

### Overview

#### HP Pro c640 Chromebook



1. Microphones (2)
2. Camera LED
3. Privacy Camera
4. HD Camera
5. Touch pad

#### Left

6. Nano Security Lock Slot
7. USB-C™ 3.1 Gen 1 (Support charging, Power delivery, Video, Data)
8. HDMI 1.4
9. USB Type-A™ 3.1 Gen1 Port

### Overview



1. Power Button
2. USB Type-A™ 3.1 Gen1 Port
3. USB-C™ 3.1 Gen 1 (Support charging, Power delivery, Video, Data)

#### Right

4. Stereo Headphone / Microphone Combo Jack
5. MicroSD™ Memory Card Reader
6. Fingerprint Sensor (select models)

### Overview

### AT A GLANCE

- Supports 10th Generation Intel® Core™ Processors
- Up to 16 GB memory and 128 GB eMMC storage options
- Data transfer in dense classroom environments by having Wi-Fi 6 2X2 ax WLAN with MU-MIMO and HP Extended Range Wireless Lan design
- Sleek design with aluminum cover & narrow border display
- Best conferencing experience with audio by B&O
- HP Privacy Camera to physically cover the webcam and mic.
- Optional fingerprint Sensor<sup>3</sup> (select models) for seamless login
- Optional backlit keyboard for working in dark environment
- Optional touchscreen for intuitive interactions
- HP Fast Charge Technology with long battery life for supporting your long work day<sup>2</sup>
- One HDMI port for instant collaboration without dongles
- Supports HP USB Type-C® docks and docking monitors
- Supports up to 3/3/0 warranty
- Tested for 19 MIL-STD 810H tests<sup>1</sup>
- Easy to carry around - 16.5 mm height plus 1519 g weight

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.
2. 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 speed will return to normal. Charging time may vary +/-10% due to System tolerance.
3. HP Fingerprint Sensor is an optional feature and requires configuration at purchase.

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

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### Technical Specifications

#### PRODUCT NAME

HP Pro C640 Chromebook

#### OPERATING SYSTEM

Preinstalled Chrome OS™

#### PROCESSOR

Intel® Pentium® Gold 6405U processor with Intel® UHD Graphics  
(2.4 GHz base frequency, 2 MB L3 cache, 2 cores)<sup>1,2,3</sup>

Intel® Core™ i3-10110U processor with Intel® UHD Graphics

(2.1 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 4 MB L3 cache, 2 cores)<sup>1,2,3</sup>

Intel® Core™ i5-10310U processor with Intel® UHD Graphics (1.6 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 6 MB L3 cache, 4 cores), supports Intel® Technology<sup>1,2,3</sup>

Intel® Core™ i7-10610U processor with Intel® UHD Graphics (1.8 GHz base frequency, up to 4.9 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 4 cores), supports Intel® Technology<sup>1,2,3</sup>

Intel® Core™ i5-10210U processor with Intel® UHD Graphics (1.6 GHz base frequency, up to 4.2 GHz with Intel® Turbo Boost Technology, 6 MB L3 cache, 4 cores)<sup>1,2,3</sup>

##### Processor Family

10th Generation Intel® Core™ i7 processor (i7-10610U)

10th Generation Intel® Core™ i5 processor (i5-10310U)

10th Generation Intel® Core™ i3 processor (i3-10110U)

10th Generation Intel® Core™ i5 processor (i5-10210U)

Intel® Pentium® processor

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 <http://www.intel.com/technology/turboboost> for more information.

#### CHIPSET

Chipset is integrated with processor

### Technical Specifications

#### GRAPHICS

**Integrated**

Intel® UHD Graphics<sup>4</sup>

**Supports**

Support HD decode, DX12, HDMI 1.4b

4. HD content required to view HD images.

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#### DISPLAY

**Non-Touch**

35.56 cm (14") diagonal HD SVA anti-glare micro-edge WLED-backlit, 220 nits, 45% NTSC (1366 x 768)<sup>4,5,6</sup>

35.56 cm (14") diagonal FHD IPS anti-glare micro-edge WLED-backlit, 250 nits, 45% NTSC (1920 x 1080)<sup>4,5,6</sup>

**Touch**

35.56 cm (14") diagonal FHD IPS anti-glare On-Cell micro-edge WLED-backlit touch screen, 250 nits, 45% NTSC (1920 x 1080)<sup>4,5,6</sup>

