

Overview

HP Chromebook 11 G9 Education Edition



Left

- | | |
|------------------------|--|
| 1. Webcam LED | 5. SuperSpeed USB Type-A 5Gbps signaling rate |
| 2. Webcam | 6. SuperSpeed USB Type-C® 5Gbps signaling rate (Power Delivery, video, data) |
| 3. Internal Microphone | 7. Nano Lock slot (Lock sold separately.) |
| 4. Touchpad | |

Overview



Right

- | | |
|--|---|
| 1. Power button | 4. Micro SD Memory Card Reader |
| 2. SuperSpeed Type-C® 5Gbps signaling rate (Power Delivery, video, data) | 5. Stereo Headphone/Microphone Combo Jack |
| 3. SuperSpeed Type-A 5 Gbps signaling rate | |

Overview

AT A GLANCE

- <19mm thin (from front) and rugged design for durability
- Enjoy affordable, convenient mobile productivity with latest Intel® Celeron® N4500 and N5100 processors
- Undergoes MIL-STD 810H tests¹
- 2 SuperSpeed Type-C® 5Gbps signaling rate (Power Delivery, Display Port™ 1.4, data)
- Choice of up to 8 GB memory and 64 GB eMMC storage
- Spill and pick resistant keyboard with Full Skirted anchored key
- Spend less time charging with HP Fast Charge technology
- 180-degree hinge and optional HD IPS anti-glare touchscreen for collaboration ³
- Enjoy Android™ Apps on Chrome OS
- Your Chromebook boots up within 10 seconds and you can be browsing online and working in Google Apps just moments later
- Intel® Wi-Fi 6 AX 2x2 WLAN with MU-MIMO and HP Extended Range Wireless Lan for stable connection in dense environment
- Keyboard that can be repeatedly wiped down with common household cleaning wipes.
- Easy for small hands to grip and handle with Unique textured surface

1. MIL-STD-810H testing is not intended to demonstrate fitness of U.S. Department of Defense (DoD) 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

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

Technical Specifications

PRODUCT NAME

HP Chromebook 11 G9 Education Edition

OPERATING SYSTEM

Preinstalled Chrome OS

PROCESSORS

Intel® Celeron® N4500 (up to 2.8 GHz burst frequency, 4 MB L3 cache, 2 cores) ^{1,2}

Intel® Celeron® N5100 (up to 2.80 GHz burst frequency, 4 MB L3 cache, 4 cores) ^{1,2}

Processor Family

Intel® Celeron® processor (N5100, N4500)

1. Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. MediaTek's numbering, branding and/or naming is not a measurement of higher performance.

2. Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.

CHIPSET

Chipset is integrated with processor

Technical Specifications

GRAPHICS

Integrated

Intel® UHD Graphics ³

Supports

Support HD decode, DX12, HDMI

3. FHD/HD content required to view HD images.

DISPLAY

Non-Touch

29.5cm (11.6") diagonal, HD (1366 x 768) anti-glare WLED SVA, 220 nits, 45% NTSC, eDP slim ^{3,4}

29.5cm (11.6") diagonal, HD (1366 x 768) anti-glare WLED UWVA, 220 nits, 50% NTSC, eDP slim 3.0mm ^{3,4}

Touch

29.5cm (11.6") diagonal, HD (1366 x 768) anti-glare WLED UWVA, 220 nits, 50% NTSC, eDP1.2 Touch on Panel ^{3,4,5}

3. FHD/HD content required to view FHD/HD images.

4. Resolutions are dependent upon monitor capability, and resolution and color depth settings.

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

STORAGE AND DRIVES

Primary Storage

64 GB eMMC 5.0 ⁶

32 GB eMMC 5.0 ⁶

6. For storage drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 9 GB is not user available

MEMORY

Maximum Memory

8 GB LPDDR4X -4266 SDRAM

Memory

8 GB LPDDR4X -4266 SDRAM

4 GB LPDDR4X -4266 SDRAM

Technical Specifications

Memory Slots

Memory soldered on board

NETWORKING/COMMUNICATIONS

WLAN

Intel® Dual Band Wi-Fi 6 AX201 802.11a/b/g/n/ac/ax (2x2) WLAN and Bluetooth® 5.1 Combo, non-vPro® ⁷

MU-MIMO supported

HP Extended Range WLAN supported

Chromecast

Chromecast Support ⁸

7. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. The specifications for Wi-Fi 6 (802.11ax WLAN) are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ax WLAN devices. Only available in countries where 802.11ax is supported.

