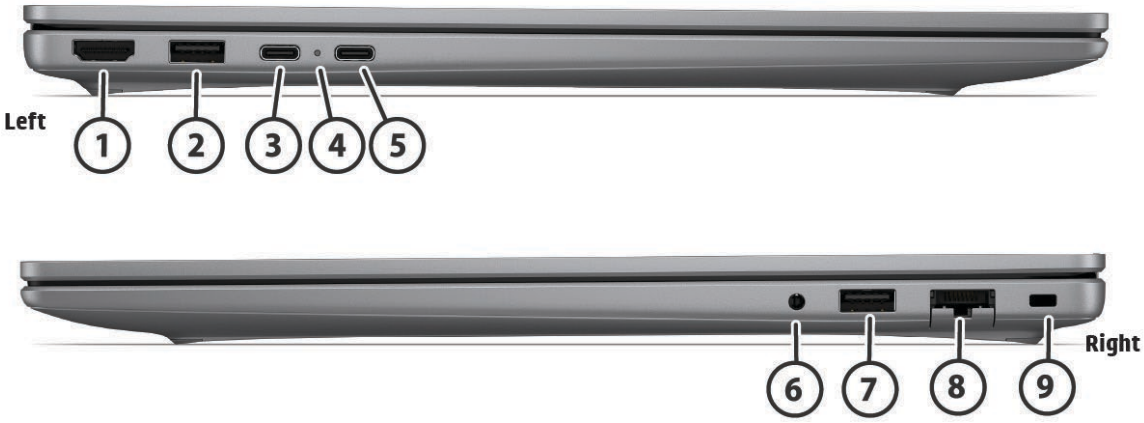
HP 200 G2Ri 16 inch Notebook AI PC



Front

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



Sides

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

PRODUCT NAME

HP 200 G2Ri 16 inch Notebook AI PC

OPERATING SYSTEM

Preinstalled

FreeDOS

Windows 11 Pro [1]

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

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

Windows 11 Home Education

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 [2,3,4,5,6]	Cores	Number of P-cores	Number of E-cores	Number of LP E-cores	Threads	Smart Cache	Max Turbo Frequency		Intel SIPP/ vPro® Enterprise	Integrated Graphics	NPU
							P-cores	E-cores/ LP E-cores			
Intel® Core™ Ultra7 processor 255H	16 cores	6	8	2	16	24 MB	5.10 GHz	4.40 GHz		Intel® Arc™ 140T	13 TOPS
Intel® Core™ Ultra5 processor 225H	14 cores	4	8	2	14	18 MB	4.90 GHz	4.30 GHz		Intel® Arc™ 130T	13 TOPS
Intel® Core™ Ultra7 processor 255U	12 cores	2	8	2	14	12 MB	5.20 GHz	4.20 GHz		Intel® Graphics	12 TOPS
Intel® Core™ Ultra5 processor 235U	12 cores	2	8	2	14	12 MB	4.90 GHz	4.10 GHz	X	Intel® Graphics	12 TOPS
Intel® Core™ Ultra5 processor 225U	12 cores	2	8	2	14	12 MB	4.80 GHz	3.80 GHz		Intel® Graphics	12 TOPS
Intel® Core™ 7 Processor 350	6 cores	2	N/A	4	6	6 MB	4.80 GHz	3.60 GHz	N/A	Intel® Graphics	17 TOPS
Intel® Core™ 5 Processor 330	6 cores	2	N/A	4	6	6 MB	4.60 GHz	3.40 GHz	SIPP	Intel® Graphics	16 TOPS
Intel® Core™ 5 Processor 320	6 cores	2	N/A	4	6	6 MB	4.60 GHz	3.40 GHz	N/A	Intel® Graphics	16 TOPS
Intel® Core™ 5 Processor 315	6 cores	2	N/A	4	6	6 MB	4.40 GHz	3.30 GHz	N/A	Intel® Graphics	15 TOPS
Intel® Core™ 3 Processor 304	5 cores	1	N/A	4	5	6 MB	4.30 GHz	3.30 GHz	N/A	Intel® Graphics	15 TOPS

Processor Family

Intel® Core™ Ultra7 processor

Intel® Core™ Ultra5 processor

Intel® Core™ 7 processor

Intel® Core™ 5 processor

Intel® Core™ 3 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. Intel® numbering, branding, naming are 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. Features and software that require a NPU may require software purchase, subscription or enablement by a software or platform provider, and third party software may have specific configuration or compatibility requirements. Potential NPU inferencing performance varies by use, configuration, and other factors.