35.56 cm (14") diagonal HD SVA anti-glare On-Cell micro-edge WLED-backlit touch screen, 220 nits, 45% NTSC (1366 x 768)<sup>4,5,6</sup>

**HDMI**

HDMI v1.4b supporting: up to 1920 x 1080

**Displays support**

support extended displays through HP docks

**Display Size**

14"

35.56 cm (14")

4. HD content required to view HD images.

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

6. Sold separately or as an optional feature.

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#### STORAGE AND DRIVES

**Primary Storage**

32 GB eMMC 5.0<sup>7</sup>

64 GB eMMC 5.0<sup>7</sup>

128 GB eMMC 5.0<sup>7</sup>

7. For storage drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 8.1 GB is not user available

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### Technical Specifications

#### MEMORY

**Maximum Memory**

16 GB DDR4 – 2666 SDRAM

**Memory**

8 GB DDR4-2666 SDRAM

16GB DDR4-2666 SDRAM

**Memory Slots**

On-board system memory

Supports Dual Channel Memory

#### NETWORKING/COMMUNICATIONS

**WLAN**

Intel® Wi-Fi 6 AX201 802.11a/b/g/n/ac/ax (2x2) Wi-Fi® and Bluetooth® 5 Combo, non-vPro™ (Support MU-MIMO and HP Extended Range Wireless LAN)<sup>8</sup>

**Chromecast**

Chromecast Support<sup>9</sup>

8. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 is backwards compatible with prior 802.11 specs. The specifications for Wi-Fi 6 (802.11ax) are draft and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ax devices.

9. Chromecast must be purchased separately.

#### AUDIO/MULTIMEDIA

**Audio**

HD Audio

Dual stereo Speakers

Audio by B&O

**Camera**

720p HD Camera<sup>4</sup>

Privacy Camera

4. HD content required to view HD images.

### Technical Specifications

#### KEYBOARD / POINTING DEVICES

##### Keyboard

Full-size Textured island-style Chrome keyboard, Pike Silver, spill resistant  
Full-size3-coat painted island-style Chrome keyboard for FPS, backlit, Pike Silver, spill resistant<sup>10</sup>

##### Pointing Device

Multi-touch gesture support, taps enabled as default

10. Backlit keyboard is an optional feature.

#### SOFTWARE AND SECURITY

##### Preinstalled Software

Google Play Store

##### Manageability Features

Chrome Enterprise Upgrade<sup>11,12</sup>

##### Security Management

Titan C  
Zero-Touch Enrollment capable  
Nano Security Lock Slot<sup>11</sup>  
HP Fingerprint Sensor (select models)<sup>13</sup>

11. Sold separately.

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

13. HP Fingerprint Sensor is an optional feature and requires configuration at purchase.

#### POWER

##### Power Supply

AC Adapter 45 Watt nPFC Standard USB type C™ Straight<sup>14</sup>  
AC Adapter 65 Watt nPFC Standard USB type C™ Straight<sup>14</sup>

##### Primary Battery

HP Long Life 3-cell, 60 Wh Li-ion; supports fast charge<sup>15</sup>

##### Power Cord

3-wire plug - 1.0 m

##### Battery life

Up to 12 hours<sup>16</sup>

##### Battery Weight

0.22 kg  
0.49 lb

### Technical Specifications

14. Availability may vary by country.

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

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

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### WEIGHTS & DIMENSIONS

#### Product Weight

Starting at 3.35 lb<sup>17</sup>

Starting at 1.5 kg<sup>17</sup>

#### Product Dimensions (w x d x h)

12.8 x 8.07 x 0.65 in

32.5 x 20.5 x 1.65 cm

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

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### PORTS/SLOTS

#### Ports

2 USB 3.1 Type-C™ Gen 1 (Power delivery, DisplayPort™)

2 USB 3.1 Type-A Gen 1

1 HDMI 1.4<sup>18</sup>

1 stereo headphone/microphone combo jack

#### Expansion Slots

1 MicroSD™ Memory Card Reader Supporting SD, SDHC, SDXC

18. HDMI cable sold separately.

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### Technical Specifications

#### **SERVICE AND SUPPORT**

HP Services offers 1-year and 3-year limited warranties and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty except for long-life batteries which will have the same one or three year warranty as the platform. 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>.<sup>19</sup>

19. HP Care Packs are sold separately. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit <http://www.hp.com/go/cpc>. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.

