tehnot≡ka

Informacije o proizvodu (EN)

HP laptop 255 G9 R3-5425U 256GB (6S6F7EA)





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-r3-5425u-256gb-6s6f7ea-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.



HP 255 15.6 inch G9 Notebook PC

QuickSpecs

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 MT/s SDRAM 11,12

Memory

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

Memory Slots

2 SODIMM (Ryzen 3/5/7 processors speed runs up to 3200 MT/s, Ryzen 3 3250U speed runs up to 2400 MT/s) ^{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.



Technical Specifications

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

MyHP

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

Yes

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

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

350.66*215.34(With PCBA) tvp +/- 0.5 Outline Dimensions (W x H)

344.16 x 193.59 typ **Active Area**

310g max Weight 15.6" Diagonal Size

2.45 typ /2.6 max **Thickness**

eDP1.4 Interface Anti-Glare **Surface Treatment**

No **Touch Enabled**

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

1920 x 1080 (FHD) **Pixel Resolution**

WLED Format RGB Backlight

sRGB100% typ **Color Gamut Coverage**

8bits **Color Depth**

UWVA 89/89/89/89 Viewing Angle

Low Blue Light Yes

Power Consumption (W. EBL@

150nits max/200nits max)

Touch Enabled

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)

344.16 x 193.59 typ **Active Area**

360g max Weight 15.6" Diagonal Size 3.2mm max

Thickness eDP1.2 Interface Anti-Glare **Surface Treatment** No

300:1 typ **Contrast Ratio** 60Hz **Refresh Rate** 250nits typ **Brightness**

1920 x 1080 (FHD) **Pixel Resolution**

WLED Format RGB Backlight



NTSC45% **Color Gamut Coverage** 6hit Color Depth

SVA 45/45/15/35 **Viewing Angle**

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

Outline Dimensions (W x H) 350.96*216.75(max.) 344.16 x 193.59 (typ.)

Active Area 370g max. Weight

15.6" **Diagonal Size** 3.2 max. **Thickness** eDP1.2 Interface Anti-Glare **Surface Treatment** No

Touch Enabled 600:1 typ **Contrast Ratio** 60Hz **Refresh Rate** 250nits typ

1920 x 1080 (FHD) **Pixel Resolution**

WLED **Format** RGB Backlight NTSC45% **Color Gamut Coverage**

6bits **Color Depth**

UWVA 85/85/85/85 **Viewing Angle**

Low Blue Light No

Power Consumption (W, EBL@

150nits max/200nits max)

Brightness

15.6-in HD (1366x768) Anti-Glare WLED SVA 45percent cq 250nits eDP 1.2 w/o PSR NWBZ ultraslim

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

2.75W max

344.23 x 193.54 typ **Active Area**

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

Thickness eDP1.2 Interface Anti-Glare **Surface Treatment**

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

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

WLED **Format RGB** Backlight NTSC45% **Color Gamut Coverage**



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

Drive Weight 0.21 lbs (95 q) **Rotation** speed 5400rpm **NAND Type** up to 128MB Height 0.28 in (7 mm) Width 2.75 in (69.85 mm) Weiaht ATA-8. SATA 3.0 Interface 600MB/s (Interface) **Maximum Sequential Read** Single Track: 1.5ms Agerage: 13ms

Agerage: 13ms Maximum: 32ms

1.953.525.168

Maximum Sequential Write

Logical Blocks

0° to 60°C [case temp]

Operating Temperature

ATA Security

Features

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

HDD 500GB 5400RPM 7mm

SATA

Drive Weight 0.21 lbs (95 g)

Rotation speed 5400rpm

Cache Buffer up to 128MB

NAND Type/Size N/A

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

ATA Security

Logical Blocks

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

Security Features

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

HDD 500GB 7200RPM 7mm

SATA

Drive Weight 0.21 lbs (95 q) **Rotation speed** 7200rpm **Cache Buffer** up to 128MB 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



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 IE

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 IEEE 802.11v

Interoperability 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 802.11iWAPI

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/g (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

Interoperability Wi-Fi certified modules

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

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 • 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

Models

Ad-hoc (Peer to Peer)

Infrastructure (Access Point Required)

Roaming

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/q, 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 and Legacy: 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 802.11g
IEEE 802.11n
IEEE 802.11ac
IEEE 802.11d
IEEE 802.11e
IEEE 802.11h
IEEE 802.11h
IEEE 802.11i
IEEE 802.11k
IEEE 802.11r

IEEE 802.11v

Interoperability 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 300Mbps802.11ac: 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

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

WPA2 certification
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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

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prior 802.11 specs.

