### **Overview**

### HP EliteBook 820 G4 Notebook PC



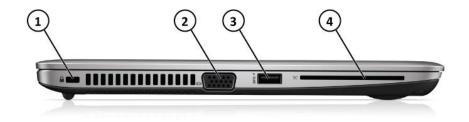
#### Front / Right

- 1. WLAN antennas (2)
- 2. WWAN antennas (2)
- 3. Internal microphones (2)
- 4. Webcam LED (select models)
- 5. Webcam (select models)
- 6. SIM card slot
- 7. Power connector
- 8. Docking connector

- 13. DisplayPort<sup>™</sup> 1.2
- 14. USB-C<sup>™</sup> port
- 15. Fingerprint reader (select models)
- 16. NFC (select models)
- 17. Touchpad buttons (4)
- 18. Indicator LEDs: Wireless Light, Power Light, AC Adapter/Battery Light, Storage Usage Light
- 19. Touchpad
- 20. Pointstick



## Overview



Left

- 1. Security lock slot
- 2. VGA port

- 3. USB 3.1 Gen 1 Charging port
- 4. Smart Card Reader



## Overview

### HP EliteBook 840 G4 Notebook PC



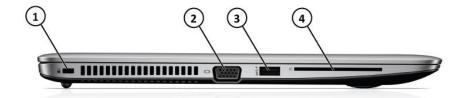
#### Front / Right

- 1. WLAN antennas (2)
- 2. WWAN antennas (2)
- 3. Internal microphones (2)
- 4. Webcam LED (select models)
- 5. Webcam (select models)
- 6. Wireless on/off button
- 7. Speaker mute button
- 8. SIM card slot
- 9. Power connector
- 10. Docking connector
- 11. Ethernet port
- 12. USB 3.1 Gen 1 port

- 13. Microphone/ headphones combo jack
- 14. SD card slot
- 15. DisplayPort<sup>™</sup> 1.2
- 16. USB-C<sup>™</sup> port
- 17. Fingerprint reader (select models)
- 18. NFC (select models)
- 19. Touchpad buttons (4)
- 20. Indicator LEDs: Wireless Light, Power Light, AC Adapter/Battery Light, Storage Usage Light
- 21. Touchpad
- 22. Pointstick
- 23. Power button



## Overview



Left

- 1. Security lock slot
- 2. VGA port

- 3. USB 3.1 Gen 1 Charging port
- 4. Smart Card Reader



### **Overview**

### HP EliteBook 850 G4 Notebook PC



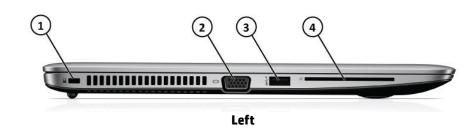
#### Front / Right

- 1. WLAN antennas (2)
- 2. WWAN antennas (2)
- 3. Internal microphones (2)
- 4. Webcam LED (select models)
- 5. Webcam (select models)
- 6. Wireless on/off button
- 7. Speaker mute button
- 8. SIM card slot
- 9. Power connector
- 10. Docking connector
- 11. Ethernet port
- 12. USB 3.1 Gen 1 port

- 13. SD card slot
- 14. Microphone/ headphones combo jack
- 15. DisplayPort<sup>™</sup> 1.2
- 16. USB-C<sup>™</sup> port
- 17. Fingerprint reader (select models)
- 18. NFC (select models)
- 19. Touchpad buttons (4)
- 20. Indicator LEDs: Wireless Light, Power Light, AC Adapter/Battery Light, Storage Usage Light
- 21. Touchpad
- 22. Pointstick
- 23. Power button



## Overview



Security lock slot
 VGA port

- 3. USB 3.1 Gen 1 Charging port
- 4. Smart Card Reader



## Overview

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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™, 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<sup>®</sup> Core<sup>™</sup> i7, i5 and i3 processors
- Integrated Intel<sup>®</sup> HD Graphics 620 or AMD Radeon<sup>™</sup> 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 TPM2.0, SmartCard Reader, HP Sure Start self-healing BIOS, HP Client Security, Self-Encrypting storage drives, and optional Fingerprint reader
- 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
  - 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<sup>™</sup>, 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.

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



## **Technical Specifications**

## **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:** 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.

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<sup>®</sup> Core<sup>™</sup> i7-7600U (2.8 GHz, up to 3.9 GHz with Intel Turbo Boost Technology, 4 MB cache, 2 cores)<sup>1</sup> Intel<sup>®</sup> Core<sup>™</sup> 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<sup>®</sup> Core<sup>™</sup> i5-7300U (2.6 GHz, up to 3.5 GHz with Intel Turbo Boost Technology, 3 MB cache, 2 cores)<sup>1</sup> Intel<sup>®</sup> Core<sup>™</sup> 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<sup>®</sup> Core<sup>™</sup> 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.

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™)



# **Technical Specifications**

### CHIPSET

Chipset integrated with processor

### INTEL<sup>®</sup> CORE 15 WITH VPRO/CORE 17 WITH VPRO TECHNOLOGY CAPABLE

Intel<sup>®</sup> Core<sup>™</sup> i5 with vPro<sup>™</sup> and Intel<sup>®</sup> Core<sup>®</sup> i7 with vPro<sup>™</sup> technology is a selectable feature that is available on units configured with select processors, on select Intel<sup>®</sup> 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<sup>®</sup> HD Graphics 620

Discrete AMD Radeon<sup>™</sup> R7 M465 2 GB GDDR5 dedicated (HP EliteBook 850 only)

### 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**



## **Technical Specifications**

#### 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)

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

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<sup>®</sup> Gorilla<sup>®</sup> 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)
39.6 cm (15.6") diagonal FHD UWVA anti-glare slim LED-backlit non-touch (1920 x 1080)
39.6 cm (15.6") diagonal FHD UWVA anti-glare slim LED-backlit non-touch with camera (1920 x 1080)
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)
39.6 cm (15.6") diagonal FHD SVA slim with camera, Corning<sup>®</sup> Gorilla<sup>®</sup> Glass 4 LED-backlit touch screen (1920 x 1080)

#### 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**



## **Technical Specifications**

#### 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 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 250 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 Gen3x4 NVMe MLC Solid State Drive 512 GB PCIe Gen3x4 NVMe TLC Self-Encrypting Solid State Drive 512 GB PCIe Gen 3x4 NVMe TLC Self-Encrypting Solid State Drive 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

#### **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 – 2400/2666 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



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

## **Technical Specifications**

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<sup>®</sup> is also available with any of the supported wireless LAN and wireless WAN options.

#### Broadband Wireless (WWAN) Via M.2 Minicard

HP lt4120 Qualcomm<sup>®</sup> Snapdragon<sup>™</sup> X5 LTE Mobile Broadband Module <sup>1</sup> HP lt4132 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

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



## **Technical Specifications**

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.

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



## **Technical Specifications**

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 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



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

## **Technical Specifications**

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) 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> 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)



## **Technical Specifications**

- 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. (TPM 2.0 is not available for Win 7 32-bit.)

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 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

Requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see www.hp.com/go/eprintcenter). Requires optional broadband module. Broadband use requires separately purchased service contract. Check with service provider for coverage and availability in your area. Separately purchased data plans or usage fees may apply. Print times and connection speeds may vary.
 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<sup>®</sup> 7th generation processors.

### POWER

**Power Supply**<sup>1</sup> HP 45W Smart AC Adapter



## **Technical Specifications**

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

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 for additional details.

#### **Power Conservation**



## **Technical Specifications**

Hibernation Standby ACPI compliance

### **WEIGHTS & DIMENSIONS**

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 x1.94 cm

1. Weight varies by configuration and components.

2. Height varies depending upon where on the notebook the measurement is made.

## PORTS/SLOTS



## **Technical Specifications**

#### Ports

1 USB 3.1 Gen 1 Charging Port
1 USB 3.1 Gen 1 Port
1 USB-C<sup>™</sup> port (Up to 5 Gbps data transfer and 15W power)
1 DisplayPort<sup>™</sup> 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.

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



# Technical Specifications

### SYSTEM UNIT

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



# Technical Specifications

| Australia /<br>NZ RCM Compliance   | Yes |
|------------------------------------|-----|
| כככ                                | Yes |
| Japan VCCI Compliance              | Yes |
| КС                                 | Yes |
| BSMI                               | Yes |
| CE Marking Compliance              | Yes |
| СІТ                                | Yes |
| EAC                                | Yes |
| Saudi Arabian Compliance<br>(SASO) | Yes |
| SABS                               | Yes |
| UKRSERTCOMPUTER                    | Yes |

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

### Displays

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

| 31.75 cm (12.5")<br>diagonal LED backlight | <b>Outline Dimensions</b><br>(W x H x D) | 291.0 x 181.9 X 3.0 mm (max) |
|--|--|------------------------------|
| HD Slim eDP SVA Anti-                      | Active Area                              | 276.62 mm x 155.52 mm        |
| glare non-touch<br>(1366 x 768)            | Weight                                   | 250g max                     |
|  | Diagonal Size                            | 31.75 cm (12.5")             |
|  | Surface Treatment                        | AG                           |
|  | Contrast Ratio                           | 300:1 (typ)                  |