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

GRAPHICS

Integrated

Intel® Graphics

Intel® Arc™ Graphics [7]

Supported protocols

Support HD Decode, DX12, and HDMI

Display supported (including internal display; dock may be required) up to 4

Codec

Hardware Acceleration HEVC (H.265) CODEC is an optional feature and must be configured at purchase.

7. Intel® ARC™ graphics only available on select Intel® Core™ Ultra H-series processor-powered systems with at least 16GB of system memory in dual channel configuration.

DISPLAY

Availability may vary by country.

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

Non-Touch

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") diagona, 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 [8]

512 GB PCIe® NVMe™ SSD Value [8]

256 GB PCIe® NVMe™ SSD Value [8]

8. 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 DDR5-5600 MT/s	32GB LPDDR5X-7467 MT/s
Available memory configurations	8GB (1 x 8GB) DDR5-5600 MT/s 12GB (1 x 12GB) DDR5-5200 MT/s 16GB (1 x 16GB) DDR5-5600 MT/s 16GB (2 x 8GB) DDR5-5600 MT/s 24GB (1 x 24GB) DDR5-5600 MT/s 24GB (2 x 12GB) DDR5-5600 MT/s 32GB (1 x 32GB) DDR5-5600 MT/s	8GB LPDDR5-7467 MT/s 16GB LPDDR5-7467 MT/s 32GB LPDDR5X-7467 MT/s
Notes	System runs at 5600 MT/s Supports Dual Channel Memory (optional) Memory is replaceable by customer or customer IT support	System runs at 7467 MT/s Memory is non-accessible / non-upgradeable.

NETWORKING /COMMUNICATIONS

Items below may be optional.

Ethernet

RTK GBE Ethernet Controller [9]

WLAN

Realtek 8852BE-VT Wi-Fi 6 Bluetooth® 5.4 WW WLAN [10]

Realtek 8922AE-VS Wi-Fi 7 Bluetooth® 6.0 WW WLAN [11]

Miracast [12]

Compatible with Miracast-certified devices (For Win11)

9. 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.
10. 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.
11. 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.
12. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.

AUDIO/MULTIMEDIA

Audio

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 (optional)

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

Microsoft Precision Touchpad Default Gestures Support

Multi-touch gesture support

Taps enabled as default

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

Buy Microsoft Office (Sold Separately)

MS Windows DPK ReG - CPS

McAfee - MLS

McAfee Checkbox

McAfee LiveSafe Install Rules Configuration

MS Office WW Common

MS Office - Lang Packs

WPS Office CMIT

Dropbox Promotion

E-QR Code - UWP

Adobe offer

HP Documentation

HP app [13]

HP Privacy Settings

HP Support Assistant [14]

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)

WW-BTB Host and ISP Stub

Booking URL

Booking Edge Fav

Agoda URL

Agoda Edge Fav

HP System Event Utility - UWP

HSA Telemetry for Consumer

HSA fusion for Consumer

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 140-3 Compliant

FIPS 140-3 Compliant: Yes

BIOS

HP Secure Erase [16]

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)

13. HP app with Multicamera support for Mini Desktop PC will only available on 13th processor and beyond.

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

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® GaN Halogen Free AC power adapter

HP 65W Wall Mount USB Type-C® GaN Halogen Free AC power adapter

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

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

Battery

HP Long Life 4 cell, 68Wh Polymer

HP Long Life 3 cell, 41Wh Polymer

Battery Recharge Time

Supports battery HP Fast Charge: approximately 50% in 45 minutes [17]

Power Cord

3-wired plug- 1.0m for standard type adapter

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

Battery life

Up to 7 hours with 41 Wh battery (Intel Core 3, UMA graphic, brightness set to 250nits on a WUXGA 300nits LCD display, 1 x 8GB DDR5 memory, 256 GB SSD) [18]

Up to 12 hours and 30 minutes with 68 Wh battery (Intel Core 5, UMA graphic, brightness set to 250nits on a WUXGA 300nits LCD display, 1 x 8GB DDR5 memory, 256 GB SSD) [18]

17. Recharges your battery up to 50% within 30 minutes when the system is off or in standby mode. Power adapter minimum of 65 watts required for battery capacities 56Whr or less. Power adapter minimum of 100 watts required for battery capacities greater than 56Whr and less than 83Whr. Power adapter minimum of 120 watts required for battery capacities greater than 83Whr and less than 100Whr. After charging has reached 50% capacity, charging will return to normal. Charging time may vary +/-10% due to System

tolerance.

