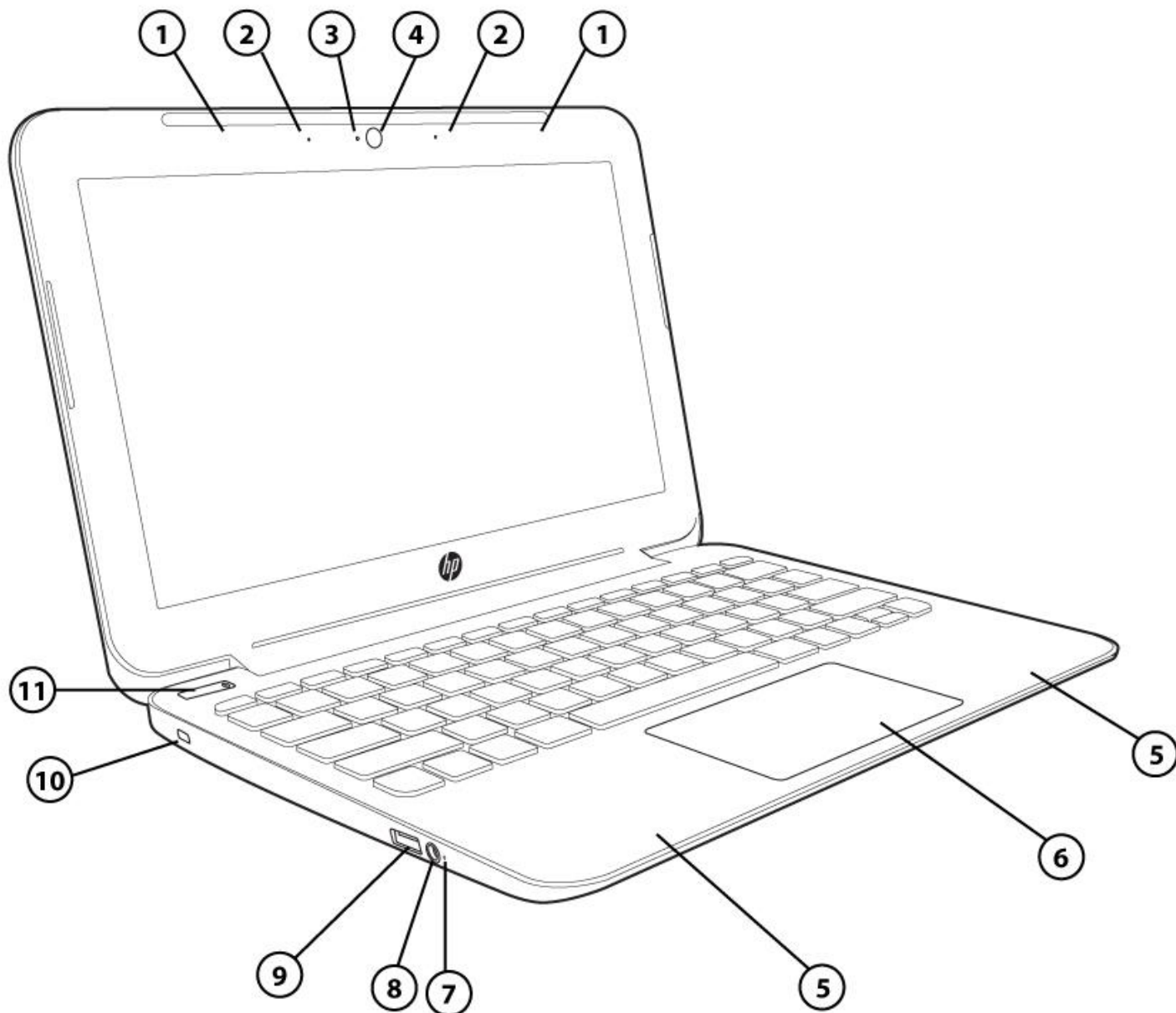


### Overview

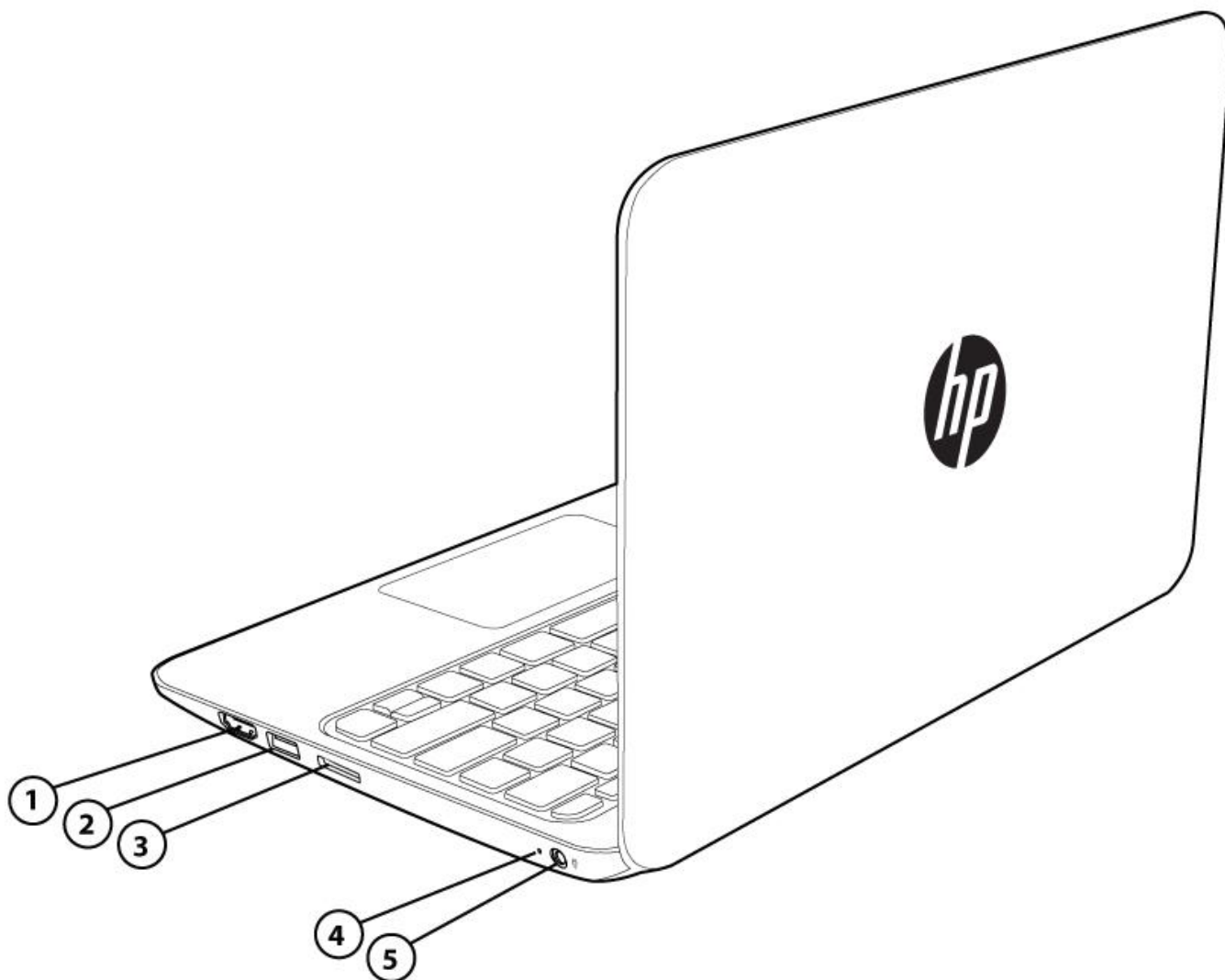
#### HP Stream 11 Pro G2 Notebook PC



- |   |   |
|---|---|
| 1. WLAN antennas                              | 7. Power LED                            |
| 2. Dual-microphone array                      | 8. Headphone / Microphone in Combo Jack |
| 3. Web Cam LED                                | 9. USB 2.0 Port                         |
| 4. Webcam                                     | 10. Security lock slot                  |
| 5. Internal Speakers (2)                      | 11. Power button with power LED         |
| 6. Clickpad with multi-touch gestures support |   |



