



HP Sales Central

HP EliteBook 650 15.6 inch G9 Notebook PC (6G9D2PA)

Active as of 20/05/2022

Overview



Upgrade to elite performance

The HP EliteBook 650 is a cost-effective, powerful, and secure PC that allows easy standardization, while giving end-users the tools needed work from almost anywhere. Designed around the fundamental needs of enterprise businesses, this PC features the collaboration, power, and security your business needs to stay on top.

The HP EliteBook 650 is a cost-effective, powerful, and secure PC that allows easy standardization into existing IT environments, while giving end-users the tools they need to work from almost anywhere.

Crystal-clear speakers

Enjoy the crystal-clear audio performance delivered by HP Dynamic Audio⁵ and HP AI Noise Reduction.⁶

Protected by HP Wolf Security

HP Wolf Security for Business creates a hardware-enforced, always-on, resilient defense.⁸

Latest Intel® processor

Drive performance with the latest Intel®² processor, on this globally available and easy-to-service laptop.

Specifications

Operating system

Windows 10 Pro (available through downgrade rights from Windows 11 Pro)^{1,21}

Processor family

12th Generation Intel® Core™ i5 processor

Processor

Intel® Core™ i5-1235U (up to 4.4 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads)^{6,71}

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

Sustainable impact specifications

Low Halogen

Security management

Absolute persistence module; HP DriveLock and Automatic DriveLock; HP Secure Erase; HP Sure Click; HP Sure Sense; BIOS Update via Network; HP Sure Admin; HP BIOSphere Gen6; HP Client Security Manager Gen7; 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

Memory

8 GB DDR4-3200 MHz RAM (1 x 8 GB)

Memory layout (slots & size)

1 x 8 GB

Memory Slots

2 SODIMM

Internal Storage

256 GB PCIe® NVMe™ SSD

Optical drive

Not included

Display

39.6 cm (15.6") diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC

Display size (diagonal)

39.6 cm (15.6")

Graphics

Integrated

Graphics (integrated)

Intel® Iris® Xe Graphics

Ports

3 SuperSpeed USB Type-A 5Gbps signaling rate (1 charging); 1 Thunderbolt™ 4 with USB4™ Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4); 1 RJ-45; 1 headphone/microphone combo; 1 HDMI 2.0; 1 AC power

(HDMI cable sold separately.)

3

Camera

720p HD privacy camera

Audio

Dual stereo speakers, dual array microphones

Pointing device

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

Keyboard

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

Wireless

Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.2 combo (supporting gigabit data rate)

Power

HP Smart 65 W External AC power adapter

Battery type

HP Long Life 3-cell, 51 Wh Li-ion

Energy star certified

ENERGY STAR® certified

Minimum dimensions (W x D x H)

35.94 x 23.39 x 1.99 cm

Weight

Starting at 1.74 kg

UPC number

196548920648

Software included

HP Connection Optimizer; HP Hotkey Support; HP MAC Address Manager; HP Support Assistant; HP Power Manager; myHP; HP Privacy Settings; Touchpoint Customizer for Commercial; HP Notifications; HP QuickDrop; HP Quick Touch¹⁸

¹⁹1

Manufacturer Warranty

1 year (1/1/1) limited warranty includes 1 year of parts, labor and on-site repair. Terms and conditions vary by country. Certain restrictions and exclusions apply. ³⁸1

Overview

- 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>. 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.
- 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 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. The specifications for Wi-Fi 6 (802.11ax) are draft and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the PC to communicate with other 802.11ax devices. Wi-Fi® supporting gigabit speeds is achievable with Wi-Fi 6 (802.11ax) when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 160MHz channels.
- 5 HP Dynamic Audio requires Windows 10 and higher, compatible with internal PC speakers and analog headsets.
- 6 Requires the myHP application and Windows OS.
- 8 HP Wolf Security for Business requires Windows 10 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 and OS requirements.

Specifications

- 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.
- 6 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. Intel's numbering, branding and/or naming is not a measurement of higher performance.
- 7 Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See <http://www.intel.com/technology/turboboost/> for more information.
- 18 HP Support Assistant requires Windows and Internet access.
- 19 HP Quick Drop requires Internet access and Windows 10 or higher PC preinstalled with HP QuickDrop app and either an Android device (phone or tablet) running Android 7 or higher with the Android HP QuickDrop app, and /or an iOS device (phone or tablet) running iOS 12 or higher with the iOS HP QuickDrop app.
- 38 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 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.

