

### Overview

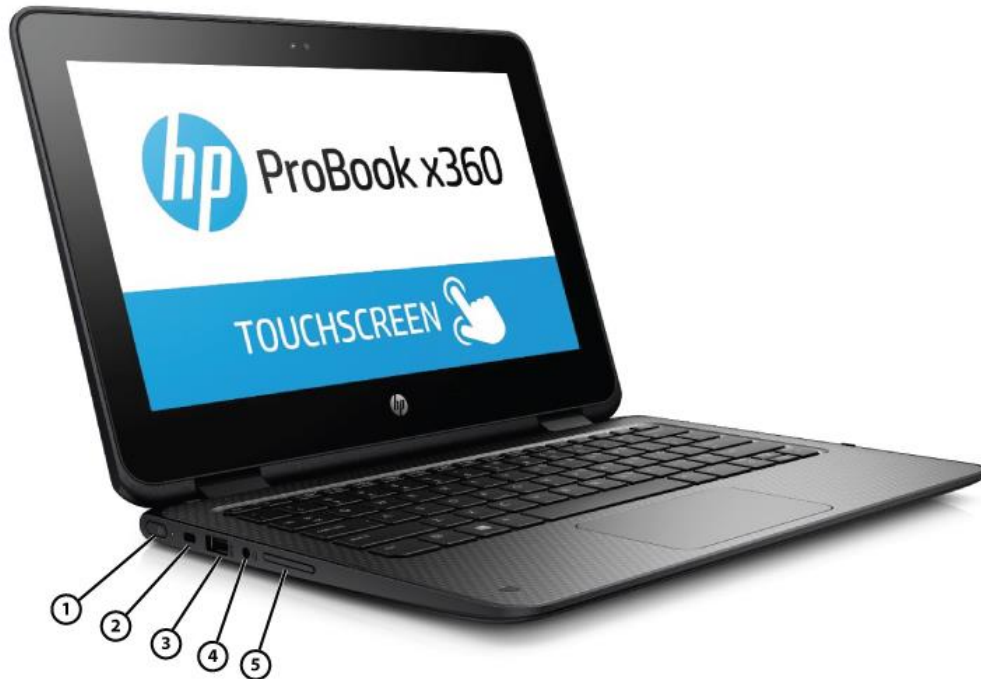
#### HP ProBook x360 11 G2 EE Notebook PC



#### Front Right

- |    |                          |     |  |
|----|--------------------------|-----|--|
| 1. | WLAN antennas (2)        | 8.  | USB 3.1 Gen 1 port                             |
| 2. | Internal microphones (2) | 9.  | USB Type-C™ (Data only)                        |
| 3. | User-facing webcam LED   | 10. | Micro SD card reader                           |
| 4. | User-facing 720p webcam  | 11. | ClickPad                                       |
| 5. | Power connector          | 12. | World-facing 1080p webcam (select models only) |
| 6. | Ethernet (RJ-45) port    | 13. | World-facing webcam LED (select models only)   |
| 7. | HDMI v1.4b               |     |  |

### Overview

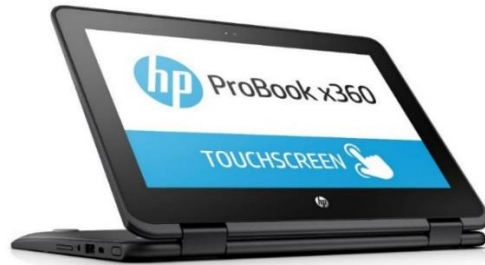


#### Front Left

- |    |                    |    |                                   |
|----|--------------------|----|-----------------------------------|
| 1. | Power button       | 4. | Headphone / Microphone Combo Jack |
| 2. | Security lock slot | 5. | Volume button                     |
| 3. | USB 3.1 Gen 1 Port |    |                                   |