### Overview



1. HDMI Port
2. USB 3.1 Port
3. Multi-Format Digital Media Card Reader

4. AC plug LED
5. AC adapter plug



### Overview

#### AT A GLANCE

- Pre-installed with Windows 10 editions
- Powered by Intel® Celeron® N3050
- Battery life up to 10 hours and 30 minutes
- 11.6" diagonal HD WLED Anti-glare display (1366x768)
- Storage options with eMMC Configurations up to 64 GB to run programs locally
- Memory options up to 4GB for enhanced memory management
- Intel® Dual Band Wireless - AC 7265 802.11 ac (2x2) WiFi + Bluetooth® Combo Wireless solution
- Weight starting at 2.43 lbs (1.10 kg) 1.8 cm thin
- HDMI port for connecting to high-resolution displays
- HP TrueVision HD camera with integrated microphone
- DTS Studio Sound™ optimized for high fidelity audio
- Enhanced security TPM 2.0 discrete chip

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



### Features

#### PRODUCT NAMES

HP Stream 11 Pro G2 Notebook PC

#### OPERATING SYSTEM

**Preinstalled** Windows 10 Pro 64<sup>1</sup>  
Windows 10 Education<sup>1</sup>

1. Not all features are available in all editions or versions of Windows of Windows 10. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows 10 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.microsoft.com>.

#### PROCESSORS

Intel® Celeron® N3050 (1.6 GHz, Turbo up to 2.16 GHz), 1600 MHz (2 MB L2, 2 cores)<sup>1</sup> SDP 4W, BGA

1. Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel® 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel's numbering is not a measurement of higher performance.

#### CHIPSET

Chipset is integrated with processor

#### GRAPHICS

**Integrated**  
Intel® HD<sup>1</sup> Graphics  
Support HD Decode, DX12, and HDMI

1. HD content required to view HD images.

#### DISPLAY

**Internal**  
11.6" diagonal HD<sup>1</sup> WLED Anti-glare(1366x768) display

**External**  
Up to 32-bit per pixel color depth



### Features

#### HDMI<sup>2</sup>

1.4v supports up to 1920 x 1080 @ 60 Hz

1. HD content required to view HD images.
2. HDMI cable sold separately.

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

### STORAGE AND DRIVES

#### Primary Storage

eMMC Configurations

32 GB

64 GB

**NOTE:** For hard 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.

### MEMORY

#### Standard

DDR3L-1600 (Transfer rates up to 1600 MT/s)

Single Channel Support (For 2 GB)

Dual Channel Support (For 4 GB)

On board (Customer non-accessible)

2 GB (256 MB x 16 x 4 pcs)

4 GB (256 MB x 16 x 8 pcs)<sup>1</sup>

1. Not available with 32 GB eMMC

#### Maximum

4 GB

#### Dual-channel

Maximized dual-channel performance requires on board memory design of the same size and speed in both memory slots.

**NOTE:** 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.

### NETWORKING/COMMUNICATIONS

#### Wireless<sup>1</sup>

Intel® Dual Band Wireless - AC 7265 802.11 ac (2x2) WiFi + Bluetooth® Combo

Supported bands: a/b/g/n/ac

#### WiDi

Integrated Intel® Wi-Di software is available and requires Intel® Wi-Di enabled receiver device.



### Features

#### Miracast

Compatible with Miracast-certified devices.

#### Internal Card Expansion

One M.2 slot for WLAN

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

### AUDIO/MULTIMEDIA

#### Audio

DTS Studio Sound™

Two integrated Stereo Speaker

Headphone / Microphone in Combo Jack

#### Webcam<sup>1</sup>

HP TrueVision HD<sup>2</sup> camera

Fixed (no tilt) + activity LED, 1 PC, USB 2.0, M-JPEG

1280 x 720 by 30 frames per second

Dual array Digital Microphones with appropriate software - beam forming, echo cancellation, noise suppression

HP Noise Cancellation support

1. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited.
2. HD content required to view HD images.

### KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

#### Keyboard

Full sized black textured

Island-style keyboard (No numeric Keypad)

#### Clickpad

Clickpad with image sensor

Multitouch gestures enabled

Default on: 2-finger scroll, pinch, rotate, 2-finger click, 3-finger flick

Support Modern Trackpad Gestures

Taps enabled as default

### SOFTWARE AND SECURITY

#### Software

Buy Office<sup>1</sup>

Optional HP Touch Point Manager<sup>1</sup>



### Features

1. Sold separately or as an optional feature.

#### Security

Lock Slot (Lock sold separately)  
TPM 2.0

### POWER

#### Power Supply

HP 45W AC Adapter  
HP 65W Smart EM AC Adapter (India and China only)

#### Primary Battery

HP 2-cell (37.69 Whr) Polymer battery  
Support battery fast charge

#### Battery life<sup>1</sup>

Up to 10 hours and 30 minutes  
(2 GB Memory/32 GB eMMC SKU)

Up to 9 hours and 30 minutes  
(4 GB Memory/64 GB eMMC SKU)

#### System Standby Time<sup>2</sup>

TBD

1. 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.
2. Standby life will vary depending on various factors including battery, Memory, CPU, EC and LAN chip. The maximum capacity of the battery will naturally decrease with time and usage.

### WEIGHTS & DIMENSIONS

#### Weight

Starting at 2.43 lbs (1.10 kg)

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

11.81 x 8.09 x .72 in  
30.0 x 20.57 x 1.84 cm

**NOTE:** Height varies depending upon where on the notebook the measurement is made.  
Weight varies by configuration and components.

### PORTS/SLOTS



### Features

#### Ports

USB 3.0 Ports – One (Right side)

USB 2.0 Ports – One (Left side)

#### USB 2.0/3.0 Allocation:

2 for the unit

1 for Camera

1 for WLAN Combo

1 AC Smart Pin adapter plug

1 Headphone / Microphone in Combo Jack

#### HP Multi-Format Digital Media Reader

Support micro SD/SDHC/SDXC up to UHS-104

Push-Push Insertion/Removal

**NOTE:** All cables are sold separately.

### SERVICE AND SUPPORT

HP 1 year limited warranty. 1 year limited warranty on primary battery. On-site service and optional extended service contracts are also available. Optional<sup>1</sup> HP Services<sup>2</sup> are extended service contracts which go beyond your standard limited warranties. For more details visit: <http://www.hp.com/go/lookuptool>.

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. 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. 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>.





### Technical Specifications

#### SYSTEM UNIT

<b>Stand-Alone Power Requirements</b> (AC Power)	<b>Nominal Operating Voltage</b>	19.5V
	<b>Average Operating Power</b>	
	<b>Max Operating Power</b>	< 45W
<b>Temperature</b>	<b>Operating</b>	41° to 95° F (5° to 35° C)
	<b>Non-operating</b>	-4° to 140° F (-20° to 60° C)
<b>Relative Humidity</b>	<b>Operating</b>	10% to 90%, non-condensing
	<b>Non-operating</b>	5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
<b>Shock</b>	<b>Operating</b>	40 G, 2 ms, half-sine
	<b>Non-operating</b>	200 G, 2 ms, half-sine
<b>Random Vibration</b>	<b>Operating</b>	0.75 grms
	<b>Non-operating</b>	1.50 grms
<b>Altitude</b> (unpressurized)	<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>CSA</b>	<u>No, need consult with Anna request or not?</u>
	<b>FCC Compliance</b>	Yes
	<b>ENERGY STAR®</b>	Yes
	<b>EPEAT</b>	Yes
	<b>ICES</b>	Yes
	<b>Australia / NZ A-Tick Compliance</b>	Yes
	<b>CCC</b>	Yes
	<b>Japan VCCI Compliance</b>	Yes
	<b>KC</b>	Yes
	<b>BSMI</b>	Yes
	<b>CE Marking Compliance</b>	Yes
	<b>BNCI or BELUS</b>	Yes, now call "CU" or "EAC"
	<b>CIT</b>	No idea
	<b>GOST</b>	Yes, now call "CU" or "EAC"
	<b>Saudi Arabian Compliance (ICCP)</b>	Yes
<b>SABS</b>	Yes	
<b>UKRSERTCOMPUTER</b>	Yes	



