Overview

HP Elite Dragonfly 13.5 inch Chromebook Enterprise

Left

1. Dual Edge Microphones (2)
2. Ambient light sensor
3. 5MP camera
4. HP Privacy Camera Shutter

5. Haptic Trackpad

6. Volume buttons
7. Power button
8. MicroSD memory card reader (Memory card is not included)
9. Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)[1]
10. HDMI port (Cable not included)

1. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

Not all configuration components are available in all regions/countries.
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Overview

Right

1. Global Microphone Mute Key
2. Audio Combo Jack
3. SuperSpeed USB Type-A 10Gbps signaling rate (USB 3.2 Gen 2)[1]
4. Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)[2]
5. Nano Lock Slot (Lock sold separately)

6. WWAN SIM slot (Only for units with WWAN)
7. HP Wireless Rechargeable USI Pen G2
8. Magnetic Area to attach Pen and Wireless Charge Pen (Pen is sold separately)
9. Fingerprint Sensor

1. SuperSpeed USB 20Gbps is not available.
2. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

Not all configuration components are available in all regions/countries.
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1. HP Wireless Rechargeable USI Pen G2

2. Magnetic Area to attach Pen and Wireless Charge Pen (Pen is sold separately)

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Overview

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Overview

AT A GLANCE

- Premium and light-weight x360 design with hybrid Mg/Al
- See more in a 13.5" diagonal 3:2 aspect ratio with up to QHD+ (2256x1504) resolution (optional) with Ambient Light Sensor (also with WUVGA+)
- 5MP camera catches more visually, making corrections for low light easier and more effective.
- Immersive haptic trackpad of which size simulates the 3:2 aspect ratio on-screen experience.
- Capture your voice with top-edge mics and suppress background noise with AI-based noise reduction for an enhanced conferencing experience.
- Audio by Bang & Olufsen and four speakers with discrete smart amps work together to create a powerfully rich sound experience.
- Magnetically attached and wirelessly charged, HP Wireless Rechargeable USI Pen G2 [1] is always ready and within reach.
- 5G [2] delivers super-fast data uploads and transfers, while Wi-Fi 6E [3] and Bluetooth® connectivity provide speed and stability on crowded networks.
- Instantly block prying eyes' ability to view your screen with optional HP Sure View Reflect [4] and physically block your camera with the handy HP Privacy Camera shutter.
- Transfer documents, photos, videos, and more between your mobile devices and your Chromebook using HP QuickDrop[5].
- Experience seamless device integration with the included perpetual Chrome Enterprise Upgrade[6] Get 300+ policies and Active Directory, VDI, and enterprise mobility management support.

1. HP Wireless Rechargeable USI Pen is optional.
2. Intel® 5G module is optional and must be configured at the factory.
3. Wi-Fi 6E module is optional and must be configured at the factory.
4. HP Sure View Reflect integrated privacy screen is an optional feature that must be configured at purchase and is designed to function in landscape orientation.
5. HP Quick Drop requires Internet access and Windows 10 or higher PC preinstalled with HP QuickDrop app and either an Android device (phone or tablet) running Android 7 or higher with the Android HP QuickDrop app, and /or an iOS device (phone or tablet) running iOS 12 or higher with the iOS HP QuickDrop app.
6. Single Chrome Enterprise Upgrade included. Requires one-time setup, subscription, Google Admin Console, and your organization's domain. Please see https://support.google.com/a/answer/60216.

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

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PRODUCT NAME

HP Elite Dragonfly 13.5 inch Chromebook Enterprise

OPERATING SYSTEM

Preinstalled   Chrome OS with Chrome Enterprise Upgrade

NOTE: Single Chrome Enterprise Upgrade included. Requires one-time setup, subscription, Google Admin Console, and your organization's domain. Please see https://support.google.com/a/answer/60216

PROCESSORS

Processor [1,2,3,4]	Cores	Number of P-cores	Number of E-cores	Threads	L3 Cache	Max Turbo Frequency		Base Frequency		Intel SIPP/vPro® Enterprise
						P-cores	E-cores	P-cores	E-cores	
Intel® Core™ i7-1265U	10	2	8	12	12MB	4.8 GHz	3.6 GHz	1.8 GHz	1.3 GHz	X
Intel® Core™ i7-1255U	10	2	8	12	12MB	4.7 GHz	3.5 GHz	1.7 GHz	1.2 GHz	
Intel® Core™ i5-1245U	10	2	8	12	12MB	4.4 GHz	3.3 GHz	1.2 GHz	1.2 GHz	X
Intel® Core™ i5-1235U	10	2	8	12	12MB	4.4 GHz	3.3 GHz	1.3 GHz	0.9 GHz	
Intel® Core™ i3-1215U	6	2	4	8	10MB	4.4 GHz	3.3 GHz	1.2 GHz	0.9 GHz	

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. Intel'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.

3. Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.

4. Intel vPro® requires Chrome OS R99 or after, a vPro supported processor, vPro enabled wired LAN and/or WLAN card, Wi-Fi 6E and H1 Security Chip are required. Some functionality requires additional 3rd party software in order to run. Features of vPro® Essentials and Enterprise vary. See http://intel.com/vpro

CHIPSET

Chipset is integrated with processor

Not all configuration components are available in all regions/countries.

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GRAPHICS

Integrated
Intel® Iris® Xe Graphics [5,6]
Intel® UHD Graphics

Supports
Support HD decode, DX12, HDMI 2.0 [5]

5. HD content required to view HD images.
6. Intel® Iris® Xe Graphics capabilities require system to be configured with Intel® Core™ i5 or i7 processors and dual channel memory. Intel® Iris® Xe Graphics with Intel® Core™ i5 or 7 processors and single channel memory will only function as UHD graphics.