# **Technical Specifications**

| 31.75 cm (12.5")       Response time       16ms typ.         Pixel Per Inch (PPI)       125         Brightness       220nits         Pixel Resolution       Format       1366 x 768 (HD)         Interface       eDP 1.2       LCD Mode       TN         Uriewing Angle       SVA 45/45/25/35       SVA 45/45/25/35         Statisting eDP UVX       Neiwing Angle       282.7 x 179.82 x 2.3 (mm) max         Anti-glare non-touch       (W × H × D)       Active Area       276.48 x 155.52 mm         Meight       170g max       Uigonal Size       31.75 cm (12.5")         Surface Treatment       AG       Gontrast Ratio       600:1 (typ)         Response time       250 x 1080       Soms typ.         Pixel Per Inch (PPI)       176       Brightness       300nits         Response time       250 x 1080 (FHD)       Gonfiguration       RGB         Interface       eDP 1.3 + PSR       LCD Mode       IPS/FS/VA         Viewing Angle       UWVA 85/85/85/85/85       UNU       Soms typ.         Pixel Resolution       RGB       IPS/FS/VA       IPS/FS/VA         Viewing Angle       UWVA 85/85/85/85/85       IPS/FS/VA       IPS/FS/VA         Viewing Angle       UWVA 85/85/85/85/85       IPS/F   |                        | Refresh Rate         | 60Hz                      |                   |
|--|------------------------|----------------------|---------------------------|-------------------|
| Bixel Per Inch (PPI)       125         Brightness       220nits         Pixel Resolution       Format       1366 x 768 (HD)         Configuration       RGB         Interface       eDP 1.2         LCD Mode       TN         Viewing Angle       SVA 45/45/25/35         SVA 45/45/25/35  |                        | Response time        | 16ms tvp.                 |                   |
| 31.75 cm (12.5")       Outline Dimensions<br>(W× H× D)       282.7 x 179.82 x 2.3 (m)) max         31.75 cm (12.5")       Outline Dimensions<br>(W× H× D)       282.7 x 179.82 x 2.3 (m)) max         Attive Area       276.48 x 155.52 mm         Weight       170g max         Diagonal LED backlight<br>(H920 x 1080)       Attive Area         Pixel Resolution       600:1 (typ)         Refresh Rate       600:1 (typ)         Response time       25ms typ.         Pixel Resolution       Configuration         Refresh Rate       60Hz         Response time       25ms typ.         Pixel Resolution       Configuration         Refresh Rate       60Hz         Response time       25ms typ.         Pixel Resolution       Configuration         Refresh Rate       60Hz         Response time       25ms typ.         Pixel Resolution       Configuration         Refresh Rate       60Hz         Response time       25ms typ.         Pixel Resolution       Configuration         Refresh Rate       60Hz  |                        | •                    |                           |                   |
| 31.75 cm (12.5")       Pixel Resolution       Format       1366 x 768 (HD)         31.75 cm (12.5")       Interface       eDP 1.2         Jangonal LED backlight<br>(1920 x 1080)       Outline Dimensions<br>(W x H x D)       282.7 x 179.82 x 2.3 (m)       max         Anti-glare non-touch<br>(1920 x 1080)       Outline Dimensions<br>(W x H x D)       282.7 x 179.82 x 2.3 (m)       max         Anti-glare non-touch<br>(1920 x 1080)       Active Area       276.48 x 155.52 mm       max         Surface Treatment<br>(1920 x 1080)       Active Area       276.48 x 155.52 mm       max         Nagonal Size       31.75 cm (12.5")       Surface Treatment       AG         Contrast Ratio       600:1 (typ)       TO       TO         Brightness       300nits       TO       TO         Pixel Per Inch (PPI)       176       Brightness       300nits         Brightness       300nits       TO       TO         Interface       EDP 1.3 + PSR       TO       TO         LED Modelight<br>FHD UltraSim eDP UWWA       Neight       TO       TO         Miagonal LED backlight<br>FHD UltraSim eDP UWWA       Size 7 x 179.82 x 2.3 (m)       TO         Miagonal LED backlight<br>FHD UltraSim eDP UWWA       Size 7 x 179.82 x 2.3 (m)       TO         Miagonal LED backlight<br>FHD UltraSim eDP UWWA <th></th> <th></th> <th></th> <th></th>   |                        |                      |                           |                   |
| Pixel Resolution       Configuration       RGB         Interface       eDP 1.2       ECD Mode       TN         LCD Mode       TN       Viewing Angle       SVA 45/45/25/35         31.75 cm (12.5")       Outline Dimensions       282.7 x 179.82 x 2.3 (mm) max         fHD UltraSlim eDP UWVA       Active Area       276.48 x 155.52 mm         Anti-glare non-touch       Neight       170g max         jagonal LED backlight       Meight       170g max         Surface Treatment       AG       Surface Treatment         (1920 x 1080)       Gourtast Ratio       600:1 (typ)         Refresh Rate       60Hz       Esponse time       1920 x 1080 (FHD)         Pixel Resolution       Format       1920 x 1080 (FHD)         Pixel Resolution       Format       1920 x 1080 (FHD)         Pixel Resolution       Format       1920 x 1080 (FHD)         Interface       EDP 1.3 + PSR       ECD Mode       ECD Mode       EVFFS/VA         Viewing Angle       UWVA 85/55/85/85       Utime Dimensions       282.7 x 179.82 x 2.3 (mm) max         J1.75 cm (12.5")       Gaigonal LED backlight       Format       1920 x 1080 (FHD)         Pixel Resolution       Format       1920 x 1080 (FHD)       Exe         Mitersolu   |                        | -                    | Format                    | 1366 x 768 (HD)   |
| Interface       eDP 1.2         LCD Mode       TN         Viewing Angle       SVA 45/45/25/35         31.75 cm (12.5")       Outline Dimensions       282.7 x 179.82 x 2.3 (mm) max         Anti-glare non-touch       Newing Angle       282.7 x 179.82 x 2.3 (mm) max         Anti-glare non-touch       Active Area       276.48 x 155.52 mm         Nutine Dimensions       31.75 cm (12.5")       Active Area         Weight       170g max   |                        | Pixel Resolution     |                           |                   |
| LCD Mode TN<br>Viewing Angle SVA 45/45/25/35<br>31.75 cm (12.5")<br>diagonal LED backlight<br>FHD UltraSlim eDP UWVA<br>Arti-glare non-touch<br>(1920 x 1080)<br>UWVA 14 x D)<br>Active Area 276.48 x 155.52 mm<br>Vieght 170g max<br>1.75 cm (12.5")<br>Surface Treatment AG<br>Contrast Ratio 600:1 (typ)<br>Refresh Rate 60Hz<br>Response time 25ms typ.<br>Pixel Per Inch (PPI) 176<br>Brightness 300nits<br>Format 1920 x 1080 (FHD)<br>Pixel Per Inch (PPI) 176<br>Brightness 300nits<br>Format 1920 x 1080 (FHD)<br>Pixel Resolution Format 1920 x 1080 (FHD)<br>110traface eDP 1.3 + PSR<br>LCD Mode IPS/FFS/VA<br>Viewing Angle UWVA 85/85/85/85<br>LCD Mode IPS/FFS/VA<br>Viewing Angle UWVA 85/85/85/85<br>LCD Mode 195/FFS/VA<br>Viewing Angle UWVA 85/85/85/85<br>LCD Mode 195/FFS/VA<br>Viewing Angle 276.48 x 155.52 mm<br>Active Area 276.48 x 155.52 mm<br>Active Area 276.48 x 155.52 mm<br>Viewing Angle 100 WVA 85/85/85/85<br>100 Utine Dimensions 282.7 x 179.82 x 2.3 (mm) max<br>Viewing Angle 31.75 cm (12.5")<br>Touch Enabled Yes<br>TSP Type Capacitive<br>Surface Treatment Anti-smudge/fingerprint - Jeting<br>Surface Treatment Anti-smudge/ Surface - Jeting<br>Surface Treatment Anti-smudge/ Surfac  |                        | Interface            | -                         |                   |
| 31.75 cm (12.5")       Outline Dimensions       282.7 x 179.82 x 2.3 (mm) max         Anti-glare non-touch<br>(1920 x 1080)       Qutline Dimensions       282.7 x 179.82 x 2.3 (mm) max         Mising Angle       276.48 x 155.52 mm       max         Vieight       170g max       max         Jigonal Size       31.75 cm (12.5")       surface Treatment         AG       Gottirast Ratio       600:1 (typ)         Refresh Rate       60Hz       surface Treatment         Response time       25ms typ.       surface Treatment         Pixel Per Inch (PPI)       176       surface Treatment         Pixel Per Inch (PPI)       176       surface Treatment         Pixel Resolution       Format       1920 x 1080 (FHD)         Configuration       RGB       surface Treatment         AG       UWVA 85/85/85/85       surface         Uitime Dimensions       282.7 x 179.82 x 2.3 (mm) max       surface         Viewing Angle       UWVA 85/85/85/85       surface       surface         Utime Dimensions       282.7 x 179.82 x 2.3 (mm) max       surface       surface         (1920 x 1080) Touch       Meight       10g max       surface       surface         (1920 x 1080) Touch       Meight       310g max       surface  |                        |                      |                           |                   |
| 31.75 cm (12.5")<br>diagonal LED backlight<br>FHD UltraSlim eDP UWVA<br>Anti-glare non-touch<br>(1920 x 1080)       Outline Dimensions<br>(W × H × D)       282.7 x 179.82 x 2.3 (mm) max         Active Area<br>Weight       276.48 x 155.52 mm   |                        |                      |                           |                   |
| diagonal LED backlight<br>FHD UltraSlim eDP UWA<br>Anti-glare non-touch<br>(1920 x 1080)(W× H× D)Keitee Area276.48 x 155.52 mmWeight170 gmaxDiagonal Size31.75 cm (12.5")Surface TreatmentAGCortrast Ratio600:1 (typ)Refresh Rate60HzRefresh Rate60HzPixel Per Inch (PPI)176Brightness300nitsPixel Resolution1920 x 1080 (FHD)Pixel Resolution6DF1.3 + PSRLCD ModeEPT.3 + PSRLCD Mode1927 x 1080 (FHD)Newing Angle00V1X 85/85/85/85Viewing Angle00V2 - ST.179.82 x 2.3 (mm) - ST.175.12 mmMitter Dimensions<br>(W× H× D)102 maxArtive Area102 maxMitter Area102 maxMitter Area102 maxMitter Area103 maxMitter Area103 maxMitter Area103 maxMitter Area103 maxMitter Area103 maxMitter Area103 maxMitter Area11.75 cm (12.5")Mitter Area11.75 cm (12.5") <trr>M</trr>   |                        | The many mage        | 5011 45/45/25/55          |                   |
| Anti-glare non-touch<br>(1920 x 1080)       Netwe nea       276.48 × 155.52 mm         Weight       170 g max         Diagonal Size       31.75 cm (12.5")         Surface Treatment       AG         Contrast Ratio       600:1 (typ)         Refresh Rate       60Hz         Response time       25ms typ.         Pixel Per Inch (PPI)       176         Brightness       300nits         Pixel Resolution       1920 x 1080 (FHD)         Configuration       RGB         Interface       6DP 1.3 + PSR         LCD Mode       IPS/FFS/VA         Viewing Angle       UWVA 85/85/85/85         Outline Dimensions       282.7 x 179.82 x 2.3 (mm) max         (W× H × D)       216.48 x 155.52 mm         Meight       31.0g max         Jigonal Size       31.75 cm (12.5")         Giagonal LED backlight       Meight         FHD UltraSlim eDP UWWA       Active Area         Meight       31.75 cm (12.5")         Giagonal Size       31.75 cm (12.5")         Touch Enabled       Yes         Touch Enabled       Yes         Touch Enabled       Yes         Touch Enabled       Anti-smudge/fingerprint.cuting         Surfac   | diagonal LED backlight | (W x H x D)          | 282.7 x 179.82 x 2.3 (mm) | max               |
| <pre>(1920 x 1080) weight in for informax Diagonal Size 31.75 cm (12.5") Surface Treatment AG Contrast Ratio 600:1 (typ) Refresh Rate 60Hz Response time 25ms typ. Pixel Per Inch (PPI) 176 Finghtness 300nits Find Interface 300nits Interface 6DP 1.3 + PSR LCD Mode 1PS/FFS/VA Viewing Angle 0HV 85/85/85/85 LCD Mode 1PS/FFS/VA Viewing Angle 22.7 x 179.82 x 2.3 (mm) max HD UltraSlim eDP UWWA (1920 x 1080) Touch Find UltraSlim eDP UWWA Gigen 31.75 cm (12.5") Giagonal Size 31.75 cm (12.5") Giagonal</pre>  |                        | Active Area          | 276.48 x 155.52 mm        |                   |
| Diagonal Size31.75 cm (12.5")Surface TreatmentAGContrast Ratio600:1 (typ)Refresh Rate60HzResponse time25ms typ.Pixel Per Inch (PPI)176Brightness300nitsPixel Resolution1920 x 1080 (FHD)InterfaceEDP 1.3 + PSRLCD ModeIPS/FFS/VAViewing AngleUWVA 85/85/85/85S1.75 cm (12.5")Outline Dimensions<br>(W × H × D)HD UltraSlim eDP UWVA<br>(1920 x 1080) TouchQuestionViewing Angle276.48 x 155.52 mmViewing Angle276.48 x 155.52 mmViewing Angle31.75 cm (12.5")Outline Dimensions<br>(W × H × D)276.48 x 155.52 mmS1.75 cm (12.5")Diagonal Size<br>Touch EnabledS1.75 cm (12.5")31.75 cm (12.5")Surface Treatment<br>(Surface Treatment<br>(Surface Treatment<br>(Surface Treatment<br>(Surface TreatmentActive Area<br>(Surface Treatment<br>(Surface Treatment<br>(Surface TreatmentActive Area<br>(Surface Treatment<br><th>-</th> <th>Weight</th> <th>170g max</th> <th></th>   | -                      | Weight               | 170g max                  |                   |
| Contrast RatioG00:1 (typ)Refresh Rate600:1 (typ)Refresh Rate60HzResponse time25ms typ.Pixel Per Inch (PPI)176Brightness300nitsPixel ResolutionFormatPixel ResolutionConfigurationRGBInterfaceEDD 1.3 + PSRLCD ModeLCD ModeIPS/FFS/VAViewing AngleUWVA 85/85/85/85S1.75 cm (12.5")Outline Dimensions<br>(W × H × D)Active Area276.48 × 155.52 mmMeight31.75 cm (12.5")Jiagonal Size31.75 cm (12.5")Touch EnabledYesTSP TypeCapacitiveSurface TreatmentAnti-smudge/fingerprint co-tingContrast Ratio600:1 (typ)  | (1520 x 1000)          | Diagonal Size        | 31.75 cm (12.5")          |                   |
| Refresh Rate       60Hz         Refresh Rate       60Hz         Refresh Rate       60Hz         GHz       25ms typ.         Pixel Per Inch (PPI)       176         Brightness       300nits         Brightness       300nits         Pixel Resolution       Format       1920 x 1080 (FHD)         Configuration       RGB         Interface       eDP 1.3 + PSR         LCD Mode       IPS/FFS/VA         Viewing Angle       UWVA 85/85/85/85         Outline Dimensions       282.7 x 179.82 x 2.3 (mm) max         (W2 H x D)       Active Area       276.48 x 155.52 mm         Meight       310g max       Jaioganal Size         Touch Enabled       Yes       TSP Type         TSP Type       Capacitive       Jaireareareat         Surface Treatment       Active Anti-smudge/fingerprint_Jetting  |                        | Surface Treatment    | AG                        |                   |
| Response time       25ms typ.         Pixel Per Inch (PPI)       176         Brightness       300nits         Pixel Resolution       Format       1920 x 1080 (FHD)         Configuration       RGB         Interface       eDP 1.3 + PSR         LCD Mode       IPS/FFS/VA         Viewing Angle       UWVA 85/85/85/85         Outline Dimensions<br>(W × H × D)       276.48 × 155.52 mm         Active Area       276.48 × 155.52 mm         Weight       310g max         Jiagonal Size       31.75 cm (12.5")         Touch Enabled       Yes         TSP Type       Capacitive         Surface Treatment       Activea, Artios         Gourtast Ratio       600:1 (typ)   |                        | Contrast Ratio       | 600:1 (typ)               |                   |
| Pixel Per Inch (PPI)176Brightness300nitsBrightness300nitsPixel ResolutionFormatPixel ResolutionRGBInterfaceeDP 1.3 + PSRLCD ModeIPS/FFS/VAViewing AngleUWVA 85/85/85/85S1.75 cm (12.5")Outline Dimensions<br>(W × H × D)Active Area276.48 × 155.52 mmWeight310g maxJagonal Size31.75 cm (12.5")Touch EnabledYesTSP TypeCapacitiveSurface Treatment<br>Contrast RatioAnti-smudge/fingerprint c-stingGon: (typ)Gon: (typ)  |                        | Refresh Rate         | 60Hz                      |                   |
| Brightness       300nits         Pixel Resolution       Format       1920 x 1080 (FHD)         Configuration       RGB         Interface       eDP 1.3 + PSR         LCD Mode       IPS/FFS/VA         Viewing Angle       UWVA 85/85/85/85/85         Outline Dimensions       282.7 x 179.82 x 2.3 (mm) max         (W × H × D)       Active Area       276.48 x 155.52 mm         Active Area       276.48 x 155.52 mm         Weight       310g max         Jingonal Size       31.75 cm (12.5")         Touch Enabled       Yes         TSP Type       Capacitive         Surface Treatment       Anti-smudge/fingerprint_strugt         Gontrast Ratio       600:1 (typ)   |                        | Response time        | 25ms typ.                 |                   |
| Format     1920 x 1080 (FHD)       Pixel Resolution     RGB       Interface     eDP 1.3 + PSR       EDD Mode     IPS/FFS/VA       LCD Mode     UWVA 85/85/855       Viewing Angle     UWVA 85/85/855       Outline Dimensions     282.7 x 179.82 x 2.3 (mm) max       (W x H x D)  |                        | Pixel Per Inch (PPI) | 176                       |                   |
| Pixel ResolutionConfigurationRGBConfigurationRGBInterfaceeDP 1.3 + PSRLCD ModeIPS/FFS/VAViewing AngleUWVA 85/85/85/8531.75 cm (12.5")Outline Dimensions<br>(W × H × D)Active Area276.48 × 155.52 mmYeight31.0g maxDiagonal Size31.75 cm (12.5")Touch EnabledYesTSP TypeCapacitiveSurface TreatmentAnti-smudge/fingerprint coatingContrast Ratio600:1 (typ)   |                        | Brightness           | 300nits                   |                   |
| ConfigurationRGBInterfaceeDP 1.3 + PSRLCD ModeIPS/FFS/VAViewing AngleUWVA 85/85/85/8531.75 cm (12.5")Outline Dimensions<br>(W × H × D)Active Area276.48 × 155.52 mmViegipt310g maxDiagonal Size31.75 cm (12.5")Touch EnabledYesTSP TypeCapacitiveSurface TreatmentAnti-smudge/fingerprint coating<br>G00:1 (typ)   |                        | Divel Decelution     | Format                    | 1920 x 1080 (FHD) |
| LCD Mode IPS/FFS/VA<br>JI.75 cm (12.5")<br>diagonal LED backlight<br>FHD UltraSlim eDP UWVA<br>(1920 x 1080) Touch Active Area 276.48 x 155.52 mm<br>Meight 310g max<br>Diagonal Size 31.75 cm (12.5")<br>Touch Enabled Yes<br>TSP Type Capacitive<br>Surface Treatment Anti-smudge/fingerprint coating<br>Contrast Ratio 600:1 (typ)  |                        | PIXEL RESOLUTION     | Configuration             | RGB               |
| Viewing AngleUWVA 85/85/8531.75 cm (12.5")Outline Dimensions<br>(W × H × D)282.7 x 179.82 x 2.3 (mm) max<br>(W × H × D)FHD UltraSlim eDP UWVA<br>(1920 x 1080) TouchActive Area<br>Weight276.48 x 155.52 mm<br>31.0g maxDiagonal Size31.0g maxDiagonal Size31.75 cm (12.5")Touch EnabledYesTSP TypeCapacitiveSurface Treatment<br>Contrast RatioAnti-smudge/fingerprint coating<br>600:1 (typ)   |                        | Interface            | eDP 1.3 + PSR             |                   |
| 31.75 cm (12.5")<br>diagonal LED backlight<br>FHD UltraSlim eDP UWVA<br>(1920 x 1080) TouchOutline Dimensions<br>(W × H × D)282.7 x 179.82 x 2.3 (mm) maxActive Area<br>Weight276.48 x 155.52 mmJ10g max310g maxDiagonal Size<br>Touch Enabled31.75 cm (12.5")Touch Enabled<br>Surface Treatment<br>Contrast RatioYes600:1 (typ)   |                        | LCD Mode             | IPS/FFS/VA                |                   |
| diagonal LED backlight<br>FHD UltraSlim eDP UWVA<br>(1920 x 1080) Touch<br>HU UltraSlim eDP UWVA<br>(1920 x 1080) Touch<br>HU Wight<br>Diagonal Size<br>Touch Enabled<br>TSP Type<br>Surface Treatment<br>Contrast Ratio<br>Contrast |                        | Viewing Angle        | UWVA 85/85/85/85          |                   |
| (1920 x 1080) TouchActive Area270.48 x 153.52 mmWeight310g maxDiagonal Size31.75 cm (12.5")Touch EnabledYesTSP TypeCapacitiveSurface TreatmentAnti-smudge/fingerprint coatingContrast Ratio600:1 (typ)   | diagonal LED backlight |                      | 282.7 x 179.82 x 2.3 (mm  | ) max             |
| Weight310g maxDiagonal Size31.75 cm (12.5")Touch EnabledYesTSP TypeCapacitiveSurface TreatmentAnti-smudge/fingerprint coatingContrast Ratio600:1 (typ)   |                        | Active Area          | 276.48 x 155.52 mm        |                   |
| Touch EnabledYesTSP TypeCapacitiveSurface TreatmentAnti-smudge/fingerprint coatingContrast Ratio600:1 (typ)  | (1920 X 1080) Touch    | Weight               | 310g max                  |                   |
| TSP TypeCapacitiveSurface TreatmentAnti-smudge/fingerprint coatingContrast Ratio600:1 (typ)  |                        | Diagonal Size        | 31.75 cm (12.5")          |                   |
| Surface TreatmentAnti-smudge/fingerprint coatingContrast Ratio600:1 (typ)  |                        | Touch Enabled        | Yes                       |                   |
| Contrast Ratio 600:1 (typ)   |                        | TSP Type             | Capacitive                |                   |
|  |                        | Surface Treatment    | Anti-smudge/fingerprint c | oating            |
| Refresh Rate 60Hz  |                        | Contrast Ratio       | 600:1 (typ)               |                   |
|  |                        | Refresh Rate         | 60Hz                      |                   |
| <b>Response time</b> 25ms typ.   |                        | Response time        | 25ms typ.                 |                   |
| Pixel Per Inch (PPI) 176   |                        | Pixel Per Inch (PPI) | 176                       |                   |
| Brightness 300nits   |                        | Brightness           | 300nits                   |                   |



## **Technical Specifications**

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

|   |  | Format                     | 1920 x 1080 (FHD)      |
|---|--|----------------------------|------------------------|
|   | Pixel Resolution                         | Configuration              | RGB                    |
|   | Interface                                | eDP 1.3 + PSR              | NOD                    |
|   | LCD Mode                                 | IPS/FFS/VA                 |                        |
|   | Viewing Angle                            | UWVA 85/85/85/85           |                        |
|   |  | 0111103/03/03/03           |                        |
| 35.56 cm (14") diagonal<br>LED backlight HD Slim  | <b>Outline Dimensions</b><br>(W x H x D) | 320.9 x 205.6 (max) x 3.0ı | nm max                 |
| eDP SVA Anti-glare non-                           | Active Area                              | 309.4 x 173.95 (mm)        |                        |
| touch<br>(1366 x 768)                             | Weight                                   | 290 g max                  |                        |
|   | Diagonal Size                            | 35.56 cm (14")             |                        |
|   | Surface Treatment                        | Anti-Glare (AG)            |                        |
|   | Contrast Ratio                           | 300:1 (typ)                |                        |
|   | Refresh Rate                             | 60Hz                       |                        |
|   | Response time                            | 16ms typ.                  |                        |
|   | Pixel Per Inch (PPI)                     | 112                        |                        |
|   | Brightness                               | 220nits                    |                        |
|   | Pixel Resolution                         | Format<br>Configuration    | 1366 x 768 (HD)<br>RGB |
|   | Interface                                | eDP 1.2                    |                        |
|   | LCD Mode                                 | TN                         |                        |
|   | Viewing Angle                            | SVA 45/45/25/35            |                        |
|   |  |                            |                        |
| 35.56 cm (14") diagonal<br>LED backlight FHD Slim | <b>Outline Dimensions</b><br>(W x H x D) | 320.9 x 205.6 (max) x 3.0( | max) mm                |
| eDP SVA Anti-glare non-<br>touch                  | Active Area                              | 309.40 x 173.95 (mm)       |                        |
| (1920 x 1080)                                     | Weight                                   | 270 g max                  |                        |
| (1010 / 1000)                                     | Diagonal Size                            | 14"                        |                        |
|   | Surface Treatment                        | Anti-Glare (AG)            |                        |
|   | Contrast Ratio                           | 300:1 (typ)                |                        |
|   | Refresh Rate                             | 60Hz                       |                        |
|   | Response time                            | 16ms typ.                  |                        |
|   | Pixel Per Inch (PPI)                     | 157                        |                        |
|   | Brightness                               | 300nits                    |                        |
|   |  | F                          | 1000 (515)             |



Not all configuration components are available in all regions/countries. c05240684 – DA15669 – World Wide – Version 8 – April 25, 2017

1920 x 1080 (FHD)