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### Technical Specifications

#### SYSTEM UNIT

<b>Stand-Alone Power Requirements (AC Power)</b>	USB-C 45 W and 65 W adapter	
	<b>Nominal Operating Voltage</b>	5V/9V/12V/15V
	<b>Average Operating Power</b>	<45 W
	<b>Integrated Graphics</b>	Yes
<b>Temperature</b>	<b>Max Operating Power</b>	UMA <45 W
	<b>Operating</b>	32° to 95° F (0° to 35° C)
<b>Relative Humidity</b>	<b>Non-operating</b>	41° to 95° F (5° to 35° C)
	<b>Operating</b>	10% to 90%
<b>Shock</b>	<b>Non-operating</b>	5% to 95%
	<b>Operating</b>	40 G, 2 ms, half-sine
<b>Random Vibration</b>	<b>Non-operating</b>	240 G, 2 ms, half-sine
	<b>Operating</b>	1.043 grms
<b>Altitude (unpressurized)</b>	<b>Non-operating</b>	3.5 grms
	<b>Operating</b>	-50 to 10,000 ft (-15 to 3,048 m)
<b>Planned Industry Standard Certifications</b>	<b>Non-operating</b>	-50 to 40,000 ft (-15 to 12,192 m)
	<b>UL</b>	Yes
	<b>FCC Compliance</b>	Yes
	<b>ENERGY STAR®</b>	Yes <sup>20</sup>
	<b>EPEAT® 2019</b>	Yes, Silver in U.S. <sup>21</sup>
	<b>ICES</b>	Yes
	<b>Australia /</b>	Yes
	<b>NZ RCM Compliance</b>	Yes
	<b>CCC</b>	Yes
	<b>KC</b>	Yes
	<b>BSMI</b>	Yes
	<b>CE Marking Compliance</b>	Yes
	<b>EAC</b>	Yes
	<b>Saudi Arabian Compliance (ICCP)</b>	Yes
<b>SABS</b>	Yes	

20. Configurations of the HP Pro c640 Chromebook that are ENERGY STAR® certified are identified as HP Pro c640 Chromebook ENERGY STAR on HP websites and on <http://www.energystar.gov>.

21. Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit <http://www.epeat.net> for more information.

### Technical Specifications

#### DISPLAYS

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

<b>14.0" diagonal FHD (1920 x 1080) Anti-Glare WLED UWVA 45% NTSC 250 nits eDP slim Touch on Panel NWBZ</b>	<b>Outline Dimensions (W x H x D)</b>	316.17 x 198.07 (mm) max
	<b>Active Area</b>	309.37 x 174.02 (mm)
	<b>Weight</b>	290 g max.
	<b>Diagonal Size</b>	14.0 (inch)
	<b>Thickness</b>	3.0 mm (Panel Side) / 3.2 mm (PCBA Side) max.
	<b>Interface</b>	eDP 1.2
	<b>Surface Treatment</b>	Anti-glare (AG)
	<b>Touch Enabled</b>	Yes
	<b>Contrast Ratio</b>	600:1 (typical)
	<b>Refresh Rate</b>	60 Hz
	<b>Brightness</b>	250 nit typical
	<b>Pixel Resolution</b>	1920 x 1080 (FHD)
	<b>Format of LCD Pixel Arrangement</b>	RGB
	<b>Backlight</b>	LED
	<b>Color Gamut Coverage</b>	45% of NTSC
<b>Color Depth</b>	6 bits (Hi FRC supportive upon condition to enable)	
<b>Viewing Angle</b>	85/85/85/85	

<b>14.0" diagonal FHD (1920 x 1080) Anti-Glare WLED UWVA 45% NTSC 250nits eDP slim NB</b>	<b>Outline Dimensions (W x H x D)</b>	316.17 x 197.98 (mm) max
	<b>Active Area</b>	309.37 x 174.02 (mm)
	<b>Weight</b>	285 g max.
	<b>Diagonal Size</b>	14.0 (inch)
	<b>Thickness</b>	3.0 mm max.
	<b>Interface</b>	eDP 1.2
	<b>Surface Treatment</b>	Anti-glare (AG)
	<b>Touch Enabled</b>	Yes
	<b>Contrast Ratio</b>	600:1 (typical)
	<b>Refresh Rate</b>	60 Hz
	<b>Brightness</b>	250 nit typical
	<b>Pixel Resolution</b>	1920 x 1080 (FHD)
	<b>Format of LCD Pixel Arrangement</b>	RGB
	<b>Backlight</b>	LED
	<b>Color Gamut Coverage</b>	45% of NTSC
<b>Color Depth</b>	6 bits (Hi FRC supportive w/ condition to enable)	
<b>Viewing Angle</b>	UWVA 85/85/85/85	

