

# QuickSpecs

## Technical Specifications

### HP EliteBook 820 G4 Notebook PC



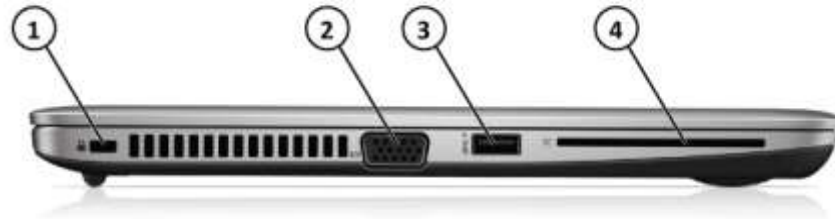
#### Front / Right

- |                               |  |
|-------------------------------|--|
| 1. WLAN antennas (2)          | 13. DisplayPort™ 1.2   |
| 2. WWAN antennas (2)          | 14. USB-C™ Basic port  |
| 3. Internal microphones (2)   | 15. Fingerprint reader (select models)   |
| 4. Webcam LED (select models) | 16. NFC (select models)  |
| 5. Webcam (select models)     | 17. Touchpad buttons (4)   |
| 6. SIM card slot              | 18. Indicator LEDs: Wireless Light, Power Light, AC Adapter/Battery Light, Storage Usage Light |
| 7. Power connector            | 19. Touchpad   |
| 8. Docking connector          | 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

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

## Technical Specifications

### HP EliteBook 840 G4 Notebook PC



#### Front / Right

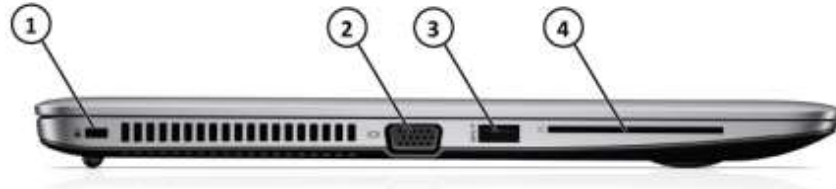
- |                               |  |
|-------------------------------|--|
| 1. WLAN antennas (2)          | 13. Microphone/ headphones combo jack  |
| 2. WWAN antennas (2)          | 14. SD card slot   |
| 3. Internal microphones (2)   | 15. DisplayPort™ 1.2   |
| 4. Webcam LED (select models) | 16. 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        |  |



Not all configuration components are available in all regions/countries.  
Americas – HP EliteBook 800 G4 Series – April 25, 2017 - c05330730

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### Left

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

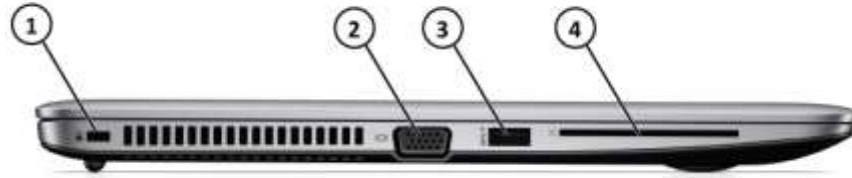




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- 11. Ethernet port
- 12. USB 3.1 Gen 1 port
- 23. Power button
- 24. 10-key Numeric Keypad



**Left**

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



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### 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™ Basic, 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 7<sup>th</sup> 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 Process<sup>1</sup>
- Enhanced security features including TPM 2.0, SmartCard Reader, HP Sure Start self-healing BIOS, HP Client Security, Self-Encrypting storage drives, and optional Fingerprint reader
- World's only PC's with integrated Privacy Display HP Sure View (HP EliteBook 840 option only)
- HP Touchpoint Manager<sup>3</sup>, HP Image Assistant and HP Management Integration Kit provide additional tools for more efficient manageability
- 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
- Regain up to 50% battery life in just 30 minutes of charging<sup>6</sup> with an HP fast charging battery.
- HP WorkWise is office intelligence rolled into one smartphone app to provide PC security, real-time PC performance information, and simplified printer driver installation for HP PC users.
- 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 cycles<sup>2</sup>
- 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.

3. HP Touchpoint Manager requires purchase of a subscription and supports Android™, iOS and Windows 7 or higher operating systems and PCs, notebooks, tablets and smartphones from various manufacturers. Not available in all countries see <http://www.hp.com/touchpoint> for availability information.



## Technical Specifications

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

### 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 64<sup>1</sup>  
Windows 10 Home 64<sup>1</sup>  
FreeDOS 2.0  
NeoKylin Linux 64

#### Web Supported

Windows 10 Enterprise 64<sup>1</sup>

#### **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)<sup>1</sup>

Intel® Core™ i7-7500U (2.7 GHz, up to 3.5 GHz with Intel Turbo Boost Technology, 4 MB cache, 2 cores)<sup>1,2</sup>

Intel® Core™ i5-7300U (2.6 GHz, up to 3.5 GHz with Intel Turbo Boost Technology, 3 MB cache, 2 cores)<sup>1</sup>

Intel® Core™ i5-7200U (2.5 GHz, up to 3.1 GHz with Intel Turbo Boost Technology, 3 MB cache, 2 cores)<sup>1,2</sup>

Intel® Core™ i3-7100U (2.4 GHz, 3 MB cache, 2 cores)<sup>1,2</sup>

#### 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.

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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)



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### 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.<sup>2</sup>

**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.

### 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



## Technical Specifications

### 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 Module<sup>1</sup>

HP It4132 LTE/HSPA+ 4G Mobile Broadband Module<sup>1</sup>

HP hs3210 WW HSPA+ with GPS Mobile Broadband<sup>1</sup>

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

### Wireless LAN (WLAN) Via M.2 Minicard



## Technical Specifications

Intel® Dual Band Wireless-AC 8265 802.11 a/b/g/n/ac (2x2) WiFi and Bluetooth® 4.2 combo (vPro and non-vPro)<sup>2</sup>  
Intel® Dual Band Wireless-AC 3168 802.11 a/b/g/n/ac (1x1) WiFi and Bluetooth® 4.2 combo (non-vPro)<sup>2</sup>

### **Near Field Communication (NFC)<sup>1</sup>**

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**

Optional<sup>1</sup> 720p HD<sup>2</sup> webcam<sup>3</sup>

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

### **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.



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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  
F11 - Blank  
F12 - Num Lock

#### Hidden Function Keys

Fn+R - Break



# QuickSpecs

## Technical Specifications

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 BIOSphere<sup>1</sup>  
HP Sure Start Gen3<sup>10</sup>  
HP DriveLock | HP Automatic DriveLock  
BIOS Update via Network  
Master Boot Record Security  
Power On Authentication  
Secure Erase<sup>2</sup>  
Pre-boot Authentication

### **Communication/Connectivity**

HP Mobile Connect Pro (Windows 10 only)<sup>3</sup>  
Native Miracast Support<sup>4</sup>  
HP LAN-WLAN Protection  
HP MAC Address Manager  
HP Wireless Wakeup

### **HP Value Add Software**

HP 3D DriveGuard (requires Windows)



## Technical Specifications

HP ePrint Driver +JetAdvantage<sup>5</sup>

HP Hotkey Support

HP Recovery Manager

HP Jumpstart

HP Support Assistant

HP Noise Cancellation Software

### Microsoft Products

Buy Office

Bing Search

Skype<sup>6</sup>

### Manageability

HP Driver Packs<sup>7</sup>

HP SoftPaq Download Manager (SDM)

HP System Software Manager (SSM)<sup>7</sup>

HP BIOS Config Utility (BCU)<sup>7</sup>

HP Client Catalog<sup>7</sup>

HP MIK for Microsoft SCCM<sup>7</sup>

HP Image Assistant<sup>7</sup>

HP WorkWise

LANDESK Management<sup>8</sup>

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 Module<sup>9</sup>
- Power On Authentication
- HP Device Access Manager

Microsoft Defender

### Security

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

Convertible to FIPS 140-2 Certified mode.