8. Chromecast must be purchased separately.

AUDIO/MULTIMEDIA

Audio

HD audio

Dual 2W stereo speakers

Integrated single microphone

Camera

720p HD camera ⁹

9. HD content required to view HD images.

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

Full-size island-style Chrome keyboard, spill resistant with HP Full-Skirted Anchored Key

Pointing Device

Touchpad with multi-touch gesture support

Taps enabled as default

Technical Specifications

SOFTWARE AND SECURITY

Preinstalled Software

HP Classroom Manager ¹⁰

Manageability Features

Chrome Education Upgrade ^{11,12}

Security Management

Titan C security chip

Zero Touch Enrollment

Nano lock slot (Lock sold separately.)

10. HP Classroom Manager is sold separately. Control and device locking from the teacher's desktop requires purchase of HP Classroom Manager.

11. Sold separately.

12. Chrome Education Upgrade requires one-time setup, subscription, Google Admin Console, and your organization's domain. Please see <https://support.google.com/a/answer/60216>.

POWER

Power Supply

HP Smart 45 W USB Type-C adapter

Primary Battery

HP Long Life 2-cell, 47 Wh Li-ion polymer ^{13,14}

HP Fast Charge Technology (90% in 90 minutes) ¹⁵

Power Cord

3-wire plug - 1m

Battery Life

Up to 12 hours and 30 minutes²⁰

Battery Weight

0.42 lb

0.192 kg

13. Battery is internal and not replaceable by customer. Serviceable by warranty.

14. 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.

15. Recharges the battery up to 90% within 90 minutes when the system is off or in standby mode. Power adapter with a

Technical Specifications

minimum capacity of 65 watts is required. After charging has reached 50% capacity, charging will return to normal. Charging time may vary +/-10% due to System tolerance.

20. Testing conducted by HP using Google Chrome OS power_LoadTest. Battery life will vary and the maximum capacity of the battery will naturally decrease with time and usage. See <http://www.chromium.org/chromium-os/testing/power-testing> for test details. Full charge battery life will decrease after Adaptive Battery Optimizer activation.

WEIGHTS & DIMENSIONS

Product Weight ¹⁶

Starting at 2.95 lb

Starting at 1.34 kg

Product Dimensions (w x d x h)

11.61 x 8.08 x 0.74 in

29.5 x 20.53 x 1.88 cm

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

PORTS/SLOTS

2 SuperSpeed USB Type-C® 5Gbps signaling rate (Power Delivery, video, data)

2 SuperSpeed USB Type-A 5Gbps signaling rate signaling rate

1 Stereo Headphone/Microphone Combo Jack

Expansion Slots

1 Micro SD Memory Card Reader

Supports SD, SDHC, SDXC

Technical Specifications

SERVICE AND SUPPORT

1-year limited warranty and 90-day software limited warranty options depending on country. Batteries have a default one year limited warranty. 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>.¹⁷

17. 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)	USB-C 45W adapter
Nominal Operating Voltage	15V
Average Operating Power	<4.3w with PLT test
Integrated graphics	Intel UHD Graphics 12EUs/24EUs
Discrete Graphics	N/A
Max Operating Power	< 45W
Temperature	
Operating	41° to 95° F (5° to 35° C)
Non-operating	-4° to 140° F (-20° to 60° C)
Relative Humidity	
Operating	10% to 90%
Non-operating	5% to 95%
Shock	
Operating	40 G, 2 ms, half-sine
Non-operating	240 G, 2 ms, half-sine
Random Vibration	
Operating	1.043 grms
Non-operating	3.5 grms
Altitude (unpressurized)	
Operating	-50 to 10,000 ft (-15 to 3,048 m)
Non-operating	-50 to 40,000 ft (-15 to 12,192 m)
Planned Industry Standard Certifications	
UL	Yes
CSA	No
FCC Compliance	Yes
ENERGY STAR®	ENERGY STAR® 8.0 ¹⁸
EPEAT	EPEAT® Silver in United States ¹⁹
ICES	Yes
Australia /	Yes
NZ A-Tick Compliance	Yes
CCC	No
Japan VCCI Compliance	Yes
KC	Yes
BSMI	Yes
CE Marking Compliance	Yes
BNCI or BELUS	No
CIT	Yes
GOST	Yes
Saudi Arabian Compliance (ICCP)	Yes
SABS	Yes
UKRSERTCOMPUTER	No

Technical Specifications

18. Configurations of the HP ChromeBook 11 G9 EE that are ENERGY STAR® qualified are identified as HP ChromeBook 11 G9 EE ENERGY STAR on HP websites and on <http://www.energystar.gov>.

