tehnot≡ka

Informacije o proizvodu (EN)

HP laptop 255 G9 (8D4D2ES)





Tehnoteka je online destinacija za upoređivanje cena i karakteristika bele tehnike, potrošačke elektronike i IT uređaja kod trgovinskih lanaca i internet prodavnica u Srbiji. Naša stranica vam omogućava da istražite najnovije informacije, detaljne karakteristike i konkurentne cene proizvoda.

Posetite nas i uživajte u ekskluzivnom iskustvu pametne kupovine klikom na link:

https://tehnoteka.rs/p/hp-laptop-255-g9-8d4d2es-akcija-cena/

Overview

HP 255 15.6 inch G9 Notebook PC



Left

- 1. Internal Dual Digital Microphone
- 2. Webcam LED
- 3. Webcam
- 4. Touchpad
- 5. Touchpad Buttons
- 6. Audio Combo Jack
- 1. SuperSpeed USB 20Gbps is not available.

- 7. Power Indicator LED
- 8. Hard Drive Indicator LED
- SuperSpeed USB Type-C[®] 5Gbps signaling rate¹ (Data Transfer Only)
- 10. HDMI Port (Cable Sold Separately)
- 11. RJ-45 / Ethernet Port
- 12. Power Button

Overview



Right

- **Power Connector**
- SuperSpeed USB Type-A 5Gbps signaling rate¹ port **5.** Fingerprint Reader (Selected Models) (USB 3.2 Gen 1)
- SuperSpeed USB Type-A 5Gbps signaling rate¹ port (USB 3.2 Gen 1)
- 1. SuperSpeed USB 20Gbps is not available.

- 4. SD Card slot

Overview

AT A GLANCE

- Preinstalled with Windows 11 Pro, Windows Home or FreeDOS
- Choice of powerful AMD Ryzen™ APU processors
- Choice of 39.62 cm (15.6") diagonal HD and Ultra Wide Viewing Angle FHD 300 nit display
- Fast and dual channel DDR4 SODIMM memory up to 32 GB
- Optimize your video calls with an HD camera and temporal noise reduction that adjusts the lighting to your environment.
- Enhanced security features including discrete TPM 2.0 (select model) and optional Fingerprint reader
- Weight with basic configurations starting at 3.84 lb / 1.74 kg
- Choice of Solid State Drives up to 1 TB, Hard Drive up to 1 TB and optional dual storage support.
- Support wireless options for connectivity on the go including gigabit-speed up to Wi-Fi® 6
- Supports fast charging (50% in 45 minutes) with no impact on battery recharge cycles
- Battery Life up to 10 hours 15 mins
- Full size, optional backlit keyboard and clickpad with Precision Touchpad Supported certified
- AMD FreeSync™ makes FHD display stutter, input lag, and screen tears ancient history
- Passed 13 MIL-STD test

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



PRODUCT NAME

HP 255 15.6 inch G9 Notebook PC

OPERATING SYSTEM

Preinstalled Windows 11 Pro ¹

Windows 11 Pro Education¹

Windows 11 Home - HP recommends Windows 11 Pro for business 1

Windows 11 Home Single Language – HP recommends Windows 11 Pro for business 1,2

Windows 11 Home Education – HP recommends Windows 11 Pro for business 1

FreeDOS

- 1. Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows is automatically updated and enabled. High speed internet and Microsoft account required. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com.
- 2. This computer is preinstalled with Windows 11 Home Single Language.

PROCESSORS

AMD Ryzen[™] 7 5825U APU with Radeon[™] (2.00 GHz base frequency, up to Standard, 16 MB L3 cache, 8 cores) ^{3,4,5} AMD Ryzen[™] 5 5625U APU with Radeon[™] (2.30 GHz base frequency, up to Standard, 16 MB L3 cache, 6 cores) ^{3,4,5} AMD Ryzen[™] 3 5425U APU with Radeon[™] (2.70 GHz base frequency, up to Standard, 8 MB L3 cache, 4 cores) ^{3,4,5}

Processor Family

AMD Ryzen™ 7 Mobile Processors ⁶ AMD Ryzen™ 5 Mobile Processors ⁶ AMD Ryzen™ 3 Mobile Processors ⁶

- 3. Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
- 4. 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. AMD's numbering is not a measurement of clock speed.
- 5. AMD Max Boost clock frequency performance varies depending on hardware, software and overall system configuration.
- 6. In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on http://www.support.hp.com.

CHIPSET

Chipset is integrated with processor.



Technical Specifications

GRAPHICS

Integrated

AMD Radeon™ Graphics

Supports

Support HD decode, DX12, HDMI 1.4b 7

7. HD content required to view HD images.

DISPLAY

Non-Touch

39.6 cm (15.6") diagonal, FHD (1920 x 1080), Low Blue Light, anti-glare, UWVA, micro-edge, 300 nits, sRGB 100% eDP $1.4+PSR2^{7.8.9}$

39.6 cm (15.6") diagonal, FHD (1920 x 1080), anti-glare, SVA, micro-edge, 250 nits, 45% NTSC eDP 1.2 7,8,9 39.6 cm (15.6") diagonal, FHD (1920 x 1080), anti-glare, UWVA, micro-edge, 250 nits, 45% NTSC eDP 1.2 7,8,9 39.6 cm (15.6") diagonal, HD (1366x768), anti-glare, SVA, micro-edge, 250 nits, 45% NTSC eDP 1.2 7,8,9

HDMI

Port supports resolutions up to 1920 x 1080 external resolution @60 Hz

Display Size

15.6" diagonal 39.6 cm (15.6") diagonal

- 7. HD content required to view HD images.
- 8. Sold separately or as an optional feature.
- 9. Resolutions are dependent upon monitor capability, and resolution and color depth settings.

STORAGE AND DRIVES

Primary Storage

1 TB 5400 rpm SATA ¹⁰ 500 GB 7200 rpm SATA ¹⁰ 501 GB 5400 rpm SATA ¹⁰

Primary M.2 Storage

1 TB PCIe® NVMe™ M.2 SSD ¹⁰
512 GB PCIe® NVMe™ M.2 QLC Solid State Drive ¹⁰
256 GB PCIe® NVMe™ M.2 QLC Solid State Drive ¹⁰
128 GB PCIe® NVMe™ TLC Solid State Drive ¹⁰

Dual Storage

256 GB PCIe® NVMe™ M.2 QLC Solid State Drive + 1TB 5400rpm SATA ¹⁰
128 GB M.2 SATA-3 TLC Solid State Drive+ 1 TB 5400 rpm SATA ¹⁰



Technical Specifications

10. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 11) is reserved for system recovery software.

