

Overview

HP Chromebook 11 G5



- 1. Webcam
- 2. Webcam LED
- 3. Security lock slot

Left View

- 4. USB 3.1 Gen 1 port
- 5. Audio in/ out combo jack
- 6. Power LED



Overview



Front Right View

- | | | | |
|----|----------------------|----|--|
| 1. | USB 3.1 Gen 1 port | 4. | AC plug LED |
| 2. | HDMI port | 5. | AC Smart Pin adapter plug (4.5mm barrel) |
| 3. | Micro SD card reader | | |



Overview

AT A GLANCE

- Enjoy affordable, convenient mobile productivity with an Intel® Celeron® Processor
- Choose from either a 11.6" diagonal HD IPS (1366 x 768) Corning® Gorilla® Glass NBT Touch screen or 11.6" diagonal HD Anti-glare (1366 x 768) Non-Touch display
- Starting at 1.1418 kg (2.51 lbs) for Non-Touch and 1.878 kg (2.61 lbs) for Touch
- A compact design at 1.84 cm (0.72 in) thin
- Up to 12 hours and 30 minutes of battery life to comfortably last the entire school day
- Wireless connectivity allows you to stay productive wherever work takes you
- The growing Chrome™ Web Store offers thousands of free apps, themes, and extensions to help you make the most of your Chromebook™ - including customized apps and extensions for education and business environments
- Store up to 100 GB of your files and content with complimentary Google Drive
Your own virtual hard drive is available anywhere the Internet is accessible with this complimentary two year promotion
- Purchase with confidence with a 1-year limited warranty and 3-year, 4-year and 5-year extended service available with optional HP Care Services.

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



Features

PRODUCT NAME

HP Chromebook 11 G5

OPERATING SYSTEM

Preinstalled Chrome OS™

PROCESSOR

Intel® Celeron® N3060 (1.60 GHz, Turbo up to 2.48 GHz) 2 MB 1600 MHz L2 cache, 2 cores¹

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 is not a measurement of higher performance.

CHIPSET

Integrated with processor

GRAPHICS

Intel® HD Graphics 400

- Support HD Decode, DX12, and HDMI

DISPLAY

Internal

Touch

11.6" diagonal HD¹ WLED slim eDP UWVA, (1366 x 768) with) Corning® Gorilla® Glass NBT

Non-Touch

11.6" diagonal HD¹ WLED flat eDP SVA Anti-glare (1366 x 768)

External

HDMI v1.4

Supporting up to 1920 x 1080 @ 60 Hz

1. High definition content is required to view high-definition images.

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

STORAGE AND DRIVES

Support eMMC

16 GB¹

32 GB¹

Store up to 100 GB with Google Drive (2-year subscription included)²

1. For hard drives, GB = 1 billion bytes. Actual formatted capacity is less. 5.1GB of the eMMC are dedicated/allocated to the OS and OS partitions.
2. This offer is tied to this device and is non-transferable. If this device is returned, the extra storage will be revoked. In order to redeem this offer, you will need to be on Chrome OSTM 23 or later. Internet access is required and not included. Additional information about storage plan refunds, renewals, cancellations and expiration is available at the Google website: <https://support.google.com/chromebook/answer/2703646?hl=en>

MEMORY

Memory soldered down

LPDDR3-1600 Single Channel (Transfer rates up to 1600 MT/s) for 2 GB Memory



Features

LPDDR3-1600 Dual Channel (Transfer rates up to 1600 MT/s) for 4 GB Memory

Maximum
4 GB

NOTE: Internal component upgrades to memory are not available after factory configuration.

NETWORKING/COMMUNICATIONS

Wireless LAN (WLAN)

Intel® Dual Band Wireless-AC 7265 802.11a/b/g/n/ac (2x2) WiFi and Bluetooth® 4.2 Combo¹

1. [Wireless access point and Internet service is required and is not included. Availability of public wireless access points limited.](#)

Internal Card Expansion

One M.2 slot for WLAN

AUDIO/MULTIMEDIA

Audio

HD Audio
Dual speakers

Webcam¹

HP TrueVision HD²

- HD² camera - Indicator LED, USB2.0, f2.0
- 720p by 30 frames per second
- Dual array digital microphone w/ appropriate software - beam forming, echo cancellation, noise suppression

1. [Internet access required and not included.](#)
2. [High definition content is required to view high-definition images.](#)

