

### Overview

#### HP Chromebook 14A G5



1. Microphones
2. Webcam LED
3. Webcam
4. Touchpad

#### Left

5. USB 2.0
6. USB Type-C™ 3.1 Gen1 port  
(Supports Power Delivery +Display Port™)
7. Nano Security lock slot (Lock sold separately)

### Overview



1. Power Button
2. USB Type-C™ 3.1 Gen1 port (Supports Power Delivery +Display Port™)
3. Power LED

#### Right

4. USB 2.0
5. Micro SD Card Reader
6. Stereo Headphone/Microphone combo jack

### Overview

### AT A GLANCE

- Enjoy affordable, convenient mobile productivity with AMD A4-9120C & A6-9220C processor
- Designed to pass MIL STD 810G tests.<sup>1</sup>
- 2 USB-C™ ports (Supports Power Delivery +Display Port™)
- Choice of up to 64 GB eMMC storage
- Monor spill and pick resistant keyboard; optional backlit keyboard for low-light environment<sup>2</sup>
- Enjoy up to 9 hour battery life<sup>3</sup> and spend less time charging with HP Fast Charge technology<sup>4</sup>
- 180 degree hinge and optional FHD IPS Touchscreen for collaboration
- Enjoy Android™ Apps\* on Chrome OS™<sup>5</sup>
- Your Chromebook boots up within 10 seconds and you can be browsing online and working in Google Apps just moments later
- Qualcomm® 2x2 AC WLAN with MIMO for easy connection in dense classroom environment

1. MIL STD 810G testing is pending and is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Damage under the MIL STD test conditions or any accidental damage requires an optional HP Accidental Damage Protection Care Pack.

2. Sold separately or as an optional feature.

3. 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.

4. Recharges your battery up to 90% within 90 minutes when the system is off (using “shut down” command). Recommended for use with the HP adapter provided with the notebook, not recommended with a smaller capacity battery charger. After charging has reached 90% capacity, charging speed will return to normal speed. Charging time may vary +/-10% due to System tolerance.

5. Apps sold separately.

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

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

### PRODUCT NAME

HP Chromebook 14A G5

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### OPERATING SYSTEM

**Preinstalled** Chrome OS™

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### PROCESSOR

AMD A4-9120C APU with Radeon™ R4 Graphics (1.6 GHz base clock, up to 2.4 GHz max boost clock, 1 MB cache, 2 cores)<sup>1,2,3</sup>

AMD A6-9220C APU with Radeon™ R5 Graphics (1.8 GHz base clock, up to 2.7 GHz max boost clock, 1 MB cache, 2 cores)<sup>1,2,3</sup>

#### Processor Family

AMD® A-Series processors

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. AMD Max Boost Clock performance varies depending on hardware, software and overall system configuration.
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### CHIPSET

Chipset is integrated with processor

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### GRAPHICS

#### Integrated

AMD Radeon™ R4 Graphics

AMD Radeon™ R5 Graphics

#### Supports

Support HD Decode, DX12, and HDMI 1.4 b<sup>4</sup>

4. HD content required to view HD images.
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Options and Accessories (sold separately and availability may vary by country)

### DISPLAY

#### Non-Touch

35.56 cm (14") diagonal FHD IPS anti-glare WLED-backlit, 220 cd/m<sup>2</sup>, 100% sRGB (1920 x 1080)<sup>5,6,7</sup>

35.56 cm (14") diagonal HD anti-glare WLED-backlit, 220 cd/m<sup>2</sup>, 100% sRGB (1366 x 768)<sup>5,6,7</sup>

#### Touch

35.56 cm (14") diagonal FHD IPS BrightView WLED-backlit touch screen, 220 cd/m<sup>2</sup>, 100% sRGB (1920 x 1080)<sup>5,6,7,8</sup>

35.56 cm (14") diagonal HD SVA BrightView WLED-backlit touch screen, 220 cd/m<sup>2</sup>, 100% sRGB (1366 x 768)<sup>5,6,7,8</sup>

5. HD content required to view HD images.

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

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

8. Touchscreen is an optional feature that must be configured at purchase.

### STORAGE AND DRIVES

#### Primary Storage

16 GB eMMC 5.0<sup>9</sup>

32 GB eMMC 5.0<sup>9</sup>

64 GB eMMC 5.0<sup>9</sup>

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

### MEMORY

#### Maximum Memory

4 GB DDR4-1866 SDRAM

#### Memory

4 GB DDR4-1866 SDRAM

#### Memory Slots

On-board system memory

Supports Single Channel Memory

### NETWORKING/COMMUNICATIONS

#### WLAN

Qualcomm® Wireless-AC 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™<sup>10</sup>  
MU-MIMO supported

#### Chromecast

Chromecast Support<sup>11</sup>

10. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited.

