Overview

HP EliteBook 840 14 inch G11 Notebook PC

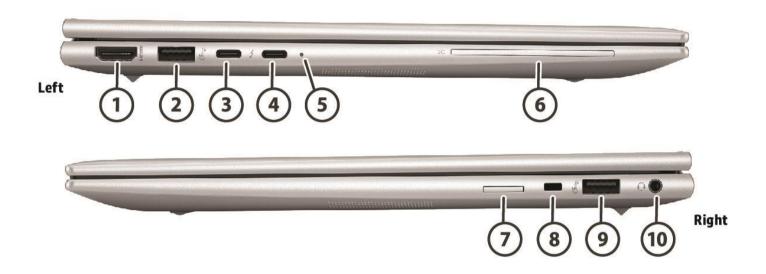


Front

- 1. ACS & ALS
- 2. Internal Microphone (2)
- 3. Webcam LED

- 4. Webcam
- 5. Camera Shutter
- 6. Touchpad

Overview



Sides

- **HDMI 2.1**
- Super Speed USB Type-A® 5Gbps Power charging
- Thunderbolt[™] 4 USB4[™] Type-C[®] 40 Gbps USB Power **9.** Super Speed USB Type-A[®] 5Gbps Power charging Delivery DisplayPort™ 1.4
- Thunderbolt[™] 4 USB4[™] Type-C[®] 40 Gbps USB Power **10.** Headphone/mic combo jack Delivery DisplayPort™ 1.4
- **Power Indicator LED**
- Smart Card Reader (Integrated)
- 1. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

- 7. Nano SIM card slot (Integrated)
- **8.** Security lock slot (Integrated)

Technical Specifications

PRODUCT NAME

HP EliteBook 840 14 inch G11 Notebook PC

OPERATING SYSTEMS

Preinstalled 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 ¹

Windows 11 Pro Education 1

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.

PROCESSORS

Processor 2,3,4,5,6	Cores	Number of P-cores	Number of E-cores	Number Of LP E-core	Threads	L3 Cache	Max Turbo Frequency ⁴		Intel SIPP/ vPro®
							P-cores	E-cores	Enterprise
Intel® Core™ Ultra7 165H	16 cores	6	8	2	22	24 MB	5.00 GHz	3.80 GHz	Х
Intel® Core™ Ultra7 155H	16 cores	6	8	2	22	24 MB	4.80 Ghz	3.80 GHz	
Intel® Core™ Ultra5 135H	14 cores	4	8	2	18	18 MB	4.60 GHz	3.60 GHz	х
Intel® Core™ Ultra5 125H	14 cores	4	8	2	18	18 MB	4.50 GHz	3.60 GHz	
Intel® Core™ Ultra7 165U	12 cores	2	8	2	14	12 MB	4.90 GHz	3.80 GHz	х
Intel® Core™ Ultra7 155U	12 cores	2	8	2	14	12 MB	4.80 GHz	3.80 GHz	
Intel® Core™ Ultra5 135U	12 cores	2	8	2	14	12 MB	4.40 Ghz	3.60 GHz	Х
Intel® Core™ Ultra5 125U	12 cores	2	8	2	14	12 MB	4.30 Ghz	3.60 GHz	

Processor Family

Intel® Core™ Ultra7 processor Intel® Core™ Ultra5 processor



- 2. Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
- 3. Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
- 4. Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.
- 5. 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.
- 6. 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

GRAPHICS

Integrated

Intel® ARC Graphics ⁷
Intel® Graphics

Supports

UMA: Support HDMI 2.18

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

DISPLAY

Non-Touch

35.6 cm (14") diagonal, WUXGA (1920 x 1200), Bent, LCD, UWVA, anti-glare, WLED + Low Blue Light , 1000 nits, sRGB 100%, HP Sure View reflect integrated privacy screen 9,10,11,12

35.6 cm (14") diagonal, WQXGA (2560 x 1600), Bent, LCD, 120Hz, UWVA, anti-glare, WLED, 500 nits, DCI-P3 100%, HP DreamColor ^{9,10,12}

35.6 cm (14") diagonal, WUXGA (1920 x 1200), Bent, LCD, UWVA, anti-glare, WLED + Low Blue Light, 400 nits, low power, sRGB 100% 9,10,12

35.6 cm (14") diagonal, WUXGA (1920 x 1200), Bent, LCD, UWVA, anti-glare, WLED, 300 nits, NTSC 45% ^{9,10,12}

Touch

35.6 cm (14") diagonal, WUXGA (1920 x 1200), Bent, LCD, touch, anti-glare, WLED, 300 nits, NTSC 45% 9,10,12

Display Size (Diagonal)

35.6 cm

14"



Technical Specifications

- 9. HD content required to view HD images.
- 10. Resolutions are dependent upon monitor capability, and resolution and color depth settings.
- 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. Actual brightness will be lower with touchscreen or HP Sure View.

DOCKING (Sold Separately)

Docking station model #1 HP USB-C Dock G5

Docking station model #2HP Thunderbolt 120W G4 DockDocking station model #3HP USB-C G5 Essential DockDocking station model #4HP USB-C/A Universal Dock G2For additional aftermarket options and docking specs please see page 40.



STORAGE AND DRIVES

Primary Storage

```
2 TB PCIe® Gen4x4 NVMe™ SSD Three Layer Cell <sup>13</sup>
1 TB PCIe® Gen4x4 NVMe™ SSD Three Layer Cell <sup>13</sup>
1 TB PCIe® NVMe™ SSD Value <sup>13</sup>
512 GB PCIe® Gen4x4 NVMe™ Self Encrypted OPAL2 SSD Three Layer Cell <sup>13</sup>
512 GB PCIe® Gen4x4 NVMe™ SSD Three Layer Cell <sup>13</sup>
512 GB PCIe® NVMe™ SSD Value <sup>13</sup>
256 GB PCIe® NVMe™ Self Encrypted OPAL2 SSD Value <sup>13</sup>
256 GB PCIe® NVMe™ SSD Value <sup>13</sup>
```

13. 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

64GB DDR5-5600 MT/s (2 x 32 GB) RAM 14

Memory

```
64GB DDR5-5600 MT/s (2 x 32 GB) RAM <sup>14</sup> 32GB DDR5-5600 MT/s (2 x 16 GB) RAM <sup>14</sup> 32GB DDR5-5600 MT/s (1 x 32 GB) RAM <sup>14</sup> 16GB DDR5-5600 MT/s (2 x 8 GB) RAM <sup>14</sup> 16GB DDR5-5600 MT/s (1 x 16 GB) RAM <sup>14</sup> 8GB DDR5-5600 MT/s (1 x 8 GB) RAM <sup>14</sup>
```

Memory Slots

2 SODIMM

System runs at 5600 MT/s

14. 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-Fi 6E Bluetooth® 5.3 vPro Wireless Card ¹⁶ Intel® AX211 Wi-Fi 6E Bluetooth® 5.3 WLAN Wireless Card ¹⁶

WWAN

HP 5G Sub-6 Cat 19 WWAN eSIM ^{17,18} HP 4G LTE-A Pro Cat16 WWAN eSIM ¹⁷

LPWAN

Qualcomm® 9205 19

NFC

NFC NXP NPC300 20

Miracast

Native Miracast Support 21

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. 4G LTE module is optional, must be configured at the factory, requires activation and separately purchased service contract. Check with service provider for coverage and availability in your area. Connection, upload and download speeds will vary due to network, location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions.