RGB

Format

eDP 1.2

Configuration

**Pixel Resolution** 

Interface

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

# Technical Specifications

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



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

# Technical Specifications

| 35.56 cm (14") diagonal<br>LED backlight FHD Slim                          | <b>Outline Dimensio</b><br>(W x H x D)   | ons 320.9 x 205.6 (max) x 3.                            | 6 (max) mm        |
|--|--|---|-------------------|
| eDP SVA Anti-glare<br>(1920 x 1080) Non-Touch<br>Integrated Privacy Screen | Active Area                              | 309.14 x 173.89 mm                                      |                   |
|  | Weight                                   | <305 g max  |                   |
|  | n – – – – – – – – – – – – – – – – – – –  | 35.56 cm (14")  |                   |
|  | Surface Treatment                        | Anti-Glare (AG)   |                   |
|  | Contrast Ratio                           | 200:1 (typ) - AG  |                   |
|  | Refresh Rate                             | 60Hz  |                   |
|  | Response time                            | 16ms typ.   |                   |
|  | Pixel Per Inch (PPI)                     | 157   |                   |
|  | Brightness                               | Privacy 85nits typ. (syste<br>Sharing 275nits typ. (sys |                   |
|  | Pixel Resolution                         | Format  | 1920 x 1080 (FHD) |
|  | Pixel Resolution                         | Configuration   | RGB Stripe        |
|  | Interface                                | eDP 1.2 (2 lane)  |                   |
|  | LCD Mode                                 | TN  |                   |
|  | Viewing Angle                            | Sharing 45/45/15/30 (CF<br>Privacy 40/40/15/30 (CR      |                   |
| 35.56 cm (14") diagonal<br>LED backlight FHD Slim                          | <b>Outline Dimensions</b><br>(W x H x D) | 320.9 x 205.6 (mm) max                                  | x 3.0 (mm) max    |
| eDP SVA (1920 x 1080)  | Active Area                              | 309.40 x 173.95 (mm)                                    |                   |
| Touch  | Weight                                   | 430 g max   |                   |
|  | Diagonal Size                            | 14"   |                   |
|  | Surface Treatment                        | Anti-smudge/fingerprin                                  | it coating        |
|  | Touch Enabled                            | Yes   |                   |
|  | TSP Type<br>Contrast Ratio               | Capacitive<br>300:1 (typ)                               |                   |
|  | Refresh Rate                             | 60 Hz   |                   |
|  | Response time                            | 16ms typ.   |                   |
|  | Pixel Per Inch (PPI)                     | 157   |                   |
|  | Brightness                               | 300nits   |                   |
|  | Pixel Resolution                         | Format  | 1920 x 1080 (FHD) |
|  |  | Configuration   | RGB               |
|  | Interface                                | eDP 1.2   |                   |
|  | LCD Mode                                 | TN  |                   |
|  | Viewing Angle                            | SVA 45/45/25/35   |                   |



# **Technical Specifications**

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

| 39.6 cm (15.6") diagonal                           | Outline Dimensions<br>(W x H x D)        | 360.0 x 224.3 x 3.2 (mm) ı | max               |
|--|--|----------------------------|-------------------|
| LED backlight HD Slim<br>eDP SVA Anti-glare non-   | (W X H X D)<br>Active Area               | 344.2 x 193.5 (mm)         |                   |
| touch  | Weight                                   | 370g max                   |                   |
| (1366 x 768)                                       | Diagonal Size                            | 39.6 cm (15.6")            |                   |
|  | Surface Treatment                        | Anti-Glare (AG)            |                   |
|  | Contrast Ratio                           | 300:1 (typ)                |                   |
|  | Refresh Rate                             | 60Hz                       |                   |
|  | Response time                            | 16ms typ.                  |                   |
|  | Pixel Per Inch (PPI)                     | 1011 101                   |                   |
|  | Brightness                               | 220 nit typ                |                   |
|  | Digiticos                                | Format                     | 1366 x 768 (HD)   |
|  | Pixel Resolution                         | Configuration              | RGB               |
|  | Interface                                | eDP 1.2                    |                   |
|  | LCD Mode                                 | TN                         |                   |
|  | Viewing Angle                            | SVA 45/45/25/35            |                   |
|  | 5 5                                      |                            |                   |
| 39.6 cm (15.6") diagonal<br>LED backlight FHD Slim | <b>Outline Dimensions</b><br>(W x H x D) | 360.0 x 224.3 x 3.2 (mm) ı | max               |
| eDP SVA Anti-glare non-                            | Active Area                              | 344.2 x 193.5 (mm)         |                   |
| touch<br>(1920 x 1080)                             | Weight                                   | 360 g max.                 |                   |
| (1920 X 1000)                                      | Diagonal Size                            | 39.6 cm (15.6")            |                   |
|  | Surface Treatment                        | Anti-Glare (AG)            |                   |
|  | Contrast Ratio                           | 400:1 (typ)                |                   |
|  | Refresh Rate                             | 60Hz                       |                   |
|  | Response time                            | 16ms typ.                  |                   |
|  | Pixel Per Inch (PPI)                     | 142                        |                   |
|  | Brightness                               | 300nits                    |                   |
|  | Divel Decolution                         | Format                     | 1920 x 1080 (FHD) |
|  | Pixel Resolution                         | Configuration              | RGB               |
|  | Interface                                | eDP 1.2                    |                   |
|  | LCD Mode                                 | TN                         |                   |
|  | Viewing Angle                            | SVA 45/45/25/35            |                   |
| 39.6 cm (15.6") diagonal                           | Outline Dimensions                       | 360 x 224.3 x 3.2 (mm) m   | ax                |

m (15.6 ) alagonal (W x H x D) LED backlight FHD Slim



# Technical Specifications

| oDD IIWWA Anti alawa                        | Active Area                         | 244 2 × 102 5 (mm                   |  |  |
|---|-------------------------------------|-------------------------------------|--|--|
| eDP UWVA Anti-glare<br>non-touch            | Active Area                         | 344.2 x 193.5 (mm                   | )  |  |
| (1920 x 1080)                               | Weight<br>Dia anna I Cina           | 360 g max                           |  |  |
|   | Diagonal Size                       | 39.6 cm (15.6")                     |  |  |
|   | Surface Treatment                   | Anti-Glare (AG)                     |  |  |
|   | Contrast Ratio                      | 600:1 (typ)                         |  |  |
|   | Refresh Rate                        | 60 Hz                               |  |  |
|   | Response time                       | 35 ms (typ)                         |  |  |
|   | Pixel Per Inch (PPI)                | 142                                 |  |  |
|   | Brightness                          | 300 nits                            |  |  |
|   | <b>Pixel Resolution</b>             | Format                              | 1920 x 1080 (FHD)                                      |  |
|   |                                     | Configuration                       | RGB  |  |
|   | Interface                           | eDP 1.3 + PSR                       |  |  |
|   | LCD Mode                            | IPS                                 |  |  |
|   | Viewing Angle                       | UWVA 85/85/85/85                    | 5  |  |
|   | Dimensions (W x H x D)              | 368.48 x 218.81 x 3.14              | (mm) max   |  |
| 39.6 cm (15.6")                             | Diagonal Size                       | 15.6 in (39.6 cm)                   |  |  |
| diagonal LED backlight<br>UHD Slim eDP UWVA | Weight                              | 345 g <del>(</del> max <del>)</del> |  |  |
| Anti-glare non-touch                        | Surface Treatment                   | Anti-glare (AG)                     |  |  |
| (3840 x 2160)                               | Contrast Ratio                      | 1000:1 (typ)                        |  |  |
|   | Refresh Rate                        | 60 Hz                               |  |  |
|   | Brightness                          | 340 nit                             |  |  |
|   | Pixel Resolution                    |                                     |  |  |
|   |                                     | Format                              | 3840x2160 (UHD)  |  |
|   |                                     | Configuration                       | RGB  |  |
|   | Backlight                           | LED                                 |  |  |
|   | PPI                                 | 282                                 |  |  |
|   | Viewing Angle                       | 80° Horizontal, ±80° Ve             | rtical (minimum)<br>nt/Down/Up) (min) UWVA 85/85/85/85 |  |
| 39.6 cm (15.6") diagona                     | Outline Dimensions<br>I (W x H x D) | 360.0 x 224.3 x 3.2                 | (mm) max   |  |
| LED backlight FHD Slim                      | Active Area                         | 344.2 x 193.5 (mm                   | )  |  |
| eDP SVA (1920 x 1080)<br>Touch              | Weight                              | 560 g max.                          |  |  |
| IUUCII                                      | Diagonal Size                       | 39.6 cm (15.6")                     |  |  |
|   | Surface Treatment                   | Anti-smudge/finge                   | rprint coating   |  |
|   | Contrast Ratio                      | 400:1 (typical)                     |  |  |
|   | Touch Enabled                       | Yes                                 |  |  |
|   | TSP Туре                            | Capacitive                          |  |  |
|   | Refresh Rate                        | 60Hz                                |  |  |
|   | <b>Response time</b>                | 16ms typ.                           |  |  |
|   | Pixel Per Inch (PPI)                | 142                                 |  |  |
|   |                                     |                                     |  |  |



# **Technical Specifications**

| Brightness       | 300nits           |                   |
|------------------|-------------------|-------------------|
| Divel Decelution | Format            | 1920 x 1080 (FHD) |
| Pixel Resolution | Configuration RGB |                   |
| Interface        | eDP 1.2           |                   |
| LCD Mode         | TN                |                   |
| Viewing Angle    | SVA 45/45/25/35   |                   |

### NETWORKING

|                             | HP lt4120 Qualcomm® Snapdragon™ X5 LTE Mobile Broadband Module   |
|-----------------------------|--|
| Technology/Operating bands  | LTE: 2100 (Band 1), 1900 (Band 2), 1800 (Band 3),<br>1700/2100 (Band 4), 850 (Band 5), 2600 (Band 7), 900 (Band 8),<br>700 (Band 12 lower), 700 (Band 13 upper), 700 (Band 17 lower),<br>800 (Band 20), 700 (Band 28).<br>HSPA+: 2100 (Band 1), 1900 (Band 2), 1700/2100 (Band 4),<br>850 (Band 5), 900 (Band 8) MHz<br>EV-D0: 850 (BC0), 1900 (BC1) MHz (Only work with Verizon network)<br>E-GPRS: 1900 (Band 2), 1800 (Band 3), 850 (Band 5), 900 (Band 8)<br>MHz |
| Wireless protocol standards | 3GPP Release 10 LTE Specification CAT.4, 20MHz BW<br>WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification<br>1xEVDO Release 0, A and B.<br>E-GPRS: Class B, Multi-slot class 12, coding schemes CS1 - CS4<br>and MSC1 - MSC9   |
| GPS                         | Standalone, A-GPS (MS-A, MS-B and XTRA)  |
| GPS bands                   | 1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz  |
| Maximum data rates          | LTE: 150 Mbps (Download), 50 Mbps (Upload)<br>DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload)<br>HSPA+: 21Mbps (Download), 5.76 Mbps (Upload)<br>CDMA 1xRTT: 153.6 kbps (Download), 153.6 kbps (Upload)<br>EVDO Rel.A: 3.1 Mbps (Download), 1.8 Mbps (Upload)<br>EVDO Rel.B: 14.7 Mbps (Download), 5.4Mbps (Upload)<br>EDGE: 236.8 kbps (Download), 236.8 kbps (Upload)<br>GPRS: 85.6 kbps(Download), 85.6 kbps (Upload)  |
| Maximum output power        | LTE: 23 dBm<br>HSPA+: 23.5 dBm<br>1xRTT/EVDO: 24dBm<br>E-GPRS 1900/1800: 26 dBm<br>E-GPRS 900/850: 27 dBm<br>GPRS 1900/1800: 29.5 dBm<br>GPRS 900/850: 32.5 dBm  |
| Maximum power consumption   | LTE: 1,200 mA (peak); 900 mA (average)<br>HSPA+: 1,100 mA (peak); 800 mA (average)   |
|                             | Not all configuration components are available in all regions (countries   |



# **Technical Specifications**

|   | 1xRTT/EVD0:  1,000 mA (peak); 700 mA (average)<br>E-GPRS: 2,800 mA (peak); 500 mA (average) |
|---|---|
| Form Factor                                       | М.2, 3042-S3 Кеу В  |
| Weight  | 6.2 g   |
| <b>Dimensions</b><br>(Length x Width x Thickness) | 42 x 30 x 2.3 mm  |
| * Mobile Broadband is an option                   | nal feature. Connection requires wireless data service contract, network support.           |

\* 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 lt4132 LTE/HSPA+ 4G Mobile Broadband Module

| Technology/Operating bands                        | LTE: 2100 (Band 1), 1900 (Band 2), 1800 (Band 3) MHz,<br>850 (Band 5), 2600 (Band 7), 900 (Band 8) MHz,<br>800 (Band 20), 700 (Band 28) MHz.<br>HSPA+: 2100 (Band 1), 1900 (Band 2), 850 (Band 5), 900 (Band 8) MHz<br>E-GPRS: 1900 (Band 2), 1800 (Band 3), 850 (Band 5), 900 (Band 8) MHz |
|---|---|
| Wireless protocol standards                       | 3GPP Release 10 LTE Specification CAT.4, 20MHz BW<br>WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification<br>E-GPRS: Class B, Multi-slot class 12, coding schemes CS1 - CS4<br>and MSC1 - MSC9  |
| GPS   | Standalone, A-GPS (MS-B and LTO)  |
| GPS bands   | 1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz   |
| Maximum data rates                                | LTE: 150 Mbps (Download), 50 Mbps (Upload)<br>DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload)<br>HSPA+: 21Mbps (Download), 5.76 Mbps (Upload)<br>EDGE: 236.8 kbps (Download), 236.8 kbps (Upload)<br>GPRS: 85.6 kbps(Download), 85.6 kbps (Upload)   |
| Maximum output power                              | LTE: 23 dBm<br>HSPA+: 23.5 dBm<br>E-GPRS 1900/1800: 26 dBm<br>E-GPRS 900/850: 27 dBm<br>GPRS 1900/1800: 29.5 dBm<br>GPRS 900/850: 32.5 dBm  |
| Maximum power consumption                         | LTE: 1,200 mA (peak); 900 mA (average)<br>HSPA+: 1,100 mA (peak); 800 mA (average)<br>E-GPRS: 2,600 mA (peak); 500 mA (average)   |
| Form Factor                                       | M.2, 3042-S3 Key B  |
| Weight  | 6 g   |
| <b>Dimensions</b><br>(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.



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

## **Technical Specifications**

4G LTE not available on all products or in all countries.

|   | HP hs3210 WW HSP with GPS Mobile Broadband   |
|---|--|
|   | HP hs3210 HSPA+ Mobile Broadband Module*   |
| Technology/Operating bands                        | HSPA+: 2100 (Band1), 1900 (Band 2), 850 (Band 5), 900 (Band 8) MHz<br>E-GPRS: 1900 (Band 2), 1800 (Band 3), 850 MHz (Band 5), 900 (Band 8) MHz |
| Wireless protocol standards                       | WCDMA R99, 3GPP Release 5, 6 and 7 UMTS Specification<br>E-GPRS: Class B, Multi-slot class 33, coding schemes CS1 - CS4 and MSC1 - MSC9        |
| Maximum data rates                                | HSPA+: 21.6 Mbps (Download), 5.76 Mbps (Upload)  |
|   | E-GPRS: 296 kbps (Download), 236.8 kbps (Upload)<br>GPRS: 107 kbps (Download), 85.6 kbps (Upload)  |
| Maximum output power                              | HSPA+: 24 dBm<br>E-GPRS 1800/1900: 26 dBm  |
|   | E-GPRS 850/900: 27 dBm<br>GPRS 1800/1900: 30 dBm<br>GPRS 850/900: 33 dBm   |
| Maximum power consumption                         | HSPA+: 1,100 mA (peak); 800 mA (average)<br>E-GPRS: 2,800 mA (peak); 700 mA (average)  |
| Form Factor                                       | M.2, 2242-S3 Key B   |
| Weight  | 6 g  |
| <b>Dimensions</b><br>(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 Interet service required. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices."