18. Mobile Mark 30 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.

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)

Product Dimensions (w x d x h) [19]

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.

19. 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

ENVIRONMENTAL DATA

Environmental Data	**Eco-Label Certifications & Declarations**	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. • TCO certified • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • Korea Eco-label • Japan PC Green label*		
	Sustainable Impact Specifications	• Product Carbon Footprint • At least 5% ocean bound plastic in the Speaker Parts[1] • At least 20% post-consumer recycled plastic[2] • At least 80% recycled metal[3] • External Power Supply 90% Efficiency • Low Halogen[4] • 100% of HP paper-based packaging is from recycled or certified sustainable sources[5] • Bulk packaging available • Outside Box and corrugated cushions are 100% sustainably sourced and recyclable • Molded Paper Pulp Cushion inside box is 100% sustainably sourced and recyclable		
	System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a "Typically Configured Notebook".		
	Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
	Normal Operation (Sort idle)	4.884 W	5.004 W	4.920 W
	Normal Operation (Long idle)	N/A	N/A	N/A

	Sleep	0.52 W	0.57 W	0.54 W
	Off	0.30 W	0.32 W	0.30 W
		Note: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
	Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
	Normal Operation (Short idle)	17 BTU/hr	17 BTU/hr	17 BTU/hr
	Normal Operation (Long idle)	N/A	N/A	N/A
	Sleep	2 BTU/hr	2 BTU/hr	2 BTU/hr
	Off	1 BTU/hr	1 BTU/hr	1 BTU/hr
		*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.		
	Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	**Sound Power (L_{WAd}, bels)**	**Sound Pressure (L_{pAm}, decibels)**	
	Typically Configured – Idle	2.8	24	
	Fixed Disk – Random writes	4.8	45	
	Optical Drive – Sequential reads	N/A	N/A	
	Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.		

	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 ISO11469 and ISO1043. • This product is 94.3% recycle-able when properly disposed of at end of life.		
	Packaging Materials	**External:**	PAPER/Corrugated	280 g
			PAPER/Molded Pulp	196 g
			PAPER/Paper	11 g
		Internal:	PLASTIC/Polyethylene low density	10 g
		The plastic packaging material contains at least 100% recycled content.		
		The corrugated paper packaging materials contains at least 35% 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	This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c05998906): • 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: https://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c05403198 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: HP Product Disassembly Instruction Website. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

	HP, Inc. Corporate Environmental Information	For more information about HP's commitment to the environment:
		• Sustainable Impact Report
		  ○ https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c06040843
		• Eco-label certifications
		  ○ https://www.hp.com/us-en/sustainable-impact/document-reports.html#filters_documents_reports-=document_type-type_energy_star,type_epeat,type_tcoISO
		• ISO 14001 certificates
		  ○ https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c04777932

	Footnotes	1. Percentage of ocean-bound plastic contained in each component varies by product. Ocean Bound plastic is expressed as a percentage of the total weight plastic. Ocean Bound plastic is based on the definition set by the UL2809 standard. 2. Recycled plastic is expressed as a percentage of the total weight plastic. Post-consumer recycled is based on the definition set in the EPEAT standard for computers, IEEE 1680.1-2018 standard. 3. Recycled metal is expressed as a percentage of the total weight of the metal according to ISO 14021 definitions for metal parts over 25 grams. 4. External power supplies, WWAN modules, power cords, cables and peripherals excluded. Service parts obtained after purchase may not be Low Halogen. 5. HP paper and fiber-based packaging for PCs, displays, home and office print, and supplies is reported by suppliers as recycled or certified, with a minimum of 97% by volume verified by HP. Packaging is the box that comes with the product and all paper-based materials inside the box. Packaging for personal systems accessories and spare parts is not included. Plastic cushions are made from >90% recycled plastic.

SERVICE AND SUPPORT

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 [20]

20. 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® [1]	Yes
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 [2]	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 [3]	Yes

1. Configurations that are ENERGY STAR® qualified are identified as ENERGY STAR on HP websites and on http://www.energystar.gov
2. Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit http://www.epeat.net for more information.
3. MIL STD testing is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack.