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

Full size textured island-style keyboard
Ash Gray

Clickpad

Clickpad with image sensor
Multitouch gestures enabled
Taps enabled as default

SOFTWARE AND SECURITY

Preinstalled Software

Chrome OS™ and its default set of apps

Security

Trusted Platform Module (TPM) 1.2
Lock slot
Optional UltraSlim Kensington Security Lock (Sold separately)



Features

POWER

Power Supply

HP 45W Smart AC Adapter¹

HP 65W EM Smart AC Adapter (India only)

Power cord included is 1.0 meter (3.3 feet)

1. AC adapter uses a 90 degree 4.5mm DC plug

Primary Battery

2-cell (43.7 WHr) Polymer Long-Life battery

Battery Life

Non-touch SKU: 750 mins = 12.5hrs

Touch SKU: 675 mins = 11.25 hrs

NOTE: Battery is internal and not replaceable by customer..

NOTE: 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.

WEIGHTS & DIMENSIONS

Weight¹

Non-Touch

Starting at 1.137 kg (2.51lbs)

Touch

Starting at 1.185 kg (2.62lbs)

Dimensions (w x d x h)

20.5 x 28.6 x 1.84 cm

8.07 x 11.25 x 0.72 in

1. Weight varies by configuration and components.

PORTS/SLOTS

Ports

USB 3.1 Gen 1 – Two (One on the left side and one on the right - Both USB ports support USB boost

HDMI v1.4 – One

Headphone/Microphone combo jack – One

AC Smart Pin adapter plug (4.5mm barrel) – One

HP Multi-Format Digital Media Card Reader

Support micro-SD/SDHC/SDXC up to UHS-104 (left side)

Push-push insertion/removal

SERVICE AND SUPPORT

HP Services offers limited 1-year limited warranty depending on country; 1-year limited warranty on primary battery. On-site service is also available with optional HP Care Services^{1,2} which extend protection beyond the standard limited warranty. To



Features

choose the right level of service for your HP product, use the HP Care Services Lookup Tool at: <http://www.hp.com/go/lookuptool>. Additional HP Care Services^{1,2} information by product is available at: <http://www.hp.com/go/cpc>.

1. Sold separately or as an optional feature.

2. 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>.

NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.

<http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp>



Technical Specifications

SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	Nominal Operating Voltage	19.5V
	Average Operating Power	28W
	Max Operating Power	< 45W
Temperature	Operating	41° to 95° F (5° to 35° C)
	Non-operating	-4° to 140° F (-20° to 60° C)
Relative Humidity	Operating	10% to 90%, non-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	200 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	No, only UL request
	FCC Compliance	Yes
	ENERGY STAR®	Yes
	EPEAT	Yes, Silver compliant
	ICES	Yes
	Australia / NZ A-Tick Compliance	Yes
	CCC	No
	Japan VCCI Compliance	Yes
	KC	No
	BSMI	Yes
	CE Marking Compliance	Yes
	BNCI or BELUS	No
	CIT	No
	GOST	Yes, now is EAC(CU) approval
	Saudi Arabian Compliance (ICCP)	No
	SABS	No
	UKRSERTCOMPUTER	No

DISPLAY

Outline Dimensions (W x H x D)	268.5 x 168.5 x 3.0 (max.)
Active Area	256.125 x 144.0
Weight	300g max.



Technical Specifications

Diagonal Size	11.6"	
Surface Treatment	AG	
Touch Enabled	Yes	
TSP Type	OGS, Direct bonding	
Contrast Ratio	800:1 (typ)	
Refresh Rate	60Hz	
Response time	27ms typ.	
Pixel Per Inch (PPI)	135	
Brightness	220nits typ.	
Pixel Resolution	Format	1366 x 768
	Configuration	RGB Vertical Stripe
Interface	eDP 1.2 w/o PSR	
LCD Mode	UWVA	
Viewing Angle	85/85/85/85	

Outline Dimensions (W x H x D)	278.5 x 168.5 x 3.0 (max.)	
Active Area	256.125 x 144.0	
Weight	235g max.	
Diagonal Size	11.6"	
Surface Treatment	AG	
Contrast Ratio	500:1 (typ)	
Refresh Rate	60Hz	
Response time	8ms typ.	
Pixel Per Inch (PPI)	135	
Brightness	220nits typ.	
Pixel Resolution	Format	1366 x 768
	Configuration	RGB Vertical Stripe
Interface	eDP 1.2 w/o PSR	
LCD Mode	TN, SVA	
Viewing Angle	45/45/15/35	