### Overview

#### Stand Mode



#### Tablet Mode



#### Tent Mode



### Overview

#### AT A GLANCE

- Weight starting at TBD lbs ( TBD kg) and 20.8 cm (8.19 in) thin
- This flexible 360° hinge converts to laptop, tablet, tent, or stand mode easily
- Passed the MIL-STD 810G testing<sup>1</sup> with rugged features such as co-molded rubber trim, and spill- and pick-resistant keyboard
- Optional dual camera system for project-based learning
- Optional HP Active Pen provides an authentic digital inking experience
- Pre-installed with Windows 10 Pro 64 or Windows 10 Home 64
- Powered by 7th Generation Intel® processors
- 29.46 cm (11.6") diagonal HD SVA eDP LED slim touch screen
- Up to 256 GB SATA-3 Solid State Drive storage options
- Up to 8 GB system memory for enhanced memory management
- Reliable connectivity with Intel® Dual Band Wireless-AC 7265 802.11 a/b/g/n/ac (2x2) WiFi and Bluetooth® 4.2 Combo WLAN for learning and collaboration beyond the classroom
- Built-in ports include: Ethernet (RJ-45), USB 3.1 Gen 1, USB Type-C™ (Data only), and HDMI 1.4b port for connecting to high-resolution displays
- Enhanced security TPM 2.0 discrete chip
- Battery life up to 13 hours

1. MIL STD 810G 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.

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

### Features

#### PRODUCT NAME

HP ProBook x360 11 G2 EE Notebook PC

#### OPERATING SYSTEM

**Preinstalled** Windows 10 Pro 64<sup>1</sup>  
Windows 10 Home 64<sup>1</sup>  
Windows 10 Pro (National Academic License)<sup>2</sup>  
Windows 10 Home Single Language 64<sup>1</sup>

**Web supported** Windows 10 Enterprise 64<sup>1</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

#### PROCESSORS

##### Processors

Intel® Core™ M3-7Y30 with Intel® Graphics 615 (1 GHz, up to 2.6 GHz, 4 MB cache, 2 cores)<sup>1</sup>  
Intel® Core™ i5-7Y54 with Intel® Graphics 615 (1.2 GHz, up to 3.2 GHz, 4 MB cache, 2 cores)<sup>1</sup>

##### Processor Family

7<sup>th</sup> Generation Intel® Core™ M3 processor (M3-7Y30 model)  
7<sup>th</sup> Generation Intel® Core™ i5 processor (i5-7Y54 model)

**NOTE:** 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>.

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

Chipset is integrated with processor

#### GRAPHICS

##### Integrated

Intel® HD Graphics 615<sup>1</sup>

1. HD content required to view HD images.

### Features

#### DISPLAY

##### Internal

29.46 cm (11.6") diagonal HD SVA eDP LED slim touch screen with user-facing camera (1366 x 768)<sup>1</sup> with Corning® Gorilla® Glass 4

##### External

Up to 32-bit per pixel color depth

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

HDMI v1.4b supporting: up to 3840 x 2160 @ 30 Hz

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

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

#### STORAGE AND DRIVES

##### Primary Storage<sup>1</sup>

##### M.2 (NGFF) 2280 Solid State Drive

128 GB SATA-3 SS TLC Solid State Drive<sup>2</sup>

256 GB SATA-3 SS TLC Solid State Drive<sup>2</sup>

1. 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.
2. Not available with eMMC storage.

#### MEMORY

##### Standard

LPDDR3-1866 (Transfer rates up to 1866 MT/s)

Supports up to 8 GB max on-board (Not Customer Accessible)

Supports Dual Channel memory

##### Configurations

4096 MB Total System Memory (8 GB 128 M x 32 x 2, Qty 4)

8192 MB Total System Memory (16 GB 256 M x 16 x 4, Qty 4)

##### Maximum Memory

8 GB

### Features

#### NETWORKING/COMMUNICATIONS

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

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

##### Communications

Realtek Ethernet (10/100/1000) GbE NIC<sup>2</sup>

1. Wireless access point and Internet service is required and is not included. 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.
2. The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.

#### AUDIO/MULTIMEDIA

##### Audio

HP Audio

Two integrated stereo speaker

Headphone / microphone in combo jack

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

User Facing Camera

1 MP HD Webcam @ 1280 x 720p<sup>2</sup>

Located on display

Dual digital mic

##### World Facing Camera

2 MP FHD Webcam @ 1920 x 1080p<sup>2</sup>

Located on keyboard deck (option only available with touch display configurations)