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



AUDIO/MULTIMEDIA

Audio

Audio by Poly Studio
2 Integrated stereo speakers
Discrete Amplifiers
2 Integrated dual array microphones

Speaker Power

1W/8ohm Per speaker

Camera

5MP+Infrared camera ²² 5MP camera ²²

Sensors

Ambient Light Sensor Adaptive Color Sensor Hall Effect Sensor Thermal Sensor HP Tamper Lock ²³ HP Sure Platform Fingerprint Sensor

- 22. Sold separately or as an optional feature.
- 23. HP Tamper Lock must be enabled by the customer or your administrator.

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

HP Premium Keyboard, spill-resistant, Privacy, Backlit, Durakey keyboard.²⁴ HP Premium Keyboard, spill-resistant, Backlit, Durakey keyboard.²⁴ HP Premium Keyboard, spill-resistant, Durakey keyboard.

Pointing Device

Clickpad with multi-touch gesture support Microsoft Precision Touchpad Default Gestures Support Multi-touch gesture support

Function Keys

ESC - System information

F1 - Display Switching

F2 - Blank or Privacy

F3 - Brightness Down

F4 - Brightness Up

F5 - 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

Power Button (with LED)

Delete

Home

End

Microsoft Copilot 25

Hidden Function Keys

Fn+R - Break

Fn+S - Sys Rq

Fn+C - Scroll Lock

24. Backlit keyboard is an optional feature.

25. Requires Windows 11 and an NPU. Timing of feature delivery and availability varies by market and device. Requires Microsoft account to log in. See http://aka.ms/WindowsAlFeatures

SOFTWARE AND SECURITY

Software

Adobe Offer

Bing Search for IE11

Buy Microsoft Office (Sold separately)

HP Connection Optimizer

HP Easy Clean

HP Easy Clean Keyboard Driver

HP Hotkey Support

HP Mac Address Manager

HP Notifications

HP PC Hardware Diagnostics UEFI

HP PC Hardware Diagnostics Windows

HP Power Manager

HP Privacy Settings

HP Services Scan 26

HP Smart Support 26

HP Support Assistant 27

HSA Fusion for Commercial

Miro Offer 28

Manageability Features

HP Client Catalog (download)

HP Client Management Script Library (download)

HP Cloud Recovery 29

HP Connect for Microsoft Endpoint Manager 30

HP Driver Packs (download)

HP Image Assistant (download)



Technical Specifications

HP Manageability Integration Kit (download) ³¹ HP Patch Assistant (download) ³²

Security Features

HP Client Security Manager

HP Sure Admin 33

HP Sure Click

HP Sure Recover 34

HP Sure Run 35

HP Sure Sense

HP Sure Start 36

HP Tamper Lock

HP Wolf Security of Business 37

Secured-Core PC Enable 38

Windows Hello Enhanced Sign-In Security (ESS)

Security

TPM

Model: Nuvoton NPCT760HABYX

TCG TPM 2.0 Version: 7.2.3.1

FIPS 140-2 Compliant: Yes

Model: Infineon SLB9672VU2.0 FW15.23

TCG TPM 2.0 Version: 15.23

FIPS 140-2 Compliant: Yes

BIOS

Absolute Persistence Module 39

BIOS Update via Network

HP BIOSphere 40

HP DriveLock & Automatic DriveLock

HP Fingerprint Sensor 41

HP Secure Erase 42

HP Wake on WLAN

Smartcard Reader

Model number: Alcorlink AK9563

FIPS 201 Compliant: Yes

IPv6 Support

Yes

FirstNet Certified

TBD

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

UEFI version: 2.7

Class: 3



Technical Specifications

26. HP Smart Support/ HPServices Scan is preinstalled and/or provided thru Windows Update and checks for service entitlement on each hardware device and downloads the HP Insights agent automatically. To disable this feature, please follow the instructions at http://www.hpdaas.com/requirements. The HP Insights agent is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. Select HP Workforce Solutions require an HP Insights agent for Windows, Mac, & Android, available for download at https://admin.hp.com/software. For full system requirements and services that require the agent, please visit https://admin.hp.com/requirements. The agent collects telemetry and analytics around devices and applications that

https://admin.hp.com/requirements. The agent collects telemetry and analytics around devices and applications that integrate into the Workforce Experience platform and is not sold as a standalone service. Internet access with connection to the Workforce Experience platform is required. HP follows stringent GDPR privacy regulations, and the platform is ISO27001, ISO27017 and SOC2 Type2 certified for Information Security. Not available in China.

- 27. HP Support Assistant is available on Windows. For more information, please visit http://www.support.hp.com/help/hp-support-assistant.
- 28. HP customers qualify for a 90 day trail of Miro, this offer ends September 2025. Complete terms and conditions are provided by Miro when accepting the offer.
- 29. HP Cloud Recovery is available for Z by HP, HP Elite and Pro desktops and laptops PCs with Intel® or AMD processors and requires an open, network connection. **NOTE:** You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Details please refer to: https://support.hp.com/us-en/document/c05115630.
- 30. 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.
- 31. HP Manageability Integration Kit can be downloaded from
- http://www8.hp.com/us/en/ads/clientmanagement/overview.html.
- 32. 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.
- 33. HP Sure Admin requires HP G8 or newer platforms, Windows 10 or higher, HP BIOS, HP Manageability Kit or KMS Service from http://www.hp.com/go/clientmanagement and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store
- 34. HP Sure Recover is available on select HP PCs and requires Windows 10 or 11 and an open network connection. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data. HP Sure Recover with Embedded Reimaging is an optional feature on select HP PCs which requires Windows 10 or 11 must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data.
- 35. HP Sure Run is available on select HP PCs and requires Windows 10 and higher.
- 36. HP Sure Start is available on select HP PCs and requires Windows 10 and higher.
- 37. HP Wolf Security for Business requires Windows 10 or 11 Pro or higher, includes various HP security features and is available on HP Pro, Elite, RPOS and Workstation products. See product details for included security features and OS requirement.
- 38. 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.
- 39. 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/
- 40. HP BIOSphere features may vary depending on the platform and configuration.
- 41. HP Fingerprint Reader is an optional feature that requires Windows 10 or 11 and must be configured at purchase.
- 42. HP Secure Erase implements the methods outlined in the National Institute of Standards and Technology Special Publication 800-88r "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.