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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](http://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](http://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 Supply<sup>1</sup>

HP 45W Smart AC Adapter  
HP 45W 2-prong DC jack AC Adapter  
HP 65W Smart AC Adapter<sup>2</sup>  
HP 65W Smart AC Adapter EM<sup>2</sup>

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



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**HP EliteBook 820 G4 Notebook PC**  
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**HP EliteBook 850 G4 Notebook PC**

## Technical Specifications

### 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 Life<sup>1</sup>

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](http://www.bapco.com) for additional details.

### Power Conservation

Hibernation

Standby

ACPI compliance

## WEIGHTS & DIMENSIONS



Not all configuration components are available in all regions/countries.  
Americas – HP EliteBook 800 G4 Series – April 25, 2017 - c05330730

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## Technical Specifications

### HP EliteBook 820

#### Weight<sup>1</sup>

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)

#### Dimensions<sup>2</sup> (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

#### Weight<sup>1</sup>

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)

#### Dimensions<sup>2</sup> (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

#### Weight<sup>1</sup>

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)

#### Dimensions<sup>2</sup> (w x d x h)

15.10 x 10.10 x 0.76 in (Front)

38.36 x 25.77 x 1.94 cm

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

## PORTS/SLOTS

### Ports



# QuickSpecs

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

## Technical Specifications

- 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 Services<sup>1</sup> 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](http://www.hp.com/go/cpc). HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.



# QuickSpecs

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

## Technical Specifications

### SYSTEM UNIT

<b>Stand-Alone Power Requirements</b> (AC Power)	<b>Nominal Operating Voltage</b>	19.5 V
	<b>Average Operating Power</b>	<b>Windows 10 (64-bit)</b>
	Integrated graphics	12.9 W
	<b>Max Operating Power</b>	Discrete < 90W UMA < 65W
<b>Temperature</b>	<b>Operating</b>	32° to 95° F (0° to 35° C) (not writing optical) 41° to 95° F (5° to 35° C) (writing optical)
	<b>Non-operating</b>	-4° to 140° F (-20° to 60° C)
<b>Relative Humidity</b>		10% to 90%, non-condensing
		5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
<b>Shock</b>	<b>Operating</b>	40 G, 2 ms, half-sine
	<b>Non-operating</b>	200 G, 2 ms, half-sine
<b>Random Vibration</b>	<b>Operating</b>	0.75 grms
	<b>Non-operating</b>	1.50 grms
<b>Altitude</b> (unpressurized)	<b>Operating</b>	-50 to 10,000 ft (-15.24 to 3,048 m)
	<b>Non-operating</b>	-50 to 15,000 ft (-15.24 to 12,192 m)
<b>Planned Industry Standard</b>	<b>UL</b>	Yes
<b>Certifications</b>	<b>CSA</b>	Yes
	<b>FCC Compliance</b>	Yes
	<b>ENERGY STAR®</b>	Select models*
	<b>EPEAT®</b>	Registered Gold in United States**



# QuickSpecs

## Technical Specifications

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

<b>31.75 cm (12.5") diagonal LED backlight HD Slim eDP SVA Anti-</b>	<b>Outline Dimensions</b> (W x H x D)	291.0 x 181.9 X 3.0 mm (max)
	<b>Active Area</b>	276.62 mm x 155.52 mm
	<b>Weight</b>	250g max



# QuickSpecs

## Technical Specifications

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



# QuickSpecs

## Technical Specifications

<b>Refresh Rate</b>	60Hz	
<b>Response time</b>	25ms typ.	
<b>Pixel Per Inch (PPI)</b>	176	
<b>Brightness</b>	300nits	
<b>Pixel Resolution</b>	<b>Format</b>	1920 x 1080 (FHD)
	<b>Configuration</b>	RGB
<b>Interface</b>	eDP 1.3 + PSR	
<b>LCD Mode</b>	IPS/FFS/VA	
<b>Viewing Angle</b>	UWVA 85/85/85/85	

**35.56 cm (14") diagonal LED backlight HD Slim eDP SVA Anti-glare non-touch (1366 x 768)**

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

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

<b>Outline Dimensions (W x H x D)</b>	320.9 x 205.6 (max) x 3.0(max) mm	
<b>Active Area</b>	309.40 x 173.95 (mm)	
<b>Weight</b>	270 g max	
<b>Diagonal Size</b>	14"	
<b>Surface Treatment</b>	Anti-Glare (AG)	
<b>Contrast Ratio</b>	300:1 (typ)	
<b>Refresh Rate</b>	60Hz	
<b>Response time</b>	16ms typ.	
<b>Pixel Per Inch (PPI)</b>	157	





# QuickSpecs

## Technical Specifications

	<b>Brightness</b>	300nits		
	<b>Pixel Resolution</b>	<b>Format</b>	1920 x 1080 (FHD)	
		<b>Configuration</b>	RGB	
	<b>Interface</b>	eDP 1.2		
	<b>LCD Mode</b>	TN		
	<b>Viewing Angle</b>	SVA 45/45/25/35		
<b>35.56 cm (14") diagonal LED backlight FHD Slim eDP UWVA Anti-glare non-touch (1920 x 1080)</b>	<b>Outline Dimensions (W x H x D)</b>	320.9 x 205.6 x 3.0 (mm) max		
	<b>Active Area</b>	309.14 x 173.89 (mm)		
	<b>Weight</b>	285 g max		
	<b>Diagonal Size</b>	35.56 cm (14")		
	<b>Surface Treatment</b>	Anti-Glare (AG)		
	<b>Contrast Ratio</b>	600:1 (typ)		
	<b>Refresh Rate</b>	60 Hz		
	<b>Response time</b>	35 ms (typ)		
	<b>Pixel Per Inch (PPI)</b>	157		
	<b>Brightness</b>	300 nits		
		<b>Format</b>	1366 x 768 (HD)	
		<b>Configuration</b>	RGB	
		<b>Interface</b>	eDP 1.3	
		<b>LCD Mode</b>	IPS	
		<b>Viewing Angle</b>	UWVA 85/85/85/85	
	<b>35.56 cm (14") diagonal LED backlight QHD UltraSlim eDP UWVA Anti-glare non-touch (2560 x 1440)</b>	<b>Outline Dimensions (W x H x D)</b>	320.9 x 205.6 (mm) max x 2.6 (mm) max	
<b>Active Area</b>		309.50 x 174.10 (mm)		
<b>Weight</b>		270g max		
<b>Diagonal Size</b>		35.56 cm (14")		
<b>Surface Treatment</b>		Anti-Glare (AG)		
<b>Contrast Ratio</b>		600:1 (typ.)		
<b>Refresh Rate</b>		60Hz		
<b>Response time</b>		30 ms typ.		
<b>Pixel Per Inch (PPI)</b>		210		
<b>Brightness</b>		340 nits		
		<b>Format</b>	2560x1440 (QHD)	
		<b>Configuration</b>	RGB	



# QuickSpecs

## Technical Specifications

<b>Interface</b>	eDP 1.3 + PSR
<b>LCD Mode</b>	IPS/FFS/VA
<b>Viewing Angle</b>	UWVA 85/85/85/85

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

<b>35.56 cm (14") diagonal LED backlight FHD Slim eDP SVA (1920 x 1080) Touch</b>	<b>Outline Dimensions</b> (W x H x D)	320.9 x 205.6 (mm) max x 3.0 (mm) max	
	<b>Active Area</b>	309.40 x 173.95 (mm)	
	<b>Weight</b>	430 g max	
	<b>Diagonal Size</b>	14"	
	<b>Surface Treatment</b>	Anti-smudge/fingerprint coating	
	<b>Touch Enabled</b>	Yes	
	<b>TSP Type</b>	Capacitive	
	<b>Contrast Ratio</b>	300:1 (typ)	
	<b>Refresh Rate</b>	60 Hz	
	<b>Response time</b>	16ms typ.	



