

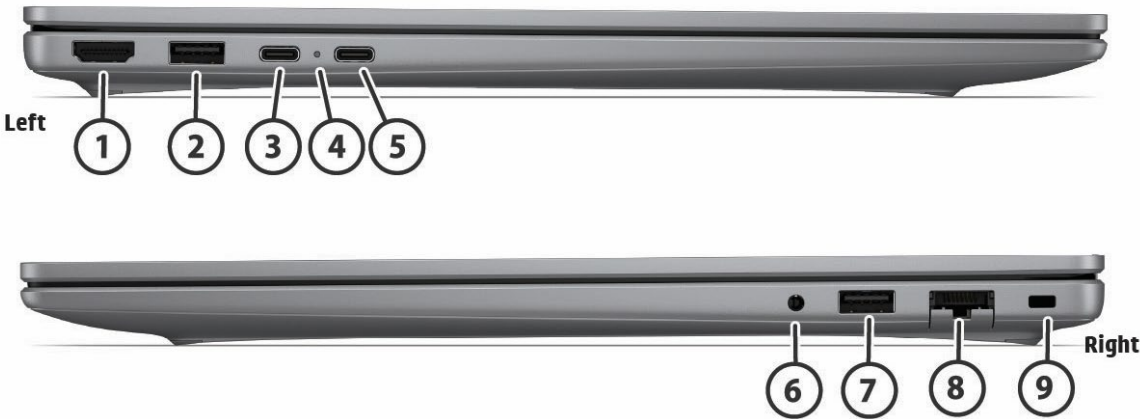
HP 200 G2i 16 inch Notebook PC



Front

- | | | | |
|---|-------------------------|---|------------|
| 1 | Internal Microphone (2) | 4 | Webcam LED |
| 2 | Webcam | 5 | Touchpad |
| 3 | Camera Shutter | | |





Sides	
1	HDMI 1.4b
2	USB Type-A 5Gbps signaling rate (Powered)
3	USB Type-C® 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)
4	Power Indicator LED
5	USB Type-C® 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)
6	Headphone/mic combo jack
7	USB Type-A 5Gbps signaling rate (Powered)
8	RJ45 Ethernet port
9	Nano Security Slot

PRODUCT NAME

HP 200 G2i 16 inch Notebook PC



OPERATING SYSTEM

Preinstalled

FreeDOS

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

Windows 11 Home Education ¹

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

Windows 11 Pro ¹

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>



PROCESSORS

Processor ^{2,3,4,5}	Cores	Number of P-cores	Number of E-cores	Number of LP E-cores	Threads	Smart Cache	Max Turbo Frequency	Integrated Graphics
							P-cores	
Intel® Core™ 7 processor 240H	10 cores	6	4	N/A	16	24 MB	5.20 GHz	Intel® Graphics
Intel® Core™ 5 processor 220H	12 cores	4	8	N/A	16	18 MB	4.90 GHz	Intel® Graphics
Intel® Core™ 5 processor 220U	10 cores	2	8	N/A	12	12 MB	5.00 GHz	Intel® Graphics
Intel® Core™ 7 processor 150U	10 cores	2	8	N/A	12	12 MB	5.40 GHz	Intel® Graphics
Intel® Core™ 5 processor 120U	10 cores	2	8	N/A	12	12 MB	5.00 GHz	Intel® Graphics
Intel® Core™ 3 processor 100U	6 cores	2	4	N/A	8	10 MB	4.70 GHz	Intel® Graphics
Intel® Core™ 3 processor N355	8 cores	0	8	N/A	8	6 MB	3.90 GHz	Intel® Graphics
Intel® processor N250	4 cores	0	4	N/A	4	6 MB	3.80 GHz	Intel® Graphics
Intel® processor N150	4 cores	0	4	N/A	4	6 MB	3.60 GHz	Intel® Graphics

Processor Family

- Intel® Core™ 7 processor
- Intel® Core™ 5 processor
- Intel® Core™ 3 processor
- Intel® processor

2. 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.

3. Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration.

4. For full Intel® vPro® functionality, Windows 10 Pro 64 bit, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or WLAN card and TPM 2.0 are required. Some functionality requires additional 3rd party software in order to run. See <http://intel.com/vpro>

5. For full Intel® vPro® functionality, Windows 10 Pro 64 bit, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or WLAN card and TPM 2.0 are required. Some functionality requires additional 3rd party software in order to run. See

<http://intel.com/vpro>



GRAPHICS

Integrated

Intel® Graphics



DISPLAY

Availability may vary by country.
Actual brightness will be lower with touchscreen or HP Sure View.

- 40.6 cm (16") diagonal, 2.5K (2560 x 1600), LCD, UWVA, Anti-Glare, Low Blue Light, 500 nits, sRGB 100%
- 40.6 cm (16") diagonal, WUXGA (1920 x 1200), LCD, UWVA, , Anti-Glare, WLED, 300 nits, sRGB 62.5%
- 40.6 cm (16") diagonal, WUXGA (1920 x 1200), OLED, UWVA, BrightView, OLED+ Low Blue Light, 300nit, DCI-P3 95%

Display Size (Diagonal)

40.6 cm (16.0")

Aspect Ratio

16:10

Screen to Body Ratio

Up to 88%

Max Hinge Open Angle

135°



STORAGE AND DRIVES

Storage

1 TB PCIe® NVMe™ SSD Value ⁶

512 GB PCIe® NVMe™ SSD Value ⁶

256 GB PCIe® NVMe™ SSD Value ⁶

6. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 32 GB is reserved for system recovery software.