11. Chromecast must be purchased separately.

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

### AUDIO/MULTIMEDIA

#### Audio

HD Audio  
Dual Speakers  
Integrated Microphones

#### Camera

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

4. HD content required to view HD images.

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### KEYBOARD / POINTING DEVICES

#### Keyboard

Full Size Textured island-style Keyboard, spill & pick resistant  
Full Size Textured island-style Keyboard, spill & pick resistant, Backlit<sup>12</sup>

#### Pointing Device

Touchpad with multi-touch gestures enabled. Taps enabled as default

12. Backlit keyboard is an optional feature.

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### SOFTWARE AND SECURITY

#### Preinstalled Software

Google One<sup>13</sup>  
HP Classroom Manager<sup>14</sup>  
Management Console<sup>15</sup>

#### Security Management

H1 Security IC  
Nano Security lock slot<sup>16</sup>

13. Google Drive 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 OS™ 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>

14. HP Classroom Manager is sold separately. Control and device locking from the teacher's desktop requires purchase of HP Classroom Manager.

15. Management Console is sold separately.

16. Lock must be purchased separately.

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

### POWER

#### Power Supply<sup>17</sup>

HP Smart 45 W Type-C™ AC Power Adapter<sup>17</sup>

#### Primary Battery

HP Long Life 2-cell, 47.36 Wh Li-ion Polymer<sup>18,20</sup>  
HP Fast Charge Technology (90% in 90 minutes)<sup>21</sup>

#### Power Cord

3-wire plug - 1m<sup>17</sup>

#### Battery life

Up to 9 hours (Non-Touch Display)<sup>19</sup>

#### Battery Weight

0.42 lb  
0.19 kg

17. Availability may vary by country.

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

19. 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.

20. 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.

21. Recharges your battery up to 90% within 90 minutes when the system is off (using “shut down” command). Recommended for use with the HP adapter provided with the notebook, not recommended with a smaller capacity battery charger. After charging has reached 90% capacity, charging speed will return to normal speed. Charging time may vary +/-10% due to System tolerance.

### WEIGHTS & DIMENSIONS

#### Product Weight

Starting at 3.48 lbs<sup>22</sup>  
Starting at 1.57 kg<sup>22</sup>

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

13.26 x 8.93 x 0.72 in  
33.7 x 22.6 x 1.83 cm

22. Weight will vary by configuration.

### PORTS/SLOTS

#### Ports

2 USB 3.1 Type-C™ Gen 1 (Power delivery, DisplayPort™)  
2 USB 2.0  
1 Stereo Headphone/Microphone combo jack

#### Expansion Slots

1 Multi-format digital media reader  
Supports SD, SDHC, SDXC

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

### SERVICE AND SUPPORT

HP Services offers 1 year and 90 day limited warranty options depending on country. Batteries have a default 1 year limited warranty except for Long Life batteries which will have same 1 year or 3 year limited warranty as the platform. 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. Service levels and response times for HP Care Packs may vary depending on your geographic location. 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>23</sup>

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.

### ENVIRONMENTAL & INDUSTRY

<b>Eco-Label Certifications &amp; declarations</b>	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: <ul style="list-style-type: none"> <li>• IT ECO declaration</li> <li>• US ENERGY STAR®</li> <li>• EPEAT® Silver registered in the United States. See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status in your country</li> </ul>		
<b>System Configuration</b>	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook”.		
<b>Energy Consumption (in accordance with US ENERGY STAR® test method)</b>	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 60Hz</b>
Normal Operation (Short idle)	4.33	4.56	4.5
Normal Operation (Long idle)	2.02	2.07	2.01
Sleep	0.51	0.56	0.51
Off	0.39	0.44	0.39
	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		