DISPLAY

Touch
34.3 cm (13.5") diagonal, QHD+ (2256 x 1504), touch, IPS BrightView, micro-edge, 400 nits, 72% NTSC, eDP 1.4+PSR2 [5,7,8,9]
34.3 cm (13.5") diagonal, WUXGA+ (1920 x 1280), touch, Low Blue Light, IPS anti-glare, micro-edge, 400 nits, 72% NTSC, eDP 1.4+PSR2 with HP Eye Ease [5,7,8,9]
4.3 cm (13.5") diagonal, WUXGA+ (1920 x 1280), HP Sure View Relfect, touch, Low Blue Light, IPS BrightView, micro-edge, 1000 nits, 72% NTSC, eDP 1.3+PSR with HP Eye Ease [5,7,8,9]
34.3 cm (13.5") diagonal, WUXGA+ (1920 x 1280), touch, Low Blue Light, IPS BrightView, micro-edge, 400 nits, 72% NTSC, eDP 1.4+PSR2 with HP Eye Ease [5,7,8,9]

Displays support
Support extended displays through HP docks

Display Size (Diagonal)
13.5"
34.3 cm

5. HD content required to view HD images.
7. Resolutions are dependent upon monitor capability, and resolution and color depth settings.
8. HP Sure View Reflect integrated privacy screen is an optional feature that must be configured at purchase and is designed to function in landscape orientation.
9. Actual brightness will be lower with touchscreen or HP Sure View.

DOCKING (Sold Separately)

Docking station model #1	HP USB-C Dock G5
Docking station model #2	HP USB-C/A Universal Dock G2
Docking station model #3	HP Thunderbolt Dock G2

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STORAGE AND DRIVES

Primary M.2 Storage
512 GB PCIe® NVMe™ M.2 SSD [10]
256 GB PCIe® NVMe™ M.2 SSD [10]
128 GB PCIe® NVMe™ M.2 SSD [10]

10. For storage drives, GB = 1 billion bytes. Actual formatted capacity is less. For 512GB drive, 48.64GB is not user accessible. For 256GB drive, 17.53GB is not user accessible. For 128GB drive, 8.76GB is not user accessible.

MEMORY

Maximum Memory
32 GB LPDDR4x-4266 MHz SDRAM [11]

Memory
32 GB LPDDR4x-4266 MHz SDRAM [11]
16 GB LPDDR4x-4266 MHz SDRAM [11]
8 GB LPDDR4x-4266 MHz SDRAM [11]

Memory Slots
On-board system memory
Supports Dual Channel Memory

11. Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.

NETWORKING/COMMUNICATIONS

WLAN
Intel® AX211 Wi-Fi 6E Bluetooth® 5.2 WLAN [12]
Intel® AX211 Wi-Fi 6E Bluetooth® 5.2 vPro WLAN [12]
MU-MIMO supported
HP Extended Range WLAN supported

WWAN
Intel® 5000 5G Solution WWAN [13]
Intel® XMM 7360 LTE-Advanced WWAN (Cat 9) [14]

Miracast
Chromecast Support [15]

11. 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. And available in countries where Wi-Fi 6E is supported.
12. Intel vPro® requires Chrome OS R99 or after, a vPro supported processor, vPro enabled wired LAN and/or WLAN card, Wi-Fi 6E and H1 Security Chip are required. Some functionality requires additional 3rd party software in order to run. Features of vPro® Essentials and Enterprise vary. See http://intel.com/vpro

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13. LTE module is optional, must be configured at the factory, requires activation and separately purchased service contract. Check with service provider for coverage and availability in your area. Connection, upload and download speeds will vary due to network, location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions.
14. Chromecast must be purchased separately.

AUDIO/MULTIMEDIA

Audio
Audio by Bang & Olufsen
4 Integrated speakers with discrete smart amps
Dual Edge Microphones

Speaker Power
2W/4ohm Per speaker

Camera
5 MP camera
HP Privacy Camera Shutter

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard
Full-size island-style backlit, spill-resistant keyboard

Pointing Device
Haptic trackpad with multi-touch gesture support

Function Keys

esc	ESC key
←	Go to the previous page
⟳	Refresh your current page
⛶	Make your page take up the full screen
⧉	Show all open windows
▣	Take a screenshot
☼	Decrease screen brightness
☼	Increase screen brightness
▨	[for SureView sku]: Turn on SureView
⌁	[for non-SureView sku]: Keyboard backlight on/off
⌁	[for SureView sku]: Keyboard backlight on/off
▶❚❚	[for non-SureView sku]: Play/pause
🎤	Global microphone mute/unmute
🔇	Turn off the sound

Not all configuration components are available in all regions/countries.
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- ◄ Lower the volume
- ◄)) Raise the volume
- 🔒 Lock Screen

SOFTWARE AND SECURITY

Preinstalled Software
HP QuickDrop [15]

Manageability Features
Zero Touch Enrollment [16]
Chrome Enterprise Upgrade (Included)

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

Security Management
Nano lock slot (Lock sold separately) [16]
Fingerprint Sensor[17]

Security
TPM
Titan C security chip

IPv6 Support
N/A

FirstNet Certified
N/A

Is the BIOS on this notebook ISO/IEC 19678:2015 (formerly NIST 800-147) compliant?: N/A

15. HP Quick Drop requires Internet access and Chrome OS device preinstalled with HP QuickDrop app and either an Android device (phone or tablet) running Android 7 or higher with the Android HP QuickDrop app, and /or an iOS device (phone or tablet) running iOS 12 or higher with the iOS HP QuickDrop app.
16. Sold separately.
17. HP Fingerprint sensor is an optional feature that must be configured at purchase.