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

| Wireless LAN Standards | IEEE 802.11a                 |
|------------------------|------------------------------|
|                        | IEEE 802.11b<br>IEEE 802.11g |
|                        | IEEE 802.11n                 |

IEEE 802.11ac



# Technical Specifications

| Interoperability               | Wi-Fi certified   |  |  |
|--------------------------------|---|--|--|
| Frequency Band                 | 802.11b/g/n   |  |  |
|                                | <ul> <li>2.402 – 2.482 GHz</li> <li>Note:</li> </ul>  |  |  |
|                                | 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   |  |  |
|                                | <ul> <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<br/>Note: Indonesia no support this band)</li> </ul>   |  |  |
| Data Rates                     | <ul> <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>  |  |  |
| Modulation                     | Direct Sequence Spread Spectrum<br>BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM   |  |  |
| Security <sup>1</sup>          | <ul> <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> |  |  |
| Network Architecture<br>Models | Ad-hoc (Peer to Peer)   |  |  |
| mouels                         | Infrastructure (Access Point Required)  |  |  |



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

# Technical Specifications

| Roaming                           | IEEE 802.11 compliant roaming between access points                                   |
|-----------------------------------|---|
| Output Power <sup>2</sup>         | • 802.11b : +16dBm minimum  |
|                                   | • 802.11g : +14dBm minimum  |
|                                   | • 802.11a : +14dBm minimum  |
|                                   | • 802.11n HT20(2.4GHz) : +14dBm minimum   |
|                                   | • 802.11n HT40(2.4GHz) : +12dBm minimum   |
|                                   | • 802.11n HT20(5GHz) : +14dBm minimum   |
|                                   | • 802.11n HT40(5GHz) : +12dBm minimum   |
| Power Consumption                 | Transmit: 2.0 W (max)   |
|                                   | Receive: 1.6 W (max)  |
|                                   | Idle mode (PSP): 180 mW (WLAN Associated)   |
|                                   | Idle mode: 50 mW (WLAN unassociated)  |
|                                   | Connect Standby: 10 mW (WLAN+BT)  |
|                                   | Radio disabled: 5 mW  |
| Power Management                  | ACPI and PCI Express compliant power management<br>802.11 compliant power saving mode |
| Receiver Sensitivity <sup>3</sup> | 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   |



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

## **Technical Specifications**

|                   | 802.11ac, 1SS, MCS-9 : -                    | 61dBm maximum  |
|-------------------|---|--|
|                   | 802.11ac, 2SS, MCS-0 : -                    | 83dBm maximum  |
|                   | 802.11ac, 2SS, MCS-9 : -                    | 58dBm maximum  |
| Antenna type      | High efficiency antenna v<br>enclosure      | with spatial diversity, mounted in the display   |
|                   |   | d 2.4/5 GHz antennas are provided to the card ommunications and Bluetooth communications |
| Form Factor       | PCI-Express M.2 MiniCard                    |  |
| Dimensions        | Type 2230 : 2.3 x 22.0 x 30.0 mm            |  |
|                   | Or<br>Type 1630 : 2.3 x 16.0 x 3            | 30.0 mm  |
| Weight            | Туре 2230 : 2.8g                            |  |
|                   | Or  |  |
|                   | Туре 1630 : 2g                              |  |
| Operating Voltage | 3.3v +/- 9%                                 |  |
| Temperature       | Operating<br>Non-operating                  | 14° to 158° F (–10° to 70° C)<br>–40° to 176° F (–40° to 80° C)                          |
| Humidity          | Operating<br>Non-operating                  | 10% to 90% (non-condensing)<br>5% to 95% (non-condensing)                                |
| Altitude          | Operating<br>Non-operating                  | 0 to 10,000 ft (3,048 m)<br>0 to 50,000 ft (15,240 m)                                    |
| LED Activity      | LED Amber – Radio OFF; LED White – Radio ON |  |

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

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

Bluetooth Specification 4.0/4.1/4.2 Compliant

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

# **Technical Specifications**

| Frequency Band               | 2402 to 2480 MHz                          |                     |   |             |
|------------------------------|---|---------------------|---|-------------|
| Number of Available Channels | Legacy : 0~79 (1 MH                       | z/CH)               |   |             |
|                              | BLE : 0~39 (2 MHz/C                       | H)                  |   |             |
| Data Rates and Throughput    | Legacy : 3 Mbps data                      | a rate; throughput  | up to 2.17 Mbps                                   |             |
|                              | BLE : 1 Mbps data ra                      | te; throughput up   | to 0.2 Mbps                                       |             |
|                              | Legacy : Synchronou<br>channels           | us Connection Orie  | nted links up to 3, 64 l                          | kbps, voice |
|                              | Legacy : Asynchrono<br>asymmetric (3-DH5) |                     | s links 2178.1 kbps/1<br>netric (3-EV5)           | 77.1 kbps   |
| Transmit Power               |   | -                   | te as a Class II Bluetoo<br>I dBm for BR and EDR. |             |
|                              |   |                     |   |             |
| <b>Receiver Sensitivity</b>  | Modulation                                | 0.01% BER           | 0.001% BER  |             |
| Legacy                       | GFSK                                      | -80 dBm             | -70 dBm   |             |
|                              | π/4-DQPSK                                 | -80 dBm             | -70 dBm   |             |
|                              | 8DPSK                                     | -80 dBm             | -70 dBm   |             |
| Power Consumption            | Peak (Tx) 330 mW<br>Peak (Rx) 230 mW      |                     |   |             |
|                              | Selective Suspend 1                       | 7 mW                |   |             |
| Range                        | Legacy Up to 33 ft ( <sup>*</sup>         | 10 m)               |   |             |
|                              | BLE Up to 99 ft (30 r                     | n)                  |   |             |
| Electrical Interface         | USB 2.0 compliant                         |                     |   |             |
| Bluetooth Software Supported | Microsoft Windows                         | Bluetooth Softwar   | e   |             |
| Link Topology                |   |                     |   |             |
| Electrical Interface         | Point to Point, Multi                     | point Pico Nets up  | to 7 slaves                                       |             |
| Bluetooth Software Supported | Full support of Blue                      | tooth Security Prov | visions   |             |



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

# **Technical Specifications**

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

Bluetooth V4.1/V4.2 support feature

V4.1: ESR5/6/7 compliant

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



# **Technical Specifications**

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

| Wireless LAN Standards | IEEE 802.11a  |
|------------------------|---|
|                        | IEEE 802.11b<br>IEEE 802.11g  |
|                        | IEEE 802.11n  |
|                        | IEEE 802.11ac   |
| Interoperability       | Wi-Fi certified   |
| Frequency Band         | 802.11b/g/n   |
|                        | • 2.402 – 2.482 GHz<br>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   |
|                        | <ul> <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<br/>Note:<br/>Indonesia only supports 5.725 - 5.825 GHz (CH149 - CH161)</li> </ul>   |
| Data Rates             | <ul> <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> |
| Modulation             | Direct Sequence Spread Spectrum<br>BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM   |



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

| Security <sup>1</sup><br>Network Architecture<br>Models | <ul> <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> <li>Ad-hoc (Peer to Peer)</li> <li>Infrastructure (Access Point Required)</li> </ul> |
|---|--|
| Roaming   | IEEE 802.11 compliant roaming between access points  |
| Output Power <sup>2</sup>                               | • 802.11b : +16dBm minimum   |
|   | • 802.11g : +14dBm minimum   |
|   | • 802.11a : +14dBm minimum   |
|   | • 802.11n HT20(2.4GHz) : +14dBm minimum  |
|   | • 802.11n HT40(2.4GHz) : +12dBm minimum  |
|   | • 802.11n HT20(5GHz) : +14dBm minimum  |
|   | • 802.11n HT40(5GHz) : +12dBm minimum  |
| Power Consumption                                       | <ul> <li>802.11ac 80MHz(5GHz) : +11dBm minimum<br/>Transmit: 2.0 W (max)</li> </ul>  |
|   | Receive: 1.6 W (max)   |
|   | Idle mode (PSP): 180 mW (WLAN Associated)  |
|   | Idle mode: 50 mW (WLAN unassociated)   |
|   | Connect Standby: 10 mW (WLAN+BT)   |
|   | Radio disabled: 5 mW   |
| Power Management  | ACPI and PCI Express compliant power management<br>802.11 compliant power saving mode  |
| Receiver Sensitivity <sup>3</sup>                       | 802.11b, 1Mbps : -94dBm maximum  |
|   |  |



|                   | 802.11b, 11Mbps : -86dBm maximum   |  |  |
|-------------------|--|--|--|
|                   | 802.11g, 6Mbps : -88dBm maximum  |  |  |
|                   | 802.11g, 54Mbps : -74dBm maximum   |  |  |
|                   | 802.11a, 6Mbps : -88dBm maximum  |  |  |
|                   | 802.11a, 54Mbps : -74dBm maximum   |  |  |
|                   | 802.11n, MCS07 : -69dBm maximum  |  |  |
|                   | 802.11n, MCS15 : -66dBm maximum  |  |  |
|                   | 802.11ac, 1SS, MCS-0 : -   | 86dBm maximum  |  |
|                   | 802.11ac, 1SS, MCS-9 : -   | 61dBm maximum  |  |
|                   | 802.11ac, 2SS, MCS-0 : -   | 83dBm maximum  |  |
|                   | 802.11ac, 2SS, MCS-9 : -   | 58dBm maximum  |  |
| Antenna type      | High efficiency antenna with spatial diversity, mounted in the display enclosure |  |  |
|                   |  | nd 2.4/5 GHz antennas are provided to the card communications and Bluetooth communications |  |
| Form Factor       | PCI-Express M.2 MiniCard   |  |  |
| Dimensions        | Type 2230 : 2.3 x 22.0 x 30.0 mm   |  |  |
|                   | Or<br>Type 1630 : 2.3 x 16.0 x   | 30.0 mm  |  |
| Weight            | Туре 2230 : 2.8g   |  |  |
|                   | Or   |  |  |
|                   | Туре 1630 : 2g   |  |  |
| Operating Voltage | 3.3v +/- 9%  |  |  |
| Temperature       | Operating<br>Non-operating   | 14° to 158° F (–10° to 70° C)<br>–40° to 176° F (–40° to 80° C)                            |  |
| Humidity          | Operating<br>Non-operating   | 10% to 90% (non-condensing)<br>5% to 95% (non-condensing)                                  |  |



### **Technical Specifications**

|                  | Altitude                              | Operating<br>Non-opera  |   | :o 10,000 ft (3,048 m)<br>:o 50,000 ft (15,240 m                                   |  |
|------------------|---------------------------------------|---|---|--|--|
|                  | LED Activity                          | LED Ambe  | r  – Radio OFF; LED                     | ) White – Radio ON   |  |
|                  | 2. Maximum outp<br>3. Receiver sensit | ut power may vary by  | y country accordin<br>packet error rate | pported security featu<br>g to local regulations.<br>of 8% for 802.11b (Ck<br>on). |  |
| HP Integrated M  | odule with Bluetoo                    | th 4.0/4.1/4.2 Wirel  | ess Technology                          |  |  |
| Bluetooth Specif | fication                              | 4.0/4.1/4.2 Complia   | nt                                      |  |  |
| Frequency Band   |                                       | 2402 to 2480 MHz  |   |  |  |
| Number of Avail  | able Channels                         | Legacy : 0~79 (1 MHz/CH)  |   |  |  |
|                  |                                       | BLE : 0~39 (2 MHz/CH)   |   |  |  |
| Data Rates and 1 | 「hroughput                            | t 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<br>asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)        |   |  |  |
| Transmit Power   |                                       | The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR. |   |  |  |
| Receiver Sensiti | vity                                  | Modulation 0.01% BER 0.001% BER   |   |  |  |

| Legacy |
|--------|
|--------|

| Houddation | 0.01 /0 BER | 0.001 /0 BER |
|------------|-------------|--------------|
| GFSK       | -80 dBm     | -70 dBm      |
| π/4-DQPSK  | -80 dBm     | -70 dBm      |
| 8DPSK      | -80 dBm     | -70 dBm      |
| (          |             |              |

**Power Consumption** 

Peak (Tx) 330 mW Peak (Rx) 230 mW



|  | Selective Suspend 17 mW   |
|--|---|
| Range  | Legacy Up to 33 ft (10 m)   |
|  | BLE Up to 99 ft (30 m)  |
| Electrical Interface                           | USB 2.0 compliant   |
| Bluetooth Software Supported                   | Microsoft Windows Bluetooth Software  |
| Link Topology                                  |   |
| Electrical Interface                           | Point to Point, Multipoint Pico Nets up to 7 slaves   |
| Bluetooth Software Supported                   | Full support of Bluetooth Security Provisions   |
| Security                                       |   |
| Power Management                               | Microsoft Windows ACPI, and USB Bus Support   |
| Certifications                                 | Self-configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff   |
| Security                                       | All necessary regulatory approvals for supported countries, including:  |
| Certifications                                 | FCC (47 CFR) Part 15C, Section 15.247 & 15.249  |
| Bluetooth Profiles Supported                   |   |
| Power Management                               | ETS 300 328, ETS 300 826  |
| Certifications                                 | Low Voltage Directive IEC950  |
|  | UL, CSA, and CE Mark  |
| Certifications<br>Bluetooth Profiles Supported | Serial Port Profile (SPP) <sup>1</sup><br>Service Discovery Application Profile (SDAP)<br>Dial-Up Networking (DUN) <sup>1,2</sup><br>Generic Object Exchange Profile (GOEP) <sup>1,2</sup><br>Object Push Profile (OPP) <sup>1,2</sup><br>Hard Copy Cable Replacement (HCRP) <sup>1,2</sup><br>Personal Area Networking Profile (PAN) <sup>1,2</sup><br>Human Interface Device Profile (HID) <sup>1,2</sup><br>Hands Free Profile (HFP)<br>Advanced Audio Distribution Profile (A2DP) |



### **Technical Specifications**

Audio Video Remote Control Profile (AVRCP)

Bluetooth V4.1/V4.2 support feature

V4.1: ESR5/6/7 compliant

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

#### Intel® I219-V Gigabit Network Connection

| Ethernet<br>Features    | <ul> <li>10 Mbit/s operation (10BASE-T; IEEE 802.3; IEEE 802.3<br/>clauses 13-14)</li> <li>100 10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE<br/>802.3 clauses 13-14)</li> <li>100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE<br/>802.3 clauses 21-30)</li> <li>1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE<br/>8023. Clauses 40)</li> <li>Auto-Negotiation (Automatic Speed Selection)</li> <li>Full Duplex Operation at all Speeds, Half Duplex<br/>operation at 10 and 100 Mbit/s</li> <li>IEEE 802.1p QoS (Quality of Service) Support<br/>IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32;<br/>configurable)</li> <li>IEEE 802.3az EEE(Energy Efficient Ethernet)</li> <li>Jumbo Frame 9K<br/>Auto MDI/MDIX Crossover cable detection</li> </ul> |
|-------------------------|--|
| Power                   | ACPI compliant - multiple power modes  |
| Management              | Energy Detect Low Power Mode(Green Ethernet)   |
| Performance<br>Features | TCP/IP/UDP Checksum Offload (configurable)<br>Protocol Offload( ARP & NS)<br>Large send offload and Giant send offload<br>Receiving Side Scaling   |



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

### **Technical Specifications**

|                        | MACSec Offload (802.3ae)<br>Intel Non-vPro<br>iSCSI Boot   |
|------------------------|--|
| Manageability          | Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft<br>Wake-Up Frame); Wake-on-LAN from off (Magic Packet only)<br>PXE 2.1 Remote Boot  |
|                        | Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30))<br>Comprehensive diagnostic and configuration software suite<br>Virtual Cable Doctor for Ethernet cable status |
| Interface              | PCI Express 1.1 x1 to fully support ASPM LOs/L1 and CLKREQ.<br><b>NOTE:</b> 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)<br>100 10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14)<br>100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30)<br>1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023. Clauses 40)<br>Auto-Negotiation (Automatic Speed Selection)<br>Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s<br>IEEE 802.1p QoS (Quality of Service) Support<br>IEEE 802.1q VLAN support<br>IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable)<br>IEEE 802.3az EEE(Energy Efficient Ethernet)<br>Jumbo Frame 9K<br>Auto MDI/MDIX Crossover cable detection |
|------------------------------------|---|
| Power<br>Management<br>Performance | ACPI compliant - multiple power modes<br>Energy Detect Low Power Mode(Green Ethernet)<br>TCP/IP/UDP Checksum Offload (configurable)   |
| Features                           | Protocol Offload( ARP & NS)<br>Large send offload and Giant send offload<br>Receiving Side Scaling<br>MACSec Offload (802.3ae)<br>Intel vPro  |



### **Technical Specifications**

|                        | iSCSI Boot  |
|------------------------|---|
| Manageability          | Wake-on-LAN from standby and hibernation (Magic Packet and<br>Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only)<br>PXE 2.1 Remote Boot<br>Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30))<br>Comprehensive diagnostic and configuration software suite<br>Virtual Cable Doctor for Ethernet cable status |
| Interface              | PCI Express 1.1 x1 to fully support ASPM LOs/L1 and CLKREQ.<br><b>NOTE:</b> Intel 82579 PCIe interface is not PCIe compliant. It operates at half<br>of PCIe specification V1.1 (2.5GT/S) speed.  |
| NIC Device Driver Name | Intel 82579LM/82579V Ethernet Network Connection  |

#### Near Field Communications Controller (optional)

| <b>Dimensions</b> (L $\times$ W $\times$ H) | Module 25 mm by 10 mm by 2.0 mm                           |
|---|---|
| Chipset                                     | NPC100  |
| 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 |



| Reader (PCD-VCD) Mode(1)                        | ISO/IEC 14443 A                         |                        |
|---|---|------------------------|
|   | ISO/IEC 14443 B                         |                        |
|   | ISO/IEC 15693                           |                        |
|   | MIFARE 1K                               |                        |
|   | MIFARE 4K                               |                        |
|   | MIFARE DESFire                          |                        |
|   | FeliCa                                  |                        |
|   | Jewel and Topaz cards                   |                        |
| Card Emulation (PICC-VICC) Mode(1)              | ISO/IEC 14443 A                         |                        |
|   | ISO/IEC 14443 B and B'                  |                        |
|   | MIFARE                                  |                        |
|   | FeliCa                                  |                        |
| Frequency                                       | 13.56 MHz                               |                        |
| NFC Modes Supported                             | Reader/Writer, Peer-to-Peer             |                        |
| Raw RF Data Rates                               | 106, 212, 424, 848 kbps                 |                        |
| Operating temperature                           | 0°C to 70°C                             |                        |
| Storage temperature                             | -20°C to 125°C                          |                        |
| Humidity  | 10-90% operating<br>5-95% non-operating |                        |
| Supply Operating voltage                        | 2.97 to 5.5 Volts                       |                        |
| I/O Voltage                                     | 1.8V or 3.3V                            |                        |
| Power Consumption                               | Mode                                    | Power Consumption,     |
| (Booster enable, VBAT= 3.3V, VCC_BOOST =<br>5V) |   | Typical <sup>(2)</sup> |
| 50,   | Polling                                 | 7.3 mA                 |
|   | Detected Test Tag Type 1                | Total 283.8 mA         |
|   |   | Net Module 236.8 mA    |