MEMORY

Maximum Memory

32 GB DDR4-3200 SDRAM 11,12

Memory

32 GB DDR4-3200 SDRAM (2 X 16 GB) ^{11,12}
16 GB DDR4-3200 SDRAM (1 x 16 GB) ^{11,12}
16 GB DDR4-3200 SDRAM (2 x 8 GB) ^{11,12}
12 GB DDR4-3200 SDRAM (4 GB (1 x 4GB) and 8 GB (1 x 8 GB)) ^{11,12}
8 GB DDR4-3200 SDRAM (1 x 8 GB) ^{11,12}
8 GB DDR4-3200 SDRAM (2 x 4 GB) ^{11,12}
4 GB DDR4-3200 SDRAM (1 x 4 GB) ^{11,12}

Memory Slots

2 SODIMM (Ryzen 3/5/7 processors speed runs up to 3200, Ryzen 3 3250U speed runs up to 2400) ^{11,12} All slots are customer non-accessible / non-upgradeable Support Dual Channel Memory

- 11. All slots are non-accessible / non-upgradeable.
- 12. 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

WLAN

Realtek RTL8822CE 802.11ac 2x2 Wi-Fi® + Bluetooth® 5.0 Wireless Card ¹³
Realtek RTL8821CE 802.11a/b/g/n/ac (1x1) Wi-Fi® with Bluetooth® 4.2 Wireless Card ¹³
Realtek RTL8852BE 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.3 Wireless Card ¹⁴

Miracast

Compatible with Miracast-certified devices (For Win11) 15

Ethernet

Integrated 10/100/1000 GbE 16

- 13. Wi-Fi supporting gigabit speeds (802.11ac) is achievable when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 160MHz channels
- 14. Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 is backwards compatible with prior 802.11 specs. The specifications for Wi-Fi 6 (802.11ax) are draft 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 802.11ax devices
- 15. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.



16. 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

2 Integrated stereo speakers Integrated dual array microphone

Speaker Power

2W/4ohm

Camera

720p HD camera with Temporal Noise Reduction 7

7. HD content required to view HD images.

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

Full Size Textured island-style Keyboard and optional Backlit¹⁷

Pointing Device

Touchpad with multi-touch gesture support (PTP certified)

Function Keys

- F1 Open " How to get help in Windows 11" webpage
- F2 Brightness Down
- F3 Brightness Up
- F4 Display Switching
- F5 Blank
- F6 Mute
- F7 Volume Down
- F8 -Volume Up
- F9 Previous
- F10 Play/Pause
- F11 Next
- F12 Airplane mode
- 17. Backlit keyboard is an optional feature.



SOFTWARE AND SECURITY

Software

MYOffice

MvHP

HP QuickDrop¹⁸

HP Privacy Settings

HP SUPPORT ASSISTANT 19

HP Audio Switch

HP Connection Optimizer

HP PC Hardware Diagnostics

HP Smart Health 20

HP Smart²¹

Manageability Features

Touchpoint Customizer for Consumer

NOTE: To enhance brightness, level go to the Intel® Graphics Command Center app, click on System and turn off the Display Power Savings function.

Security Management

McAfee Security (30 days free trial as default) ²² Express VPN (30 days free trial) LastPass password manager Discrete TPM 2.0 (select model) / Firmware TPM 2.0 ²³ Fingerprint reader ²⁴

- 18. HP Quick Drop requires Internet access and Windows 10 PC preinstalled with HP QuickDrop app and either an Android device (phone or tablet) running Android 7 or higher with the Android HP QuickDrop app, and /or an iOS device (phone or tablet) running iOS 12 or higher with the iOS HP QuickDrop app.
- 19. HP Support Assistant requires Windows and Internet access.
- 20. HP Smart Support automatically collects the telemetry necessary upon initial boot of the product to deliver device-level configuration data and health insights and is available preinstalled on select products, thru HP Factory Configuration Services; or it can be downloaded. For more information about how to enable HP Smart Support or for download, please visit http://www.hp.com/smart-support.
- 21. HP Smart Support automatically collects the telemetry necessary upon initial boot of the product to deliver device-level configuration data and health insights and is available preinstalled on select products, thru HP Factory Configuration Services; or it can be downloaded. For more information about how to enable HP Smart Support or for download, please visit http://www.hp.com/smart-support.
- 22. 30-day McAfee® LiveSafe™ trial included. Internet access required and not included. Subscription required after expiration. See http://www.McAfee.com for more details.
- 23. Firmware TPM is version 2.0. Hardware TPM is v2.0.
- 24. HP Fingerprint Sensor is an optional feature and requires configuration at purchase.



POWER

Power Supply

HP Smart 65 W EM External AC power adapter ²⁵ HP Smart 45 W External AC power adapter ²⁵

Battery

HP Long Life 3-cell, 41 Wh Li-ion Polymer ^{26,27} Compliant with UL 1642 Standard

Power Cord

1M (3.28 feet) length power cord

Battery Life

Up to 10 hours 15 mins 28

Battery Weight

0.42 lb

0.19 kg

- 25. Availability may vary by country.
- 26. Battery is internal and not replaceable by customer. Serviceable by warranty.
- 27. Actual battery Watt-hours (Wh) will vary from design capacity. Battery capacity will naturally decrease with shelf life, time, usage, environment, temperature, system configuration, loaded apps, features, power management settings and other factors.
- 28. Windows MM18 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.

WEIGHTS & DIMENSIONS

Product Weight- 41 Whr 29

Starting at 3.84 lb Starting at 1.74 kg

Product Dimensions (W x D x H)

14.09 x 9.53 x 0.78 in 35.8 x 24.2 x 1.99 cm

29. Weight will vary by configuration. Does not include power adapter.



Technical Specifications

PORTS/SLOTS

Ports

- 2 SuperSpeed USB Type-A 5Gbps signaling rate (USB 3.2 Gen 1) 30
- 1 SuperSpeed USB Type-C® 5Gbps signaling rate (Supports data transfer only and does not support charging or external monitors) 30
- 1 HDMI v1.4b 31
- 1 RJ-45
- 1 AC Power
- 1 Headphone/microphone combo jack

Expansion Slots

Support SD/SDHC/SDXC

- 1 Multi-format digital media reader
- 30. SuperSpeed USB 20Gbps is not available.
- 31.HDMI cable sold separately.



