

QuickSpecs

Technical Specifications

HP EliteBook 820 G4 Notebook PC



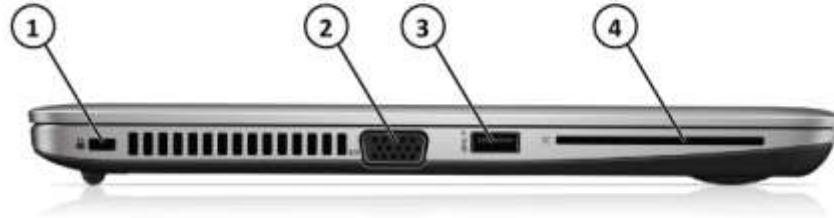
Front / Right

- | | |
|---|--|
| 1. WLAN antennas (2) | 11. USB 3.1 Gen 1 port |
| 2. WWAN antennas (2) | 12. Microphone/headphone combo jack |
| 3. Internal microphones (2) | 13. DisplayPort™ 1.2 |
| 4. Webcam LED (select models) | 14. USB-C™ port |
| 5. Webcam (select models) | 15. Fingerprint reader (select models) |
| 6. SIM card slot | 16. NFC (select models) |
| 7. Power connector | 17. Touchpad buttons (4) |
| 8. Docking connector | 18. Indicator LEDs: Wireless Light, Power Light, AC Adapter/Battery Light, Storage Usage Light |
| 9. Ethernet port | 19. Touchpad |
| 10. SD card slot (please move the arrow to be under #13. See red arrow above. The SD card slot is located under the display port) | 20. Pointstick |



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Left

- 1. Security lock slot
- 2. VGA port
- 3. USB 3.1 Gen 1 Charging port
- 4. Smart Card Reader



QuickSpecs

Technical Specifications

HP EliteBook 840 G4 Notebook PC



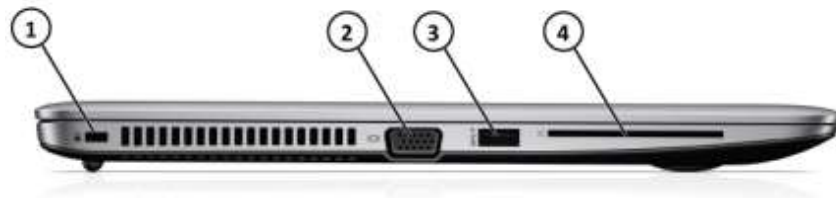
Front / Right

- | | |
|-------------------------------|--|
| 1. WLAN antennas (2) | 13. Microphone/ headphones combo jack |
| 2. WWAN antennas (2) | 14. SD card slot |
| 3. Internal microphones (2) | 15. DisplayPort™ 1.2 |
| 4. Webcam LED (select models) | 16. USB-C™ Basic port |
| 5. Webcam (select models) | 17. Fingerprint reader (select models) |
| 6. Wireless on/off button | 18. NFC (select models) |
| 7. Speaker mute button | 19. Touchpad buttons (4) |
| 8. SIM card slot | 20. Indicator LEDs: Wireless Light, Power Light, AC Adapter/Battery Light, Storage Usage Light |
| 9. Power connector | 21. Touchpad |
| 10. Docking connector | 22. Pointstick |
| 11. Ethernet port | 23. Power button |
| 12. USB 3.1 Gen 1 port | |



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Left

- 1. Security lock slot
- 2. VGA port
- 3. USB 3.1 Gen 1 Charging port
- 4. Smart Card Reader



QuickSpecs

Technical Specifications

HP EliteBook 850 G4 Notebook PC



Front / Right

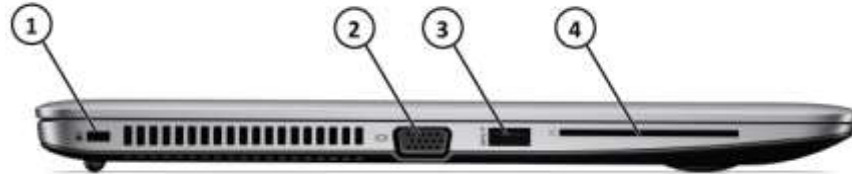
- | | |
|-------------------------------|--|
| 1. WLAN antennas (2) | 13. SD card slot |
| 2. WWAN antennas (2) | 14. Microphone/ headphones combo jack |
| 3. Internal microphones (2) | 15. DisplayPort™ 1.2 |
| 4. Webcam LED (select models) | 16. USB-C™ Basic port |
| 5. Webcam (select models) | 17. Fingerprint reader (select models) |
| 6. Wireless on/off button | 18. NFC (select models) |
| 7. Speaker mute button | 19. Touchpad buttons (4) |
| 8. SIM card slot | 20. Indicator LEDs: Wireless Light, Power Light, AC Adapter/Battery Light, Storage Usage Light |
| 9. Power connector | 21. Touchpad |
| 10. Docking connector | 22. Pointstick |



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- 11. Ethernet port
- 12. USB 3.1 Gen 1 port
- 23. Power button
- 24. 10-key Numeric Keypad



Left

- 1. Security lock slot
- 2. VGA port
- 3. USB 3.1 Gen 1 Charging port
- 4. Smart Card Reader



Technical Specifications

AT A GLANCE

- Stylish magnesium and aluminum chassis provides optimal durability with minimal weight
- Thin design but no adapters are needed with built-in VGA, drop-jaw RJ-45 Ethernet port, USB 3.1 Gen 1 Ports, USB Type-C™, and full-size DisplayPort™ 1.2 for high resolution support
- Design allows memory, storage, wireless modules, and battery to be customer serviceable and upgradeable
- Choice of 7th generation Intel® Core™ i7, i5 and i3 processors
- Integrated Intel® HD Graphics 620 or AMD Radeon™ R7 M465 discrete graphics (HP EliteBook 850 option only)
- Optimize your audio experience for conference calls and remote collaboration with optional HD webcam, dual-array microphones, premium speakers, HP Noise Cancellation Software, HP Audio Boost, and audio custom-tuned by HP and Bang & Olufsen
- Featuring HP Premium Keyboard with Pointstick and 10-key numeric keypad available on HP EliteBook 850
- Optional back-lit keyboard keeps you productive in all settings with HP DuraKeys to help protect keys from fading
- Passed MIL-SPEC 810G testing, plus an additional 120,000 hours of reliability testing through HP's Total Test Process¹
- Enhanced security features including TPM2.0, SmartCard Reader, HP Sure Start self-healing BIOS, HP Client Security, Self-Encrypting storage drives, and optional Fingerprint reader
- LED-backlit displays:
 - HP EliteBook 820: 31.75 cm (12.5") diagonal HD, FHD Non-Touch or FHD Touch
 - HP EliteBook 840: 35.56 cm (14") diagonal HD, FHD, QHD Non-Touch or FHD Touch
 - HP EliteBook 850: 39.6 cm (15.6") diagonal HD, FHD, UHD Non-Touch or FHD Touch
- Flexible wireless connectivity options including 4G LTE mobile broadband
- Easily dock with the optional HP UltraSlim Docking Station
- Choice of hard drives up to 1 TB and solid state drives up to 512 GB
- DDR4 memory up to 32 GB
- Preinstall Windows 10, FreeDOS 2.0 or NeoKylin Linux 64 versions
- Supports fast charging (50% in 30 minutes) with no impact on battery recharge cycles²
- UEFI 2.5 specification version

1. MIL STD 810G testing is not intended to demonstrate fitness for Department of Defense contracts requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Damage under the MIL STD test conditions or any accidental damage requires an optional HP Accidental Damage Protection Care Pack.

2. 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.

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



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PRODUCT NAMES

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

OPERATING SYSTEM

Preinstalled Windows 10 Pro 64¹
Windows 10 Home 64¹
FreeDOS 2.0
NeoKylin Linux 64

Web Supported Windows 10 Enterprise 64¹

Note: Your product does not support Windows 8 or Windows 7

In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on <http://www.support.hp.com>.

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>.

PROCESSOR

Intel® Core™ i7-7600U (2.8 GHz, up to 3.9 GHz with Intel Turbo Boost Technology, 4 MB cache, 2 cores)¹
Intel® Core™ i7-7500U (2.7 GHz, up to 3.5 GHz with Intel Turbo Boost Technology, 4 MB cache, 2 cores)^{1,2}
Intel® Core™ i5-7300U (2.6 GHz, up to 3.5 GHz with Intel Turbo Boost Technology, 3 MB cache, 2 cores)¹
Intel® Core™ i5-7200U (2.5 GHz, up to 3.1 GHz with Intel Turbo Boost Technology, 3 MB cache, 2 cores)^{1,2}
Intel® Core™ i3-7100U (2.4 GHz, 3 MB cache, 2 cores)^{1,2}

Processors Family

7th Generation Intel® Core™ i3 processor (i3-7100 model)
7th Generation Intel® Core™ i5 processor (i5-7300, i5-7200 models)
7th Generation Intel® Core™ i7 processor (i7-7500, i7-7600 models)

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>.

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



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1. 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 is not a measurement of higher performance.

2. Not available with Intel iAMT (Not available with vPro™)

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

Note: Your product does not support Windows 8 or Windows 7

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

Chipset integrated with processor

INTEL® CORE I5 WITH vPRO/CORE I7 WITH vPRO TECHNOLOGY CAPABLE

Intel® Core™ i5 with vPro™ and Intel® Core® i7 with vPro™ technology is a selectable feature that is available on units configured with select processors, on select Intel® Wireless WLAN module and a preinstalled Windows operating system.

1. Requires a Windows operating system, network hardware and software, connection with a power source, and a direct (non-VPN) corporate network connection which is either cable or wireless LAN.

NOTE: Some functionality of this technology, such as Intel® Active management technology and Intel Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel vPro technology is dependent on 3rd party software providers. Microsoft Windows required.