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

	for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
<b>Heat Dissipation*</b>	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 60Hz</b>
Normal Operation (Short idle)	14 BTU/hr	15 BTU/hr	15 BTU/hr
Normal Operation (Long idle)	7 BTU/hr	7 BTU/hr	6 BTU/hr
Sleep	2 BTU/hr	2 BTU/hr	2 BTU/hr
Off	1 BTU/hr	1 BTU/hr	1 BTU/hr
	Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.		
<b>Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)</b>	Sound Power (L <sub>WAd</sub> , bels)		Sound Pressure (L <sub>pAm</sub> , decibels)
Typically Configured – Idle	2.7		25
Fixed Disk – Random writes	2.8		25
Longevity and Upgrading	<p>This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include:</p> <ul style="list-style-type: none"> <li>• 3 USB ports</li> <li>• 1 PC card slot (type I/II)</li> <li>• 1 ExpressCard/54 slot</li> <li>• 1 IEEE 1394 Port</li> <li>• 2 SODIMM memory slots</li> <li>• Optional expansion base docking station</li> <li>• 1 multi-bay II storage port</li> <li>• Interchangeable HDD</li> </ul> <p>Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.</p>		
Batteries	<p>This battery(s) in this product comply with EU Directive 2006/66/EC</p> <p>Batteries used in the product do not contain: Mercury greater the 1ppm by weight Cadmium greater than 20ppm by weight</p> <p>Battery size: CR2032 (coin cell) Battery type: Lithium</p>		

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

<b>Additional Information</b>	<ul style="list-style-type: none"> <li>• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC.</li> <li>• This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC.</li> <li>• This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).</li> <li>• This product is in compliance with the IEEE 1680 (EPEAT) standard at the &lt;gold&gt; level, see <a href="http://www.epeat.net">www.epeat.net</a></li> <li>• Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.</li> <li>• This product contains 2.6% post-consumer recycled plastic (by wt.)</li> <li>• This product is 96.3% recycle-able when properly disposed of at end of life.</li> </ul>		
<b>Packaging Materials</b>	<b>External:</b>	PAPER/Paperboard	230 g
	<b>Internal:</b>	PAPER/Corrugated	51 g
		PLASTIC/Polyethylene Expanded - EPE	9 g
		PLASTIC/Polyethylene low density - LDPE	49 g
<b>Material Usage</b>	<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 <a href="http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf">http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf</a>):</p> <ul style="list-style-type: none"> <li>• Asbestos</li> <li>• Certain Azo Colorants</li> <li>• Certain Brominated Flame Retardants – may not be used as flame retardants in plastics</li> <li>• Cadmium</li> <li>• Chlorinated Hydrocarbons</li> <li>• Chlorinated Paraffins</li> <li>• Formaldehyde</li> <li>• Halogenated Diphenyl Methanes</li> <li>• Lead carbonates and sulfates</li> <li>• Lead and Lead compounds</li> <li>• Mercuric Oxide Batteries</li> <li>• Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user.</li> <li>• Ozone Depleting Substances</li> <li>• Polybrominated Biphenyls (PBBs)</li> <li>• Polybrominated Biphenyl Ethers (PBBEs)</li> <li>• Polybrominated Biphenyl Oxides (PBBOs)</li> <li>• Polychlorinated Biphenyl (PCB)</li> <li>• Polychlorinated Terphenyls (PCT)</li> <li>• Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.</li> <li>• Radioactive Substances</li> <li>• Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)</li> </ul>		

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

<b>Packaging Usage</b>	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p> <ul style="list-style-type: none"> <li>• Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.</li> <li>• Eliminate the use of ozone-depleting substances (ODS) in packaging materials.</li> <li>• Design packaging materials for ease of disassembly.</li> <li>• Maximize the use of post-consumer recycled content materials in packaging materials.</li> <li>• Use readily recyclable packaging materials such as paper and corrugated materials.</li> <li>• Reduce size and weight of packages to improve transportation fuel efficiency.</li> <li>• Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.</li> </ul>
<b>End-of-life Management and Recycling</b>	<p>HP Inc. offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: <a href="http://www.hp.com/go/reuse-recycle">http://www.hp.com/go/reuse-recycle</a> 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: <a href="http://www.hp.com/go/recyclers">http://www.hp.com/go/recyclers</a>. 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>
<b>HP Inc. Corporate Environmental Information</b>	<p>For more information about HP's commitment to the environment:</p> <p>Global Citizenship Report</p> <p><a href="http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html">http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html</a></p> <p>Eco-label certifications</p> <p><a href="http://www8.hp.com/us/en/hp-information/environment/ecolabels.html">http://www8.hp.com/us/en/hp-information/environment/ecolabels.html</a></p> <p>ISO 14001 certificates:</p> <p><a href="http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/PC_GBU_Product_Design_ISO_14K_Certificate.pdf">http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/PC_GBU_Product_Design_ISO_14K_Certificate.pdf</a></p> <p>and</p> <p><a href="http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf">http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</a></p>