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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.

ΗP	65W	Sm	art	AC
ad:	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

48 ~ 63 Hz Input frequency range

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

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

temperature

Altitude 0 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.

45 W AC adapter

Dimensions 95x40x26.5mm

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

100 to 240 VAC Input

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

48 ~ 63 Hz Input frequency range

Max. 1.4 A at 90 VA **Input AC current**

Output 45W **Output power**

> 19.5V DC output

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)

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

*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

Temperature

 Operating (Charging)
 32° to 113° F (0° to 45° C)

 Operating
 14° to 122° F (-10° to 60° C)

41Wh

(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 Yes. 0

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 certified to the following approvals and may					
declarations	be labeled with one or more of these marks:					
	IT ECO declaration					
	US ENERGY STAR					
		y Management Program (FE				
			® registration varies by country. See			
		t.net for registration status	to IEEE 1680.1-2018 EPEAT®. Status varies			
		nttp://www.epeat.net for m				
	TCO- N/A					
	 China Energy Con 	servation Program (CECP)				
		onmental Protection Admin	istration (SEPA)			
	Taiwan Green Ma	rk				
	Korea Eco-label	1 14				
Sustainable Impact	Japan PC Green la For post consumer resus					
Sustainable Impact Specifications	5% post-consumer recycLow halogen	ιευ μιαστιτ				
Specifications	_	ted cuchions are 100% suct	ainably sourced and recyclable			
	_		ainably sourced and recyclable			
	Bulk packaging available		amasty sourced and recyclastic			
System Configuration			and Declared Noise Emissions data for the			
		on a "Typically Configured N				
		, , , , , , , , , , , , , , , , , , ,				
Energy Consumption						
1						
(in accordance with US						
(in accordance with US ENERGY STAR® test						
	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz			
ENERGY STAR® test	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz			
ENERGY STAR® test method)	115VAC, 60Hz 5.34 W	230VAC, 50Hz 5.27 W	100VAC, 50Hz 5.31 W			
ENERGY STAR® test method) Normal Operation (Sort idle) Normal Operation (Long	5.34 W	5.27 W	5.31 W			
ENERGY STAR® test 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			
ENERGY STAR® test 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			
ENERGY STAR® test 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			
ENERGY STAR® test 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			
ENERGY STAR® test 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			
ENERGY STAR® test 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® c	5.31 W 3.23 W 0.53 W 0.13 W ompliant product if offered within the model			
ENERGY STAR® test 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® content of the energy stars of	5.31 W 3.23 W 0.53 W 0.13 W ompliant product if offered within the model Logo are compliant with the applicable U.S.			
ENERGY STAR® test 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® cked with the ENERGY STAR® Agency (EPA) ENERGY STAR	5.31 W 3.23 W 0.53 W 0.13 W ompliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model			
ENERGY STAR® test 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® CARENCY STAR® COMPLIANT CONFI	5.31 W 3.23 W 0.53 W 0.13 W ompliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model gurations, then energy efficiency data listed			
ENERGY STAR® test 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 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® COMPLIANT CONFIRMS OF FEBRES STAR COMPLIANT CONFIRMS	5.31 W 3.23 W 0.53 W 0.13 W ompliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model			
ENERGY STAR® test 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® COMPLIANT CONFIRMS OF FEBRES STAR COMPLIANT CONFIRMS	5.31 W 3.23 W 0.53 W 0.13 W ompliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model gurations, then energy efficiency data listed			
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ENERGY STAR® test 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® operation	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 CONFIRED STAR® COMPLIANT CONFIRED POR FEATURING A HARD disk string system.	3.23 W 0.53 W 0.13 W ompliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model gurations, then energy efficiency data listed drive, a high efficiency power supply, and a			
ENERGY STAR® test 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 liste family. HP computers mar Environmental Protection family does not offer ENE is for a typically configure Microsoft Windows® operation	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 CONFIRED STAR® COMPLIANT CONFIRED POR FEATURING A HARD disk string system.	3.23 W 0.53 W 0.13 W ompliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model gurations, then energy efficiency data listed drive, a high efficiency power supply, and a			
ENERGY STAR® test 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 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® of PC featuring a hard disk ating system.	5.31 W 3.23 W 0.53 W 0.13 W ompliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model gurations, then energy efficiency data listed drive, a high efficiency power supply, and a			
ENERGY STAR® test 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® of PC featuring a hard disk ating system.	5.31 W 3.23 W 0.53 W 0.13 W ompliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model gurations, then energy efficiency data listed drive, a high efficiency power supply, and a			
ENERGY STAR® test 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 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 STARGY STARGY STAR® Compliant confirmed PC featuring a hard disk ating system. 230VAC, 50Hz 18 BTU/hr	5.31 W 3.23 W 0.53 W 0.13 W ompliant product if offered within the model Logo are compliant with the applicable U.S. R® specifications for computers. If a model gurations, then energy efficiency data listed drive, a high efficiency power supply, and a 100VAC, 50Hz 18.2 BTU/hr			



