

Overview

HP ProBook x360 11 G7 Education Edition



Left

- | | |
|--|---|
| 1. Webcam LED | 6. World-facing Webcam LED (optional) |
| 2. 720p Webcam | 7. Power button |
| 3. Microphone | 8. Headphone/Microphone combo jack |
| 4. Clickpad | 9. SuperSpeed USB Type-A 5 Gbps signaling rate port |
| 5. World-facing 5 Megapixels Webcam (optional) | 10. Nano Security lock slot (Lock sold separately) |

Overview



Right

1. Power connector
2. Ethernet (RJ-45) port
3. HDMI port (Cable sold separately)
4. SuperSpeed USB Type-A 5 Gbps signaling rate port
5. SuperSpeed USB Type-C® 5 Gbps signaling rate port

Overview

At a Glance

- Windows 11 Pro, other Windows OS, or FreeDOS preinstalled
- Starting at 3.15 lbs (1.43 kg)
- At 21.2mm (0.83") thin at front, this flexible 360° hinge converts to laptop, tablet, tent, stand or book mode easily
- Undergoes MIL-STD 810H ¹
- Rugged features such as co-molded rubber trim, spill- and pick-resistant keyboard, and Corning® Gorilla® Glass 3 touch screen
- Optional world-facing camera for project-based learning
- Optional HP Pro Pen engineered with durable tips for every classroom – durable tips require less replacing
- Powered by Intel® Celeron® N4500, Intel® Celeron® N5100 or Intel® Pentium® N6000 processors
- Choice of 29.5cm (11.6") diagonal HD UWVA slim LED touch screen (1366 x 768) or 29.5 cm (11.6") diagonal HD SVA slim LED touch screen (1366 x 768) displays
- 64 GB eMMC or up to 256 GB PCIe® NVMe™ Solid State Drive storage options
- Up to 8 GB LPDDR4X system memory for enhanced memory management
- Reliable WLAN connectivity for learning and collaboration beyond the classroom
- Built-in ports include: Ethernet (RJ-45), USB A, USB Type-C® and HDMI 1.4b port for connecting to high-resolution displays
- Enhanced security with TPM 2.0 discrete chip
- Battery life up to 11 hours 30 minutes

1. MIL-STD 810H is not intended to demonstrate fitness of 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.

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



Technical Specifications

PRODUCT NAME

HP ProBook x360 11 G7 Education Edition

OPERATING SYSTEMS

Preinstalled

Windows 11 Pro - HP recommends Windows 11 Pro ¹
Windows 11 Pro Education ¹
Windows 11 Home ¹
Windows 11 Home Single Language ¹
Windows 11 Pro (Windows 11 Enterprise available with a Volume Licensing Agreement) ¹
Windows 10 Pro ^{1,2}
Windows 10 Pro Education ^{1,2}
Windows 10 Home ^{1,2}
Windows 10 Home Single Language ^{1,2}
Windows 10 Pro (Windows 10 Enterprise available with a Volume Licensing Agreement) ^{1,2}
FreeDOS

1. Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows is automatically updated and enabled. High speed internet and Microsoft account required. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.

2. This PC comes with Windows 10 and a free Windows 11 upgrade. The Windows 11 upgrade will be delivered late 2021 into 2022. Timing varies by device. Certain features require specific hardware. See aka.ms/windows11-spec.

PROCESSORS

Intel® Pentium® Silver N6000 (up to 3.3 GHz burst frequency, 4 MB L3 cache, 4 cores) ^{4,5,6}

Intel® Celeron® N4500 (up to 2.8 GHz burst frequency, 4 MB L3 cache, 2 cores) ^{4,5,6}

Intel® Celeron® N5100 (up to 2.80 GHz burst frequency, 4 MB L3 cache, 4 cores) ^{4,5,6}

Processor Family

Intel® Celeron® processor (N4500, N5100) ⁷

Intel® Pentium® processor (N6000) ⁷

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

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

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>.