### Technical Specifications

#### DISPLAYS

**11.6" diagonal HD WLED Anti-Glare (1366x768) flat (3.6mm), SVA**

<b>Outline Dimensions (W x H x D)</b>	278.5 x 168.5 x 3.6mm max.	
<b>Active Area</b>	256.125 x 144.0mm typ.	
<b>Weight</b>	235g max.	
<b>Diagonal Size</b>	11.6 inch	
<b>Contrast Ratio</b>	300:1	
<b>Refresh Rate</b>	60Hz	
<b>Brightness</b>	220nits typ.	
<b>Pixel Resolution</b>	<b>Format</b>	1366 x 768
	<b>Configuration</b>	RGB Stripe
<b>Pixel Resolution Interface</b>	eDP	
<b>LCD Mode</b>	TN	
<b>PPI</b>	135	
<b>Viewing Angle</b>	40/40/15/30	

#### NETWORKING/COMMUNICATIONS

**Intel® Dual Band Wireless - AC 7265 802.11 ac (2x2) WiFi + Bluetooth® Combo**

<b>Wireless LAN Standards</b>	IEEE 802.11a
	IEEE 802.11b
	IEEE 802.11g
	IEEE 802.11n
	IEEE 802.11ac
<b>Interoperability</b>	Wi-Fi certified
<b>Frequency Band</b>	802.11b/g/n

- 2.402 – 2.482 GHz  
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.



### Technical Specifications

#### 802.11a/n

- 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

Note: Indonesia no support this band)

#### Data Rates

- 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  
BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM

#### Security<sup>1</sup>

- 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)  
Infrastructure (Access Point Required)

#### Roaming

IEEE 802.11 compliant roaming between access points

#### Output Power<sup>2</sup>

- 802.11b : +16dBm minimum
- 802.11g : +14dBm minimum
- 802.11a : +14dBm minimum
- 802.11n HT20(2.4GHz) : +13dBm minimum
- 802.11n HT40(2.4GHz) : +13dBm minimum
- 802.11n HT20(5GHz) : +12dBm minimum
- 802.11n HT40(5GHz) : +12dBm minimum
- 802.11ac 80MHz(5GHz) : +11dBm minimum

#### Power Consumption

Transmit: 2.0 W (max)



### Technical Specifications

	Receive: 1.6 W (max)
	Idle mode (PSP): 180 mW (WLAN Associated)
	Idle mode: 60 mW (WLAN unassociated)
	Radio disabled: 30 mW
<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 : -94dBm maximum 802.11b, 11Mbps : -86dBm maximum 802.11g, 6Mbps : -88dBm maximum 802.11g, 54Mbps : -74dBm maximum 802.11a, 6Mbps : -86dBm maximum 802.11a, 54Mbps : -72dBm 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
<b>Antenna type</b>	High efficiency antenna with spatial diversity, mounted in the display enclosure  Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
<b>Form Factor</b>	PCI-Express M.2 MiniCard
<b>Dimensions</b>	Type 2230 : 2.3 x 22.0 x 30.0 mm
<b>Weight</b>	Type 2230 : 2.8g



### Technical Specifications

<b>Operating Voltage</b>	3.3v +/- 9%	
<b>Temperature</b>	Operating	14° to 158° F (–10° to 70° C)
	Non-operating	–40° to 176° F (–40° to 80° C)
<b>Humidity</b>	Operating	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
<b>Altitude</b>	Operating	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	LED Amber – Radio OFF; LED White – Radio ON	

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).

#### HP Integrated Module with Bluetooth 4.0+EDR Wireless Technology

<b>Bluetooth Specification</b>	4.0+EDR Compliant		
<b>Frequency Band</b>	2402 to 2480 MHz		
<b>Number of Available Channels</b>	79 (1 MHz) available channels		
<b>Data Rates and Throughput</b>	3 Mbps data rate; throughput up to 2.17 Mbps		
	Synchronous Connection Oriented links up to 3, 64 kbps, voice channels		
	Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric or 1306.9 kbps symmetric		
<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>Receiver Sensitivity</b>	<b>Modulation</b>	<b>0.01% BER</b>	<b>0.001% BER</b>
	GFSK	-80 dBm	-70 dBm
	$\pi/4$ -DQPSK	-80 dBm	-70 dBm
	8DPSK	-80 dBm	-70 dBm
<b>Power Consumption</b>	Peak (Tx) 330 mW		
	Peak (Rx) 230 mW		
	Selective Suspend 17 mW		