GRAPHICS

Integrated

Intel® HD Graphics 620

Discrete

AMD Radeon™ R7 M465

2 GB GDDR5 dedicated

(HP EliteBook 850 only)



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DISPLAY

HP EliteBook 820

Internal

Non-Touch

31.75 cm (12.5") diagonal HD SVA anti-glare slim LED-backlit non-touch (1366 x 768)

31.75 cm (12.5") diagonal HD SVA anti-glare slim LED-backlit non-touch with camera (1366 x 768)

31.75 cm (12.5") diagonal FHD UWVA anti-glare ultra-slim LED-backlit non-touch (1920 x 1080)

31.75 cm (12.5") diagonal FHD UWVA anti-glare ultra-slim LED-backlit non-touch with camera (1920 x 1080)

Touch

31.75 cm (12.5") diagonal FHD UWVA ultra slim with camera, Corning® Gorilla® Glass 4 LED-backlit touch screen (1920 x 1080)

HP EliteBook 840

Internal

Non-Touch

35.56 cm (14") diagonal HD SVA anti-glare slim LED-backlit non-touch (1366 x 768)

35.56 cm (14") diagonal HD SVA anti-glare slim LED-backlit non-touch with camera (1366 x 768)

35.56 cm (14") diagonal FHD SVA anti-glare slim LED-backlit non-touch (1920 x 1080)

35.56 cm (14") diagonal FHD SVA anti-glare slim LED-backlit non-touch with camera (1920 x 1080)

35.56 cm (14") diagonal FHD UWVA anti-glare slim LED-backlit non-touch (1920 x 1080) (Planned to be available second quarter 2017.)

35.56 cm (14") diagonal FHD UWVA anti-glare slim LED-backlit non-touch with camera (1920 x 1080) (Planned to be available second quarter 2017.)

35.56 cm (14") diagonal QHD UWVA anti-glare ultraSlim LED-backlit non-touch (2560 x 1440)

35.56 cm (14") diagonal QHD UWVA anti-glare ultraSlim LED-backlit non-touch with camera (2560 x 1440)

HP Sure View integrated privacy screen 35.56 cm (14") diagonal FHD SVA anti-glare slim LED-backlit non-touch with camera (1920 x 1080) ([Must be configured at purchase.](#))

Touch

35.56 cm (14") diagonal FHD SVA slim with camera, Corning® Gorilla® Glass 4 LED-backlit touch screen (1920 x 1080)

HP EliteBook 850

Internal

Non-Touch

39.6 cm (15.6") diagonal HD SVA anti-glare slim LED-backlit non-touch (1366 x 768)

39.6 cm (15.6") diagonal HD SVA anti-glare slim LED-backlit non-touch with camera (1366 x 768)

39.6 cm (15.6") diagonal FHD SVA anti-glare slim LED-backlit non-touch (1920 x 1080)

39.6 cm (15.6") diagonal FHD SVA anti-glare slim LED-backlit non-touch with camera (1920 x 1080)

39.6 cm (15.6") diagonal FHD UWVA anti-glare slim LED-backlit non-touch (1920 x 1080) (Planned to be available first quarter 2017.)

39.6 cm (15.6") diagonal FHD UWVA anti-glare slim LED-backlit non-touch with camera (1920 x 1080) (Planned to be available first quarter 2017.)

39.6 cm (15.6") diagonal UHD UWVA anti-glare slim LED-backlit non-touch (3840 x 2160)

39.6 cm (15.6") diagonal UHD UWVA anti-glare slim LED-backlit non-touch with camera (3840x 2160)

Touch

39.6 cm (15.6") diagonal FHD SVA slim with camera, Corning® Gorilla® Glass 4 LED-backlit touch screen (1920 x 1080)



Technical Specifications

VGA

Port supports resolutions up to 1920 x 1200 external resolution @60 Hz

DisplayPort™ 1.2

Supports resolutions up to 4096 x 2304 @ 60Hz

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

Displays support

Supports dual display through the dock

Supports 3 independent displays if used with optional HP UltraSlim Docking Station.²

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

1. HD content required to view HD images.
2. Sold separately or as an optional feature.

STORAGE AND DRIVES

SATA, 7 mm 2.5" Hard Drives

500 GB 7200 rpm Hard Drive

500 GB 7200 rpm Self-Encrypting Hard Drive (Opal 2)

500 GB 7200 rpm Self-Encrypting Hard Drive FIPS-140-2

500 GB Hybrid 8 GB Cache (Not available in the North America)

1 TB 5400 rpm Hard Drive

M.2 (NGFF) 2280 Solid State Drives

128 GB SATA-3 Value Solid State Drive

128 GB SATA-3 TLC Solid State Drive

256 GB PCIe Gen3x4 NVMe TLC Solid State Drive

256 GB PCIe Gen3x4 NVMe Value Solid State Drive

256 GB SATA-3 TLC Self-Encrypting Solid State Drive (Opal 2)

360 GB PCIe Gen3x4 NVMe TLC Solid State Drive

512 GB PCIe Gen3x4 NVMe Value Solid State Drive

512 GB PCIe Gen3x4 NVMe TLC Solid State Drive

512 GB PCIe Gen3x4 NVMe MLC Solid State Drive

512 GB PCIe Gen 3x4 NVMe TLC Self-Encrypting Solid State Drive (Opal 2)

512 GB SATA-3 TLC Solid State Drive FIPS-140-2

1 TB PCIe Gen 3x4 NVMe TLC Solid State Drive

NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30GB of system disk is reserved for system recovery software.



Technical Specifications

HP 3D DriveGuard (Windows and Hard Drives only)

The hard drive is mounted directly to the notebook frame, reducing the transmission of shock to the hard drive

Dual Drive Configuration

HP EliteBook 840 & 850 can be configured with a hard drive and M.2 SSD drive.

MEMORY

Supports the following configurations

DDR4 – 2400 SDRAM (Transfer rates up to 2133 MT/s)

Two SODIMM slots supporting dual-channel memory

Both slots are customer accessible / upgradeable

Standard

4096 MB Total System Memory (4096 MB x 1)

8192 MB Total System Memory (4096 MB x 2)

8192 MB Total System Memory (8192 MB x 1)

16384 MB Total System Memory (16384 MB x 1)

16384 MB Total System Memory (8192 MB x 2)

32768 MB Total System Memory (16384 MB x 2)

Maximum Memory

Up to 32 GB

Dual-channel

Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory slots.

NOTE: Improved system performance when memory is added in pairs (dual channel).

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

Wireless

Support for a broad range of secure, integrated wireless LAN and wireless WAN options featuring support for the latest industry standards. Optional Broadband Wireless (WWAN) requires a Windows operating system and is available in select countries as a standard, factory configurable feature only. Integrated Bluetooth® is also available with any of the supported wireless LAN and wireless WAN options.

Broadband Wireless (WWAN) Via M.2 Minicard

HP It4120 Qualcomm® Snapdragon™ X5 LTE Mobile Broadband Module¹

HP It4132 LTE/HSPA+ 4G Mobile Broadband Module¹



Technical Specifications

HP hs3210 WW HSPA+ with GPS Mobile Broadband¹

Note: The HP EliteBook 850 G4 UHD panel is not compatible with WWAN.

Wireless LAN (WLAN) Via M.2 Minicard

Intel® Dual Band Wireless-AC 8265 802.11 a/b/g/n/ac (2x2) WiFi and Bluetooth® 4.2 combo (vPro and non-vPro)²

Intel® Dual Band Wireless-AC 3168 802.11 a/b/g/n/ac (1x1) WiFi and Bluetooth® 4.2 combo (non-vPro)²

Near Field Communication (NFC)¹

HP Module with NXP NFC Controller NPC100 I2C NCI

Support for Miracast

1. Sold separately or as an optional feature.
2. Wireless access point and Internet service is required and is not included.
Availability of public wireless access points limited.
3. 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.

Communications

Intel® Ethernet Connection I219-V 10/100/1000 Ethernet (With Intel® i3-7100U, i5-7200U, and i7-7500U)

Intel® Ethernet Connection I219-LM 10/100/1000 Ethernet (With Intel® i5-7300U and i7-7600U)

NOTE: 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

HP Audio Boost

HP Noise Cancellation Software

Digital Microphones (Dual Array)

2 Premium Stereo Speakers

Webcam

Optional¹ 720p HD² webcam³

1. Sold separately or as an optional feature.
2. HD content required to view HD images.
3. Internet access required.

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS



Technical Specifications

Keyboard

HP Premium Keyboard

The HP Premium, spill-resistant keyboard with drain is designed using a thin layer of Mylar film under the keyboard and includes an all-metal keyboard deck for greater rigidity. Backlit keyboard with HP DuraKeys is available as an option.

The 820 has 79/80-key, 840 has 85-86-key, the 850 has 100/101-key compatible keyboard and features a full-pitch key layout with desktop keyboard features, such as editing keys, both left and right control and alt keys, and function keys.

US and International key layouts are available.

Pointing Devices

Glass Touchpad

On/Off button

Taps enabled as default

Gestures enabled by default - 2 Finger Scrolling, 2 Finger Zoom (Pinch)

Function Keys

HP EliteBook 820

F1 - Sleep

F2 - Blank

F3 - Backlit Keyboard Toggle

F4 - Display Switching

F5 - Brightness Down

F6 - Brightness Up

F7 - Audio Mute

F8 - Volume Down

F9 - Volume Up

F10 - Mic Mute

F11 - Wireless

F12 - Num Lock

Hidden Function Keys

Fn+R - Break

Fn+S - Sys Rq

Fn+C - Scroll Lock

HP EliteBook 840

F1 - Sleep

F2 - Blank (Privacy Key for configurations with HP Sure View integrated privacy screen)

F3 - Backlit Keyboard Toggle

F4 - Display Switching

F5 - Brightness Down

F6 - Brightness Up

F7 - Blank

F8 - Volume Down

F9 - Volume Up

F10 - Mic Mute



Technical Specifications

F11 - Blank
F12 - Num Lock

Hidden Function Keys

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

HP EliteBook 850

F1 - Sleep
F2 - Blank
F3 - Backlit Keyboard Toggle
F4 - Display Switching
F5 - Brightness Down
F6 - Brightness Up
F7 - Blank
F8 - Volume Down
F9 - Volume Up
F10 - Mic Mute
F11 - Blank
F12 - Blank

Hidden Function Keys

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

SOFTWARE AND SECURITY

Preinstalled Software

BIOS

HP BIOSphere¹
HP Sure Start Gen3¹⁰
HP DriveLock | HP Automatic DriveLock
BIOS Update via Network
Master Boot Record Security
Power On Authentication
Secure Erase²
Pre-boot Authentication

Communication/Connectivity

HP Mobile Connect Pro (Windows 10 only)³
Native Miracast Support⁴
HP LAN-WLAN Protection



Technical Specifications

HP MAC Address Manager
HP Wireless Wakeup

HP Value Add Software

HP 3D DriveGuard (requires Windows)
HP ePrint Driver + JetAdvantage⁵
HP Hotkey Support
HP Recovery Manager
HP Jumpstart
HP Support Assistant
HP Noise Cancellation Software

Microsoft Products

Buy Office
Bing Search
Skype⁶

Manageability

HP Driver Packs⁷
HP SoftPaq Download Manager (SDM)
HP System Software Manager (SSM)⁷
HP BIOS Config Utility (BCU)⁷
HP Client Catalog⁷
HP MIK for Microsoft SCCM⁷
HP Image Assistant⁷
HP WorkWise
LANDESK Management⁸

For more information on HP Client Management Solutions refer to: <http://www.hp.com/go/clientmanagement>.