Technical Specifications

POWER

Power Supply

HP Standard 65W USB Type-C® adapter 43 HP Slim 65W USB Type-C® adapter 43

Battery

HP Long Life 3 cell 56Whr Polymer 44,45

Battery Recharge Time

Supports battery HP Fast Charge: approximately 50% in 30 minutes 46

Power Cord

3-wire plug - 1m

Battery life

TRD 47

- 43. Availability may vary by country.
- 44. Battery is internal and not replaceable by customer. Serviceable by warranty.
- 45. 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.
- 46. Recharges your battery up to 50% within 30 minutes when the system is off or in standby mode. Power adapter minimum of 65 watts required for battery capacities 56Whr or less. Power adapter minimum of 100 watts required for battery capacities greater than 56Whr and less than 83Whr. Power adapter minimum of 120 watts required for battery capacities greater than 83Whr and less than 100Whr. After charging has reached 50% capacity, charging will return to normal. Charging time may vary +/-10% due to System tolerance.
- 47. 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

Starting at 1.417 kg (3.12 lb) with 56.00 Wh battery Weight will vary by configuration. Does not include power adapter.

Product Dimensions (W x D x H) 48

315.6 (W) x 224.35 (D) x 9.04 mm (front) / 16.35 mm (rear) 12.42 in x 8.83 in x 0.35 in (front) / 0.64 in (rear) Maximum height 19.2mm / Maximum height 0.75 in

Pallet Dimensions (W x D x H) 49

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

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

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

PORTS/SLOTS

Left side

- 2 Thunderbolt[™] 4 USB4[™] Type-C[®] 40 Gbps USB Power Delivery DisplayPort[™] 1.4 ⁵⁰
- 1 Super Speed USB Type-A 5Gbps Power charging
- 1 HDMI 2.18
- 1 Smart Card Reader (Integrated)

Right side

- 1 Super Speed USB Type-A 5Gbps Power charging
- 1 Headphone/mic combo jack
- 1 Nano SIM card slot (Integrated)
- 1 Security lock slot (Integrated)
- 50. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.
- 8. HDMI cable sold separately.



Technical Specifications

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. 51

51. HP Care Packs are sold separately. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit http://www.hp.com/go/cpc. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.



SYSTEM UNIT

Stand-Alone Power Requirements

(AC Power)

Nominal Operating Voltage 20.0V Average Operating Power W

Max Operating Power UMA 65W

Temperature

Operating 0° to 35° C (32° to 95° F)

Non-operating -20° to 60° C (-4° to 140° F)

Relative Humidity

Operating 10% to 90 % (non-condensing)

Non-operating 5% to 95 %, 38.7° C (101.6° F) maximum wet bulb temperature

Shock

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

Random Vibration

Operating 1.043 grams Non-operating 3.500 grams

Altitude (unpressurized)

Operating 3048 m (10000 ft) Non-operating 12192 m (40000 ft)

Planned Industry Standard

Certifications

Regulatory Model Number HSN-I45C-4

CSA/UL 62368-1 Yes ENERGY STAR® Yes 52

EPEAT® Gold in the United States⁵³

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 WW RoHS Yes Low Blue Light Yes

52. Configurations of the HP EliteBook 840 14 inch G11 Notebook PC that are ENERGY STAR® qualified are identified as HP EliteBook 840 14 inch G11 Notebook PC ENERGY STAR on HP websites and on http://www.energystar.gov.



53. 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.

14.0 in WUXGA (1920 x 1200) Anti-Glare UWVA LED NTSC 45 NB2X 300 eDP 1.2 w/o PSR bent LCD Panel

 Outline Dimensions (W x H)
 307.29x199.25(max)

 Active Area
 301.59 X 188.50 (typ)

Weight 300 (max)

Diagonal Size 14

Surface Treatment Anti-Glare

Touch Enabled No

Contrast Ratio 1000:1(typ)
Refresh Rate 60 Hz

Brightness 300 nits¹

Pixel Resolution - Format 1920 x 1200 (WUXGA)

Backlight WLED
Pixel Resolution RGB

Color Gamut Coverage NTSC 45% **Color Depth** 6+2 FRC

Viewing Angle UWVA 89/89/89

Low Blue Light No

Power Consumption (W, EBL@ 2.20 (max) / 2.70 (max)

150nits max/ 200nits max))

14.0 in WUXGA (1920 x 1200) Anti-Glare UWVA LED NTSC 45 NB2X 300 TOP eDP 1.2 w/o PSR bent LCD Panel

 Outline Dimensions (W x H)
 307.29x199.25(max)

 Active Area
 301.59 X 188.50 (tvp)

Weight 305q (max)

Diagonal Size 14

Surface Treatment Anti-Glare

Touch Enabled Yes

Contrast Ratio1000:1(typ)Refresh Rate60 HzBrightness300 nits1

Pixel Resolution - Format 1920 x 1200 (WUXGA)

 Backlight
 WLED

 Pixel Resolution
 RGB

 Color Gamut Coverage
 NTSC (

Color Gamut Coverage NTSC 45%
Color Depth 6+2 FRC



Viewing Angle UWVA 89/89/89

Low Blue Light No

Power Consumption (W, EBL@

150nits max/ 200nits max)) 2.15 (max)/2.65 (max)

14.0 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)** 307.590 x 199.550 (max)

Active Area 301.590 x 188.500 (typ)

Weight 210 (max)

Diagonal Size 14

Surface Treatment Anti-Glare

Touch Enabled No

Contrast Ratio1000:1(typ)Refresh Rate60 HzBrightness400 nits1

Pixel Resolution - Format 1920 x 1200 (WUXGA)

Backlight WLED **Pixel Resolution** RGB

Color Gamut Coverage sRGB 100%

Color Depth 8

Viewing Angle UWVA 89/89/89

Low Blue Light Yes

Power Consumption (W, EBL@

150nits max/ 200nits max)) 1.29 (max) / 1.66 (max)

14.0 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)
 307.600 x 199.550 (max)

 Active Area
 301.680 x 188.500 (typ)

Weight 238 (max)

Diagonal Size 14

Surface Treatment Anti-Glare

Touch Enabled No

Contrast Ratio 1500:1 (typ)
Refresh Rate 60 Hz
Brightness 1000 nits¹

Pixel Resolution - Format 1920 x1200 (WUXGA)

BacklightWLEDPixel ResolutionRGB

Color Gamut Coverage sRGB 100%

Color Depth 8

Viewing Angle UWVA 85/85/85



Low Blue Light Yes

Power Consumption (W, EBL@

150nits max/ 200nits max)) N/A

14.0 in WOXGA DRM (2560 x Outline Dimensions (W x H) 1600) Anti-Glare UWVA LED Active Area DCI-P3 NB2X 500 eDP 1.4+PSR2 100 120Hz bent **LCD Panel**

307.594 x 199.546 (max)

301.594 x 188.496 (typ)

Weight 230 (max)

Diagonal Size 14

Surface Treatment Anti-Glare

Touch Enabled No

Contrast Ratio 1200:1(typ) **Refresh Rate** 120 Hz 500 nits1 **Brightness**

Pixel Resolution - Format 2560 x1600 (WQXGA)

Backlight **WLED Pixel Resolution** RGB

Color Gamut Coverage DCI-P3 100%

Color Depth 8

Viewing Angle UWVA 89/89/89/89

Low Blue Light No

Power Consumption (W, EBL@

150nits max/ 200nits max)) 2.88 (max) / 3.44 (max)



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

InterfacePCIe NVMe Gen4X4Maximum Sequential Read6400 MB/s ±20%Maximum Sequential Write3500 MB/s ±20%Logical Blocks1,000,215,215