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POWER

Power Supply
HP Smart 65 W USB Type-C® adapter [18]
HP Smart 65 W Slim USB Type-C® adapter [18]
HP Smart 45 W USB Type-C® adapter [18]

Battery
HP Long Life 4-cell, 50 Wh Polymer [19,20]
Support HP Fast Charge Technology (90 mins to 90%) [21]

Power Cord
3-wire plug - 1m

Battery Life
Up to 10 hours (Intel i3-1215U/8GB/128GB SSD/WUXGA+) [22]

Battery Weight
0.52lb
235g

18. Availability may vary by country.
19. Battery is internal and not replaceable by customer. Serviceable by warranty.
20. 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.
21. Recharges up to 90% within 90 minutes when the system is off or in standby mode when used with the power adapter provided with the notebook. After charging has reached 90% capacity, charging will return to normal. Charging time may vary +/-10% due to System tolerance.
22. 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 and battery optimization activation. See http://www.chromium.org/chromium-os/testing/power-testing for test details. Battery configuration and charge capacity is optimized to improve battery health over time based upon charging patterns and temperature.

WEIGHTS & DIMENSIONS

Product Weight
Starting at 2.8 lb [23]
Starting at 1.27 kg [23]

Product Dimensions (W x D x H)
11.59 x 8.73 x 0.65 in
29.45 x 22.18 x 1.66 cm

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

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PORTS/SLOTS

2 Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4) [24]

1 SuperSpeed USB Type-A 10Gbps signaling rate (USB 3.2 Gen 2) [25]

1 stereo headphone/microphone combo jack

1 HDMI 2.0 [26]

Expansion Slots

1 Micro SD multi-format digital media reader [27]

Supports SD, SDHC, SDXC

24. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

25. SuperSpeed USB 20Gbps is not available.

26. HDMI cable sold separately.

27. Memory card sold separately.

Not all configuration components are available in all regions/countries.

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SERVICE AND SUPPORT

HP Services offers 1-year or 3-year limited warranties 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. [28]

28. 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.

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SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	USB-C 45W and 65W adapter
Nominal Operating Voltage	5V/9V/12V/15V
Average Operating Power	< 45W
Integrated graphics	Yes
Discrete Graphics	N/A
Max Operating Power	UMA < 45W
Temperature	
Operating	32° to 95° F (0° to 35° C)
Non-operating	41° to 95° F (5° to 35° 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 grams
Non-operating	3.5 grams
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	
Regulatory Model Number	TPN-Q273
UL	Yes
CSA	No
FCC Compliance	Yes
ENERGY STAR® 8.0	Yes [29]
EPEAT®	Yes, EPEAT® Gold in United States[30]
TCO certified	Yes
ICES	Yes
Australia / NZ A-Tick Compliance	Yes
CCC	Yes
Japan VCCI Compliance	Yes
KC	Yes
BSMI	Yes
CE Marking Compliance	Yes
BNCI or BELUS	No
CIT	No
EAC Certificate	Yes
GOST	Yes (EAC)
Saudi Arabian Compliance (ICCP)	Yes
SABS	Yes
UKRSERTCOMPUTER	No

29. Configurations of the HP Elite Dragonfly Chromebook Enterprise that are ENERGY STAR® qualified are identified as HP Elite Dragonfly Chromebook Enterprise ENERGY STAR on HP websites and on http://www.energystar.gov.

30. 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.

Not all configuration components are available in all regions/countries.
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DISPLAYS

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

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

13.5 in WUXGA+ (1920 x 1280) HP SureView Reflect+1000nits	**Outline Dimensions (W x H x D)**	290.189 x 199.970 (max)
	Active Area	284.890 x 189.930 (typ.)
	Weight	255 g(max)
	Diagonal Size	13.5 (inch)
	Thickness	2.2 mm/3.9mm (max)
	Interface	eDP1.4
	Surface Treatment	Bright View
	Touch Enabled	No
	Contrast Ratio	1500:1(typ.)
	Refresh Rate	60Hz
	Brightness	1000 nits
	Pixel Resolution - Format	1920 x1280 (FHD)
	Backlight	WLED
	Pixel Resolution	RGB
	Color Gamut Coverage	sRGB 100%
	Color Depth	8
	Viewing Angle	UWVA 85/85/85/85
	Low Blue Light	Yes
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	2.03 (max)/2.32(max)

13.5" WUXGA+ (1920 x 1280) Anti-Glare 400nits	**Outline Dimensions (W x H x D)**	290.200 x 199.970 max
	Active Area	284.889 x 189.926 mm (typ.)
	Weight	200g
	Diagonal Size	13.5(inch)
	Thickness	2.05mm / 3.85mm (w/ PCB) max
	Interface	eDP1.4
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1500:1 (typ.)
	Refresh Rate	60Hz
	Brightness	400nits (typ.)
	Pixel Resolution - Format	1920 x 1280 (WUXGA+)
	Backlight	WLED
	Pixel Resolution	RGB
	Color Gamut Coverage	sRGB 100%
	Color Depth	8bit
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes

Technical Specifications

	Power Consumption (W, EBL@ 150nits max/ 200nits max)	1.42W(max)/ 1.71W(max)

13.5" WUXGA+ (1920 x 1280) Bright View 400nits		
	Outline Dimensions (W x H x D)	290.200 x 199.970 max
	Active Area	284.889 x 189.926 mm (typ.)
	Weight	200g
	Diagonal Size	13.5(inch)
	Thickness	2.05mm / 3.85mm (w/ PCB) max
	Interface	eDP1.4
	Surface Treatment	Bright View
	Touch Enabled	No
	Contrast Ratio	1500:1 (typ.)
	Refresh Rate	60Hz
	Brightness	400nits (typ.)
	Pixel Resolution - Format	1920 x 1280 (WUXGA+)
	Backlight	WLED
	Pixel Resolution	RGB
	Color Gamut Coverage	sRGB 100%
	Color Depth	8bit
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	1.42W(max)/ 1.71W(max)