# QuickSpecs

## Technical Specifications

<b>Pixel Per Inch (PPI)</b>	157	
<b>Brightness</b>	300nits	
<b>Pixel Resolution</b>	<b>Format</b>	1920 x 1080 (FHD)
	<b>Configuration</b>	RGB
<b>Interface</b>	eDP 1.2	
<b>LCD Mode</b>	TN	
<b>Viewing Angle</b>	SVA 45/45/25/35	

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

<b>39.6 cm (15.6") diagonal LED backlight FHD Slim eDP SVA Anti-glare non-touch (1920 x 1080)</b>	<b>Outline Dimensions (W x H x D)</b>	360.0 x 224.3 x 3.2 (mm) max
	<b>Active Area</b>	344.2 x 193.5 (mm)
	<b>Weight</b>	360 g max.
	<b>Diagonal Size</b>	39.6 cm (15.6")
	<b>Surface Treatment</b>	Anti-Glare (AG)
	<b>Contrast Ratio</b>	400:1 (typ)
	<b>Refresh Rate</b>	60Hz
	<b>Response time</b>	16ms typ.
	<b>Pixel Per Inch (PPI)</b>	142
	<b>Brightness</b>	300nits



# QuickSpecs

## Technical Specifications

	<b>Pixel Resolution</b>	<b>Format</b>	1920 x 1080 (FHD)	
		<b>Configuration</b>	RGB	
	<b>Interface</b>	eDP 1.2		
	<b>LCD Mode</b>	TN		
	<b>Viewing Angle</b>	SVA 45/45/25/35		
<b>39.6 cm (15.6") diagonal LED backlight FHD Slim eDP UWVA Anti-glare non-touch (1920 x 1080)</b>	<b>Outline Dimensions (W x H x D)</b>	360 x 224.3 x 3.2 (mm) max		
	<b>Active Area</b>	344.2 x 193.5 (mm)		
	<b>Weight</b>	360 g max		
	<b>Diagonal Size</b>	39.6 cm (15.6")		
	<b>Surface Treatment</b>	Anti-Glare (AG)		
	<b>Contrast Ratio</b>	600:1 (typ)		
	<b>Refresh Rate</b>	60 Hz		
	<b>Response time</b>	35 ms (typ)		
	<b>Pixel Per Inch (PPI)</b>	142		
	<b>Brightness</b>	300 nits		
		<b>Pixel Resolution</b>	<b>Format</b>	1920 x 1080 (FHD)
			<b>Configuration</b>	RGB
		<b>Interface</b>	eDP 1.3 + PSR	
	<b>LCD Mode</b>	IPS		
	<b>Viewing Angle</b>	UWVA 85/85/85/85		
<b>39.6 cm (15.6") diagonal LED backlight UHD Slim eDP UWVA Anti-glare non-touch (3840 x 2160)</b>	<b>Dimensions (W x H x D)</b>	368.48 x 218.81 x 3.14 (mm) max		
	<b>Diagonal Size</b>	15.6 in (39.6 cm)		
	<b>Weight</b>	345 g (max)		
	<b>Surface Treatment</b>	Anti-glare (AG)		
	<b>Contrast Ratio</b>	1000:1 (typ)		
	<b>Refresh Rate</b>	60 Hz		
	<b>Brightness</b>	340 nit		
	<b>Pixel Resolution</b>		<b>Format</b>	3840x2160 (UHD)
			<b>Configuration</b>	RGB
		<b>Backlight</b>	LED	
	<b>PPI</b>	282		
	<b>Viewing Angle</b>	80° Horizontal, ±80° Vertical (minimum) 80/80/80/80 (Left/Right/Down/Up) (min) UWVA 85/85/85/85		



# QuickSpecs

## Technical Specifications

<b>39.6 cm (15.6") diagonal LED backlight FHD Slim eDP SVA (1920 x 1080) Touch</b>	<b>Outline Dimensions</b>	360.0 x 224.3 x 3.2 (mm) max
	(W x H x D)	
	<b>Active Area</b>	344.2 x 193.5 (mm)
	<b>Weight</b>	560 g max.
	<b>Diagonal Size</b>	39.6 cm (15.6")
	<b>Surface Treatment</b>	Anti-smudge/fingerprint coating
	<b>Contrast Ratio</b>	400:1 (typical)
	Touch Enabled	Yes
	TSP Type	Capacitive
	<b>Refresh Rate</b>	60Hz
	<b>Response time</b>	16ms typ.
	<b>Pixel Per Inch (PPI)</b>	142
	<b>Brightness</b>	300nits
	<b>Pixel Resolution</b>	<b>Format</b> 1920 x 1080 (FHD)
		<b>Configuration</b> RGB
<b>Interface</b>	eDP 1.2	
<b>LCD Mode</b>	TN	
<b>Viewing Angle</b>	SVA 45/45/25/35	

## NETWORKING

### HP It4120 Qualcomm® Snapdragon™ X5 LTE Mobile Broadband Module

<b>Technology/Operating bands</b>	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 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
<b>Wireless protocol standards</b>	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



# QuickSpecs

## Technical Specifications

<b>GPS</b>	Standalone, A-GPS (MS-A, MS-B and XTRA)
<b>GPS bands</b>	1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz
<b>Maximum data rates</b>	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)
<b>Maximum output power</b>	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
<b>Maximum power consumption</b>	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)
<b>Form Factor</b>	M.2, 3042-S3 Key B
<b>Weight</b>	6.2 g
<b>Dimensions</b> (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**

<b>Technology/Operating bands</b>	LTE: 2100 (Band 1), 1900 (Band 2), 1800 (Band 3) MHz, 850 (Band 5), 2600 (Band 7), 900 (Band 8) MHz, 800 (Band 20), 700 (Band 28) MHz. HSPA+: 2100 (Band 1), 1900 (Band 2), 850 (Band 5), 900 (Band 8) MHz E-GPRS: 1900 (Band 2), 1800 (Band 3), 850 (Band 5), 900 (Band 8) MHz
<b>Wireless protocol standards</b>	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
<b>GPS</b>	Standalone, A-GPS (MS-B and LTO)
<b>GPS bands</b>	1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz



# QuickSpecs

## Technical Specifications

<b>Maximum data rates</b>	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)
<b>Maximum output power</b>	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
<b>Maximum power consumption</b>	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)
<b>Form Factor</b>	M.2, 3042-S3 Key B
<b>Weight</b>	6 g
<b>Dimensions</b> (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\***

<b>Technology/Operating bands</b>	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
<b>Wireless protocol standards</b>	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
<b>Maximum data rates</b>	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)
<b>Maximum output power</b>	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
<b>Maximum power consumption</b>	HSPA+: 1,100 mA (peak); 800 mA (average) E-GPRS: 2,800 mA (peak); 700 mA (average)
<b>Form Factor</b>	M.2, 2242-S3 Key B



# QuickSpecs

## Technical Specifications

<b>Weight</b>	6 g
<b>Dimensions</b> (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

<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ac Wave 2 MU-MIMO
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**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





# QuickSpecs

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

## Technical Specifications

Note: Indonesia no support this band)

<b>Data Rates</b>	<ul style="list-style-type: none"><li>• 802.11b: 1, 2, 5.5, 11 Mbps</li><li>• 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li><li>• 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li><li>• 802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz)</li><li>• 802.11ac : MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, and 80MHz)</li></ul>
<b>Modulation</b>	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
<b>Security<sup>1</sup></b>	<ul style="list-style-type: none"><li>• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only</li><li>• AES-CCMP: 128 bit in hardware</li><li>• 802.1x authentication</li><li>• WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.</li><li>• WPA2 certification</li><li>• IEEE 802.11i</li><li>• Cisco Certified Extensions, all versions through CCX4 and CCX Lite</li><li>• WAPI</li></ul>
<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
<b>Roaming</b>	IEEE 802.11 compliant roaming between access points
<b>Output Power<sup>2</sup></b>	<ul style="list-style-type: none"><li>• 802.11b : +16dBm minimum</li><li>• 802.11g : +14dBm minimum</li><li>• 802.11a : +14dBm minimum</li><li>• 802.11n HT20(2.4GHz) : +14dBm minimum</li><li>• 802.11n HT40(2.4GHz) : +12dBm minimum</li><li>• 802.11n HT20(5GHz) : +14dBm minimum</li><li>• 802.11n HT40(5GHz) : +12dBm minimum</li></ul>
<b>Power Consumption</b>	Transmit: 2.0 W (max)  Receive: 1.6 W (max)  Idle mode (PSP): 180 mW (WLAN Associated)



