

### Overview

#### HP Stream 11 Pro G5 Notebook PC



- 1. Web camera LED
- 2. Web Camera
- 3. Microphone
- 4. Clickpad with multi-touch gestures support
- 5. Power LED

#### Front Left

- 6. Headphone / Microphone Combo Jack
- 7. USB 2.0 port (Cable not included)
- 8. Security lock mini slot (Lock sold separately)
- 9. Power Button

### Overview



#### Front Right

- |    |                      |    |                                |
|----|----------------------|----|--------------------------------|
| 1. | Power connector      | 3. | USB 3.1 Gen1                   |
| 2. | Micro SD card reader | 4. | HDMI port (Cable not included) |

### Overview

#### At A Glance

- Preinstall with Windows 10 or Windows 10 S versions
- Choice of Intel® Celeron® and Pentium® processors
- Intel® UHD Graphics 600 or 605
- Choice of eMMC up to 128 GB
- Intel® Dual Band Wireless-AC 9560 802.11 AC (2x2) WiFi (MU-MIMO/160 Mhz) and Bluetooth® 5.0 Combo Adapter
- Display choices include 11.6" diagonal HD touch or non-touch
- Weight starting at 1.26 kg (2.78 lbs)
- Security features including HW TPM 2.0 and security lock mini slot (Lock not included.)
- Full size textured island-style keyboard
- Touchpad with gestures support
- HP webcam with single digital microphone and VGA camera
- One USB 3.1 Gen1 port and one USB 2.0 port
- Designed to pass 70 cm drop on concrete test, IPX1/IP41, 9 MIL-STD 810G certification<sup>1</sup>

1. MIL-STD-810G testing is pending and 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.**

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### Features

#### PRODUCT NAME

HP Stream 11 Pro G5

#### OPERATING SYSTEM

##### Preinstalled

Windows 10 Pro 64<sup>1</sup>  
Windows 10 Pro 64 (National Academic only)<sup>2</sup>  
Windows 10 Home 64 – HP recommends Windows 10 Pro<sup>1</sup>  
Windows 10 Pro in S mode 64<sup>3</sup>  
Windows 10 Pro in S mode 64 (National Academic only)<sup>2,3</sup>

1. Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com/>.
2. Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see <https://aka.ms/ProEducation> for Windows 10 Pro Education feature information.
3. Windows 10 Pro in S mode 64 works exclusively with apps from the Windows store. Some accessories and apps compatible with Windows 10 may not work, and performance may vary. Certain default settings, features, and apps cannot be changed. Easily switch to Windows 10 Pro configuration (fee applies) Learn more at [Microsoft.com/Windows 10S](https://Microsoft.com/Windows10S).

#### PROCESSORS

Intel® Celeron® N4000 with Intel® UHD Graphics 600 (1.1 GHz base frequency, up to 2.6 GHz burst frequency, 4 MB cache, 2 cores)<sup>4,5,6</sup>

Intel® Celeron® N4020 with Intel® UHD Graphics 600 (1.1 GHz base frequency, up to 2.8 GHz burst frequency, 4 MB cache, 2 cores)<sup>4,5,6</sup>

Intel® Celeron® N4100 with Intel® UHD Graphics 600 (1.1 GHz base frequency, up to 2.4 GHz burst frequency, 4 MB cache, 4 cores)<sup>4,5,6</sup>

Intel® Celeron® N4120 with Intel® UHD Graphics 600 (1.1 GHz base frequency, up to 2.6 GHz burst frequency, 4 MB cache, 4 cores)<sup>4,5,6</sup>

Intel® Pentium® Silver N5000 with Intel® UHD Graphics 605 (1.1 GHz base frequency, up to 2.7 GHz burst frequency, 4 MB cache, 4 cores)<sup>4,5,6</sup>

##### Processor Family

Intel® Celeron® processor (N4000 is on Windows 10 only)<sup>6</sup>

Intel® Celeron® processor (N4020 is on Windows 10 only)<sup>6</sup>

Intel® Celeron® processor (N4100 is on Windows 10 only)<sup>6</sup>

Intel® Celeron® processor (N4120 is on Windows 10 only)<sup>6</sup>

Intel® Pentium® silver processor (N5000 is on Windows 10 only)<sup>6</sup>



### Features

4. 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.
  5. Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
  6. In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on <http://www.support.hp.com>.
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### Features