13.5" WUXGA+ (1920 x 1280) Bright View 400nits		
	Outline Dimensions (W x H x D)	290.200 x 199.970 max
	Active Area	284.889 x 189.926 mm (typ.)
	Weight	200g
	Diagonal Size	13.5(inch)
	Thickness	2.05mm / 3.85mm (w/ PCB) max
	Interface	eDP1.4
	Surface Treatment	Bright View
	Touch Enabled	No
	Contrast Ratio	1500:1 (typ.)
	Refresh Rate	60Hz
	Brightness	400nits (typ.)
	Pixel Resolution - Format	1920 x 1280 (WUXGA+)
	Backlight	WLED
	Pixel Resolution	RGB
	Color Gamut Coverage	sRGB 100%
	Color Depth	8bit
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes

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QuickSpecs

Technical Specifications

	Power Consumption (W, EBL@ 150nits max/ 200nits max)	1.42W(max)/ 1.71W(max)

13.5" QHD+ (2256 x 1504) 400nits	Outline Dimensions (W x H x D)	290.230 × 201.210 (max)
	Active Area	284.93mm × 189.9mm (typ)
	Weight	200g (max)
	Diagonal Size	13.5 inch
	Thickness	2.0mm/ 3.8mm (w/ PCB) (max)
	Interface	eDP1.4
	Surface Treatment	Bright View
	Touch Enabled	No
	Contrast Ratio	1500:1 typ
	Refresh Rate	60Hz
	Brightness	400 nits(typ)
	Pixel Resolution - Format	2256x1504(QHD+)
	Backlight	WLED
	Pixel Resolution	RGB
	Color Gamut Coverage	sRGB 100%
	Color Depth	8bit
	Viewing Angle	UWVA 85/85/85/85
	Low Blue Light	No
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	1.65(max)/ 2.0(max)

Not all configuration components are available in all regions/countries.
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Technical Specifications

STORAGE AND DRIVES

For storage drives, GB = 1 billion bytes. Actual formatted capacity is less. For 512GB drive, 48.64GB is not user accessible. For 256GB drive, 17.53GB is not user accessible. For 128GB drive, 8.76GB is not user accessible.

SSD 128GB 2230 PCIe NVMe Value (SSD 128GB 2230 PCIe NVMe Value)

Form Factor	M.2 2230
Capacity	128GB
NAND Type	NVMe
Height	0.09 in (2.3 mm)
Width	0.87 in (22 mm)
Weight	0.02 lb (10 g)
Interface	Value
Maximum Sequential Read	Up to 3000
Maximum Sequential Write	Up to 1400
Logical Blocks	250,069,680
Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
Features	Pyrite

SSD 256GB 2230 PCIe NVMe Value (SSD 256GB 2230 PCIe NVMe Value)

Form Factor	M.2 2230
Capacity	256GB
NAND Type	NVMe
Height	0.09 in (2.3 mm)
Width	0.87 in (22 mm)
Interface	Value
Maximum Sequential Read	Up to 3000
Maximum Sequential Write	Up to 1800
Logical Blocks	500,118,192
Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
Features	Pyrite
Form Factor	M.2 2230

SSD 512GB 2280 PCIe NVMe Value (512GB 2280 PCIe NVMe Value 2nd M.2 India Solid State Drive)

Form Factor	M.2 2280
Capacity	512GB
NAND Type	NVMe
Height	0.09 in (2.3 mm)
Width	0.87 in (22 mm)
Interface	Value
Maximum Sequential Read	Up to 3200
Maximum Sequential Write	Up to 2700
Logical Blocks	1,000,215,216
Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
Features	Pyrite

Not all configuration components are available in all regions/countries.
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NETWORKING/COMMUNICATIONS

Intel® AX211 Wi-Fi 6E + Bluetooth® 5.2 M.2 160MHz CNVi World-wide WLAN vPro®[1]

Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v	
Interoperability	Wi-Fi certified	

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 – 6.415 GHz
	  6.435 – 6.515 GHz
	  6.535 – 6.875 GHz
	  6.895 – 7.115 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 : 1733Mbps • 802.11ax : max 2.4Gbps	
Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM	
Security[3]	• IEEE and WiFi 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 • 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[2]	• 802.11b : +17dBm minimum • 802.11g : +16dBm minimum	

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	• 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 • 802.11ac VHT160(5GHz) : +10dBm minimum • 802.11ax HE40(2.4GHz) : +12dBm minimum • 802.11ax HE80(5GHz) : +10dBm minimum • 802.11ax HE160(5GHz) : +10dBm minimum
Power Consumption	• Transmit mode 2.0 W • Receive mode 1.6 W • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode 50 mW (WLAN unassociated) • Connected Standby 10mW • Radio disabled 8 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
Receiver Sensitivity[4]	• 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(VHT80) : -84dBm maximum • 802.11ac, MCS9(VHT80) : -59dBm maximum • 802.11ac, MCS9(VHT160) : -58.5dBm maximum • 802.11ax, MCS11(HE40): -57dBm maximum • 802.11ax, MCS11(HE80): -54dBm maximum • 802.11ax, MCS11(HE160): -53.5dBm 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	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 1216: 1.3g
Operating Voltage	3.3v +/- 9%

Temperature	**Operating**	14° to 158° F (−10° to 70° C)
	Non-operating	−40° to 176° F (−40° to 80° C)
Humidity	**Operating**	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
Altitude	**Operating**	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED OFF – Radio ON	

Not all configuration components are available in all regions/countries.
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HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2 Wireless Technology

Bluetooth Specification	4.0/4.1/4.2/5.0/5.1/5.2 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. 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. And available in countries where Wi-Fi 6E 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).

