Overview

HP EliteBook 840 G5 Notebook PC



- 1. HD Camera (Select models only)
- 2. IR Camera (Select models only)
- 3. Webcam LED (Select models only)
- 4. Internal microphones
- 5. IR Camera LEDs (Select models only)
- 6. Power connector
- 7 USB Type-C™ with Thunderbolt™
- 8. Docking connector

Left

- 9. Ethernet port
- 10. HDMI port (Cable not included)
- 11. USB 3.1 Gen 1 port
- 12. Audio combo jack
- 13. SIM card slot1
- 14. Fingerprint reader
- 15. Clickpad
- 16. Pointstick

1. All units have a SIM card slot and icon but units that do not support WWAN are shipped with a non-removable SIM slot plug

Overview



- Indicator LEDs:
 Power ligh
 Wireless light
 Storage usage light
- 2. Smartcard Reader (Select models)
- 3. USB 3.1 Gen 1 charging port

Right

- 4. Security Lock slot (Lock sold separately)
- 5. Power button

Overview

AT A GLANCE

- Eye-catching ultraslim design, premium precision-crafted machined aluminum (CNC), seamless formed aluminum chassis for clean, crisp, premium look and feel
- Choice of 8th Generation Intel® Core™ i5, i7 Processors and 7th generation Intel® Core™ i5 Processors
- Designed to support all HP docking options including HP's traditional Ultraslim mechanical dock and all-new Thunderbolt™ dock² (Available in May 2018)
- Featuring HP Collaboration Keyboard with Clickpad to manage most commonly used conferencing functions with a single keystroke
- Innovative world-facing third mic improves inbound ambient noise cancellation
- Optional ultrabright displays with ambient light sensor
- Enterprise grade security with HP SureStart Gen4, HP Privacy Camera³, HP Sure View², HP Sure Run, HP Sure Recover, SmartCard Reader² and Fingerprint reader²
- Choice of displays:
 - 35.6cm (14.0") diagonal FHD IPS anti-glare LED-backlit non-touch, 220 cd/m², 67% sRGB
 - 35.6cm (14.0") diagonal FHD IPS anti-glare LED-backlit non-touch, 400 cd/m², 100% sRGB
 - 35.6cm (14.0") diagonal UHD IPS anti-glare LED-backlit non-touch, 400 cd/m², 100% sRGB
 - 35.6cm (14.0") diagonal FHD IPS anti-glare LED-backlit non-touch, 700 cd/m², 100% sRGB with HP Sure View
 - 35.6cm (14.0") diagonal FHD IPS LED-backlit Corning® Gorilla® Glass 3 touch, 220 cd/m², 67% sRGB
 - 35.6cm (14.0") diagonal FHD IPS LED-backlit Corning® Gorilla® Glass 3 touch, 700 cd/m², 100% sRGB with HP Sure View
- Optional AMD Radeon™ RX540 discrete graphics with 2 GB GDDR5 video memory
- Flexible wireless connectivity options
- Preinstalled with Windows 10 versions or FreeDOS 2.0
- Choice of solid state drives up to 1 TB and DDR4 memory up to 32 GB
- Supports fast charging (50% in 30 minutes) with no impact on battery recharge cycles⁴
- Optional HD camera or Infra Red camera with multi-array microphone
- Batterv life:
 - UMA graphics: Up to 14 hours (Intel® 7th generation CPU and 3-cell 50 WHr battery)
 - Discrete graphics: Up to 13 hours and 45 mins (Intel® 7th generation CPU and 3-cell 50 WHr battery)
- Pending MIL-STD testing⁵
 - 2. Sold separately or as an optional feature.
 - 3. Only available with non-touch configurations.
 - 4. Recharges your battery up to 50% within 30 minutes when the system is off or in standby mode. Power adapter with a minimum capacity of 65 watts is required. After charging has reached 50% capacity, charging will return to normal. Charging time may vary +/-10% due to System tolerance.
 - 5. MIL-STD-810G testing is pending and is conducted on select HP products. Testing is not intended to demonstrate fitness of U.S. Department of Defense (DoD) contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack.

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



Features

PRODUCT NAME

HP EliteBook 840 G5 Notebook PC

OPERATING SYSTEM

Preinstalled Windows 10 Pro 64¹

Windows 10 Home 641

FreeDOS 2.0

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 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com/

PROCESSORS

Intel® Core™ i5-7200U with Intel® HD Graphics 620 (2.5 GHz base frequency, up to 3.1 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores)^{2,3,4}

Intel® Core™ i5-7300U vPro™ processor with Intel® HD Graphics 620 (2.6 GHz base frequency, up to 3.5 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores)^{2,3,4}

Intel® Core™ i5-8250U with Intel® UHD Graphics 620 (1.6 GHz base frequency, up to 3.4 GHz with Intel® Turbo Boost Technology, 6 MB cache, 4 cores)^{2,3,4}

Intel® Core™ i5-8350U vPro™ processor with Intel® UHD Graphics 620 (1.7 GHz base frequency, up to 3.6 GHz with Intel® Turbo Boost Technology, 6 MB cache, 4 cores)^{2,3,4}

Intel® Core™ i7-8550U with Intel® UHD graphics 620 (1.8 GHz base frequency, up to 4 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores)^{2,3,4}

Intel® Core™ i7-8650U vPro™ processor with Intel® UHD graphics 620 (1.9 GHz base frequency, up to 4.2 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores)^{2,3,4}

Processor Family

7th Generation Intel® Core™ i5 processor (i5-7300U, i5-7200U models)

8th Generation Intel® Core™ i5 processor (i5-8350U, i5-8250U models)

8th Generation Intel® Core™ i7 processor (i7-8650U, i7-8550U models)

- 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. **NOTE:** 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.

CHIPSET

Integrated with processor

GRAPHICS



Features

Integrated

Intel® HD Graphics 620⁵ Intel® UHD Graphics 620⁵

Discrete

AMD Radeon™ RX 540 (2 GB GDDR5 video memory)^{6,7} Support HD decode, DX12, HDMI 1.4b^{5,8}

- 5. HD content required to view HD images.
- 6. Sold separately or as an optional feature.

7. AMD Dynamic Switchable Graphics technology requires an Intel processor, plus an AMD Radeon™ discrete graphics configuration and is not available on FreeDOS and Linux OS. With AMD Dynamic Switchable Graphics 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).