Technical Specifications

SERVICE AND SUPPORT

HP Services offers 1-year or 3-year limited warranties and 90 days software limited warranty options depending on country. Batteries have a default one year limited warranty except for Long Life batteries which will have same 1-year or 3-year limited warranty as the platform. Refer to http://www.hp.com/support/batterywarranty/ for additional battery information. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/cpc.³²

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



Technical Specifications

SYSTEM UNIT

Stand-Alone Power Requirements

(AC Power) Yes Nominal Operating Voltage 19V

Average Operating Power 4.5W@MM18
Integrated graphics Vega7 Graphic Core

Discrete Graphics N/A

Max Operating Power UMA < 45W

Temperature

Operating 41°F to 95°F (5°C to 35° C)

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

Relative Humidity

Operating 10% to 90% Non-operating 5% to 95%

Shock

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

Random Vibration

Operating 1.043 grams Non-operating 3.5 grams

Altitude (unpressurized)

Operating -50 to 10,000 ft (-15m to 3,048 m) Non-operating -50 to 40,000 ft (-15m to 12,192 m)

Planned Industry Standard

Certifications

Regulatory Model Number TPN-C151
UL Yes
CSA No
FCC Compliance Yes
ENERGY STAR® Yes³³

EPEAT® Yes, EPEAT® registered³⁴

ICES Yes Australia / Yes NZ A-Tick Compliance Yes CCC Yes Japan VCCI Compliance Yes KC Yes **BSMI** Yes **CE Marking Compliance** Yes CU/EAC Yes CIT N/A Saudi Arabian Compliance (ICCP) Yes **SABS** Yes **UKRSERTCOMPUTER** Yes



33. Configurations of the HP 255 15.6 inch G9 that are ENERGY STAR® qualified are identified as HP 255 15.6 inch G9 ENERGY STAR on HP websites and on http://www.energystar.gov.

34.Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit www.epeat.net for more information.

DISPLAYS

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

1. Actual brightness will be lower with touchscreen or HP Sure View.

15.6 in FHD (1920 x 1080) Anti-Glare UWVA Low Blue Light sRGB NWBZ 300 eDP 1.4+PSR2 100 flat LCD Panel **Outline Dimensions (W x H)** 350.66*215.34(With PCBA) typ +/- 0.5

Active Area 344.16 x 193.59 typ

Weight 310g max
Diagonal Size 15.6"

Thickness 2.45 typ /2.6 max

Interface eDP1.4
Surface Treatment Anti-Glare

Touch Enabled No.

Contrast Ratio 1000:1 typ
Refresh Rate 60Hz
Brightness 300nits typ

Pixel Resolution 1920 x 1080 (FHD)

Format WLED Backlight RGB

Color Gamut Coverage SRGB100% typ

Color Depth 8bits

Viewing Angle UWVA 89/89/89

Low Blue Light Yes

Power Consumption (W, EBL@

150nits max/ 200nits max)

2.69W max / 3.34W max

Panel LCD 15.6-in FHD (1920x1080) Anti-Glare WLED SVA 45percent cg 250nits eDP 1.2 w/o PSR NWBZ ultraslim **Outline Dimensions (W x H)** 350.96 * 216.65 (max. w/ PCB)

Active Area 344.16 x 193.59 typ

Weight 360g max Diagonal Size 15.6"

Thickness 3.2mm max Interface eDP1.2
Surface Treatment Anti-Glare
No

Touch Enabled

Contrast Ratio

Refresh Rate

Brightness

NO

300:1 typ

60Hz

250nits typ

Pixel Resolution 1920 x 1080 (FHD)

Format WLED Backlight RGB



Color Gamut Coverage NTSC45%
Color Depth 6bit

Viewing Angle SVA 45/45/15/35

Low Blue Light No

Power Consumption (W, EBL@ 150nits max/ 200nits max)

2.67W max / 3.33W max

15.6-in FHD (1920x1080) Anti-Glare WLED UWVA 45percent cg 250nits eDP 1.2 w/o PSR NWBZ slim

15.6-in HD (1366x768) Anti-

ultraslim

Glare WLED SVA 45percent cq

250nits eDP 1.2 w/o PSR NWBZ

Outline Dimensions (W x H) 350.96*216.75(max.)

Active Area 344.16 x 193.59 (typ.) **Weight** 370g max.

Weight 3/0g max.

Diagonal Size 15.6"

Thickness 3.2 max.
Interface eDP1.2

Surface Treatment Anti-Glare

No

Touch Enabled
Contrast Ratio
Refresh Rate
Brightness
No
600:1 typ
60Hz
250nits typ

Pixel Resolution 1920 x 1080 (FHD)

Format WLED

Backlight RGB

Color Gamut Coverage NTSC45%

Color Depth 6bits

Viewing Angle UWVA 85/85/85

Low Blue Light No

Power Consumption (W, EBL@

150nits max/ 200nits max)

Outline Dimensions (W x H) 350.96 * 216.65 (max. w/ PCB)

2.75W max

Active Area 344.23 x 193.54 typ

Weight 360g max
Diagonal Size 15.6"
Thickness 3.2mm max

Interface eDP1.2
Surface Treatment Anti-Glare
No

Touch Enabled No
Contrast Ratio 300:1 typ
Refresh Rate 60Hz

Brightness 250nits typ **Pixel Resolution** 1366 x 768 (HD)

Format WLED RGB

Color Gamut Coverage NTSC45%



Color Depth 6bits

Viewing Angle SVA 45/45/15/35

Low Blue Light

Power Consumption (W, EBL@ 150nits max/ 200nits max)

2.42W max / 2.98W max



STORAGE AND DRIVES

For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 11) is reserved for system recovery software.

HDD 1TB 5400RPM 7mm **SATA**

Rotation speed **NAND Type** Height Width Weight Interface

Drive Weight

5400rpm up to 128MB 0.28 in (7 mm) 2.75 in (69.85 mm) ATA-8. SATA 3.0 600MB/s (Interface) **Maximum Sequential Read** Single Track: 1.5ms Agerage: 13ms

0.21 lbs (95 q)

Maximum: 32ms 1.953.525.168

Logical Blocks

0° to 60°C [case temp]

Operating Temperature

Maximum Sequential Write

ATA Security

Features

S.M.A.R.T., NCQ, Ultra DMA

HDD 500GB 5400RPM 7mm SATA

Drive Weight 0.21 lbs (95 q) **Rotation** speed 5400rpm **Cache Buffer** up to 128MB N/A NAND Type/Size

Height 0.28 in (7 mm) Width 2.75 in (69.85 mm) Interface **ATA-8, SATA 3.0 Transfer Rate** 600MB/s (Interface) **Seek Time** Single Track: 1.5ms Agerage: 13ms

Maximum: 32ms 976,773,168

Logical Blocks

Operating Temperature 0° to 60°C [case temp]

Security Features ATA Security

Features S.M.A.R.T., NCQ, Ultra DMA

HDD 500GB 7200RPM 7mm **SATA**

Rotation speed Cache Buffer Height Width Interface **Transfer Rate Seek Time**

Drive Weight

0.21 lbs (95 q) 7200rpm up to 128MB 0.28 in (7 mm) 2.75 in (69.85 mm) **ATA-8, SATA 3.0** 600MB/s (Interface) Single Track: 1.5ms

Agerage: 13ms Maximum: 32ms



Logical Blocks 976,773,168

Operating Temperature 0° to 60°C [case temp]

Security Features ATA Security

Features S.M.A.R.T., NCQ, Ultra DMA

SSD 128GB 2280 PCIe-3x2 Three Layer Cell

Form Factor M.2 2280
Capacity 128GB
NAND Type TLC

Height0.09 in (2.3 mm)Width0.87 in (22 mm)InterfacePCIe NVMe Gen3X4Maximum Sequential Readup to 1600MB/s ±20%Maximum Sequential Writeup to 900MB/s ±20%