# QuickSpecs

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

## Technical Specifications

	Idle mode: 50 mW (WLAN unassociated)
	Connect Standby: 10 mW (WLAN+BT)
	Radio disabled: 5 mW
<b>Power Management</b>	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
<b>Receiver Sensitivity<sup>3</sup></b>	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
<b>Antenna type</b>	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
<b>Form Factor</b>	PCI-Express M.2 MiniCard
<b>Dimensions</b>	Type 2230 : 2.3 x 22.0 x 30.0 mm  Or Type 1630 : 2.3 x 16.0 x 30.0 mm



# QuickSpecs

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

## Technical Specifications

<b>Weight</b>	Type 2230 : 2.8g Or Type 1630 : 2g
<b>Operating Voltage</b>	3.3v +/- 9%
<b>Temperature</b>	Operating 14° to 158° F (–10° to 70° C) Non-operating –40° to 176° F (–40° to 80° C)
<b>Humidity</b>	Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing)
<b>Altitude</b>	Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	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

<b>Bluetooth Specification</b>	4.0/4.1/4.2 Compliant
<b>Frequency Band</b>	2402 to 2480 MHz
<b>Number of Available Channels</b>	Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)
<b>Data Rates and Throughput</b>	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)



# QuickSpecs

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

## Technical Specifications

### 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

### 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



## Technical Specifications

<b>Power Management</b>	ETS 300 328, ETS 300 826
<b>Certifications</b>	Low Voltage Directive IEC950 UL, CSA, and CE Mark
<b>Certifications</b>	Serial Port Profile (SPP) <sup>1</sup> Service Discovery Application Profile (SDAP) Dial-Up Networking (DUN) <sup>1,2</sup> Generic Object Exchange Profile (GOEP) <sup>1,2</sup> Object Push Profile (OPP) <sup>1,2</sup> Hard Copy Cable Replacement (HCRP) <sup>1,2</sup> Personal Area Networking Profile (PAN) <sup>1,2</sup> Human Interface Device Profile (HID) <sup>1,2</sup> Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP) Audio Video Remote Control Profile (AVRCP)
<b>Bluetooth Profiles Supported</b>	
<b>Bluetooth V4.1/V4.2 support feature</b>	V4.1: ESR5/6/7 compliant  V4.2: ESR8 compliant, LE Secure Connection – Basic.

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

<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g
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# QuickSpecs

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

## Technical Specifications

	IEEE 802.11n
	IEEE 802.11ac
<b>Interoperability</b>	Wi-Fi certified
<b>Frequency Band</b>	802.11b/g/n <ul style="list-style-type: none"><li>• 2.402 – 2.482 GHz</li></ul> <p><b>Note:</b></p> <p>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.</p>
	802.11a/n <ul style="list-style-type: none"><li>• 4.9 – 4.95 GHz (Japan)</li><li>• 5.15 – 5.25 GHz</li><li>• 5.25 – 5.35 GHz</li><li>• 5.47 – 5.725 GHz</li><li>• 5.825 – 5.850 GHz</li></ul> <p><b>Note:</b></p> <p>Indonesia only supports 5.725 - 5.825 GHz (CH149 - CH161)</p>
<b>Data Rates</b>	<ul style="list-style-type: none"><li>• 802.11b: 1, 2, 5.5, 11 Mbps</li><li>• 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li><li>• 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li><li>• 802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz)</li><li>• 802.11ac: MCS0 ~ MCS7, (1SS) (20MHz, 40MHz, and 80MHz)</li></ul>
<b>Modulation</b>	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
<b>Security<sup>1</sup></b>	<ul style="list-style-type: none"><li>• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only</li><li>• AES-CCMP: 128 bit in hardware</li><li>• 802.1x authentication</li><li>• WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.</li><li>• WPA2 certification</li><li>• IEEE 802.11i</li></ul>



# QuickSpecs

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

## Technical Specifications

	<ul style="list-style-type: none"><li>• Cisco Certified Extensions, all versions through CCX4 and CCX Lite</li><li>• WAPI</li></ul>
<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
<b>Roaming</b>	IEEE 802.11 compliant roaming between access points
<b>Output Power<sup>2</sup></b>	<ul style="list-style-type: none"><li>• 802.11b : +16dBm minimum</li><li>• 802.11g : +14dBm minimum</li><li>• 802.11a : +14dBm minimum</li><li>• 802.11n HT20(2.4GHz) : +14dBm minimum</li><li>• 802.11n HT40(2.4GHz) : +12dBm minimum</li><li>• 802.11n HT20(5GHz) : +14dBm minimum</li><li>• 802.11n HT40(5GHz) : +12dBm minimum</li><li>• 802.11ac 80MHz(5GHz) : +11dBm minimum</li></ul>
<b>Power Consumption</b>	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
<b>Power Management</b>	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
<b>Receiver Sensitivity<sup>3</sup></b>	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



# QuickSpecs

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

## Technical Specifications

	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
<b>Antenna type</b>	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
<b>Form Factor</b>	PCI-Express M.2 MiniCard
<b>Dimensions</b>	Type 2230 : 2.3 x 22.0 x 30.0 mm
	Or
	Type 1630 : 2.3 x 16.0 x 30.0 mm
<b>Weight</b>	Type 2230 : 2.8g
	Or
	Type 1630 : 2g
<b>Operating Voltage</b>	3.3v +/- 9%
<b>Temperature</b>	Operating 14° to 158° F (-10° to 70° C) Non-operating -40° to 176° F (-40° to 80° C)
<b>Humidity</b>	Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing)
<b>Altitude</b>	Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	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).





# QuickSpecs

## Technical Specifications

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

<b>Bluetooth Specification</b>	4.0/4.1/4.2 Compliant
<b>Frequency Band</b>	2402 to 2480 MHz
<b>Number of Available Channels</b>	Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)
<b>Data Rates and Throughput</b>	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)
<b>Transmit Power</b>	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

<b>Modulation</b>	<b>0.01% BER</b>	<b>0.001% BER</b>
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



## Technical Specifications

<b>Bluetooth Software Supported</b>	Microsoft Windows Bluetooth Software
<b>Link Topology</b>	
<b>Electrical Interface</b>	Point to Point, Multipoint Pico Nets up to 7 slaves
<b>Bluetooth Software Supported</b>	Full support of Bluetooth Security Provisions
<b>Security</b>	
<b>Power Management</b>	Microsoft Windows ACPI, and USB Bus Support
<b>Certifications</b>	Self-configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
<b>Security</b>	All necessary regulatory approvals for supported countries, including:
<b>Certifications</b>	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
<b>Bluetooth Profiles Supported</b>	
<b>Power Management</b>	ETS 300 328, ETS 300 826
<b>Certifications</b>	Low Voltage Directive IEC950
	UL, CSA, and CE Mark
<b>Certifications</b>	Serial Port Profile (SPP) <sup>1</sup> Service Discovery Application Profile (SDAP) Dial-Up Networking (DUN) <sup>1,2</sup> Generic Object Exchange Profile (GOEP) <sup>1,2</sup> Object Push Profile (OPP) <sup>1,2</sup> Hard Copy Cable Replacement (HCRP) <sup>1,2</sup> Personal Area Networking Profile (PAN) <sup>1,2</sup> Human Interface Device Profile (HID) <sup>1,2</sup> Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP)
<b>Bluetooth Profiles Supported</b>	Audio Video Remote Control Profile (AVRCP)



## Technical Specifications

**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 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

**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))



# QuickSpecs

## Technical Specifications

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 802.3i; 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

**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))



## Technical Specifications

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<sup>2</sup>C

#### 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



# QuickSpecs

## Technical Specifications

<b>Reader (PCD-VCD) Mode(1)</b>	ISO/IEC 14443 A ISO/IEC 14443 B ISO/IEC 15693 MIFARE 1K MIFARE 4K MIFARE DESFire FeliCa Jewel and Topaz cards	
<b>Card Emulation (PICC-VICC) Mode(1)</b>	ISO/IEC 14443 A ISO/IEC 14443 B and B' MIFARE FeliCa	
<b>Frequency</b>	13.56 MHz	
<b>NFC Modes Supported</b>	Reader/Writer, Peer-to-Peer	
<b>Raw RF Data Rates</b>	106, 212, 424, 848 kbps	
<b>Operating temperature</b>	0°C to 70°C	
<b>Storage temperature</b>	-20°C to 125°C	
<b>Humidity</b>	10-90% operating 5-95% non-operating	
<b>Supply Operating voltage</b>	2.97 to 5.5 Volts	
<b>I/O Voltage</b>	1.8V or 3.3V	
<b>Power Consumption (Booster enable, VBAT= 3.3V, VCC_BOOST = 5V)</b>	<b>Mode</b> Polling	<b>Power Consumption, Typical<sup>(2)</sup></b> 7.3 mA



# QuickSpecs

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

## Technical Specifications

	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
<b>Antenna</b>	Antenna connector, 0.5mm pitch, 7 connector FPC. Antenna matching is external to module.	