8. HDMI cable sold separately.

DISPLAY

Non-Touch

35.6 cm (14") diagonal FHD IPS anti-glare LED-backlit, 220 cd/m², 67% sRGB (1920 x 1080)^{9,10,11}

35.6 cm (14") diagonal FHD IPS anti-glare LED-backlit, 220 cd/m², 67% sRGB with HD camera (1920 x 1080)^{9,10,11}

35.6 cm (14") diagonal FHD IPS anti-glare LED-backlit, 220 cd/m², 67% sRGB with HD IR webcam (1920 x 1080)^{9,10,11}

35.6 cm (14") diagonal FHD IPS anti-glare LED-backlit, 220 cd/m², 67% sRGB for WWAN (1920 x 1080)^{9,10,11}

35.6 cm (14") diagonal FHD IPS anti-glare LED-backlit, 220 cd/m², 67% sRGB with HD camera for WWAN (1920 x 1080)^{9,10,11}

35.6 cm (14") diagonal FHD IPS anti-glare LED-backlit, 220 cd/m², 67% sRGB with HD IR webcam for WWAN (1920 x 1080)9,10,11

35.6 cm (14") diagonal FHD IPS anti-glare LED-backlit, 400 cd/m 2 , 100% sRGB with Ambient Light Sensor and HD IR webcam (1920 x 1080) 9,10,11

35.6 cm (14") diagonal FHD IPS anti-glare LED-backlit, 400 cd/m², 100% sRGB with Ambient Light Sensor and HD IR webcam for WWAN (1920 x 1080)^{9,10,11}

35.6 cm (14") diagonal 4K IPS anti-glare LED-backlit, 400 cd/m^2 , 100% sRGB with Ambient Light Sensor and HD IR webcam for WWAN (3840 x 2160)^{9,10,11}

HP Sure View Integrated Privacy Screen 35.6 cm (14") diagonal FHD IPS anti-glare LED-backlit, 700 cd/m 2 , 100% sRGB with HD IR webcam for WWAN (1920 x 1080) 9,10,11,12

Touch

35.6 cm (14") diagonal FHD IPS LED-backlit touch screen with Corning® Gorilla® Glass 3, 220 cd/m², 67% sRGB with HD IR webcam (1920 x 1080) 9,10,11

35.6 cm (14") diagonal FHD IPS LED-backlit touch screen with Corning® Gorilla® Glass 3, 220 cd/m², 67% sRGB with HD IR webcam for WWAN (1920 x 1080)9,10,11

HP Sure View Integrated Privacy Screen 35.6 cm (14") diagonal FHD IPS LED-backlit touch screen with Corning® Gorilla® Glass 3, 700 cd/m², 100% sRGB with HD IR webcam for WWAN (1920 x 1080)^{9,10,11,12}

HDMI 1.4b

Supports resolution up to 4k @ 24 Hz

Displays support

Supports 2 independent displays when docked on the HP Ultraslim Dock - Max. resolution = 2.5K @ 60Hz (DP1) & 2.5K @



Features

60Hz (DP2)11

Supports 2 independent displays when docked on the HP Thunderbolt™ Dock G2 (Available in May 2018) - Max. resolution = 4K @ 60Hz (DisplayPort) & 4K @ 60Hz (Thunderbolt)¹¹

- 9. HD content required to view HD images.
- 10. Sold separately or as an optional feature.
- 11. Resolutions are dependent upon monitor capability, and resolution and color depth settings.
- 12. HP Sure View is optional and must be configured at purchase.

STORAGE AND DRIVES

Primary M.2 Storage

128 GB SATA-3 SS TLC¹³
256 GB PCIe NVMe Value SS TLC¹³
256 GB PCIe Gen3x4 NVMe SS TLC¹³
256 GB SATA-3 SS TLC Opal 2¹³
360 GB PCIe Gen3x4 NVMe SS TLC (Intel®)¹³
512 GB PCIe Gen3x4 NVMe SS TLC¹³
512 GB PCIe Gen3x4 NVMe SS TLC Opal 2¹³
512 GB SATA-3 SS TLC FIPS-140-2¹³

1 TB PCIe Gen3x4 NVMe SS TLC13

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

MEMORY

Maximum Memory

32 GB DDR4-2400 SDRAM14

Memory

32 GB DDR4-2400 SDRAM (2 X 16 GB)¹⁴
16 GB DDR4-2400 SDRAM (1 X 16 GB)¹⁴
16 GB DDR4-2400 SDRAM (2 X 8 GB)¹⁴
8 GB DDR4-2400 SDRAM (1 x 8 GB)¹⁴
8 GB DDR4-2400 SDRAM (2 x 4 GB)¹⁴
4 GB DDR4-2400 SDRAM (1 x 4 GB)¹⁴

Memory Slots

2 SODIMM

Both slots are upgradeable

System runs at 2133 for Intel® 7th generation processors

System runs at 2400 for Intel® 8th generation processors

Supports Dual Channel Memory.

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.

NETWORKING/COMMUNICATIONS



Features

WLAN15

Intel® Dual Band Wireless-AC 8265 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, vPro™16 Intel® Dual Band Wireless-AC 8265 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™16 Realtek RTL8822BE 802.11ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™16

WWAN15

HP lt4132 LTE/HSPA+ 4G Mobile Broadband¹⁷ Intel® XMM™ 7360 LTE-Advanced¹⁷

NFC¹⁵

NXP NPC300 Near Field Communication Module

Miracast

Native Miracast Support¹⁸

Ethernet

Intel® I219-LM 10/100/1000 GbE, vPro™19
Intel® I219-V 10/100/1000 GbE, non-vPro™19

15. Sold separately or as an optional feature.

16. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.

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

18. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming 19. The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.