NETWORKING

Intel® Dual Band Wireless-AC 7265 802.11 ac (2x2) WiFi + Bluetooth® 4.2 Combo(non-vPro, Non-UNII D1)

Wireless LAN Standards	IEEE 802.11a
	IEEE 802.11b
	IEEE 802.11g
	IEEE 802.11n
	IEEE 802.11ac
Interoperability	Wi-Fi certified



Technical Specifications

Frequency Band	<p>802.11b/g/n</p> <ul style="list-style-type: none"> • 2.402 – 2.482 GHz <p>Note: The FCC has declared as of January 1, 2015 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.</p> <p>802.11a/n</p> <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>Note: Indonesia no support this band)</p>
Data Rates	<ul style="list-style-type: none"> • 802.11b: 1, 2, 5.5, 11 Mbps • 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz) • 802.11ac : MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, and 80MHz)
Modulation	Direct Sequence Spread Spectrum
Security¹	<p>BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM</p> <ul style="list-style-type: none"> • IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • IEEE 802.11i • Cisco Certified Extensions, all versions through CCX4 and CCX Lite • WAPI
Network Architecture Models	Ad-hoc (Peer to Peer)
Roaming	Infrastructure (Access Point Required)
Output Power²	<p>IEEE 802.11 compliant roaming between access points</p> <ul style="list-style-type: none"> • 802.11b : +16dBm minimum • 802.11g : +14dBm minimum • 802.11a : +14dBm minimum • 802.11n HT20(2.4GHz) : +14dBm minimum • 802.11n HT40(2.4GHz) : +12dBm minimum • 802.11n HT20(5GHz) : +14dBm minimum • 802.11n HT40(5GHz) : +12dBm minimum
Power Consumption	Transmit: 2.0 W (max)



Technical Specifications

	Receive: 1.6 W (max)
	Idle mode (PSP): 180 mW (WLAN Associated)
	Idle mode: 50 mW (WLAN unassociated)
	Connect Standby: 10 mW (WLAN+BT)
	Radio disabled: 5 mW
Power Management	ACPI and PCI Express compliant power management
	802.11 compliant power saving mode
Receiver Sensitivity³	802.11b, 1Mbps : -94dBm maximum
	802.11b, 11Mbps : -86dBm maximum
	802.11g, 6Mbps : -88dBm maximum
	802.11g, 54Mbps : -74dBm maximum
	802.11a, 6Mbps : -88dBm maximum
	802.11a, 54Mbps : -74dBm maximum
	802.11n, MCS07 : -69dBm maximum
	802.11n, MCS15 : -66dBm maximum
	802.11ac, 1SS, MCS-0 : -86dBm maximum
	802.11ac, 1SS, MCS-9 : -61dBm maximum
	802.11ac, 2SS, MCS-0 : -83dBm maximum
	802.11ac, 2SS, MCS-9 : -58dBm maximum
Antenna type	High efficiency antenna with spatial diversity, mounted in the display enclosure
	Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express M.2 MiniCard
Dimensions	Type 2230 : 2.3 x 22.0 x 30.0 mm
	Or
	Type 1630 : 2.3 x 16.0 x 30.0 mm
Weight	Type 2230 : 2.8g
	Or
	Type 1630 : 2g
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
	<ol style="list-style-type: none"> 1. Check latest software/driver release for updates on supported security features. 2. Maximum output power may vary by country according to local regulations. 3. 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

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

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

Receiver Sensitivity Legacy

Modulation	0.01% BER	0.001% BER
GFSK	-80 dBm	-70 dBm
$\pi/4$ -DQPSK	-80 dBm	-70 dBm
8DPSK	-80 dBm	-70 dBm

Power Consumption

Peak (Tx) 330 mW
Peak (Rx) 230 mW
Selective Suspend 17 mW

Range

Legacy Up to 33 ft (10 m)
BLE Up to 99 ft (30 m)

Electrical Interface

USB 2.0 compliant

Bluetooth Software Supported

Microsoft Windows Bluetooth Software

Link Topology

Electrical Interface

Point to Point, Multipoint Pico Nets up to 7 slaves

Bluetooth Software Supported

Full support of Bluetooth Security Provisions

Security

Power Management

Microsoft Windows ACPI, and USB Bus Support

Certifications

Self-configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff

Security

All necessary regulatory approvals for supported countries, including:

