

Overview

HP Pro c645 Chromebook



Left

- 1. Microphone
- 2. Webcam LED
- 3. Webcam
- 4. Privacy Camera Latch
- 5. Touchpad
- 6. Lock slot (Lock sold separately.)
- 7. USB Super Speed Type-C® 3.2
- 8. HDMI 1.4 (HDMI cable sold separately.)
- 9. USB Type-A 3.2

Overview



Right

- 1. Power button
- 2. USB Type-A 3.2
- 3. USB Type-C® 3.2
- 4. Headphone/microphone combo
- 5. Micro SD card reader
- 6. Fingerprint sensor (Select models)

Overview

AT A GLANCE

- Choose from AMD Ryzen™ or AMD Athlon™ processors
- Up to 64 GB eMMC 5.0 or 128 GB PCIe® NVMe™ M.2 SSD storage to choose from
- Up to 16 GB memory and 128 GB SSD storage options
- Work farther from the Wi-Fi® router 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
- Audio by B&O
- Privacy Camera protects your privacy from remote camera hacking
- Optional fingerprint Sensor¹ for unlock the screen in a flash
- Optional backlit keyboard¹ for working in a dark environment
- Optional touchscreen for intuitive interactions
- HP Fast Charge Technology (With optional 65W adapter)²
- One HDMI port for instant connection to display without dongles
- Undergoes MIL-STD 810H Tests³

1. HP Fingerprint Sensor, Backlit Keyboard and Touchscreen are optional features and require configuration at purchase.
2. Recharges the battery up to 90% within 90 minutes when the system is off or in standby mode. Power adapter with a minimum capacity of 65 watts is required. After charging has reached 90% capacity, charging will return to normal. Charging time may vary +/-10% due to System tolerance.
3. MIL-STD-810H testing is not intended to demonstrate fitness of U.S. Department of Defense (DoD) contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack.

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

Technical Specifications

PRODUCT NAME

HP Pro c645 Chromebook

OPERATING SYSTEM

Preinstalled Chrome OS™ 64

PROCESSOR

AMD Athlon™ Gold 3150C with Radeon™ Graphics (2.4 GHz base clock, up to 3.3 GHz max boost clock, 4 MB L3 cache, 2 cores) ^{1,2,3,4}

AMD Athlon™ Silver 3050C with Radeon™ Graphics (2.3 GHz base clock, up to 3.2 GHz max boost clock, 4 MB L3 cache, 2 cores) ^{1,2,3,4}

AMD Ryzen™ 3 3250C with Radeon™ Graphics (2.6 GHz base clock, up to 3.5 GHz max boost clock, 4 MB cache, 2 cores) ^{1,2,3,4}

AMD Ryzen™ 5 3500C with Radeon™ Graphics (2.1 GHz base clock, up to 3.7 GHz max boost clock, 4 MB L3 cache, 4 cores) ^{1,2,3,4}

AMD Ryzen™ 7 3700C with Radeon™ Graphics (2.3 GHz base clock, up to 4.0 GHz max boost clock, 4 MB L3 cache, 4 cores) ^{1,2,3,4}

Processor Family

AMD Ryzen™ 3 processor

AMD Ryzen™ 5 processor

AMD Ryzen™ 7 processor

AMD Athlon™ Gold processor

AMD Athlon™ Silver 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. AMD's numbering is not a measurement of clock speed.

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

3. Max Boost clock frequency performance varies depending on hardware, software and overall system configuration.

4. 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>.