19. 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.

Technical Specifications

DISPLAYS

1. Actual brightness will be lower with touchscreen or sure view.

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

11.6 inch HD (1366x768) Anti-Glare WLED SVA 45percent cg 220nits eDP slim

Outline Dimensions (W x H x D)	268.5 x 168.54 (mm) max.
Active Area	256.125 x 144.0 (mm)
Weight	210g max.
Diagonal Size	11.6 inch
Thickness	3.0 (mm) max
Interface	eDP 1.2
Surface Treatment	Anti-glare (AG)
Touch Enabled	No
Contrast Ratio	400:1 - AG
Refresh Rate	60Hz
Brightness	220 nit (Panel Only)
Pixel Resolution	1366x768 (HD)
Format	RGB
Backlight	LED
Color Gamut Coverage	45%
Color Depth	6-bit
Viewing Angle	SVA 40/40/15/30

11.6 inch HD (1366x768) Anti-Glare WLED UWVA 50percent cg 220nits eDP 1.2 w/o PSR slim Touch on Panel

Outline Dimensions (W x H x D)	278.5 x 168.52 (mm) max
Active Area	256.125 x 144 (mm)
Weight	200g max
Diagonal Size	11.6 (inch)
Thickness	3.20 (mm) max
Interface	eDP 1.2
Surface Treatment	Anti-glare (AG)
Touch Enabled	yes
Contrast Ratio	700:1
Refresh Rate	60Hz
Brightness ¹	220nit (Panel Only)
Pixel Resolution	1366x768 (HD)
Format	RGB
Backlight	LED
Color Gamut Coverage	50%
Color Depth	6 bit
Viewing Angle	UWVA 85/85/85/85

Technical Specifications

11.6 inch HD (1366x768) Anti-Glare WLED UWVA 50percent cg 220nits eDP slim	Outline Dimensions (W x H x D)	278 x 168(mm) max
	Active Area	256.125 × 144.0 (mm)
	Weight	200g max.
	Diagonal Size	11.6 (inch)
	Thickness	3.0 (mm) max
	Interface	eDP 1.2
	Surface Treatment	Anti-glare (AG)
	Touch Enabled	No
	Contrast Ratio	800:1
	Refresh Rate	60HZ
	Brightness	220nit (Panel Only)
	Pixel Resolution	1366x768 (HD)
	Format	RGB
	Backlight	LED
	Color Gamut Coverage	50%
	Color Depth	6 bit
	Viewing Angle	278 x 168(mm) max

Technical Specifications

STORAGE

eMMC 5.0	Drive Weight	0.2g
	Rotation speed	32GB/64GB
	Cache Buffer	
	Height	1.4mm
	Width	11.5x13mm
	Interface	MMC protocol
	Transfer Rate	Up to 250 MB/s
	Seek Time	Up to 70 MB/s
	Logical Blocks	32 GB(31,268,536,320 Bytes)/ 64 GB(62,537,072,640 Bytes)
	Operating Temperature	0 to 70
	Security Features	HS400

For storage drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 9 GB is not user available

Technical Specifications

NETWORKING

Intel® Wi-Fi 6 AX201 + BT5.1 (802.11ax 2x2, supporting gigabit data rate) (non-vPro)^{1,5}	Wireless LAN Standards	<ul style="list-style-type: none"> 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	Features Wi-Fi 6 technology
	Frequency Band	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> •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, (1SS, and 2SS) (20MHz, 40MHz, ,80MHz & 160MHz) •802.11ax : MCS0 ~ MCS11, (1SS and 2SS) (20MHz, 40MHz, ,80MHz & 160MHz)
	Modulation	<ul style="list-style-type: none"> Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM , 1024QAM
	Security³	<ul style="list-style-type: none"> •IEEE compliant 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 •IEEE 802.11i •WAPI
	Network Architecture Models	<ul style="list-style-type: none"> Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points