#### CHIPSET

Chipset is integrated with processor

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#### GRAPHICS

##### Integrated

Intel® UHD Graphics 600<sup>7</sup>

Intel® UHD Graphics 605<sup>7</sup>

##### Supports

Support HD Decode, DX12, and HDMI

7. HD content required to view HD images.
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#### DISPLAY

##### Internal

##### Non-Touch

29.46 cm (11.6") diagonal HD SVA eDP anti-glare WLED-backlit slim, 220 cd/m<sup>2</sup>, 50% sRGB (1366 x 768)<sup>7,8,9</sup>

##### Touch

29.46 cm (11.6") diagonal HD IPS eDP BrightView WLED-backlit slim TOP touch screen, 220 cd/m<sup>2</sup>, 50% sRGB (1366 x 768)<sup>7,8,9</sup>

##### HDMI v1.4

Supports up to 1920x1080 @ 60Hz

Supports dual display through the dock

Supports 3 independent displays if used with optional HP UltraSlim Docking Station.

7. HD content required to view HD images.
  8. Resolutions are dependent upon monitor capability, and resolution and color depth settings.
  9. Sold separately or as an optional feature.
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#### STORAGE AND DRIVES

##### Primary Storage

64 GB eMMC<sup>10</sup>

128 GB eMMC<sup>10</sup>

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



### Features

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## MEMORY

### Maximum Memory

4 GB DDR4-2400 onboard memory (DDR4-2666 downgrade to DDR4-2400)<sup>11</sup>

### Memory

4 GB DDR4-2400 onboard memory<sup>11</sup>

### Memory Slots

Onboard memory

Supports Dual Channel Memory

11. Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.

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## NETWORKING/COMMUNICATIONS

### WLAN

Intel® Dual Band Wireless-AC 9560 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 5 Combo, non-vPro™<sup>12</sup>

### Miracast

Compatible with Miracast-certified devices (models with Windows 10)<sup>13</sup>

12. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. The specifications for the 802.11ac 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 802.11ac WLAN devices.
13. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.

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## AUDIO/MULTIMEDIA

### Audio

Single digital microphone



### Features

#### Webcam

VGA camera, indicator LED, USB 2.0 (640 x 480 by 24 frames per second)<sup>7,9</sup>

7. HD content required to view HD images

9. Sold separately or as an optional feature.

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## KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

#### Keyboard

Full-size textured island-style keyboard (No numeric Keypad)

#### Pointing Device

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

#### Function Keys

ESC: system information

F1 - Display Switching

F2 - Blank

F3 - Brightness Down

F4 - Brightness Up

F5 - Speaker Mute

F6 - Volume Down

F7 - Volume Up

F8 - Mic Mute

F9 - Blank

F10 - Blank

F11 - Wi-fi Toggle

F12 - Print Screen

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## SOFTWARE AND SECURITY

#### Preinstalled Software

HP Audio Switch

HP Connection Optimizer

HP JumpStart

HP PC Hardware Diagnostics Windows

HP SSRM

HP Support Assistant<sup>17</sup>

Buy Office (sold separately)

HP School Pack 3.5





### Features

HP Prime Graphing Calculator Pro  
HP Simple Sign-On  
HP Classroom Manager  
Kortext

#### Manageability Features

HP Driver Packs<sup>19</sup>

#### Security Management

TPM 2.0<sup>18</sup>  
Mini security lock slot (Lock sold separately.)

17. HP Support Assistant requires Windows and Internet access.
  18. HP ePrint Driver requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see <http://www.hp.com/go/eprintcenter>). Print times and connection speeds may vary.
  19. HP Driver Packs not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>.
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### POWER

#### Power Supply

HP Smart 45 W External AC power adapter<sup>20</sup>

#### Primary Battery

2-cell, 37.69 Wh Li-ion polymer<sup>21</sup>

#### Power Cord

1M length power cord

#### Battery life

Up to 12 hours<sup>22</sup>

20. Availability may vary by country.
  21. Battery is internal and not replaceable by customer. Serviceable by warranty.
  22. Windows 10 MM14 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See [www.bapco.com](http://www.bapco.com) for additional details
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### WEIGHTS & DIMENSIONS

#### Weight

Starting at 2.82 lb (touch); Starting at 2.78 lb (non-touch)<sup>23</sup>  
Starting at 1.28 kg (touch); Starting at 1.26 kg (non-touch)<sup>23</sup>