CHIPSET

Integrated with processor

Technical Specifications

GRAPHICS

Integrated
AMD Radeon™ Graphics
AMD Radeon™ Graphics

Supports
Support HD Decode, DX12, and HDMI 1.4b⁵

5. HDMI cable sold separately.

DISPLAY

Non-Touch

35.6 cm (14") diagonal, FHD (1920 x 1080), IPS, micro-edge, anti-glare, 250 nits, 45% NTSC^{6,7}
35.6 cm (14") diagonal, HD (1366 x 768), micro-edge, anti-glare, 250 nits, 45% NTSC^{6,7}

Touch

35.6 cm (14") diagonal, FHD (1920 x 1080), touch, IPS, micro-edge, anti-glare, 250 nits, 45% NTSC^{6,7,8}
35.6 cm (14") diagonal, HD (1366 x 768), touch, micro-edge, anti-glare, 250 nits, 45% NTSC^{6,7,8}

HDMI

HDMI v1.4b
Supporting: up to 1920x1080

Displays support
Support extended displays through HP docks⁹

Display Size

14"
35.56 cm (14")

- 6. FHD/HD content required to view FHD/HD images.
- 7. Resolutions are dependent upon monitor capability, and resolution and color depth settings.
- 8. Actual brightness will be lower with touchscreen or Sure View.
- 9. Docks are sold separately.

Technical Specifications

STORAGE AND DRIVES

Primary Storage

32 GB eMMC 5.0¹⁰

64 GB eMMC 5.0¹⁰

SSD 128GB 2230 PCIe NVMe Value¹⁰

Primary M.2 Storage

128 GB PCIe® NVMe™ M.2 SSD¹⁰

10. For storage drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 5.1 GB is not user available.

MEMORY

Maximum Memory

16 GB DDR4-2666 SDRAM

Memory

4 GB DDR4-2666 SDRAM

8 GB DDR4-2666 SDRAM

16 GB DDR4-2666 SDRAM

Note: Transfer rates up to 2666 MT/s.

Memory Slots

On-board system memory

Supports Single Channel Memory (Athlon)

Supports Dual Channel Memory (Ryzen)

NETWORKING/COMMUNICATIONS

WLAN

Intel® AX200 Wi-Fi® 6 (2x2) and Bluetooth® 5 combo¹¹

Chromecast

Chromecast Support¹²

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

12. Chromecast must be purchased separately.

Technical Specifications

AUDIO/MULTIMEDIA

Audio**Audio by B&O**

Dual stereo speakers

Camera

720p HD camera⁶

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

KEYBOARD / POINTING DEVICES

Keyboard

Spill-resistant, full-size, optional backlit, pike silver Chrome keyboard¹³

Pointing Device

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

13. Backlit keyboard is an optional feature.

SOFTWARE AND SECURITY

Preinstalled Software

Chrome Educational Upgrade (Optional)¹⁴

Manageability Features

Chrome Enterprise Upgrade (Optional)¹⁵

Security Management

Google Titan C

Nano Security Lock Slot¹⁶

Fingerprint sensor (Select models)

14. Chrome Educational Upgrade is sold separately.

15. 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>.

16. Locks are sold separately.

Technical Specifications

POWER

Power Supply

HP Smart 65 W USB Type-C adapter¹⁷

HP Smart 45 W USB Type-C adapter¹⁷

Primary Battery

HP Long Life 3-cell, 58 Wh Li-ion¹⁸

HP Fast Charge Technology (90% in 90 minutes)¹⁹

Power Cord

3-wire plug - 1.0m

Battery life

Up to 10 hours²⁰

Battery Weight

220 g

0.49 lb

17. Availability may vary by country.

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

29. Recharges the battery up to 90% within 90 minutes when the system is off or in standby mode. Power adapter with a minimum capacity of 65 watts is required. After charging has reached 50% capacity, charging will return to normal. Charging time may vary +/-10% due to System tolerance.

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

WEIGHTS & DIMENSIONS

Product Weight

Starting at 3.38 lb²¹

Starting at 1.54 kg²¹

Product Dimensions (w x d x h)

12.75 x 8.7 x 0.64 in

32.4 x 22.1 x 1.65 cm

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

Technical Specifications

PORTS/SLOTS

Ports

2 USB Super Speed Type-C® 5Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.2)

2 Super Speed USB Type-A 5Gbps signaling rate

1 Headphone/microphone combo

1 HDMI 1.4²²

22. HDMI cable sold separately.

Expansion Slots

1 Micro SD multi-format digital media reader

SERVICE AND SUPPORT

HP Services offers 1-year and 3-year limited warranties and 90 day software limited warranty options depending on country. Refer to https://www8.hp.com/us/en/privacy/limited_warranty.html 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>.²³