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

### SYSTEM UNIT

<b>Stand-Alone Power Requirements (AC Power)</b>	USB-C 45W adapter
	<b>Nominal Operating Voltage</b> 5V/9V/12V/15V
	<b>Average Operating Power</b> 45W
	<b>Integrated Graphics</b> Yes
	<b>Max Operating Power</b> UMA < 45 W
<b>Temperature</b>	<b>Operating</b> 32° to 95° F (0° to 35° C)
	<b>Non-operating</b> 41° to 95° F (5° to 35° C)
<b>Relative Humidity</b>	<b>Operating</b> 10% to 90%
	<b>Non-operating</b> 5% to 95%
<b>Shock</b>	<b>Operating</b> 40 G, 2 ms, half-sine
	<b>Non-operating</b> 240 G, 2 ms, half-sine
<b>Random Vibration</b>	<b>Operating</b> 1.043 grms
	<b>Non-operating</b> 3.5 grms
<b>Altitude (unpressurized)</b>	<b>Operating</b> -50 to 10,000 ft (-15.24 to 3,048 m)
	<b>Non-operating</b> -50 to 40,000 ft (-15.24 to 12,192 m)
<b>Planned Industry Standard Certifications</b>	<b>UL</b> Yes
	<b>FCC Compliance</b> Yes
	<b>ENERGY STAR®</b> Yes <sup>24</sup>
	<b>EPEAT</b> Yes <sup>25</sup>
	<b>ICES</b> Yes
	<b>Australia /</b> Yes
	<b>NZ A-Tick Compliance</b> Yes
	<b>CCC</b> Yes
	<b>KC</b> Yes
	<b>BSMI</b> Yes
	<b>CE Marking Compliance</b> Yes
	<b>GOST</b> Yes
	<b>Saudi Arabian Compliance (ICCP)</b> Yes
	<b>SABS</b> Yes

24. Configurations of the HP Chromebook 14A G5 that are ENERGY STAR® qualified are identified as HP Chromebook 14A G5 ENERGY STAR on HP websites and on <http://www.energystar.gov>.

25. EPEAT® registered where applicable. EPEAT registration varies by country. See <http://www.epeat.net> for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at <http://www.hp.com/go/options>.

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

### 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 HD WLED AntiGlare (1366 x 768) slim, SVA</b>	<b>Outline Dimensions (W x H x D)</b>	320.9 x 205.6 (max) x 3.0 (max.) mm
	<b>Active Area</b>	309.4 x 173.95 mm
	<b>Weight</b>	280g max.
	<b>Diagonal Size</b>	14.0"
	<b>Surface Treatment</b>	AG
	<b>Touch enabled</b>	No
	<b>Contrast Ratio</b>	300:1 (typ. - AG)
	<b>Refresh Rate</b>	60 Hz
	<b>Brightness</b>	220 nits typ. (Panel Only)
	<b>Format</b>	RGB
	<b>Configuration</b>	1366 x 768
	<b>Interface</b>	eDP 1.2
	<b>LCD Mode</b>	TN
	<b>PPI</b>	112
<b>Viewing Angle</b>	SVA 40/40/15/30	

<b>14.0" diagonal HD WLED BrightView (1366 x 768) SVA slim TOP, Touch</b>	<b>Outline Dimensions (W x H x D)</b>	320.9 x 205.6 (max) x 3.2 (max.) mm
	<b>Active Area</b>	309.4 x 173.95 mm
	<b>Weight</b>	275g max.
	<b>Diagonal Size</b>	14.0"
	<b>Surface Treatment</b>	BV
	<b>Touch enabled</b>	Yes
	<b>Contrast Ratio</b>	500:1 (typ. - BV)
	<b>Refresh Rate</b>	60 Hz
	<b>Brightness</b>	200 nits typ. (Panel Only)0
	<b>Format</b>	RGB
	<b>Configuration</b>	1366 x 768
	<b>Interface</b>	eDP 1.2
	<b>LCD Mode</b>	TN
	<b>PPI</b>	112
<b>Viewing Angle</b>	SVA 40/40/15/30	