AUDIO/MULTIMEDIA

Audio

Audio by Bang & Olufsen
Integrated 3 Multi Array Microphone
2 Integrated Stereo Speakers (74Db)

Webcam

HD camera^{20,21} HD IR camera^{20,21}

20. HD content required to view HD images.

21. Sold separately or as an optional feature.



Features

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

HP Premium Collaboration Keyboard, spill resistant with drain Backlit keyboard available as an option

Pointing Device

Clickpad with multi-touch gestures enabled, taps enabled as default Microsoft Precision Touchpad Default Gestures Support

Function Keys

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 - numlk

F11 - Wireless

F12 - Calendar

Share/Present

Call Answer

Call End

Hidden Fuctions

Fn+R = Break

Fn+S = Sys Rq

Fn+C = Scroll Lock



Features

SOFTWARE AND SECURITY

Preinstalled Software BIOS

HP BIOSphere Gen4²³

HP DriveLock & Automatic DriveLock

BIOS Update via Network

Master Boot Record Security

Power On Authentication

Secure Erase²⁴

Absolute Persistence Module²⁵

Pre-boot Authentication

HP Wireless Wakeup

Software

HP Native Miracast Support²²

HP LAN-Wireless Protection

HP Connection Optimizer

HP Velocity

HP ePrint + JetAdvantage²⁶

HP Hotkey Support - CMIT

HP Recovery Manager

HP Jumpstart

HP Support Assistant²⁷

HP Noise Cancellation Software

HP PhoneWise³⁰

Buy Office

Manageability Features

HP Driver Packs²³

HP System Software Manager (SSM)

HP BIOS Config Utility (BCU)

HP Client Catalog

HP Manageability Integration Kit Gen2²⁴

Ivanti Management Suite30

Client Security Software

HP Client Security Suite Gen4³¹ including:

HP Security Manager³² (including Credential Manager, HP Password Manager, HP Spare Key)

Power On Authentication

HP Fingerprint Sensor³⁶

HP Device Access Manager



Features

HP Power On Authentication

Microsoft Defender³³

Security Management

HP BIOSphere Gen4²³

HP DriveLock & Automatic DriveLock

BIOS Update via Network

Secure Erase²⁴

Pre-boot Authentication

TPM 2.0 Embedded Security Chip shipped with Windows 10 (Common Criteria EAL4+ Certified)³⁷

SATA 0,1 port disablement (viaBIOS)

RAID configurations³⁷

Serial, USB enable/disable (viaBIOS)

Power-on password (viaBIOS)

Setup password (viaBIOS)

Support for chassis padlocks and cable lock devices

HP Sure Click³⁸

HP Sure Start Gen435

HP Sure Run³⁹

HP Sure Recover⁴⁰

TPM

Model: Infineon SLB9670

Version: 7.62.3126.0

Revision: TPM 2.0

FIPS 140-2 Compliant: Yes (select models only)

Smartcard Reader

Model number: Alcor AU9560 FIPS 201 Compliant: Yes

IPv6 Certification:

Yes

MD5 Hash: Please follow the instructions below to access MD5 Hash.

Log-on to http://hp.com/support, enter your product name, select software and drivers, select OS, select driver. After selecting the driver, click on "Associated files" and then click on "Download". When opening the file, under "Purpose" you should see the appropriate "SOFTPAQ MD5:" Field

Is the BIOS on this notebook ISO/IEC 19678:2015 (formerly NIST 800-147) compliant?:

Yes

UEFI version: 2.5



Features

- 22. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming
- 23. HP BIOSphere Gen4 features may vary depending on the PC platform and configurations requires 8th Gen Intel® processors.
- 24. Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88. Supported on Elite platforms with BIOS version F.03 or higher.
- 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.
- 26. HP ePrint Driver requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see http://www.hp.com/go/eprintcenter). Print times and connection speeds may vary.
- 27. HP Support Assistant requires Windows and Internet access.
- 28. HP Driver Packs not preinstalled, however available for download at http://www.hp.com/go/clientmanagement.
- 29. HP Manageability Integration Kit can be downloaded from

http://www8.hp.com/us/en/ads/clientmanagement/overview.html

- 30. Ivanti Management Suite subscription required.
- 31. HP Client Security Suite Gen4 requires Windows and Intel® or AMD 8th generation processors.
- 32. HP Password Manager requires Internet Explorer or Chrome or FireFox. Some websites and applications may not be supported. User may need to enable or allow the add-on / extension in the internet browser.
- 33. Microsoft Defender Opt in and internet connection required for updates.
- 34. HP PhoneWise Client is only available on select platforms. For supported platforms and HP PhoneWise system requirements see http://www.hp.com/go/HPPhoneWise.
- 35. HP Sure Start Gen4 is available on HP EliteBook products equipped with Intel® 8th generation processors
- 36. HP Fingerprint Sensor sold separately or as an optional feature.
- 37. RAID configuration is optional and does require a second hard drive.
- 38. HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer and Chromium™. Check http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW for all compatible platforms as they become available.
- 39. HP Sure Run is available on HP Elite products equipped with Intel® or AMD® 8th generation processors
- 40. HP Sure Recover is available on HP Elite PCs with 8th generation Intel® or AMD processors and requires an open, wired network connection. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data



Features

POWER

Power Supply

HP Smart 45 W External AC power adapter⁴²
HP Smart 45 W External AC power adapter, 2-prong (Japan only)⁴²
HP Smart 65 W External AC power adapter⁴²
HP Smart 65 W EM External AC power adapter⁴²
45 W USB Type-C™ adapter⁴²
65 W USB Type-C™ adapter⁴²

Primary Battery

HP Long Life 3-cell, 50 Wh Li-ion⁴³

Power Cord

2-wire plug - 1.0m (Japan only)⁴²
3-wire plug - 1.0m⁴²
3-wire plug - 1.8m⁴²
Duckhead power cord - 1.0m⁴²
Duckhead power cord - 1.8m⁴²

Battery Life

UMA graphics: Up to 14 hours (Intel® 7th generation CPU and 3-cell 50 WHr battery)
Discrete graphics: Up to 13 hours and 45 mins (Intel® 7th generation CPU and 3-cell 50 WHr battery)

42. Availability may vary by country.

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

44. Windows 10 MM14 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

Weight

Starting at 3.27 lb (non-touch); Starting at 3.56 lb (touch)⁴⁵ Starting at 1.48 kg (non-touch); Starting at 1.61 kg (touch)⁴⁵

Dimensions (w x d x h)