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

Technical Specifications

SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	USB-C 45W and 65W adapter	
	Nominal Operating Voltage	5V/9V/12V/15V
	Average Operating Power	< 45W
	Integrated Graphics	Yes
Temperature	Max Operating Power	UMA < 45W
	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 grms
	Non-operating	3.5 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	No
	FCC Compliance	Yes
	ENERGY STAR®	Yes ²⁴
	EPEAT® 2019	Yes ²⁵
	ICES	Yes
	Australia /	Yes
	NZ A-Tick Compliance	Yes
	CCC	Yes
	Japan VCCI Compliance	No
	KC	Yes
	BSMI	Yes
	CE Marking Compliance	Yes
	BNCI or BELUS	No
	CIT	No
	GOST	Yes
	Saudi Arabian Compliance (ICCP)	Yes
SABS	Yes	
UKRSERTCOMPUTER	No	

24. Configurations of the HP Pro c645 Chromebook that are ENERGY STAR® certified are identified as HP Pro c645 Chromebook ENERGY STAR on HP websites and on <http://www.energystar.gov>.

25. 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.

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

Panel LCD 14 inch FHD (1920x1080) Anti-Glare WLED UWVA 45percent cg 250nits eDP slim Touch on Panel NWBZ

Outline Dimensions (W x H x D)	316.17 x 198.07 max. (w/ PCB)
Active Area	309.37 x 174.02
Weight	<290g max.
Diagonal Size	14.0"
Thickness	3.0mm (Panel Side) / 3.2mm (PCBA Side) max.
Interface	eDP 1.2
Surface Treatment	Anti-glare (AG)
Touch Enabled	Yes
Contrast Ratio	600:1 (typ)
Refresh Rate	60Hz
Brightness	250 nits typ. ¹
Pixel Resolution	1920 x 1080 (FHD)
Format	RGB
Backlight	LED
Color Gamut Coverage	45%
Color Depth	6 bits
Viewing Angle	UWVA 85/85/85/85

Panel LCD 14-in FHD (1920x1080) Anti-Glare WLED UWVA 45percent cg 250nits eDP NWBZ slim

Outline Dimensions (W x H x D)	316.17 x 197.98 max. (w/ PCB)
Active Area	309.37 x 174.02
Weight	<285g max
Diagonal Size	14.0"
Thickness	3.0mm max.
Interface	eDP 1.2
Surface Treatment	Anti-glare (AG)
Touch Enabled	None
Contrast Ratio	600:1 (typ)
Refresh Rate	60Hz
Brightness	250nit typ.
Pixel Resolution	1920 x 1080 (FHD)
Format	RGB
Backlight	LED
Color Gamut Coverage	45%
Color Depth	6 bits
Viewing Angle	UWVA 85/85/85/85

Technical Specifications

Panel LCD 14-in HD (1366x768) Anti-Glare WLED SVA 45percent cg 250nits eDP 1.2 w/o PSR TOP NWBZ flat

Outline Dimensions (W x H x D)	(315.9 +/- 0.3) * (197.54 +/- 0.5)
Active Area	309.4 x 173.95 typ.
Weight	290g Max
Diagonal Size	14."
Thickness	3.0mm (Panel Side) / 3.2mm (PCBA Side) max.
Interface	eDP 1.2
Surface Treatment	AG
Touch Enabled	YES
Contrast Ratio	400:1 (Typ)
Refresh Rate	60Hz
Brightness	250nits ¹
Pixel Resolution	1366 x 768 (HD)
Format	RGB
Backlight	LED
Color Gamut Coverage	45%
Color Depth	6 bits
Viewing Angle	SVA 45/45/15/30

Panel LCD 14-in HD (1366x768) Anti-Glare WLED SVA 45percent cg 250nits eDP NWBZ ultraslim