Detailed Specifications

Accessories

HP Wired USB-A Stereo Headset 428K6AA; HP Renew Business17.3 Laptop Backpack 3E2U5AA; HP Universal USB-C Multiport Hub 50H55AA; HP Multi-Device 635 Black Wireless Mouse 1DOK2AA

Aggregation group name

BV_FE_FAMILY:thanos 15_Group_276

Aggregation UPC group

196548506026 196548677719 196548677726 196548677740 196548677764 196548678815
196548802784 196548911059 196548920648 196548920655 196548920693 196548936038
196548937592 196548937608 196786083297 196786174940 196786174957 196786215247
196786215384 196786215391 196786216510

Audio

Dual stereo speakers, dual array microphones

Available software

HP Smart Support

Available software footnote number

[57]

Battery brand

HP

Battery capacity

51

Battery capacity uom

Wh

Battery cells number

3

Battery life

Long Life

Battery life note

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

Battery type

HP Long Life 3-cell, 51 Wh Li-ion

Battery type

Li-ion

Battery weight

180 g

Bluetooth version

Bluetooth® 5.2

Brightness

250 nits

Camera

720p HD privacy camera

Camera resolution (vertical)

720p

Camera resolution standard

HD

Certifications and compliances

CCC; CECP; GS Mark

Code name

Thanos 15

Color gamut

45% NTSC

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Datasheet photo 1

AHID/c562103dc4b7fd56762d504419ccca5f5bd67966

Datasheet photo 2

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Datasheet photo 3

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Datasheet photo 5

AHID/bec8d0c030a35e04f539e70ff854895cf88b696d

Display

15.6" diagonal FHD display

Display

15.6" diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC

Display

39.6 cm (15.6") diagonal FHD display

Display

39.6 cm (15.6") diagonal, FHD (1920 x 1080), IPS, narrow bezel, anti-glare, 250 nits, 45% NTSC

Display bezel

narrow bezel

Display brightness

250

Display brightness uom

nits

Display footnote number

[12,15,16]

Display panel technology

IPS

Display resolution (pixels)

1920 x 1080

Display resolution standard

FHD

Display size (diagonal)

39.6 cm (15.6")

Display size (diagonal) uom

"

Display size (diagonal, imperial)

15.6

Display size (diagonal, metric)

39.6

Display size (diagonal, metric) uom

cm

Display surface treatment

anti-glare

ECC memory

non-ECC

Energy star certified

ENERGY STAR® certified

External I/O ports footnote number

[11]

Fingerprint reader

Fingerprint sensor

Graphic card footnote number

[42]

Graphics

Integrated

Graphics (integrated)

Intel® Iris® Xe Graphics

Image legal disclaimer

Product image may differ from actual product

Internal Storage

256 GB PCIe® NVMe™ SSD

Keyboard

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

Keyboard backlight

backlit

Keyboard features

Spill-resistant

Keyboard keypad

numeric keypad

Keyboard name

HP Premium Keyboard

Legal tagline

HP recommends Windows 11 Pro for business

Manageability features footnote number

[20,21,22,23,24]

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

Manufacturer Warranty

1 year (1/1/1) limited warranty includes 1 year of parts, labor and on-site repair. Terms and conditions vary by country. Certain restrictions and exclusions apply.

Memory

8 GB DDR4-3200 MHz RAM (1 x 8 GB)

Memory and storage

8 GB memory; 256 GB SSD storage

Memory layout (slots & size)

1 x 8 GB

Memory module type

DIMM

Memory size

8

Memory size uom

GB

Memory Slots

2 SODIMM

Memory speed

3200

Memory speed uom

MHz

Memory type

DDR4

Minimum dimensions (W x D x H)

35.94 x 23.39 x 1.99 cm

Number of memory slots

1

Operating system

Windows 10 Pro (available through downgrade rights from Windows 11 Pro)

Operating system footnote number

[1,2]

Optical drive

Not included

Playbook TS icon battery life

<https://h10003.www1.hp.com/digmedialib/prodimg/lowres/c03905264.png>

Playbook TS icon connectivity

<https://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08201987.png>

Playbook TS icon dimensions NB

<https://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08250394.png>

Playbook TS icon display NB

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Playbook TS icon graphics

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Playbook TS icon memory

<https://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08267700.png>

Playbook TS icon OS

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Playbook TS icon processor

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Playbook TS icon storage

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Playbook TS icon weight imperial

<https://h10003.www1.hp.com/digmedialib/prodimg/lowres/c05790117.png>

Playbook TS icon weight metric

<https://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08267650.png>

Pointing device

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

Ports

3 SuperSpeed USB Type-A 5Gbps signaling rate (1 charging); 1 Thunderbolt™ 4 with USB4™ Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4); 1 RJ-45; 1 headphone/microphone combo; 1 HDMI 2.0; 1 AC power

Ports note

HDMI cable sold separately.