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

<b>14.0" diagonal FHD WLED AntiGlare (1920 x 1080) slim (3.0mm) UWVA, eDP</b>	<b>Outline Dimensions</b> (W x H x D)	320.9 x 205.6 (max) x 3.0 (max.) mm
	<b>Active Area</b>	309.31 x 173.99 mm
	<b>Weight</b>	290 g max.
	<b>Diagonal Size</b>	14.0"
	<b>Surface Treatment</b>	AG
	<b>Touch enabled</b>	No
	<b>Contrast Ratio</b>	600:1 (typ. - AG)
	<b>Refresh Rate</b>	60Hz
	<b>Brightness</b>	220 nits typ. (Panel Only)
	<b>Format</b>	RGB
	<b>Configuration</b>	1920 x 1080
	<b>Interface</b>	eDP 1.2
	<b>LCD Mode</b>	IPS/FFS/AHVA
	<b>PPI</b>	157
<b>Viewing Angle</b>	UWVA 85/85/85/85	

<b>14.0" diagonal FHD WLED BrightView (1920x1080) slim (3.0mm) UWVA, TOP Touch eDP</b>	<b>Outline Dimensions</b> (W x H x D)	320.9 x 205.6 (max) x 3.2 (max.) mm
	<b>Active Area</b>	309.31 x 173.99 mm
	<b>Weight</b>	290g max.
	<b>Diagonal Size</b>	14.0"
	<b>Surface Treatment</b>	BV
	<b>Touch enabled</b>	Yes
	<b>Contrast Ratio</b>	800:1 (typ. - BV)
	<b>Refresh Rate</b>	60Hz
	<b>Brightness</b>	220 nits typ. (Panel Only)
	<b>Format</b>	RGB
	<b>Configuration</b>	1920 x 1080
	<b>Interface</b>	eDP 1.2
	<b>LCD Mode</b>	IPS/FFS/AHVA
	<b>PPI</b>	157
<b>Viewing Angle</b>	UWVA 85/85/85/85	

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

### STORAGE AND DRIVES

<b>eMMC 5.0</b>	<b>Weight</b>	0.2 g
	<b>Height</b>	1.4 mm
	<b>Width</b>	11.5 x 13 mm
	<b>Interface</b>	MMC protocol
	<b>Transfer Rate</b>	HS400
	<b>Logical Blocks</b>	16 GB (15,758,000,128 Bytes) / 32 GB (31,268,536,320 Bytes) / 64 GB (62,537,072,640 Bytes)
	<b>Operating Temperature</b>	0 to 70 degree

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

### NETWORKING/COMMUNICATIONS

<b>802.11a/b/g/n/ac (2x2) Wifi® and Bluetooth® 4.2 Combo</b>	<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac
	<b>Interoperability</b>	QCA6174A passed Google AVL tests for Wi-Fi/BT
	<b>Frequency Band</b>	IEEE 802.11a/b/g/n/ac (2.4GHz and 5GHz)
	<b>Data Rates</b>	802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: MCS 0 ~ MCS 15, (20/40/80 MHz) 802.11ac: MCS 0 ~ MCS 9, (20/40/80 MHz), 1x1/2x2
	<b>Modulation</b>	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT (20/40) mode
	<b>Security<sup>3</sup></b>	<ul style="list-style-type: none"> <li>• IEEE and WiFi® 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>• IEEE 802.11i</li> </ul>
	<b>Network Architecture Models</b>	Infrastructure (Access Point Required)
	<b>Roaming</b>	IEEE 802.11 compliant roaming between access points
	<b>Output Power<sup>2</sup></b>	<ul style="list-style-type: none"> <li>• 802.11b : +17dBm minimum</li> <li>• 802.11g : +14dBm minimum</li> <li>• 802.11a : +9dBm minimum</li> <li>• 802.11n HT20(2.4GHz) : +14dBm minimum</li> <li>• 802.11n HT40(2.4GHz) : +14dBm minimum</li> <li>• 802.11n HT20(5GHz) : +7dBm minimum</li> <li>• 802.11n HT40(5GHz) : +7dBm minimum</li> <li>• 802.11ac HT20(5GHz) : +6dBm minimum</li> <li>• 802.11ac HT40(5GHz) : +5dBm minimum</li> <li>• 802.11ac HT80(5GHz) : +5dBm minimum</li> </ul>
	<b>Power Consumption</b>	Transmit: 2.0 W (max) Receive: 1.6 W (max) Idle mode: 60 mW
	<b>Power Management</b>	ACPI and PCI Express compliant power management
	<b>Receiver Sensitivity<sup>3</sup></b>	High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded 2.4 GHz antennas are provided to the card to support WLAN and Bluetooth communications (Support Dual antenna or Single antenna, depend on platform requirement)