Outline Dimensions (W x H x D)	315.9+/-0.3 x 197.54 +/- 0.5
Active Area	309.4 x 173.95
Weight	285g Max
Diagonal Size	14."
Thickness	3.0mm max
Interface	eDP 1.2
Surface Treatment	AG
Touch Enabled	None
Contrast Ratio	300:1 (typ)
Refresh Rate	60Hz
Brightness	250nits
Pixel Resolution	1366 x 768 (HD)
Format	RGB
Backlight	LED
Color Gamut Coverage	45%
Color Depth	6 bits
Viewing Angle	SVA 45/45/15/30

Technical Specifications

STORAGE AND DRIVES*

* For storage drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 5.1 GB is not user available

32 GB eMMC

Drive Weight	0.2g
Rotation speed	32GB
Cache Buffer	1.4mm
Height	11.5x13mm
Width	MMC potocal
Interface	
Transfer Rate	Up to 250 MB/s
Seek Time	Up to 70 MB/s
Logical Blocks	31,268,536,320 Bytes
Operating Temperature	0 to 70
Security Features	HS400

64 GB eMMC

Drive Weight	0.2g
Rotation speed	64GB
Cache Buffer	1.4mm
Height	11.5x13mm
Width	MMC potocal
Interface	
Transfer Rate	Up to 250 MB/s
Seek Time	Up to 70 MB/s
Logical Blocks	62,537,072,640 Bytes
Operating Temperature	0 to 70
Security Features	HS400

SSD 128GB 2230 PCIe NVMe Value

Form Factor	M.2 2230
Capacity	128 GB
NAND Type	TLC
Height	0.09 in (2.3 mm)
Width	0.87 in (22 mm)
Weight	0.01 lb (5 g)
Interface	PCIe NVMe Gen3X4
Maximum Sequential Read	Up to 1500 MB/s
Maximum Sequential Write	UP to 600 MB/s
Logical Blocks	250,069,680
Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
Features	TRIM; L1.2

Technical Specifications

NETWORKING/COMMUNICATIONS

<p>Intel® Wi-Fi® 6 AX200 + Bluetooth® 5 (802.11ax 2x2, non-vPro, supporting gigabit file transfer speeds) non-vPro^{1,2}</p>	<p>Wireless LAN Standards</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>Interoperability</p>	<p>Features Wi-Fi® 6 technology</p>
	<p>Frequency Band</p>	<ul style="list-style-type: none"> • 802.11b/g/n/ax 2.402 – 2.482 GHz • 802.11a/n/ac/ax 4.9 – 4.95 GHz (Japan) 5.15 – 5.25 GHz 5.25 – 5.35 GHz 5.47 – 5.725 GHz 5.825 – 5.850 GHz
	<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: MCS 0 ~ MCS 15, (20MHz, and 40MHz) • 802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, ,80MHz & 160MHz) • 802.11ax: MCS0 ~ MCS11, (1SS and 2SS) (20MHz, 40MHz, ,80MHz & 160MHz)
	<p>Modulation</p>	<p>Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM</p>
	<p>Security³</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 • IEEE 802.11i • WAPI
	<p>Network Architecture Models</p>	<p>Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)</p>
	<p>Roaming</p>	<p>IEEE 802.11 compliant roaming between access points</p>
	<p>Output Power⁴</p>	<ul style="list-style-type: none"> • 802.11b: +18.5dBm minimum • 802.11g: +17.5dBm minimum • 802.11a: +18.5dBm minimum • 802.11n HT20(2.4GHz): +15.5dBm minimum • 802.11n HT40(2.4GHz): +14.5dBm minimum • 802.11n HT20(5GHz): +15.5dBm minimum • 802.11n HT40(5GHz): +14.5dBm minimum • 802.11ac VHT80(5GHz): +11.5dBm minimum