Non-touch

12.84 x 9.22 x 0.7 in 32.6 x 23.4 x 1.79 cm **Touch** 12.84 x 9.22 x 0.71 in

32.6 x 23.4 x 1.81 cm

45. Weight will vary by configuration.



Features

PORTS/SLOTS

Ports

1 Thunderbolt™ (USB Type-C™ connector) 2 USB 3.1 Gen 1 (1 charging)

1 HDMI 1.4b46

1 RJ-45

1 docking connector

1 headphone/microphone combo

1 AC power

1 SIM card slot⁴⁷

1 Smartcard reader⁴⁷

46. HDMI cable sold separately.

47. Sold separately or as an optional feature.

SERVICE AND SUPPORT

3 year and 1 year limited warranties and 90-day software limited warranty options depending on country. Batteries have a default one year limited warranty except for Long Life batteries which will have same 1 year or 3 year limited warranty as the platform. 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.⁴⁸

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



Technical Specifications

SYSTEM UNIT

Stand-Alone Power **Nominal Operating** 19V

Requirements (AC Power) Voltage

> **Average Operating Power** Win 10 Integrated Graphics 6.78W **Discrete Graphics** 18W

Max Operating Power Discrete < 65W

UMA < 45W

Temperature 32° to 95° F (0° to 35° C) (not writing optical) **Operating**

41° to 95° F (5° to 35° C) (writing optical)

-4° to 140° F (-20° to 60° C) Non-operating **Relative Humidity Operating** 10% to 90%, non-condensing

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

Shock **Operating** 40 G, 2 ms, half-sine

> Non-operating 200 G, 2 ms, half-sine

Random Vibration Operating 0.75 grms

> Non-operating 1.50 grms

-50 to 10,000 ft (-15.24 to 3,048 m) **Altitude** (unpressurized) Operating

> Non-operating -50 to 40.000 ft (-15.24 to 12.192 m)

Planned Industry Standard Certifications

UL Yes **CSA** Yes **FCC Compliance** Yes

ENERGY STAR® Select models1

EPEAT® Registered Gold in United States²

ICES Yes Australia / Yes

NZ A-Tick Compliance

Yes Japan VCCI Compliance Yes KC Yes **BSMI** Yes **CE Marking Compliance** Yes **BNCI or BELUS** Yes CIT Yes GOST Yes Saudi Arabian Compliance Yes

(ICCP)

SABS Yes

UKRSERTCOMPUTER

^{2.} EPEAT® registered where applicable. EPEAT registration varies by country. See http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.



^{1.} Configurations of the HP Elitebook 840 G5 that are ENERGY STAR® qualified are identified as HP Elitebook 840 G5 ENERGY STAR on HP websites and on http://www.energystar.gov.

Technical Specifications

DISPLAYS

Panel LCD 14 inch FHD (1920x1080) Anti-Glare WLED UWVA 45% cg 220nits eDP slim NB Non-Touch **Outline Dimensions (W x H)** 316.112 x 197.98 max.

Active Area 309.312 x 173.988

Weight <280g max.

Diagonal Size 14.0"

Thickness 3.0mm max.

Interface eDP 1.2

Surface Treatment IPS

Touch Enabled No

Contrast Ratio 600:1 (typical)

Refresh Rate 60Hz

Brightness 220 nits typical (Panel Only

Pixel Resolution 1920 x 1080 (FHD)

Format RGB

Backlight LED

Color Gamut Coverage 45%

Color Depth 6 bits + Hi FRC

Viewing Angle UWVA 85/85/85

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

Panel LCD 14 inch FHD (1920x1080) WLED UWVA 45% cg 220nits eDP slim NB Touch **Outline Dimensions (W x H)** 316.112 x 197.98 max.

Active Area 309.312 x 173.988

Weight <413q max.

Diagonal Size 14.0"

Thickness 3.2mm max.

Interface eDP 1.2

Surface Treatment IPS

Touch Enabled Yes

Contrast Ratio 600:1 (typical)

Refresh Rate 60Hz



Technical Specifications

Brightness 220 nits typical (Panel Only

Pixel Resolution 1920 x 1080 (FHD)

Format RGB

Backlight LED

Color Gamut Coverage 45%

Color Depth 6 bits + Hi FRC

Viewing Angle UWVA 85/85/85

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

Panel LCD 14 inch FHD (1920x1080) Anti-Glare WLED UWVA 72% cg 400nits eDP 1.3 + PSR slim NB **Outline Dimensions (W x H)** 316.11 x 197.98 max.

Active Area 309.31 x 173.99

Weight <285g max.

Diagonal Size 14.0"

Thickness 3.0mm max.

Interface eDP 1.3 + PSR (2 lane)

Surface Treatment IPS
Touch Enabled No

Contrast Ratio 600:1 (typical)

Refresh Rate 60Hz

Brightness 400 nits typical (Panel Only)

Pixel Resolution 1920 x 1080 (FHD)

Format RGB

Backlight LED

Color Gamut Coverage 72%

Color Depth 6 bits + Hi FRC

Viewing Angle UWVA 85/85/85

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

Technical Specifications

Panel LCD 14 inch UHD (3840x2160) Anti-Glare WLED UWVA 72% cg 400nits eDP 1.3 + PSR ultraslim NB **Outline Dimensions (W x H)** 315.31 x 199.54 max.

Active Area 309.31 x 173.99

Weight <240 max.

Diagonal Size 14.0"

Thickness 2.4mm max

Interface eDP 1.3 + PSR (4 lane)

Surface Treatment IPS
Touch Enabled No

Contrast Ratio 1200:1 (typ) - AG

Refresh Rate 60Hz

Brightness 400 nits typical (Panel Only)

Pixel Resolution 3840 x 2160 (UHD)

Format RGB

Backlight LED

Color Gamut Coverage 72%

Color Depth 8 bits

Viewing Angle UWVA 85/85/85

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

Technical Specifications

Panel LCD 14 inch FHD (1920x1080) WLED UWVA 72% cg 700nits eDP 1.3+PSR ultraslim Privacy Outline Dimensions (W x H) 315.41x 196.14 max.

Active Area 309.312 x 173.988

Weight <225g max.

Diagonal Size 14.0"

Thickness 3.0mm max.