### Technical Specifications

<b>Range</b>	Up to 33 ft (10 m)
<b>Electrical Interface</b>	USB 2.0 compliant
<b>Bluetooth Software Supported</b>	Microsoft Windows Bluetooth Software
<b>Link Topology</b>	
<b>Electrical Interface</b>	Point to Point, Multipoint Pico Nets up to 7 slaves
<b>Bluetooth Software Supported</b>	Full support of Bluetooth Security Provisions
<b>Security</b>	
<b>Power Management</b>	Microsoft Windows ACPI, and USB Bus Support
<b>Power Management</b>	Self-configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
<b>Certifications</b>	
<b>Security</b>	All necessary regulatory approvals for supported countries, including:
<b>Certifications</b>	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
<b>Bluetooth Profiles Supported</b>	
<b>Power Management</b>	ETS 300 328, ETS 300 826
<b>Certifications</b>	Low Voltage Directive IEC950
	UL, CSA, and CE Mark
	Serial Port Profile (SPP) <sup>1</sup>
	Service Discovery Application Profile (SDAP)
	Dial-Up Networking (DUN) <sup>1,2</sup>
	Generic Object Exchange Profile (GOEP) <sup>1,2</sup>
<b>Certifications</b>	Object Push Profile (OPP) <sup>1,2</sup>
	File Transfer Profile (FTP)
<b>Bluetooth Profiles Supported</b>	Synchronization Profile (SYNC)
	Hard Copy Cable Replacement (HCRP) <sup>1,2</sup>
	Personal Area Networking Profile (PAN) <sup>1,2</sup>
	Human Interface Device Profile (HID) <sup>1,2</sup>
	FAX Profile (FAX)
	Basic Imaging Profile (BIP) <sup>2</sup>
	Headset Profile (HSP)
	Hands Free Profile (HFP)
	Advanced Audio Distribution Profile (A2DP)



### Technical Specifications

#### AUDIO/MULTIMEDIA

##### DTS STUDIO SOUND

<b>Hardware</b>	<b>Implementation</b>	Realtek ALC 3227 Low Power High Definition Audio Codec
	<b>Function Key Volume Controls</b>	Volume up, Volume down, and Mute
	<b>Full Duplex</b>	Yes
	<b>Microphone In</b>	Mono
	<b>Headphone/Line Out</b>	Stereo
	<b>Integrated Microphone</b>	Yes, Dual Digital Microphone
<b>Audio Output Quality</b>	<b>Frequency Response</b>	20 Hz – 20KHz
	<b>Signal to Noise Ratio</b>	90 dB FSA (Typical)
	<b>Total Harmonic Distortion</b>	-80 dB FS (Typical)
	<b>Noise Floor</b>	-120 dB
	<b>Play/Record Sampling Rate(s)</b>	8KHz – 96KHz
	<b>DAC</b>	16, 20 or 24 bit
	<b>ADC</b>	16 or 20 bit
<b>Integrated Stereo Speakers</b>	<b>Power Rating</b>	2 Watts
	<b>Impedance</b>	4 Ohm

#### POWER

<b>HP 45W AC Adapter</b>	<b>Dimensions</b>	3.74 x 1.57 x 1.04 in (9.5 x 4.0 x 2.65 cm)
	<b>Weight</b>	0.386 lb (175g) max
	<b>Input</b>	
	<b>Input Efficiency</b>	87.74% at 115Vac and 88.4% at 230Vac
	<b>Input frequency range</b>	47 to 63 Hz
	<b>Input AC current</b>	1.4A at 90VAC



### Technical Specifications

	<b>Output</b>	<b>Output power</b>	45W	
		<b>Hold-up time</b>	5m Sec. at 115 VAC input	
		<b>DC output</b>	19.5V	
	<b>Environmental Design</b>	<b>Output current limit</b>	< 8.0A	
		<b>Operating temperature</b>	32° to 95° F (0° to 35° C)	
		<b>Non-operating (storage) temperature</b>	-4° to 185° F (-20° to 85° C)	
		<b>Altitude</b>	0 to 16,400 ft (0 to 5,000 m)	
		<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 65W EM Smart AC Adapter</b>	<b>Dimensions</b>	4.98 x 1.97 x 1.18 in (12.65 x 5.0 x 3.0 cm)		
	<b>Weight</b>	0.62 lb (290g) max		
	<b>Input</b>	<b>Input Efficiency</b>	87.74% at 115Vac and 88.4% at 230Vac	
		<b>Input frequency range</b>	47 to 63 Hz	
		<b>Input AC current</b>	1.7 A at 90 VAC	
	<b>Output</b>	<b>Output power</b>	65W	
		<b>DC output</b>	19.5V	
		<b>Hold-up time</b>	5 msec at 115 VAC input	
		<b>Output current limit</b>	<11.0A	
		<b>Connector</b>		
<b>Environmental Design</b>	<b>Operating temperature</b>	32° to 95° F (0° to 35° C)		
	<b>Non-operating (storage) temperature</b>	-4° to 185° F (-20° to 85° C)		
	<b>Altitude</b>	0 to 16,400 ft (0 to 5,000 m)		
	<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.			