Not all configuration components are available in all regions/countries.

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Intel® AX211 Wi-Fi 6E + Bluetooth® 5.2 M.2 160MHz CNVi World-wide WLAN non-vPro®[1]

Wireless LAN Standards	IEEE 802.11a	
	IEEE 802.11b	
	IEEE 802.11g	
	IEEE 802.11n	
	IEEE 802.11ac	
	IEEE 802.11ax	
	IEEE 802.11d	
	IEEE 802.11e	
	IEEE 802.11h	
	IEEE 802.11i	
	IEEE 802.11k	
	IEEE 802.11r	
	IEEE 802.11v	
Interoperability	Wi-Fi certified	
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 – 6.415 GHz 6.435 – 6.515 GHz 6.535 – 6.875 GHz 6.895 – 7.115 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 : 1733Mbps • 802.11ax : max 2.4Gbps	
Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM	
Security[3]	• IEEE and WiFi 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 • 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[2]	• 802.11b : +17dBm minimum • 802.11g : +16dBm minimum • 802.11a : +17dBm minimum	

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	• 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	
	• 802.11ac VHT160(5GHz) : +10dBm minimum	
	• 802.11ax HE40(2.4GHz) : +12dBm minimum	
	• 802.11ax HE80(5GHz) : +10dBm minimum	
	• 802.11ax HE160(5GHz) : +10dBm minimum	

Power Consumption
- Transmit mode 2.0 W
- Receive mode 1.6 W
- Idle mode (PSP) 180 mW (WLAN Associated)
- Idle mode 50 mW (WLAN unassociated)
- Connected Standby   10mW
- Radio disabled 8 mW

Power Management
ACPI and PCI Express compliant power management
802.11 compliant power saving mode

Receiver Sensitivity[4]
- 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(VHT80) : –84dBm maximum
- 802.11ac, MCS9(VHT80) : –59dBm maximum
- 802.11ac, MCS9(VHT160) : –58.5dBm maximum
- 802.11ax, MCS11(HE40): –57dBm maximum
- 802.11ax, MCS11(HE80): –54dBm maximum
- 802.11ax, MCS11(HE160): –53.5dBm 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
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 1216: 1.3g

Operating Voltage
3.3v +/- 9%

Temperature	**Operating**	14° to 158° F (−10° to 70° C)
	Non-operating	−40° to 176° F (−40° to 80° C)

Humidity	**Operating**	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)

Altitude	**Operating**	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)

LED Activity
LED Amber – Radio OFF; LED OFF – Radio ON

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

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Bluetooth Specification	4.0/4.1/4.2/5.0/5.1/5.2 Compliant
Frequency Band	2402 to 2480 MHz
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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. 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. And available in countries where Wi-Fi 6E 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).

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Intel® XMM™ 7360 LTE-Advanced (CAT 9)[1]		
	Technology/Operating bands	FDD LTE: 2100 (Band 1), 1900 (Band 2), 1800 (Band 3), 1700/2100 (Band 4), 850 (Band 5), 2600 (Band 7), 900 (Band 8), 700 (Band 12 lower), 700 (Band 13 upper), 700 (Band 17 lower), 850 (Band 18 lower), 850 (Band 19 upper), 800 (Band 20), 850 (Band 26), 700 (Band 28), 700 (Band 29 RX only), 2300 (Band 30), 1700/2100 (Band 66), 600 (Band 38), 1900 (Band 39), 2400 (Band 40), 2500 (Band 41), HSPA+: 2100 (Band 1), 1900 (Band 2), 1700/2100 (Band 4), 850 (Band 5), 900 (Band 8) MHz
	Wireless protocol standards	3GPP Release 11 LTE Specification DL-CAT.9, DL 60MHz BW throughput up to 450Mbps; UL-CAT.3 50Mbps WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification
	GPS	Standalone GPS/Beidou/Glonass, A-GPS (MS-A, MS-B)
	GPS bands	GPS 1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz, Beidou 1561.098 MHz
	Maximum data rates	LTE: 450Mbps (Download), 50 Mbps (Upload) DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload)
	Maximum output power	LTE: 23 dBm in all bands HSPA+: 23.5 dBm
	Maximum power consumption	LTE: 1,300 mA (peak); 880 mA (average) HSPA+: 800 mA (peak); 650 mA (average)
	Form Factor	M.2, 3042-S3 Key B
	Weight	6.2 g
	Dimensions (Length x Width x Thickness)	42 x 30 x 2.3 mm

1. Mobile Broadband is an optional feature that requires configuration at hardware purchase. Connection requires wireless data service contract, network support, and is not available in all areas. Contact service provider to determine the coverage area and availability. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products or in all countries.