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

### **Technical Specifications**

| Detected Test Tag Type 2                             | Total 288.8 mA<br>Net Module 241.8 mA       |
|--|---|
| Detected Test Tag Type 3                             | Total 287.7 mA<br>Net Module 240.7 mA       |
| Detected Test Tag Type 4                             | Total 282.3 mA<br>Net Module 235.3 mA       |
| Antenna connector, 0.5m<br>matching is external to m | m pitch, 7 connector FPC. Antenna<br>odule. |

#### **STORAGE AND DRIVES**

Antenna

| 500 GB 7200rpm<br>Hard Drive | Drive Weight<br>Capacity<br>Height<br>Width<br>Interface | 0.20 lbs (92 g) ~ 0.21 lbs (9<br>500 GB<br>0.28 in (7 mm)<br>2.75 in (69.85 mm)<br>ATA-8, SATA 3.0 | 95 g)                          |
|------------------------------|--|--|--------------------------------|
|                              | Transfer Rate  | Synchronous (maximum)  | 600 MB/s                       |
|                              | <b>Seek Time</b><br>(typical reads, including            | Single Track<br>Average  | 1.5 ms ~ 2 ms<br>11 ms ~ 13 ms |
|                              | settling)  | Maximum  | 18 ms ~ 22 ms                  |
|                              | Cache  | 32 MB  |                                |
|                              | Rotational Speed   | 7200 rpm   |                                |
|                              | Logical Blocks   | 976,773,168  |                                |
|                              | Operating Temperature                                    | 32° to 140° F (0° to 60° C) [  | case temp]                     |
|                              | Features   | ATA Security, S.M.A.R.T., N  | CQ, Ultra DMA                  |
|                              |  |  |                                |
| 500 GB 7200rpm Self-         | Drive Weight   | 0.21 lbs (95 g)  |                                |
| Encrypting Drive (Opal 2)    | Capacity   | 500 GB   |                                |
|                              | Height   | 0.28 in (7 mm)   |                                |
|                              | Width  | 2.75 in (69.85 mm)   |                                |
|                              | Interface  | ATA-8, SATA 3.0  |                                |



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

## Technical Specifications

|   | Transfer Rate<br>Seek Time<br>(typical reads, including<br>settling)<br>Cache<br>Rotational Speed<br>Logical Blocks<br>Operating Temperature<br>Features   | Synchronous (maximum)<br>Single Track<br>Average<br>Maximum<br>32 MB<br>7200rpm<br>976,773,168<br>32° to 140° F (0° to 60° C) [<br>ATA Security; TCG Opal 2.x  | 1.5ms<br>12ms<br>21 ms  |
|---|--|--|---|
| 500 GB 7200rpm Self<br>Encrypting Drive (FIPS-<br>140-2) (Opal 2) | Drive Weight<br>Capacity<br>Height<br>Width<br>Interface<br>Transfer Rate<br>Seek Time<br>(typical reads, including<br>settling)<br>Cache<br>Rotational Speed<br>Logical Blocks                          | 0.21 lbs (95 g)<br>500 GB<br>0.28 in (7 mm)<br>2.75 in (69.85 mm)<br>ATA-8, SATA 3.0<br>Synchronous (maximum)<br>Single Track<br>Average<br>Maximum<br>32 MB<br>7200 rpm<br>976,773,168  | 1.5 ms<br>12 ms<br>21 ms  |
|   | Operating Temperature<br>Features  | 32° to 140° F (0° to 60° C)  <br>ATA Security; TCG Opal 2.x  | [top cover temp]<br>, FIPS, S.M.A.R.T., NCQ, Ultra DMA <del>,</del> |
| 500 GB Hybrid,<br>8 GB cache                                      | Drive Weight<br>Capacity<br>Height<br>Width<br>Interface<br>Transfer Rate<br>Seek Time<br>(typical reads, including<br>settling)<br>Cache<br>Rotational Speed<br>Logical Blocks<br>Operating Temperature | 0.20 lbs (92 g) ~ 0.21 lbs (9<br>500 GB<br>0.28 in (7 mm)<br>2.75 in (69.85 mm)<br>ATA-8, SATA 3.0<br>Synchronous (maximum)<br>Single Track<br>Average<br>Maximum<br>64 MB<br>5400 rpm<br>976,773,168<br>32° to 140° F (0° to 60° C) [ | 600 MB/s<br>2 ms<br>12 ms<br>22 ms                                  |



1 TB 5400rpm **Hard Drive** 

#### **Technical Specifications**

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

| Drive Weight0.21 lbs (94 g)- 0.21 lbs ()Capacity1TBHeight0.28 in (7 mm)Width2.75 in (69.85 mm)InterfaceATA-8, SATA 3.0Transfer RateSynchronous (maximum)Seek Time<br>(typical reads, including<br>settling)Single TrackZame<br>(typical reads, including)Single TrackRotational SpeedQue to 32-MBLogical Blocks1.953,525,168Operating Temperature<br>Features20° to 140° F(0° to 60° C) [-se temp] |   | Features                     | ATA Security, S.M.A.R.T., N               | CQ, Ultra DMA |
|--|---|------------------------------|---|---------------|
| Height0.28 in (7 mm)Width2.75 in (69.85 mm)InterfaceATA-8, SATA 3.0Transfer RateSynchronous (maximum)Seek Time<br>(typical reads, including<br>settling)Single TrackAverage12ms-13msMaximum18ms- 22msCacheUp to 32-MBRotational Speed5400rpmLogical Blocks1,953,525,168Operating Temperature32° to 140° F (0° to 60° C) [Jame 14,000]  | 1 | Drive Weight                 | 0.21 lbs (94 g)- 0.21 lbs ( 95 g)         |               |
| Width2.75 in (69.85 mm)InterfaceATA-8, SATA 3.0Transfer RateSynchronous (maximum)600 MB/sSeek TimeSingle Track2ms(typical reads, including<br>settling)Average12ms-13msMaximum18ms- 22msCacheUp to 32-MB   |   | Capacity                     | 1TB                                       |               |
| InterfaceATA-8, SATA 3.0Transfer RateSynchronous (maximum)600 MB/sSeek TimeSingle Track2ms(typical reads, including<br>settling)Average12ms-13msRational SpeedUp to 32-MB18ms- 22msRotational Speed5400rpm   |   | Height                       | 0.28 in (7 mm)                            |               |
| Transfer RateSynchronous (maximum)600 MB/sSeek Time<br>(typical reads, including<br>settling)Single Track2msAverage<br>Maximum12ms-13msMaximum18ms- 22msCache<br>Rotational SpeedUp to 32-MBLogical Blocks1,953,525,168Operating Temperature32° to 140° F (0° to 60° C) [case temp]  |   | Width                        | 2.75 in (69.85 mm)                        |               |
| Seek Time<br>(typical reads, including<br>settling)Single Track2msAverage<br>Maximum12ms-13msMaximum18ms- 22msCacheUp to 32-MBRotational Speed5400rpmLogical Blocks1,953,525,168Operating Temperature32° to 140° F (0° to 60° C) [case temp]   |   | Interface                    | ATA-8, SATA 3.0                           |               |
| Image: Final constraintImage: Final constraint(typical reads, including settling)Average12ms-13msMaximum18ms- 22msCacheUp to 32-MBRotational Speed5400rpmLogical Blocks1,953,525,168Operating Temperature32° to 140° F (0° to 60° C) [case temp]   |   | Transfer Rate                | Synchronous (maximum)                     | 600 MB/s      |
| settling)Maximum18ms- 22msCacheUp to 32-MBRotational Speed5400rpmLogical Blocks1,953,525,168Operating Temperature32° to 140° F (0° to 60° C) [case temp]   |   | Seek Time                    | Single Track                              | 2ms           |
| MaximumT8ms- 22msCacheUp to 32-MBRotational Speed5400rpmLogical Blocks1,953,525,168Operating Temperature32° to 140° F (0° to 60° C) [case temp]  |   |                              | Average                                   | 12ms-13ms     |
| Rotational Speed5400rpmLogical Blocks1,953,525,168Operating Temperature32° to 140° F (0° to 60° C) [case temp]   |   | settling)                    | Maximum                                   | 18ms- 22ms    |
| Logical Blocks1,953,525,168Operating Temperature32° to 140° F (0° to 60° C) [case temp]  |   | Cache                        | Up to 32-MB                               |               |
| <b>Operating Temperature</b> 32° to 140° F (0° to 60° C) [case temp]   |   | <b>Rotational Speed</b>      | 5400rpm                                   |               |
|  |   | Logical Blocks               | 1,953,525,168                             |               |
| Features ATA Security, S.M.A.R.T., NCQ, Ultra DMA  |   | <b>Operating Temperature</b> | e 32° to 140° F (0° to 60° C) [case temp] |               |
|  |   | Features                     | •   |               |

| 128 GB SATA-3 Value     | Drive Weight          | 0.01 lb (6 g) ~ 0.02 lb (10 g)        |                          |
|-------------------------|-----------------------|---------------------------------------|--------------------------|
| Solid State Drive       | Capacity              | 128 GB                                |                          |
|                         | Height                | 0.09 in (2.3 mm)                      |                          |
|                         | Width                 | 0.87 in (22 mm)                       |                          |
|                         | Interface             | ATA-8, SATA 3.0                       |                          |
|                         | Performance           | Maximum Sequential Read               | Maximum Sequential Write |
|                         |                       | 520 ~ 535 MB/s                        | 185~515 MB/s             |
|                         | Logical Blocks        | 250,069,680                           |                          |
|                         | Operating Temperature | 32° to 158°F (0° to 70°C) [ambient te | emp]                     |
|                         | Features              | ATA Security; DIPM; TRIM; DEVSLP      |                          |
|                         |                       |                                       |                          |
| 128 GB SATA-3 TLC Solid | Drive Weight          | 0.02 lb (10 g)                        |                          |
| State Drive             | Capacity              | 128 GB                                |                          |
|                         | Height                | 0.09 in (2.3 mm)                      |                          |
|                         | Width                 | 0.87 in (22 mm)                       |                          |
|                         | Interface             | ATA-8, SATA 3.0                       |                          |
|                         | Performance           | Maximum Sequential Read               | Maximum Sequential Write |
|                         |                       | 515 ~ 520 MB/s                        | 320 ~ 450 MB/s           |



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

## Technical Specifications

|   | Logical Blocks<br>Operating Temperature<br>Features  | 250,069,680<br>32° to 158°F (0° to 70°C) [ambient ter<br>ATA Security; DIPM; TRIM; DEVSLP   | mp]  |
|---|--|---|--|
| 256 GB PCIe Gen3x4<br>NVMe TLC Solid State<br>Drive                 | Drive Weight<br>Capacity<br>Height<br>Width<br>Interface   | 0.02 lb (10g)<br>256 GB<br>0.09 in (2.3 mm)<br>0.87 in (22 mm)<br>PCIe NVMe Gen3X4  |  |
|   | Performance  | <b>Maximum Sequential Read</b><br>1,800 ~ 2600 MB/s   | <b>Maximum Sequential Write</b><br>600 ~ 900 MB/s                                |
|   | Logical Blocks<br>Operating Temperature<br>Features  | 500,118,192<br>32° to 158°F (0° to 70°C) [ambient ter<br>ATA Security (Option); TRIM; L1.2  | mp]  |
| 256 GB PCIe Gen3x4<br>NVMe Value Solid State<br>Drive               | Drive Weight<br>Capacity<br>Height<br>Width<br>Interface<br>Performance<br>Logical Blocks<br>Operating Temperature<br>Features | 0.02 lb (10 g)<br>256 GB<br>0.09 in (2.3 mm)<br>0.87 in (22 mm)<br>PCIe NVMe Gen3X4<br><b>Maximum Sequential Read</b><br>1,700 MB/s (Compressible<br>Performance)<br>500,118,192<br>32° to 158°F (0° to 70°C) [ambient ter<br>ATA Security (Option); TRIM; L1.2 | <b>Maximum Sequential Write</b><br>600 MB/s (Compressible<br>Performance)<br>mp] |
| 256 GB SATA-3 TLC Self-<br>Encrypting Solid State<br>Drive (Opal 2) | Drive Weight<br>Capacity<br>Height<br>Width<br>Interface<br>Performance<br>Logical Blocks<br>Operating Temperature<br>Features | 0.02 lb (10g)<br>256 GB<br>0.09 in (2.3 mm)<br>0.87 in (22 mm)<br>ATA-8, SATA 3.0<br><b>Maximum Sequential Read</b><br>515 ~ 530 MB/s<br>500,118,192<br>32° to 158°F (0° to 70°C) [ambient te<br>ATA Security; TCG Opal 2.0; DIPM; TR                           | • -  |



## Technical Specifications

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

| 360 GB PCIe Gen3x4            | Drive Weight          | 0.02 lb (10 g)                                  |  |
|-------------------------------|-----------------------|---|--|
| NVMe TLC Solid State          | Capacity              | 360 GB  |  |
| Drive                         | Height                | 0.09 in (2.3 mm)                                |  |
|                               | Width                 | 0.02 lb (10 g)                                  |  |
|                               | Interface             | PCIe NVMe Gen3X4                                |  |
|                               | Performance           | Maximum Sequential Read                         | Maximum Sequential Write               |
|                               |                       | 1,700 MB/s (Compressible<br>Performance)        | 600 MB/s (Compressible<br>Performance) |
|                               | Logical Blocks        | 703,282,608                                     |  |
|                               | Operating Temperature | 32° to 158°F (0° to 70°C) [amb                  | ient temp]                             |
|                               | Features              | ATA Security (Option); TRIM; L                  | 1.2                                    |
|                               |                       |   |  |
| 512 GB PCIe Gen3x4            | Drive Weight          | 0.02 lb (10 g)                                  |  |
| NVMe Value Solid State        | Capacity              | 512 GB  |  |
| Drive                         | Height                | 0.09 in (2.3 mm)                                |  |
|                               | Width                 | 0.87 in (22 mm)                                 |  |
|                               | Interface             | PCIe NVMe Gen3X4                                |  |
|                               | Performance           | Maximum Sequential Read Maximum Sequential Read |  |
|                               |                       | 1,700MB/s                                       | 600 MB/s                               |
|                               | Logical Blocks        | 1,000,215,216                                   |  |
|                               | Operating Temperature | 32° to 158°F (0° to 70°C) [amb                  | ient temp]                             |
|                               | Features              | ATA Security (Option); TRIM; L <sup>2</sup>     | 1.2                                    |
| 512 GB PCIe Gen3x4            | Drive Weight          | 0.02 lb (10g)                                   |  |
| NVMe TLC Solid State<br>Drive | Capacity              | 512 GB  |  |
| DIIVe                         | Height                | 0.09 in (2.3 mm)                                |  |
|                               | Width                 | 0.87 in (22 mm)                                 |  |
|                               | Interface             | PCIe NVMe Gen3X4                                |  |
|                               | Performance           | Maximum Sequential Read                         | Maximum Sequential Write               |
|                               |                       | 1,580 ~ 2600 MB/s                               | 300 ~ 400 MB/s                         |
|                               | Logical Blocks        | 1,000,215,216                                   |  |
|                               | Operating Temperature | 32° to 158°F (0° to 70°C) [amb                  | ient temp]                             |
|                               | Features              | ATA Security (Option); TRIM; L <sup>2</sup>     | 1.2                                    |
|                               |                       |   |  |
| 512 GB PCIe Gen3x4            | Drive Weight          | 0.02 lb (10g)                                   |  |
| NVMe MLC Solid State<br>Drive | Capacity              | 512 GB  |  |
|                               | Height                | 0.09 in (2.3 mm) ~ 0.14 in (3.65 mm)            |  |



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

### **Technical Specifications**

|  | Width<br>Interface<br>Performance<br>Logical Blocks<br>Operating Temperature<br>Features | 0.87 in (22 mm)<br>PCIe NVMe Gen3X4<br><b>Maximum Sequential Read</b><br>2,260 ~ 3,000 MB/s<br>1,000,215,216<br>32° to 158°F (0° to 70°C) [ar<br>ATA Security (Option); TRIM | 1,500 ~ 1,600 MB/s<br>nbient temp]                  |
|--|--|--|---|
| 512 GB PCIe Gen3x4<br>NVMe TLC Self-<br>Encrypting Solid State<br>Drive (Opal 2) | Drive Weight<br>Capacity<br>Height<br>Width<br>Interface<br>Performance                  | 0.02 lb (10g)<br>512 GB<br>0.09 in (2.3 mm)<br>0.87 in (22 mm)<br>PCIe NVMe Gen3X4<br><b>Maximum Sequential Read</b>   | Maximum Sequential Write                            |
|  | Logical Blocks<br>Operating Temperature<br>Features                                      | 1,800 ~ 2,600 MB/s<br>1,000,215,216<br>32° to 158°F (0° to 70°C) [ambient te<br>ATA Security (Option) ; TCG Opal 2.0;  | •   |
| 512 GB SATA-3 TLC Solid<br>State Drive FIPS-140-2                                | Drive Weight<br>Capacity<br>Height<br>Width<br>Interface                                 | 0.02 lb (10 g)<br>512 GB<br>0.09 in (2.3 mm)<br>0.87 in (22 mm)<br>ATA-8, SATA 3.0   |   |
|  | Performance<br>Logical Blocks<br>Operating Temperature<br>Features                       | Maximum Sequential Read<br>530 MB/s<br>1,000,215,216<br>32° to 158°F (0° to 70°C) [ambient te<br>ATA Security; TCG Opal 2.0; FIPS; DIP                                       | • -   |
| 1 TB PCIe Gen3x4 NVMe<br>TLC Solid State Drive                                   | Drive Weight<br>Capacity<br>Height<br>Width<br>Interface<br>Performance                  | 0.02 lb (10 g)<br>1024 GB<br>0.09 in (2.3 mm) ~ 0.14 in (3.65 mm)<br>0.87 in (22 mm)<br>PCIe NVMe Gen3X4<br><b>Maximum Sequential Read</b><br>1,500 ~ 1,800 MB/s             | <b>Maximum Sequential Write</b><br>980 ~ 2,800 MB/s |