**Outline Dimensions (W x H x D)** 316.2 x 186 (mm) max

### Technical Specifications

<b>14.0" diagonal HD (1366 x 768) SVALED- backlight 45% NTSC 220 nits</b>	<b>Active Area</b>	309.4 x 173.95 (mm)
	<b>Weight</b>	280 g max.
	<b>Diagonal Size</b>	14.0 (inch)
	<b>Thickness</b>	3.0 (mm) max
	<b>Interface</b>	eDP 1.2
	<b>Surface Treatment</b>	Anti-glare (AG)
	<b>Touch Enabled</b>	None
	<b>Contrast Ratio</b>	500:1 (typical)
	<b>Refresh Rate</b>	60 Hz
	<b>Brightness</b>	220 nit typical
	<b>Pixel Resolution</b>	1366 x 768 (HD)
	<b>Format of LCD Pixel Arrangement</b>	RGB
	<b>Backlight</b>	LED
	<b>Color Gamut Coverage</b>	45% of NTSC
	<b>Color Depth</b>	6 bits
<b>Viewing Angle</b>	45/45/20/45	

### Technical Specifications

#### STORAGE AND DRIVES\*

<b>eMMC 5.0</b>	<b>Drive Weight</b>	0.2 g
	<b>Rotation speed</b>	32 GB/64 GB/128 GB
	<b>Cache Buffer</b>	1.4 mm
	<b>Height</b>	11.5 x 13 mm
	<b>Width</b>	MMC protocol
	<b>Transfer Rate</b>	Up to 250 MB/s
	<b>Seek Time</b>	Up to 70 MB/s
	<b>Logical Blocks</b>	32 GB (31,268,536,320 Bytes)/64 GB (62,537,072,640 Bytes)/128 GB (125,074,145,280 Bytes)
	<b>Operating Temperature</b>	0 to 70
	<b>Security Features</b>	HS400

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### Technical Specifications

#### NETWORKING/COMMUNICATIONS

<p><b>Intel® Wi-Fi 6<sup>1</sup> AX200 and Bluetooth® 5.0 802.11ax (2 x 2), non-vPro, supporting gigabit file transfer speeds non-vPro</b></p>	<p>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</p>
<p><b>Interoperability</b></p>	<p>Wi-Fi CERTIFIED™</p>
<p><b>Frequency Band</b></p>	<ul style="list-style-type: none"> <li>•802.11b/g/n/ax 2.402 – 2.482 GHz</li> <li>•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</li> </ul>
<p><b>Data Rates</b></p>	<ul style="list-style-type: none"> <li>•802.11b: 1, 2, 5.5, 11 Mbps</li> <li>•802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>•802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>•802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz)</li> <li>•802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, 80MHz &amp; 160MHz)</li> <li>• 802.11ax: MCS0 ~ MCS11, (1SS and 2SS) (20MHz, 40MHz, 80MHz &amp; 160MHz)</li> </ul>
<p><b>Modulation</b></p>	<p>Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM</p>
<p><b>Security<sup>3</sup></b></p>	<ul style="list-style-type: none"> <li>•IEEE and Wi-Fi compliant 64 / 128 bit WEP encryption for a/b/g mode only</li> <li>•AES-CCMP: 128 bit in hardware</li> <li>•802.1x authentication</li> <li>•WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.</li> <li>•WPA2 certification</li> <li>•IEEE 802.11i</li> <li>•WAPI</li> </ul>
<p><b>Network Architecture Models</b></p>	<p>Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)</p>
<p><b>Roaming</b></p>	<p>IEEE 802.11 compliant roaming between access points</p>
<p><b>Output Power<sup>2</sup></b></p>	<ul style="list-style-type: none"> <li>• 802.11b: +18.5dBm minimum</li> </ul>