## STORAGE AND DRIVES

<b>500 GB 7200rpm Hard Drive</b>	<b>Drive Weight</b>	0.20 lbs (92 g) ~ 0.21 lbs (95 g)
	<b>Capacity</b>	500 GB
	<b>Height</b>	0.28 in (7 mm)
	<b>Width</b>	2.75 in (69.85 mm)
	<b>Interface</b>	ATA-8, SATA 3.0
	<b>Transfer Rate</b>	<b>Synchronous</b> (maximum) 600 MB/s
	<b>Seek Time</b> (typical reads, including settling)	<b>Single Track</b> 1.5 ms ~ 2 ms <b>Average</b> 11 ms ~ 13 ms <b>Maximum</b> 18 ms ~ 22 ms
	<b>Cache</b>	32 MB
	<b>Rotational Speed</b>	7200 rpm
	<b>Logical Blocks</b>	976,773,168
	<b>Operating Temperature</b>	32° to 140° F (0° to 60° C) [case temp]
	<b>Features</b>	ATA Security, S.M.A.R.T., NCQ, Ultra DMA



# QuickSpecs

## Technical Specifications

<b>500 GB 7200rpm Self-Encrypting Drive (Opal 2)</b>	<b>Drive Weight</b>	0.21 lbs (95 g)	
	<b>Capacity</b>	500 GB	
	<b>Height</b>	0.28 in (7 mm)	
	<b>Width</b>	2.75 in (69.85 mm)	
	<b>Interface</b>	ATA-8, SATA 3.0	
	<b>Transfer Rate</b>	<b>Synchronous</b> (maximum) 600 MB/s	
	<b>Seek Time</b> (typical reads, including settling)	<b>Single Track</b>	1.5ms
		<b>Average</b>	12ms
		<b>Maximum</b>	21 ms
	<b>Cache</b>	32 MB	
	<b>Rotational Speed</b>	7200rpm	
	<b>Logical Blocks</b>	976,773,168	
	<b>Operating Temperature</b>	32° to 140° F (0° to 60° C) [top cover temp]	
	<b>Features</b>	ATA Security; TCG Opal 2.x, S.M.A.R.T., NCQ, Ultra DMA	
<b>500 GB 7200rpm Self-Encrypting Drive (FIPS-140-2) (Opal 2)</b>	<b>Drive Weight</b>	0.21 lbs (95 g)	
	<b>Capacity</b>	500 GB	
	<b>Height</b>	0.28 in (7 mm)	
	<b>Width</b>	2.75 in (69.85 mm)	
	<b>Interface</b>	ATA-8, SATA 3.0	
	<b>Transfer Rate</b>	<b>Synchronous</b> (maximum) 600 MB/s	
	<b>Seek Time</b> (typical reads, including settling)	<b>Single Track</b>	1.5 ms
		<b>Average</b>	12 ms
		<b>Maximum</b>	21 ms
	<b>Cache</b>	32 MB	
	<b>Rotational Speed</b>	7200 rpm	
	<b>Logical Blocks</b>	976,773,168	
	<b>Operating Temperature</b>	32° to 140° F (0° to 60° C) [top cover temp]	
	<b>Features</b>	ATA Security; TCG Opal 2.x, FIPS, S.M.A.R.T., NCQ, Ultra DMA—	
<b>500 GB Hybrid, 8 GB cache</b>	<b>Drive Weight</b>	0.20 lbs (92 g) ~ 0.21 lbs (95 g)	
	<b>Capacity</b>	500 GB	
	<b>Height</b>	0.28 in (7 mm)	
	<b>Width</b>	2.75 in (69.85 mm)	





# QuickSpecs

## Technical Specifications

<b>Interface</b>	ATA-8, SATA 3.0	
<b>Transfer Rate</b>	<b>Synchronous</b> (maximum)	600 MB/s
<b>Seek Time</b> (typical reads, including settling)	<b>Single Track</b>	2 ms
	<b>Average</b>	12 ms
	<b>Maximum</b>	22 ms
<b>Cache</b>	64 MB	
<b>Rotational Speed</b>	5400 rpm	
<b>Logical Blocks</b>	976,773,168	
<b>Operating Temperature</b>	32° to 140° F (0° to 60° C) [case temp]	
<b>Features</b>	ATA Security, S.M.A.R.T., NCQ, Ultra DMA	

### 1 TB 5400rpm Hard Drive

<b>Drive Weight</b>	0.21 lbs (94 g)- 0.21 lbs ( 95 g)	
<b>Capacity</b>	1TB	
<b>Height</b>	0.28 in (7 mm)	
<b>Width</b>	2.75 in (69.85 mm)	
<b>Interface</b>	ATA-8, SATA 3.0	
<b>Transfer Rate</b>	<b>Synchronous</b> (maximum)	600 MB/s
<b>Seek Time</b> (typical reads, including settling)	<b>Single Track</b>	2ms
	<b>Average</b>	12ms-13ms
	<b>Maximum</b>	18ms- 22ms
<b>Cache</b>	Up to 32-MB	
<b>Rotational Speed</b>	5400rpm	
<b>Logical Blocks</b>	1,953,525,168	
<b>Operating Temperature</b>	32° to 140° F (0° to 60° C) [case temp]	
<b>Features</b>	ATA Security, S.M.A.R.T., NCQ, Ultra DMA	

### 128 GB SATA-3 Value Solid State Drive

<b>Drive Weight</b>	0.01 lb (6 g) ~ 0.02 lb (10 g)	
<b>Capacity</b>	128 GB	
<b>Height</b>	0.09 in (2.3 mm)	
<b>Width</b>	0.87 in (22 mm)	
<b>Interface</b>	ATA-8, SATA 3.0	
<b>Performance</b>	<b>Maximum Sequential Read</b>	<b>Maximum Sequential Write</b>
	520 ~ 535 MB/s	185 ~ 515 MB/s
<b>Logical Blocks</b>	250,069,680	



# QuickSpecs

## Technical Specifications

	<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]		
	<b>Features</b>	ATA Security; DIPM; TRIM; DEVSLP		
<b>128 GB SATA-3 TLC Solid State Drive</b>	<b>Drive Weight</b>	0.02 lb (10 g)		
	<b>Capacity</b>	128 GB		
	<b>Height</b>	0.09 in (2.3 mm)		
	<b>Width</b>	0.87 in (22 mm)		
	<b>Interface</b>	ATA-8, SATA 3.0		
	<b>Performance</b>	<b>Maximum Sequential Read</b>	515 ~ 520 MB/s	<b>Maximum Sequential Write</b> 320 ~ 450 MB/s
		<b>Logical Blocks</b>	250,069,680	
		<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]	
		<b>Features</b>	ATA Security; DIPM; TRIM; DEVSLP	
<b>256 GB PCIe Gen3x4 NVMe TLC Solid State Drive</b>	<b>Drive Weight</b>	0.02 lb (10g)		
	<b>Capacity</b>	256 GB		
	<b>Height</b>	0.09 in (2.3 mm)		
	<b>Width</b>	0.87 in (22 mm)		
	<b>Interface</b>	PCIe NVMe Gen3X4		
	<b>Performance</b>	<b>Maximum Sequential Read</b>	1,800 ~ 2600 MB/s	<b>Maximum Sequential Write</b> 600 ~ 900 MB/s
		<b>Logical Blocks</b>	500,118,192	
		<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]	
		<b>Features</b>	ATA Security (Option); TRIM; L1.2	
<b>256 GB PCIe Gen3x4 NVMe Value Solid State Drive</b>	<b>Drive Weight</b>	0.02 lb (10 g)		
	<b>Capacity</b>	256 GB		
	<b>Height</b>	0.09 in (2.3 mm)		
	<b>Width</b>	0.87 in (22 mm)		
	<b>Interface</b>	PCIe NVMe Gen3X4		
	<b>Performance</b>	<b>Maximum Sequential Read</b>	1,700 MB/s (Compressible Performance)	<b>Maximum Sequential Write</b> 600 MB/s (Compressible Performance)
		<b>Logical Blocks</b>	500,118,192	
		<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]	