### **Technical Specifications**

| Logical Blocks        | 2,000,409,264                            |
|-----------------------|--|
| Operating Temperature | 32° to 158°F (0° to 70°C) [ambient temp] |
| Features              | ATA Security (Option); TRIM; L1.2        |

#### Power

| HP 45W Smart<br>AC Adapter | Dimensions (H × W × D)<br>Weight<br>Input | 9.5 x 4.0 x 2.65 cm <del>)</del><br>unit: 200g +/- 10g<br>90 to 265 VAC  |                                      |
|----------------------------|---|--|--------------------------------------|
|                            |   | Input Efficiency   | 87.74% at 115Vac and 88.4% at 230Vac |
|                            |   | Input frequency range  | 47 to 63 Hz                          |
|                            |   | Input AC current   | Max. 1.4 A at 90 Vac                 |
|                            | Output                                    | Output power   | 45W                                  |
|                            |   | DC output  | 19.5V                                |
|                            |   | Hold-up time   | 5 ms at 115 Vac input                |
|                            |   | Output current limit   | <8.0A                                |
|                            | AC Connector (Ac Inlet)                   | C6 (3pin/with grounded, w  | vith Smart ID DC connector)          |
|                            | Environmental Design                      | sign Operating 32° to 95° F (0° to 35° C)<br>temperature   |                                      |
|                            |   | Non-operating (storage)<br>temperature   | -4° to 185° F (-20° to 85° C)        |
|                            |   | Altitude   | 0 to 16,400 ft (0 to 5,000 m)        |
|                            |   | Humidity   | 20% to 95%                           |
|                            |   | Storage Humidity   | 10% to 95%                           |
|                            | EMI and Safety<br>Certifications          | *CE Mark - full compliance with LVD and EMC directives<br>* Worldwide safety standards - IEC60950, EN60950, UL60950, Class1,<br>SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B,<br>Class B, CISPR22 Class B, CCC, NOM-1 NYCE.<br>* MTBF - over 200,000 hours at 25°C ambient condition. |                                      |



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

| HP 45W Smart<br>AC Adapter (2 Prong)       Dimensions (H × W × D)       95,0x40.0x26.5mm         Meight       unit: 200g +/ 10g         Input       Site 265 VAC         Input Efficiency       87,74% at 115Vac and 88.4% at 230Vac         Input frequency range       47 to 63 Hz         Input frequency range       47 to 63 Hz         Input frequency range       5 ms at 115Vac input         Output       Output ourent limit       <8.0 A         AC Connector (Ac Inlet)       C6 (2 pin/non-grounded, with Smart ID DC connector)         Environmental Design       Operating       32'to 95'F (0'to 35'C)         Humidity       20% to 55%       Storage Humidity       10% to 55,000 m)         Humidity       20% to 55%       Storage Humidity       10% to 55%         ENI and Safety       "CE Mark - full compliance with LVD and EMC directives       *Worldwide safety stand=s- ECG0950, EN6050, UL60950, Class1, SEL/v Agency approvals - C4U-LS, 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.       *MTBF - over 200,000 hours at 25'C ambient condition.         HP 65W Smart       Dimensions       107.0x47.0x30.0mm       Full Addition.         MCE Mark - full compliance with LVD and EMC directives       *Worldwide safety stand=rafs.       ECG0950, ECG0950, ELG0950, UL60950, Class B, FCC Class |                      |                               |  |   |
|---|----------------------|-------------------------------|--|---|
| <ul> <li>Hundt</li> <li>Bin to 265 VAC</li> <li>Input</li> <li>Input</li> <li>Input Efficiency</li> <li>B7.74% at 115Vac and 88.4% at 230Vac</li> <li>Input Efficiency</li> <li>B7.74% at 115Vac and 88.4% at 230Vac</li> <li>Input AC current</li> <li>Max. 1.4 A at 90 Vac</li> <li>Output</li> <li>Output 190ewer</li> <li>Goutput</li> <li>Input BC current</li> <li>Base and Safety</li> <li>CE Mark - full compliance with Smart ID DC connector)</li> <li>Environmental Design</li> <li>Operating</li> <li>B2* to 95* F (0* to 35* C)</li> <li>temperature</li> <li>Attitude</li> <li>Ot 16,400 ft (0 to 5,000 m)</li> <li>Humidity</li> <li>20% to 95%</li> <li>Storage Humidity</li> <li>Storage Humidity</li> <li>Moto 0 to 16,400 ft (0 to 5,000 m)</li> <li>Humidity</li> <li>B3.65 VAC</li> <li>Input Efficiency</li> <li>B .GSPR 22 Class B. CCC, NON-1 NYCE.</li> <li>Cass B. CSPR 22 Class B. CCC, NON-1 NYCE.</li> <li>Cass B. CSPR 22 Class B. CCC, NON-1 NYCE.</li> <li>TMBF - over 200,000 hours at 25*C ambient condition.</li> </ul>  |                      | <b>Dimensions</b> (H x W x D) | 95.0x40.0x26.5mm   |   |
| Hput Efficiency       87.74% at 115Vac and 88.4% at 230Vac         Input frequency range       47 to 63 H2         Input AC current       Max. 1.4 Aa 190 Vac         Output       Output power       45W         Octuput       19.5V         Hold-up time       5 ms at 115Vac input         Output current limit       <8.0A         AC Connector (Ac Inlet)       63 (2 pin/non-grounded, with Smart ID DC connector)         Environmental Design       Operating       32° to 95° F (0° to 35° C)         Temperature       -4° to 185° F (-20° to 85° C)       115Vac input         Humidity       20% to 95%       20% to 95%         Storage Humidity       10% to 95%       20% to 95%         EMI and Safety       *CE Mark - full compliance with LVD and EMC directives         *Undivide safety       *CC Nark - full compliance with LVD and EMC directives         *Undivide safety       *Undivide safety       10% to 95%         Certifications       *107.0x47.0x30.0mm       HMEG000000000000000000000000000000000000   | AC Adapter (2 Prong) | Weight                        | unit: 200g +/- 10g   |   |
| HP 65W Smart       Dimensions       107.0X47.0X30.0mm       47 to 63 Hz         HP 65W Smart       Dimensions       107.0X47.0X30.0mm         AC Connector (Ac Intet)       CEM arX-0x10.0mm         Build Support       45 W         Dutput       19.5V         Hold-up time       5 ms at 115Vac input         Output current limit       <8.0A         AC Connector (Ac Intet)       C8 (2 pin/non-grounded, with Smart 10 D C connector)         Doperating       32* to 95° F (0° to 35° C)         temperature       32* to 95° F (0° to 35° C)         Attitude       0 to 16,400 ft (0 to 5,000 m)         Humidity       20% to 95%         Storage Humidity       10% to 95%         Certifications       *Uor/dwide safety standards - EEC08050, EN60950, Lass 1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CES PR22 Class B, CCC, NOM-1 NYCE.         * MER - over 200,000 hours at 25°C ambient condition.       *         Weight       unit: 250g +/- 10g         Input Efficiency       88.0% at 115 Vac and 89.0 % at 230 Vac         Input AC Current       1.7 A 430 Vac         Output power       65W         Coutput       19.5V         Hold-up time       5 ms at 115 Vac input         Output power       65W   |                      | Input                         | 90 to 265 VAC  |   |
| Hput AC current       Max. 1.4 A at 90 Vac         Output       Output power       45W         DC output       19.5V         HOId-up time       5 ms at 115Vac input         Output Current limit       <8.0A         AC Connector (Ac Inlet)       C8 (2 pin/non-grounded, with Smart ID DC connector)         Environmental Design       32* to 95* F (0* to 35* C)         Hono-operating (storage)       -4* to 185* F (-20* to 85* C)         temperature       Attitude       0 to 16,400 ft (0 to 5,000 m)         Humidity       20% to 95%         Storage Humidity       10% to 95%         Storage Humidity       10% to 95%         EMI and Safety       *CE Mark - full compliance with LVD and EMC directives         * Worldwide safety standards - IEC60950, EN60950, UL60950, UL60950, Class 1, SEU: Agency approvals - C-UL-US, NORDICS, DENAN, ENS5022 Class B, FCC         Class B, CISPR22 Class B, CCC, NOM-1 NYCE.       *MTBF - over 200,000 hours at 25°C ambient condition.         HP 65W Smart       Dimensions       107.0x47.0x30.0mm         Meight       unit: 250g +/- 10g       Input ffequency range         Input MC current       1.7 A at 90 Vac       Input Fficiency         0utput AC current       1.7 A at 90 Vac       Input AC current         Input AC current limit       <11.0A       A   |                      |                               | Input Efficiency   | 87.74% at 115Vac and 88.4% at 230Vac  |
| Mutput     Output     9.5V       Notoutput     9.5V       Hold-up time     5 ms at 115Vac input       Output Comector (Ac Intel)     C8 (2 pin/non-grounded-uith Smart IDD Connector)       Environmental Design     0prating     32° to 95° F (0° to 35° C)       Temperature     -4" to 185° F (-20° to 85° C)  |                      |                               | Input frequency range  | 47 to 63 Hz   |
| HP 65W Smart       Dimensions       107.0x47.0x30.0mm       32*to 33*t         AC Adapter       Dimensions       107.0x47.0x30.0mm         AC Adapter       Dimensions       107.0x47.0x30.0mm         AC Adapter       107.0x47.0x30.0mm       32*to 31*Z         AC Adapter       Dimensions       107.0x47.0x30.0mm         AC Adapter       At Connector (Ac Inlet)       10% to 31*Z         AC Adapter       Dimensions       107.0x47.0x30.0mm         AC A  |                      |                               | Input AC current   | Max. 1.4 A at 90 Vac  |
| Hold-up time       5 ms at 115Vac input         AC Connector (Ac Inlet)       (AC Connector (Ac Inlet)         Environmental Design       32° to 95° F (0° to 35° C)         Environmental Design       32° to 95° F (-20° to 85° C)         temperature       Non-operating (storage)       -4° to 185° F (-20° to 85° C)         Humidity       20% to 95%         ENI and Safety       Storage Humidity       10% to 95%         Certifications       *CE Mark - full compliance- with LVD and EMC directives         * Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CIC, NOM - 1 NYCE.         * MTBF - over 200,000 hours at 25°C ambient condition.         HP 65W Smart       Dimensions       107.0x47.0x30.0mm         Meight       unit: 250g +/- 10g       Input Efficiency         Not 265 VAC       Input Efficiency       88.0 % at 115 Vac and 89.0 % at 230 Vac         Input frequency range       47 to 63 Hz       Input AC current         Input AC current       1.7.0 At 90 Vac       Dimensions         Output power       65W       GSW         Diuput C Gurger       5 ms at 115 Vac input       GSW Since         Input Efficiency       85.0 % at 115 Vac input       GSW Since         Input Gurger       65W   |                      | Output                        | Output power   | 45W   |
| HP 65W Smart       Dimensions       000000000000000000000000000000000000  |                      |                               | DC output  | 19.5V   |
| AC Connector (Ac Inlet)       C8 (2 pin/non-grounded, with Smart ID DC connector)         Environmental Design       32° to 95° F (0° to 35° C)         hon-operating (storage)       -4° to 185° F (-20° to 85° C)         temperature       Altitude       0 to 16,400 ft (0 to 5,000 m)         Humidity       20% to 95%         Storage Humidity       10% to 95%         Certifications       *Certidwide safety storal-rds - IEC60950, EN60950, 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.       *MTBF - over 200,000 hours at 25°C ambient condition.         KC Adapter       Dimensions       107.0x47.0x30.0mm         Weight       unit: 250g +/- 10g       Input Efficiency         Input Efficiency       88.0 % at 115 Vac and 89.0 % at 230 Vac         Input Frequency range       47 to 63 Hz         Input AC current       1.7 A at 90 Vac         Output       Output power       65W         Didu-up time       5ms at 115 Vac input         Dutput current limit       1.71.0x         AC Connector (Ac Inlet)       C6 (Sipin/with grounded, with Smart ID DC connector)  |                      |                               | Hold-up time   | 5 ms at 115Vac input  |
| HP 65W Smart<br>AC Adapter       Dimensions       107.0x47.0x30.0mm         HP 65W Smart<br>AC Adapter       Dimensions       107.0x47.0x30.0mm         Humidity       20% to 35°C)       107.0x47.0x30.0mm         Input Ffequency range       47 to 63 Hz         Input ffequency range       50 Vac         Input ffequency range       50 Vac         Input ffequency range   |                      |                               | Output current limit   | <8.0A   |
| HP 65W Smart       Dimensions       107.0x47.0x30.0mm         HP 65W Smart       Dimensions       107.0x47.0x30.0mm         AC Adapter       Weight       unit: 250g +/- 10g         Input Efficiency       88.0% at 115 Vac and 89.0% at 230 Vac         Input frequency range       47 to 63 Hz         Input Current       1.7 A at 90 Vac         Output       Output power       65W         AC Connector (Ac Inlet)       6 (3 pin/with grounded, with Smart ID DC connector)         Output Environmental Design       Operating       32° to 95° (10° to 35° (1)  |                      | AC Connector (Ac Inlet)       | C8 (2 pin/non-grounded, v  | vith Smart ID DC connector)   |
| HP 65W Smart<br>AC Adapter       Dimensions       107.0x47.0x30.0mm         HV 655W Smart<br>AC Adapter       Dimensions       107.0x47.0x30.0mm         Worldwide safety       25°C ambient condition.         HP 65W Smart<br>AC Adapter       Dimensions       107.0x47.0x30.0mm         Weight       unit: 250g +/- 10g       Input         Input       90 to 265 VAC       Input Efficiency         BR.0 % at 115 Vac and 89.0 % at 230 Vac       Input Efficiency         MUTUR       0utput power       65W         Output       0utput power       65W         Didul-up time       5 m sat 115 Vac input         AC Connector (Ac Inlet)       CG (3pin/with grounded, with Smart ID DC connector)         Environmental Design       00erating       32° to 95° (0° to 35° (0)   |                      | Environmental Design          |  | 32° to 95° F (0° to 35° C)  |
| Humidity       20% to 95%         Storage Humidity       10% to 95%         Storage Humidity       10% to 95%         EMI and Safety       *CE Mark - full compliance with LVD and EMC directives         * Worldwide safety standards - IEC60950, EM60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CCC, NOM-1 NYCE.         * MTBF - over 200,000 hours at 25°C ambient condition.         HP 65W Smart       Dimensions         AC Adapter       Dimensions         Weight       unit: 250g +/- 10g         Input       90 to 265 VAC         Input Efficiency       88.0 % at 115 Vac and 89.0 % at 230 Vac         Input frequency range       47 to 63 Hz         Input frequency range       47 to 63 Hz         Input Ac current       1.7 A at 90 Vac         Output       Output power       65W         Couput       19.5V         Hold-up time       5 ms at 115 Vac input         Output current limit       <11.0A         AC Connector (Ac Inlet)       C6 (3pin/with grounded, with Smart ID DC connector)         Operating       32° to 95° E (0° to 35° C)   |                      |                               |  | -4° to 185° F (-20° to 85° C)   |
| HP 65W Smart       Dimensions       107.0x47.0x30.0mm         AC Adapter       Dimensions       107.0x47.0x30.0mm         Weight       unit: 250g +/- 10g       unit: 250g +/- 10g         Input       90 to 265 VAC       Input Efficiency         Not put fiftiency       88.0 % at 115 Vac and 89.0 % at 230 Vac         Input       90 to 265 VAC         Input AC current       1.7 A at 90 Vac         Output       Output power       65W         AC Connector (Ac Inlet)       Co (3pin/with grounded, with Smart ID DC connector)         Operating       32* to 95° E (0° to 35° C)   |                      |                               | Altitude   | 0 to 16,400 ft (0 to 5,000 m)   |
| EMI and Safety<br>Certifications       *CE Mark - full compliance with LVD and EMC directives<br>* Worldwide safety standards - IEC60950, EN60950, UL60950, Class 1,<br>SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC<br>Class B, CISPR22 Class B, CCC, NOM-1 NYCE.         #P 65W Smart<br>AC Adapter       Dimensions       107.0x47.0x30.0mm         Weight       unit: 250g +/- 10g         Input       90 to 265 VAC         Input Efficiency       88.0 % at 115 Vac and 89.0 % at 230 Vac         Input AC current       1.7 A at 90 Vac         Output       Output power       65W         DC output       19.5V         Hold-up time       5 ms at 115 Vac input         Output current limit       <11.0A         AC Connector (Ac Inlet)       C6 (3pin/with grounded, with Smart ID DC connector)         Operating       32° to 95° F (0° to 35° C)  |                      |                               | Humidity   | 20% to 95%  |
| HP 65W Smart       Dimensions       107.0x47.0x30.0mm         AC Adapter       Dimensions       107.0x47.0x30.0mm         Input       90 to 265 VAC       Input Efficiency         Input 1       90 to 265 VAC       88.0 % at 115 Vac and 89.0 % at 230 Vac         Input 1       107.0x47.0x30.0mm       47 to 63 Hz         Input 650 VAC       109 Vac       109 Vac         Input 1       1000 Vac       1000 Vac         Veluput power       65W       1000 Vac         Output       Output power       65W         Veluput current limit       19.5V         Hold-up time       5 ms at 115 Vac input         Output current limit       411.0A         C6 (3pin/with grounded, with Smart ID DC connector)       Operating         32° to 95° E (0° to 35° C)       1000 Vac  |                      |                               | Storage Humidity   | 10% to 95%  |
| AC Adapter Weight unit: 250g +/- 10g<br>Input 90 to 265 VAC<br>Input Efficiency 88.0 % at 115 Vac and 89.0 % at 230 Vac<br>Input frequency range 47 to 63 Hz<br>Input AC current 1.7 A at 90 Vac<br>Output 0utput power 65W<br>DC output 19.5V<br>Hold-up time 5 ms at 115 Vac input<br>Output current limit <11.0A<br>AC Connector (Ac Inlet) C6 (3pin/with grounded, with Smart ID DC connector)<br>Operating 32° to 95° E (0° to 35° C)  |                      | •                             | * Worldwide safety standa<br>SELV; Agency approvals -<br>Class B, CISPR22 Class B, C | ards - IEC60950, EN60950, UL60950, Class1,<br>C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC<br>CCC, NOM-1 NYCE. |
| Input       90 to 265 VAC         Input Efficiency       88.0 % at 115 Vac and 89.0 % at 230 Vac         Input frequency range       47 to 63 Hz         Input AC current       1.7 A at 90 Vac         Output       Output power         65W         DC output       19.5V         Hold-up time       5 ms at 115 Vac input         Output current limit       <11.0A         C6 (3pin/with grounded, with Smart ID DC connector)         Environmental Design       Operating   |                      | Dimensions                    | 107.0x47.0x30.0mm  |   |
| Input Efficiency88.0 % at 115 Vac and 89.0 % at 230 VacInput frequency range47 to 63 HzInput AC current1.7 A at 90 VacOutput0utput powerDC output19.5VHold-up time5 ms at 115 Vac inputOutput current limit<11.0AAC Connector (Ac Inlet)C6 (3pin/with grounded, with Smart ID DC connector)Operating32° to 95° E (0° to 35° C)  | AC Adapter           | Weight                        | unit: 250g +/- 10g   |   |
| Input frequency range47 to 63 HzInput AC current1.7 A at 90 VacOutputOutput power65WDC output19.5VHold-up time5 ms at 115 Vac inputOutput current limit<11.0AAC Connector (Ac Inlet)C6 (3pin/with grounded, with Smart ID DC connector)Environmental DesignOperating  |                      | Input                         |  |   |
| Input AC current       1.7 A at 90 Vac         Output       Output power       65W         DC output       19.5V         Hold-up time       5 ms at 115 Vac input         Output current limit       <11.0A         AC Connector (Ac Inlet)       C6 (3pin/with grounded, with Smart ID DC connector)         Environmental Design       Operating  |                      |                               |  | 88.0 % at 115 Vac and 89.0 % at 230 Vac   |
| OutputOutput power65WDC output19.5VHold-up time5 ms at 115 Vac inputOutput current limit<11.0AAC Connector (Ac Inlet)C6 (3pin/with grounded, with Smart ID DC connector)Environmental DesignOperating   |                      |                               |  | 47 to 63 Hz   |
| DC output       19.5V         Hold-up time       5 ms at 115 Vac input         Output current limit       <11.0A         AC Connector (Ac Inlet)       C6 (3pin/with grounded, with Smart ID DC connector)         Environmental Design       Operating   |                      |                               | -  | 1.7 A at 90 Vac   |
| Hold-up time5 ms at 115 Vac inputOutput current limit<11.0A   |                      | Output                        |  |   |
| Output current limit<11.0A  |                      |                               | •  | 19.5V   |
| AC Connector (Ac Inlet) C6 (3pin/with grounded, with Smart ID DC connector)<br>Environmental Design Operating   |                      |                               | •  | -   |
| Environmental Design Operating  |                      |                               | •  |   |
|   |                      |                               |  |   |
|   |                      | Environmental Design          |  | 32° to 95° F (0° to 35° C)  |