Technical Specifications

CHIPSET

Chipset is integrated with processor

GRAPHICS

Integrated

Intel® UHD Graphics ⁷

Supports

Support HD decode, DX12, HDMI 1.4b⁸

7. HD content required to view HD images.

8. HDMI cable sold separately.

DISPLAY

Touch

29.5 cm (11.6") diagonal HD SVA eDP WLED-backlit touch screen with HD camera, 220 nits, 45% NTSC (1366 x 768) ^{7,9,10}

29.5 cm (11.6") diagonal HD UWVA eDP WLED-backlit touch screen with HD camera, 220 nits, 50% NTSC (1366 x 768) ^{7,9,10}

7. HD content required to view HD images.

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

10. Actual brightness will be lower with touchscreen

STORAGE AND DRIVES

Primary M.2 Storage

Up to 256 GB PCIe® NVMe™ Value Solid State Drive ¹¹

Up to 128 GB PCIe® M.2 TLC Solid State Drive ¹¹

eMMC Configurations

64 GB eMMC¹²

11. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.

12. For storage drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 6.8 GB is not user available.

Technical Specifications

MEMORY

Maximum Memory

8 GB LPDDR4X- 2933 SDRAM (on-board) ¹³

Memory

4 GB LPDDR4X- 2933 SDRAM (on-board) ¹³

8 GB LPDDR4X- 2933 SDRAM (on-board) ¹³

Memory Slots

On board LPDDR4X; system runs at 2933MHz

13. All slots are non-accessible / non-upgradeable.

NETWORKING/COMMUNICATIONS

WLAN

Intel® Dual Band Wi-Fi 6 AX201 802.11a/b/g/n/ac/ax (2x2) WLAN and Bluetooth® 5 Combo, non-vPro® ¹⁵

Intel® Dual Band Wireless-AC 9560 802.11a/b/g/n/ac (2x2) WLAN and Bluetooth® 5 Combo, non-vPro® ¹⁶

Miracast

Native Miracast Support¹⁷

Ethernet

Realtek RTL8111HSH-CG 10/100/1000 GbE NIC ¹⁸

15. 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. Only available in countries where 802.11ax is supported.

16. Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 5 (802.11ac) is backwards compatible with prior 802.11 specs.

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

18. 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.



Technical Specifications

AUDIO/MULTIMEDIA

Audio

Integrated dual array microphone
2 Integrated stereo speakers
HP HD Audio

Speaker Power

2W/4ohm per speaker

Camera

720p HD camera ^{7,19}
World-facing 5 MP camera (Optional) ^{7,19}

7. HD content required to view HD images.

19. Sold separately or as an optional feature.

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

Full-sized keyboard, pick proof and spill-resistant²⁰

Pointing Device

Clickpad with multi-touch gesture support, taps enabled as default

Function Keys

F1 - Blank
F2 - Blank
F3 - Sleep
F4 - Display Switching
F5 - Audio Mute/Unmute
F6 - Volume <down>
F7 - Volume <up>
F8 - Mic Mute/Unmute
F9 - Brightness <down>
F10 - Brightness <up>
F11 - Blank
F12 - Wireless On/Off

Optional Pen

Optional Passive Targus Slim Stylus
Optional Active HP Pro Pen²¹

Sensors

Combo Chip
Accelerometer
Magnetometer
Gyroscope
Hall Sensor

20. Keyboards are made from up to 65% post-consumer recycled plastic.

21. Sold separately or as an optional feature.



Technical Specifications

SOFTWARE AND SECURITY

Preinstalled Software

BIOS

HP BIOSphere Gen6 ²²
HP Drive Lock & Automatic Drive Lock
BIOS Update via Network
HP Secure Erase ²³
Absolute Persistence Module ²⁴
HP LAN-Wireless Protection
USB enable/disable (via BIOS)

Software

HP Connection Optimizer ²⁵
HP Hotkey Support
myHP
HP Classroom Manager
FluidMath
Bulb Digital Portfolio ⁴⁰
HP Prime Graphing Calculator Pro
Kortext e-Library
HP Interactive Light
HP Easy Clean ³⁹
Touchpoint Customizer for Commercial
HP Notifications
HP Privacy Settings
HP Wireless Button Driver
HP Power Manager
HP PC Hardware Diagnostics Windows
Microsoft Defender ²⁶
Buy Microsoft Office (Sold separately)
HP Smart Support⁴¹

Manageability Features

HP Driver Packs (download) ²⁷
HP Manageability Integration Kit Gen4 (download) ²⁸
HP System Software Manager (SSM) (download)
HP Client Catalog (download)
HP Client Management Script Library (download)
HP Image Assistant (download)