Certifications

FCC (47 CFR) Part 15C, Section 15.247 & 15.249

Bluetooth Profiles Supported

Power Management

ETS 300 328, ETS 300 826

Certifications

Low Voltage Directive IEC950

Certifications

UL, CSA, and CE Mark

Bluetooth Profiles Supported

Serial Port Profile (SPP)¹

Service Discovery Application Profile (SDAP)

Dial-Up Networking (DUN)^{1,2}



Technical Specifications

Generic Object Exchange Profile (GOEP)^{1,2}
 Object Push Profile (OPP)^{1,2}
 Hard Copy Cable Replacement (HCRP)^{1,2}
 Personal Area Networking Profile (PAN)^{1,2}
 Human Interface Device Profile (HID)^{1,2}
 Hands Free Profile (HFP)
 Advanced Audio Distribution Profile (A2DP)
 Audio Video Remote Control Profile (AVRCP)

Bluetooth V4.1/V4.2 support feature

V4.1: ESR5/6/7 compliant

V4.2: ESR8 compliant, LE Secure Connection – Basic.

AUDIO / MULTIMEDIA

Hardware	Implementation	Realtek ALC5650, I2S Audio
	Function Key Volume Controls	Volume up, Volume down, and Mute
	Full Duplex	Yes
	Microphone In	Yes (Headset)
	Headphone/Line Out	Yes (Stereo)
	Integrated Microphone	Yes (Dual)
Audio Output Quality	Frequency Response	20-20kHz
	Total Harmonic Distortion + Noise	-85dB
	Noise Floor	-100dB
	Play/Record Sampling Rate(s)	48kHz
	DAC	100dBA SNR, -85dB THD+N
	ADC	94dBA SNR, -83dB THD+N
	Integrated Stereo Speakers	Power Rating
	Impedance	4ohm

POWER

HP 45W Smart AC Adapter

Dimensions 3.74 x 1.57 x 1.04 in (9.5 x 4.0 x 2.65 cm)

Weight 0.386 lb (175g) max



Technical Specifications

	90 to 265 VAC	
Input	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
Output	Hold-up time	5 msec at 115 VAC input
	Output current limit	<8.0A
	Over voltage protection	< 29V max automatic shutdown
	Over short protection	Auto-recovery and no damage
Connector	3 pin/grounded, mates with interchangeable cords	
	Operating temperature	32° to 95° F (0° to 35° C)
Environmental Design	Non-operating (storage) temperature	-4° to 185° F (-20° to 85° C)
	Altitude	0 to 16,400 ft (0 to 5,000 m)
	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.	

HP 65W EM Smart AC Adapter

Dimensions	4.98 x 1.97 x 1.18 in (12.65 x 5.0 x 3.0 cm)	
Weight	0.62 lb (290g) max	
	90 to 265 VAC	
Input	Input Efficiency	87.74% at 115Vac and 88.4% at 230Vac
	Input frequency range	47 to 63 Hz
	Input AC current	1.7 A at 90 VAC
	Output power	65W
	DC output	19.5V
Output	Hold-up time	5 msec at 115 VAC input
	Output current limit	<11.0A
	Over voltage protection	< 29V max automatic shutdown
	Over short protection	Auto-recovery and no damage
Connector	3 pin/grounded, mates with interchangeable cords	
Environmental Design	Operating temperature	32° to 95° F (0° to 35° C)



Technical Specifications

Non-operating (storage) temperature	-4° to 185° F (-20° to 85° C)
Altitude	0 to 16,400 ft (0 to 5,000 m)
Humidity	20% to 95%
Storage Humidity	10% to 95%

*CE Mark - full compliance with LVD and EMC directives

EMI and Safety Certifications

* 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.

2-cell (43.7 WHr) Polymer battery

Dimensions (H x W x L)	5.3mm x 142.6mm x 159.2mm
Weight (max)	195g
Cells/Type	Polymer Cells/LGC ICP3678122L1 & Coslight C3678122G
Energy	Voltage 7.7V
	Amp-hour capacity 5680mAh(Typ.)/5400mAh(Min.)
	Watt-hour capacity 43.7Whr(Typ.)/41.5Whr(Min.)
Temperature	Operating (Charging) 0~45°C
	Operating (Discharging) -10~60°C
	Non-operating -20~60°C(1 month storage)
	-20~45°C(3 month storage)
	-20~30°C(6 month storage)
Battery Re-Charge Time	System in OFF or Standby Mode ~2.77hrs-2.92hrs
	System ON ~3.25hrs
Fuel Gauge LED	No
Warranty	1 year
Compatible with optional Travel Battery	No

ENVIRONMENTAL

- BFR/PVC Free
- WEEE compliant (Waste Electric and Electronic Equipment)
- Energy Star 6.1 / EPEAT Gold compliant
- RoHS 2 Compliant
- California Battery Charger Energy Efficiency compliant



Technical Specifications

Eco-Label Certifications & declarations This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

- IT ECO declaration
- US ENERGY STAR®
- EPEAT <Gold> registered in the United States. See <http://www.epeat.net> for registration status in your country.