Client Security Software

HP Client Security

- HP Security Manager (including Credential Manager and Password Manager)
- HP Drive Lock
- HP Fingerprint Sensor
- HP Password Manager
- Absolute Persistence Module⁹
- Power On Authentication
- HP Device Access Manager



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Microsoft Defender

Security

Trusted Platform Module (TPM) 2.0 (Infineon SLB9670). Common Criteria EAL4+ Certified.

Convertible to FIPS 140-2 Certified mode.

Integrated SmartCard Reader and HP Fingerprint Reader (On select models)

For more information on HP Client Security Software Suite, refer to <http://www.hp.com/go/clientsecurity>.

1. Available only on business PCs with HP BIOS. HP BIOSphere features may vary depending on the PC platform & configuration.
2. For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.
3. HP Mobile Connect Pro is only available on preconfigured devices with WWAN. For geographic availability refer to www.hp.com/go/mobileconnect
4. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming media players that also support Miracast. You can use Miracast to share what you're doing on your PC and present a slide show. For more information: <http://windows.microsoft.com/en-us/windows-8/project-wireless-screen-miracast>
5. 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 www.hp.com/go/eprintcenter). Requires optional broadband module. Broadband use requires separately purchased service contract. Check with service provider for coverage and availability in your area. Separately purchased data plans or usage fees may apply. Print times and connection speeds may vary.
6. Skype is not offered in China.
7. Not preinstalled, however available for download in December 2015 at <http://www.hp.com/go/clientmanagement>
8. Subscription required.
9. 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: <https://www.absolute.com/en/about/legal/agreements/absolute>. 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.
10. Available on HP EliteBook products equipped with Intel® 7th generation processors.

POWER

Power Supply¹

HP 45W Smart AC Adapter

HP 45W 2-prong DC jack AC Adapter

HP 65W Smart AC Adapter²



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HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

HP 65W Smart AC Adapter EM²

1. Availability may vary by country.
2. Supports HP Fast Charging. Required for HP EliteBook 850 configured with optional discrete graphics.

Power cord is configurable; either 3.2 feet or 6 feet (1.0 or 1.8 meter)

Total length including external AC adapter is 9.2 feet or 12 feet (2.86 or 3.66 meter)

Battery

HP EliteBook 820

HP Long Life 3-cell, 49 WHr Li-ion polymer (Supports HP Fast Charging with 65W AC Adapter)

HP EliteBook 840 & 850

HP Long Life 3-cell, 51 WHr Li-ion polymer (Supports HP Fast Charging with 65W AC Adapter)

Battery Life¹

Platform	Other HW Details	Battery	UMA Graphics	Discrete Graphics
HP EliteBook 820 G4	HDD	3-cell (49WHr)	Up to 11 hrs 15 mins	N/A
HP EliteBook 820 G4	SSD	3-cell (49WHr)	Up to 14 hrs 45 mins	N/A
HP EliteBook 840 G4	HDD	3-cell (51WHr)	Up to 12 hrs 15 mins	N/A
HP EliteBook 840 G4	SSD	3-cell (51WHr)	Up to 15 hrs 15 mins	N/A
HP EliteBook 850 G4	HDD	3-cell (51WHr)	Up to 12 hrs 15 mins	Up to 11 hrs 30 mins
HP EliteBook 850 G4	SSD	3-cell (51WHr)	Up to 14 hrs 15 mins	Up to 14 hrs 15 mins

1. 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.



Technical Specifications

Power Conservation

Hibernation
Standby
ACPI compliance

WEIGHTS & DIMENSIONS

HP EliteBook 820

Weight¹

Starting at 2.78 lbs (1.26 kg)
(3-cell battery (49WHr), UMA, no FPR, 1 SODIMM, WLAN, M.2 SSD, no camera, no WWAN, Non-Touch panel)
Starting at 3.05 lbs (1.38 kg)
(3-cell battery (49WHr), UMA, no FPR, 1 SODIMM, WLAN, M.2 SSD, no camera, no WWAN, Touch)

Dimensions² (w x d x h)

12.2 x 8.6 x 0.74 in (Front)
31 x 21.89 x 1.89 cm

HP EliteBook 840

Weight¹

Starting at 3.27 lbs (1.48 kg)
(3-cell battery (51WHr), UMA, no FPR, 1 SODIMM, WLAN, M.2 SSD, no camera, no WWAN, Non-Touch panel)
Starting at 3.76 lbs (1.70 kg)
(3-cell battery (51WHr), UMA, no FPR, 1 SODIMM, WLAN, M.2 SSD, no camera, no WWAN, Touch)

Dimensions² (w x d x h)

13.3 x 9.3 x 0.74 in (Front)
33.8 x 23.7 x 1.89 cm

HP EliteBook 850

Weight¹

Starting at 4.06 lbs (1.84 kg)
(3-cell battery (51WHr), UMA, no FPR, 1 SODIMM, WLAN, M.2 SSD, no camera, no WWAN, Non-Touch panel)

Starting at 4.54 lbs (2.06 kg)
(3-cell battery (51WHr), UMA, no FPR, 1 SODIMM, WLAN, M.2 SSD, no camera, no WWAN, Touch)

Dimensions² (w x d x h)

15.10 x 10.10 x 0.76 in (Front)
38.36 x 25.77 x 1.94 cm



Technical Specifications

1. Weight varies by configuration and components.
2. Height varies depending upon where on the notebook the measurement is made.

PORTS/SLOTS

Ports

- 1 USB 3.1 Gen 1 Charging Port
- 1 USB 3.1 Gen 1 Port
- 1 USB-C™ Basic Port (Up to 5 Gbps data transfer and 15W power)
- 1 DisplayPort™ 1.2
- 1 VGA
- 1 RJ-45 / Ethernet
- 1 Docking connector
- 1 Headphone/Microphone Combo
- 1 AC Port

NOTE: Cables are not included.

Slots

- SD Media Card Reader Slot
- Supports SD, SDHC, SDXC

SERVICE AND SUPPORT

Limited 3-year or 1-year limited warranty options available, 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. Optional HP Care Pack Services¹ are extended service contracts which go beyond your standard limited warranties.

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



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	Nominal Operating Voltage	19.5 V
	Average Operating Power	Windows 10 (64-bit)
	Integrated graphics	12.9 W
	Max Operating Power	Discrete < 90W UMA < 65W
Temperature	Operating	32° to 95° F (0° to 35° C) (not writing optical) 41° to 95° F (5° to 35° C) (writing optical)
	Non-operating	-4° to 140° F (-20° to 60° C)
Relative Humidity		10% to 90%, non-condensing
		5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
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
Altitude (unpressurized)	Operating	-50 to 10,000 ft (-15.24 to 3,048 m)
	Non-operating	-50 to 15,000 ft (-15.24 to 12,192 m)
Planned Industry Standard	UL	Yes
Certifications	CSA	Yes
	FCC Compliance	Yes
	ENERGY STAR®	Select models*
	EPEAT®	Registered Gold in United States**



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

ICES	Yes
Australia / NZ RCM Compliance	Yes
CCC	Yes
Japan VCCI Compliance	Yes
KC	Yes
BSMI	Yes
CE Marking Compliance	Yes
CIT	Yes
EAC	Yes
Saudi Arabian Compliance (SASO)	Yes
SABS	Yes
UKRSERTCOMPUTER	Yes

For accessibility information on HP products, please visit: <http://www.hp.com/accessibility>.

Displays

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

31.75 cm (12.5") diagonal LED backlight HD Slim eDP SVA Anti-	Outline Dimensions (W x H x D)	291.0 x 181.9 X 3.0 mm (max)
	Active Area	276.62 mm x 155.52 mm



Not all configuration components are available in all regions/countries.
Americas – HP EliteBook 800 G4 Series – Oct 18, 2017 - c05330730

QuickSpecs

Technical Specifications

glare non-touch (1366 x 768)	Weight	250g max	
	Diagonal Size	31.75 cm (12.5")	
	Surface Treatment	AG	
	Contrast Ratio	300:1 (typ)	
	Refresh Rate	60Hz	
	Response time	16ms typ.	
	Pixel Per Inch (PPI)	125	
	Brightness	220nits	
	Pixel Resolution	Format	1366 x 768 (HD)
		Configuration	RGB
		Interface	eDP 1.2
		LCD Mode	TN
		Viewing Angle	SVA 45/45/25/35
31.75 cm (12.5") diagonal LED backlight FHD UltraSlim eDP UWVA Anti-glare non-touch (1920 x 1080)	Outline Dimensions (W x H x D)	282.7 x 179.82 x 2.3 (mm) max	
	Active Area	276.48 x 155.52 mm	
	Weight	170g max	
	Diagonal Size	31.75 cm (12.5")	
	Surface Treatment	AG	
	Contrast Ratio	600:1 (typ)	
	Refresh Rate	60Hz	
	Response time	25ms typ.	
	Pixel Per Inch (PPI)	176	
	Brightness	300nits	
	Pixel Resolution	Format	1920 x 1080 (FHD)
		Configuration	RGB
		Interface	eDP 1.3 + PSR
	LCD Mode	IPS/FFS/VA	
	Viewing Angle	UWVA 85/85/85/85	
31.75 cm (12.5") diagonal LED backlight FHD UltraSlim eDP UWVA (1920 x 1080) Touch	Outline Dimensions (W x H x D)	282.7 x 179.82 x 2.3 (mm) max	
	Active Area	276.48 x 155.52 mm	
	Weight	310g max	
	Diagonal Size	31.75 cm (12.5")	
	Touch Enabled	Yes	
	TSP Type	Capacitive	



QuickSpecs

Technical Specifications

Surface Treatment	Anti-smudge/fingerprint coating	
Contrast Ratio	600:1 (typ)	
Refresh Rate	60Hz	
Response time	25ms typ.	
Pixel Per Inch (PPI)	176	
Brightness	300nits	
Pixel Resolution	Format	1920 x 1080 (FHD)
	Configuration	RGB
Interface	eDP 1.3 + PSR	
LCD Mode	IPS/FFS/VA	
Viewing Angle	UWVA 85/85/85/85	