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

InterfacePCIe NVMe Gen4X4Maximum Sequential Read6400 MB/s ±20%Maximum Sequential Write5000 MB/s ±20%Logical Blocks2,000,409,264FeaturesPyrite 2.0; TRIM; L1.2

SSD 2TB 2280 PCIe-4x4 NVMe Three Layer Cell Form Factor M.2 2280
Capacity 2TB
NAND Type TLC

InterfacePCIe NVMe Gen4X4Maximum Sequential Read6400 MB/s ±20%Maximum Sequential Write5000 MB/s ±20%Logical Blocks4,000,797,360FeaturesPyrite 2.0; TRIM; L1.2

256GB PCIe 2280 NVMe Self Encrypted OPAL2 Value Solid State Drive Form Factor M.2 2280
Capacity 256GB
NAND Type TLC

InterfacePCIe NVMe Gen4X4Maximum Sequential Read2000 MB/s ±20%Maximum Sequential Write900 MB/s ±20%Logical Blocks500,118,192

Features TCG Opal 2.0; TRIM; L1.2

512GB PCIe-4x4 2280 NVME Self Encrypted OPAL2 Three Layer Cell Solid State Drive Form Factor M.2 2280
Capacity 512GB
NAND Type TLC

InterfacePCIe NVMe Gen4X4Maximum Sequential Read6400 MB/s ±20%Maximum Sequential Write3500 MB/s ±20%Logical Blocks1,000,215,215

Features TCG Opal 2.0; TRIM; L1.2

SSD 256GB 2280 PCIe NVMe Value Form Factor M.2 2280
Capacity 256 GB
NAND Type TLC

InterfacePCIe NVMe Gen4X4Maximum Sequential Read2000 MB/s ±20%Maximum Sequential Write900 MB/s ±20%Logical Blocks500,118,192

Features Pyrite 2.0; TRIM; L1.2

SSD 512GB 2280 PCIe NVMe Value Form Factor M.2 2280
Capacity 512 GB
NAND Type TLC

InterfacePCIe NVMe Gen4X4Maximum Sequential Read2200 MB/s ±20%Maximum Sequential Write1000 MB/s ±20%Logical Blocks1,000,215,215FeaturesPyrite 2.0; TRIM; L1.2

SSD 1TB 2280 PCIe NVMe Value Form Factor M.2 2280
Capacity 1TB
NAND Type TLC
Interface PCIe NVM

InterfacePCIe NVMe Gen4X4Maximum Sequential Read2200 MB/s ±20%Maximum Sequential Write1600 MB/s ±20%Logical Blocks2,000,409,264FeaturesPyrite 2.0; TRIM; L1.2



NETWORKING/COMMUNICATIONS

Intel® AX211 Wi-Fi 6E +BT Wireless LAN Standards
5.3 M.2 160MHz CNVi IEEE 802.11b
World-wide WLAN vPro® IEEE 802.11g
Wireless Card¹ IEEE 802.11n
IEEE 802.11ac
IEEE 802.11ax

IEEE 802.11ax
IEEE 802.11d
IEEE 802.11e
IEEE 802.11h
IEEE 802.11i
IEEE 802.11k
IEEE 802.11r
IEEE 802.11r

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 300Mbps802.11ac: 1733Mbps802.11ax: max 2.4Gbps

Modulation Direct Sequence Spread Spectrum

OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM

, 1024QAM

• 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

• WAP

Network Architecture Ad-hoc (Peer to Peer)

Models



Infrastructure (Access Point Required)

Roaming IEEE 802.11 compliant roaming between access points

Output Power³ • 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

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)

802.11ax HE160(5GHz): +10dBm minimum

Connected Standby 10mW

Radio disabled 8 mW

Power Management ACPI and PCI Express compliant power management

802.11 compliant power saving mode

Receiver Sensitivity⁴ • 802.11b, 1Mbps : -93.5dBm maximum

802.11b, 11Mbps: -84dBm maximum
802.11a/g, 6Mbps: -86dBm maximum
802.11a/g, 54Mbps: -72dBm maximum
802.11n, MCS07: -67dBm maximum
802.11n, MCS15: -64dBm maximum

802.11ac, MCS0(VHT80): -84dBm maximum
802.11ac, MCS9(VHT80): -59dBm maximum
802.11ac, MCS9(VHT160): -58.5dBm maximum
802.11ax, MCS11(HE40): -57dBm maximum
802.11ax, MCS11(HE80): -54dBm maximum
802.11ax, MCS11(HE160): -53.5dBm maximum

Antenna type High efficiency antenna with spatial diversity

Two embedded tri-band 2.4/5/6 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications

Form Factor PCI-Express M.2 MiniCard

Dimensions Type 2230 : 2.3 x 22.0 x 30.0 mm

 Weight
 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)



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 Technology

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 AvailableLegacy : 0~79 (1 MHz/CH)ChannelsBLE : 0~39 (2 MHz/CH)

Signaling Data Rate Legacy: 3 Mbps data rate; throughput up to 2.17 Mbps

BLE: 1 Mbps data rate; throughput up to 0.2 Mbps

Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice

channels

Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps

asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)

Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with

a maximum transmit power of + 9.5 dBm for BR and EDR.

Power Consumption Peak (Tx): 330 mW

Peak (Rx): 230 mW

Selective Suspend: 17 mW

Bluetooth Software 1. Microsoft Windows Bluetooth Software **Supported Link Topology** 2. Linux/Chrome OS Bluetooth Software.

Power Management ACPI and PCI Express compliant power management

802.11 compliant power saving mode

Certifications FCC (47 CFR) Part 15C/E, Section 15.247, 15.249, 15.407

ETSI 300 328, ETSI 301 893, ETSI 303 687

Bluetooth Software Supported

BT4.1-ESR 5/6/7 Compliance

LE Link Layer Ping LE Dual Mode LE Link Layer

LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels

Train Nudging & Interlaced Scan

BT4.2 ESR08 Compliance

LE Secure Connection- Basic/Full LE Privacy 1.2 –Link Layer Privacy

LE Privacy 1.2 –Extended Scanner Filter Policies

LE Data Packet Length Extension

FAX Profile (FAX)

Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP)

Advanced Audio Distribution Profile (A2DP)

BT5.2

ESR9/10 Compliance

LE Advertisement Extensions Channel Selection Algo



Limited High Duty Cycle Non-Connectable Advertising
2Mbps LE
LE Long Range
BT5.3
Host to Controller Encryption Key Control Enahancements
Compliance to the latest Errata Section 12.3 of BT 5.3 specification

- 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).



vPro® Wireless Card¹

Technical Specifications

Intel® AX211 Wi-Fi 6E +BT Wireless LAN Standards 5.3 M.2 160MHz CNVi World-wide WLAN nonIEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n

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 802.11r

Interoperability Wi-Fi certified

Frequency Band

2.402 – 2.482 GHz •802.11a/n/ac/ax 4.9 – 4.95 GHz (Japan)

•802.11b/g/n/ax

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 300Mbps802.11ac: 1733Mbps802.11ax: max 2.4Gbps