MEMORY

Only one memory type option can be selected in a single unit.

HP branded SODIMM memory is recommended to ensure compatibility. If two SODIMM memory modules with different speeds are installed, the system will perform at the lower memory speed.

Option	Option 1	Option 2
Memory slots	Two SODIMM slot	Onboard memory, no memory slots
Memory type	DDR5	LPDDR5x
Maximum supported memory	32GB DDR5-5200 MT/s	8GB LPDDR5-4800 MT/s
Available memory configurations	8GB (1 x 8GB) DDR5-5200 MT/s 12GB (1 x 12GB) DDR5-5200 MT/s 16GB (1 x 16GB) DDR5-5200 MT/s 16GB (2 x 8GB) DDR5-5200 MT/s 24GB (1 x 24GB) DDR5-5200 MT/s 32GB (1 x 32GB) DDR5-5200 MT/s	8GB LPDDR5-4800 MT/s
Notes	System runs at 5200 MT/s Supports Dual Channel Memory (optional) Memory is replaceable by customer or customer IT support.	System runs at 4800 MT/s Memory is non-accessible / non-upgradeable.

NETWORKING /COMMUNICATIONS

Items below may be optional.

Ethernet

RTK GBE Ethernet Controller ⁷

WLAN

Realtek 8852BE-VT Wi-Fi 6 Bluetooth® 5.4 WW WLAN ^{8,10}

Realtek 8922AE-VS Wi-Fi 7 Bluetooth® 6.0 WW WLAN ^{9,10}

Miracast ¹¹

Compatible with Miracast-certified devices (For Win11)

7. 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.

8. Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. Available in countries where Wi-Fi 6E is supported.

9. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 7 (802.11BE) functionality requires compatible Windows OS, select processor, and a Wi-Fi 7 router, sold separately. Wi-Fi 7 is backwards compatible with prior 802.11 specs. Available in countries where Wi-Fi 7 is supported. The specification for 802.11BE is a draft specification and is not final. If the final specification differs from the draft specification, it may affect the ability of the device to communicate with other 802.11BE devices.

10. 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).

11. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.



AUDIO/MULTIMEDIA

Privacy panel is only available on select models.

Audio

Audio by Poly Studio

2 Integrated stereo speakers

2 Integrated dual array microphone

AI noise reduction

Speaker Power

2W / 4 ohm per speaker

Camera

FHD HDR camera

FHD HDR camera, IR camera

Sensors

Fingerprint Sensor



KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

HP Standard Notebook Keyboard with numeric keypad, spill-resistant, backlit keyboard.

HP Standard Notebook Keyboard with numeric keypad, spill-resistant keyboard.

Pointing Device

Clickpad

Function Keys

F1 - Display Switching

F2 - Screenshot

F3 - Brightness Down

F4 - Brightness Up

F5 - Play and Pause

F6 - Audio Mute

F7 - Volume Down

F8 - Volume Up

F9 - Mic Mute

F10 - Blank or Backlit Toggle

F11 - Programmable Key

F12 - Settings

Hidden Function Keys

Fn+R - Break

Fn+S - Sys Rq

Fn+C - Scroll Lock



SOFTWARE AND SECURITY

Application Software

MS Windows DPK ReG - CPS
Windows 10 Wallpaper - CPS
McAfee - MLS
McAfee Checkbox
McAfee LiveSafe Install Rules Configuration
McAfee URL
MS Office WW Common
MS Office - Lang Packs
WPS Office CMIT
Dropbox Promotion
Dropbox URL
E-QR Code - UWP
sMedio True DVD for HP
Adobe offer
Doubao
HP Documentation
Retail Demo -Video Attract Loop
HP app¹²
HP Privacy Settings
Windows Push Button Reset Recovery - CPS
Windows 10 HP Driver Reinstallation Support - CPS
HP SSRM
HP Support Assistant¹³
HP Connection Optimizer
ENERGY STAR UWP
HP PC Hardware Diagnostics Windows
Touchpoint Customizer for Consumer
HP PC Hardware Diagnostics UEFI
HP Setup Integrated OOBE (GDPR)
Bing Search for IE11
WW-BTB Host and ISP Stub



Audio Brand Logo Rules Configuration

Booking URL

Booking Edge Fav

Agoda URL

Agoda Edge Fav

HP Smart Support ¹⁴

HP System Event Utility - UWP

HSA Telemetry for Consumer

HSA fusion for Consumer

TCO E-Logo

Manageability Features

HP BIOS Recovery

Windows Cloud Bare Metal Recovery – CPS

Security Features

Absolute Persistence Module ¹⁵

Security- TPM

Model

Model: Nuvoton NPCT760HACYX

Firmware Version

Firmware Version: 7.2.4.0

FIPS 140-2 Compliant

No. It is FIPS 140-3 Level 1 Compliant.