### Features

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

11.81 x 8.19 x 0.71 in  
30 x 20.81 x 1.8 cm

23. Availability may vary by country.

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### PORTS/SLOTS

**Ports**

1 USB 3.1 Gen 1  
1 USB 2.0  
1 HDMI 1.4<sup>24</sup>  
1 AC power  
1 Headphone/microphone combo jack

**Expansion Slots**

1 M.2 slot for WLAN

24. HDMI cable sold separately.

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### SERVICE AND SUPPORT

HP Services offers 1-year limited warranties and 90-day software limited warranty options depending on country. Batteries have a default one-year limited warranty. Refer to <http://www.hp.com/support/batterywarranty/> for additional battery information. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: <http://www.hp.com/go/cpc>.<sup>25</sup>

25. 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 [www.hp.com/go/cpc](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

##### Stand-Alone Power Requirements

###### (AC Power)

Nominal Operating Voltage	19V
Average Operating Power	2 cell polymer battery - 37.69Whr
Integrated graphics	< 4.0w (PLT test)
Max Operating Power	UMA < 45W

##### Temperature

Operating	0 to 35 C
Non-operating	5 to 35 C

##### Relative Humidity

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

##### Shock

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

##### Random Vibration

Operating	0.015 g <sup>2</sup> /Hz, 10-40 Hz, nominal 1.043 grms
Non-operating	0.025 g <sup>2</sup> /Hz, 10-500 Hz, nominal 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
FCC Compliance	Yes
ENERGY STAR®	Select models <sup>26</sup>
EPEAT® 2019	Yes, Silver in U.S. <sup>27</sup>
ICES	Yes
Australia /	Yes
NZ A-Tick Compliance	Yes
Japan VCCI Compliance	Yes
CE Marking Compliance	Yes

26. Configurations of the HP Stream 11 Pro G5 Notebook PC is ENERGY STAR® qualified are identified as HP Stream 11 Pro G5 Notebook PC ENERGY STAR on HP websites and on <http://www.energystar.gov>.

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



### Technical Specifications

#### DISPLAYS

<b>Panel LCD 11.6 inch HD (1366x768) Anti-Glare WLED SVA 45percent cg 220nits eDP slim</b>	<b>Outline Dimensions (W x H x D)</b>	268 x 168 x 3.0 mm
	<b>Active Area</b>	256.125 x 144 mm
	<b>Weight</b>	210 g max
	<b>Diagonal Size</b>	11.6 (in)
	<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 typ
	<b>Refresh Rate</b>	60 Hz
	<b>Brightness</b>	220 nit typ
	<b>Pixel Resolution</b>	1366 x 768 (HD)
	<b>Format</b>	RGB
	<b>Backlight</b>	LED
	<b>Color Gamut Coverage</b>	45%
<b>Color Depth</b>	6 bit	
<b>Viewing Angle</b>	SVA 45/45/20/40	

<b>Panel LCD 11.6 inch HD (1366x768) BrightView WLED UWVA 50percent cg 220nits eDP 1.2 w/o PSR slim TOP</b>	<b>Outline Dimensions (W x H x D)</b>	278.5 X 168.52 X 3.2(PCBA) mm
	<b>Active Area</b>	256.125 x 144
	<b>Weight</b>	200g
	<b>Diagonal Size</b>	11.6
	<b>Thickness</b>	3.2mm (PCBA)
	<b>Interface</b>	eDP 1.2
	<b>Surface Treatment</b>	BV
	<b>Touch Enabled</b>	enable
	<b>Contrast Ratio</b>	800:1 typ
	<b>Refresh Rate</b>	60Hz
	<b>Brightness</b>	220nits
	<b>Pixel Resolution</b>	1366 x 768 (HD)
	<b>Format</b>	RGB
	<b>Backlight</b>	LED
	<b>Color Gamut Coverage</b>	50



### Technical Specifications

<b>Color Depth</b>	6bit
<b>Viewing Angle</b>	UWVA 85/85/85/85

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### Technical Specifications

#### STORAGE AND DRIVES

##### HARD DRIVES

<b>eMMC 5.0</b>	<b>Drive Weight</b>	0.2g
	<b>Rotation speed</b>	64GB/128GB
	<b>Cache Buffer</b>	1.4mm
	<b>Height</b>	11.5x13mm
	<b>Width</b>	MMC potocal
	<b>Transfer Rate</b>	Up to 250 MB/s
	<b>Seek Time</b>	Up to 70 MB/s
	<b>Logical Blocks</b>	64GB (62,537,072,640 Bytes)/128GB (125,074,145,280)
	<b>Operating Temperature</b>	0 to 70
	<b>Security Features</b>	HS400