Technical Specifications

Output Power²	<ul style="list-style-type: none"> • 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 • 802.11ac VHT160(5GHz) : +11.5dBm minimum • 802.11ax HT40(2.4GHz) : +10dBm minimum • 802.11ax VHT160(5GHz) : +10dBm minimum
Power Consumption	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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(HT40): -59dBm maximum • 802.11ax, MCS11(VHT160): -58.5dBm 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 with CNVi Interface
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)

Technical Specifications

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 Wireless Technology	
Bluetooth Specification	4.0/4.1/4.2/5.0/5.1 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 + 9.5 dBm for BR and EDR.

1. 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. Only available in countries where 802.11ax is supported.
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).
5. Wi-Fi 5 or 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.

Technical Specifications

POWER

45W PD adapter	Dimensions	3.74 x 1.69 x 1.08 in (9.5 x 4.3 x 2.75 cm)
	Weight	0.45 lbs (200g) max (Not including power cord. Power cord varies by country.)
	Input	100 to 240 VAC
	Input Efficiency	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec: 5V : 81.5% 9V : 86.7% 12V : 87.41% 15V : 87.8%
	Input frequency range	47 ~ 63Hz
	Input AC current	Max. 1.4 A at 90 Vac
	Output	5V/9V/12V/15V
	Output power	45W
	DC output	5V/9V/12V/15V
	Hold-up time	5ms at 115 Vac input
	Output current limit	<5.0A
	Connector	USB Type-C®
	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	Eg: *CE Mark - full compliance with LVD and EMC directives * Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE. * MTBF - over 200,000 hours at 25°C ambient condition.

Technical Specifications

HP 2-cell Long Life Li-Ion (47 Wh)	Dimensions (H x W x L)	5.2 x 240.8 x 76.4 mm (0.204 x 9.48 x 3 inch)
	Weight	0.192 kg (0.42 lb)
	Cells/Type	2cell Lithium-Ion Polymer cell / 4473A9
	Energy	
	Voltage	8.8V
	Amp-hour capacity	6.150 Ah
	Watt-hour capacity	47.3 Wh
	Temperature	
	Operating (Charging)	32° to 113° F (0° to 45° C)
	Operating (Discharging)	14° to 122° F (-10° to 60° C)
	Fuel Gauge LED	NA
	Warranty	1-year [6]
	Optional Travel Battery Available	No

Technical Specifications

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: <ul style="list-style-type: none">• IT ECO declaration• US ENERGY STAR®• US Federal Energy Management Program (FEMP)• EPEAT® Silver registered in the United States. See http://www.epeat.net for registration status in your country.• TCO 8.0• China Energy Conservation Program (CECP)• China State Environmental Protection Administration (SEPA)• Taiwan Green Mark• Korea Eco-label• Japan PC Green label*		
Sustainable Specifications	Impact	<ul style="list-style-type: none">• 5% post-consumer recycled plastic• Low halogen• Outside Box and corrugated cushions are 100% sustainably sourced and recyclable• Molded Paper Pulp Cushion inside box is 100% sustainably sourced and recyclable• Bulk packaging available		
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)		3.372 W	3.684 W	3.408 W
Normal Operation (Long idle)		1.308 W	1.392 W	1.212 W
Sleep		0.288 W	0.36 W	0.288 W
Off		0.192 W	0.252 W	0.192 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.		

Technical Specifications

Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	12 BTU/hr	13 BTU/hr	12 BTU/hr
Normal Operation (Long idle)	5 BTU/hr	5 BTU/hr	4 BTU/hr
Sleep	1 BTU/hr	1 BTU/hr	1 BTU/hr
Off	1BTU/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	2.4	16
	Fixed Disk – Random writes	2.4	16
	Optical Drive – Sequential reads	2.4	16
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	<ul style="list-style-type: none">• 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 Silver level, see www.epeat.net• Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.• This product is 96.9% recycle-able when properly disposed of at end of life.		
Packaging Materials	External:	PAPER/Corrugated	186 g
		PAPER/Corrugated	40 g
	Internal:	PAPER/Molded pulp	121 g
		PLASTIC/Polyethylene low density	7 g
	The plastic packaging material contains at least 100% recycled content.		
	The corrugated paper packaging materials contains at least 35.6% 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		