35.56 cm (14") diagonal LED backlight HD Slim eDP SVA Anti-glare non-touch (1366 x 768)	Outline Dimensions (W x H x D)	320.9 x 205.6 (max) x 3.0mm max	
	Active Area	309.4 x 173.95 (mm)	
	Weight	290 g max	
	Diagonal Size	35.56 cm (14")	
	Surface Treatment	Anti-Glare (AG)	
	Contrast Ratio	300:1 (typ)	
	Refresh Rate	60Hz	
	Response time	16ms typ.	
	Pixel Per Inch (PPI)	112	
	Brightness	220nits	
	Pixel Resolution	Format	1366 x 768 (HD)
		Configuration	RGB
	Interface	eDP 1.2	
	LCD Mode	TN	
Viewing Angle	SVA 45/45/25/35		

35.56 cm (14") diagonal LED backlight FHD Slim eDP SVA Anti-glare non-touch (1920 x 1080)	Outline Dimensions (W x H x D)	320.9 x 205.6 (max) x 3.0(max) mm	
	Active Area	309.40 x 173.95 (mm)	
	Weight	270 g max	
	Diagonal Size	14"	
	Surface Treatment	Anti-Glare (AG)	
	Contrast Ratio	300:1 (typ)	



QuickSpecs

Technical Specifications

Refresh Rate	60Hz	
Response time	16ms typ.	
Pixel Per Inch (PPI)	157	
Brightness	300nits	
Pixel Resolution	Format	1920 x 1080 (FHD)
	Configuration	RGB
Interface	eDP 1.2	
LCD Mode	TN	
Viewing Angle	SVA 45/45/25/35	

35.56 cm (14") diagonal LED backlight FHD Slim eDP UWVA Anti-glare non-touch (1920 x 1080)

Outline Dimensions (W x H x D)	320.9 x 205.6 x 3.0 (mm) max	
Active Area	309.14 x 173.89 (mm)	
Weight	285 g max	
Diagonal Size	35.56 cm (14")	
Surface Treatment	Anti-Glare (AG)	
Contrast Ratio	600:1 (typ)	
Refresh Rate	60 Hz	
Response time	35 ms (typ)	
Pixel Per Inch (PPI)	157	
Brightness	300 nits	
Pixel Resolution	Format	1366 x 768 (HD)
	Configuration	RGB
Interface	eDP 1.3	
LCD Mode	IPS	
Viewing Angle	UWVA 85/85/85/85	

35.56 cm (14") diagonal LED backlight QHD UltraSlim eDP UWVA Anti-glare non-touch (2560 x 1440)

Outline Dimensions (W x H x D)	320.9 x 205.6 (mm) max x 2.6 (mm) max
Active Area	309.50 x 174.10 (mm)
Weight	270g max
Diagonal Size	35.56 cm (14")
Surface Treatment	Anti-Glare (AG)
Contrast Ratio	600:1 (typ.)
Refresh Rate	60Hz
Response time	30 ms typ.



QuickSpecs

Technical Specifications

Pixel Per Inch (PPI)	210
Brightness	340 nits
Pixel Resolution	Format 2560x1440 (QHD)
	Configuration RGB
Interface	eDP 1.3 + PSR
LCD Mode	IPS/FFS/VA
Viewing Angle	UWVA 85/85/85/85

35.56 cm (14") diagonal LED backlight FHD Slim eDP SVA Anti-glare (1920 x 1080) Non-Touch Integrated Privacy Screen	Outline Dimensions (W x H x D)	320.9 x 205.6 (max) x 3.6 (max) mm
	Active Area	309.14 x 173.89 mm
	Weight	<305 g max
	Diagonal Size	35.56 cm (14")
	Surface Treatment	Anti-Glare (AG)
	Contrast Ratio	200:1 (typ) - AG
	Refresh Rate	60Hz
	Response time	16ms typ.
	Pixel Per Inch (PPI)	157
	Brightness	Privacy 85nits typ. (system) Sharing 275nits typ. (system)
	Pixel Resolution	Format 1920 x 1080 (FHD)
		Configuration RGB Stripe
	Interface	eDP 1.2 (2 lane)
	LCD Mode	TN
Viewing Angle	Sharing 45/45/15/30 (CR>10) Privacy 40/40/15/30 (CR>10)	

35.56 cm (14") diagonal LED backlight FHD Slim eDP SVA (1920 x 1080) Touch	Outline Dimensions (W x H x D)	320.9 x 205.6 (mm) max x 3.0 (mm) max
	Active Area	309.40 x 173.95 (mm)
	Weight	430 g max
	Diagonal Size	14"
	Surface Treatment	Anti-smudge/fingerprint coating



QuickSpecs

Technical Specifications

Touch Enabled	Yes	
TSP Type	Capacitive	
Contrast Ratio	300:1 (typ)	
Refresh Rate	60 Hz	
Response time	16ms typ.	
Pixel Per Inch (PPI)	157	
Brightness	300nits	
Pixel Resolution	Format	1920 x 1080 (FHD)
	Configuration	RGB
Interface	eDP 1.2	
LCD Mode	TN	
Viewing Angle	SVA 45/45/25/35	

39.6 cm (15.6") diagonal LED backlight HD Slim eDP SVA Anti-glare non-touch (1366 x 768)	Outline Dimensions (W x H x D)	360.0 x 224.3 x 3.2 (mm) max	
	Active Area	344.2 x 193.5 (mm)	
	Weight	370g max	
	Diagonal Size	39.6 cm (15.6")	
	Surface Treatment	Anti-Glare (AG)	
	Contrast Ratio	300:1 (typ)	
	Refresh Rate	60Hz	
	Response time	16ms typ.	
	Pixel Per Inch (PPI)	101	
	Brightness	220 nit typ	
	Pixel Resolution	Format	1366 x 768 (HD)
		Configuration	RGB
	Interface	eDP 1.2	
LCD Mode	TN		
Viewing Angle	SVA 45/45/25/35		

39.6 cm (15.6") diagonal LED backlight FHD Slim eDP SVA Anti-glare non-touch (1920 x 1080)	Outline Dimensions (W x H x D)	360.0 x 224.3 x 3.2 (mm) max	
	Active Area	344.2 x 193.5 (mm)	
	Weight	360 g max.	
	Diagonal Size	39.6 cm (15.6")	
	Surface Treatment	Anti-Glare (AG)	



QuickSpecs

Technical Specifications

Contrast Ratio	400:1 (typ)	
Refresh Rate	60Hz	
Response time	16ms typ.	
Pixel Per Inch (PPI)	142	
Brightness	300nits	
Pixel Resolution	Format	1920 x 1080 (FHD)
	Configuration	RGB
Interface	eDP 1.2	
LCD Mode	TN	
Viewing Angle	SVA 45/45/25/35	

39.6 cm (15.6") diagonal LED backlight FHD Slim eDP UWVA Anti-glare non-touch (1920 x 1080)	Outline Dimensions (W x H x D)	360 x 224.3 x 3.2 (mm) max	
	Active Area	344.2 x 193.5 (mm)	
	Weight	360 g max	
	Diagonal Size	39.6 cm (15.6")	
	Surface Treatment	Anti-Glare (AG)	
	Contrast Ratio	600:1 (typ)	
	Refresh Rate	60 Hz	
	Response time	35 ms (typ)	
	Pixel Per Inch (PPI)	142	
	Brightness	300 nits	
	Pixel Resolution	Format	1920 x 1080 (FHD)
		Configuration	RGB
	Interface	eDP 1.3 + PSR	
	LCD Mode	IPS	
Viewing Angle	UWVA 85/85/85/85		

39.6 cm (15.6") diagonal LED backlight UHD Slim eDP UWVA Anti-glare non-touch (3840 x 2160)	Dimensions (W x H x D)	368.48 x 218.81 x 3.14 (mm) max
	Diagonal Size	15.6 in (39.6 cm)
	Weight	345 g {max}
	Surface Treatment	Anti-glare (AG)
	Contrast Ratio	1000:1 (typ)
	Refresh Rate	60 Hz
	Brightness	340 nit
	Pixel Resolution	



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

	Format	3840x2160 (UHD)
	Configuration	RGB
Backlight	LED	
PPI	282	
Viewing Angle	80° Horizontal, ±80° Vertical (minimum) 80/80/80/80 (Left/Right/Down/Up) (min) UWVA 85/85/85/85	
39.6 cm (15.6") diagonal LED backlight FHD Slim eDP SVA (1920 x 1080) Touch	Outline Dimensions (W x H x D)	360.0 x 224.3 x 3.2 (mm) max
	Active Area	344.2 x 193.5 (mm)
	Weight	560 g max.
	Diagonal Size	39.6 cm (15.6")
	Surface Treatment	Anti-smudge/fingerprint coating
	Contrast Ratio	400:1 (typical)
	Touch Enabled	Yes
	TSP Type	Capacitive
	Refresh Rate	60Hz
	Response time	16ms typ.
	Pixel Per Inch (PPI)	142
	Brightness	300nits
	Pixel Resolution	Format 1920 x 1080 (FHD) Configuration RGB
	Interface	eDP 1.2
	LCD Mode	TN
	Viewing Angle	SVA 45/45/25/35

NETWORKING

	HP lt4120 Qualcomm® Snapdragon™ X5 LTE Mobile Broadband Module
Technology/Operating bands	LTE: 2100 (Band 1), 1900 (Band 2), 1800 (Band 3), 1700/2100 (Band 4), 850 (Band 5), 2600 (Band 7), 900 (Band 8), 700 (Band 12 lower), 700 (Band 13 upper), 700 (Band 17 lower), 800 (Band 20), 700 (Band 28). HSPA+: 2100 (Band 1), 1900 (Band 2), 1700/2100 (Band 4), 850 (Band 5), 900 (Band 8) MHz



QuickSpecs

Technical Specifications

	EV-DO: 850 (BC0), 1900 (BC1) MHz (Only work with Verizon network) 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 1xEVDO Release 0, A and B. E-GPRS: Class B, Multi-slot class 12, coding schemes CS1 - CS4 and MSC1 - MSC9
GPS	Standalone, A-GPS (MS-A, MS-B and XTRA)
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) CDMA 1xRTT: 153.6 kbps (Download), 153.6 kbps (Upload) EVDO Rel.A: 3.1 Mbps (Download), 1.8 Mbps (Upload) EVDO Rel.B: 14.7 Mbps (Download), 5.4Mbps (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 1xRTT/EVDO: 24dBm 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) 1xRTT/EVDO: 1,000 mA (peak); 700 mA (average) E-GPRS: 2,800 mA (peak); 500 mA (average)
Form Factor	M.2, 3042-S3 Key B
Weight	6.2 g
Dimensions (Length x Width x Thickness)	42 x 30 x 2.3 mm

* 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.

	HP It4132 LTE/HSPA+ 4G Mobile Broadband Module
Technology/Operating 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.