Modulation Direct Sequence Spread Spectrum

OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM

, 1024QAM

• 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 minimum802.11a: +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 Sensitivity⁴ • 802.11b, 1Mbps : -93.5dBm maximum

802.11b, 11Mbps: -84dBm maximum
802.11a/g, 6Mbps: -86dBm maximum
802.11a/g, 54Mbps: -72dBm maximum
802.11n, MCS07: -67dBm maximum
802.11n, MCS15: -64dBm maximum

802.11ac, MCS0(VHT80): -84dBm maximum
802.11ac, MCS9(VHT80): -59dBm maximum
802.11ac, MCS9(VHT160): -58.5dBm maximum
802.11ax, MCS11(HE40): -57dBm maximum
802.11ax, MCS11(HE80): -54dBm maximum
802.11ax, MCS11(HE160): -53.5dBm maximum

Antenna type High efficiency antenna with spatial diversity

Two embedded tri-band 2.4/5/6 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications

Form Factor PCI-Express M.2 MiniCard

Dimensions Type 2230 : 2.3 x 22.0 x 30.0 mm

 Weight
 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)

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 Technology

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 Legacy : 0~79 (1 MHz/CH)
Channels BLE : 0~39 (2 MHz/CH)

Signaling Data Rate Legacy: 3 Mbps data rate; throughput up to 2.17 Mbps

BLE: 1 Mbps data rate; throughput up to 0.2 Mbps

Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice

channels

Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps

asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)

Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with

a maximum transmit power of + 9.5 dBm for BR and EDR.

Power Consumption Peak (Tx): 330 mW

Peak (Rx): 230 mW

Selective Suspend: 17 mW

Bluetooth Software 1. Microsoft Windows Bluetooth Software **Supported Link Topology** 2. Linux/Chrome OS Bluetooth Software.

Power Management ACPI and PCI Express compliant power management

802.11 compliant power saving mode

Certifications FCC (47 CFR) Part 15C/E, Section 15.247, 15.249, 15.407

ETSI 300 328, ETSI 301 893, ETSI 303 687

Bluetooth Software Supported

tware BT4.1-ESR 5/6/7 Compliance
LE Link Laver Ping

LE Dual Mode LE Link Layer

LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels

Train Nudging & Interlaced Scan

BT4.2 ESR08 Compliance

LE Secure Connection- Basic/Full LE Privacy 1.2 —Link Layer Privacy

LE Privacy 1.2 –Extended Scanner Filter Policies

LE Data Packet Length Extension

FAX Profile (FAX)

Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP)

Advanced Audio Distribution Profile (A2DP)

BT5.2

ESR9/10 Compliance

LE Advertisement Extensions Channel Selection Algo

Limited High Duty Cycle Non-Connectable Advertising

2Mbps LE LE Long Range



BT5.3

Host to Controller Encryption Key Control Enahancements Compliance to the latest Errata Section 12.3 of BT 5.3 specification

- 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).



HP 5G Sub-6 Cat 19 WWAN eSIM ¹ Technology/Operating bands

WCDMA/HSPA+ operating bands:

Band 1: 1920 to 1980 MHz (UL), 2110 to 2170 MHz (DL)

Band 2: 1850 to 1910 MHz (UL), 1930 to 1990 MHz (DL)

Band 4: 1710 to 1755 MHz (UL), 2110 to 2155 MHz (DL)

Band 5: 824 to 849 MHz (UL), 869 to 894 MHz (DL)

Band 8: 880 to 915 MHz (UL), 925 to 960 MHz (DL)

LTE FDD/TDD operating bands:

Band 1: 1920 to 1980 MHz (UL), 2110 to 2170 MHz (DL)

Band 2: 1850 to 1910 MHz (UL), 1930 to 1990 MHz (DL)

Band 3: 1710 to 1785 MHz (UL), 1805 to 1880 MHz (DL)

Band 4: 1710 to 1755 MHz (UL), 2110 to 2155 MHz (DL)

Band 5: 824 to 849 MHz (UL), 869 to 894 MHz (DL)

Band 7: 2500 to 2570 MHz (UL), 2620 to 2690 MHz (DL)

Band 8: 880 to 915 MHz (UL), 925 to 960 MHz (DL)

Band 12: 699 to 716 MHz (UL), 729 to 746 MHz (DL)

Band 13: 777 to 787 MHz (UL), 746 to 756 MHz (DL)

Band 14: 788 to 798 MHz (UL), 758 to 768 MHz (DL)

Band 17: 704 to 716 MHz (UL), 734 to 746 MHz (DL)

Band 18: 815 to 830 MHz (UL), 860 to 875 MHz (DL)

Band 19: 830 to 845 MHz (UL), 875 to 890 MHz (DL)

Band 20: 832 to 862 MHz (UL), 791 to 821 MHz (DL)

Band 25: 1850 to 1915 MHz (UL), 1930 to 1995 MHz (DL)

Band 26: 814 to 849 MHz (UL), 859 to 894 MHz (DL)

Band 28: 703 to 748 MHz (UL), 758 to 803 MHz (DL)

Band 29: 717 to 728 MHz (DL)

Band 30: 2305 to 2315 MHz (UL) 2350 to 2360 MHz (DL)

Band 32: 1452 to 1496 MHz (DL)

Band 34: 2010 to 2025 MHz (UL/DL)

Band 38: 2570 to 2620 MHz (UL/DL)

Band 39: 1880 to 1920 MHz (UL/DL)

Band 40: 2300 to 2400 MHz (UL/DL)

Band 41: 2496 to 2690 MHz (UL/DL)

Band 42: 3400 to 3600 MHZ (UL/DL)

Band 43: 3400 to 3800 MHZ (UL/DL)

Band 46: 5150 to 5925 MHZ (DL)

Band 48: 3550 to 3700 MHZ (UL/DL)

Band 66: 1710 to 1800 MHz (UL), 2110 to 2200 MHz (DL)

Band 71: 663 to 698 MHz (UL), 617 to 652 MHz (DL)

5GNR Sub 6GHZ

n1: 1920 to 1980 MHz (UL), 2110 to 2170 MHz (DL)

n2: 1850 to 1910 MHz (UL), 1930 to 1990 MHz (DL)

n3: 1710 to 1785 MHz (UL), 1805 to 1880 MHz (DL)

n5: 824 to 849 MHz (UL), 869 to 894 MHz (DL)

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)

n30: 2305 to 2315 MHz (UL) 2350 to 2360 MHz (DL)

n38: 2570 to 2620 MHz (UL/DL)



n40: 2300 to 2400 MHz (UL/DL) 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 NR Sub6G rel15

200MHz 2 DLCA, 256 QAM 200MHz 2 ULCA, 256 QAM 15KHz/30KHz SCS for FDD/TDD

LTE Rel15

100MHz 5 DLCA, 256 QAM 40MHz 2 ULCA, 256 QAM

UMTS Rel8

GPS GPS only support L1 C/A
GPS bands GPS: L1 (1575.42MHz)
GLONASS: L1 (1602MHz)
BeidouB1(1561.098MHz)
Galileo E1 (1575.42)
QZSS(1575.42 MHz)

Maximum data rates Sub-6 SA Peak

DL 4.67Gbps/UL 1.25Gbps

Sub-6 NSA Peak

DL 3.74Gbps/UL 835Mbps

LTE Peak

DL 1.6Gbps (CAT19)/UL 211Mbps (CAT18)

UMTS/HSPA+

DL DC-HSPA+: 42 Mbps (CAT24)/UL 11.5 Mbps (CAT7)

Maximum output power NR:

23 dBm in all band except (n30 = 22dBm & n48=21dBm &

n77=25dBm & n41/n77/n78 = 26dBm)

LTE:

23 dBm in all band except (B30 = 22dBm & B48=21dBm &

B41=26dBm) UMTS:

23.5 dBm

Maximum power 3500 mA (peak); 1674mA (average)

consumption

Form Factor M.2, 3052-S3 Key B

Weight 8.7g

Dimensions 52 mm × 30 mm × 2.3 mm

(Length x Width x Thickness)

embedded eSIM Support

1. 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.