BIOS

HP Secure Erase ¹⁶

Smartcard Reader

FIPS 140-2 Compliant

No Smartcard Reader



IPv6 Support

Yes

FirstNet Certified

No

Does the BIOS implement the ISO/IEC 19678:2015 (formerly NIST 800-147) guidelines?

Yes

UEFI version

2.8

Class

2 (RPL)

3 (TWL)

12. HP app requires Windows 10 or higher OS. Multicamera support for Mini Desktop PC only available on 13th processor and beyond.

13. HP Support Assistant is available on Windows. For more information, please visit <http://www.support.hp.com/help/hp-support-assistant>

14. 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>.

15. Absolute Persistence firmware module is shipped turned off and can only be activated with the purchase a license subscription and full activation of the software agent. License subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. Certain conditions apply. For full details visit: <https://www.absolute.com/about/legal/agreements/absolute/>.

16. HP Secure Erase implements the methods outlined in the National Institute of Standards and Technology Special.



POWER

Power supply availability may vary by country.

Battery is internal and replaceable by customer.

Higher wattage adapter is recommended for best performance and fastest charging.

Using lower-capacity third-party USB Type-C® power cables may reduce power delivery.

Power Supply

HP 100W Wall Mount USB Type-C® Gallium Nitride AC power adapter

HP 65W Wall Mount USB Type-C® Gallium Nitride AC power adapter

HP 65W Standard USB Type-C® Gallium Nitride AC power adapter

HP 45W Standard USB Type-C® Gallium Nitride AC power adapter

Battery

HP Long Life 4 cell, 68Wh Polymer ¹⁷

HP Long Life 3 cell, 41Wh Polymer ¹⁷

Battery Recharge Time

Supports battery HP Fast Charge: approximately 50% in 45 minutes

Power Cord

3-wired plug- 1.0m

USB Type-C® Power Cable- 2.0m for wall mount adapter

Battery life

Up to 7.35 hours with 41whr battery (HP Long Life 3-Cell, 41 Whr Polymer, UMA graphic, Intel UR15, Display set to 300 nits display, 256 GB SSD) Up to 12.12 hours with 68whr battery (HP Long Life 4-Cell, 68 Whr Polymer, UMA graphic, Intel UR15, Display set to 300 nits display, 256 GB SSD)

17. MobileMark 25 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 <http://www.bapco.com> for additional details.



WEIGHT & DIMENSIONS

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

Front height measurement is near the front edge where the mechanical chassis taper begins. Back height measurement is near the rear edge where the mechanical chassis taper ends.

Product Weight

Starting at 1.72 kg (3.79 lb)

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

Product Dimensions (w x d x h)¹⁸

358.6 mm (W) x 251.8 mm (D) x 11.2 mm (H front) / 15.35 mm (H rear)

(14.11 in (W) x 9.91 in (D) x 0.44 in (H front)/ 0.6 in (H rear))

Maximum height 18.90 mm (0.74 in)

Pallet Dimensions (w x d x h)

Product packaging size varies based on options chosen. Please contact your HP representative for your packaging size details. For detailed packaging information, access the [HP Commercial Notebooks Packaging Guide](#).

18. Typical dimension. Actual dimension may vary +/- 0.5mm. Height may vary based on configuration. Maximum Height does not include Rubber feet.



PORTS/SLOTS

Left side

2 x USB Type-C® 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)

1 x USB Type-A 5Gbps signaling rate (Powered)

1 x HDMI 1.4b

Right side

1 x USB Type-A 5Gbps signaling rate (Powered)

1 x headphone/mic combo jack

1 x Nano Security Slot

1 x RJ45 Ethernet port



SERVICE AND SUPPORT

Warranty

1-year warranty and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty. 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>¹⁹

19. 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.



SYSTEM UNIT

Stand - Alone Power Requirements

(AC Power)

Nominal Operating Voltage	15V / 20V
Max Operating Power	UMA < 100W for H series CPU UMA < 45W for U/N series CPU

Temperature

Operating	32° to 95° F (0° to 35° C) (not writing optical) 41° to 95° F (5° to 35° C) (writing optical)
Non - operating	-4° to 140° F (-20° to 60° C)

Relative Humidity

Operating	10% to 90%, non-condensing
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 grms
Non - operating	3.5 grms

Altitude(unpressurized)

Operating	-15 m to 3048 m (-50 ft to 10000 ft)
Non - operating	-15 m to 12192 m (-50 ft to 40000 ft)

Industry Standard Certifications

Regulatory Model Number	TPN-Q311
CSA/UL 62368-1	Yes, UL
ENERGY STAR®	Yes ¹
FCC/ICES/CISPR/VCCI	Yes
CE MARKING	Yes
GS Mark	No
China CCC/SRRC/CEL	Yes
Taiwan BSMI/NCC	Yes
Korea KCC/KC/KES	Yes
Ukraine NSoC/TEC	Yes