Logical Blocks 250,069,680

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

Features Pyrite

SSD 1TB 2280 PCIe NVMe OLC

Form Factor M.2 2280
Capacity 1TB
NAND Type QLC

 Height
 0.09 in (2.3 mm)

 Width
 0.87 in (22 mm)

 Interface
 PCIe NVMe

Maximum Sequential Readup to 2300MB/s ±20%Maximum Sequential Writeup to 2000MB/s ±20%

Logical Blocks 2,000,409,264

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

Features Pyrite

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

 Height
 0.09 in (2.3 mm)

 Width
 0.87 in (22 mm)

 Weight
 0.02 lb (10 g)

 Interface
 PCIe NVMe

Maximum Sequential Readup to 2300MB/s ±20%Maximum Sequential Writeup to 1280MB/s ±20%

Logical Blocks 1,000,215,216

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

Features Pyrite

Technical Specifications

SSD 512GB 2280 PCIe NVMe QLC

Form Factor M.2 2280
Capacity 512GB
NAND Type QLC

Height 0.09 in (2.3 mm)
Width 0.87 in (22 mm)
Interface PCIe NVMe

Maximum Sequential Read up to 2300MB/s ±20%
Maximum Sequential Write up to 1400MB/s ±20%

Logical Blocks 1,000,215,216

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

Features Pyrite



NETWORKING/COMMUNICATIONS

802.11a/b/g/n/ac (1x1) Wi-Fi® and Bluetooth® 4.2

Wireless Card 1

Realtek

Wireless LAN Standards

IEEE 802.11a IEEE 802.11b IEEE 802.11g

IEEE 802.11n IEEE 802.11ac

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

Interoperability W

Wi-Fi certified modules

Frequency Band •802.11b/g/n

2.402 – 2.482 GHz •802.11a/n/ac

4.9 – 4.95 GHz (Japan) 5.15 – 5.25 GHz 5.25 – 5.35 GHz 5.47 – 5.725 GHz 5.825 – 5.850 GHz

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

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

802.11n: max 150Mbps802.11ac: max 433.3Mbps

Modulation Direct Sequence Spread Spectrum

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

• IEEE and WiFi certified 64 / 128 bit WEP encryption for a/b/g mode only

• AES-CCMP: 128 bit in hardware

• 802.1x authentication

• WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.

WPA2 certificationWPA3 certificationIEEE 802.11i

WAPI

Network Architecture

Models

Ad-hoc (Peer to Peer)

Infrastructure (Access Point Required)

Roaming Output Power² IEEE 802.11 compliant roaming between access points

• 802.11b : +14dBm minimum • 802.11g : +12dBm minimum

802.11a: +12dBm minimum
 802.11n HT20(2.4GHz): +12dBm minimum

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

Power Consumption

• Transmit mode 2.0 W

Receive mode 1.6 W

Idle mode (PSP) 180 mW (WLAN Associated)

• Idle mode 50 mW (WLAN unassociated)

Connected Standby 10mW

Radio disabled 8 mW

Power Management ACPI and PCI Express compliant power management

802.11 compliant power saving mode

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

802.11b, 11Mbps: -84dBm maximum 802.11a/g, 6Mbps: -86dBm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11n, MCS07: -67dBm maximum 802.11n, MCS15: -64dBm maximum 802.11ac, MCS0: -84dBm maximum 802.11ac, MCS9: -59dBm maximum

Antenna type High efficiency antenna.

One embedded dual band 2.4/5 GHz antenna is provided to the card to

support WLAN communications and Bluetooth communications

Form Factor PCI-Express M.2 MiniCard

Dimensions Type 2230 : 2.3 x 22.0 x 30.0 mm

 Weight
 Type 2230 : 2.8g

 Operating Voltage
 3.3v +/- 9%

Temperature Operating 14° to 158° F (-10° to 70° C)

Non-operating -40° to 176° F (-40° to 80° C)

Humidity Operating 10% to 90% (non-condensing)

Non-operating 5% to 95% (non-condensing)"

Altitude Operating 0 to 10,000 ft (3,048 m)

Non-operating 0 to 50,000 ft (15,240 m)

LED Activity LED Amber – Radio OFF;

LED OFF - Radio ON

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

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

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

Data Rates andLegacy: 3 Mbps data rate; throughput up to 2.17 Mbps **Throughput**BLE: 1 Mbps data rate; throughput up to 0.2 Mbps

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

channels

Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps

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

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

a maximum transmit power of + 4 dBm for BR and EDR.

- 1. Wi-Fi 5 is designed to support gigabit data rate when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 80MHz and higher channels. Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 5 (802.11 ac) is backwards compatible with prior 802.11 specs.
- 2. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.
- 3. 1. Check latest software/driver release for updates on supported security features.
- 4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/q (OFDM modulation).



Realtek RTL8852BE 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.3 Wireless Card (802.11ax 2x2. supporting gigabit data rate) 1

Wireless LAN Standards IEEE 802.11a

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

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

IEEE 802.11v

Wi-Fi certified modules Interoperability

Frequency Band •802.11b/g/n/ax

> 2.402 - 2.482 GHz •802.11a/n/ac/ax 4.9 - 4.95 GHz (Japan) 5.15 - 5.25 GHz 5.25 - 5.35 GHz 5.47 - 5.725 GHz 5.825 - 5.850 GHz

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

•802.11q: 6, 9, 12, 18, 24, 36, 48, 54 Mbps •802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps

•802.11n: max 300Mbps •802.11ac: max 866.7Mbps 802.11ax: max 1201Mbps

Modulation Direct Sequence Spread Spectrum

BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM

Security³ •IEEE and WiFi certified 64 / 128 bit WEP encryption for a/b/g mode only

AES-CCMP: 128 bit in hardware

•802.1x authentication

•WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.