QuickSpecs

Technical Specifications

Wireless protocol standards	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 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 (Length x Width x Thickness)	42 x 30 x 2.3 mm

* 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.

HP hs3210 WW HSP with GPS Mobile Broadband

HP hs3210 HSPA+ Mobile Broadband Module*

Technology/Operating bands	HSPA+: 2100 (Band1), 1900 (Band 2), 850 (Band 5), 900 (Band 8) MHz E-GPRS: 1900 (Band 2), 1800 (Band 3), 850 MHz (Band 5), 900 (Band 8) MHz
Wireless protocol standards	WCDMA R99, 3GPP Release 5, 6 and 7 UMTS Specification E-GPRS: Class B, Multi-slot class 33, coding schemes CS1 - CS4 and MSC1 - MSC9
Maximum data rates	HSPA+: 21.6 Mbps (Download), 5.76 Mbps (Upload) E-GPRS: 296 kbps (Download), 236.8 kbps (Upload) GPRS: 107 kbps (Download), 85.6 kbps (Upload)



QuickSpecs

Technical Specifications

Maximum output power	HSPA+: 24 dBm E-GPRS 1800/1900: 26 dBm E-GPRS 850/900: 27 dBm GPRS 1800/1900: 30 dBm GPRS 850/900: 33 dBm
Maximum power consumption	HSPA+: 1,100 mA (peak); 800 mA (average) E-GPRS: 2,800 mA (peak); 700 mA (average)
Form Factor	M.2, 2242-S3 Key B
Weight	6 g
Dimensions (Length x Width x Thickness)	1.65 x 8.66 x 0.09 in (42 x 22 x 2.38 mm)

* 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.

Note: Wireless access point and Internet service required. 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."

Intel® Dual Band Wireless-AC 8265 802.11 a/b/g/n/ac (2x2) WiFi and Bluetooth® 4.2 combo

Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ac Wave 2 MU-MIMO
Interoperability	Wi-Fi certified
Frequency Band	802.11b/g/n

- 2.402 – 2.482 GHz

Note:

The FCC has declared as of January 1, 2015 products that utilize passive scanning on channel 12/13 and are capable of



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.

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
Note: Indonesia no support this band)

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

Security¹

- 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 : +16dBm minimum
- 802.11g : +14dBm minimum
- 802.11a : +14dBm minimum
- 802.11n HT20(2.4GHz) : +14dBm minimum



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

- 802.11n HT40(2.4GHz) : +12dBm minimum
- 802.11n HT20(5GHz) : +14dBm minimum
- 802.11n HT40(5GHz) : +12dBm minimum

Power Consumption

Transmit: 2.0 W (max)

Receive: 1.6 W (max)

Idle mode (PSP): 180 mW (WLAN Associated)

Idle mode: 50 mW (WLAN unassociated)

Connect Standby: 10 mW (WLAN+BT)

Radio disabled: 5 mW

Power Management

ACPI and PCI Express compliant power management
802.11 compliant power saving mode

Receiver Sensitivity³

802.11b, 1Mbps : -94dBm maximum

802.11b, 11Mbps : -86dBm maximum

802.11g, 6Mbps : -88dBm maximum

802.11g, 54Mbps : -74dBm maximum

802.11a, 6Mbps : -88dBm maximum

802.11a, 54Mbps : -74dBm maximum

802.11n, MCS07 : -69dBm maximum

802.11n, MCS15 : -66dBm maximum

802.11ac, 1SS, MCS-0 : -86dBm maximum

802.11ac, 1SS, MCS-9 : -61dBm maximum

802.11ac, 2SS, MCS-0 : -83dBm maximum

802.11ac, 2SS, MCS-9 : -58dBm maximum

Antenna type

High efficiency antenna with spatial diversity, mounted in the display enclosure



QuickSpecs

Technical Specifications

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	
	Or	
	Type 1630 : 2.3 x 16.0 x 30.0 mm	
Weight	Type 2230 : 2.8g	
	Or	
	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)
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	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

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



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

Data Rates and Throughput

Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps

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

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

Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)

Transmit Power

The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.

Receiver Sensitivity

Legacy

Modulation	0.01% BER	0.001% BER
GFSK	-80 dBm	-70 dBm
$\pi/4$ -DQPSK	-80 dBm	-70 dBm
8DPSK	-80 dBm	-70 dBm

Power Consumption

Peak (Tx) 330 mW
Peak (Rx) 230 mW
Selective Suspend 17 mW

Range

Legacy Up to 33 ft (10 m)

BLE Up to 99 ft (30 m)

Electrical Interface

USB 2.0 compliant

Bluetooth Software Supported

Microsoft Windows Bluetooth Software

Link Topology

Electrical Interface

Point to Point, Multipoint Pico Nets up to 7 slaves

Bluetooth Software Supported

Full support of Bluetooth Security Provisions

Security



Technical Specifications

Power Management	Microsoft Windows ACPI, and USB Bus Support
Certifications	Self-configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
Security	All necessary regulatory approvals for supported countries, including:
Certifications	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
Bluetooth Profiles Supported	
Power Management	ETS 300 328, ETS 300 826
Certifications	Low Voltage Directive IEC950
	UL, CSA, and CE Mark
Certifications	Serial Port Profile (SPP) ¹ Service Discovery Application Profile (SDAP) Dial-Up Networking (DUN) ^{1,2} Generic Object Exchange Profile (GOEP) ^{1,2} Object Push Profile (OPP) ^{1,2} Hard Copy Cable Replacement (HCRP) ^{1,2} Personal Area Networking Profile (PAN) ^{1,2} Human Interface Device Profile (HID) ^{1,2} Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP)
Bluetooth Profiles Supported	Audio Video Remote Control Profile (AVRCP)
Bluetooth V4.1/V4.2 support feature	V4.1: ESR5/6/7 compliant
	V4.2: ESR8 compliant, LE Secure Connection – Basic.



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

Intel® Dual Band Wireless-AC 3168 802.11 a/b/g/n/ac (1x1) WiFi and Bluetooth® 4.2 combo

Wireless LAN Standards IEEE 802.11a

IEEE 802.11b

IEEE 802.11g

IEEE 802.11n

IEEE 802.11ac

Interoperability Wi-Fi certified

Frequency Band 802.11b/g/n

- 2.402 – 2.482 GHz

Note:

The FCC has declared as of January 1, 2015 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.

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

Note:

Indonesia only supports 5.725 - 5.825 GHz (CH149 - CH161)

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 ~ MCS7, (1SS) (20MHz, 40MHz, and 80MHz)



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

Modulation	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
Security¹	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 802.11b : +16dBm minimum• 802.11g : +14dBm minimum• 802.11a : +14dBm minimum• 802.11n HT20(2.4GHz) : +14dBm minimum• 802.11n HT40(2.4GHz) : +12dBm minimum• 802.11n HT20(5GHz) : +14dBm minimum• 802.11n HT40(5GHz) : +12dBm minimum• 802.11ac 80MHz(5GHz) : +11dBm minimum
Power Consumption	Transmit: 2.0 W (max) Receive: 1.6 W (max) Idle mode (PSP): 180 mW (WLAN Associated) Idle mode: 50 mW (WLAN unassociated) Connect Standby: 10 mW (WLAN+BT) Radio disabled: 5 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode



QuickSpecs

Technical Specifications

Receiver Sensitivity³	802.11b, 1Mbps : -94dBm maximum 802.11b, 11Mbps : -86dBm maximum 802.11g, 6Mbps : -88dBm maximum 802.11g, 54Mbps : -74dBm maximum 802.11a, 6Mbps : -88dBm maximum 802.11a, 54Mbps : -74dBm maximum 802.11n, MCS07 : -69dBm maximum 802.11n, MCS15 : -66dBm maximum 802.11ac, 1SS, MCS-0 : -86dBm maximum 802.11ac, 1SS, MCS-9 : -61dBm maximum 802.11ac, 2SS, MCS-0 : -83dBm maximum 802.11ac, 2SS, MCS-9 : -58dBm 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 Or Type 1630 : 2.3 x 16.0 x 30.0 mm
Weight	Type 2230 : 2.8g Or Type 1630 : 2g
Operating Voltage	3.3v +/- 9%



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

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	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

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 Channels	Legacy : 0~79 (1 MHz/CH)
	BLE : 0~39 (2 MHz/CH)
Data Rates and Throughput	Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps
	BLE : 1 Mbps data rate; throughput up to 0.2 Mbps
	Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels
	Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)
Transmit Power	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.

Receiver Sensitivity

Modulation	0.01% BER	0.001% BER



QuickSpecs

Technical Specifications

Legacy	GFSK	-80 dBm	-70 dBm
	$\pi/4$ -DQPSK	-80 dBm	-70 dBm
	8DPSK	-80 dBm	-70 dBm

Power Consumption
 Peak (Tx) 330 mW
 Peak (Rx) 230 mW
 Selective Suspend 17 mW

Range
 Legacy Up to 33 ft (10 m)
 BLE Up to 99 ft (30 m)

Electrical Interface
 USB 2.0 compliant

Bluetooth Software Supported
 Microsoft Windows Bluetooth Software

Link Topology

Electrical Interface
 Point to Point, Multipoint Pico Nets up to 7 slaves

Bluetooth Software Supported
 Full support of Bluetooth Security Provisions

Security

Power Management
 Microsoft Windows ACPI, and USB Bus Support

Certifications
 Self-configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff

Security
 All necessary regulatory approvals for supported countries, including:

Certifications
 FCC (47 CFR) Part 15C, Section 15.247 & 15.249

Bluetooth Profiles Supported

Power Management
 ETS 300 328, ETS 300 826

Certifications
 Low Voltage Directive IEC950

Certifications
 UL, CSA, and CE Mark



QuickSpecs

Technical Specifications

Bluetooth Profiles Supported

Serial Port Profile (SPP)¹
Service Discovery Application Profile (SDAP)
Dial-Up Networking (DUN)^{1,2}
Generic Object Exchange Profile (GOEP)^{1,2}
Object Push Profile (OPP)^{1,2}
Hard Copy Cable Replacement (HCRP)^{1,2}
Personal Area Networking Profile (PAN)^{1,2}
Human Interface Device Profile (HID)^{1,2}
Hands Free Profile (HFP)
Advanced Audio Distribution Profile (A2DP)

Audio Video Remote Control Profile (AVRCP)

Bluetooth V4.1/V4.2 support feature

V4.1: ESR5/6/7 compliant

V4.2: ESR8 compliant, LE Secure Connection – Basic.