#### NETWORKING/COMMUNICATIONS

<b>Intel Jefferson Peak2 9560 802.11a/b/g/n/ac (2x2) WiFi and Bluetooth® 5.0 Combo<sup>1</sup> non-vPro</b>	<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
	<b>Interoperability</b>	Wi-Fi certified
	<b>Data Rates</b>	<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> </ul>
	<b>Modulation</b>	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
	<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> </ul>



### Technical Specifications

- 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

<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) 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: +18.5dBm minimum</li> <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> </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/Modern Standby: 10mW</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>3</sup></b>	802.11b, 1Mbps: -93.5dBm maximum 802.11b, 11Mbps: -84dBm maximum 802.11a/g, 6Mbps: -86dBm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11n, MCS07: -67dBm maximum 802.11n, MCS15: -64dBm maximum



### Technical Specifications

	802.11ac, MCS0: -84dBm maximum 802.11ac, MCS9: -59dBm maximum
<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 with CNVi Interface
<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: 2.8g Type 126: 1.3g
<b>Operating Voltage</b>	3.3v +/- 9%
<b>Temperature</b>	<b>Operating</b> 14° to 158° F (–10° to 70° C) <b>Non-operating</b> –40° to 176° F (–40° to 80° C)
<b>Humidity</b>	<b>Operating</b> 10% to 90% (non-condensing) <b>Non-operating</b> 5% to 95% (non-condensing)
<b>Altitude</b>	<b>Operating</b> 0 to 10,000 ft (3,048 m) <b>Non-operating</b> 0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	LED Amber – Radio OFF; LED White – Radio ON
	<ol style="list-style-type: none"> <li>1. <a href="#">Check latest software/driver release for updates on supported security features.</a></li> <li>2. <a href="#">Maximum output power may vary by country according to local regulations.</a></li> <li>3. <a href="#">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).</a></li> </ol>

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

<b>Bluetooth Specification</b>	4.0/4.1/4.2/5.0 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>Data Rates and Throughput</b>	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)
<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.
<b>Power Consumption</b>	Peak (Tx): 330 mW Peak (Rx): 230 mW





### Technical Specifications

	Selective Suspend: 17 mW
<b>Bluetooth Software Supported Link Topology</b>	Microsoft Windows Bluetooth Software
<b>Power Management</b>	Microsoft Windows ACPI, and USB Bus Support
<b>Certifications</b>	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
<b>Power Management Certifications</b>	ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
<b>Bluetooth Profiles Supported</b>	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode LE Link Layer LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels Train Nudging & Interlaced Scan BT4.2 ESR08 Compliance LE Secure Connection- Basic/Full LE Privacy 1.2 –Link Layer Privacy LE Privacy 1.2 –Extended Scanner Filter Policies LE Data Packet Length Extension FAX Profile (FAX) Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP)



### Technical Specifications

#### POWER

<b>45 W AC adapter</b>	<b>Dimensions</b>	95.0x40.0x26.5mm	
	<b>Weight</b>	unit: 200g +/- 10g	
	<b>Input</b>	100 to 240 VAC	
		<b>Input Efficiency</b>	87.74 % at 115 Vac and 88.4 % at 230Vac
		<b>Input frequency range</b>	47 ~ 63 Hz
		<b>Input AC current</b>	Max. 1.4 A at 90 Vac
	<b>Output</b>	<b>Output power</b>	45W
		<b>DC output</b>	19.5V
		<b>Hold-up time</b>	5ms at 115 Vac input
		<b>Output current limit</b>	<8.0A
	<b>Connector</b>	4.5mm Barrel Type	
	<b>Environmental Design</b>	<b>Operating temperature</b>	32oF to 95oF (0oto 35oC)
		<b>Non-operating (storage) temperature</b>	-4oF to 185oF (-20oto 85oC)
		<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 (37 Whr)</b>	<b>Dimensions (H x W x L)</b>	4.26 x 207.1 x 137.1 mm (0.173 x 8.45 x 5.59 inch)	
	<b>Weight</b>	0.17 kg (0.37 lb)	
	<b>Cells/Type</b>	2cell Lithium-Ion Polymer cell / 3674C0	
	<b>Voltage</b>	7.6V	
	<b>Amp-hour capacity</b>	4.96Ah	
	<b>Watt-hour capacity</b>	37Wh	
	<b>Temperature</b>	<b>Operating (Charging)</b>	32° to 113° F (0° to 45° C)
		<b>Operating (Discharging)</b>	14° to 122° F (-10° to 60° C)



### Technical Specifications

#### ENVIRONMENTAL

**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 Silver registered in the United States. Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit <http://www.epeat.net> for more information.