HP 4G LTE-A Pro Cat16 WWAN eSIM 1

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 26: 814 to 849 MHz (UL), 859 to 894 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 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 48: 3550 to 3700 MHZ (UL/DL)

Band 66: 1710 to 1800 MHz (UL), 2110 to 2200 MHz (DL) Band 71: 663 to 698 MHz (UL), 617 to 652 MHz (DL)

Wireless protocol standards

3GPP LTE Rel15

LTE Specification, 100MHz 5 DLCA, 256 QAM, DL 1.0Gbps (CAT16)/

40MHz 2 ULCA, 256 QAM, UL 211Mbps (CAT18)

WCDMA 3GPP Release 8 UMTS Specification, DL UMTS: 384 kbps/UL 384

kbp, DL DC-HSPA+: 42 Mbps (CAT24)/UL 11.5 Mbps (CAT7)



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) OZSS(1575.42 MHz)

Maximum data rates LTE: ue-CategoryDL 16, (DL: 1 Gbps)

ue-CategoryUL 18, (UL: 211Mbps)

DC-HSPA+: 42 Mbps (Download), 11.5 Mbps (Upload)

Maximum output power HPUE: Not supported

LTE: 23 dBm in all band except (B30= 22dBm& B48= 21dBm)

UMTS: 23.5 dBm

Maximum powerLTE: 1300 mA (peak); 1100 mA (average)consumptionHSPA+: 1,100 mA (peak); 800 mA (average)

Form Factor M.2, 3052-S3 Key B

Weight 8 g

Dimensions 52 mm × 30 mm × 2.3 mm

(Length x Width x

Thickness)

eSIM Support

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.



> 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 temperature0°C to 70°CStorage temperature-20°C to 125°CHumidity10-90% 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



Antenna Antenna connector, 0.5mm pitch, 7 connector FPC. Antenna matching is

external to module.

Qualcomm® 9205 1

Technology/Operating

bands

FDD LTE: 2100 (Band 1), 1900 (Band 2), 1800 (Band 3),

1700/2100 (Band 4), 850 (Band 5), 900 (Band 8), 700 (Band 12 lower), 700 (Band 13 upper), 700 (Band 14 upper), 850 (Band 18 lower), 850 (Band 19 upper), 800 (Band 20), 1900 (Band 25), 850 (Band 26), 800 (Band 27), 700 (Band 28), 1700/2100 (Band 66), 700 (band 85) MHz.

GSM/GPRS/EGPRS: 850, 900, 1800, 1900MHz.

Wireless protocol standards

• 3GPP TS 51.010-1 V10.5.0: Mobile Station (MS) conformance

specification; Part 1: Conformance specification

• 3GPP TS 36.521-1 V14.3.0: User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Conformance

testing

• 3GPP TS 21.111 V10.0.0: USIM and IC card requirements

• 3GPP TS 51.011 V4.15.0: Specification of the Subscriber Identity

Module - Mobile Equipment (SIM-ME) interface

• 3GPP TS 31.102 V10.11.0: Characteristics of the Universal Subscriber

Identity Module (USIM) application

• 3GPP TS 31.11 V10.16.0: Universal Subscriber Identity Module (USIM)

Application Toolkit (USAT)

• 3GPP TS 36.124 V10.3.0: Electro Magnetic Compatibility (EMC) requirements for mobile terminals and ancillary equipment

• 3GPP TS 27.007 V10.0.8: AT command set for User Equipment (UE)

• 3GPP TS 27.005 V10.0.1: Use of Data Terminal Equipment - Data Circuit terminating Equipment (DTE - DCE) interface for Short Message Service

(SMS) and Cell Broadcast Service (CBS)

GPS 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 FDD: 375 Kbps (Download), 1119 Kbps (Upload)

GSM:

- GPRS: 107 Kbps (Download), 85.6 Kbps (Upload) - EGPRS: 296 Kbps (Download), 236.8 Kbps (Upload)

Maximum output power LTE: 21.5 dBm in all band

GSM:34dBm

Maximum power consumption

LTE: 1,200 mA (peak); 900 mA (average) HSPA+: 1,100 mA (peak); 800 mA (average)

Form Factor M.2, 2242-S3 Key B

Weight 5.5 g

Dimensions (Length x Width x 22 x 42 x 2.3 mm

Thickness)

eSIM Support



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



POWER

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 65 Watt nPFC Weight Standard USB type C

Straight 1.8m

240a ± 10a Input 100-240Vac

Input Efficiency

81.50% min at 115 Vac/ 230 Vac @5.00V 86.70% min at 115 Vac/ 230 Vac @9.00V 88.00% min at 115 Vac/ 230 Vac @12.00V 89.00% min at 115 Vac/ 230 Vac @15.00V

89.00% min at 115 Vac/ 230 Vac @20.00V

Input frequency range 47-63Hz

Input AC current Max. 1.6 A at 90 Vac

5V/15W **Output power**

> 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 **C6 AC Inlet Type**

DC Cable Connector USB type C

DC Cable Material PVC

C6 Connector

Environmental Design **Operating**

temperature

32°F to 95°F (0° to 35°C)

Non-operating (storage) -4°F to 185°F (-20° to 85°C)

temperature

Altitude

0 to 16,400 ft (0 to 5000m)

Humidity 20% to 95% **Storage Humidity** 10% to 95%

EMI and Safety Certifications

Output

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 **Weight** 220g ± 10g **Input** 100-240Vac

Input Efficiency 81.50% min at 115 Vac/ 230 Vac @5.00V

86.70% min at 115 Vac/ 230 Vac @9.00V 88.00% min at 115 Vac/ 230 Vac @12.00V 89.00% min at 115 Vac/ 230 Vac @15.00V 89.00% min at 115 Vac/ 230 Vac @20.00V

Input frequency range 47-63Hz

Input AC current Max. 1.6 A at 90 Vac

Output 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
AC Inlet Type C6

DC Cable Connector USB type C
DC Cable Material PVC

Connector C6

Environmental Design Operating 32°F to 95°F (0° to 35°C)

temperature

Non-operating (storage) -4°F to 185°F (-20° to 85°C)

temperature

Altitude 0 to 16,400 ft (0 to 5000m)