Intel® I219-V Gigabit Network Connection

Ethernet Features

10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14)
100 10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14)
100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30)
1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 802.3. Clauses 40)
Auto-Negotiation (Automatic Speed Selection)
Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s
IEEE 802.1p QoS (Quality of Service) Support
IEEE 802.1q VLAN support
IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable)
IEEE 802.3az EEE(Energy Efficient Ethernet)
Jumbo Frame 9K
Auto MDI/MDIX Crossover cable detection



QuickSpecs

Technical Specifications

Power Management	ACPI compliant - multiple power modes Energy Detect Low Power Mode(Green Ethernet)
Performance	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload(ARP & NS)
Features	Large send offload and Giant send offload Receiving Side Scaling MACSec Offload (802.3ae) Intel Non-vPro iSCSI Boot
Manageability	Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30)) Comprehensive diagnostic and configuration software suite Virtual Cable Doctor for Ethernet cable status
Interface	PCI Express 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ. NOTE: Intel 82579 PCIe interface is not PCIe compliant. It operates at half of PCIe specification V1.1 (2.5GT/S) speed.
NIC Device Driver Name	Intel 82579LM/82579V Ethernet Network Connection
Intel®	I219-LM Gigabit Network Connection
Ethernet Features	10 Mbit/s operation (10BASE-T; IEEE 802.3j; IEEE 802.3 clauses 13-14) 100 10 Mbit/s operation (10BASE-T; IEEE 802.3j; IEEE 802.3 clauses 13-14) 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30) 1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023. Clauses 40) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s IEEE 802.1p QoS (Quality of Service) Support IEEE 802.1q VLAN support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable) IEEE 802.3az EEE(Energy Efficient Ethernet)



QuickSpecs

Technical Specifications

	Jumbo Frame 9K Auto MDI/MDIX Crossover cable detection
Power Management	ACPI compliant - multiple power modes Energy Detect Low Power Mode(Green Ethernet)
Performance Features	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload(ARP & NS) Large send offload and Giant send offload Receiving Side Scaling MACSec Offload (802.3ae) Intel vPro iSCSI Boot
Manageability	Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30)) Comprehensive diagnostic and configuration software suite Virtual Cable Doctor for Ethernet cable status
Interface	PCI Express 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ. NOTE: Intel 82579 PCIe interface is not PCIe compliant. It operates at half of PCIe specification V1.1 (2.5GT/S) speed.
NIC Device Driver Name	Intel 82579LM/82579V Ethernet Network Connection
Near Field Communications Controller (optional)	
Dimensions (L x W x H)	Module 25 mm by 10 mm by 2.0 mm
Chipset	NPC 100
System interface	I ² C



QuickSpecs

Technical Specifications

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



QuickSpecs

Technical Specifications

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⁽²⁾
	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.	

STORAGE AND DRIVES

500 GB 7200rpm Hard Drive	Drive Weight	0.20 lbs (92 g) ~ 0.21 lbs (95 g)
	Capacity	500 GB
	Height	0.28 in (7 mm)



QuickSpecs

Technical Specifications

Width	2.75 in (69.85 mm)
Interface	ATA-8, SATA 3.0
Transfer Rate	Synchronous (maximum) 600 MB/s
Seek Time (typical reads, including settling)	Single Track 1.5 ms ~ 2 ms Average 11 ms ~ 13 ms Maximum 18 ms ~ 22 ms
Cache	32 MB
Rotational Speed	7200 rpm
Logical Blocks	976,773,168
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
Features	ATA Security, S.M.A.R.T., NCQ, Ultra DMA

500 GB 7200rpm Self-Encrypting Drive (Opal 2)

Drive Weight	0.21 lbs (95 g)
Capacity	500 GB
Height	0.28 in (7 mm)
Width	2.75 in (69.85 mm)
Interface	ATA-8, SATA 3.0
Transfer Rate	Synchronous (maximum) 600 MB/s
Seek Time (typical reads, including settling)	Single Track 1.5ms Average 12ms Maximum 21 ms
Cache	32 MB
Rotational Speed	7200rpm
Logical Blocks	976,773,168
Operating Temperature	32° to 140° F (0° to 60° C) [top cover temp]
Features	ATA Security; TCG Opal 2.x, S.M.A.R.T., NCQ, Ultra DMA

500 GB 7200rpm Self-Encrypting Drive (FIPS-140-2) (Opal 2)

Drive Weight	0.21 lbs (95 g)
Capacity	500 GB
Height	0.28 in (7 mm)
Width	2.75 in (69.85 mm)
Interface	ATA-8, SATA 3.0
Transfer Rate	Synchronous (maximum) 600 MB/s Single Track 1.5 ms Average 12 ms



QuickSpecs

Technical Specifications

	Seek Time (typical reads, including settling)	Maximum	21 ms
	Cache		32 MB
	Rotational Speed		7200 rpm
	Logical Blocks		976,773,168
	Operating Temperature		32° to 140° F (0° to 60° C) [top cover temp]
	Features		ATA Security; TCG Opal 2.x, FIPS, S.M.A.R.T., NCQ, Ultra DMA—
500 GB Hybrid, 8 GB cache	Drive Weight		0.20 lbs (92 g) ~ 0.21 lbs (95 g)
	Capacity		500 GB
	Height		0.28 in (7 mm)
	Width		2.75 in (69.85 mm)
	Interface		ATA-8, SATA 3.0
	Transfer Rate	Synchronous (maximum)	600 MB/s
	Seek Time (typical reads, including settling)	Single Track	2 ms
		Average	12 ms
		Maximum	22 ms
	Cache		64 MB
	Rotational Speed		5400 rpm
	Logical Blocks		976,773,168
	Operating Temperature		32° to 140° F (0° to 60° C) [case temp]
	Features		ATA Security, S.M.A.R.T., NCQ, Ultra DMA
1 TB 5400rpm Hard Drive	Drive Weight		0.21 lbs (94 g)- 0.21 lbs (95 g)
	Capacity		1TB
	Height		0.28 in (7 mm)
	Width		2.75 in (69.85 mm)
	Interface		ATA-8, SATA 3.0
	Transfer Rate	Synchronous (maximum)	600 MB/s
	Seek Time (typical reads, including settling)	Single Track	2ms
		Average	12ms-13ms
		Maximum	18ms- 22ms
	Cache		Up to 32-MB
	Rotational Speed		5400rpm
	Logical Blocks		1,953,525,168



QuickSpecs

Technical Specifications

Operating Temperature 32° to 140° F (0° to 60° C) [case temp]
Features ATA Security, S.M.A.R.T., NCQ, Ultra DMA

128 GB SATA-3 Value Solid State Drive

Drive Weight 0.01 lb (6 g) ~ 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
Performance **Maximum Sequential Read** **Maximum Sequential Write**
 520 ~ 535 MB/s 185 ~ 515 MB/s
Logical Blocks 250,069,680
Operating Temperature 32° to 158°F (0° to 70°C) [ambient temp]
Features ATA Security; DIPM; TRIM; DEVSLP

128 GB SATA-3 TLC Solid State Drive

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
Performance **Maximum Sequential Read** **Maximum Sequential Write**
 515 ~ 520 MB/s 320 ~ 450 MB/s
Logical Blocks 250,069,680
Operating Temperature 32° to 158°F (0° to 70°C) [ambient temp]
Features ATA Security; DIPM; TRIM; DEVSLP

256 GB PCIe Gen3x4 NVMe TLC Solid State Drive

Drive Weight 0.02 lb (10g)
Capacity 256 GB
Height 0.09 in (2.3 mm)
Width 0.87 in (22 mm)
Interface PCIe NVMe Gen3X4
Performance **Maximum Sequential Read** **Maximum Sequential Write**
 1,800 ~ 2600 MB/s 600 ~ 900 MB/s
Logical Blocks 500,118,192



QuickSpecs

Technical Specifications

	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
	Features	ATA Security (Option); TRIM; L1.2	
256 GB PCIe Gen3x4 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	
	Performance	Maximum Sequential Read	Maximum Sequential Write
		1,700 MB/s (Compressible Performance)	600 MB/s (Compressible Performance)
	Logical Blocks	500,118,192	
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
	Features	ATA Security (Option); TRIM; L1.2	
256 GB SATA-3 TLC Self-Encrypting Solid State Drive (Opal 2)	Drive Weight	0.02 lb (10g)	
	Capacity	256 GB	
	Height	0.09 in (2.3 mm)	
	Width	0.87 in (22 mm)	
	Interface	ATA-8, SATA 3.0	
	Performance	Maximum Sequential Read	Maximum Sequential Write
		515 ~ 530 MB/s	490 ~ 515 MB/s
	Logical Blocks	500,118,192	
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
	Features	ATA Security; TCG Opal 2.0; DIPM; TRIM; DEVSLP	
360 GB PCIe Gen3x4 NVMe TLC Solid State Drive	Drive Weight	0.02 lb (10 g)	
	Capacity	360 GB	
	Height	0.09 in (2.3 mm)	
	Width	0.02 lb (10 g)	
	Interface	PCIe NVMe Gen3X4	
	Performance	Maximum Sequential Read	Maximum Sequential Write
		1,700 MB/s (Compressible Performance)	600 MB/s (Compressible Performance)
	Logical Blocks	703,282,608	



QuickSpecs

Technical Specifications

	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
	Features	ATA Security (Option); TRIM; L1.2	
512 GB PCIe Gen3x4 NVMe Value Solid State Drive	Drive Weight	0.02 lb (10 g)	
	Capacity	512 GB	
	Height	0.09 in (2.3 mm)	
	Width	0.87 in (22 mm)	
	Interface	PCIe NVMe Gen3X4	
	Performance	Maximum Sequential Read	Maximum Sequential Write
		1,700MB/s	600 MB/s
	Logical Blocks	1,000,215,216	
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
	Features	ATA Security (Option); TRIM; L1.2	
512 GB PCIe Gen3x4 NVMe TLC Solid State Drive	Drive Weight	0.02 lb (10g)	
	Capacity	512 GB	
	Height	0.09 in (2.3 mm)	
	Width	0.87 in (22 mm)	
	Interface	PCIe NVMe Gen3X4	
	Performance	Maximum Sequential Read	Maximum Sequential Write
		1,580 ~ 2600 MB/s	300 ~ 400 MB/s
	Logical Blocks	1,000,215,216	
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
	Features	ATA Security (Option); TRIM; L1.2	
512 GB PCIe Gen3x4 NVMe MLC Solid State Drive	Drive Weight	0.02 lb (10g)	
	Capacity	512 GB	
	Height	0.09 in (2.3 mm) ~ 0.14 in (3.65 mm)	
	Width	0.87 in (22 mm)	
	Interface	PCIe NVMe Gen3X4	
	Performance	Maximum Sequential Read	Maximum Sequential Write
		2,260 ~ 3,000 MB/s	1,500 ~ 1,600 MB/s
	Logical Blocks	1,000,215,216	
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
	Features	ATA Security (Option); TRIM; L1.2	