EAEU Compliance	Yes
Saudi Arabian Compliance	Yes
TCO	Yes
EPEAT Gold	Yes, 2.0
Low Blue Light	No
WW RoHS	Yes
CECP	Government Purchase, TBC
Medical EMC: IEC 60601-1-2:2014 EN60601-1-2: 2015	No
SEPA	Government Purchase, TBC
MIL - STD Testing	Yes

1. Configurations that are ENERGY STAR® qualified are identified as ENERGY STAR on HP websites and on <http://www.energystar.gov>



DISPLAYS

Actual brightness will be lower with touchscreen or HP Sure View.
Availability may vary by country

16.0" WUXGA (1920 X 1200) OLED BrightView bent UWVA, eDP, Narrow Bezel, 60Hz, Low Blue Light (300nits, 95% DCI-P3)	Active Area	344.448 (H) x 215.28 (V) mm
	Dimensions (W x H)	348.15 (W) x 224.76 (H) x 3.005 (D) mm
	Weight	216 g
	Diagonal Size	16 inch
	Surface Treatment	Glare (BV)
	Touch Enabled	Not specified
	Contrast Ratio	1,000,000:1
	Refresh Rate	60 Hz
	Brightness	300nits
	Pixel Resolution - Format	RGB Stripe Type
	Aspect Ratio	16:10
	Backlight	OLED (self-emissive, no separate backlight)
	Color Gamut Coverage	DCI-P3: 95% (typ), 90% (min)
	Color Depth	1.074 billion colors (RGB 8bit + 2FRC)
	Viewing Angle	89/89/89/89
16.0" WUXGA (1920X1200) WLED AntiGlare flat UWVA, eDP, Narrow Bezel (300nits, 62.5% sRGB)	Low Blue Light	Support
	Power Consumption	8.0W (BL + Logic @ Mosaic)
	Active Area	344.6784 x 215.424 mm
	Dimensions (W x H)	350.68 x 233.77 mm
	Weight	380g
	Diagonal Size	16 inch
	Surface Treatment	AG
	Touch Enabled	NA
	Contrast Ratio	1200:1
	Refresh Rate	60Hz
	Brightness	300nits
	Pixel Resolution - Format	1920 x 1200
	Aspect Ratio	16:10
	Backlight	WLED

	Color Gamut Coverage	sRGB62.5%
	Color Depth	8bits
	Viewing Angle	89/89/89/89
	Low Blue Light	NA
	Power Consumption	4.1W (BL + Logic @ Mosaic)
16.0" WQXGA (2560X1600) WLED AntiGlare flat UWVA, eDP, Narrow Bezel (500nits, 100% sRGB)	Active Area	344.68 x 215.42
	Dimensions (W x H)	349.978(W) x 233.924 (H)(w/PCBA)
	Weight	330g
	Diagonal Size	16 inch
	Surface Treatment	AG
	Touch Enabled	NA
	Contrast Ratio	1200:1
	Refresh Rate	240Hz
	Brightness	500nits
	Pixel Resolution - Format	2560 x 1600
	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	sRGB 100%
	Color Depth	8bits
	Viewing Angle	89/89/89/89
	Low Blue Light	Support
	Power Consumption	5.3W EBL@250nits



STORAGE

1 TB PCIe® NVMe™ M.2 SSD	Form Factor	M.2 2280
	Capacity	1TB
	NAND Type	TLC/QLC
	Weight	0 ~ 15.0 g (0 ~ 0.03 lb)
	Interface	PCIe NVMe
	Sequential Read	Up to 3500 MB/s
	Sequential Write	Up to 2700 MB/s
	Logical Blocks	2000409264
	Features	Pyrite 2.0; TRIM; L1.2
512 GB PCIe® NVMe™ M.2 SSD	Form Factor	M.2 2280
	Capacity	512GB
	NAND Type	TLC/QLC
	Weight	0 ~ 15.0 g (0 ~ 0.03 lb)
	Interface	PCIe NVMe
	Sequential Read	Up to 3500 MB/s
	Sequential Write	Up to 1600 MB/s
	Logical Blocks	1000215216
	Features	Pyrite 2.0; TRIM; L1.2
256 GB PCIe® NVMe™ M.2 SSD	Form Factor	M.2 2280
	Capacity	256GB
	NAND Type	TLC
	Weight	0 ~ 15.0 g (0 ~ 0.03 lb)
	Interface	PCIe NVMe
	Sequential Read	Up to 3100 MB/s
	Sequential Write	Up to 1200 MB/s
	Logical Blocks	500118192
	Features	Pyrite 2.0; TRIM; L1.2

NETWORKING / COMMUNICATION

Mediatek MT7920 Wi-Fi® 6 Bluetooth® 5.4 WW WLAN	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
	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