Interface eDP 1.4a

Surface Treatment IPS
Touch Enabled Yes

Contrast Ratio "Privacy mode 150:1 (typ.) – Privacy, 110:1(min.)- Privacy

Refresh Rate 120Hz

Brightness Privacy mode 350nits

Pixel Resolution 1920 x 1080 (FHD)

Format RGB

Backlight LED

Color Gamut Coverage 72%

Color Depth 6 bits + Hi FRC

Viewing Angle Privacy mode CR>2: UWVA 50/50/85/85

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

Technical Specifications

STORAGE¹

SSD 128 GB 2280 M2 SATA-3 TLC Drive Weight 0.02 lb (10 g)

Capacity 128 GB

Height 0.09 in (2.3 mm)
Width 0.87 in (22 mm)
Interface ATA-8, SATA 3.0
Maximum Sequential Read Up To 520 MB/s
Maximum Sequential Write Up To 450 MB/s
Logical Blocks 250,069,680

Operating Temperature 32° to 158°F (0° to 70°C) [ambient temp]

Features DIPM; TRIM; DEVSLP

SSD 1 TB 2280 PCIe-3x4 NVMe

TLC DS

 Drive Weight
 0.02 lb (10 g)

 Capacity
 1024 GB

Height0.09 in (2.3 mm)Width0.87 in (22 mm)InterfacePCIe NVMe Gen3X4Maximum Sequential ReadUp To 2800 MB/sMaximum Sequential WriteUp To 1600 MB/sLogical Blocks2,000,409,264

Operating Temperature 32° to 158°F (0° to 70°C) [ambient temp]

Features TRIM; L1.2

Capacity 256 GB

Height 0.09 in (2.3 mm)
Width 0.87 in (22 mm)
Interface PCIe NVMe Gen3X4
Maximum Sequential Read Up To 2800 MB/s
Maximum Sequential Write Up To 1600 MB/s
Logical Blocks 500,118,192

Operating Temperature 32° to 158°F (0° to 70°C) [ambient temp]

Features TRIM; L1.2

Technical Specifications

SSD 256 GB 2280 M2 SATA-3 Self Drive Weight

Encrypted OPAL2 TLC

 Drive Weight
 0.02 lb (10 g)

 Capacity
 256 GB

Height0.09 in (2.3 mm)Width0.87 in (22 mm)InterfaceATA-8, SATA 3.0Maximum Sequential ReadUp To 530 MB/sMaximum Sequential WriteUp To 515 MB/sLogical Blocks500,118,192

Operating Temperature 32° to 158°F (0° to 70°C) [ambient temp]

Features DIPM; TRIM; DEVSLP

256 GB 2280 PCIe NVMe Value Solid State Drive

 Drive Weight
 0.02 lb (10 g)

 Capacity
 256 GB

Height 0.09 in (2.3 mm)
Width 0.87 in (22 mm)
Interface PCIe NVMe Gen3X4
Maximum Sequential Read Up To 1700 MB/s
Maximum Sequential Write Up To 600 MB/s
Logical Blocks 500,118,192

Operating Temperature 32° to 158°F (0° to 70°C) [ambient temp]

Features TRIM; L1.2

SSD 360 GB 2280 PCle-3x4 NVMe Drive Weight

TLC

Prive Weight 0.02 lb (10 g)
Capacity 360 GB

Height 0.09 in (2.3 mm)
Width 0.87 in (22 mm)
Interface PCIe NVMe Gen3X4
Maximum Sequential Read Up To 1700 MB/s
Maximum Sequential Write Up To 600 MB/s
Logical Blocks 703,282,608

Operating Temperature 32° to 158°F (0° to 70°C) [ambient temp]

Features TRIM; L1.2

Technical Specifications

Capacity 512 GB

Height 0.09 in (2.3 mm)
Width 0.87 in (22 mm)
Interface PCIe NVMe Gen3X4
Maximum Sequential Read Up To 2600 MB/s
Maximum Sequential Write Up To 1400 MB/s
Logical Blocks 1,000,215,216

Operating Temperature 32° to 158°F (0° to 70°C) [ambient temp]

Features TRIM; L1.2

SSD 512GB 2280 M2 SATA-3 TLC Drive Weight

FIPS

Drive Weight 0.02 lb (10 g) **Capacity** 512GB

Height 0.09 in (2.3 mm)
Width 0.87 in (22 mm)
Interface ACS-3, SATA 3.2
Maximum Sequential Read Up To 530 MB/s
Maximum Sequential Write Up To 400 MB/s
Logical Blocks 1,000,215,216

Operating Temperature 32° to 158°F (0° to 70°C) [ambient temp]

Features DIPM; TRIM; DEVSLP

SSD 512 GB 2280 PCIe-3x4 NVMe Drive Weight Self Encrypted OPAL2 TLC Capacity

Prive Weight 0.02 lb (10 g)
Capacity 512GB

Height 0.09 in (2.3 mm)

Width 0.87 in (22 mm)

Interface PCIe NVMe Gen3X4

Maximum Sequential Read Up To 2900 MB/s

Maximum Sequential Write Up To 1400 MB/s

Logical Blocks 1,000,215,215

Operating Temperature 32° to 158°F (0° to 70°C) [ambient temp]

Features DIPM; TRIM; DEVSLP

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

Technical Specifications

NETWORKING/COMMUNICATIONS

Intel® 802.11a/b/ (2x2) WiFi and

Bluetooth® 4.2 Combo¹

Intel® 802.11a/b/q/n/ac Wireless LAN Standards

IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n

IEEE 802.11n IEEE 802.11ac

Interoperability Wi-Fi certified **Frequency Band** 802.11b/g/n

• 2.402 – 2.482 GHz

802.11a/n

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

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: MCS 0 ~ MCS 15, (20MHz, and 40MHz)

802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, and 80MHz)

Modulation Direct Sequence Spread Spectrum

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

• 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 •IEEE 802.11i •Cisco Certified Extensions, all versions through CCX4 and CCX Lite

WAPI

Network Architecture

Models

Ad-hoc (Peer to Peer)

Infrastructure (Access Point Required)

Roaming IEEE 802.11 compliant roaming between access points

Output Power² • 802.11b: +14dBm minimum

802.11g: +12dBm minimum802.11a: +12dBm minimum

802.11n HT20(2.4GHz): +12dBm minimum
802.11n HT40(2.4GHz): +12dBm minimum
802.11n HT20(5GHz): +10dBm minimum
802.11n HT40(5GHz): +10dBm minimum
802.11ac VHT80(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 compliant power management

802.11 compliant power saving mode

Technical Specifications

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: -84dBm maximum 802.11ac, MCS9: -59dBm maximum

Antenna type High efficiency antenna with spatial diversity, mounted in the display

enclosure

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

Form Factor PCI-Express Half-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 White - Radio ON

HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology

Bluetooth Specification 4.0/4.1/4.2 Compliant **Frequency Band** 2402 to 2480 MHz

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

Data Rates andLegacy: 3 Mbps data rate; throughput up to 2.17 Mbps **Throughput**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 + 4 dBm for BR and EDR.