QuickSpecs

Technical Specifications

512 GB PCIe Gen3x4 NVMe TLC Self-Encrypting Solid State Drive (Opal 2)	Drive Weight	0.02 lb (10g)	
	Capacity	512 GB	
	Height	0.09 in (2.3 mm)	
	Width	0.87 in (22 mm)	
	Interface	PCIe NVMe Gen3X4	
	Performance	Maximum Sequential Read	Maximum Sequential Write
		1,800 ~ 2,600 MB/s	980 ~ 1,400 MB/s
	Logical Blocks	1,000,215,216	
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
	Features	ATA Security (Option) ; TCG Opal 2.0; TRIM; L1.2	

512 GB SATA-3 TLC Solid State Drive FIPS-140-2	Drive Weight	0.02 lb (10 g)	
	Capacity	512 GB	
	Height	0.09 in (2.3 mm)	
	Width	0.87 in (22 mm)	
	Interface	ATA-8, SATA 3.0	
	Performance	Maximum Sequential Read	Maximum Sequential Write
		530 MB/s	400 MB/s
	Logical Blocks	1,000,215,216	
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
	Features	ATA Security; TCG Opal 2.0; FIPS; DIPM; TRIM; DEVSLP	

1 TB PCIe Gen3x4 NVMe TLC Solid State Drive	Drive Weight	0.02 lb (10 g)	
	Capacity	1024 GB	
	Height	0.09 in (2.3 mm) ~ 0.14 in (3.65 mm)	
	Width	0.87 in (22 mm)	
	Interface	PCIe NVMe Gen3X4	
	Performance	Maximum Sequential Read	Maximum Sequential Write
		1,500 ~ 1,800 MB/s	980 ~ 2,800 MB/s
	Logical Blocks	2,000,409,264	
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
	Features	ATA Security (Option); TRIM; L1.2	



QuickSpecs

Technical Specifications

POWER

HP 45W Smart AC Adapter

Dimensions (H x W x D)	9.5 x 4.0 x 2.65 cm}
Weight	unit: 200g +/- 10g
Input	90 to 265 VAC
	Input Efficiency 87.74% at 115Vac and 88.4% at 230Vac
	Input frequency range 47 to 63 Hz
	Input AC current Max. 1.4 A at 90 Vac
Output	Output power 45W
	DC output 19.5V
	Hold-up time 5 ms at 115 Vac input
	Output current limit <8.0A
AC Connector (Ac Inlet)	C6 (3pin/with grounded, with Smart ID DC connector)
Environmental Design	Operating temperature 32° to 95° F (0° to 35° C)
	Non-operating (storage) temperature -4° to 185° F (-20° to 85° C)
	Altitude 0 to 16,400 ft (0 to 5,000 m)
	Humidity 20% to 95%
	Storage Humidity 10% to 95%
EMI and Safety Certifications	<p>*CE Mark - full compliance with LVD and EMC directives</p> <p>* 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.</p> <p>* MTBF - over 200,000 hours at 25°C ambient condition.</p>



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

HP 45W Smart AC Adapter (2 Prong)	Dimensions (H x W x D)	95.0x40.0x26.5mm	
	Weight	unit: 200g +/- 10g	
	Input	90 to 265 VAC	
		Input Efficiency	87.74% at 115Vac and 88.4% at 230Vac
	Output	Input frequency range	47 to 63 Hz
		Input AC current	Max. 1.4 A at 90 Vac
		Output power	45W
		DC output	19.5V
		Hold-up time	5 ms at 115Vac input
		Output current limit	<8.0A
		AC Connector (Ac Inlet)	C8 (2 pin/non-grounded, with Smart ID DC connector)
	Environmental Design	Operating temperature	32° to 95° F (0° to 35° C)
		Non-operating (storage) temperature	-4° to 185° F (-20° to 85° C)
		Altitude	0 to 16,400 ft (0 to 5,000 m)
		Humidity	20% to 95%
		Storage Humidity	10% to 95%
	EMI and Safety Certifications	*CE Mark - full compliance with LVD and EMC directives	
* Worldwide safety standards - IEC60950, 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	90 to 265 VAC	
		Input Efficiency	88.0 % at 115 Vac and 89.0 % at 230 Vac
	Output	Input frequency range	47 to 63 Hz
		Input AC current	1.7 A at 90 Vac
		Output power	65W
		DC output	19.5V
		Hold-up time	5 ms at 115 Vac input
		Output current limit	<11.0A
	AC Connector (Ac Inlet)	C6 (3pin/with grounded, with Smart ID DC connector)	



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

	Environmental Design	Operating temperature	32° to 95° F (0° to 35° C)
		Non-operating (storage) temperature	-4° to 185° F (-20° to 85° C)
		Altitude	0 to 16,400 ft (0 to 5,000 m)
		Humidity	20% to 95%
		Storage Humidity	10% to 95%
	EMI and Safety Certifications	Eg:	
			*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 Smart AC Adapter EM	Dimensions		102.0x55.0x30.0mm
	Weight		unit: 350g +/- 10g
	Input		90 to 265 VAC
		Input Efficiency	87.0% min at 115 VAC and 230Vac
		Input frequency range	47 to 63 Hz
		Input AC current	1.7 A at 90 VAC
	Output	Output power	65W
		DC output	19.5V
		Hold-up time	5 ms at 115 Vac input
		Output current limit	<11.0A
	AC Connector (Ac Inlet)		C6 (3pin/with grounded, with Smart ID DC connector)
	Environmental Design	Operating temperature	32° to 95° F (0° to 35° C)
		Non-operating (storage) temperature	-4° to 185° F (-20° to 85° C)
		Altitude	0 to 16,400 ft (0 to 5,000 m)
		Humidity	20% to 95%
		Storage Humidity	10% to 95%
	EMI and Safety Certifications		*CE Mark - full compliance with LVD and EMC directives
			* Worldwide safety standards - IEC60950, 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 3-cell Long Life Li-Ion (49	Dimensions (H x W x L)		8.30 mm x127.5 mm x 160.25 mm
)	Weight		225g



QuickSpecs

Technical Specifications

WHr) – HP EliteBook 820 G4	Cells/Type	3 cell Lithium-Ion Polymer cell / 505295
	Energy	Voltage 11.55V Amp-hour capacity 4250mAh Watt-hour capacity 49Wh
	Temperature	Operating (Charging) 0~45 C Operating (Discharging) -10~60 C
	Fuel Gauge LED	NA
	Warranty	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.
	Optional Travel Battery Available	No

HP 3-cell Long Life Li-Ion (51 WHr) – HP EliteBook 840 & 850 G4	Dimensions (H x W x L)	6.8mm x 102.8mm x 198mm
	Weight	235g
	Cells/Type	3cell Lithium-Ion Polymer cell / 506480
	Energy	Voltage 11.55V Amp-hour capacity 4420mAh Watt-hour capacity 51wh
	Temperature	Operating (Charging) 0~45 C Operating (Discharging) -10~60 C
	Fuel Gauge LED	NA
	Warranty	1000 cycles > 65% (at 23°C)
	Optional Travel Battery Available	No

ENVIRONMENTAL

HP EliteBook 820 G4 Notebook PC



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

Eco-Label Certifications & declarations	<p>This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:</p> <ul style="list-style-type: none"> • IT ECO declaration • US ENERGY STAR® • EPEAT[®] Gold registered in the United States. See http://www.epeat.net for registration status in your country. 																						
System Configuration Energy Consumption (in accordance with US ENERGY STAR® test method)	<p>The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook”.</p> <table border="1" data-bbox="427 730 1572 898"> <thead> <tr> <th></th> <th>115VAC, 60Hz</th> <th>230VAC, 50Hz</th> <th>100VAC, 50Hz</th> </tr> </thead> <tbody> <tr> <td>Normal Operation (Short idle)</td> <td>5.15 W</td> <td>5.15 W</td> <td>4.66 W</td> </tr> <tr> <td>Normal Operation (Long idle)</td> <td>2.80 W</td> <td>3.23 W</td> <td>2.80 W</td> </tr> <tr> <td>Sleep</td> <td>0.74 W</td> <td>0.83 W</td> <td>0.77 W</td> </tr> <tr> <td>Off</td> <td>0.40 W</td> <td>0.48 W</td> <td>0.40 W</td> </tr> </tbody> </table>				115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz	Normal Operation (Short idle)	5.15 W	5.15 W	4.66 W	Normal Operation (Long idle)	2.80 W	3.23 W	2.80 W	Sleep	0.74 W	0.83 W	0.77 W	Off	0.40 W	0.48 W	0.40 W
	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz																				
Normal Operation (Short idle)	5.15 W	5.15 W	4.66 W																				
Normal Operation (Long idle)	2.80 W	3.23 W	2.80 W																				
Sleep	0.74 W	0.83 W	0.77 W																				
Off	0.40 W	0.48 W	0.40 W																				
	<p>Note:</p> <p>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.</p>																						
Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz																				



QuickSpecs

Technical Specifications

Normal Operation (Short idle)	18 BTU/hr	18 BTU/hr	16 BTU/hr
Normal Operation (Long idle)	10 BTU/hr	11 BTU/hr	10 BTU/hr
Sleep	3 BTU/hr	3 BTU/hr	3 BTU/hr
Off	1 BTU/hr	2 BTU/hr	1 BTU/hr
*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.			
Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	Sound Power (L _{WA} d, bels)		Sound Pressure (L _{pAm} , decibels)
Typically Configured – Idle	3.2		26
Fixed Disk – Random writes	3.5		27
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the 1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2320 (coin cell) Battery type: Lithium		



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

Additional Information	<ul style="list-style-type: none"> This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). This product is in compliance with the IEEE 1680 (EPEAT) standard at the gold level, see www.epeat.net Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. This product contains 0% post-consumer recycled plastic (by wt.) This product is 96.7% recycle-able when properly disposed of at end of life. 		
Packaging Materials	External:	PAPER/Corrugated	328 g
	Internal:	PLASTIC/Expanded Polyethylene - EPE	38 g
		PLASTIC/Polyethylene low density - LDPE	14 g
		PLASTIC/Polypropylene - PP	3 g
	The plastic packaging material contains at least 50% recycled content.		
	The corrugated paper packaging materials contains at least 70% recycled content.		
Material Usage	<p>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/pdf/qse.pdf):</p> <ul style="list-style-type: none"> Asbestos Certain Azo Colorants Certain Brominated Flame Retardants – may not be used as flame retardants in plastics Cadmium Chlorinated Hydrocarbons Chlorinated Paraffins 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) 		



QuickSpecs

Technical Specifications

	<ul style="list-style-type: none"> • 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)
<p>Packaging Usage</p>	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p> <ul style="list-style-type: none"> • 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.
<p>End-of-life Management and Recycling</p>	<p>Hewlett-Packard 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.</p> <p>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.</p>
<p>HP Inc.</p> <p>Corporate Environmental Information</p>	<p>For more information about HP's commitment to the environment:</p> <p>Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/qcreport/index.html</p> <p>Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html</p> <p>ISO 14001 certificates: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842</p> <p>and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</p>



QuickSpecs

Technical Specifications

HP EliteBook 840 G4 Notebook PC

Eco-Label Certifications & declarations	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: <ul style="list-style-type: none"> • IT ECO declaration • US ENERGY STAR® • EPEAT <Gold> registered in the United States. See http://www.epeat.net for registration status in your country. 		
System Configuration Energy Consumption (in accordance with US ENERGY STAR® test method)	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook”.		
Normal Operation (Short idle)	115VAC, 60Hz 5.12 W	230VAC, 50Hz 5.47 W	100VAC, 50Hz 5.18 W
Normal Operation (Long idle)	3.00 W	3.26 W	3.50 W
Sleep	0.66 W	0.66 W	0.67 W
Off	0.40 W	0.40 W	0.40 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.		