Security	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 EAP
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power	802.11b : +17dBm minimum 802.11g : +16dBm minimum 802.11a : +17dBm minimum 802.11n HT20(2.4GHz) : +14dBm minimum 802.11n HT40(2.4GHz) : +13dBm minimum 802.11n HT20(5GHz) : +14dBm minimum 802.11n HT40(5GHz) : +13dBm minimum 802.11ac VHT80(5GHz) : +10dBm minimum 802.11ax HE40(2.4GHz) : +12dBm 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 Sensitivity	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. One embedded dual band 2.4/5 GHz antenna is provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express M.2 MiniCard
Dimensions	Type 2230 : 2.3 x 22.0 x 30.0 mm
Weight	Type 2230 : 2.8g
Operating Voltage	3.3v +/- 9%
Bluetooth® Specification	Integrated Bluetooth® specifications 4.0/4.1/4.2/5.0/5.1 Compliant/5.2 Compliant/5.3 Compliant/5.4 Compliant
Frequency Band	2402 to 2480 MHz



Number of Available Channels	Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)
Data Rates and Throughput	Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps BLE : 1 Mbps data rate; throughput up to 0.2 Mbps Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)
Transmit Power	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.
Power Consumption	Peak (Tx): 330 mW Peak (Rx): 230 mW Selective Suspend: 17 mW
Bluetooth® Software Supported Link Topology	Microsoft Windows Bluetooth Software
Power Management	Microsoft Windows ACPI, and USB Bus Support
Certifications	FCC (47 CFR) Part 15C/E, Section 15.247, 15.249 ETSI 300 328, ETSI 301 893
Bluetooth® Profiles Supported	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode LE Link Layer LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels Train Nudging & Interlaced Scan



Realtek 8852BE-VT Wi-Fi® 6
Bluetooth® 5.4 WW WLAN

Wireless LAN Standards

- BT4.2 ESR08 Compliance
- LE Secure Connection- Basic/Full
- LE Privacy 1.2 -Link Layer Privacy
- LE Privacy 1.2 -Extended Scanner Filter Policies
- LE Data Packet Length Extension
- FAX Profile (FAX)
- Basic Imaging Profile (BIP)2
- Headset Profile (HSP)
- Hands Free Profile (HFP)
- Advanced Audio Distribution Profile (A2DP)
- BT5.2
- ESR9/10 Compliance
- LE Advertisement Extensions
- Channel Selection Algo
- Limited High Duty Cycle Non-Connectable Advertising
- 2Mbps LE
- LE Long Range
- Windows BT profiles support
- BT5.3
- Encryption key size control enhancements

- 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, OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
Security	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 Power	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 Sensitivity	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. Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express M.2 MiniCard
Dimensions	Type 2230 : 2.4 x 22.0 x 30.0 mm
Weight	Type 2230 : 2.8g
Operating Voltage	3.3v +/- 9%
Bluetooth® Specification	Integrated Bluetooth® specifications 4.0/4.1/4.2/5.0/5.1/5.2/5.3/5.4 Compliant
Frequency Band	2402 to 2480 MHz
Number of Available Channels	Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)
Data Rates and Throughput	Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps BLE : 1 Mbps data rate; throughput up to 0.2 Mbps Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)
Transmit Power	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.



Power Consumption	Peak (Tx): 330 mW Peak (Rx): 230 mW Selective Suspend: 17 mW
Bluetooth® Software Supported Link Topology	Microsoft Windows Bluetooth Software
Power Management	Microsoft Windows ACPI, and USB Bus Support
Certifications	FCC (47 CFR) Part 15C/E, Section 15.247, 15.249 ETSI 300 328, ETSI 301 893
Bluetooth® Profiles Supported	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode LE Link Layer LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels Train Nudging & Interlaced Scan BT4.2 ESR08 Compliance LE Secure Connection- Basic/Full LE Privacy 1.2 –Link Layer Privacy LE Privacy 1.2 –Extended Scanner Filter Policies LE Data Packet Length Extension FAX Profile (FAX) Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP) BT5.1 ESR9/10 Compliance LE Advertisement Extensions Channel Selection Algo Limited High Duty Cycle Non-Connectable Advertising



		2Mbps LE
		LE Long Range
Realtek 8922AE-VS Wi-Fi 7 Bluetooth® 6.0 WW WLAN	Wireless LAN Standards	IEEE 802.11a
		IEEE 802.11b
		IEEE 802.11g
		IEEE 802.11n
		IEEE 802.11ac
		IEEE 802.11ax
		IEEE 802.11be
		IEEE 802.11d
		IEEE 802.11e
		IEEE 802.11h
		IEEE 802.11i
		IEEE 802.11j
		IEEE 802.11k
		IEEE 802.11mc
		IEEE 802.11r
		IEEE 802.11v
		IEEE 802.11w
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
		5.955-6.415GHz
		6.435-6.515GHz
		6.535-6.875GHz



	6.895-7.115GHz
	5.925-7.125GHz
Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps ▪ 802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz) ▪ 802.11ac: MCS0 ~ MCS9, (20MHz, 40MHz, ,80MHz & 160MHz) ▪ 802.11ax: MCS0 ~ MCS11, (20MHz, 40MHz, ,80MHz & 160MHz) ▪ 802.11be: MCS0 ~ MCS11, (20MHz, 40MHz, ,80MHz & 160MHz)
Modulation	Direct Sequence Spread Spectrum, OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
Security	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 EAP
Network Architecture	Infrastructure (Access Point Required)
Models	
Roaming	IEEE 802.11 compliant roaming between access points
Output Power	802.11b: +20dBm 802.11g: +20dBm 802.11a: +18dBm