Off

0.5 BTU/hr

0.4 BTU/hr

0.4 BTU/hr



	* NOTE: Heat attained for 0	dissipation is calculat one hour.	ed based on th	e measu	red watts, a	assuming	the service level is	
Declared Noise Emissions		Sound Power			Sound F	Pressure		
(in accordance with								
ISO 7779 and ISO 9296)	(Lpam, decibets)							
Typically Configured – Idle		3.2			2!	5.7		
Fixed Disk – Random writes		3.3				6.5		
Optical Drive - Sequential reads		N/A			N	/A		
Longevity and Upgrading		can be upgraded, poss /or components conta		ı its usefu	ıl life by sev	veral year	s. Upgradeable	
	Spare parts a of production	nre available througho n.	ut the warrant	y period a	and or for u	p to "5" ye	ears after the end	
Additional Information	 This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC. This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net Plastics parts weighing over 25 grams used in the product are marked per IS011469 an IS01043. This product is 94.2% recycle-able when properly disposed of at end of life. 				ectronic alifornia; Safe he Gold level, see per ISO11469 and			
Packaging Materials	External:	PAPER/Corrugated				295 g		
		PAPER/Molded Pulp				141 g		
	Internal:	PLASTIC/Polyethyle	ne low density	- I DPF		10 g		
	Internati	PLASTIC/Polypropylene - PP				4 g		
	The plastic packaging material contains at least 0.0% recycled content.							
	The corrugated paper packaging materials contains at least 57.0% recycled content.							
RoHS Compliance	HP Inc. complies fully with materials regulations. We were among the first companies to extend the restrictions in the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive to our products worldwide through the HP GSE. HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam. We believe the RoHS directive and similar laws play an important role in promoting industry-wide elimination of substances of concern. We have supported the inclusion of additional substances—including PVC, BFRs, and certain phthalates—in future RoHS legislation that pertains to electrical and electronics products. We met our voluntary objective to achieve worldwide compliance with the new EU RoHS requirements for virtually all relevant products by July 2013, and we will continue to extend the scope of the commitment to include further restricted substances as regulations continue to evolve. To obtain a copy of the HP RoHS Compliance Statement, see HP RoHS position statement.							
Material Usage	to the	does not contain any c HP Genera np.com/hpinfo/globalo	al Specifi	ication	for	the	Environment at	



Technical Specifications

recillical Specifica	נוטווס
recinical Specifical	 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 (DBP) 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 been 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. 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.	Corporate	For more information about HP's commitment to the environment:
Enviro	nmental		
Inform	nation		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
footno	otes		 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	1DOK8AA
	HP USB-A+Bluetooth Travel Bluetooth Mouse	6SP30AA
	HP 235 Slim Wireless Mouse	4E407AA
Power	HP 65W Smart AC Adapter	H6Y89AA
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
April 24, 2024	V10 to V11	Updated	Memory Section

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