# QuickSpecs

## Technical Specifications

	<b>Features</b>	ATA Security (Option); TRIM; L1.2		
<b>256 GB SATA-3 TLC Self-Encrypting Solid State Drive (Opal 2)</b>	<b>Drive Weight</b>	0.02 lb (10g)		
	<b>Capacity</b>	256 GB		
	<b>Height</b>	0.09 in (2.3 mm)		
	<b>Width</b>	0.87 in (22 mm)		
	<b>Interface</b>	ATA-8, SATA 3.0		
	<b>Performance</b>	<b>Maximum Sequential Read</b>	<b>Maximum Sequential Write</b>	
		515 ~ 530 MB/s	490 ~ 515 MB/s	
	<b>Logical Blocks</b>	500,118,192		
<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]			
	<b>Features</b>	ATA Security; TCG Opal 2.0; DIPM; TRIM; DEVSLP		
<b>360 GB PCIe Gen3x4 NVMe TLC Solid State Drive</b>	<b>Drive Weight</b>	0.02 lb (10 g)		
	<b>Capacity</b>	360 GB		
	<b>Height</b>	0.09 in (2.3 mm)		
	<b>Width</b>	0.02 lb (10 g)		
	<b>Interface</b>	PCIe NVMe Gen3X4		
	<b>Performance</b>	<b>Maximum Sequential Read</b>	<b>Maximum Sequential Write</b>	
		1,700 MB/s (Compressible Performance)	600 MB/s (Compressible Performance)	
	<b>Logical Blocks</b>	703,282,608		
<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]			
	<b>Features</b>	ATA Security (Option); TRIM; L1.2		
<b>512 GB PCIe Gen3x4 NVMe Value Solid State Drive</b>	<b>Drive Weight</b>	0.02 lb (10 g)		
	<b>Capacity</b>	512 GB		
	<b>Height</b>	0.09 in (2.3 mm)		
	<b>Width</b>	0.87 in (22 mm)		
	<b>Interface</b>	PCIe NVMe Gen3X4		
	<b>Performance</b>	<b>Maximum Sequential Read</b>	<b>Maximum Sequential Write</b>	
		1,700MB/s	600 MB/s	
	<b>Logical Blocks</b>	1,000,215,216		
<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]			
	<b>Features</b>	ATA Security (Option); TRIM; L1.2		



# QuickSpecs

## Technical Specifications

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

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

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

<b>512 GB SATA-3 TLC Solid State Drive FIPS-140-2</b>	<b>Drive Weight</b>	0.02 lb (10 g)
	<b>Capacity</b>	512 GB



# QuickSpecs

## Technical Specifications

<b>Height</b>	0.09 in (2.3 mm)		
<b>Width</b>	0.87 in (22 mm)		
<b>Interface</b>	ATA-8, SATA 3.0		
<b>Performance</b>	<b>Maximum Sequential Read</b>	<b>Maximum Sequential Write</b>	
	530 MB/s	400 MB/s	
<b>Logical Blocks</b>	1,000,215,216		
<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]		
<b>Features</b>	ATA Security; TCG Opal 2.0; FIPS; DIPM; TRIM; DEVSLP		

### 1 TB PCIe Gen3x4 NVMe TLC Solid State Drive

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

-

## POWER

### HP 45W Smart AC Adapter

<b>Dimensions (H x W x D)</b>	9.5 x 4.0 x 2.65 cm}		
<b>Weight</b>	unit: 200g +/- 10g		
<b>Input</b>	90 to 265 VAC		
<b>Input Efficiency</b>	87.74% at 115Vac and 88.4% at 230Vac		



# QuickSpecs

## Technical Specifications

<b>Output</b>	<b>Input frequency range</b>	47 to 63 Hz	
	<b>Input AC current</b>	Max. 1.4 A at 90 Vac	
	<b>Output power</b>	45W	
	<b>DC output</b>	19.5V	
	<b>Hold-up time</b>	5 ms at 115 Vac input	
	<b>Output current limit</b>	<8.0A	
	<b>AC Connector (Ac Inlet)</b>	C6 (3pin/with grounded, with Smart ID DC connector)	
	<b>Environmental Design</b>	<b>Operating temperature</b>	32° to 95° F (0° to 35° C)
		<b>Non-operating (storage) temperature</b>	-4° to 185° F (-20° to 85° C)
		<b>Altitude</b>	0 to 16,400 ft (0 to 5,000 m)
<b>Humidity</b>		20% to 95%	
	<b>Storage Humidity</b>	10% to 95%	
<b>EMI and Safety Certifications</b>	*CE Mark - full compliance with LVD and EMC directives		
	* Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE.		
	* MTBF - over 200,000 hours at 25°C ambient condition.		

**HP 45W Smart AC Adapter (2 Prong)**

<b>Dimensions (H x W x D)</b>	95.0x40.0x26.5mm	
	<b>Weight</b>	unit: 200g +/- 10g
<b>Input</b>	<b>Input</b>	90 to 265 VAC
	<b>Input Efficiency</b>	87.74% at 115Vac and 88.4% at 230Vac
<b>Output</b>	<b>Input frequency range</b>	47 to 63 Hz
	<b>Input AC current</b>	Max. 1.4 A at 90 Vac
	<b>Output power</b>	45W
	<b>DC output</b>	19.5V
	<b>Hold-up time</b>	5 ms at 115Vac input
	<b>Output current limit</b>	<8.0A
	<b>AC Connector (Ac Inlet)</b>	C8 (2 pin/non-grounded, with Smart ID DC connector)
<b>Environmental Design</b>	<b>Operating temperature</b>	32° to 95° F (0° to 35° C)
	<b>Non-operating (storage) temperature</b>	-4° to 185° F (-20° to 85° C)
	<b>Altitude</b>	0 to 16,400 ft (0 to 5,000 m)



# QuickSpecs

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

## Technical Specifications

		<b>Humidity</b>	20% to 95%
		<b>Storage Humidity</b>	10% to 95%
	<b>EMI and Safety Certifications</b>	<p>*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.</p>	
<b>HP 65W Smart AC Adapter</b>	<b>Dimensions</b>	107.0x47.0x30.0mm	
	<b>Weight</b>	unit: 250g +/- 10g	
	<b>Input</b>	90 to 265 VAC	
		<b>Input Efficiency</b>	88.0 % at 115 Vac and 89.0 % at 230 Vac
		<b>Input frequency range</b>	47 to 63 Hz
		<b>Input AC current</b>	1.7 A at 90 Vac
	<b>Output</b>	<b>Output power</b>	65W
		<b>DC output</b>	19.5V
		<b>Hold-up time</b>	5 ms at 115 Vac input
		<b>Output current limit</b>	<11.0A
	<b>AC Connector (Ac Inlet)</b>	C6 (3pin/with grounded, with Smart ID DC connector)	
	<b>Environmental Design</b>	<b>Operating temperature</b>	32° to 95° F (0° to 35° C)
		<b>Non-operating (storage) temperature</b>	-4° to 185° F (-20° to 85° C)
		<b>Altitude</b>	0 to 16,400 ft (0 to 5,000 m)
		<b>Humidity</b>	20% to 95%
		<b>Storage Humidity</b>	10% to 95%
	<b>EMI and Safety Certifications</b>	<p>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.</p>	
<b>HP 65W Smart AC Adapter EM</b>	<b>Dimensions</b>	102.0x55.0x30.0mm	
	<b>Weight</b>	unit: 350g +/- 10g	
	<b>Input</b>	90 to 265 VAC	
		<b>Input Efficiency</b>	87.0% min at 115 VAC and 230Vac