Security Management

Pre-boot Authentication
USB enable/disable (via BIOS)
Power-on password (via BIOS)
Setup password (via BIOS)
Support for chassis padlocks and cable lock devices
HP Sure Sense ²⁹



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TPM 2.0 Embedded Security Chip shipped with Windows 10 (Common Criteria EAL4+ Certified) (FIPS 140-2 Level 2 Certified)

22. HP BIOSphere Gen6 requires Windows 10 and is available on select HP Pro and Elite PCs. Features may vary depending on the platform and configurations.
 23. HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.
 24. Absolute 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/>
 25. HP Connection Optimizer requires Windows 10.
 26. Microsoft Defender Opt in and internet connection required for updates.
 27. HP Driver Packs not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>.
 28. HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.
 29. HP Sure Sense is available on select HP PCs and is not available with Windows10 Home.
 39. HP Easy Clean requires Windows and will disable the keyboard, display and touchpad only. Ports are not disabled.
 40. Bulb Digital Portfolio includes full version 6-month trial. After 6 months, number of published pages is limited to 10 and storage to 2GB. To retain full functionality, subscription required prior to the end of the 6-month trial period.
 41. HP Smart Support is available to commercial customers through your HP Service Representative and HP Factory Configuration Services; or it can be downloaded at: <http://www.hp.com/smart-support>. HP Smart Support automatically collects the telemetry necessary upon initial boot of the product to deliver device-level configuration data and health insights.
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Technical Specifications

POWER

Power Supply

- HP Smart 45 W External AC power adapter ³⁰
- HP Smart 45 W USB Type-C adapter ³⁰
- HP Smart 65 W EM External AC power adapter ³⁰

Power Cord

- 2-wire plug - 1 m ³⁰
- 3-wire plug - 1 m ³⁰

Primary Battery

- HP Long Life 3-cell, 48 Wh Li-ion ^{31,32}

Battery life

- Up to 11 hours and 30 minutes³³

30. Availability may vary by country.

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

32. 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.

33. Windows 10 MM18 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.

WEIGHTS & DIMENSIONS

Product Weight³⁴

- Starting at 3.15 lbs
- Starting at 1.43 kg

Product Dimensions

- 11.81 x 8.08 x 0.83 in
- 30 x 20.5 x 2.12 cm

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

PORTS/SLOTS

- 2 SuperSpeed USB Type-A 5Gbps signaling rate
- 1 SuperSpeed USB Type-C[®] 5Gbps signaling rate (USB Power Delivery, Alt-mode DisplayPort™ 1.2)
- 1 HDMI 1.4b ³⁵
- 1 AC power
- 1 RJ-45
- 1 Headphone/microphone combo jack

35. HDMI cable sold separately.



Technical Specifications

SERVICE AND SUPPORT

1-year 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>.³⁶

36. 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)

Nominal Operating Voltage	19.5V
Average Operating Power	Win 10
Integrated graphics	Yes
Discrete Graphics	N/A
Max Operating Power	UMA < 45W

Temperature

Operating	32° to 95° F (0° to 35° C)
Non-operating	-4° to 140° F (-20° to 60° C)

Relative Humidity

Operating	10% to 90%, non-condensing
Non-operating	5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature

Shock

Operating	40 G, 2 ms, half-sine
Non-operating	240 G, 2 ms, half-sine

Random Vibration

Operating	0.75 grms
Non-operating	1.50 grms

Altitude (unpressurized)

Operating	-50 to 10,000 ft (-15.24 to 3,048 m)
Non-operating	-50 to 40,000 ft (-15.24 to 12,192 m)

Planned Industry Standard Certifications

UL	YES
CSA	YES
FCC Compliance	YES
ENERGY STAR®	YES ³⁷
EPEAT	EPEAT® Gold in United States ³⁸
ICES	YES
Australia /	YES
NZ A-Tick Compliance	YES
CCC	YES
Japan VCCI Compliance	YES
KC	YES
BSMI	YES
CE Marking Compliance	YES
BNCI or BELUS	YES
CIT	YES
GOST	YES
Saudi Arabian Compliance (ICCP)	YES



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SABS	YES
UKRSERTCOMPUTER	YES

37. Configurations of the HP ProBook x360 11 G7 is ENERGY STAR® qualified are identified as HP ProBook x360 11 G7 ENERGY STAR on HP websites and on <http://www.energystar.gov>.