 WPA2 certification WPA3 certification •IEEE 802.11i •WAPI

Network Architecture

Ad-hoc (Peer to Peer)

Models Roaming Infrastructure (Access Point Required)

IEEE 802.11 compliant roaming between access points Output Power²

• 802.11b: +18.5dBm minimum 802.11g: +17.5dBm minimum • 802.11a: +18.5dBm minimum

 802.11n HT20(2.4GHz): +15.5dBm minimum • 802.11n HT40(2.4GHz): +14.5dBm minimum 802.11n HT20(5GHz): +15.5dBm minimum

 802.11n HT40(5GHz): +14.5dBm minimum • 802.11ac VHT80(5GHz): +11.5dBm minimum 802.11ax HE40(2.4GHz): +10dBm minimum • 802.11ax HE80(5GHz): +10dBm minimum

Power Consumption Transmit mode: 2.5 W

•Receive mode:2 W

Idle mode (PSP)180 mW(WLAN Associated)
 Idle mode:50 mW(WLAN unassociated)
 Connected Standby/Modern Standby: 10mW

•Radio disabled: 8 mW

Power Management ACPI and PCI Express compliant power management

802.11 compliant power saving mode

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

•802.11b, 11Mbps: -84dBm maximum
•802.11a/g, 6Mbps: -86dBm maximum
•802.11a/g, 54Mbps: -72dBm maximum
•802.11n, MCS07: -67dBm maximum
•802.11n, MCS15: -64dBm maximum
•802.11ac, MCS0: -84dBm maximum
•802.11ac, MCS9: -59dBm maximum

•802.11ax, MCS11(HE40): -57dBm maximum •802.11ax, MCS11(HE80): -54dBm maximum

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

enclosure

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

Form Factor PCI-Express M.2 MiniCard

Dimensions 1. Type 2230: 2.3 x 22.0 x 30.0 mm

2. Type 1216: 1.67 x 12.0 x 16.0 mm

Weight 1. Type 2230: 2.8g

2. Type 126: 1.3g

Operating Voltage 3.3v +/- 9%

Temperature Operating 14° to 158° F (-10° to 70° C)

Non-operating -40° to 176° F (-40° to 80° C)

Humidity Operating 10% to 90% (non-condensing)

Non-operating 5% to 95% (non-condensing)

Altitude Operating 0 to 10,000 ft (3,048 m)

Non-operating 0 to 50,000 ft (15,240 m)

LED Activity LED Amber – Radio OFF

LED Off – Radio ON

HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2/5.3 Wireless Technology

Bluetooth Specification 4.0/4.1/4.2/5.0/5.1/5.2/5.3 Compliant

Frequency Band 2402 to 2480 MHz

Number of Available Legacy: 0~79 (1 MHz/CH)

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

Data Rates andLegacy: 3 Mbps data rate; throughput up to 2.17 Mbps **Throughput**BLE: 1 Mbps data rate; throughput up to 0.2 Mbps

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

channels

Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps

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

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

a maximum transmit power of + 4 dBm for BR and EDR.

1.Wi-Fi 6 is designed to support gigabit data rate when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 80MHz and higher channels. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11ax) is backwards compatible with



prior 802.11 specs.

- 2. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.
- 3. Check latest software/driver release for updates on supported security features.
- 4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

| Realtek RTL8822CE |
|-------------------------|
| 802.11ac 2x2 Wi-Fi® + |
| Bluetooth® 5.0 Wireless |
| Card ¹ |

Wireless LAN Standards IEEE 802.11a

> IEEE 802.11b IEEE 802.11q IEEE 802.11n IEEE 802.11ac IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r

IEEE 802.11v

Interoperability Wi-Fi certified modules

Frequency Band •802.11b/a/n

> 2.402 - 2.482 GHz •802.11a/n/ac 4.9 - 4.95 GHz (Japan) 5.15 - 5.25 GHz 5.25 - 5.35 GHz 5.47 - 5.725 GHz

5.825 - 5.850 GHz

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

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

• 802.11n: max 300Mbps 802.11ac: max 866.7Mbps

Modulation Direct Sequence Spread Spectrum

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

• IEEE and WiFi certified 64 / 128 bit WEP encryption for a/b/g mode only Security3

• AES-CCMP: 128 bit in hardware

802.1x authentication

• WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.

 WPA2 certification WPA3 certification • IEEE 802.11i WAPI

Network Architecture Ad-hoc (Peer to Peer)

Output Power2

Models Infrastructure (Access Point Required)

Roaming IEEE 802.11 compliant roaming between access points

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> > 802.11n HT20(2.4GHz): +15.5dBm minimum • 802.11n HT40(2.4GHz): +14.5dBm minimum • 802.11n HT20(5GHz): +15.5dBm minimum • 802.11n HT40(5GHz): +14.5dBm minimum

• 802.11ac VHT80(5GHz): +11.5dBm minimum

Power Consumption • Transmit mode :2.0 W

• Receive mode: 1.6 W

Idle mode (PSP) 180 mW (WLAN Associated)
Idle mode :50 mW (WLAN unassociated)
Connected Standby/Modern Standby: 10mW

Radio disabled: 8 mW

Power Management ACPI and PCI Express compliant power management

802.11 compliant power saving mode

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

802.11b, 11Mbps: -84dBm maximum 802.11a/g, 6Mbps: -86dBm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11n, MCS07: -67dBm maximum 802.11n, MCS15: -64dBm maximum 802.11ac, MCS0: -84dBm maximum 802.11ac, MCS9: -59dBm maximum

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

enclosure

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channels

Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps

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

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prior 802.11 specs.

2. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.

3. Check latest software/driver release for updates on supported security features.

4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

| Realtek RTK8111HSH |
|------------------------|
| 10/100/1000 Integrated |
| NIC |

Ethernet Features

10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14)

100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-

30)

1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023 clauses 40)

Auto-Negotiation (Automatic Speed Selection)

Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100

Mbit/s

Power Management ACPI compliant – multiple power modes

Situation-sensitive features reduce power consumption

Advanced link down power saving for reducing link down power

consumption

Performance Features TCP/IP/UDP Checksum Offload (configurable)

Protocol Offload (ARP & NS)

Large send offload and Giant send offload

Receiving Side Scaling Jumbo Frame 9K

Manageability Wake-on-LAN from modern standby or sleep state (Magic Packet and

Microsoft Wake-Up Frame): Wake-on-LAN from off (Magic Packet

only) (MSC is supported on selected model)

PXE 2.1 Remote Boot

Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB

(802.3x. clause 30))

Comprehensive diagnostic and configuration software suite

Virtual Cable Doctor for Ethernet cable status



POWER

1. Actual battery Watt-hours (Wh) will vary from design capacity. Battery capacity will naturally decrease with shelf life, time, usage, environment, temperature, system configuration, loaded apps, features, power management settings and other factors.

| HP | 65W | Smart | AC |
|-----|-------|-------|----|
| ada | anter | | |

Dimensions (H x W x D) 90x51x28.5mm

Weight 230g +/- 10g (Not including power cord. Power cord varies by country.)

Input 100 to 240 VAC

Input Efficiency 88.0 % at 115 VAC and 89.0 % at 230VAC

Input frequency range 48 ~ 63 Hz

Input AC current Max. 1.7 A at 90 VAC

Output Output power 65W

DC output 19.5V

Hold-up time 5ms at 115 Vac input

Output current limit <11.0A Over voltage protection- 29V max

automatic shutdown

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

Environmental Design Operating temperature 32°F to 95°F (0° to 35°C)
Non-operating (storage) -4°F to 185°F (-20° to 85°C)

temperature

Altitude 0 to 16,400 ft (0 to 5,000m)

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

EMI and Safety Eg

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

* Worldwide safety standards - IEC60950-1 and/or IEC62368-1, EN60950-1 and/or EN62368-1. UL60950-1 and/or UL62368-1. Class1.