System Configuration The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook”.

Energy Consumption (in accordance with US ENERGY STAR® test method)

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation (Short idle)	4.75 W	4.82 W	4.51 W
Normal Operation (Long idle)	2.73 W	2.74 W	2.44 W
Sleep	0.36 W	0.42 W	0.37 W
Off	0.34 W	0.36 W	0.32 W

Note:
Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.

Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation (Short idle)	16 BTU/hr	16 BTU/hr	15 BTU/hr
Normal Operation (Long idle)	9 BTU/hr	9 BTU/hr	8 BTU/hr
Sleep	1 BTU/hr	1 BTU/hr	1 BTU/hr
Off	1 BTU/hr	1 BTU/hr	1 BTU/hr

*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

	Sound Power (L _{WAd} , bels)	Sound Pressure (L _{pAm} , decibels)
Typically Configured – Idle	N/A	17
Fixed Disk – Random writes	N/A	17

Longevity and Upgrading This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include:



Not all configuration components are available in all regions/countries.
c04934894 – DA 15515 – World Wide – Version 8 – December 7, 2017

Technical Specifications

- 3 USB ports
- 1 PC card slot (type I/II)
- 1 ExpressCard/54 slot
- 1 IEEE 1394 Port
- 2 SODIMM memory slots
- Optional expansion base docking station
- 1 multi-bay II storage port
- Interchangeable HDD??

Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.

Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater the 1ppm by weight
- Cadmium greater than 20ppm by weight

Battery size: CR2032 (coin cell)

Battery type: Lithium

Additional Information

- 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 contains 0% post-consumer recycled plastic (by wt.)
- This product is 95.5% recycle-able when properly disposed of at end of life.

Packaging Materials

External:	PAPER/Corrugated	329.8 g
Internal:	PLASTIC/EPE-Expanded Polyethylene	33.3 g
	PLASTIC/Polyethylene low density	10.3 g
	PLASTIC/EPP (Expanded Polypropolene)	4.9 g

The plastic packaging material contains at least 0% recycled content.

The corrugated paper packaging materials contains at least 95.5% recycled content.

Material Usage

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/pdf/gse.pdf>):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants – may not be used as flame retardants in plastics
- Cadmium



Technical Specifications

- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- 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)

Packaging Usage

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

End-of-life Management and Recycling

Hewlett-Packard 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.

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.



Technical Specifications

Hewlett-Packard 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://www.hp.com/hpinfo/globalcitizenship/environment/pdf/PC_GBU_Product_Design_ISO_14K_Certificate.pdf

and

<http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf>

COUNTRY OF ORIGIN

China



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

Type	Description	Part number
Cases	HP Business Backpack	H5M90AA
	HP Slim Ultrabook Top Load	F3W15AA
	HP Essential Top Load Case (up to 15.6")	H2W17AA#xxx
	HP Essential Backpack (up to 15.6")	H1D24AA
Input/Output	HP 3-Button Laser Mouse	H4B81AA#xxx
	HP Ultra Mobile Wireless Mouse	H6F25AA
	HP USB Optical Travel mouse	G1K28AA
	HDMI to VGA Adapter	H4F02AA
Power	HP 45W Smart AC Adapter (4.5mm)	H6Y88AA#xxx
	HP Notebook Power Bank	N9F71AA
Storage - External Storage	HP External USB Optical Drive	F2B56AA



Summary of Changes

Date of change	Version History	Change	Description of change
May 12, 2016	Version 1 to 2	Updated	Weights, added India only disclaimer to 65W adapter, added 4-year and 5-year service packs, and updated service and support section
June 13, 2016	Version 2 to 3	Updated	Weights
June 23, 2016	Version 3 to 4	Updated	Battery life, weights, specs section in the back
June 29, 2016	Version 4 to 5	Added	Environmental info
March 16, 2017	Version 5 to 6	Updated	Weight on display updated
April 7, 2017	Version 6 to 7	Removed	HP UltraSlim Keyed Cable Lock
December 7, 2017	Version 7 to 8	Added	Note on battery's life section

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