Intel(R) 5G Solution 5000		
	Technology/Operating bands	WCDMA/HSPA+ operating bands: Band 1: 1920 to 1980 MHz (UL), 2110 to 2170 MHz (DL) Band 2: 1850 to 1910 MHz (UL), 1930 to 1990 MHz (DL) Band 4: 1710 to 1755 MHz (UL), 2110 to 2155 MHz (DL) Band 5: 824 to 849 MHz (UL), 869 to 894 MHz (DL) Band 8: 880 to 915 MHz (UL), 925 to 960 MHz (DL) LTE FDD/TDD operating bands: Band 1: 1920 to 1980 MHz (UL), 2110 to 2170 MHz (DL) Band 2: 1850 to 1910 MHz (UL), 1930 to 1990 MHz (DL) Band 3: 1710 to 1785 MHz (UL), 1805 to 1880 MHz (DL) Band 4: 1710 to 1755 MHz (UL), 2110 to 2155 MHz (DL) Band 5: 824 to 849 MHz (UL), 869 to 894 MHz (DL) Band 7: 2500 to 2570 MHz (UL), 2620 to 2690 MHz (DL) Band 8: 880 to 915 MHz (UL), 925 to 960 MHz (DL) Band 12: 699 to 716 MHz (UL), 729 to 746 MHz (DL)

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Band 13: 777 to 787 MHz (UL), 746 to 756 MHz (DL)
Band 14: 788 to 798 MHz (UL), 758 to 768 MHz (DL)
Band 17: 704 to 716 MHz (UL), 734 to 746 MHz (DL)
Band 18: 815 to 830 MHz (UL), 860 to 875 MHz (DL)
Band 19: 830 to 845 MHz (UL), 875 to 890 MHz (DL)
Band 20: 832 to 862 MHz (UL), 791 to 821 MHz (DL)
Band 25: 1850 to 1915 MHz (UL), 1930 to 1995 MHz (DL)
Band 26: 814 to 849 MHz (UL), 859 to 894 MHz (DL)
Band 28: 703 to 748 MHz (UL), 758 to 803 MHz (DL)
Band 29: 717 to 728 MHz (DL)
Band 30: 2305 to 2315 MHz (UL) 2350 to 2360 MHz (DL)
Band 32: 1452 to 1496 MHz (DL)
Band 34: 2010 to 2025 MHz (UL/DL)
Band 38: 2570 to 2620 MHz (UL/DL)
Band 39: 1880 to 1920 MHz (UL/DL)
Band 40: 2300 to 2400 MHz (UL/DL)
Band 41: 2496 to 2690 MHz (UL/DL)
Band 42: 3400 to 3600 MHZ (UL/DL)
Band 43: 3400 to 3800 MHZ (UL/DL)
Band 46: 5150 to 5925 MHZ (DL)
Band 48: 3550 to 3700 MHZ (UL/DL)
Band 66: 1710 to 1800 MHz (UL), 2110 to 2200 MHz (DL)
Band 71: 663 to 698 MHz (UL), 617 to 652 MHz (DL)
5GNR Sub 6GHZ
n1: 1920 to 1980 MHz (UL), 2110 to 2170 MHz (DL)
n2: 1850 to 1910 MHz (UL), 1930 to 1990 MHz (DL)
n3: 1710 to 1785 MHz (UL), 1805 to 1880 MHz (DL)
n5: 824 to 849 MHz (UL), 869 to 894 MHz (DL)
n7: 2500 to 2570 MHz (UL), 2620 to 2690 MHz (DL)
n8: 880 to 915 MHz (UL), 925 to 960 MHz (DL)
n20: 832 to 862 MHz (UL), 791 to 821 MHz (DL)
n25: 1850 to 1915 MHz (UL), 1930 to 1995 MHz (DL)
n28: 703 to 748 MHz (UL), 758 to 803 MHz (DL)
n38: 2570 to 2620 MHz (UL/DL)
n40: 2300 to 2400 MHz (UL/DL)
n41: 2496 to 2690 MHz (UL/DL)
n48: 3550 to 3700 MHZ (UL/DL)
n66: 1710 to 1800 MHz (UL), 2110 to 2200 MHz (DL)
n71: 663 to 698 MHz (UL), 617 to 652 MHz (DL)
n77: 3300 to 4200 MHz (UL/DL)
n78: 3300 to 3800 MHz (UL/DL)
n79: 4400 to 5000 MHz (UL/DL)

Wireless protocol standards	5GNR Air Interface 3GPP Rel15 5G NR sub-6 LTE Rel14 20 layers and 2 Gbps downlink (DL) throughput – 4 × 4 MIMO across 5x CA 200 Mbps/uplink (UL) throughput – 40 MHz ULCA and 256 QAM WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification

Not all configuration components are available in all regions/countries.
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GPS	Standalone, A-GPS (MS-A, MS-B)
GPS bands	GPS: L1 (1575.42MHz)
	GLONASS: L1 (1602MHz)
	BeidouB1(1561.098MHz)
	Galileo E1 (1575.42)
	QZSS(1575.42 MHz)
Maximum data rates	SA 5G/NR sub-6 Peak: DL4.67Gbps/ UL 1.25Gbps
	5G NSA sub 6G : DL: 3.8 Gbps/UL 700Mbps
	LTE: ue-CategoryDL 19, (DL : 1.6 Gbps)
	ue-CategoryUL 13 , (UL: 150Mbps)
	DC-HSPA+: 42 Mbps (Download), 11.5 Mbps (Upload)
Maximum output power	LTE: 23 dBm in all band except B41
	LTE B41 HPUE = 26dBm
	NR: 23 dBm in all band except n41, n77, n78 and n79
	LTE n41, n77, n78 and n79 HPUE = 26dBm
	HSPA+: 23.5 dBm
Maximum power consumption	5G Sub 6 : 2500 mA
	LTE: 1,300 mA (peak); 1100 mA (average)
	HSPA+: 1,100 mA (peak); 800 mA (average)
Form Factor	M.2, 3042-S3 Key B
Weight	8 g
Dimensions (Length x Width x Thickness)	52 mm × 30 mm × 2.6 mm
Embedded eSIM	Support

1. Intel(R) 5G module is optional and must be configured at the factory. Module designed for 5G NR NSA (non-standalone) networks as carriers deploy Evolved-Universal Terrestrial Radio Access New Radio Dual Connectivity (ENDC) with both 100Mhz of 5G NR and LTE channel bandwidth, using 256QAM 4x4 as defined by 3GPP. Module requires activation and separately purchased service contract. Check with service provider for coverage and availability in your area. Data connection, upload and download speeds will vary due to network, location, environment, network conditions, and other factors. Backwards compatible to 4G LTE and 3G HSPA technologies. 5G module planned to be available in select platforms and select countries, where carrier supported.