# QuickSpecs

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

## Technical Specifications

	<b>Output</b>	<b>Input frequency range</b>	47 to 63 Hz
		<b>Input AC current</b>	1.7 A at 90 VAC
		<b>Output power</b>	65W
		<b>DC output</b>	19.5V
		<b>Hold-up time</b>	5 ms at 115 Vac input
		<b>Output current limit</b>	<11.0A
	<b>AC Connector (Ac Inlet)</b>	C6 (3pin/with grounded, with Smart ID DC connector)	
	<b>Environmental Design</b>	<b>Operating temperature</b>	32° to 95° F (0° to 35° C)
		<b>Non-operating (storage) temperature</b>	-4° to 185° F (-20° to 85° C)
		<b>Altitude</b>	0 to 16,400 ft (0 to 5,000 m)
		<b>Humidity</b>	20% to 95%
		<b>Storage Humidity</b>	10% to 95%
	<b>EMI and Safety Certifications</b>	*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.	
<b>HP 3-cell Long Life Li-Ion (49 WHr) – HP EliteBook 820 G4</b>	<b>Dimensions (H x W x L)</b>	8.30 mm x127.5 mm x 160.25 mm	
	<b>Weight</b>	225g	
	<b>Cells/Type</b>	3 cell Lithium-Ion Polymer cell / 505295	
	<b>Energy</b>	<b>Voltage</b>	11.55V
		<b>Amp-hour capacity</b>	4250mAh
		<b>Watt-hour capacity</b>	49Wh
	<b>Temperature</b>	<b>Operating (Charging)</b>	0~45 C
		<b>Operating (Discharging)</b>	-10~60 C
	<b>Fuel Gauge LED</b>	NA	
	<b>Warranty</b>	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.	
	<b>Optional Travel Battery Available</b>	No	
	<b>Dimensions (H x W x L)</b>	6.8mm x 102.8mm x 198mm	



Not all configuration components are available in all regions/countries.  
 Americas – HP EliteBook 800 G4 Series –April 25, 2017 - c05330730



# QuickSpecs

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

## Technical Specifications

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

## ENVIRONMENTAL

### HP EliteBook 820 G4 Notebook PC

<b>Eco-Label Certifications &amp; declarations</b>	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"> <li>• IT ECO declaration</li> <li>• US ENERGY STAR®</li> <li>• EPEAT<sup>®</sup> Gold registered in the United States. See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status in your country.</li> </ul>		
<b>System Configuration</b>	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook”.		
<b>Energy Consumption (in accordance with US ENERGY STAR® test method)</b>	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 50Hz</b>
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



# QuickSpecs

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

## Technical Specifications

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>		
<b>Heat Dissipation*</b>	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 50Hz</b>
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
	<p>*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.</p>		
<b>Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)</b>	Sound Power ( $L_{WAd}$ , bels)	Sound Pressure ( $L_{pAm}$ , decibels)	
Typically Configured – Idle	3.2	26	



# QuickSpecs

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

## Technical Specifications

Fixed Disk – Random writes	3.5	27	
<b>Batteries</b>	<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: CR2320 (coin cell)            Battery type: Lithium</p>		
<b>Additional Information</b>	<ul style="list-style-type: none"> <li>• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC.</li> <li>• This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC.</li> <li>• This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).</li> <li>• This product is in compliance with the IEEE 1680 (EPEAT) standard at the gold level, see <a href="http://www.epeat.net">www.epeat.net</a></li> <li>• Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.</li> <li>• This product contains 0% post-consumer recycled plastic (by wt.)</li> <li>• This product is 96.7% recycle-able when properly disposed of at end of life.</li> </ul>		
<b>Packaging Materials</b>	<b>External:</b>	PAPER/Corrugated	328 g
	<b>Internal:</b>	PLASTIC/Expanded Polyethylene - EPE	38 g
		PLASTIC/Polyethylene low density - LDPE	14 g
		PLASTIC/Polypropylene - PP	3 g
	<p>The plastic packaging material contains at least 50% recycled content.            The corrugated paper packaging materials contains at least 70% recycled content.</p>		
<b>Material Usage</b>	<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 <a href="http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf">http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf</a>):</p> <ul style="list-style-type: none"> <li>• Asbestos</li> <li>• Certain Azo Colorants</li> <li>• Certain Brominated Flame Retardants – may not be used as flame retardants in plastics</li> <li>• Cadmium</li> <li>• Chlorinated Hydrocarbons</li> <li>• Chlorinated Paraffins</li> <li>• Formaldehyde</li> <li>• Halogenated Diphenyl Methanes</li> </ul>		



# QuickSpecs

## Technical Specifications

	<ul style="list-style-type: none"> <li>• Lead carbonates and sulfates</li> <li>• Lead and Lead compounds</li> <li>• Mercuric Oxide Batteries</li> <li>• Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user.</li> <li>• Ozone Depleting Substances</li> <li>• Polybrominated Biphenyls (PBBs)</li> <li>• Polybrominated Biphenyl Ethers (PBBEs)</li> <li>• Polybrominated Biphenyl Oxides (PBBOs)</li> <li>• Polychlorinated Biphenyl (PCB)</li> <li>• Polychlorinated Terphenyls (PCT)</li> <li>• Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.</li> <li>• Radioactive Substances</li> <li>• Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)</li> </ul>
<p><b>Packaging Usage</b></p>	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p> <ul style="list-style-type: none"> <li>• Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.</li> <li>• Eliminate the use of ozone-depleting substances (ODS) in packaging materials.</li> <li>• Design packaging materials for ease of disassembly.</li> <li>• Maximize the use of post-consumer recycled content materials in packaging materials.</li> <li>• Use readily recyclable packaging materials such as paper and corrugated materials.</li> <li>• Reduce size and weight of packages to improve transportation fuel efficiency.</li> <li>• Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.</li> </ul>
<p><b>End-of-life Management and Recycling</b></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: <a href="http://www.hp.com/go/reuse-recycle">http://www.hp.com/go/reuse-recycle</a> 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: <a href="http://www.hp.com/go/recyclers">http://www.hp.com/go/recyclers</a>. 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>



## Technical Specifications

<p><b>HP Inc.</b></p> <p><b>Corporate Environmental Information</b></p>	<p>For more information about HP's commitment to the environment:</p> <p>Global Citizenship Report  <a href="http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html">http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html</a></p> <p>Eco-label certifications  <a href="http://www8.hp.com/us/en/hp-information/environment/ecolabels.html">http://www8.hp.com/us/en/hp-information/environment/ecolabels.html</a></p> <p>ISO 14001 certificates:  <a href="http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842">http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842</a></p> <p>and  <a href="http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf">http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</a></p>
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### HP EliteBook 840 G4 Notebook PC

<p><b>Eco-Label Certifications &amp; declarations</b></p>	<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"> <li>• IT ECO declaration</li> <li>• US ENERGY STAR®</li> <li>• EPEAT &lt;Gold&gt; registered in the United States. See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status in your country.</li> </ul>																		
<p><b>System Configuration</b></p> <p><b>Energy Consumption (in accordance with US ENERGY STAR® test method)</b></p>	<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="414 1360 1567 1528"> <thead> <tr> <th></th> <th><b>115VAC, 60Hz</b></th> <th><b>230VAC, 50Hz</b></th> <th><b>100VAC, 50Hz</b></th> </tr> </thead> <tbody> <tr> <td>Normal Operation (Short idle)</td> <td>5.12 W</td> <td>5.47 W</td> <td>5.18 W</td> </tr> <tr> <td>Normal Operation (Long idle)</td> <td>3.00 W</td> <td>3.26 W</td> <td>3.50 W</td> </tr> <tr> <td>Sleep</td> <td>0.66 W</td> <td>0.66 W</td> <td>0.67 W</td> </tr> </tbody> </table>				<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 50Hz</b>	Normal Operation (Short idle)	5.12 W	5.47 W	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
	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 50Hz</b>																
Normal Operation (Short idle)	5.12 W	5.47 W	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																
<p>Normal Operation (Short idle)</p>	5.12 W	5.47 W	5.18 W																
<p>Normal Operation (Long idle)</p>	3.00 W	3.26 W	3.50 W																
<p>Sleep</p>	0.66 W	0.66 W	0.67 W																