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

<b>Antenna type</b>	802.11b, 11Mbps : -84dBm maximum 802.11g, 54Mbps : -70dBm maximum 802.11a, 54Mbps : -70dBm maximum 802.11n 2.4g,HT20 : -69dBm maximum 802.11n 2.4g,HT40 : -67dBm maximum 802.11n 5g, HT20 : -68dBm maximum 802.11n 5g, HT40 : -66dBm maximum 802.11n 5g, HT20 : -63dBm maximum 802.11n 5g, HT40 : -59dBm maximum 802.11n 5g, HT80 : -56dBm maximum
<b>Form Factor</b>	PCI-Express M.2 MiniCard
<b>Dimensions</b>	Type 2230 : 2.3 x 22.0 x 30.0 mm
<b>Weight</b>	Type 2230 : 2.3g
<b>Operating Voltage</b>	3.3v +/- 5%
<b>Temperature</b>	Operating: 32° to 149° F (0° to 65° C) Non-operating: -40° to 185° F (-40° to 85° 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)

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

<b>Bluetooth Specification</b>	4.0/4.1/4.2 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, 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 + 4 dBm for BR and EDR.

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

### POWER

<b>45 W USB-C AC adapter</b>	<b>Dimensions (H x W x D)</b>	94.0 x 40.0 x 26.5 mm	
	<b>Weight</b>	192.5g +/-10%	
	<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: 87.8% 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>	<b>Output power</b>	5V/15W; 9V/27W; 12V/36W; 15V/45W
		<b>DC output</b>	5V/9V/12V/15V
		<b>Hold-up time</b>	5ms at 115 Vac input
		<b>Output current limit</b>	<5.0A
	<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>HP 2-cell Long Life Li-Ion (47 Whr)</b>	<b>Dimensions (H x W x L)</b>	3.89 mm x 240.8 mm x 76.4 mm (0.153 x 9.48 x 3.01 inch)	
	<b>Weight</b>	0.19 kg (0.42 lb)	
	<b>Cells/Type</b>	2cell Lithium-Ion Polymer cell / 4473A9	
	<b>Voltage</b>	7.7 V	
	<b>Amp-hour capacity</b>	6150mAh	
	<b>Watt-hour capacity</b>	47.3WH	
	<b>Temperature</b>	5°C ~ 40°C	
	<b>Operating (Charging)</b>	0°C ~ 45°C	
	<b>Operating (Discharging)</b>	-10°C ~ 60°C	

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

Category	Description	Part Number
<b>Cases</b>	HP Business Slim Top Load	F3W15AA
	HP Essential Top Load Case	H2W17AA
	HP Essential Backpack	H1D24AA
<b>Docking</b>	HP USB-C Mini Dock	1PM64AA
<b>Input/output</b>	HP 3-Button Laser Mouse	H4B81AA
	HP Ultra Mobile Wireless Mouse	H6F25AA
	HP USB Optical Travel mouse	G1K28AA
	HP Slim Bluetooth Mouse	F3J92AA
	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 to VGA Adapter	N9K76AA	
<b>Power</b>	HP 45W USB-C G2 Power Adapter	1MZ01AA#ABA
	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
<b>Displays</b>	HP EliteDisplay S240n 23.8-inch Monitor	W9A88AA
	HP EliteDisplay S270n 27-inch Monitor	2PD37AA
	HP EliteDisplay E273q 27-inch Monitor	1FH52AA
	HP EliteDisplay E273m 27-inch Monitor	1FH51AA

### Summary of Changes

<b>Date of change:</b>	<b>Version History:</b>		<b>Description of change:</b>
April 23, 2019	From v1 to v2	Added	Networking Section: Chromecast
May 6, 2019	From v2 to v3	Added	Environmental Section

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