- 802.11n HT20(2.4GHz) : +20dBm
- 802.11n HT40(2.4GHz) : +20dBm
- 802.11n HT20(5GHz) : +18dBm
- 802.11n HT40(5GHz) : +17dBm
- 802.11ac VHT80(5GHz) : +16dBm
- 802.11ac VHT160(5GHz) : +15dBm
- 802.11ax HE40(2.4GHz) : +17dBm
- 802.11ax HE80(5GHz) : +14dBm
- 802.11ax HE160(5GHz) : +13dBm
- 802.11ax HE80(6GHz) : +13dBm
- 802.11ax HE160(6GHz) : +12dBm

Power Consumption

- Transmit mode:3.1 W
- Receive mode:1.8W
- 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 Sensitivity

- 802.11b, 1Mbps : -93.5dBm maximum
- 802.11b, 11Mbps : -85dBm maximum
- 802.11a/g, 6Mbps : -90.5dBm maximum
- 802.11a/g, 54Mbps : -72.5dBm maximum
- 802.11n, MCS0(HT20) : -90dBm maximum
- 802.11n, MCS7(HT20) : -71.5dBm maximum
- 802.11n, MCS0(HT40) : -88.5dBm maximum
- 802.11n, MCS7(HT40) : -68.5dBm maximum
- 802.11ac, MCS9(VHT20) : -88.5dBm maximum
- 802.11ac, MCS9(VHT40) : -65.5dBm maximum
- 802.11ac, MCS9(VHT80) : -60.5dBm maximum
- 802.11ac, MCS9(VHT160) : -58.5dBm maximum



- 802.11ax, MCS11(HE20)(6GHz) : -59.5dBm maximum
- 802.11ax, MCS11(HE40)(6GHz) : -56.5dBm maximum
- 802.11ax, MCS11(HE80)(6GHz) : -53.5dBm maximum
- 802.11ax, MCS11(HE160)(6GHz) : -51.5dBm maximum

Antenna Type	High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express M.2 MiniCard
Dimensions	Type 2230 : 2.3 x 22.0 x 30.0 mm
Weight	Type 2230 : 2.8g
Operating Voltage	3.15 ~3.6V
Bluetooth® Specification	Integrated Bluetooth® specifications 4.0/4.1/4.2/5.0/5.1/5.2/5.3/5.4/6.0 Compliant
Frequency Band	2402 to 2480 MHz
Number of Available Channels	Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)
Data Rates and Throughput	Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps BLE : 1 Mbps data rate; throughput up to 0.2 Mbps Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)



Transmit Power	The Bluetooth component shall operate as a Class I Bluetooth device with a maximum transmit power of +15.5 dBm for BR and +13dBm for EDR.
Power Consumption	Peak (Tx): 330 mW Peak (Rx): 230 mW Selective Suspend: 17 mW
Bluetooth® Software Supported Link Topology	Microsoft Windows Bluetooth Software
Power Management	Microsoft Windows ACPI, and USB Bus Support compliant power management 802.11 compliant power saving mode
Certifications	FCC (47 CFR) Part 15C/E, Section 15.247, 15.249, 15.407 ETSI 300 328, ETSI 301 893, ETSI 303 687
Bluetooth® Profiles Supported	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode LE Link Layer LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels Train Nudging & Interlaced Scan BT4.2 ESR08 Compliance LE Secure Connection- Basic/Full LE Privacy 1.2 -Link Layer Privacy LE Privacy 1.2 -Extended Scanner Filter Policies LE Data Packet Length Extension FAX Profile (FAX) Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP)



		Advanced Audio Distribution Profile (A2DP) BT5.2 ESR9/10 Compliance LE Advertisement Extensions Channel Selection Algo Limited High Duty Cycle Non-Connectable Advertising 2Mbps LE LE Long Range Windows BT profiles support BT5.3 Compliance to the latest errata spetipn 12.3 of bluetooth 5.3 specification ESR 9/10 compliance Host to controller Encryption key control enhancements
RTK GBE Ethernet Controller	Connector	RJ-45
	System Interface	PCIe + SMBus
	Data Rates Supported	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
	IEEE Compliance	IEEE 802.1p QoS (Quality of Service) Support IEEE 802.1q VLAN support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable) IEEE 802.3az EEE (Energy Efficient Ethernet)

Performance	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload (ARP & NS) Large send offload and Giant send offload Receiving Side Scaling Jumbo Frame 9K
Power Consumption	Cable Disconnection: 25mW 100Mbps Full Run: 450mW 1000bp Full Run: 1000mW WoL Enable(S3/S4/S5): 50mW WoL Disable(S3/S4/S5): 25mW
Power Management	ACPI compliant – multiple power modes Situation-sensitive features reduce power consumption Advanced link down power saving for reducing link down power consumption
Management Interface	Auto MDI/MDIX Crossover cable detection
IT Manageability	Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30)) Comprehensive diagnostic and configuration software suite Virtual Cable Doctor for Ethernet cable status



POWER

Power supply availability may vary by country.