SELV:

Agency approvals - C-UL-US, NORDICS, DENAN, EN55032 Class B, FCC

Class B, CISPR32 Class B, CCC, NOM-001 NYCE.

* MTBF - over 200,000 hours at 25°C ambient condition.

45 W AC adapter

Dimensions 95x40x26.5mm

Weight 200g +/- 10g (Not including power cord. Power cord varies by country.)

Input 100 to 240 VAC

Input Efficiency 88.0 % at 115 VAC and 89.0 % at 230VAC

Input frequency range 48 ~ 63 Hz

Input AC current Max. 1.4 A at 90 VA

Output Output power 45W

DC output 19.5V

Hold-up time 5ms at 115 Vac input

<8.0A Over voltage protection- 29V max

Output current limit automatic shutdown

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

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

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

temperature



Altitude 1 to 16.400 ft (0 to 5.000m)

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

EMI and Safety Certifications

*CE Mark - full compliance with LVD and EMC directives

* Worldwide safety standards - IEC60950-1 and/or IEC62368-1. EN60950-1 and/or EN62368-1. UL60950-1 and/or UL62368-1. Class1.

SELV:

Agency approvals - C-UL-US, NORDICS, DENAN, EN55032 Class B, FCC

Class B, CISPR32 Class B, CCC, NOM-001 NYCE.

* MTBF - over 200,000 hours at 25°C ambient condition.

HP 65W EM Smart AC adapter

Dimensions 102x55x30mm

250g +/- 10g (Not including power cord. Power cord varies by country.) Weight

Input 100 to 240 VAC

> **Input Efficiency** 88.0 % at 115 VAC and 89.0 % at 230VAC

Input frequency 48 ~ 63 Hz

range

Max. 1.7 A at 90 VAC **Input AC current**

Output 65W **Output power**

DC output 19.5V

Hold-up time 5ms at 115 Vac input

<11.0A Over voltage protection- 29V max **Output current limit**

automatic shutdown 4.5mm Barrel Type. 3 pin/grounded, mates with interchangeable cords

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

temperature

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

(storage) temperature

Altitude 1 to 16,400 ft (0 to 5,000m)

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

EMI and Safety Certifications

Connector

Eq:

*CE Mark - full compliance with LVD and EMC directives

* Worldwide safety standards - IEC60950-1 and/or IEC62368-1. EN60950-1 and/or EN62368-1, UL60950-1 and/or UL62368-1, Class1,

Agency approvals - C-UL-US, NORDICS, DENAN, EN55032 Class B, FCC

Class B, CISPR32 Class B, CCC, NOM-001 NYCE.

* MTBF - over 200.000 hours at 25°C ambient condition.

HP 3-cell Long Life Li-Ion (41 Wh¹) **Dimensions (H x W x L)** 6.0 x 186.85 x 90.2 mm (0.23 x 7.29 x 3.52 inch)

Weight 0.175 Kg (0.385 lb)

Cells/Type 3cell lithium-Ion Polymer cell 515974

Energy

Voltage 11.34V/11.28V **Amp-hour capacity** 3.62Ah/3.635Ah

Watt-hour capacity 41Wh

Temperature

Operating (Charging) 32° to 113° F (0° to 45° C)
Operating 14° to 122° F (-10° to 60° C)
(Discharging)

Fuel Gauge LED N/A
Warranty 1-year
Optional Travel No
Battery Available



AUDIO

HD Stereo Codec Realtek ALC3247

Audio I/O Ports One Headset Combo-Jack connector support CTIA spec.

Internal Speaker Amplifier 2W class D stereo amplifier for the internal speaker only. External speakers must be powered. **Multi-streaming Capable** Playback multi-streaming can be enabled in the audio control panel to allow independent audio

streams to be sent to/from the Combo jack or integrated speaker.

4-channel DAC supports 16/20/24-bit PCM format for independent two stereo channel or 2.1 Sampling

audio playback.

4-channel ADC supports 16/20/24-bit PCM format for independent two stereo channel audio

inputs.

All DACs support 44.1k/48k/96k/192kHz sample rate. All ADCs support 44.1k/48k/96k/192kHz sample rate.

Wavetable Syntheses

Yes - Uses OS soft wavetable

Analog Audio # of Channels on Line-Out

0

Yes.

Internal Speaker Yes

FINGERPRINT READER

Elan eFSA80ST touch sensor Sensor vendor

Sensor type Capacitive

DPI resolution

Scan area

False Rejection Rate FRR (False Reject Rate) / FAR (False Acceptance Rate):

FRR ~ 2% @ 1:50K FAR

False Acceptance Rate

Mobile Voltage Operation Mobile Voltage Operation: 2.65V to 3.6V

Operating Temperature Operating Temperature: 32° to 95° F (0° to 35° C)