38. 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.

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.

Panel LCD 11.6 HD AG WLED SVA 45%cg 220nits eDP Slim	Outline Dimensions (W x H x D)	278.5 x 168.5 mm(max)
	Active Area	256.125 x 144 mm
	Weight	210g max
	Diagonal Size	11.6 (inch)
	Thickness	3.0 mm (max)
	Interface	eDP1.3
	Surface Treatment	BrightView glass
	Touch Enabled	Yes
	Contrast Ratio	400:1 (typical)
	Refresh Rate	60Hz
	Brightness¹	220 nit typical (panel only)
	Pixel Resolution	1366x768 (HD)
	Format	RGB
	Backlight	LED
	Color Gamut Coverage	45%
	Color Depth	6 bits
	Viewing Angle	SVA 45/45/15/35

Panel LCD 11.6 inch HD AG WLED UWVA 50percent cg 220nits eDP slim	Outline Dimensions (W x H x D)	278.5 x 168.5 mm(max)
	Active Area	256.125 x 144 mm
	Weight	200g max
	Diagonal Size	11.6 (inch)
	Thickness	3.2 mm max
	Interface	eDP1.3
	Surface Treatment	BrightView Glass
	Touch Enabled	Yes
	Contrast Ratio	600:1 (typical)
	Refresh Rate	60Hz
	Brightness¹	220 nit typical (panel only)
	Pixel Resolution	1366x768 (HD)
	Format	RGB
	Backlight	LED



Technical Specifications

Color Gamut Coverage	50%
Color Depth	6 bits
Viewing Angle	UWVA 85/85/85/85



Technical Specifications

STORAGE AND DRIVES

SSD 128GB 2280 PCIe-3x2 Three Layer Cell	Form Factor	M.2 2280
	Capacity	128GB
	NAND Type	TLC
	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Weight	0.02 lb (10 g)
	Interface	PCIe NVMe Gen3X4 or Gen3X2
	Maximum Sequential Read	Up To 2047 MB/s
	Maximum Sequential Write	Up To 1200 MB/s
	Logical Blocks	250,069,680
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	ATA Security; TRIM; L1.2

NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.

SSD 256GB 2280 PCIe NVMe Value Solid State Drive	Form Factor	2280
	Capacity	256GB
	NAND Type	Value
	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	PCIe NVMe Gen3x4 or Gen3x2
	Maximum Sequential Read	Up To 1700 MB/s
	Maximum Sequential Write	Up To 600 MB/s
	Logical Blocks	500,118,192
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
Features	TRIM; L1.2	

NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.

Technical Specifications

NETWORKING/COMMUNICATIONS

<p>Intel® 9560 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 5.0 Combo¹ (Non-vPro)</p>	<p>Wireless LAN Standards</p>	<ul style="list-style-type: none"> IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
	<p>Interoperability</p>	<ul style="list-style-type: none"> Wi-Fi CERTIFIED modules
	<p>Frequency Band</p>	<ul style="list-style-type: none"> 802.11b/g/n <ul style="list-style-type: none"> •2.402 – 2.482 GHz 802.11a/n/ac <ul style="list-style-type: none"> •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
	<p>Data Rates</p>	<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: max 300Mbps •802.11ac :max 1733Mbps
	<p>Modulation</p>	<ul style="list-style-type: none"> Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
	<p>Security²</p>	<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 •WPA3 certification •IEEE 802.11i •WAPI
	<p>Network Architecture Models</p>	<ul style="list-style-type: none"> Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	<p>Roaming</p>	<ul style="list-style-type: none"> IEEE 802.11 compliant roaming between access points
	<p>Output Power³</p>	<ul style="list-style-type: none"> • 802.11b : +17dBm minimum • 802.11g : +16dBm minimum • 802.11a : +17dBm minimum • 802.11n HT20(2.4GHz) : +14dBm minimum • 802.11n HT40(2.4GHz) : +13dBm minimum • 802.11n HT20(5GHz) : +14dBm minimum • 802.11n HT40(5GHz) : +13dBm minimum • 802.11ac VHT80(5GHz) : +10dBm minimum • 802.11ac VHT160(5GHz) : +10dBm minimum
	<p>Power Consumption</p>	<ul style="list-style-type: none"> •Transmit mode: 2.0 W •Receive mode: 1.6 W