Battery is internal and replaceable by customer.

Higher wattage adapter is recommended for best performance and fastest charging.

Using lower-capacity third-party USB Type-C® power cables may reduce power delivery.

HP CALI 45W	Weight (DC Cable Included)	185g(+/-5g) (Not including power cord. Power cord varies by country.)
	Input	100-240Vac
	Input Efficiency	81.76% min at 115 Vac/ 230 Vac @5.00V
		87.3% min at 115 Vac/ 230 Vac @9.00V
		88.85% min at 115 Vac/ 230 Vac @15.00V
		88.85% min at 115 Vac/ 230 Vac @20.00V
	Input frequency range	47-63Hz
	Input AC current	Max. 1.4 A at 90 Vac
	Output	
	Output power	5V/15W
		9V/27W
		15V/45W
		20V/2.25A
	DC output	5V/9V/15V/20V
	Hold - up time	100% load 5ms at 115 Vac input
	Output Over Current	< 5.0A
	Protection	
	AC Inlet Type	C6
	DC Cable Connector	USB type C
	DC Cable Material	PVC
	Connector	
	Connector	C6
	Environmental Design	
	Operating temperature	32°F to 95°F (0°to 35°C)
	Non - operating(storage) temperature	-4°F to 185°F (-20°to 85°C)
	Altitude	0 to 16,400 ft (0 to 5000m)

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 IEC62368-1 : 2018, EN62368-1:2014+A11, UL62368-1 Agency approvals - C-UL-US, TUV/GS, TUV/PSE, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC and CECP, CU(EAC), EAEU, KCC(Safety+EMC) and K-MEPS, NOM-001 and 029 NYCE, NRcan, NRCS, ISC, SEC, PSB, Argentina S-mark, Australia RCM, BIS, BSMI, UAE, UKCA DoC, USB-IF, Ukraine(CoC+DoC+RoHS+ECO)

HP Luna 65W

Weight (DC Cable Included)	220g(+/-10g) (Not including power cord. Power cord varies by country.)
Input	100-240Vac
Input Efficiency	81.84% min at 115 Vac/ 230 Vac @5.00V 87.3% min at 115 Vac/ 230 Vac @9.00V 88.85% min at 115 Vac/ 230 Vac @15.00V 89.00% min at 115 Vac/ 230 Vac @20.00V
Input frequency range	47-63Hz
Input AC current	Max. 1.6 A at 90 Vac
Output	
Output power	5V/15W 9V/27W 12V/60W 15V/65W 20V/65W
DC output	5V/9V/15V/20V
Hold - up time	100% load 5ms at 115 Vac input
Output Over Current	< 8.0A
Protection	
AC Inlet Type	C6
DC Cable Connector	USB type C
DC Cable Material	PVC



Connector	
Connector	C6
Environmental Design	
Operating temperature	32°F to 95°F (0°to 35°C)
Non - operating(storage) temperature	-4°F to 185°F (-20°to 85°C)
Altitude	0 to 16,400 ft (0 to 5000m)
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 IEC62368-1 : 2018, EN62368-1:2014+A11, UL 62368-1 Agency approvals - C-UL-US, TUV/GS, TUV/PSE, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC and CECP, CU(EAC), EAEU, KCC(Safety+EMC) and K-MEPS, NOM-001 and 029 NYCE, NRcan, NRCS, ISC, SEC, PSB, Argentina S-mark, Australia RCM, BIS, BSMI, UAE, UKCA DoC

HP Kinopio 65W

Weight (DC Cable Included)	180g(+/-10g) (Not including Duck Head. Duck Head varies by country.)
Input	100-240Vac
Input Efficiency	81.84% min at 115 Vac/ 230 Vac @5.00V 87.3% min at 115 Vac/ 230 Vac @9.00V 88.85% min at 115 Vac/ 230 Vac @15.00V 89.00% min at 115 Vac/ 230 Vac @20.00V
Input frequency range	47-63Hz
Input AC current	Max. 1.6 A at 90 Vac
Output	
Output power	5V/15W 9V/27W 15V/65W 20V/65W
DC output	5V/9V/15V/20V



Hold - up time	100% load 5ms at 115 Vac input
Output Over Current	115%-135%
Protection	
AC Inlet Type	Foldable or Fixed type
DC Cable Connector	USB type C
DC Cable Material	Halogen Free (2.0 Meters)
Environmental Design	
Operating temperature	32°F to 95°F (0°to 35°C)
Non - operating(storage) temperature	-4°F to 185°F (-20°to 85°C)
Altitude	0 to 16,400 ft (0 to 5000m)
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 IEC62368-1 : 2018, EN62368-1:2014+A11, UL 62368-1 Agency approvals - C-UL-US, TUV/GS, TUV/PSE, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC and CEC, CU(EAC), EAEU, KCC(Safety+EMC) and K-MEPS, NOM-001 and 029 NYCE, NRcan, NRCS, ISC, SEC, PSB, Argentina S-mark, Australia RCM, BIS, BSMI, UAE, UKCA DoC