Current Consumption

Image

Current Consumption Image: 50mA peak

Low Latency Wait For

Finger

Low Latency Wait For Finger: <900 uA

Capture Rate: 20cm/sec **Capture Rate**

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

Detection Matrix Detection Matrix: 508 dpi / 4x4mm sensor area



Technical Specifications

| ENVIRONMENTAL DATA | | | |
|---|---|--|--|
| Eco-Label Certifications & | This product has received | or is in the process of being c | ertified to the following approvals and may |
| declarations | be labeled with one or more of these marks: | | |
| | IT ECO declaration | า | |
| | US ENERGY STAR | B | |
| | | y Management Program (FEN | |
| | | | registration varies by country. See |
| | | t.net for registration status I | by country.* o IEEE 1680.1-2018 EPEAT®. Status varies |
| | | nttp://www.epeat.net for mo | |
| | TCO- N/A | nttp://www.epedt.net for mo | Te information. |
| | - | servation Program (CECP) | |
| | | onmental Protection Adminis | stration (SEPA) |
| | Taiwan Green Mai | rk | |
| | Korea Eco-label | | |
| | Japan PC Green la | | |
| Sustainable Impact | • 5% post-consumer recyc | iea plastic | |
| Specifications | • Low halogen | tad a | inable comendand we well blo |
| | | | ninably sourced and recyclable nably sourced and recyclable |
| | Bulk packaging available | | nably sourced and recyclable |
| System Configuration | | | and Declared Noise Emissions data for the |
| Jystem Configuration | _ | =- | |
| | Notebook model is based on a "Typically Configured Notebook". | | |
| Energy Consumption | | | |
| (in accordance with US | | | |
| ENERGY STAR® test | | | |
| | | | |
| method) | 115VAC, 60Hz | 230VAC, 50Hz | 100VAC, 50Hz |
| method) Normal Operation (Sort | | ` | |
| method) Normal Operation (Sort idle) | 115VAC, 60Hz 5.34 W | 230VAC, 50Hz 5.27 W | 100VAC, 50Hz 5.31 W |
| method) Normal Operation (Sort idle) Normal Operation (Long | 5.34 W | 5.27 W | 5.31 W |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) | 5.34 W 3.27 W | 5.27 W 3.22 W | 5.31 W 3.23 W |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep | 5.34 W 3.27 W 0.53 W | 5.27 W 3.22 W 0.55 W | 5.31 W 3.23 W 0.53 W |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) | 5.34 W 3.27 W | 5.27 W 3.22 W | 5.31 W 3.23 W |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep | 5.34 W 3.27 W 0.53 W 0.13 W | 5.27 W 3.22 W 0.55 W | 5.31 W 3.23 W 0.53 W |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep | 5.34 W 3.27 W 0.53 W 0.13 W | 5.27 W 3.22 W 0.55 W 0.16 W | 5.31 W 3.23 W 0.53 W 0.13 W |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep | 5.34 W 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data liste | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® co | 5.31 W 3.23 W 0.53 W 0.13 W empliant product if offered within the model |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep | 5.34 W 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data lister family. HP computers mar | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® co | 5.31 W 3.23 W 0.53 W 0.13 W mpliant product if offered within the model Logo are compliant with the applicable U.S. |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep | 5.34 W 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data liste family. HP computers mar Environmental Protection | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® coked with the ENERGY STAR® Agency (EPA) ENERGY STAR® | 5.31 W 3.23 W 0.53 W 0.13 W empliant product if offered within the model |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep | 5.34 W 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data liste family. HP computers mar Environmental Protection family does not offer ENE | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® coked with the ENERGY STAR Agency (EPA) ENERGY STAR | 5.31 W 3.23 W 0.53 W 0.13 W mpliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep | 5.34 W 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data liste family. HP computers mar Environmental Protection family does not offer ENE | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® coked with the ENERGY STAR® Agency (EPA) ENERGY STAR® RGY STAR® compliant configed PC featuring a hard disk described to the configer of the confige | 5.31 W 3.23 W 0.53 W 0.13 W mpliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model urations, then energy efficiency data listed |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep Off | 5.34 W 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data liste family. HP computers mar Environmental Protection family does not offer ENE is for a typically configure Microsoft Windows® opera | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® coked with the ENERGY STAR® Agency (EPA) ENERGY STAR RGY STAR® COMPLIANT Configed PC featuring a hard disk deting system. | 3.23 W 0.53 W 0.13 W mpliant product if offered within the model Logo are compliant with the applicable U.S. specifications for computers. If a model urations, then energy efficiency data listed lrive, a high efficiency power supply, and a |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep Off Heat Dissipation* | 5.34 W 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data lists family. HP computers mar Environmental Protection family does not offer ENE is for a typically configure | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® coked with the ENERGY STAR® Agency (EPA) ENERGY STAR® RGY STAR® compliant configed PC featuring a hard disk described to the configer of the confige | 5.31 W 3.23 W 0.53 W 0.13 W mpliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model urations, then energy efficiency data listed |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep Off Heat Dissipation* Normal Operation (Short | 5.34 W 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data liste family. HP computers mar Environmental Protection family does not offer ENEI is for a typically configure Microsoft Windows® opera | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® coked with the ENERGY STAR® Agency (EPA) ENERGY STAR® COMPLIANT Configured PC featuring a hard disk detring system. | 5.31 W 3.23 W 0.53 W 0.13 W mpliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model urations, then energy efficiency data listed drive, a high efficiency power supply, and a |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep Off Heat Dissipation* Normal Operation (Short idle) | 5.34 W 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data liste family. HP computers mar Environmental Protection family does not offer ENE is for a typically configure Microsoft Windows® opera | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® coked with the ENERGY STAR® Agency (EPA) ENERGY STAR RGY STAR® COMPLIANT Configed PC featuring a hard disk deting system. | 3.23 W 0.53 W 0.13 W mpliant product if offered within the model Logo are compliant with the applicable U.S. specifications for computers. If a model urations, then energy efficiency data listed lrive, a high efficiency power supply, and a |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep Off Heat Dissipation* Normal Operation (Short | 5.34 W 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data liste family. HP computers mar Environmental Protection family does not offer ENEI is for a typically configure Microsoft Windows® opera | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® coked with the ENERGY STAR® Agency (EPA) ENERGY STAR® COMPLIANT Configured PC featuring a hard disk detring system. | 5.31 W 3.23 W 0.53 W 0.13 W mpliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model urations, then energy efficiency data listed drive, a high efficiency power supply, and a |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep Off Heat Dissipation* Normal Operation (Short idle) Normal Operation (Long | 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data liste family. HP computers mar Environmental Protection family does not offer ENEI is for a typically configure Microsoft Windows® opera | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® coked with the ENERGY STAR® Agency (EPA) ENERGY STAR® COMPLIANT Configured PC featuring a hard disk detaing system. 230VAC, 50Hz 18 BTU/hr | 3.23 W 0.53 W 0.13 W mpliant product if offered within the model Logo are compliant with the applicable U.S. specifications for computers. If a model urations, then energy efficiency data listed lrive, a high efficiency power supply, and a 100VAC, 50Hz 18.2 BTU/hr |
| method) Normal Operation (Sort idle) Normal Operation (Long idle) Sleep Off Heat Dissipation* Normal Operation (Short idle) Normal Operation (Long idle) | 5.34 W 3.27 W 0.53 W 0.13 W NOTE: Energy efficiency data liste family. HP computers mar Environmental Protection family does not offer ENE is for a typically configure Microsoft Windows® operations. 115VAC, 60Hz 18.3 BTU/hr | 5.27 W 3.22 W 0.55 W 0.16 W ed is for an ENERGY STAR® coked with the ENERGY STAR® Agency (EPA) ENERGY STAR® of PC featuring a hard disk dating system. 230VAC, 50Hz 18 BTU/hr | 5.31 W 3.23 W 0.53 W 0.13 W mpliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model urations, then energy efficiency data listed drive, a high efficiency power supply, and a 100VAC, 50Hz 18.2 BTU/hr |