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	<ul style="list-style-type: none"> • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode: 50 mW (WLAN unassociated) • Connected Standby/Modern Standby: 10mW • Radio disabled: 8 mW
Power Management	50
Receiver Sensitivity⁴	802.11b, 1Mbps: -93.5dBm maximum 802.11b, 11Mbps: -84dBm maximum 802.11a/g, 6Mbps: -86dBm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11n, MCS07: -67dBm maximum 802.11n, MCS15: -64dBm maximum 802.11ac, MCS0(VHT80): -84dBm maximum 802.11ac, MCS9(VHT80): -59dBm maximum 802.11ac, MCS9(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)
LED Activity	LED Amber – Radio OFF; LED White – Radio ON

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

Bluetooth Specification	4.0/4.1/4.2/5.0 Compliant
Frequency Band	2402 to 2480 MHz
Number of Available Channels	Legacy: 0~79 (1 MHz/CH) BLE: 0~39 (2 MHz/CH)
Data Rates and Throughput	Legacy: 3 Mbps data rate; throughput up to 2.17 Mbps BLE: 1 Mbps data rate; throughput up to 0.2 Mbps Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)
Transmit Power	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 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 5 (802.11 ac) is backwards compatible with prior 802.11 specs.

2. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of



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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).

Intel® Wi-Fi 6 AX201 + Bluetooth® 5 (802.11ax 2x2, supporting gigabit data rate) (non-vPro)^{1,5}	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	Features Wi-Fi 6 technology
	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: 1733Mbps • 802.11ax: max 2.4Gbps
	Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
	Security¹	• 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
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power²	• 802.11b : +17dBm minimum • 802.11g : +16dBm minimum • 802.11a : +17dBm minimum • 802.11n HT20(2.4GHz) : +14dBm minimum • 802.11n HT40(2.4GHz) : +13dBm minimum • 802.11n HT20(5GHz) : +14dBm minimum



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	<ul style="list-style-type: none"> • 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	<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 Sensitivity³	<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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Type 2230: 2.8g 2. Type 126: 1.3g
Operating Voltage	3.3v +/- 9%
Temperature	Operating: 14° to 158° F (-10° to 70° C) Non-operating: -40° to 176° F (-40° to 80° C)
Humidity	Operating: 10% to 90% (non-condensing) Non-operating: 5% to 95% (non-condensing)
Altitude	Operating: 0 to 10,000 ft (3,048 m) Non-operating: 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED Off – Radio ON

HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1 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



Technical Specifications

Transmit Power

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)

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. 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

AC Adapter 45 Watt Smart nPFC Standard Barrel 4.5mm Right Angle 1.8m	Dimensions (H x W x D)	3.74 x 1.57 x 1.04 in (9.5 x 4.0 x 2.65 cm)
	Weight¹	0.386 lb (175g) max
Output	Input	90 to 265 VAC
	Input Efficiency	87.74% at 115Vac and 88.4% at 230Vac
	Input frequency range	47 to 63 Hz
	Input AC current	1.4 A at 90 VAC
	Output power	45W
	DC output	19.5V
	Hold-up time	5 msec at 115 VAC input
	Output current limit	<8.0A
	Connector	4.5mm Barrel Type
	Environmental Design	Operating temperature
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, 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.	

1. Not including power cord. Power cord varies by country

AC Adapter 45 Watt Smart nPFC Standard Barrel 4.5mm Right Angle 1.8m 2prong	Dimensions (H x W x D)	95 x 45 x 26.8mm	
	Weight¹	unit: 200g +/- 10g	
Output	Input	Input Efficiency 87.74 % at 115 Vac and 88.4 % at 230Vac	
	Input frequency range	47 ~ 63 Hz	
	Input AC current	Max. 1.4 A at 90 Vac	
	Output power	45W	
	DC output	19.5V	
	Hold-up time	5ms at 115 Vac input	
	Output current limit	<8.0 A	
	Connector	4.5mm Barrel Type	
	Environmental Design	Operating temperature	32oF to 95oF (0oto 35oC)
		Non-operating (storage) temperature	-4oF to 185oF (-20oto 85oC)
Altitude		0 to 16,400 ft (0 to 5000m)	



Technical Specifications

	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, 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.	