HP Koopa 100W

Weight (DC Cable Included)	255g(+/-5g) (Not including power cord. Power cord varies by country.)
Input	100-240Vac
Input Efficiency	81.76% min at 115 Vac/ 230 Vac @5.00V 87.3% min at 115 Vac/ 230 Vac @9.00V 89.00% min at 115 Vac/ 230 Vac @15.00V 89.00% min at 115 Vac/ 230 Vac @20.00V
Input frequency range	47-63Hz
Input AC current	Max. 1.6 A at 90 Vac
Output	
Output power	5V/15W 9V/27W



	15V/75W
	20V/100W
DC output	5V/9V/15V/20V
Hold - up time	100% load 5ms at 115 Vac input/80% load 10ms at 115 Vac input
Output Over Current Protection	5V/9V : 125%~135% ; 15V/20V: 5.4A
AC Inlet Type	Foldable or Fixed type
DC Cable Connector	USB type C
DC Cable Material	Halogen Free (2M)
Environmental Design	
Operating temperature	32°F to 95°F (0°to 35°C)
Non - operating(storage) temperature	-4°F to 185°F (-20°to 85°C)
Altitude	0 to 16,400 ft (0 to 5000m)
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, IEC 62368-1:2014 and IEC62368-1 : 2018, EN62368-1:2020+A11, UL 62368-1 Agency approvals - C-UL-US, TUV/GS, TUV/PSE, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC, CU(EAC), KCC(Safety+EMC), NOM-001 NYCE, NRcan, NRCS, ISC, SEC, PSB, Argentina S-mark, Australia RCM, BIS, BSMI, UAE, UKCA DoC, Ukraine(CoC+DoC+RoHS+ECO)



Battery

HP 3-cell Long Life Li-Ion (41 WHr)	Weight	0.175 kg (0.377 lb)
	Cells / Type	3cell Lithium-Ion Polymer cell / 515974
	Energy	
	Voltage	11.25V
	Amp - hour capacity	3.648Ah
	Watt - hour capacity	41WH
	Temperature	
	Operating (Charging)	32° to 113° F (0° to 45° C)
	Operating (Discharging)	14° to 122° F (-10° to 60° C)
	Optional Travel Battery Available	No

HP 4-cell Long Life Li-Ion (68 WHr)	Weight	0.255 kg / (0.55 lb)
	Cells / Type	4cell Lithium-Ion Polymer cell / 506473
	Energy	
	Voltage	7.72V
	Amp - hour capacity	8.81Ah
	Watt - hour capacity	68Wh
	Temperature	
	Operating (Charging)	32° to 113° F (0° to 45° C)
	Operating (Discharging)	14° to 122° F (-10° to 60° C)
	Optional Travel Battery Available	No

AUDIO

Privacy panel is only available on select models.

Codec	Realtek ALC3247-CG
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.
Sampling	Independent sampling rates for DAC's and ADC's; supports resolutions from 16 to 24-bit; 44.1 kHz to 48 kHz for DAC and ADC.
Wavetable Syntheses	Yes - Uses OS soft wavetable
Internal Speaker	Yes.



FINGERPRINT READER

Sensor vendor	ELAN
Sensor type	Capacitive
DPI resolution	508 DPI
Scan area	80 x 80 pixels
False Rejection Rate	< 3%
False Acceptance Rate	< 0.001%
Mobile Voltage Operation	3 V ~ 3.6 V
Operating Temperature	-20°C ~ 80°C (-4°F ~ 176°F)
Current Consumption Image	120mA max
Low Latency Wait For Finger	300 uA
Capture Rate	50 frames/sec
ESD Resistance	IEC 61000-4-2 4B (+15KV)
Detection Matrix	508 dpi / 4.0 x 4.0 mm sensor area

Sensor vendor	SYNAPTICS
Sensor type	Capacitive
DPI resolution	363 DPI
Scan area	104x86 pixels
False Rejection Rate	< 3%
False Acceptance Rate	< 1/100000 (0.001%)
Mobile Voltage Operation	2.7 V ~ 3.6 V
Operating Temperature	0 to 60° C
Current Consumption Image	100 mA max
Low Latency Wait For Finger	60 uA
Capture Rate	17ms/times (~58 frame/sec)
ESD Resistance	IEC 61000-4-2 4B (+15KV)
Detection Matrix	363 dpi / 7.4 x 6.0 mm sensor area



CHANGELOG

Date of change	Version History		Description of change
February 9, 2026	V1 to V2	Updated	Battery Life
February 12, 2026	V2 to V3	Updated	Software and Security Section
February 26, 2026	V3 to V4	Updated	Memory Section
April 14, 2026	V4 to V5	Updated	Ports / Slots
May 14, 2026	V5 to V6	Updated	Processor Section
June 5, 2026	V6 to V7	Updated	Memory Section
June 26, 2026	V7 to V8	Updated	Power Section
August 14, 2026	V8 to V9	Updated	Memory Section

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