### Technical Specifications

<b>HP 2-cell Polymer Battery (37.69 WHr)</b>	<b>Cells/Type</b>	2-cell Polymer	
	<b>Watt-hour capacity</b>	37.69Whr	
	<b>Temperature</b>	<b>Operating (Charging)</b>	0° to 45° C
		<b>Operating (Discharging)</b>	-10° to 60° C
		<b>Non-operating</b>	-20° ~ 60° C (1 month)
			-20° ~ 45° C (3 month)
		-20° ~ 30° C (6 month)	
	<b>Warranty</b>	1 year limited	

### 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 <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)**

	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 60Hz</b>
Normal Operation (Short idle)	5.06 W	5.08 W	5.19 W
Normal Operation (Long idle)	2.78 W	2.83 W	2.78 W
Sleep	0.72 W	0.74 W	0.72 W
Off	0.16 W	0.24 W	0.16 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.

<b>Heat Dissipation*</b>	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 60Hz</b>
Normal Operation (Short idle)	17 BTU/hr	17 BTU/hr	18 BTU/hr



### Technical Specifications

Normal Operation (Long idle)	10 BTU/hr	10 BTU/hr	10 BTU/hr
Sleep	2 BTU/hr	3 BTU/hr	2 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 <sub>WAd</sub> , bels)	Sound Pressure (L <sub>pAm</sub> , decibels)
Typically Configured – Idle	1.7	16
Fixed Disk – Random writes	1.7	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 the 1ppm by weight  
 Cadmium greater than 20ppm by weight

Battery size: CR2032 (coin cell)  
 Battery type: Lithium



### Technical Specifications

#### 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](http://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 97.4% recycle-able when properly disposed of at end of life.

#### Packaging Materials

<b>External:</b>	PAPER/Corrugated	302 g
<b>Internal:</b>	PLASTIC/EPE (Expanded Polyethylene)	19 g
	PLASTIC/Polyethylene low density	18 g

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

The corrugated paper packaging materials contains at least 80% 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/qse.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)



### Technical Specifications

#### 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.

For more information about HP's commitment to the environment:

#### Hewlett-Packard Corporate Environmental Information

Global Citizenship Report

<http://www.hp.com/hpinfo/globalcitizenship/qcreport/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



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

**NOTE:** Options/capabilities listed in the QuickSpecs represent those capabilities available through Base Units or Build to Order configurations. The various product features and capabilities will vary in terms of configurable vs. aftermarket options (AMOs). There may be options and capabilities available through CTO that are not available as AMOs.

Category	Description	Part number
<b>Carrying Cases</b>	HP Business Slim Top Load	H5M91AA
	HP Business Backpack	H5M90AA
	HP Essential Top Load Case (up to 15.6")	H2W17AA
<b>Input/Output</b>	HP Comfort Grip Wireless Mouse	H2L63AA
	HP 3-Button USB Laser Mouse	H4B81AA
	HP USB Optical Travel mouse	G1K28AA
	HP Slim Bluetooth Mouse	F3J92AA
	HDMI to VGA Adapter	H4F02AA
	HP HDMI to DVI Adapter	F5A28AA
	HP USB to Gigabit RJ45 Adapter	N7P47AA
<b>Power</b>	HP Power Bank	N9F71AA
	HP 45W Smart AC Adapter (4.5mm)	H6Y88AA
<b>Storage</b>	HP External USB Optical Drive	F2B56AA
<b>Security</b>	HP UltraSlim Keyed Cable Lock	H4D73AA



### Summary of Changes

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