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

### **Technical Specifications**

|                |                                  | Non-operating (storage)<br>temperature   | -4° to 185° F (-20° to 85° C)   |
|----------------|----------------------------------|--|---|
|                |                                  | Altitude   | 0 to 16,400 ft (0 to 5,000 m)   |
|                |                                  | Humidity   | 20% to 95%  |
|                |                                  | Storage Humidity   | 10% to 95%  |
|                | EMI and Safety<br>Certifications | * Worldwide safety standa<br>SELV; Agency approvals - (<br>Class B, CISPR22 Class B, C | with LVD and EMC directives<br>rds - IEC60950, EN60950, UL60950, Class1,<br>C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC<br>CC, NOM-1 NYCE.<br>Irs at 25°C ambient condition.  |
| HP 65W Smart   | Dimensions                       | 102.0x55.0x30.0mm  |   |
| AC Adapter EM  | Weight                           | unit: 350g +/- 10g   |   |
|                | Input                            | 90 to 265 VAC  |   |
|                |                                  | Input Efficiency   | 87.0% min at 115 VAC and 230Vac   |
|                |                                  | Input frequency range  | 47 to 63 Hz   |
|                |                                  | Input AC current   | 1.7 A at 90 VAC   |
|                | Output                           | Output power   | 65W   |
|                |                                  | DC output  | 19.5V   |
|                |                                  | Hold-up time   | 5 ms at 115 Vac input   |
|                |                                  | Output current limit   | <11.0A  |
|                | AC Connector (Ac Inlet)          | C6 (3pin/with grounded, w  | ith Smart ID DC connector)  |
|                | Environmental Design             | Operating<br>temperature   | 32° to 95° F (0° to 35° C)  |
|                |                                  | Non-operating (storage)<br>temperature   | -4° to 185° F (-20° to 85° C)   |
|                |                                  | Altitude   | 0 to 16,400 ft (0 to 5,000 m)   |
|                |                                  | Humidity   | 20% to 95%  |
|                |                                  | Storage Humidity   | 10% to 95%  |
|                | EMI and Safety<br>Certifications | * Worldwide safety standa<br>SELV; Agency approvals - (<br>Class B, CISPR22 Class B, C | with LVD and EMC directives<br>rds - IEC60950, EN60950, UL60950, Class1,<br>C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC<br>CCC, NOM-1 NYCE.<br>ırs at 25°C ambient condition. |
| HP 3-cell Long | <b>Dimensions</b> (H × W × L) 8  | .30 mm x127.5 mm x 160.2   | 5 mm  |

HP 3-cell Long Life Li-Ion (49 Dimensions (H × W Weight 8.30 mm x127.5 mm x 160.25 mm 225g



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

### **Technical Specifications**

| WHr) – HP                    | Cells/Type                           | 3 cell Lithium-Ion Poly    | mer cell / 505295   |
|------------------------------|--------------------------------------|----------------------------|---|
| EliteBook 820                | Energy                               | Voltage                    | 11.55V  |
| G4                           |                                      | Amp-hour capacity          | 4250mAh   |
|                              |                                      | Watt-hour capacity         | 49Wh  |
|                              | Temperature                          | Operating (Charging)       | 0~45 C  |
|                              |                                      | Operating<br>(Discharging) | -10~60 C  |
|                              | Fuel Gauge LED                       | NA                         |   |
|                              | Warranty                             |                            | lt one year limited warranty except for Long Life<br>ve same 1-year or 3-year limited warranty as the |
|                              | Optional Travel Battery<br>Available | No                         |   |
| HP 3-cell Long               | Dimensions (H × W × L)               | 6.8mm x 102.8mm x 1        | 98mm  |
| Life Li-Ion (51<br>WHr) – HP | Weight                               | 235g                       |   |
| EliteBook 840 &              | Cells/Type                           | 3cell Lithium-Ion Poly     | ner cell / 506480   |
| 850 G4                       | Energy                               | Voltage                    | 11.55V  |
|                              |                                      | Amp-hour capacity          | 4420mAh   |
|                              |                                      | Watt-hour capacity         | 51wh  |
|                              | Temperature                          | Operating (Charging)       | 0~45 C  |
|                              |                                      | Operating<br>(Discharging) | -10~60 C  |
|                              | Fuel Gauge LED                       | NA                         |   |
|                              | Warranty                             |                            | lt one year limited warranty except for Long Life<br>ve same 1-year or 3-year limited warranty as the |
|                              | Optional Travel Battery<br>Available | No                         |   |

#### ENVIRONMENTAL



### **Technical Specifications**

#### HP EliteBook 820 G4 Notebook PC

| Eco-Label Certifications<br>& declarations                                   | This product has received a labeled with one or more of   | •   | g certified to the following approvals and may be  |
|--|---|---|--|
|  | <ul> <li>IT ECO declaration</li> <li>US ENERGY STAR<sup>®</sup></li> <li>EPEAT<sup>0</sup> Gold regist<br/>your country.</li> </ul> | ered in the United States. S  | See http://www.epeat.net for registration status in  |
| System Configuration   | The configuration used for Notebook model is based o  |   | on and Declared Noise Emissions data for the<br>lotebook".   |
| Energy Consumption<br>(in accordance with US<br>ENERGY STAR® test<br>method) | 115VAC, 60Hz  | 230VAC, 50Hz  | 100VAC, 50Hz   |
| Normal Operation (Short idle)  | 5.15 W  | 5.15 W  | 4.66 W   |
| Normal Operation (Long idle)   | 2.80 W  | 3.23 W  | 2.80 W   |
| Sleep  | 0.74 W  | 0.83 W  | 0.77 W   |
| Off  | 0.40 W  | 0.48 W  | 0.40 W   |
|  | family. HP computers man<br>Environmental Protection<br>does not offer ENERGY S   | ked with the ENERGY STA<br>Agency (EPA) ENERGY STA<br>FAR® compliant configurat<br>aturing a hard disk drive, | R® compliant product if offered within the model<br>AR® Logo are compliant with the applicable U.S.<br>R® specifications for computers. If a model family<br>tions, then energy efficiency data listed is for a<br>a high efficiency power supply, and a Microsoft |
| Heat Dissipation*  | 115VAC, 60Hz  | 230VAC, 50Hz  | 100VAC, 50Hz   |
| Normal Operation (Short idle)  | 18 BTU/hr   | 18 BTU/hr   | 16 BTU/hr  |
|  | 1   |   |  |



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

| Normal Operation (Long idle)                  | 10 BTU/hr  | 11 BTU/  | /hr  | 10 BTU/hr   |
|---|--|--|--|---|
| Sleep   | 3 BTU/hr   | 3 BTU/   | hr   | 3 BTU/hr  |
| Off   | 1 BTU/hr   | 2 BTU/   | hr   | 1 BTU/hr  |
|   | *NOTE: Heat dissipation i attained for one hour.   | is calculated ba   | sed on the m   | easured watts, assuming the service level is  |
| Declared Noise                                | Sound Power  |  |  | Sound Pressure  |
| Emissions                                     | (L <sub>wAd</sub> , bels)  |  |  | (L <sub>pAm</sub> , decibels)   |
| (in accordance with<br>ISO 7779 and ISO 9296) |  |  |  |   |
| Typically Configured –<br>Idle                | 3.2  |  |  | 26  |
| Fixed Disk – Random<br>writes                 | 3.5  |  |  | 27  |
| Batteries                                     | This battery(s) in this prod   | uct comply with  | EU Directive 20  | 006/66/EC   |
|   | Batteries used in the produ<br>Mercury greater the1p<br>Cadmium greater than<br>Battery size: CR2320 (coin<br>Battery type: Lithium  | opm by weight<br>I 20ppm by weigl  |  |   |
| Additional Information                        | <ul> <li>2011/65/EC.</li> <li>This HP product is (WEEE) Directive -</li> <li>This product is in Water and Toxic E</li> <li>This product is in www.epeat.net</li> <li>Plastics parts wei IS01043.</li> <li>This product cont</li> </ul> | designed to con<br>- 2002/96/EC.<br>compliance with<br>inforcement Act<br>compliance with<br>ghing over 25 gra<br>ains 0% post-cor | nply with the V<br>California Prop<br>of 1986).<br>the IEEE 1680<br>ams used in th<br>nsumer recycle | ns of Hazardous Substances (RoHS) directive –<br>Vaste Electrical and Electronic Equipment<br>position 65 (State of California; Safe Drinking<br>(EPEAT) standard at the gold level, see<br>e product are marked per ISO11469 and<br>ed plastic (by wt.)<br>y disposed of at end of life. |



| Packaging Materials | External:  | PAPER/Corruga  | ated   |  | 328 g                                |                         |
|---------------------|--|--|--|--|--------------------------------------|-------------------------|
|                     | Internal:  | PLASTIC/Expar  | nded Polyethylene - El   | PE                                     | 38 g                                 |                         |
|                     |  | PLASTIC/Polye  | thylene low density -  | LDPE                                   | 14 g                                 |                         |
|                     |  | PLASTIC/Polyp  | ropylene - PP  |  | 3 g                                  |                         |
|                     | The plastic  | packaging materia  | al contains at least 50  | % recycled conte                       | nt.                                  |                         |
|                     |  |  | ing materials contain  |  | -                                    |                         |
| Material Usage      |  |  | any of the following s   |  | ess of regulato                      | ry limits (refer to the |
|                     | HP<br>http://www   | General<br>.hp.com/hpinfo/gl   | Specification<br>obalcitizenship/enviro  | for<br>onment/pdf/gse.                 | the<br>pdf):                         | Environment at          |
|                     | <ul> <li>Cer</li> <li>Cer</li> <li>Cat</li> <li>Chl</li> <li>Chl</li> <li>Chl</li> <li>For</li> <li>Hal</li> <li>Lea</li> <li>Lea</li> <li>Lea</li> <li>Mer</li> <li>Nic</li> <li>car</li> <li>Ozo</li> <li>Pol</li> <li>Pol</li></ul> | Imium<br>orinated Hydrocar<br>orinated Paraffins<br>maldehyde<br>ogenated Dipheny<br>d carbonates and<br>d and Lead compo<br>rcuric Oxide Batter<br>kel – finishes musi<br>ried by the user.<br>one Depleting Subi<br>ybrominated Biph<br>ybrominated Biph<br>ybrominated Biph<br>ychlorinated Terp<br>yvinyl Chloride (PV<br>untarily removed fi<br>lioactive Substance | lame Retardants – ma<br>bons<br>/l Methanes<br>sulfates<br>ounds<br>ries<br>t not be used on the e<br>stances<br>enyls (PBBs)<br>enyl Ethers (PBBEs)<br>enyl Oxides (PBBOs)<br>enyl (PCB)<br>henyls (PCT)<br>/C) – except for wires<br>from most application | xternal surface d<br>and cables, and c | esigned to be fi<br>ertain retail pa | equently handled or     |



### **Technical Specifications**

| Packaging Usage                           | <ul> <li>HP follows these guidelines to decrease the environmental impact of product packaging:</li> <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> |
|---|---|
| End-of-life Management                    | Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas.   |
| and Recycling                             | To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.  |
|   | The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.   |
| HP Inc.                                   | For more information about HP's commitment to the environment:  |
| Corporate<br>Environmental<br>Information | Global Citizenship Report<br>http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html<br>Eco-label certifications<br>http://www8.hp.com/us/en/hp-information/environment/ecolabels.html<br>ISO 14001 certificates:  |
|   | http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842   |
|   | and   |
|   | http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf   |

#### HP EliteBook 840 G4 Notebook PC



| Eco-Label Certifications   | This product has received  | or is in the process of being   | g certified to the following approvals and may be  |
|--|--|---|--|
| & declarations   | labeled with one or more o   |   | 5 ,  |
| System Configuration   | in your country.<br>The configuration used                                     | »<br>gistered in the United States.   | See http://www.epeat.net for registration status<br>on and Declared Noise Emissions data for the<br>otebook".  |
| Energy Consumption<br>(in accordance with US<br>ENERGY STAR® test<br>method) | 115VAC, 60Hz   | 230VAC, 50Hz  | 100VAC, 50Hz   |
| Normal Operation (Short idle)  | 5.12 W   | 5.47 W  | 5.18 W   |
| Normal Operation (Long<br>idle)  | 3.00 W   | 3.26 W  | 3.50 W   |
| Sleep  | 0.66 W   | 0.66 W  | 0.67 W   |
| Off  | 0.40 W   | 0.40 W  | 0.40 W   |
|  | family. HP computers ma<br>Environmental Protection<br>does not offer ENERGY S | arked with the ENERGY STA<br>Agency (EPA) ENERGY STAR<br>STAR® compliant configurati<br>eaturing a hard disk drive, a | <sup>®</sup> compliant product if offered within the model<br>R <sup>®</sup> Logo are compliant with the applicable U.S.<br><sup>®</sup> specifications for computers. If a model family<br>ions, then energy efficiency data listed is for a<br>a high efficiency power supply, and a Microsoft |
| Heat Dissipation*  | 115VAC, 60Hz   | 230VAC, 50Hz  | 100VAC, 50Hz   |
| Normal Operation (Short<br>idle)   | 18 BTU/hr  | 19 BTU/hr   | 18 BTU/hr  |
| Normal Operation (Long   | 10 BTU/hr  | 11 BTU/hr   | 12 BTU/hr  |