Power

HP Smart 65 W External AC power adapter

Power supply required footnote number

[37]

Processor

Intel® Core™ i5-1235U (up to 4.4 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads)

Processor Brand

Intel®

Processor cache

12 MB L3

Processor core

10

Processor family

12th Generation Intel® Core™ i5 processor

Processor family

Core™ i5

Processor frequency technology

Intel® Turbo Boost Technology

Processor generation

12th Generation

Processor maximum frequency

4.4

Processor maximum frequency uom

GHz

Processor model

1235U

Processor name footnote number

[6,7]

Processor threads

12

Product brand name

HP

Product long name specifications

HP EliteBook 650 15.6 inch G9 Notebook PC, 15.6", Windows 10 Pro (available through downgrade rights from Windows 11 Pro), Intel® Core™ i5, 8GB RAM, 256GB SSD, FHD

Product short name specifications

HP EliteBook 650 15.6 inch G9 Notebook PC, 15.6", Intel® Core™ i5, 8GB RAM, 256GB SSD

Sales office and telephone number

Albania: +49 89 9396 1803; Algeria: +213 (0) 61 68 23 00; Austria: +43 (0) 810 00 60 80; Bahrain: 800 171; Belgium: +32 (02) 729 71 11; Bulgaria: +359 2 969 87; Bosnia-Herzegovina: +49 89 9396 1803; Commonwealth of Independent States (CIS): +(095) 923 50 01; Croatia: +385 1 606 02 00; Czech Republic: +420 261 108 108; Denmark: +45 48 12 10 00; HP East Africa, Authorized Consultant: +254 20 27 16 111; Egypt: HP +202 792 5070; Estonia: +372 6 813 820; Finland: HP Myyntipalvelu 010 217 2700; France: +33 (0) 826 800 400; Germany: +49 (0) 180 532 62 22; Greece: +30 801 11 22 55 47; Hungary: +36 (1) 382 11 11; Iceland: +354 (1) 67 10 00; Ireland: +353 1 615 82 00; Israel: +972 9 830 48 48; Italy: Prodotti +39 02 92607 330, Servizio HP Care Pack: +39 02 9212 2040; Kazakhstan & Kyrgyzstan: +7 327 2 58 43 43; Latvia: +371 703 07 00; Lithuania: +370 5 2103 300; Luxembourg: (+352) 263 160 34 Macedonia: +49 89 9396 1803; Malta: +49 89 9396 1803; Middle East (Within UAE Toll Free): 800 45 20; Moldova: +49 89 9396 1803; Morocco (African Region): Call Centre +212 22 40 47 47, HP Sale Office +212 22 97 37 37/+212 22 43 64 00; Netherlands: 0800 266 7272; Nigeria: + 234 13 205 241/3; Norway: +47 24 09 70 00; Poland: 0 801 522 622 and/or 00 48 22 565 77 00 (calls are charged at national rates); Portugal: +351 808 200 808 (end user welcome desk for commercial products); Romania: +40 (21) 303 83 00; Saudi Arabia: (Toll free) 800 897 14 33, Office Number: +9661 2731200; Serbia and Montenegro: +381 11 201 99 00; Slovakia: 0800 147 147; Slovenia: +386 1 230 74 20; Spain: +34 (91) 631 16 00; Sweden: +46 200 27 00 00; Switzerland: Pre-sales/product information +41 (0) 848 88 44 66, Spare parts, manuals +41 (0) 848 84 74 64; Tunisia: +216 1 89 12 22; Turkey: +90 (212) 444 79 79; UAE (Toll Free): 800 45 20; UAE (Toll Free): 800 45 20 or 800 49 10; Ukraine: +380 44 490 61 20; United Kingdom: HP Teleweb Glasgow +44 (0) 845 270 40 00

Security management

Absolute persistence module; HP DriveLock and Automatic DriveLock; HP Secure Erase; HP Sure Click; HP Sure Sense; BIOS Update via Network; HP Sure Admin; HP BIOSphere Gen6; HP Client Security Manager Gen7; 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

Security management footnote number

[25,26,27,28,29,30,31,32,33,34]

Software included

HP Connection Optimizer; HP Hotkey Support; HP MAC Address Manager; HP Support Assistant; HP Power Manager; myHP; HP Privacy Settings; Touchpoint Customizer for Commercial; HP Notifications; HP QuickDrop; HP Quick Touch

Software included footnote number

[18,19]

Standard memory note

Transfer rates up to 3200 MT/s.

Storage capacity

256

Storage capacity uom 01

GB

Storage interface 01

PCIe®

Storage interface protocol 01

NVMe™

Storage type

SSD

Storage type 01

SSD

Sustainable impact specifications

Low Halogen

Sustainable impact specifications footnote number

[40]

Tech spec footnote

[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>.