**NOTE:** Both webcams are fix focus.

1. Internet access required.
2. HD content required to view HD images.

## Features

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

#### Keyboard

Full-sized, minor spill and pick-resistant

#### Function Keys

F1 - Blank  
F2 - Clickpad Enable/Disable  
F3 - Sleep  
F4 - Display Switching  
F5 - Audio Mute/Unmute  
F6 - Volume <down>  
F7 - Volume <up>  
F8 - Mic Mute/Unmute  
F9 - Brightness <down>  
F10 - Brightness <up>  
F11 - Blank  
F12 - Wireless On/Off

#### ClickPad

Multitouch gestures enabled  
Default on: 2-finger scroll, pinch  
Support Windows 10 modern Trackpad gestures  
Taps enabled as default

#### Pen

Optional HP Active Pen <sup>1</sup>

[1.Sold separately or as an optional feature.](#)

## SOFTWARE AND SECURITY

#### BIOS

HP BIOSphere Gen3<sup>1</sup>  
HP DriveLock | HP Automatic DriveLock  
BIOS Update via Network  
Master Boot Record Security  
Power On Authentication  
Secure Erase<sup>2</sup>  
Absolute Persistence Module<sup>3</sup>  
Pre-boot Authentication

#### HP Value Add Software

HP ePrint Driver + JetAdvantage<sup>4</sup>  
HP Hotkey Support - CMIT  
HP Recovery Manager  
HP Jumpstart  
HP Support Assistant  
HP Noise Cancellation Software



### Features

#### Microsoft Products

Buy Office  
Bing Search  
Skype<sup>5</sup>

#### Manageability

HP System Software Manager (SSM)<sup>6</sup>  
HP BIOS Config Utility (BCU)<sup>6</sup>  
LANDESK Management<sup>7</sup>

For more information on HP Client Management Solutions refer to: <http://www.hp.com/go/clientmanagement>.

#### HP School Pack

- HP Adaptive Learning created by Fishtree
- HP Simple Sign-on created by Classlink
- HP Classroom Manager Student Edition<sup>10</sup>
- SparkVue
- Codecademy
- Corinth Classroom
- HP Prime Graphing Calculator
- Curriculum Matrix/CMX
- Oxford University Press Advanced Learners English Dictionary

#### Security

Trusted Platform Module (TPM) 2.0

1. Available only on business PCs with HP BIOS.
2. For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.
3. Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: <http://www.absolute.com/company/legal/agreements/computrace-agreement>. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.
4. 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>). Requires optional broadband module. Broadband use requires separately purchased service contract. Check with service provider for coverage and availability in your area. Separately purchased data plans or usage fees may apply. Print times and connection speeds may vary.
5. Skype is not offered in China.
6. Not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>
8. Subscription required.
10. HP Classroom Manager for Teachers is required and sold separately for control and device locking from the teacher's Windows desktop console; no locking and control functionality originates from HP Classroom Manager for Student. Control and device locking originate from the teacher's Windows desktop console.

### Features

#### POWER

**Power Supply<sup>1</sup>**

HP 45W Smart AC adapter  
HP 65W EM Smart AC adapter

**Primary Battery**

HP Long Life 3-cell, 41 Whr Li-Ion Prismatic battery

**Power Cord**

Power cord is 3.2 feet (1 meter)

**Battery life<sup>2</sup>**

Up to 13 hours

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

**Charging Time:** 90 mins to 90% when the system is off or in standby mode. Power adapter with a minimum capacity of 45 watts is required

**System Standby Time<sup>3</sup>**

TBD

1. Availability may vary by country.

2. 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.

3. Talk, standby, and usage times are approximate and depend on the network configuration, the usage pattern of an individual user, and the configuration of the handheld. Use of some internal wireless capabilities, backlight will significantly decrease battery run time

#### WEIGHTS & DIMENSIONS

**Weight****Touch**

Starting at 3.19 lbs (1.45 kg)

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

20.795 x 30.24 x 1.99 cm

8.14 x 11.88 x 0.78 in

**NOTE:** Weight varies by configuration and components.

### Features

#### PORTS/SLOTS

##### Ports

- 1 USB 3.1 Type-C™ (Data transfer only)
- 2 USB 3.1 Gen 1
- 1 AC power connector
- 1 HDMI
- 1 RJ-45
- 1 Headphone/microphone combo jack