Power Consumption Peak (Tx) 330 mW

Peak (Rx) 230 mW

Selective Suspend 17 mW

Electrical Interface USB 2.0 compliant

Technical Specifications

Bluetooth Software

Supported

Microsoft Windows Bluetooth Software

Power Management

Microsoft Windows ACPI, and USB Bus Support FCC (47 CFR) Part 15C. Section 15.247 & 15.249

Certifications

Power Management Certifications ETS 300 328, ETS 300 826 Low Voltage Directive IEC950

UL, CSA, and CE Mark

Bluetooth Profiles

Supported

BT4.1-ESR 5/6/7 Compliance

LE Link Layer Ping

LE Dual Mode LE Link Layer

LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels

Train Nudging & Interlaced Scan BT4.2 ESR08 Compliance

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

LE Privacy 1.2 - Extended Scanner Filter Policies

LE Data Packet Length Extension

FAX Profile (FAX)

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

Advanced Audio Distribution Profile (A2DP)

- 1. Wireless access point and Internet service is required. Availability of public wireless access point is limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices
- 2. 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.
- 3. Check latest software/driver release for updates on supported security features.
- 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/q (OFDM modulation).



Technical Specifications

HP lt4132 LTE/HSPA+ 4G Technology/Operating Mobile Broadband⁵

bands

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

850 (Band 5), 2600 (Band 7), 900 (Band 8) MHz,

800 (Band 20), 700 (Band 28) MHz.

HSPA+: 2100 (Band 1), 1900 (Band 2), 850 (Band 5), 900 (Band 8) MHz E-GPRS: 1900 (Band 2), 1800 (Band 3), 850 (Band 5), 900 (Band 8) MHz

Wireless protocol

standards

3GPP Release 10 LTE Specification CAT.4, 20MHz BW

WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification

E-GPRS: Class B, Multi-slot class 12, coding schemes CS1 - CS4

and MSC1 - MSC9

GPS Standalone, A-GPS (MS-B and LTO)

GPS bands 1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz

Maximum data rates LTE: 150 Mbps (Download), 50 Mbps (Upload)

> DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload) HSPA+: 21Mbps (Download), 5.76 Mbps (Upload) EDGE: 236.8 kbps (Download), 236.8 kbps (Upload) GPRS: 85.6 kbps(Download), 85.6 kbps (Upload)

Maximum output power

LTE: 23 dBm

HSPA+: 23.5 dBm

E-GPRS 1900/1800: 26 dBm E-GPRS 900/850: 27 dBm GPRS 1900/1800: 29.5 dBm GPRS 900/850: 32.5 dBm

Maximum power consumption

LTE: 1,200 mA (peak); 900 mA (average) HSPA+: 1,100 mA (peak); 800 mA (average) E-GPRS: 2,600 mA (peak); 500 mA (average)

Form Factor M.2, 3042-S3 Key B

Weight 6 g

Dimensions 42 30 x 2.3 mm

(Length x Width x

Thickness)

5. Wireless access point and Internet service is required. Availability of public wireless access point is limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices

Technical Specifications

Intel® XMM™ 7360 LTE-Advanced⁶ **Technology/Operating**

bands

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

1700/2100 (Band 4), 850 (Band 5), 2600 (Band 7), 900 (Band 8), 1400 (Band 11), 700 (Band 12 lower), 700 (Band 13 upper), 700 (Band 17 lower), 850 (Band 18 lower), 850 (Band 19 upper), 800 (Band 20), 1400 (Band 21), 850 (Band 26), 700 (Band 28), 700 (Band 29 RX only), 2300 (Band 30),

2100 (Band 66).

TDD LTE: 2600 (Band 38), 1900 (Band 39), 2400 (Band 40), 2500 (Band 41).

HSPA+: 2100 (Band 1), 1900 (Band 2), 1700/2100 (Band 4),

850 (Band 5), 900 (Band 8) MHz

Wireless protocol

standards

3GPP Release 11 LTE Specification CAT.9, DL 60MHz BW throughput up to

450Mbps; UL 20MHz throughput up to 50Mbps

WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification

GPS Standalone, A-GPS (MS-A, MS-B and XTRA)

GPS bands 1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz, Beidou 1561.098

MHz

Maximum data rates LTE: 450 Mbps (Download), 50 Mbps (Upload)

DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload) HSPA+: 21 Mbps (Download), 5.76 Mbps (Upload)

Maximum output power LTE: 23 dBm

HSPA+: 23.5 dBm

Maximum powerLTE: 1,200 mA (peak); 900 mA (average)consumptionHSPA+: 1,100 mA (peak); 800 mA (average)

Form Factor M.2, 3042-S3 Key B

Weight 5.8 g

Dimensions 42 x 30 x 2.3 mm

(Length x Width x

Thickness)

6. Wireless access point and Internet service is required. Availability of public wireless access point is limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices



Technical Specifications

Realtek 802.11b/g/n (2x2) WiFi and

Bluetooth® 4.2 Combo⁷

Wireless LAN Standards IEEE 802.11a

IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac

InteroperabilityWi-Fi certifiedFrequency Band802.11b/g/n [2]

• 2.402 - 2.482 GHz

Data Rates 802.11b: 1, 2, 5.5, 11 Mbps

802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps

802.11n: MCS 0 ~ MCS 07, (20MHz)

Modulation Direct Sequence Spread Spectrum

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

• 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.