Not all configuration components are available in all regions/countries.
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POWER

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

45W PD adapter	Dimensions	3.74 x 1.69 x 1.08 in (9.5cm x 4.3cm x 2.75cm)
	Weight	0.44 lb (200 g) 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 ~ 63 Hz
	Input AC current	Max. 1.4 A at 90 Vac
	Output	
	Output power	5V/15W 9V/27W 12V/36W 15V/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 - IEC60950-1 and/or IEC62368-1, EN60950-1 and/or EN62368-1, UL60950-1 and/or UL62368-1 , Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC, NOM-001 NYCE. * MTBF - over 200,000 hours at 25°C ambient condition.
65W PD adapter	Dimensions	3.46 x 2.1 x 0.83 in (8.8 x 5.35 x 2.1 cm)
	Weight	0.485 lb (220 g) max (Not including power cord. Power cord varies by country.)
	Input	100 to 240 VAC
	Input Efficiency	81.5% min at 115 Vac/ 230Vac @ 5V/3A 86.7% min at 115 Vac/ 230Vac @ 9V/3A

Not all configuration components are available in all regions/countries.

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		88% min at 115 Vac/ 230Vac @ 12V/5A
		89% min at 115 Vac/ 230Vac @ 15V/4.33A
		89% min at 115 Vac/ 230Vac @ 20V/3.25A
	Input frequency range	47 ~ 63 Hz
	Input AC current	1.6 A at 90 VAC and maximum load
	Output	
	Output power	5V/15W
		9V/27W
		12V/60W
		15V/65W
		20V/65W
	DC output	5V/9V/12V/15V/20V
	Hold-up time	5ms at 115 Vac input
	Output current limit	<8.0A
	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 - IEC60950-1 and/or IEC62368-1, EN60950-1 and/or EN62368-1, UL60950-1 and/or UL62368-1 , Class1, SELV;
		Agency approvals - C-UL-US, NORDICS, DENAN, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC, NOM-001 NYCE.
		* MTBF - over 200,000 hours at 25°C ambient condition.
65W PD adapter	**Dimensions**	3.54 x 2.0 x 1.12 in (9.0 x 5.1 x 2.85 cm)
	Weight	0.55 lb (250 g) max (Not including power cord. Power cord varies by country.)
	Input	100 to 240 VAC
	Input Efficiency	81.5% min at 115 Vac/ 230Vac @ 5V/3A
		86.7% min at 115 Vac/ 230Vac @ 9V/3A
		88% min at 115 Vac/ 230Vac @ 12V/5A
		89% min at 115 Vac/ 230Vac @ 15V/4.33A
		89% min at 115 Vac/ 230Vac @ 20V/3.25A"
	Input frequency range	47 ~ 63 Hz
	Input AC current	1.6 A at 90 VAC and maximum load
	Output	
	Output power	5V/15W
		9V/27W
		12V/60W

Not all configuration components are available in all regions/countries.

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Technical Specifications

		15V/65W
		20V/65W
	DC output	5V/9V/12V/15V/20V
	Hold-up time	5ms at 115 Vac input
	Output current limit	<8.0A
	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 - IEC60950-1 and/or IEC62368-1, EN60950-1 and/or EN62368-1, UL60950-1 and/or UL62368-1 , Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC, NOM-001 NYCE. * MTBF - over 200,000 hours at 25°C ambient condition.

HP 4-cell Long Life Li-Ion (50 Wh)[1]	**Dimensions (H x W x L)**	4.65 x 249.1 x 85.2 mm (0.183 x 9.8 x 3.35 inch)
	Weight	0.205 Kg (0.45 lb)
	Cells/Type	4cell Lithium-Ion Polymer cell / 4041B3
	Energy	
	Voltage	7.7V
	Amp-hour capacity	6.62Ah
	Watt-hour capacity	50.97Wh
	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
	Optional Travel Battery Available	No

Not all configuration components are available in all regions/countries.

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Technical Specifications

AUDIO

HD Stereo Codec	Realtek ALC5682I-VS
Audio I/O Ports	Headset connector supports both CTIA and OMTP style headset
Internal Speaker Amplifier	Maxim MAX98390A x4, up to 6W class-D mono smart amplifier
Multi-streaming Capable	Follow ChromeOS behavior (NOT SUPPORT in current version)
Sampling	Follow ChromeOS behavior
Wavetable Syntheses	N/A
Analog Audio	Stereo headphone out by 3.5mm audio jack only.
# of Channels on Line-Out	Headphone L/R, No Line-Out
Internal Speaker	Yes

FINGERPRINT READER

Sensor vendor	Model: FINGERPRINTS FPC1025
Sensor type	Capacitive
DPI resolution	508 dpi
Scan area	160x160
False Rejection Rate	CLKfreq 8kHz~19kHz
False Acceptance Rate	n/a
Mobile Voltage Operation	1.62V to 1.98V (Typical 1.8V)
Operating Temperature	-40° to +85°C
Current Consumption Image	< 6 mA
Low Latency Wait For Finger Capture Rate	2.1 mA
ESD Resistance	+/- 30kV
Detection Matrix	160 x 160 pixels

COUNTRY OF ORIGIN

China

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

DOCKING (Sold Separately)