**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
<b>Normal Operation (Short idle)</b>	3.91	4.04	3.85
<b>Normal Operation (Long idle)</b>	1.94	1.98	1.9
<b>Sleep</b>	0.61	0.67	0.61
<b>Off</b>	0.12	0.15	0.12

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
<b>Normal Operation (Short idle)</b>	13	14	13
<b>Normal Operation (Long idle)</b>	7	7	6
<b>Sleep</b>	2	2	2
<b>Off</b>	1	1	1



### Technical Specifications

\*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  
( $L_{WA}$ , bels)

Sound Pressure  
( $L_{pAm}$ , decibels)

#### Typically Configured – Idle

1.6

16

#### Fixed Disk – Random writes

1.6

16

#### 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:

- 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 than 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 1680.1 (EPEAT) standard at the Silver level, see <http://www.epeat.net>
- Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.
- This product contains 8.4 % post-consumer recycled plastic (by wt.)
- This product is 98.1 % recycle-able when properly disposed of at end of life.

#### Packaging Materials

External:

PAPER/Corrugated

265 g



### Technical Specifications

**Internal:** PLASTIC/Polyethylene low density - LDPE 39 g

#### 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
- 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.



### Technical Specifications

#### 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.

#### 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](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

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### Options and Accessories (sold separately)

Category	Description	Part number
<b>Cases</b>	HP Business Top Load	2SC66AA
	HP Business Slim Top Load	2SC65AA
	HP Business Backpack	2SC67AA
	HP Essential Top Load Case (up to 15.6")	H2W17AA#xxx
<b>Docking</b>	HP USB 3.0 Travel Dock	T0K30AA
	HP 3005pr USB3 Port Replicator	Y4H06AA
	HP USB-C Universal Dock	1MK33AA
	HP USB-C Dock w/4.5mm Adapter	2UF95AA
	HP USB-C Universal Dock Non-Flash (w/4.5mm Adapter)	3DV65AA
<b>Input / Output</b>	HP Slim USB Keyboard & Mouse	T6T83AA#xxx
	HP USB Optical Travel mouse	G1K28AA
	HP Essential USB Mouse	2TX37AA
	HP Comfort Grip Wireless Mouse	H2L63AA
	HP Slim Bluetooth Mouse	F3J92AA
	HP UC Speaker Phone	K7V16AA
	HP UC Wired Headset	K7V17AA
	HP Stereo USB Headset	T1A67AA
	HP Stereo 3.5mm Headset	T1A66AA
	HDMI to VGA Adapter	H4F02AA
	HP HDMI to DVI Adapter	F5A28AA
	HP USB to Gig RJ45 Adapter	N7P47AA#xxx
	HP 3-Button USB Laser Mouse	H4B81AA
	HP 45W Smart AC Adapter (4.5mm)	H6Y88AA#xxx
	HP Notebook Power Bank	N9F71AA
<b>Storage</b>	HP External USB Optical Drive	F2B56AA
	<b>UCC</b>	
<b>Displays</b>	HP Conferencing Keyboard	K8P74AA
	HP Speaker Phone	K7V16AA
	HP Wired Headset	K7V17AA
	HP ProDisplay P240VA 23.8-inch Monitor	N3H13AA
	HP EliteDisplay E243m 23.8-inch Collaboration Monitor	1FH48AA
HP EliteDisplay E230t 23-Inch Touch Monitor	W2Z50AA	
HP EliteDisplay S14 14-inch USB-C Portable Monitor	3HX46AA	



### Summary of Changes

<b>Date of change:</b>	<b>Version History:</b>		<b>Description of change:</b>
January 14, 2019	V1 to V2	Added	Environmental Tab
April 10, 2019	V2 to V3	Changed	SOFTWARE AND SECURITY section updated
June 12, 2019	V3 to V4	Updated	EPEAT
January 26, 2021	V4 to V5	Updated	Processor Section
April 27, 2021	V5 to V6	Updated	Options and Accessories section
	V6 to V7		

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