### Technical Specifications

	<ul style="list-style-type: none"> <li>• 802.11g: +17.5dBm minimum</li> <li>• 802.11a: +18.5dBm minimum</li> <li>• 802.11n HT20(2.4GHz): +15.5dBm minimum</li> <li>• 802.11n HT40(2.4GHz): +14.5dBm minimum</li> <li>• 802.11n HT20(5GHz): +15.5dBm minimum</li> <li>• 802.11n HT40(5GHz): +14.5dBm minimum</li> <li>• 802.11ac VHT80(5GHz): +11.5dBm minimum</li> <li>• 802.11ac VHT160(5GHz): +11.5dBm minimum</li> <li>• 802.11ax HT40(2.4GHz): +10dBm minimum</li> <li>• 802.11ax VHT160(5GHz): +10dBm minimum</li> </ul>
<b>Power Consumption</b>	<ul style="list-style-type: none"> <li>• Transmit mode: 2.0 W</li> <li>• Receive mode: 1.6 W</li> <li>• Idle mode (PSP) 180 mW (WLAN Associated)</li> <li>• Idle mode: 50 mW (WLAN unassociated)</li> <li>• Connected Standby: 10 mW</li> <li>• Radio disabled: 8 mW</li> </ul>
<b>Power Management</b>	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
<b>Receiver Sensitivity<sup>4</sup></b>	<ul style="list-style-type: none"> <li>• 802.11b, 1Mbps: -93.5dBm maximum</li> <li>• 802.11b, 11Mbps: -84dBm maximum</li> <li>• 802.11a/g, 6Mbps: -86dBm maximum</li> <li>• 802.11a/g, 54Mbps: -72dBm maximum</li> <li>• 802.11n, MCS07: -67dBm maximum</li> <li>• 802.11n, MCS15: -64dBm maximum</li> <li>• 802.11ac, MCS0: -84dBm maximum</li> <li>• 802.11ac, MCS9: -59dBm maximum</li> <li>• 802.11ax, MCS11(HT40): -59dBm maximum</li> <li>• 802.11ax, MCS11(VHT160): -58.5dBm maximum</li> </ul>
<b>Antenna type</b>	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
<b>Form Factor</b>	PCI-Express M.2 MiniCard
<b>Dimensions</b>	Type 2230: 2.3 x 22.0 x 30.0 mm Type 1216: 1.67 x 12.0 x 16.0 mm
<b>Weight</b>	Type 2230: 2.8 g Type 1216: 1.3 g
<b>Operating Voltage</b>	3.3 v +/- 9%
<b>Temperature</b>	Operating: 14° to 158° F (-10° to 70° C) Non-operating: -40° to 176° F (-40° to 80° C)
<b>Humidity</b>	Operating: 10% to 90% (non-condensing) Non-operating: 5% to 95% (non-condensing)
<b>Altitude</b>	Operating: 0 to 10,000 ft (3,048 m) Non-operating: 0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	LED Amber – Radio OFF

### Technical Specifications

LED OFF – Radio ON

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

<b>Bluetooth Specification</b>	4.0/4.1/4.2/5.0/5.1 Compliant
<b>Frequency Band</b>	2402 to 2480 MHz
<b>Number of Available Channels</b>	Legacy: 0~79 (1 MHz/CH) BLE: 0~39 (2 MHz/CH)
<b>Signaling Data Rate</b>	Legacy: 3 Mbps signaling data rate <sup>1</sup> 2.17 Mbps BLE: 1 Mbps signaling data rate 0.2 Mbps <a href="#">1. Actual throughput may vary.</a>
	Legacy: Synchronous Connection Oriented links, 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)
<b>Transmit Power</b>	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 9.5 dBm for BR and EDR.

1. Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 is backwards compatible with prior 802.11 specs. The specifications for Wi-Fi 6 (802.11ax) are draft and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ax devices. Only available in countries where 802.11ax is supported.
2. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.
3. Check latest software/driver release for updates on supported security features.
4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