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HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	18 BTU/hr	19 BTU/hr	18 BTU/hr
Normal Operation (Long idle)	10 BTU/hr	11 BTU/hr	12 BTU/hr
Sleep	2 BTU/hr	2 BTU/hr	2 BTU/hr
Off	1 BTU/hr	1 BTU/hr	1 BTU/hr
	*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.		
Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	Sound Power (L _{WA} d, bels)	Sound Pressure (L _{pAm} , decibels)	
Typically Configured – Idle	2.9	21	
Fixed Disk – Random writes	3.2	22	
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the 1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell) Battery type: Lithium		



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

Additional Information	<ul style="list-style-type: none"> This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). This product is in compliance with the IEEE 1680 (EPEAT) standard at the <Gold> level, see www.epeat.net Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. This product contains 0% post-consumer recycled plastic (by wt.) This product is 94.6% recycle-able when properly disposed of at end of life. 	
Packaging Materials	External: PAPER/Corrugated	323 g
	Internal: PLASTIC/Polyethylene Expanded - EPE	38 g
	PLASTIC/Polyethylene low density - LDPE	15 g
	PLASTIC/Polypropylene - PP	4 g
	The plastic packaging material contains at least 50% recycled content.	
	The corrugated paper packaging materials contains at least 70% recycled content.	
Material Usage	<p>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/pdf/gse.pdf):</p> <ul style="list-style-type: none"> Asbestos Certain Azo Colorants Certain Brominated Flame Retardants – may not be used as flame retardants in plastics Cadmium Chlorinated Hydrocarbons Chlorinated Paraffins 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) 	



QuickSpecs

Technical Specifications

	<ul style="list-style-type: none"> • 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)
<p>Packaging Usage</p>	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p> <ul style="list-style-type: none"> • 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.
<p>End-of-life Management and Recycling</p>	<p>Hewlett-Packard 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.</p> <p>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.</p>
<p>Hewlett-Packard Corporate Environmental Information</p>	<p>For more information about HP's commitment to the environment:</p> <p>Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/qcreport/index.html</p> <p>Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html</p> <p>ISO 14001 certificates: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842</p> <p>and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</p>



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

HP EliteBook 850 G4 Notebook PC

Eco-Label Certifications & declarations	<p>This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:</p> <ul style="list-style-type: none"> • IT ECO declaration • US ENERGY STAR® • EPEAT <Gold> registered in the United States. See http://www.epeat.net for registration status in your country. 																	
System Configuration Energy Consumption (in accordance with US ENERGY STAR® test method)	<p>The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook”.</p> <table border="1" data-bbox="423 989 1567 1157"> <thead> <tr> <th data-bbox="423 989 712 1157">115VAC, 60Hz</th> <th data-bbox="716 989 1024 1157">230VAC, 50Hz</th> <th data-bbox="1027 989 1567 1157">100VAC, 50Hz</th> </tr> </thead> <tbody> <tr> <td data-bbox="423 1161 712 1255">Normal Operation (Short idle)</td> <td data-bbox="716 1161 1024 1255">5.86 W</td> <td data-bbox="1027 1161 1567 1255">5.99 W</td> </tr> <tr> <td data-bbox="423 1257 712 1352">Normal Operation (Long idle)</td> <td data-bbox="716 1257 1024 1352">3.14 W</td> <td data-bbox="1027 1257 1567 1352">3.40 W</td> </tr> <tr> <td data-bbox="423 1354 712 1419">Sleep</td> <td data-bbox="716 1354 1024 1419">0.71 W</td> <td data-bbox="1027 1354 1567 1419">0.72 W</td> </tr> <tr> <td data-bbox="423 1421 712 1745">Off</td> <td data-bbox="716 1421 1024 1745">0.40 W</td> <td data-bbox="1027 1421 1567 1745">0.48 W</td> </tr> </tbody> </table>			115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz	Normal Operation (Short idle)	5.86 W	5.99 W	Normal Operation (Long idle)	3.14 W	3.40 W	Sleep	0.71 W	0.72 W	Off	0.40 W	0.48 W
115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz																
Normal Operation (Short idle)	5.86 W	5.99 W																
Normal Operation (Long idle)	3.14 W	3.40 W																
Sleep	0.71 W	0.72 W																
Off	0.40 W	0.48 W																
Normal Operation (Short idle)	5.86 W	5.86 W	5.99 W															
Normal Operation (Long idle)	3.14 W	3.73 W	3.40 W															
Sleep	0.71 W	0.79 W	0.72 W															
Off	0.40 W	0.48 W	0.40 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



QuickSpecs

Technical Specifications

	PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	20 BTU/hr	20 BTU/hr	20 BTU/hr
Normal Operation (Long idle)	11 BTU/hr	13 BTU/hr	12 BTU/hr
Sleep	2 BTU/hr	3 BTU/hr	2 BTU/hr
Off	1 BTU/hr	2 BTU/hr	1 BTU/hr
	*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.		
Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	Sound Power (L _{WAd} , bels)	Sound Pressure (L _{pAm} , decibels)	
Typically Configured – Idle	2.9	22	
Fixed Disk – Random writes	3.5	28	
Batteries	<p>This battery(s) in this product comply with EU Directive 2006/66/EC</p> <p>Batteries used in the product do not contain: Mercury greater the 1ppm by weight Cadmium greater than 20ppm by weight</p> <p>Battery size: CR2032 (coin cell) Battery type: Lithium</p>		



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

Technical Specifications

Additional Information	<ul style="list-style-type: none"> This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). This product is in compliance with the IEEE 1680 (EPEAT) standard at the <Gold> level, see www.epeat.net Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. This product contains 0% post-consumer recycled plastic (by wt.) This product is 95.2% recycle-able when properly disposed of at end of life. 		
Packaging Materials	External:	PAPER/Corrugated	348 g
	Internal:	PLASTIC/Polyethylene Expanded - EPE	38 g
		PLASTIC/Polyethylene low density - LDPE	15 g
		PLASTIC/Polypropylene - PP	5 g
	The plastic packaging material contains at least 50% recycled content.		
	The corrugated paper packaging materials contains at least 70% recycled content.		
Material Usage	<p>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/pdf/gse.pdf):</p> <ul style="list-style-type: none"> Asbestos Certain Azo Colorants Certain Brominated Flame Retardants – may not be used as flame retardants in plastics Cadmium Chlorinated Hydrocarbons Chlorinated Paraffins 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) 		



QuickSpecs

Technical Specifications

	<ul style="list-style-type: none"> • 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)
<p>Packaging Usage</p>	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p> <ul style="list-style-type: none"> • 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.
<p>End-of-life Management and Recycling</p>	<p>Hewlett-Packard 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.</p> <p>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.</p>
<p>Hewlett-Packard Corporate Environmental Information</p>	<p>For more information about HP's commitment to the environment:</p> <p>Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/qcreport/index.html</p> <p>Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html</p> <p>ISO 14001 certificates: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842</p> <p>and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</p>



QuickSpecs

Technical Specifications

COUNTRY OF ORIGIN

China



QuickSpecs

HP EliteBook 820 G4 Notebook PC
HP EliteBook 840 G4 Notebook PC
HP EliteBook 850 G4 Notebook PC

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

Type	Description	Part Number
Docking	HP USB-C Travel Dock	T0K29AA#xxx
	HP USB Travel Dock	T0K30AA#xxx
	HP UltraSlim Docking Station	D9Y32AA#xxx
	HP Elite USB-C Docking Station	X7W54AA
	HP Adjustable Dual Display Stand	AW664AA
	HP Display and Notebook Stand II	E8G00AA
Input/Output	HP Slim Wireless Keyboard and Mouse	T6L04AAxxx
	HP USB Essential Keyboard and Mouse	H6L29AA
	HP Conferencing Keyboard	K8P74AA
	HP Ultrathin Wireless Mouse	L9V78AA
	HP UC Speaker Phone	K7V16AA
	HP UC Wired Headset	K7V17AA
	HP Stereo 3.5mm Headset	T1A66AA
	HP Stereo USB Headset	T1A67AA
	HP UC Wireless Mono Headset	W3K08AA
	HP UC Wireless Duo Headset	W3K09AA
	HP USB Speaker Phone	X7N17AA
	Memory	HP 4GB 2400 MHz DDR4 Memory
HP 8GB 2400 MHz DDR4 Memory		Z4Y85AA
HP 16GB 2400 MHz DDR4 Memory		Z4Y86AA
Power	HP 65W Slim AC Adapter	H6Y82AA#xxx
	HP 90W Slim AC Adapter	H6Y83AA#xxx
	HP 90W Slim Combo AC Adapter w/ USB	H6Y84AA#xxx
	HP 45W Smart AC Adapter	H6Y88AA#xxx
	HP 65W Smart AC Adapter	H6Y89AA#xxx
	HP 90W Smart AC Adapter	H6Y90AA#xxx
	HP Notebook Power Bank	N9F71AA#xxx
	Storage	HP USB External DVDRW Drive
Security		HP Combination Lock
	HP Keyed Cable lock	T0Y14AA
Displays	HP EliteDisplay E232 23-inch Monitor	M1N98AA
	HP EliteDisplay S231d 23-inch Notebook Docking Monitor	F3J72AA
	HP Elite Display S140u 14-inch USB Portable Monitor	G8R65AA



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