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) × 215.28 (V) mm
	Dimensions (W x H)	348.15 (W) × 224.76 (H) × 3.005 (D) mm
	Weight	216 g
	Diagonal Size	16.0 inches
	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
	Low Blue Light	Support
	Power Consumption	8.0W (BL + Logic @ Mosaic)
16.0" WUXGA (1920X1200) WLED AntiGlare flat UWVA, eDP, Narrow Bezel (300nits, 62.5% sRGB)	**Active Area**	344.6784 x 215.424 mm
	Dimensions (W x H)	350.68 x 233.77 mm
	Weight	380g
	Diagonal Size	16.0 inches
	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**	344.68x215.42
	Dimensions (W x H)	349.978(W) x 233.924 (H)(w/PCBA)
	Weight	330g
	Diagonal Size	16.0 inches
	Surface Treatment	AG
	Touch Enabled	NA
	Contrast Ratio	1200:1
	Refresh Rate	240Hz
	Brightness	500nits
	Pixel Resolution - Format	2560x1600
	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 [1]	**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 [1]	**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 [1]	**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

1. 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.

NETWORKING / COMMUNICATION

Realtek 8852BE-VT Wi-Fi® 6 Bluetooth® 5.4 WW WLAN [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 802.11j
		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
	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 (personal) certification IEEE 802.11i WAPI (by request) EAP
Network Architecture	Ad-hoc (Peer to Peer)
Models	Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power	802.11b : +20dBm 802.11g : +18dBm 802.11a : +18dBm 802.11n HT20(2.4GHz) : +17dBm 802.11n HT40(2.4GHz) : +17dBm 802.11n HT20(5GHz) : +17dBm 802.11n HT40(5GHz) : +17dBm 802.11ac VHT80(5GHz) : +15dBm 802.11ax HE40(2.4GHz) : +13dBm 802.11ax HE80(5GHz) : +13dBm
Power Consumption	Transmit mode 3.1 W Receive mode 1.8 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 Sensitivity [2]	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.
	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
Dimensions	1. Type 2230 : 2.4 x 22.0 x 30.0 mm
Weight	1. Type 2230 : 2.8g
Operating Voltage	3.3v +/- 9%
	Integrated Bluetooth® specifications
Bluetooth® Specification	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	Legacy : 0~79 (1 MHz/CH)
Channels	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	Microsoft Windows Bluetooth Software
Supported Link Topology	
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) BT5.2

		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 spetion 12.3 of bluetooth 5.3 specification ESR 9/10 compliance Host to controller Encryption key control enhancements
Realtek 8922AE-VS Wi-Fi 7 Bluetooth® 6.0 WW WLAN [3]	**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
	Frequency Band	802.11b/g/n/ax 2.402 - 2.482 GHz 802.11a/n/ac/ax

	4.9-4.95GHz(Japan)
	5.15-5.25GHz
	5.25-5.35GHz
	5.47-5.725GHz
	5.825-5.850GHz
	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 (personal) certification
	IEEE 802.11i
	WAPI (by request)
	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 1.8 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 Sensitivity [2]	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
Dimensions	1. Type 2230 : 2.3 x 22.0 x 30.0 mm
Weight	1. Type 2230 : 2.8g
Operating Voltage	3.15 ~3.6V
	Integrated Bluetooth® specifications
Bluetooth® Specification	4.0/4.1/4.2/5.0/5.1/5.2/5.3/5.4/6 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	Microsoft Windows Bluetooth Software
Supported Link Topology	
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 spetion 12.3 of bluetooth 5.3 specification ESR 9/10 compliance Host to controller Encryption key control enhancements
Realtek RTL8111HSH 10/100/1000 Integrated NIC	**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 Disconnetion: 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
Security & Manageability	Non-support

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. 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).
3. Wi-Fi 7 requires a Wi-Fi 7 router, sold separately, to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 7 is backwards compatible with prior 802.11 specs. And available in countries where Wi-Fi 7 is supported. Wi-Fi 7 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.

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 Protection	< 5.0A
	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 Protection	< 8.0A
	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 Protection	115%-135%
	AC Inlet Type	Foldable or Fixed type
	DC Cable Connector	USB type C
	DC Cable Material	Halogen Free (2.0 Meters)
	Connector	
	Connector	USB type C
	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 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)
Connector	
Connector	USB type C
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

Codec	Realtek ALC3247-CG
Audio I/O Ports	One Headset Combo-Jack connector support CTIA spec.
Internal Speaker Amplifier	2W class D stereo amplifierfor 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
April 29, 2026	V1 to V2	Updated	Environmental Data Section
May 14, 2026	V2 to V3	Updated	Processor Section
June 5, 2026	V3 to V4	Updated	Memory Section
June 26, 2026	V4 to V5	Updated	Power Section
July 17, 2026	V5 to V6	Updated	Processor Section
August 14, 2026	V6 to V7	Updated	Memory Section
September 29, 2026	V7 to V8	Updated	Memory Section

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