### Technical Specifications

#### POWER

<b>AC Adapter 65 Watt nPFC Standard USB type C™ Straight 1.8 m</b>	<b>Dimensions (H x W x D)</b>	90 mm x 51 mm x 28.5 mm
	<b>Weight</b>	220 g +/-20% <a href="#">Not including power cord. Power cord varies by country</a>
	<b>Input</b>	100 to 240 VAC
	<b>Input Efficiency</b>	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec: 5V: 81.5% 9V: 86.7% 12V: 88% 15V: 89% 20V: 89%
	<b>Input frequency range</b>	47 ~ 63Hz
	<b>Input AC current</b>	Max. 1.6 A at 90 Vac
	<b>Output</b>	5V/9V/12V/15V/20V
	<b>Output power</b>	65 W
	<b>Hold-up time</b>	5ms at 115 Vac input
	<b>Output current limit</b>	<8.0 A
	<b>Connector</b>	USB Type-C™
	<b>Environmental Design</b>	<b>Operating temperature</b> 32°F to 95°F (0°C to 35°C) <b>Non-operating (storage) temperature</b> -4°F to 185°F (-20°C to 85°C) <b>Altitude</b> 0 to 16,400 ft (0 to 5000m) <b>Humidity</b> 20% to 95% <b>Storage Humidity</b> 10% to 95%
	<b>EMI and Safety Certifications</b>	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.

<b>AC Adapter 45 Watt nPFC Standard USB type C™ Straight</b>	<b>Dimensions (H x W x D)</b>	95 mm x 43 mm x 27.5 mm
	<b>Weight</b>	200 g +/-10% <a href="#">Not including power cord. Power cord varies by country</a>
	<b>Input</b>	100 to 240 VAC
	<b>Input Efficiency</b>	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%
	<b>Input frequency range</b>	47 ~ 63Hz
	<b>Input AC current</b>	Max. 1.4 A at 90 Vac
	<b>Output</b>	5V/15W 9V/27W

### Technical Specifications

	12V/36W 15V/45W	
	<b>Output power</b>	45 W
	<b>DC output</b>	5V/9V/12V/15V
	<b>Hold-up time</b>	5ms at 115 Vac input
	<b>Output current limit</b>	<5.0 A
<b>Connector</b>	USB Type-C™	
<b>Environmental Design</b>	<b>Operating temperature</b>	32°F to 95°F (0°C to 35°C)
	<b>Non-operating (storage) temperature</b>	-4°F to 185°F (-20°C to 85°C)
	<b>Altitude</b>	0 to 16,400 ft (0 to 5000m)
	<b>Humidity</b>	20% to 95%
	<b>Storage Humidity</b>	10% to 95%
<b>EMI and Safety Certifications</b>	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.	

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

Category	Description	Part Number
<b>Cases</b>	HP Business Slim Top Load	2UW02AA
	HP 14.0 Always On Black Case	3YF54AA
	HP Essential Top Load Case (up to 15.6")	H2W17AA
	HP Essential Backpack (up to 15.6")	H1D24AA
<b>Docking</b>	HP USB-C/A Universal Dock G2 <small>1. According to Chromebook hardware design, this platform can only support up to dual 4k displays through the dock.            2. According to Chrome OS limitation, the power button function of the dock will not be supportable.            3. Do not support HP Alt Mode</small>	5TW13AA
	HP USB-C Travel Dock G2	7PJ38AA
<b>Input/output</b>	HP 3-Button Laser Mouse	H4B81AA
	HP USB Optical Travel mouse	G1K28AA
	HP Bluetooth Travel Mouse	6SP30AA
	HP Essential USB Mouse	2TX37AA
	HP Stereo USB Headset	T1A67AA
	HP Stereo 3.5mm Headset	T1A66AA
	HP USB-C to DP	N9K78AA
	HP USB-C to HDMI 2.0 Adapter	1WC36AA
	HP USB-C to USB HUB	Z6A00AA
	HP USB to RJ45 Adapter	N7P47AA
HP USB-C Travel Dock G2	7PJ38AA	
<b>Power</b>	HP 45 W USB-C G2 Power Adapter	1MZ01AA
	65 W USB-C Slim Power adapter	3PN48AA
	HP Notebook USB-C Power Bank	2NA10AA
<b>Storage</b>	HP External USB Optical Drive	F2B56AA
<b>Security</b>	HP Nano Keyed Cable Lock	1AJ39AA
	HP Sure Key Cable Lock	6UW42AA
<b>Displays</b>	HP E24d G4 Advanced Docking monitor	6PA50AA
	HP E27d G4 Advanced Docking monitor	6PA56AA

### Summary of Changes

<b>Date of change:</b>	<b>Version History:</b>		<b>Description of change:</b>
December 18, 2020	V1 to V2	Update	Software and Security
February 3, 2021	V2 to V3	Update	Processor and Memory section
May 19, 2021	V3 to V4	Update	Software section
August 3, 2021	V4 to V5	Add	Zero Touch Enrollment in Security Management
October 22, 2021	V5 to V6	Update	Security Management Section

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