Technical Specifications

Power Consumption	<ul style="list-style-type: none"> • 802.11 ac VHT160(5GHz): +11.5dBm minimum • 802.11 ax HT40(2.4GHz): +10dBm minimum • 802.11 ax VHT160(5GHz): +10dBm minimum • 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/Modern Standby: 10mW • Radio disabled: 8 mW 				
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode				
Receiver Sensitivity⁵	<ul style="list-style-type: none"> • 802.11 b, 1Mbps: -93.5dBm maximum • 802.11 b, 11Mbps: -84dBm maximum • 802.11 a/g, 6Mbps: -86dBm maximum • 802.11 a/g, 54Mbps: -72dBm maximum • 802.11 n, MCS07: -67dBm maximum • 802.11 n, MCS15: -64dBm maximum • 802.11 ac, MCS0: -84dBm maximum • 802.11 ac, MCS9: -59dBm maximum • 802.11 ax, MCS11(HT40): -59dBm maximum • 802.11 ax, MCS11(VHT160): -58.5dBm maximum 				
Antenna type	<p>High efficiency antenna with spatial diversity, mounted in the display enclosure</p> <p>Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications</p>				
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: 2.8 g 2. Type 126: 1.3 g 				
Operating Voltage	3.3v +/- 9%				
Temperature	<table border="0"> <tr> <td style="padding-right: 10px;">Operating</td> <td>14° to 158° F (-10° to 70° C)</td> </tr> <tr> <td>Non-operating</td> <td>-40° to 176° F (-40° to 80° C)</td> </tr> </table>	Operating	14° to 158° F (-10° to 70° C)	Non-operating	-40° to 176° F (-40° to 80° C)
Operating	14° to 158° F (-10° to 70° C)				
Non-operating	-40° to 176° F (-40° to 80° C)				
Humidity	<table border="0"> <tr> <td style="padding-right: 10px;">Operating</td> <td>10% to 90% (non-condensing)</td> </tr> <tr> <td>Non-operating</td> <td>5% to 95% (non-condensing)</td> </tr> </table>	Operating	10% to 90% (non-condensing)	Non-operating	5% to 95% (non-condensing)
Operating	10% to 90% (non-condensing)				
Non-operating	5% to 95% (non-condensing)				
Altitude	<table border="0"> <tr> <td style="padding-right: 10px;">Operating</td> <td>0 to 10,000 ft (3,048 m)</td> </tr> <tr> <td>Non-operating</td> <td>0 to 50,000 ft (15,240 m)</td> </tr> </table>	Operating	0 to 10,000 ft (3,048 m)	Non-operating	0 to 50,000 ft (15,240 m)
Operating	0 to 10,000 ft (3,048 m)				
Non-operating	0 to 50,000 ft (15,240 m)				
LED Activity	<p>LED Amber – Radio OFF</p> <p>LED Off – Radio ON</p>				
	<ol style="list-style-type: none"> 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 (802.11 ax) 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. 2. Wi-Fi supporting gigabit speeds is achievable when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 160MHz channels. 3. Check latest software/driver release for updates on supported security features. 				

Technical Specifications

4. 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.
5. 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).

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)
Signaling Data Rate	Legacy: 3 Mbps signaling data rate ⁶ 2.17 Mbps BLE: 1 Mbps signaling data rate ⁶ 0.2 Mbps 6. Actual throughput may vary.
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.

Technical Specifications

POWER

HP 3-cell Long Life Li-Ion (58 WHr)

Dimensions (H x W x L)	4.7 x 249 x 103.07 mm (0.183 x 9.72 x 4.02 inch)
Weight	0.23 kg (0.506 lb)
Cells/Type	3cell Lithium-Ion Polymer cell / 407792
Energy	
Voltage	11.55V
Amp-hour capacity	5.095Ah
Watt-hour capacity	58.84Wh
Temperature	
Operating (Charging)	32° to 113° F (0° to 45° C)
Operating (Discharging)	14° to 122° F (-10° to 60° C)
Fuel Gauge LED	N/A
Warranty	1-year
Optional Travel Battery Available	No