IEEE 802.11 compliant roaming between access points

WPA2 certificationIEEE 802.11i

Cisco Certified Extensions, all versions through CCX4 and CCX Lite

WAPI

Network Architecture

Models Roaming Ad-hoc (Peer to Peer)

Infrastructure (Access Point Required)

Output Power⁸ • 802.11b: +14dBm minimum

• 802.11g : +12dBm minimum • 802.11a : +12dBm minimum

802.11n HT20(2.4GHz): +12dBm minimum
 802.11n HT40(2.4GHz): +12dBm minimum
 802.11n HT20(5GHz): +10dBm minimum
 802.11n HT40(5GHz): +10dBm minimum
 802.11ac VHT80(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 compliant power management

802.11 compliant power saving mode

Receiver Sensitivity¹⁰ 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: -84dBm maximum



Technical Specifications

802.11ac, MCS9: -59dBm maximum

Antenna type High efficiency antenna with spatial diversity, mounted in the display

enclosure

Two embedded dual band 2.4/5 GHz antennas are provided to the card to

support WLAN MIMO communications and Bluetooth communications

Form Factor PCI-Express M.2 MiniCard

Dimensions Type 2230 : 2.3 x 22.0 x 30.0 mm

0r

Type 1630: 2.3 x 16.0 x 30.0 mm

Weight Type 2230: 2.8g

0r

Type 1630: 2g

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)

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 White - Radio ON



Technical Specifications

HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology

Bluetooth Specification 4.0/4.1/4.2 Compliant **Frequency Band** 2402 to 2480 MHz

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

Data Rates andLegacy : 3 Mbps data rate; throughput up to 2.17 MbpsThroughputBLE : 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 + 4 dBm for BR and EDR.

7. Wireless access point and Internet service is required. Availability of public wireless access point is limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices

- 8. 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.
- 9. Check latest software/driver release for updates on supported security features.
- 10. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).



Technical Specifications

Near Field Communications Controller (optional)

Dimensions (L x W x H) Module 25 mm by 10 mm by 2.0 mm

Chipset NPC100
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(1)

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(1) ISO/IEC 14443 A

ISO/IEC 14443 B and B'

MIFARE FeliCa

Frequency 13.56 MHz

NFC Modes Supported Reader/Writer, Peer-to-Peer Raw RF Data Rates 106, 212, 424, 848 kbps

Operating temperature 0°C to 70°C **Storage temperature** -20°C to 125°C

Humidity 10-90% operating

5-95% non-operating

Supply Operating

voltage

2.97 to 5.5 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



Technical Specifications

Detected Test Tag Type 4 Total 282.3 mA

Net Module 235.3 mA

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

external to module.

POWER

AC Adapter 65 Watt nPFC Dimensions **USB** type C

Weight Input

74x74x28.5mm unit: 245q +/- 10q

Input Efficiency

86.7% min at 115 Vac/ 230Vac @ 9V/3A 88% min at 115 Vac/ 230Vac @ 10V/5A 88% min at 115 Vac/ 230Vac @ 12V/5A 89% min at 115 Vac/ 230Vac @ 15V/4.33A 89% min at 115 Vac/ 230Vac @ 20V/3.25A

81.5% min at 115 Vac/ 230Vac @ 5V/3A

Input frequency range 47 ~ 63 Hz

Input AC current 1.7 A at 90 VAC and maximum load

Output **Output power** 65W

> **DC** output 5V/9V/10V/12V/15V/20V Hold-up time 5ms at 115 Vac input

Output current limit <8.0A

Non-operating (storage)

Environmental Design Operating temperature

32°F to 95°F (0° to 35°C) -4°F to 185°F (-20°to 85°C)

temperature

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

Humidity 5% to 95% **Storage Humidity** 5% to 95%

EMI and Safety Certifications

CE Mark - full compliance with LVD and EMC directives

Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B.

FCC Class B. CISPR22 Class B. CCC. NOM-1 NYCE. MTBF - over 100.000 hours at 25°C ambient condition.

AC Adapter 45 Watt nPFC Dimensions **USB** type C

Weight Input

62.0x62.0x28.5mm unit: 220g +/- 10g

Input Efficiency

Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec:5V: 81.5%9V:86.7%10V:87.5%12V:87.8%15V:

87.8%20V:87.8%

Input frequency range

47 ~ 63Hz

Input AC current

Max. 1.4 A at 90 Vac

Output **Output power**

> 9V/27W 10V/37.5W 12V/45W 15V/45W 20V/45W

5V/15W



Technical Specifications

DC output 5V / 9V / 10V /12V / 15V / 20V

Hold-up time 5ms at 115 Vac input

Output current limit <5.0A

Connector **USB Type-C**

320F to 950F (0oto 350C) **Environmental Design** Operating temperature

> -4oF to 185oF (-20oto 85oC) Non-operating (storage)

temperature

Altitude 0 to 16.400 ft (0 to 5000m)

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

Safety Certifications CE Mark - full compliance with LVD and EMC directives

> Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B,

FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE. MTBF - over 200,000 hours at 25°C ambient condition.

HP 45W Smart AC adapter Dimensions 3.74 x 1.57 x 1.04 in (9.5 x 4.0 x 2.65 cm)

> Weight 0.386 lb (175g) max

Input **Input Efficiency** 87.74% at 115Vac and 88.4% at 230Vac

> Input frequency range 47 ~ 63Hz

Input AC current Max. 1.4 A at 90 Vac

Output **Output power** 45W

> DC output 19.5V

Hold-up time 5 msec at 115 VAC input

Output current limit <8.0A

Connector 4.5mm Barrel Type, 3 pin/grounded, mates with interchangeable cords

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

Non-operating (storage) -4° 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%

CE Mark - full compliance with LVD and EMC directives **Safety Certifications**

> Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV: Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B.

FCC Class B. CISPR22 Class B. CCC. NOM-1 NYCE. MTBF - over 200,000 hours at 25°C ambient condition.

HP 65W Smart AC adapter Dimensions 107.0x47.0x30.0mm

> Weight unit: 250g +/- 10g

Input **Input Efficiency** 88.0 % at 115 Vac and 89.0 % at 230Vac

> Input frequency range 47 ~ 63 Hz

Input AC current Max. 1.7 A at 90 Vac

Output **Output power** 65W

> DC output 19.5V

Hold-up time 5ms at 115 Vac input

<11.0A Output current limit

Technical Specifications

Connector 4.5mm Barrel Type

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%

Safety Certifications CE Mark - full compliance with LVD and EMC directives

> Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B,

FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE. MTBF - over 200.000 hours at 25°C ambient condition.