1. Not including power cord. Power cord varies by country

AC Adapter 65 Watt Smart nPFC EM Barrel 4.5mm New EM	Dimensions (H x W x D)	102x55x30mm	
	Weight¹	270g +/- 10g	
	Input	Input Efficiency	88.0 % at 115 Vac and 89.0 % at 230Vac
		Input frequency range	47 to 63 Hz
		Input AC current	Max. 1.7 A at 90 Vac
	Output	Output power	65W
		DC output	19.5V
		Hold-up time	5 msec at 115 VAC input
		Output current limit	<11.0A
	Connector	4.5 mm Barrel Type	
	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, 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.		

1. Not including power cord. Power cord varies by country



Technical Specifications

AC Adapter 45 Watt nPFC Standard USB Type-C® Straight 1.8m	Dimensions (H x W x D)	94.0 x 40.0 x 26.5 mm	
	Weight¹	192.5g +/-10%	
Output	Input	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 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	
	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%	
EMI and Safety Certifications	Storage Humidity	10% to 95%	
	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.		

1. Not including power cord. Power cord varies by country



Technical Specifications

HP 3-cell Long Life Li-Ion (48 Wh)	Dimensions (H x W x D)	7.3 x 94 x 184.47mm (0.287 x 3.7 x 7.263 inch)
	Weight¹	0.215kg
	Cells/Type	3cell Lithium-Ion Prismatic cell / 596080
	Energy	Voltage 11.4V
		Amp-hour capacity 4.212Ah
		Watt-hour capacity 48Wh
	Temperature	Operating (Charging) 32°F to 113°F (0°C to 45°C) Operating (Discharging) 14°F to 122°F (-10°C to 60°C)

1. Not including power cord. Power cord varies by country



Technical Specifications

ENVIRONMENTAL DATA

Eco-Label Certifications & declarations	<p>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:</p> <ul style="list-style-type: none"> • 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 8.0 • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • Korea Eco-label • Japan PC Green label* 		
Sustainable Impact Specifications	<ul style="list-style-type: none"> • 20% post-consumer recycled plastic • External Power Supply 90% Efficiency • 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 • Recycled Plastic cushions • Bulk packaging available 		
System Configuration	<p>The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook”.</p>		
Energy Consumption (in accordance with US ENERGY STAR® test method)	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Sort idle)	3.49 W	3.45 W	3.52 W
Normal Operation (Long idle)	2.10 W	2.08 W	2.05 W
Sleep	0.55 W	0.60 W	0.54 W
Off	0.40 W	0.47 W	0.41 W
	<p>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.</p>		
Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	12 BTU/hr	12 BTU/hr	12 BTU/hr
Normal Operation (Long idle)	7 BTU/hr	7 BTU/hr	7 BTU/hr
Sleep	2 BTU/hr	2 BTU/hr	2 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr
	<p>*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.</p>		



Technical Specifications

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	Sound Power (L _{WAd} , bels)	Sound Pressure (L _{pAm} , decibels)	
Typically Configured – Idle	2.6	15.7	
Fixed Disk – Random writes	2.6	15.7	
Optical Drive – Sequential reads	2.6	15.5	
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 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 96.1% recycle-able when properly disposed of at end of life. 		
Packaging Materials	External:	PAPER/Corrugated	191g
	Internal:	PAPER/Molded pulp	128 g
		PLASTIC/Polyethylene low density	13 g
		PLASTIC/polypropylene	3
	The plastic packaging material contains at least 0% recycled content.		
	The corrugated paper packaging materials contains at least 59.1% recycled content.		
RoHS Compliance	<p>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.</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 		



Technical Specifications

	<ul style="list-style-type: none"> • 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)
<p>Packaging Usage</p>	<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.
<p>End-of-life Management and Recycling</p>	<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>

Technical Specifications

HP, Inc. Corporate Environmental Information	For more information about HP's commitment to the environment: Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html ISO 14001 certificates: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842 and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf
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.• Plastic cushions are made from >90% recycled plastic.