| | *NOTE: Heat dissipation is calculated based on the measured watts, assuming the servi attained for one hour. | | | ssuming the service level is | |
|----------------------------------|--|--|--|---|--|
| Declared Noise Emissions | | Sound Power | Sound P | ressure | |
| (in accordance with | | (L _{WAd} , bels) | (L _{pAm} , de | ecibels) | |
| ISO 7779 and ISO 9296) | | | | | |
| Typically Configured – Idle | 3.2 25.7 | | | | |
| Fixed Disk – Random writes | | 3.3 | 26 | .5 | |
| Optical Drive - Sequential reads | N/A N/A | | | 'A | |
| Longevity and Upgrading | | can be upgraded, possib /or components contain | ly extending its useful life by sev ed in the | eral years. Upgradeable | |
| | Spare parts a of production | | the warranty period and or for up | o to "5" years after the end | |
| Additional Information | dire This Equi This Drin This www Plas | ctive - 2011/65/EC. HP product is designed in the product is designed in the product is in compliance where the product is in compliance where the product is in compliance where the parts weighing over 1043. | with California Proposition 65 (S | cal and Electronic State of California; Safe Idard at the Gold level, see In marked per ISO11469 and | |
| Packaging Materials | External: | PAPER/Corrugated | | 295 g | |
| | | PAPER/Molded Pulp | | 141 g | |
| | Internal: | PLASTIC/Polyethylene | low density - LDPE | 10 g | |
| | | PLASTIC/Polypropyler | ie - PP | 4 g | |
| | The plastic packaging material contains at least 0.0% recycled content. | | | | |
| | | | terials contains at least 57.0% re | | |
| RoHS Compliance | the restriction to our product legislation in We believe the elimination of substances—pertains to elimination of the met our vicquirements scope of the evolve. | ns in the European Union the Europe, as well as China e RoHS directive and single from the Substances of concernational power of the Substances of concernational and electronics for virtually all relevant commitment to include for the Substance of the Substance | nilar laws play an important role i . We have supported the inclusior d certain phthalates—in future R | ubstances (RoHS) Directive the development of related in promoting industry-wide n of additional toHS legislation that the new EU RoHS will continue to extend the egulations continue to | |
| Material Usage | to the | HP General | the following substances in exces Specification for zenship/environment/supplycha | the Environment at | |



Technical Specifications

| rechnical Specificat | tions |
|--------------------------------------|---|
| |): |
| | Asbestos Certain Azo Colorants Certain Brominated Flame Retardants – may not be used as flame retardants in plastics Cadmium Chlorinated Hydrocarbons Chlorinated Paraffins Bis(2-Ethylhexyl) phthalate (DEHP) Benzyl butyl phthalate (BBP) Dibutyl phthalate (BBP) Diisobutyl phthalate (DIBP) Formaldehyde Halogenated Diphenyl Methanes Lead carbonates and sulfates Lead and Lead compounds Mercuric Oxide Batteries Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user. Ozone Depleting Substances Polybrominated Biphenyls (PBBs) Polybrominated Biphenyl Ethers (PBBEs) Polybrominated Biphenyl Oxides (PBBOs) Polychlorinated Biphenyl (PCB) Polychlorinated Terphenyls (PCT) Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has |
| Packaging Usage | Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications. Radioactive Substances Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO) HP follows these guidelines to decrease the environmental impact of product packaging: Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials. |
| | Eliminate the use of ozone-depleting substances (ODS) in packaging materials. Design packaging materials for ease of disassembly. Maximize the use of post-consumer recycled content materials in packaging materials. Use readily recyclable packaging materials such as paper and corrugated materials. Reduce size and weight of packages to improve transportation fuel efficiency. Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards. |
| End-of-life Management and Recycling | HP offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. |
| | 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. |

Technical Specifications

| HP, Inc. Environment | Corporate | For more information about HP's commitment to the environment: |
|-------------------------|-----------|--|
| Information | | Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html ISO 14001 certificates: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842 and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf |
| footnotes | | Percentage of ocean-bound plastic contained in each component varies by product Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard. External power supplies, WWAN modules, power cords, cables and peripherals excluded. 100% outer box packaging and corrugated cushions made from sustainably sourced certified and recycled fibers. Fiber cushions made from 100% recycled wood fiber and organic materials. |

COUNTRY OF ORIGIN

China



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

| Category | Description | Part Number |
|----------------|---|-------------|
| Audio/Video | HP Wired USB-A Stereo Headset | 428K6AA |
| | HP Wired 3.5mm Stereo Headset | 428K7AA |
| | HP 500 BT Headset | 53L34AA |
| | HP 365 BT Speaker | 567D3AA |
| Cases | HP Prelude Backpack 15.6 | 1E7D6AA |
| | HP Prelude Top Load 15.6 | 1E7D7AA |
| | HP Prelude Pro Recycle Backpack | 1X644AA |
| | HP Prelude Pro Recycle Top Load | 1X645AA |
| | HP Prelude Pro Recycle Backpack | 1X644AA |
| | HP Prelude Pro Recycle Top Load | 1X645AA |
| | HP Executive 15.6 Backpack | 6KD07AA |
| | HP Executive 15.6 Top Load | 6KD06AA |
| | HP Renew Business 17.3" Backpack | 3E2U5AA |
| | HP Renew Business 15.6" Bag | 3E5F8AA |
| | HP Renew Business 17.3" Bag | 3E2U6AA |
| Hub | HP USB-C to USB-A Hub | Z6A00AA |
| Adapter | HP USB 3.0 to Gigabit Adapter | N7P47AA |
| | HP USB-C to RJ45 Adapter | V7W66AA |
| | HP USB-C to USB 3.0 Adapter | N2Z63AA |
| | HP USB-C to RJ45 Adapter G2 | 4Z527AA |
| | HP USB 3.0 to Gig RJ45 Adapter G2 | 4Z7Z7AA |
| Keyboard/Combo | HP 975 USB+BT Dual-Mode Wireless Keyboard | 3Z726AA |
| | HP 655 Wireless Keyboard and Mouse Combo | 4R009AA |
| | HP 225 Wired Mouse and Keyboard Combo | 286J4AA |
| | HP 235 Wireless Mouse and Keyboard Combo | 1Y4D0AA |
| Mouse | HP USB Premium Wireless Mouse | 1JR31AA |
| | HP 435 Multi-Device Wireless Mouse | 3B4Q5AA |
| | HP Creator USB-A+Bluetooth 935 Wireless Mouse Black | 1D0K8AA |
| | HP USB-A+Bluetooth Travel Bluetooth Mouse | 6SP30AA |
| | HP 235 Slim Wireless Mouse | 4E407AA |
| Power | HP 65W Smart AC Adapter | Н6Ү89АА |
| Commodity | HP USB DVD-Writer EXT ODD | F2B56AA |



Summary of Changes

| Date of change | Version History | | Description of change |
|------------------|-----------------|---------|---|
| March 14, 2022 | V1 to V2 | Added | Battery Compliance in Power section; Environmental Data |
| April 11, 2022 | V2 to V3 | Added | Reference for USB ports |
| April 25, 2022 | V3 to V4 | Added | MIL-STD test in At a Glance section |
| June 15, 2022 | V4 to V5 | Added | Added note in Manageability Feature |
| August 5, 2022 | V5 to V6 | Updated | Eco-Label Certifications & declarations |
| August 8, 2022 | V6 to V7 | Updated | Memory Slots |
| October 20, 2022 | V7 to V8 | Updated | Bluetooth version |
| March 6, 2023 | V8 to V9 | Updated | Storage and Drives section |
| March 22, 2023 | V9 to V10 | Updated | USB Type C [®] description |
| | V10 to V11 | | |
| | | | |
| | | | |

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