# QuickSpecs

## Technical Specifications

Off	0.40 W	0.40 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>		
<b>Heat Dissipation*</b>	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 50Hz</b>
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
	<p>*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.</p>		
<b>Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)</b>	Sound Power (L <sub>WAd</sub> , bels)	Sound Pressure (L <sub>pAm</sub> , decibels)	
Typically Configured – Idle	2.9	21	
Fixed Disk – Random writes	3.2	22	



# QuickSpecs

## Technical Specifications

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



# QuickSpecs

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

## Technical Specifications

	<ul style="list-style-type: none"> <li>• Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user.</li> <li>• Ozone Depleting Substances</li> <li>• Polybrominated Biphenyls (PBBs)</li> <li>• Polybrominated Biphenyl Ethers (PBBEs)</li> <li>• Polybrominated Biphenyl Oxides (PBBOs)</li> <li>• Polychlorinated Biphenyl (PCB)</li> <li>• Polychlorinated Terphenyls (PCT)</li> <li>• Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.</li> <li>• Radioactive Substances</li> <li>• Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)</li> </ul>
<p><b>Packaging Usage</b></p>	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p> <ul style="list-style-type: none"> <li>• Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.</li> <li>• Eliminate the use of ozone-depleting substances (ODS) in packaging materials.</li> <li>• Design packaging materials for ease of disassembly.</li> <li>• Maximize the use of post-consumer recycled content materials in packaging materials.</li> <li>• Use readily recyclable packaging materials such as paper and corrugated materials.</li> <li>• Reduce size and weight of packages to improve transportation fuel efficiency.</li> <li>• Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.</li> </ul>
<p><b>End-of-life Management and Recycling</b></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: <a href="http://www.hp.com/go/reuse-recycle">http://www.hp.com/go/reuse-recycle</a> 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: <a href="http://www.hp.com/go/recyclers">http://www.hp.com/go/recyclers</a>. 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>





## Technical Specifications

<b>Hewlett-Packard Corporate Environmental Information</b>	<p>For more information about HP's commitment to the environment:</p> <p>Global Citizenship Report  <a href="http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html">http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html</a></p> <p>Eco-label certifications  <a href="http://www8.hp.com/us/en/hp-information/environment/ecolabels.html">http://www8.hp.com/us/en/hp-information/environment/ecolabels.html</a></p> <p>ISO 14001 certificates:  <a href="http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842">http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842</a></p> <p>and  <a href="http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf">http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</a></p>
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### HP EliteBook 850 G4 Notebook PC

<b>Eco-Label Certifications &amp; declarations</b>	<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"> <li>• IT ECO declaration</li> <li>• US ENERGY STAR®</li> <li>• EPEAT &lt;Gold&gt; registered in the United States. See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status in your country.</li> </ul>		
<b>System Configuration</b>	<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>		
<b>Energy Consumption (in accordance with US ENERGY STAR® test method)</b>	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 50Hz</b>
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



# QuickSpecs

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

## Technical Specifications

Sleep	0.71 W	0.79 W	0.72 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>		
<b>Heat Dissipation*</b>	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 50Hz</b>
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
	<p>*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.</p>		
<b>Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)</b>	Sound Power ( $L_{WAd}$ , bels)	Sound Pressure ( $L_{pAm}$ , decibels)	
Typically Configured – Idle	2.9	22	



# QuickSpecs

## Technical Specifications

Fixed Disk – Random writes	3.5	28
<b>Batteries</b>	<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>	
<b>Additional Information</b>	<ul style="list-style-type: none"> <li>• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC.</li> <li>• This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC.</li> <li>• This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).</li> <li>• This product is in compliance with the IEEE 1680 (EPEAT) standard at the &lt;Gold&gt; level, see <a href="http://www.epeat.net">www.epeat.net</a></li> <li>• Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.</li> <li>• This product contains 0% post-consumer recycled plastic (by wt.)</li> <li>• This product is 95.2% recycle-able when properly disposed of at end of life.</li> </ul>	
<b>Packaging Materials</b>	<b>External:</b>	PAPER/Corrugated 348 g
	<b>Internal:</b>	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.		
<b>Material Usage</b>	<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 <a href="http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf">http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf</a>):</p> <ul style="list-style-type: none"> <li>• Asbestos</li> <li>• Certain Azo Colorants</li> <li>• Certain Brominated Flame Retardants – may not be used as flame retardants in plastics</li> <li>• Cadmium</li> <li>• Chlorinated Hydrocarbons</li> <li>• Chlorinated Paraffins</li> <li>• Formaldehyde</li> <li>• Halogenated Diphenyl Methanes</li> <li>• Lead carbonates and sulfates</li> </ul>	



# QuickSpecs

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

## Technical Specifications

	<ul style="list-style-type: none"> <li>• Lead and Lead compounds</li> <li>• Mercuric Oxide Batteries</li> <li>• Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user.</li> <li>• Ozone Depleting Substances</li> <li>• Polybrominated Biphenyls (PBBs)</li> <li>• Polybrominated Biphenyl Ethers (PBBEs)</li> <li>• Polybrominated Biphenyl Oxides (PBBOs)</li> <li>• Polychlorinated Biphenyl (PCB)</li> <li>• Polychlorinated Terphenyls (PCT)</li> <li>• Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.</li> <li>• Radioactive Substances</li> <li>• Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)</li> </ul>
<p><b>Packaging Usage</b></p>	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p> <ul style="list-style-type: none"> <li>• Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.</li> <li>• Eliminate the use of ozone-depleting substances (ODS) in packaging materials.</li> <li>• Design packaging materials for ease of disassembly.</li> <li>• Maximize the use of post-consumer recycled content materials in packaging materials.</li> <li>• Use readily recyclable packaging materials such as paper and corrugated materials.</li> <li>• Reduce size and weight of packages to improve transportation fuel efficiency.</li> <li>• Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.</li> </ul>
<p><b>End-of-life Management and Recycling</b></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: <a href="http://www.hp.com/go/reuse-recycle">http://www.hp.com/go/reuse-recycle</a> 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: <a href="http://www.hp.com/go/recyclers">http://www.hp.com/go/recyclers</a>. 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>



# QuickSpecs

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

## Technical Specifications

<b>Hewlett-Packard Corporate Environmental Information</b>	For more information about HP's commitment to the environment:  Global Citizenship Report <a href="http://www.hp.com/hpinfo/globalcitizenship/qcreport/index.html">http://www.hp.com/hpinfo/globalcitizenship/qcreport/index.html</a> Eco-label certifications <a href="http://www8.hp.com/us/en/hp-information/environment/ecolabels.html">http://www8.hp.com/us/en/hp-information/environment/ecolabels.html</a> ISO 14001 certificates:  <a href="http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842">http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842</a>  and  <a href="http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf">http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</a>
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### 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.)

<b>Type</b>	<b>Description</b>	<b>Part Number</b>
<b>Docking</b>	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
<b>Input/Output</b>	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
	<b>Memory</b>	HP 4GB 2400 MHz DDR4 Memory
HP 8GB 2400 MHz DDR4 Memory		Z4Y85AA
HP 16GB 2400 MHz DDR4 Memory		Z4Y86AA
<b>Power</b>	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
<b>Storage</b>	HP USB External DVDRW Drive	F2B56AA
<b>Security</b>	HP Combination Lock	T0Y15AA
	HP Keyed Cable lock	T0Y14AA
<b>Displays</b>	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



# QuickSpecs

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

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