Tech spec footnote

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

Tech spec footnote

[11] SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

Tech spec footnote

[12] HD content required to view HD images.

Tech spec footnote

[13] 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.

Tech spec footnote

[14] Backlit keyboard is an optional feature.

Tech spec footnote

[15] Resolutions are dependent upon monitor capability, and resolution and color depth settings.

Tech spec footnote

[16] Actual brightness will be lower with touchscreen.

Tech spec footnote

[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.

Tech spec footnote

[18] HP Support Assistant requires Windows and Internet access.

Tech spec footnote

[19] HP Quick Drop requires Internet access and Windows 10 or higher PC preinstalled with HP QuickDrop app and either an Android device (phone or tablet) running Android 7 or higher with the Android HP QuickDrop app, and/or an iOS device (phone or tablet) running iOS 12 or higher with the iOS HP QuickDrop app.

Tech spec footnote

[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.

Tech spec footnote

[20] HP Driver Packs not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>.

Tech spec footnote

[21] HP Manageability Integration Kit can be downloaded from <http://www.hp.com/go/clientmanagement>.

Tech spec footnote

[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>.

Tech spec footnote

[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. Detail please refer to: <https://support.hp.com/us-en/document/c05115630>.

Tech spec footnote

[24] 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.

Tech spec footnote

[25] Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: <http://www.absolute.com/company/legal/agreements/computrace-agreement>. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.

Tech spec footnote

[26] 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™.

Tech spec footnote

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

Tech spec footnote

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

Tech spec footnote

[29] 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.

Tech spec footnote

[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.

Tech spec footnote

[30] HP BIOSphere Gen6 features may vary depending on the platform and configuration.

Tech spec footnote

[31] HP Client Security Manager Gen7 requires Windows and is available on the select HP Elite and Pro PCs.

Tech spec footnote

[32] HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher.

Tech spec footnote

[33] HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.

Tech spec footnote

[34] HP Sure Recover Gen5 with Embedded Reimaging is an optional feature which requires Windows 10 and 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 PC's with Intel Wi-Fi Module.

Tech spec footnote

[35] HP Fingerprint sensor is an optional feature that must be configured at purchase.

Tech spec footnote

[36] 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.

Tech spec footnote

[37] Availability may vary by country.

Tech spec footnote

[38] 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 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.

Tech spec footnote

[39] Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit www.epeat.net for more information.

Tech spec footnote

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

Tech spec footnote

[40] External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.

Tech spec footnote

[41] Second storage is only available with non-WWAN base Unit AND Primary M.2 storage.

Tech spec footnote

[42] Integrated graphics depends on processor. NVIDIA® Optimus™ technology requires an Intel processor, plus an NVIDIA® GeForce® discrete graphics configuration and is available on Windows 10 Pro OS. With NVIDIA® Optimus™ technology, full enablement of all discrete graphics video and display features may not be supported on all systems (e.g. OpenGL applications will run on the integrated GPU or the APU as the case may be).

Tech spec footnote

[43] Second storage is only available with non-WWAN base Unit AND Primary M.2 storage.

Tech spec footnote

[44] SIM slot is not user accessible without WWAN configuration.

Tech spec footnote

[45] 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>.

Tech spec footnote

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

Tech spec footnote

[6] 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. Intel's

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

Tech spec footnote

[7] Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See <http://www.intel.com/technology/turboboost/> for more information.

Tech spec footnote

[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.

Tech spec footnote

[9] 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.

Tech spec footnote 57

[57] HP Smart Support automatically collects the telemetry necessary upon initial boot of the product to deliver device-level configuration data and health insights and is available preinstalled on select products, thru HP Factory Configuration Services; or it can be downloaded. For more information about how to enable HP Smart Support or for download, please visit <http://www.hp.com/smart-support>.

Touchscreen

No

Trademark information

Intel, Core, Iris, Thunderbolt, and Intel vPro are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Bluetooth is a trademark owned by its proprietor and used by HP Inc. under license. USB Type-C® and USB-C® are registered trademarks of USB Implementers Forum. SDXC is a registered trademark of SD-3C in the United States, other countries or both. ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency. All other trademarks are the property of their respective owners.

UNSPSC code

43211503

UPC number

196548920648

Warranty footnote number

[38]

Weight

Starting at 1.74 kg

Weight note (metric)

Weight will vary by configuration.

Wireless

Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.2 combo (supporting gigabit data rate)

Wireless antenna

2x2

Wireless Model

Wi-Fi 6E AX211

Wireless standard

Wi-Fi 6

Wireless supplier

Intel®

Wireless transfer speeds

Supporting Gigabit data rate