Technical Specifications

	<p>products worldwide through the HP GSE. HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam.</p> <p>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.</p> <p>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.</p> <p>To obtain a copy of the HP RoHS Compliance Statement, see HP RoHS position statement.</p>
Material Usage	<p>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 http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html):</p> <ul style="list-style-type: none"> • 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)

Technical Specifications

Packaging Usage	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p> <ul style="list-style-type: none"> • 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	<p>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.</p> <p>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.</p>
HP, Inc. Corporate Environmental Information	<p>For more information about HP's commitment to the environment:</p> <p>Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html</p> <p>Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html</p> <p>ISO 14001 certificates: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842 and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</p>
footnotes	<ul style="list-style-type: none"> • 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.

Technical Specifications

COUNTRY OF ORIGIN

China

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

Category	Description	Part Number
Cases	HP Always On 11.6 Black Case	1D3D0AA
	HP Prelude Pro Recycled 15.6 Backpack	1X644AA,1X644UT,1X644ET
	HP Prelude Pro Recycled 15.6 Top Load	1X645AA,1X645UT,1X645ET
	HP Reversible 11.6 Sleeve	7ZE81AA,7ZE81UT,7ZE81ET
Docking	HP USB-C/A Universal Dock G2	5TW13AA, 5TW13UT, 5TW13ET
	HP USB-C Travel Hub G2	7PJ38AA
Input/Output	HP WL USB Agnes Keyboard	T6U20AA, T6U20UT
	HP Slim Wireless Keyboard and Mouse	T6L04AA, T 6L04UT
	HP Wireless USB Premium Keyboard	Z9N41AA, Z9N41AT
	HP Wireless Rechargeable 950MK Mouse and Keyboard	3M165AA, 3M165UT
	HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA, 9SR36UT, 9SR36ET
	HP 235 WL Mouse and Keyboard Combo	1Y4D0AA, 1Y4D0UT,
	HP 125 Wired Keyboard	266C9AA, 266C9UT,
	HP 225 Wired Mouse and Keyboard Combo	286J4AA, 286J4UT,
	HP Comfort Grip USB Wireless Mouse	H2L63AA, H2L63UT
	HP USB 320M Wired Mouse	9VA80AA, 9VA80UT, 9VA80ET
	HP USB Laser 3 Button USB Mouse	H4B81AA, H4B81ET
	HP USB Premium USB Mouse	1JR32AA,1JR32UT
	HP USB Premium Wireless Mouse	1JR31AA,1JR31UT
	HP USB Travel USB Mouse	G1K28AA, G1K28ET
	HP Wireless 2.4GHz X4000 Bluetooth Mouse	H3T50AA, H3T50UT
	HP HDMI to DVI Adapter	F5A28AA
	HP HDMI to VGA Adapter	H4F02AA, H4F02UT, H4F02ET
	HP USB-C to HDMI 2.0 Adapter	2PC54AA, 1WC36UT, 1WC36AA
	HP USB-C to RJ45 Adapter	V8Y76AA, V7W66AA, V7W66UT
	HP USB-C to USB 3.0 Adapter	N2Z63AA, N2Z63UT
Power	HP USB-C to VGA Adapter	P7Z54AA, N9K76AA, N9K76UT
	HP WL USB Keyboard	T6U20AA, T6U20UT
	HP 45W USB-C G2 Zeus AC Power Adapter	1HE07AA, 1HE07UT
	HP 45W USB-C LC Dali AC Power Adapter	1MZ01AA
Security	HP 65W USB-C Hades AC Power Adapter	X7W50AA, 1HE08AA, 1HE08UT
	HP 65W USB-C Travel Slim AC Power Adapter	3PN48AA, 3PN48UT
UCC	HP Nano Cable Lock	1AJ39AA,1AJ39UT
	HP SureKey Standard/Nano/Wedge Cable Lock	6UW42AA,6UW42UT
UCC	HP Stereo 3.5mm Headset	T1A66AA
	HP Wired USB-A Stereo Headset	T1A67AA

Summary of Changes

Date of change:	Version History:	Updated	Description of change:
March 10, 2021	V1 to V2	Add	Battery Life
March 31, 2021	V2 to V3	Updated	Bluetooth version
August 3, 2021	V3 to V4	Add	Zero Touch Enrollment in Security management

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