Docking station model #1	HP USB-C Dock G5
Total number of supported displays (incl. the notebook display)	3
Max. resolutions supported	Dual 5K@ 30Hz + (1) 4K UHD (multi-function mode)
Dock Connectors	1xHDMI, 2xDP
Technical limitations	Highest resolution with dual displays is two 8K@ 60Hz host in High Resolution mode. Three maximum displays supported are two 5K@ 30 Hz on DP ports plus one 4K UHD@ 30 Hz on HDMI in Multi-function mode The highest resolution for a non-Thunderbolt host in Multi-function mode is a single 5K dual cable (using both DP ports) + (1) 4K on HDMI port.
Docking station model #2	HP USB-C/A Universal Dock G2
Total number of supported displays (incl. the notebook display)	3
Max. resolutions supported	Triple 4K UHD@ 60Hz
Dock Connectors	1xHDMI, 2xDP
Technical limitations	The best resolution for dual or triple displays is 4K UHD@ 60Hz. For use with the USB-A adapter that comes in the box the maximum number of displays supported is (2) 4k x 60 Hz on the Type-A Gen 1 connection from the host
Docking station model #3	HP Thunderbolt Dock G2
Total number of supported displays (incl. the notebook display)	4
Max. resolutions supported	Dual 4K @30Hz or dual 4K UHD @ 60Hz is supported Single 8K@ 30Hz (multiple tiles) for Thunderbolt hosts
Dock Connectors	2xDP, 1xVGA, 1xTB, 1xUSB-C alt-mode
Technical limitations	Thunderbolt Hosts: Maximum of (4) displays with maximum resolution of 5K@ 30Hz running Thunderbolt host. Maximum resolution possible is dual 8K displays @ 60Hz running Thunderbolt host or running a non-Thunderbolt host in high resolution mode @30Hz Non-Thunderbolt hosts: The highest resolution for dual displays running a non-Thunderbolt host in multi-function mode is (1) 5K dual cable (using both DP ports) +(1) 4K on USB-C DP port Non-Thunderbolt hosts support (3) displays with a maximum resolution of (2) 5K single cable + (1) 4K UHD @ 60 Hz in high resolution mode. In multifunction mode the maximum resolution for (3) displays is (2) 5K single cable @ 30Hz + (1) 4K UHD @ 30Hz.

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QuickSpecs

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

Category	Description	Part Number
Audio/Video	HP Wired USB-A Stereo Headset	428K6AA
	HP Wired 3.5mm Stereo Headset	428K7AA
Cases	HP Executive 15.6 Backpack	6KD07AA
	HP Executive 15.6 Top Load	6KD06AA
	HP Executive Slim 14.1 Top Load	6KD04AA
	HP Prelude G2 15.6 Backpack	1E7D6AA
	HP Prelude G2 15.6 Top Load	1E7D7AA
	HP Prelude Pro Recycled 15.6 Backpack	1X644AA
	HP Prelude Pro Recycled 15.6 Top Load	1X645AA
	HP Mobility 14" Laptop Case	4U9G9AA
	HP Renew Business 14.1" Bag	3E5F9AA
	HP Renew Business 17.3" Backpack	3E2U5AA
	HP Renew Business 14.1" Sleeve	3E2U7AA
	HP Renew Business 15.6" Bag	3E5F8AA
	HP Renew Business 17.3" Bag	3E2U6AA
Docking	HP USB-C Dock G5	5TW10AA
	HP USB-C/A Universal Dock G2	5TW13AA
Hub	HP USB-C Mini Dock	1PM64AA
	HP Universal USB-C Multiport Hub	50H55AA
	HP USB-C Travel Dock G2	7PJ38AA
	HP USB-C to USB-A Hub	Z6A00AA
Adapter	HP HDMI to DVI Adapter	F5A28AA
	HP HDMI to VGA Adapter	H4F02AA
	HP USB to Gigabit RJ45 Adapter	N7P47AA
	HP USB-C to DisplayPort Adapter	N9K78AA
	HP USB-C to HDMI 2.0 Adapter	1WC36AA
	HP USB-C to RJ45 Adapter	V7W66AA
	HP USB-C to USB 3.0 Adapter	N2Z63AA
	HP USB-C to VGA Adapter	N9K76AA
Digital Pen	HP Active RECHBL Pen USI Galantis	235N6AA
Keyboard/Combo	HP 325 Chrome BT Keyboard	45U14AA
Mouse	HP USB Premium Wireless Mouse	1JR31AA
	HP 435 Multi-Device Wireless Mouse	3B4Q5AA
	HP 125 USB-A Wired Mouse	265A9AA
	HP 128 USB Laser Wired Mouse	265D9AA
	HP 320M USB-A Wired Mouse	9VA80AA
	HP Creator USB-A+Bluetooth 935 Wireless Mouse Black	1D0K8AA

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

	HP USB-A+Bluetooth Multi-Device 635 Wireless Mouse Black	1D0K2AA
	HP USB-A+Bluetooth Travel Bluetooth Mouse	6SP30AA
Power	HP 45W USB-C G2 AC Power Adapter	1HE07AA
	HP 45W USB-C LC AC Power Adapter	1MZ01AA
	HP 65W USB-C AC Power Adapter	5TQ76AA
	HP 65W USB-C AC Power Adapter	1HE08AA
	HP 65W USB-C LC AC Power Adapter	1P3K6AA
	HP 65W USB-C Travel Slim AC Power Adapter	3PN48AA
Commodity	HP Nano Keyed Cable Lock	1AJ39AA
	HP Nano Master Keyed Cable Lock	1AJ40AA
	HP SureKey Standard/Nano/Wedge Cable Lock	6UW42AA

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Summary of Changes

Date of change:	Version History:	Updated	Description of change:
May 17, 2022	V1 to V2	Added	Battery life
June 15, 2022	V2 to V3	Added	Added note in Manageability Feature

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