COUNTRY OF ORIGIN

China



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

Type	Description	Part Number
Cases	HP Prelude Pro Top Load	1X645AA
	HP Prelude Pro Backpack	1X644AA
	HP Business Backpack (17.3")	25C67AA
	HP Business Case (15.6")	25C66AA
	HP Business Slim Top Load (14.1")	25C65AA
	HP 14.1 Business Sleeve	2UW01AA
	HP 13.3 Business Sleeve	2UW00AA
Docking	HP Thunderbolt Dock 120W G2	2UK37AA
	HP Thunderbolt Dock 230W G2	2UK38AA
	HP TB Dock w/ Combo Cable (230W)	3TR87AA
	HP TB Dock Audio Module	3AQ21AA
	HP TB Dock 230W G2 Cable	3XB95AA
	HP TB Dock 120W G2 cable	3XB94AA
	HP TB Dock G2 combo cable	3XB96AA
	HP USB Type-C Mini Dock	1PM64AA
	HP USB Type-C Dock G5	5TW10AA
	HP USB Type-C /A Universal Dock G2	5TW13AA
Input / Output	HP Wireless Rechargeable 950MK Mouse and Keyboard	3M165AA
	HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA
	HP Wireless Premium Keyboard	Z9N41AA
	HP USB Essential Keyboard and Mouse	H6L29AA
	HP Wireless Collaboration Keyboard	Z9N39AA
	HP 935 Creator Wireless Mouse	1D0K8AA
	HP 635 Multi-Device Wireless Mouse	1D0K2AA
	HP Comfort Grip Wireless Mouse	H2L63AA
	HP X4000b Bluetooth Mouse	H3T50AA
	HP Wired Desktop 320M Mouse	9VA80AA
	HP USB Travel Mouse	G1K28AA
	HP Bluetooth Travel Mouse	6SP30AA
	HP Wireless Premium Mouse	1JR31AA
	HP USB Premium Mouse	1JR32AA
	HP Elite Presenter Mouse	2CE30AA
	HP Stereo 3.5mm Headset	T1A66AA
	HP Stereo USB Headset	T1A67AA
	HP UC Wireless Mono Headset	W3K08AA
	HP UC Wireless Duo Headset	W3K09AA
	HP USB Type-C to USB-A Hub	Z6A00AA
	HP USB Type-C to DP	N9K78AA
	HP USB Type-C to VGA	N9K76AA
	HP HDMI to VGA	H4F02AA



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

	HP USB Type-C to HDMI 2.0 Adapter	1WC36AA
	HP USB Type-C to RJ45 Adapter	V7W66AA
	HP USB Type-C Travel Hub G2	7PJ38AA
	HP Elite USB Type-C Hub	4WX89AA
Power	HP 65W Slim AC Adapter	H6Y82AA
	HP 45W Smart AC Adapter	H6Y88AA
	HP 65W Smart AC Adapter	H6Y89AA
	HP 45W 2-prong 4.5 mm DC jack AC Adapter	L6F60AA#ABJ
	HP 45W USB-C Power Adapter	1HE07AA
	HP 65W USB-C Power Adapter	1HE08AA
	HP 65W USB Type-C Slim Power Adapter	3PN48AA
	HP Notebook Power Bank	N9F71AA
	HP USB-C Essential Power Bank	3TB55AA
Storage	HP USB External DVDRW Drive	F2B56AA
	HP 256GB PCI-e 3x4 NVMe M.2 SSD	TBT
	HP 512GB PCI-e 3x4 NVMe M.2 SSD	TBT
Security	HP Nano Keyed Cable Lock	1AJ39AA
	HP Sure Key Cable Lock	6UW42AA

Summary of changes

Date of change:	Version History:		Description of change:
February 9, 2021	V1 to V2	Added	Environmental Data
March 17, 2021	V2 to V3	Updated	Environmental Data
May 4, 2021	V3 to V4	Added	HP Smart Support
June 11, 2021	V4 to V5	Removed	HP WorkWell from Software and Security section
July 19, 2021	V5 to v6	Updated	TechSpecs
September 10, 2021	V6 to V7	Updated	Speaker Power in Audio section
September 28, 2021	V7 to V8	Updated & Added	Updated Optional Pen Section and added Sensors Section
November 11, 2021	V8 to V9	Updated	Windows 10 with Free upgrade to Windows 11 when available in OS section and footnote.

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