HP 65W EM Smart AC adapter

Dimensions 102x55x30mm Weight 270g +/- 10g

Input **Input Efficiency** 87% min at 115V/230V

> Input frequency range 47 to 63 Hz

Input AC current 1.7 A at 90 VAC and maximum load

Output DC output 65W(19.5V/3.33A)

> 5 msec at 115 VAC input Hold-up time

Output current limit <11A, Over voltage protection- 29V max

automatic shutdown

Connector 4.5mm Barrel Type, 3 pin/grounded, mates with interchangeable cords

Environmental Design Operating temperature 0° to 35° C Non-operating (storage) -20° to 85° C

temperature

Altitude 0 to 5,000 m **Humidity** 0% to 95% **Storage Humidity** 0% to 95%

CE Mark - full compliance with LVD and EMC directives **Safety Certifications**

> Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV: Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B.

FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE. MTBF - over 200,000 hours at 25°C ambient condition.

Battery SS 3 Cell 50 WHr Long Life -PL

Dimensions $(H \times W \times L)$

L 278.7mm x W 76.3mm x H 7.1mm

Weight 193 +/- 10q

Cells/Type

3cell Lithium-Ion Polymer cell / P604883A1

Voltage 11.55V/

Energy **Amp-hour capacity** 4.113Ah/ 4.330Ah

> **Watt-hour capacity** 50Wh

Operating (Charging) 0° to 50° C **Temperature**

-10° to 60° C Operating (Discharging)

Fuel Gauge LED N/A Warranty 3 years **Optional Travel Battery**

Available

No



Technical Specifications

COUNTRY OF ORIGIN

China



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

Туре	Description	Part #
Cases	HP Exec Midnight 15.6" Backpack	1KM16AA
	HP Slim Top Load	F3W15AA
Docking	HP Thunderbolt Dock 120W G2 (Available in May 2018)	2UK37AA
	HP USB-C Universal Dock	1MK33AA
	HP USB-C Mini Dock	1PM64AA
	HP UltraSlim Docking Station	D9Y32AA
	HP USB-C Dock G4	TBD
Input/Output	HP Slim Wireless Keyboard and Mouse	T6L04AA
	HP Slim USB Keyboard and Mouse	T6T83AA
	HP Wireless (Link-5) Keyboard	T6U20AA
	HP Wireless Premium Mouse	1JR31AA
	HP USB Premium Mouse	1JR32AA
	HP Comfort Grip Wireless Mouse	H2L63AA
	HP Ultra Mobile Wireless Mouse	H6F25AA
	HP Slim Bluetooth Mouse	F3J92AA
	HP Elite Presenter Mouse	2CE30AA
	HP USB-C to USB-A Hub	Z6A00AA
	HP USB-C to DP	N9K78AA
	HP USB-C to VGA	N9K76AA
	HP HDMI to DVI	F5A28AA
	HP HDMI to VGA	H4F02AA
	HP USB-C to HDMI 2.0	1WC36AA
Power	HP 45W USB-C Power Adapter	1HE07AA
	HP 65W USB-C Power Adapter	1HE08AA
	HP Notebook Power Bank	N9F71AA
	HP USB-C Notebook Power Bank	1TZ86AA
	HP 65W Slim AC Adapter	H6Y82AA
	HP 90W Slim AC Adapter	H6Y83AA
	HP 90W Slim Combo AC Adapter w/ USB	H6Y84AA
Storage	HP USB External DVDRW Drive	F2B56AA
	HP 256GB M2 PCIe NVME SSD TLC (2280)	1FU87AA
	HP 512GB M2 PCIe NVME SSD TLC (2280)	1FU88AA
Momory	HD 4CP 2400MHz DDB4 Momery	Z4Y84AA
Memory	HP 4GB 2400MHz DDR4 Memory	Z4Y85AA Z4Y85AA
	HP 8GB 2400MHz DDR4 Memory	Z4Y85AA Z4Y86AA
	HP 16GB 2400MHz DDR4 Memory	Z4100AA



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

Security	HP Docking Station Cable Lock	AU656AA
	HP Keyed Cable Lock	TOY14AA
	HP Keyed Cable Lock 10mm	T1A62AA
	HP Dual Head Keyed Cable Lock	T1A64AA
UCC	HP USB Collaboration Keyboard	Z9N38AA
	HP Wireless Collaboration Keyboard	Z9N39AA
	HP UC Wireless Mono Headset	W3K08AA
	HP UC Wireless Duo Headset	W3K09AA
	HP UC Speaker Phone	K7V16AA
Displays	HP EliteDisplay E273m 27-inch Monitor	1FH51AA
	HP EliteDisplay E273q 27-inch Monitor	1FH52AA
	HP EliteDisplay E243 23.8-inch Monitor	1FH47AA

Docking station model	Total number of supported displays (incl. the notebook display)	Max.resolutions supported	Dock Connectors	Technical limitations
HP UltraSlim Docking Station	3	Dual 2.5K @ 60Hz	2xDP, 1xVGA	Dual 2.5k only with both displays into DP
HP Thunderbolt Dock G2 (Available 2Q 2018)	3	Dual 4K @ 60Hz	2xDP, 1xVGA, 1xTB, 1xUSB-C alt- mode	Dual 4k only with one display in to DP and + TB port or USB-C alt mode + TB port
HP Elite USB-C Dock G4 (Available 2Q 2018)	3	Dual 2K @ 60Hz Single 4K @ 60Hz (3840 x 1440)	1xHDMI, 2xDP	
HP USB-C Universal Dock	3	Dual 4K @ 60Hz Single 5K @ 60Hz	2xDP	
HP USB-C Travel Dock	2	Single 2K @ 60Hz	1xHDMI, 1xVGA	Single external display Only HDMI or VGA at the time
HP USB-C Mini Dock	2	Single 4K @ 30Hz	1xHDMI, 1xVGA	Single external display Only HDMI or VGA at the time

Summary of Changes

Date of change:	Version History:		Description of change:
February 12, 2018	V1 to V2	Update	Processor speed updated
February 28, 2018	V2 to V3	Update	256GB 2280 PCIe NVMe Value Solid State Drive features specs added
March 12, 2018	V3 to V4	Update	Processor list updated
April 30, 2018	V4 to V5	Update	Weight updated

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