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

| idle)  |   |   |   |   |                                  |
|--|---|---|---|---|----------------------------------|
| Sleep  | 2 BTU/ł   | nr 2  | BTU/hr  |   | 2 BTU/hr                         |
| Off  | 1 BTU/ł   | nr 1  | BTU/hr  |   | 1 BTU/hr                         |
|  | *NOTE: Heat d<br>attained for one   | •   | d based on the  | measured watt   | s, assuming the service level is |
| Declared Noise   | Sc  | und Power   |   | Sound   | d Pressure                       |
| Emissions<br>(in accordance with<br>ISO 7779 and ISO 9296) | ()  | L <sub>WAd</sub> , bels)  |   | (L <sub>pAm</sub> ,   | , decibels)                      |
| Typically Configured –<br>Idle                             |   | 2.9   |   |   | 21                               |
| Fixed Disk – Random<br>writes                              |   | 3.2   |   |   | 22                               |
| Batteries  | Batteries used i<br>Mercury gro<br>Cadmium g  | in this product comply<br>in the product do not c<br>eater the1ppm by weig<br>reater than 20ppm by  | ontain:<br>Jht  | 2006/66/EC  |                                  |
|  | Battery size: CR  |   |   |   |                                  |
| Additional Information                                     | 2011/6<br>• This HI<br>(WEEE)<br>• This pr<br>Water<br>• This pr<br>www.e<br>• Plastic<br>ISO104<br>• This pr | oduct is in compliance<br>55/EC.<br>P product is designed t<br>Directive – 2002/96/I<br>oduct is in compliance<br>and Toxic Enforcemen<br>oduct is in compliance<br>peat.net<br>s parts weighing over | to comply with the<br>EC.<br>with California P<br>t Act of 1986).<br>with the IEEE 16<br>25 grams used in<br>st-consumer recy | e Waste Electrica<br>roposition 65 (St<br>80 (EPEAT) stanc<br>the product are<br>cled plastic (by v |                                  |
| Packaging Materials  | External:   | PAPER/Corrugated  |   |   | 323 g                            |
|  | Internal:   | -<br>PLASTIC/Polyethylene   | Expanded - EPE  |   | 38 g                             |



|                 | PLASTIC/Polyethylene low density - LDPE  | 15 g   |
|-----------------|--|--|
|                 | PLASTIC/Polypropylene - PP   | 4 g  |
|                 | The plastic packaging material contains at least 50% recycled cont   | ent.   |
|                 | The corrugated paper packaging materials contains at least 70% re  | ecycled content.   |
| Material Usage  | This product does not contain any of the following substances in ex  | cess of regulatory limits (refer to the  |
| Material Usage  | <ul> <li>This product does not contain any of the following substances in ex</li> <li>HP General Specification for</li> <li>http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse</li> <li>Asbestos</li> <li>Certain Brominated Flame Retardants – may not be used at</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> <li>Nickel – finishes must not be used on the external surface or carried by the user.</li> <li>Ozone Depleting Substances</li> <li>Polybrominated Biphenyl Ethers (PBBEs)</li> <li>Polybrominated Biphenyl Oxides (PBBOs)</li> <li>Polychlorinated Terphenyls (PCT)</li> <li>Polychlorinated Terphenyls (PCT)</li> <li>Polyvinyl Chloride (PVC) – except for wires and cables, and voluntarily removed from most applications.</li> <li>Radioactive Substances</li> <li>Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (T</li> </ul> | the Environment at<br>e.pdf):<br>s flame retardants in plastics<br>designed to be frequently handled or<br>certain retail packaging has been   |
| Packaging Usage | <ul> <li>HP follows these guidelines to decrease the environmental impact of</li> <li>Eliminate the use of heavy metals such as lead, chromium, materials.</li> <li>Eliminate the use of ozone-depleting substances (ODS) in p</li> <li>Design packaging materials for ease of disassembly.</li> <li>Maximize the use of post-consumer recycled content materials such as paper a</li> <li>Reduce size and weight of packages to improve transporta</li> <li>Plastic packaging materials are marked according to ISO 17</li> </ul>   | mercury and cadmium in packaging<br>backaging materials.<br>rials in packaging materials.<br>nd corrugated materials.<br>tion fuel efficiency. |



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

### **Technical Specifications**

| End-of-life Management<br>and Recycling                      | Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas.<br>To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.   |
|--|---|
|  | The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.     |
| Hewlett-Packard<br>Corporate<br>Environmental<br>Information | For more information about HP's commitment to the environment:<br>Global Citizenship Report<br>http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html<br>Eco-label certifications<br>http://www8.hp.com/us/en/hp-information/environment/ecolabels.html<br>ISO 14001 certificates:<br>http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842<br>and<br>http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf |

#### HP EliteBook 850 G4 Notebook PC

| Eco-Label Certifications<br>& declarations   | This product has received<br>labeled with one or more o                    |  | g certified to the following approvals and may be      |
|--|--|--|--|
|  | <ul> <li>IT ECO declaration</li> <li>US ENERGY STAR<sup>6</sup></li> </ul> | n<br>D   | See http://www.epeat.net for registration status       |
| System Configuration                         | -  | for the Energy Consumptic<br>on a "Typically Configured No | on and Declared Noise Emissions data for the otebook". |
| Energy Consumption<br>(in accordance with US | 115VAC, 60Hz   | 230VAC, 50Hz   | 100VAC, 50Hz   |



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

| Emissions                     | (L <sub>WAd</sub> , bels)  |   |  | (L <sub>pAm</sub> , decibels)   |
|-------------------------------|--|---|--|---|
| Declared Noise                | Sound Power  |   |  | Sound Pressure  |
|                               | *NOTE: Heat dissipation attained for one hour.                                 | is calculated t   | ased on the                                | measured watts, assuming the service level is   |
| Off                           | 1 BTU/hr   | 2 BTI   | J/hr                                       | 1 BTU/hr  |
| Sleep                         | 2 BTU/hr   | 3 BTI   |  | 2 BTU/hr  |
| Normal Operation (Long idle)  | 11 BTU/hr  | 13 BT   | U/hr                                       | 12 BTU/hr   |
| Normal Operation (Short idle) | 20 BTU/hr  | 20 BT   | U/hr                                       | 20 BTU/hr   |
| Heat Dissipation*             | 115VAC, 60Hz   | 230VAC  | , 50Hz                                     | 100VAC, 50Hz  |
|                               | family. HP computers ma<br>Environmental Protection<br>does not offer ENERGY S | arked with the<br>Agency (EPA)<br>STAR® complia<br>eaturing a har | ENERGY STA<br>ENERGY STAR<br>nt configurat | <sup>®</sup> compliant product if offered within the model<br>AR <sup>®</sup> Logo are compliant with the applicable U.S.<br>A <sup>®</sup> specifications for computers. If a model family<br>ions, then energy efficiency data listed is for a<br>a high efficiency power supply, and a Microsoft |
| Off                           | 0.40 W   | 0.48  | 8 W  | 0.40 W  |
| Sleep                         | 0.71 W   | 0.79  | W  | 0.72 W  |
| Normal Operation (Long idle)  | 3.14 W   | 3.73  | W  | 3.40 W  |
| Normal Operation (Short idle) | 5.86 W   | 5.86  | i W  | 5.99 W  |
| ENERGY STAR® test<br>method)  |  |   |  |   |



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

| Typically Configured –       2.9       22         Idle       3.5       28         Fixed Disk – Random writes       3.5       28         Batteries       This battery(s) in this product comply with EU Directive 2006/66/EC         Batteries used in the product do not contain:<br>Mercury greater the1ppm by weight<br>Cadmium greater than 20ppm by weight       Battery size: CR2032 (coin cell)<br>Battery type: Lithium         Additional Information       • This product is nompliance with the Restrictions of Hazardous Substances (RoHS) direc 2011/65/EC.         • This HP product is designed to comply with the Waste Electrical and Electronic Equipmen (WEEE) Directive – 2002/96/EC.       • This product is nompliance with California Proposition 65 (State of California; Safe Drin Water and Toxic Enforcement Act of 1986).         • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level, se www.epeat.net         • Plastics parts weighing over 25 grams used in the product are marked per IS011469 and IS01043.         • This product to restains 0% post-consumer recycled plastic (by wt.)         • This product contains 0% post-consumer recycled plastic (by wt.)         • This product is PS.2% recycle-able when properly disposed of at end of life.         Packaging Materials       External: PAPER/Corrugated       348 g</gold>  |
|--|
| writes       This battery(s) in this product comply with EU Directive 2006/66/EC         Batteries       This battery(s) in this product do not contain:<br>Mercury greater the1ppm by weight<br>Cadmium greater than 20ppm by weight         Battery size: CR2032 (coin cell)<br>Battery type: Lithium       Battery size: CR2032 (coin cell)<br>Battery type: Lithium         Additional Information       • This product is in compliance with the Restrictions of Hazardous Substances (RoHS) direct 2011/65/EC.         • This HP product is designed to comply with the Waste Electricat and Electronic Equipment (WEEE) Directive – 2002/96/EC.       • This product is nompliance with California Proposition 65 (State of California; Safe Drint Water and Toxic Enforcement Act of 1986).         • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level, see www.epeat.net         • Plastics parts weighing over 25 grams used in the product are marked per IS011469 and IS01043.         • This product is 95.2% recycle-able when properly disposed of at end of life.         Packaging Materials       External:       PAPER/Corrugated       348 g</gold>   |
| Batteries used in the product do not contain:<br>Mercury greater the1ppm by weight<br>Cadmium greater tha 20ppm by weight         Battery size: CR2032 (coin cell)<br>Battery type: Lithium         Additional Information         • This product is in compliance with the Restrictions of Hazardous Substances (RoHS) direct<br>2011/65/EC.         • This HP product is designed to comply with the Waste Electrical and Electronic Equipment<br>(WEEE) Directive - 2002/96/EC.         • This product is in compliance with California Proposition 65 (State of California; Safe Drin<br>Water and Toxic Enforcement Act of 1986).         • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level, se<br/>www.epeat.net         • Plastics parts weighing over 25 grams used in the product are marked per IS011469 and<br/>IS01043.         • This product contains 0% post-consumer recycled plastic (by wt.)         • This product is 95.2% recycle-able when properly disposed of at end of life.</gold>   |
| Mercury greater the 1ppm by weight<br>Cadmium greater than 20ppm by weightBattery size: CR2032 (coin cell)<br>Battery type: LithiumAdditional Information• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) direc<br>2011/65/EC.• This HP product is designed to comply with the Waste Electrical and Electronic Equipment<br>(WEEE) Directive – 2002/96/EC.• This product is in compliance with California Proposition 65 (State of California; Safe Drin<br>Water and Toxic Enforcement Act of 1986).• This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level, se<br/>www.epeat.net• Plastics parts weighing over 25 grams used in the product are marked per IS011469 and<br/>IS01043.• This product contains 0% post-consumer recycled plastic (by wt.)• This product is 95.2% recycle-able when properly disposed of at end of life.Packaging MaterialsExternal:PAPER/Corrugated348 g</gold>   |
| Additional InformationThis product is in compliance with the Restrictions of Hazardous Substances (RoHS) direct 2011/65/EC.This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC.This product is in compliance with California Proposition 65 (State of California; Safe Drin Water and Toxic Enforcement Act of 1986).This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level, se www.epeat.netPlastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.This product is 95.2% recycle-able when properly disposed of at end of life.Packaging MaterialsExternal:PAPER/Corrugated348 g</gold>  |
|  |
| Internal:         PLASTIC/Polyethylene Expanded - EPE         38 g   |
|  |
| PLASTIC/Polyethylene low density - LDPE 15 g   |
| PLASTIC/Polypropylene - PP 5 g   |
| The plastic packaging material contains at least 50% recycled content.   |
| The corrugated paper packaging materials contains at least 70% recycled content.   |
| Material Usage       This product does not contain any of the following substances in excess of regulatory limits (reference of the the the text of tex of text of text of text of text of tex of text of text |
| Chlorinated Paraffins  |



|                        | Formaldehyde  |  |  |
|------------------------|---|--|--|
|                        | Halogenated Diphenyl Methanes   |  |  |
|                        | Lead carbonates and sulfates  |  |  |
|                        | Lead and Lead compounds   |  |  |
|                        | Mercuric Oxide Batteries  |  |  |
|                        | • Nickel – finishes must not be used on the external surface designed to be frequently handled or                 |  |  |
|                        | carried by the user.  |  |  |
|                        | Ozone Depleting Substances  |  |  |
|                        | Polybrominated Biphenyls (PBBs)   |  |  |
|                        | Polybrominated Biphenyl Ethers (PBBEs)  |  |  |
|                        | Polybrominated Biphenyl Oxides (PBBOs)  |  |  |
|                        | Polychlorinated Biphenyl (PCB)  |  |  |
|                        | Polychlorinated Terphenyls (PCT)  |  |  |
|                        | <ul> <li>Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been</li> </ul> |  |  |
|                        | voluntarily removed from most applications.   |  |  |
|                        | Radioactive Substances  |  |  |
|                        | Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)  |  |  |
|                        |   |  |  |
| Packaging Usage        | HP follows these guidelines to decrease the environmental impact of product packaging:                            |  |  |
|                        | Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging                        |  |  |
|                        | materials.  |  |  |
|                        | <ul> <li>Eliminate the use of ozone-depleting substances (ODS) in packaging materials.</li> </ul>                 |  |  |
|                        | <ul> <li>Design packaging materials for ease of disassembly.</li> </ul>   |  |  |
|                        | <ul> <li>Maximize the use of post-consumer recycled content materials in packaging materials.</li> </ul>          |  |  |
|                        | <ul> <li>Use readily recyclable packaging materials such as paper and corrugated materials.</li> </ul>            |  |  |
|                        | <ul> <li>Reduce size and weight of packages to improve transportation fuel efficiency.</li> </ul>                 |  |  |
|                        | <ul> <li>Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.</li> </ul>         |  |  |
|                        |   |  |  |
|                        |   |  |  |
|                        |   |  |  |
|                        |   |  |  |
| End-of-life Management | Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas.             |  |  |
| and Recycling          | To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP              |  |  |
|                        | sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.         |  |  |
|                        |   |  |  |
|                        |   |  |  |
|                        | The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each               |  |  |
|                        | product type for use by treatment facilities. This information (product disassembly instructions) is              |  |  |
|                        | posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may                 |  |  |
|                        | be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate                |  |  |
|                        | and re-sell HP equipment.   |  |  |
|                        |   |  |  |



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

### **Technical Specifications**

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

#### **COUNTRY OF ORIGIN**

China



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

| Туре         | Description  | Part Number |
|--------------|--|-------------|
| Docking      | HP USB-C Travel Dock                                   | T0K29AA#xxx |
|              | HP USB Travel Dock                                     | T0K30AA#xxx |
|              | HP UltraSlim Docking Station                           | D9Y32AA#xxx |
|              | HP Elite USB-C Docking Station                         | X7W54AA     |
|              | HP Adjustable Dual Display Stand                       | AW664AA     |
|              | HP Display and Notebook Stand II                       | E8G00AA     |
| Input/Output | HP Slim Wireless Keyboard and Mouse                    | T6L04AAxxx  |
|              | HP USB Essential Keyboard and Mouse                    | H6L29AA     |
|              | HP Conferencing Keyboard                               | K8P74AA     |
|              | HP Ultrathin Wireless Mouse                            | L9V78AA     |
|              | HP UC Speaker Phone                                    | K7V16AA     |
|              | HP UC Wired Headset                                    | K7V17AA     |
|              | HP Stereo 3.5mm Headset                                | T1A66AA     |
|              | HP Stereo USB Headset                                  | T1A67AA     |
|              | HP UC Wireless Mono Headset                            | W3K08AA     |
|              | HP UC Wireless Duo Headset                             | W3K09AA     |
|              | HP USB Speaker Phone                                   | X7N17AA     |
| Memory       | HP 4GB 2400 MHz DDR4 Memory                            | Z4Y84AA     |
|              | HP 8GB 2400 MHz DDR4 Memory                            | Z4Y85AA     |
|              | HP 16GB 2400 MHz DDR4 Memory                           | Z4Y86AA     |
| Power        | HP 65W Slim AC Adapter                                 | H6Y82AA#xxx |
|              | HP 90W Slim AC Adapter                                 | H6Y83AA#xxx |
|              | HP 90W Slim Combo AC Adapter w/ USB                    | H6Y84AA#xxx |
|              | HP 45W Smart AC Adapter                                | H6Y88AA#xxx |
|              | HP 65W Smart AC Adapter                                | H6Y89AA#xxx |
|              | HP 90W Smart AC Adapter                                | H6Y90AA#xxx |
|              | HP Notebook Power Bank                                 | N9F71AA#xxx |
| Storage      | HP USB External DVDRW Drive                            | F2B56AA     |
| Security     | HP Combination Lock                                    | TOY15AA     |
|              | HP Keyed Cable lock                                    | TOY14AA     |
| Displays     | HP EliteDisplay E232 23-inch Monitor                   | M1N98AA     |
|              | HP EliteDisplay S231d 23-inch Notebook Docking Monitor | F3J72AA     |
|              | HP Elite Display S140u 14-inch USB Portable Monitor    | G8R65AA     |



### Change Log

| Date of change    | Version History |         | Description of change   |  |
|-------------------|-----------------|---------|---|--|
| December 19, 2016 | V1 to V2        | Launch  | Quickspecs launched   |  |
| March 6, 2017     | V2              | Update  | Options page updated (updated memory)   |  |
| March 7, 2017     | V2 to V3        | Update  | Technical Specification section updated (Note added in Processor)                         |  |
| March 9, 2017     | V3 to V4        | Update  | Updated Note in Operating System and Processor sections                                   |  |
| March 17, 2017    | V4 to V5        | Update  | At a Glance, Displays, Storage and Drives and Technical<br>Specificarions section updated |  |
| April 4, 2017     | V5 to V6        | Added   | Processors Family added   |  |
| April 11, 2017    | V6 to V7        | Removed | Planned to be available notes from displays and Memory                                    |  |
| April 25, 2017    | V7 to V8        | Updated | Planned to be available notes from displays and updated Memory section                    |  |

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