HP Smart 65 W USB Type-C adapter

Dimensions	3.54x2.0x1.12in (9.0 x 5.1 X 2.85cm)
Weight	unit: 0.51 lbs (235g)
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 @ 20V/3.25A 89% min at 115 Vac/ 230Vac @ 15V/4.33A
Input frequency range	47 ~ 63 Hz
Input AC current	1.6 A at 90 VAC and maximum load
Output	
Output power	65W
DC output	5V/9V/12V/15V/20V
Hold-up time	5ms at 115 Vac input by each output voltage
Output current limit	8.0A Maximum
Connector	USB TYPE-C®
Environmental Design	
Operating temperature	32°F to 95°F (0°to 35°C)
Non-operating (storage) temperature	-4°F to 185°F (-20°to 85°C)
Altitude	0 to 16,400 ft (0 to 5000m)
Humidity	20% to 95%
Storage Humidity	10% to 95%

Technical Specifications

EMI and Safety Certifications

- CE Mark - full compliance with LVD and EMC directives
- Worldwide safety standards -IEC60950, EN60950, UL60950, UL62368, 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.

HP Smart 45 W USB Type-C adapter

Dimensions

3.74x1.69x1.08 in (9.5*4.3*2.75cm)

Weight

unit: 0.45 lbs (200g)

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

45W

5V/15W

9V/27W

12V/36W

15V/45W

DC output

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%

Storage Humidity

10% to 95%

EMI and Safety Certifications

- CE Mark - full compliance with LVD and EMC directives
- Worldwide safety standards -IEC60950, EN60950, UL60950, UL62368, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE.
- MTBF - over 200,000 hours at 25°C ambient condition.

Technical Specifications

FINGER PRINT READER

FINGERPRINTS FPC1025

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:	2.1 mA
Capture Rate:	
ESD Resistance:	+/- 30kV
Detection Matrix:	160 x 160 pixels
FRR (False Reject Rate) / FAR (False Acceptance Rate):	

COUNTRY OF ORIGIN

China

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

Category	Description	Part Number
Cases	HP Prelude Pro Top Load	1X645AA
	HP Prelude Pro Backpack	1X644AA
	HP Business Backpack (17.3")	2SC67AA
	HP Business Case (15.6")	2SC66AA
	HP Business Slim Top Load (14.1")	2SC65AA
	HP 14.1 Business Sleeve	2UW01AA
	HP 13.3 Business Sleeve	2UW00AA
Docking	HP USB Type-C /A Universal Dock G2	5TW13AA
Input/Output	HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA
	HP Slim Wireless Keyboard & Mouse	T6L04AA
	HP Wired Desktop 320K Keyboard	9SR37AA
	HP Slim Wireless Keyboard	T6U20AA
	HP 3-Button USB Laser Mouse	H4B81AA
	HP Comfort Grip Wireless Mouse	H2L63AA
	HP Wired Desktop 320M Mouse	9VA80AA
	HP USB Optical Travel mouse	G1K28AA
	HP Bluetooth Travel Mouse	6SP30AA
	HP Essential USB Mouse	2TX37AA
	HP USB Type-C to DP	N9K78AA
	HP USB Type-C to HDMI 2.0 Adapter	1WC36AA
	HP USB Type-C to USB HUB	Z6A00AA
	HP USB to RJ45 Adapter	N7P47AA
	HP USB Type-C Travel Dock G2	7PJ38AA
HP USB Type-C to VGA Adapter	N9K76AA	
Power	HP 45W USB-C G2 Power Adapter	1MZ01AA#ABA
	HP 65W USB Type-C Slim Power adapter	3PN48AA
	HP USB-C Essential Power Bank	3TB55AA
Storage	HP External USB Optical Drive	F2B56AA
Security	HP Nano Keyed Cable Lock	1AJ39AA
	HP Sure Key Cable Lock	6UW42AA

Summary of Changes

Date of change:	Version History:		Description of change:
	From V1 to V2		

© Copyright 2020 HP Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

AMD and Radeon are trademarks of Advanced Micro Devices, Inc. Bluetooth is a trademark owned by its proprietor and used by HP Inc. under license. USB Type-C® and USB-C® are registered trademarks of USB Implementers Forum. ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency. © 2020 Google LLC All rights reserved. Google and the Google Logo are registered trademarks of Google LLC.