Humidity 20% to 95% **Storage Humidity** 10% to 95%

EMI and Safety Certifications

Output

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 Weight

0.205kg +/- 10g (0.474 lb)

(56WHr) 1

Cells/Type 3cell Lithium-Ion Polymer cell / 586075

Energy Voltage 11.58V

Amp-hour capacity

4.84Ah

Watt-hour capacity¹

56.04Wh

Temperature

Operating (Charging) 32° to 113° F (0° to 45° C)

Operating (Discharging) 14° to 140° F (-10° to 60° C)

Optional Travel Battery No

Available

AUDIO

HD Stereo Codec

Realtek ALC3315

Audio I/O Ports

3.5mm Headset: CTIA only: Headphone-out

Internal Speaker Amplifier

Cirrus Logic High-Efficiency Boosted Class D Amplifier

Multi-streaming Capable

Playback multi-streaming can be enabled in the audio control panel to allow independent audio

streams to be sent to/from the front jacks or integrated speaker.,

Following MSFT Behavior

Sampling

DAC: 48.0 kHZ to 48.0 kHz ADC: 48.0 kHZ to 48.0 kHz

Wavetable Syntheses # of Channels on Line-Out N/A

Internal Speaker

N/A

Yes

FINGERPRINT READER

Sensor vendor **SYNAPTICS** Sensor type Capacitive 363 DPI **DPI** resolution

Scan area 104 x 86 pixels

False Rejection Rate < 3% **False Acceptance Rate** < 0.001% **Mobile Voltage Operation** 3V ~ 3.6 V

0°C ~ 60°C (32°F ~ 140°F) **Operating Temperature**

Current Consumption

Image

100 mA max

Low Latency Wait For

260 uA

Finger

Capture Rate

50 frames/sec

ESD Resistance

IEC 61000-4-2 4B (+15KV)

Detection Matrix

363 dpi / 7.4 x 6.0 mm sensor area



Technical Specifications

Sensor vendorELANSensor typeCapacitiveDPI resolution508 DPIScan area80 x 80 pixels

False Rejection Rate < 3%False Acceptance Rate < 0.001%Mobile Voltage Operation $2.7 \text{ V} \sim 3.6 \text{ V}$

Operating Temperature $-20^{\circ}\text{C} \sim 80^{\circ}\text{C} (-4^{\circ}\text{F} \sim 176^{\circ}\text{F})$

Current Consumption 35 mA max

Image

Low Latency Wait For 300 uA

Finger

Capture Rate 50 frames/sec

ESD Resistance IEC 61000-4-2 4B (+15KV)

Detection Matrix 508 dpi / 4.0 x 4.0 mm sensor area



Technical Specifications

ENVIRONMENTAL DATA

ENVIRONMENTAL DATA				
Eco-Label Certifications &	This product has received or is in the process of being certified to the following approvals and			
declarations	may be labeled with one o			
	IT ECO declaration			
	US ENERGY STAR		>	
		y Management Program (FEN		
	EPEAT® Gold regit status in your cou		See http://www.epeat.net for registration	
	TCO Certified	anti y.		
		servation Program (CECP)		
		onmental Protection Adminis	stration (SEPA)	
	Taiwan Green Ma		,	
	 Korea Eco-label 			
	 Japan PC Green la 	abel*		
Sustainable Impact	 Product Carbon F 	ootprint (hp.com)		
Specifications	 Ocean-bound pla 	stic in Speaker		
	•	ner recycled plastic		
	 65% recycled me 	tal		
	Low halogen			
		=	% sustainably sourced and recyclable	
		•	sustainably sourced and recyclable	
System Configuration	 Bulk packaging available The configuration used for the Energy Consumption and Declared Noise Emissions data for the 			
System Configuration		on a "Typically Configured N		
Energy Consumption		on a Typically configured in		
(in accordance with US				
ENERGY STAR® test				
method)	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz	
Normal Operation (Sort idle)	5.88 W	6.17 W	5.92 W	
Normal Operation (Long	1.66 W	1.85 W	1.76 W	
idle)				
Sleep	1.66 W	1.85 W	1.76 W	
Off	0.46 W	0.48 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	20.1 BTU/hr	21.1 BTU/hr	20.2 BTU/hr	
idle)				
Normal Operation (Long	5.7 BTU/hr	6.3 BTU/hr	6.0 BTU/hr	
idle)				
Sleep	5.7 BTU/hr	6.3 BTU/hr	6.0 BTU/hr	
Off	1.6 BTU/hr	1.6 BTU/hr	1.4 BTU/hr	
- · ·			210/111	
	* NOTE: Heat dissipation is	s calculated based on the me	asured watts, assuming the service level is	
	·	s calculated based on the me	asured watts, assuming the service level is	
	* NOTE: Heat dissipation is attained for one hour.	s calculated based on the me	asured watts, assuming the service level is	



Technical Specifications

Declared Noise Emissions	1	Sound Power	Sound P	ressure
(in accordance with	(L _{WAd} , bels)		(L _{pAm} , de	ecibels)
ISO 7779 and ISO 9296)				
Typically Configured – Idle		3.1	20	.6
Operating (SSD)		3.3	22	.8
Operating		4.0	31	.5
Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the			
	of production	n.	e warranty period and or for up	
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, so www.epeat.net Plastics parts weighing over 25 grams used in the product are marked per ISO11469 at ISO1043. This product is 94% recycle-able when properly disposed of at end of life. 		al and Electronic state of California; Safe dard at the Gold level, see marked per ISO11469 and	
Packaging Materials	External:	PAPER/Corrugated		220 g
		PAPER/Corrugated		49 g
		PAPER/Molded Pulp		52 g
		PAPER/Molded Pulp		56 g
		PAPER/Paper		3 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 59.1% 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.			
	scope of the	commitment to include fur	ther restricted substances as r	egulations continue to



Technical Specifications

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):			
	AsbestosCertain Azo Colorants			
	 Certain Azo Cotorants Certain Brominated Flame Retardants – may not be used as flame retardants in plastics Cadmium 			
	Chlorinated HydrocarbonsChlorinated 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.			

Technical Specifications

	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	For more information about HP's commitment to the environment:			
Environmental				
Information	Global Citizenship Report			
iii oi iii acioii	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.			



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

DOCKING (Sold Separately)

Docking station model #1

Total number of supported displays

(incl. the notebook display)

Max. resolutions supported Multi-Function Mode: (2) 5k @ 30Hz and (1) 4k UHD @ 30Hz on any port

High-Resolution Mode: (2) 5k @ 60Hz on DisplayPort ports and (1) 4k UHD @

60Hz on HDMI port

HP USB-C Dock G5

3

Dock Connectors 1x HDMI 2.0, 2x DisplayPort 1.4

Technical limitations Maximum resolution and display support is dependent on the maximum

capability of the notebook.

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

Three maximum displays supported are two 5K@ 30 Hz on DP ports plus one 4K

UHD@ 30 Hz on HDMI in Multi-function mode

The highest resolution for a non-Thunderbolt host in Multi-function mode is a

single 5K dual cable (using both DP ports) + (1) 4K on HDMI port.

Docking station model #2

Total number of supported displays

(incl. the notebook display)

Max. resolutions supported

HP Thunderbolt 120W G4 Dock

Quad 4K @60Hz

4

Dual 8K single cable@30 for Thunderbolt hosts or USB-C hosts DisplayPort 1.4

with Display Stream Compression in High-Resolution Mode

Dock Connectors 2x HDMI 2.0, 2x DisplayPort 1.4, 1x Thunderbolt 4, 1x USB-C 3.2 Gen 2

DisplayPort

Technical limitations Maximum resolution and display support is dependent on the maximum

capability of the notebook.

Thunderbolt Hosts:

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

Thunderbolt host.

Maximum resolution possible is dual 8K displays @ 60Hz running Thunderbolt

host or running a non-Thunderbolt host in high resolution mode @30Hz

Non-Thunderbolt hosts:

The highest resolution for dual displays running a non-Thunderbolt host in

multi-function mode is

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

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

(1) 4K UHD @ 30Hz.

Docking station model #3

Total number of supported displays

(incl. the notebook display)

Max. resolutions supported

HP USB-C G5 Essential Dock

3

Multi-Function Mode: (2) 5k @ 30Hz and (1) 4k UHD @ 30Hz on any port

High-Resolution Mode: (2) 5k @ 60Hz on DisplayPort ports and (1) 4k UHD @

60Hz on HDMI port



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

Dock Connectors 1x HDMI 2.0, 2x DisplayPort 1.4

Technical limitations Maximum resolution and display support is dependent on the maximum

capability of the notebook.

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

Resolution mode.

Three maximum displays supported are two 5K@ 30 Hz on DP ports plus one 4K

UHD@ 30 Hz on HDMI in Multi-function mode

The highest resolution for a non-Thunderbolt host in Multi-function mode is a

single 5K dual cable (using both DP ports) + (1) 4K on HDMI port.

Docking station model #4

HP USB-C/A Universal Dock G2

Total number of supported displays

(incl. the notebook display)
Max. resolutions supported

3

Multi-Function Mode: (3) 4K DCI @ 30Hz on any port High-Resolution Mode: (3) 4K DCI @ 30Hz on any port

Dock Connectors 1x HDMI 2.0, 2x DisplayPort 1.2

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)

Туре	Description	Part Number
Adapter	HP USB-C to HDMI 2.0 Adapter	1WC36AA
	HP USB-C to RJ45 Adapter G2	4Z527AA
	HP USB 3.0 to Gigabit RJ45 Adapter G2	4Z7Z7AA
	HP USB-C to DisplayPort Adapter G2	8Y8Y1AA
	HP HDMI to VGA Adapter	H4F02AA
	HP USB-C to USB 3.0 Adapter	N2Z63AA
	HP USB-C to VGA Adapter	N9K76AA
	HP USB-C to DisplayPort Adapter	N9K78AA
Audio	HP BluetoothTM 365 Speaker	567D3AA
	HP USB G2 Stereo Headset	428K6AA
	HP 3.5mm G2 Stereo Headset	428K7AA
Cases	HP Prelude 15.6 Backpack	1E7D6AA
	HP Prelude 15.6 Top Load	1E7D7AA
	HP Prelude Pro Recycled 15.6 Backpack	1X644AA
	HP Prelude Pro Recycled 15.6 Top Load	1X645AA
	HP Renew Business 17.3 Laptop Backpack	3E2U5AA
	HP Renew Business 17.3 Laptop Bag	3E2U6AA
	HP Renew Business 14.1 Laptop Sleeve	3E2U7AA
	HP Renew Business 15.6 Laptop Bag	3E5F8AA
	HP Renew Business 14.1 Laptop Bag	3E5F9AA
	HP Prelude 15.6 Top Load	50P31AA
	HP Prelude 15.6 Backpack	50P32AA
	HP Renew Executive 16 Laptop Backpack	6B8Y1AA
	HP Renew Executive 16 Laptop Bag	6B8Y2AA
	HP Renew Executive 14.1 Laptop Sleeve	6B8Y3AA
	HP Travel 15.6 iron gray Laptop Backpack	6H2D8AA
	HP Travel 15.6 iron gray Laptop Backpack	6H2D9AA
Commodity	HP USB DVD-Writer External ODD	F2B56AA
	HP Nano Keyed Cable Lock	1AJ39AA
	HP Nano Master Keyed Cable Lock	1AJ40AA
	HP Combination Nano Cable Lock	63B28AA
	HP Essential Combination Nano Cable Lock	63B31AA
	HP SureKey Standard/Nano/Wedge Cable Lock	6UW42AA
Docking	HP USB-C™ G2 Travel Dock	7PJ38AA



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

Hub	HP Universal USB-C Multiport Hub	50H55AA
	HP 4K USB-C Multiport Hub	6G843AA
	HP USB-C Travel Hub G3	86S97AA
	HP Universal USB-C Hub and Laptop Charger Combo	9Н0Н9АА
	HP USB-C to USB-A Hub	Z6A00AA
Keyboard/Combo	HP Wireless Rechargeable 950MK Mouse and Keyboard	3M165AA
	HP 655 Wireless Keyboard and Mouse Combo	4R009AA
	HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA
	HP 975 Dual-Mode USB+Bluetooth Wireless Keyboard	3Z726AA
	HP 455 Programmable Wireless Keyboard	4R177AA
	HP 965 black Ergonomic Wireless Keyboard	7E756AA
	HP 475 Dual-Mode Wireless Keyboard	7N7B9AA
	HP 405 Multi-Device Backlit Wired Keyboard	7N7C1AA
	HP 435 Programmable Wireless Keypad	7N7C3AA
	HP 320K USB Wired Keyboard	9SR37AA
Mouse	HP Multi-Device Black 635 Wireless Mouse	1D0K2AA
	HP Creator Black 935 Wireless Mouse	1D0K8AA
	HP Premium Wireless Mouse	1JR31AA
	HP 435 Multi-Device Wireless Mouse	3B4Q5AA
	HP 235 Slim Wireless Mouse	4E407AA
	HP 715 Rechargeable Multi-Device Bluetooth Mouse	6E6F0AA
	HP 925 Ergonomic Vertical Wireless Mouse	6H1A5AA
	HP Travel Bluetooth Mouse	6SP30AA
	HP 320M Wired Mouse	9VA80AA
Power	HP 65W LC USB-C AC power adapter	1P3K6AA
	HP 65W USB-C Laptop Charger	600Q8AA
	HP 65W USB-C Laptop Charger	671R3AA
	HP 110W USB-C Laptop Charger	8B3Y2AA
Video	HP USB-A 325 Webcam	53X27AA
	HP Streaming 965 Webcam	695J5AA
	HP 625 Webcam	6Y7L1AA



HP EliteBook 840 14 inch G11 Notebook PC

QuickSpecs

Change Log

Date of change:	Version History:	Description of change:
	V1 to V2	

© Copyright 2024 HP Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Intel, Core and Intel vPro are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. DisplayPort™ and the DisplayPort™ logo are trademarks owned by the Video Electronics Standards Association (VESA®) in the United States and other countries. USB Type-C® and USB-C® are trademarks of USB Implementers Forum. ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency. Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