##### HP Multi-Format Digital Media Reader

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

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

#### ENVIRONMENTAL & INDUSTRY

<b>Environmental Data</b>	<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<sup>®</sup> Gold registered in the United States. See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status in your country. Search keyword <i>generator</i> on HP's 3rd party option store for solar energy accessory at <a href="http://www.hp.com/go/options">http://www.hp.com/go/options</a></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, 50Hz</b>
	Normal Operation (Short idle)	3.79 W	4.77 W	3.73 W
	Normal Operation (Long idle)	2.29 W	2.76 W	2.24 W
	Sleep	0.29 W	0.38 W	0.29 W
	Off	0.24 W	0.32 W	0.24 W
		<b>Note:</b> Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR®		

### Features

	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, 50Hz</b>
Normal Operation (Short idle)	13 BTU/hr	16 BTU/hr	13 BTU/hr
Normal Operation (Long idle)	8 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
	<b>NOTE:</b> 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	2.6	15	
Fixed Disk – Random writes	2.6	15	
<b>Longevity and Upgrading</b>	<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>		
<b>Batteries</b>	<p>This battery(s) in this product comply with EU Directive 2006/66/EC</p> <p>Batteries used in the product do not contain:</p>		

### Features

	<p>Mercury greater than 1ppm by weight Cadmium greater than 20ppm by weight</p> <p>Battery size: CR2032 (coin cell) Battery type: Lithium</p>		
<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 gold 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 0% post-consumer recycled plastic (by wt.)</li> <li>This product is 98.5% recycle-able when properly disposed of at end of life.</li> </ul>		
<b>Packaging Materials</b>	<b>External:</b>	PAPER/Corrugated	318g
	<b>Internal:</b>	PLASTIC/Polyethylene Expanded - EPE	25g
		PLASTIC/Polyethylene low density – LDPE	18g
		PLASTIC/Polypropylene - PP	3g
	The plastic packaging material contains at least 50% recycled content.		
	The corrugated paper packaging materials contains at least 75% recycled content.		
<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> </ul>		

### Features

		<ul style="list-style-type: none"> <li>• Polyvinyl Chloride (PVC) – except for wires and cables, 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>
	<p><b>Packaging Usage</b></p>	<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>
	<p><b>End-of-life Management and Recycling</b></p>	<p>Hewlett-Packard 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>
	<p><b>HP, Inc. Corporate Environmental Information</b></p>	<p>For more information about HP's commitment to the environment:</p> <p>Global Citizenship Report  <a href="http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html">http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html</a>  Eco-label certifications  <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>  ISO 14001 certificates:  <a href="http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842">http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842</a>  <a href="http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf">http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</a></p>

### Features

#### SYSTEM UNIT

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%, non-condensing

#### SERVICE AND SUPPORT

HP Services offers a 1-year limited warranties and 90 day software support options depending on country. Batteries have a default one year limited warranty. On-site service and extended coverage is also available. HP Care Pack Services<sup>1</sup> 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>.

1. HP Services offers 3-year and 1-year limited warranties and 90 day software limited warranty options depending on country. Batteries have a default one 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. 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

#### DISPLAYS

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

<b>29.4 cm (11.6") diagonal HD SVA slim LED touch screen (1366 x 768)</b>	<b>Outline Dimensions</b>	278.5 x 168.5 (mm) max	
	<b>Active Area</b>	256.13 x 144.0 (mm)	
	<b>Weight</b>	360 g max	
	<b>Diagonal Size</b>	11.6 (inch)	
	<b>Contrast Ratio</b>	300:1 (typical)	
	<b>Refresh Rate</b>	60 Hz	
	<b>Brightness</b>	220 nits	
	<b>Pixel Resolution</b>	<b>Format</b>	1366 x 768 (HD)
		<b>Configuration</b>	RGB
	<b>Interface</b>	eDP 1.2	
	<b>PPI</b>	135 ppi	
	<b>Backlight</b>	LED	
	<b>Color Gamut Coverage</b>	45%	
	<b>Color depth</b>	6 bit	
<b>Viewing Angle</b>	SVA 45/45/25/35		
<b>Pen Enabled</b>	Yes		



### Technical Specifications

#### STORAGE

<b>128 GB SATA-3 Solid State Drive TLC</b>	<b>Drive Weight</b>	10 grams		
	<b>Capacity</b>	128 GB		
	<b>Height</b>	0.09 in (2.3 mm)		
	<b>Width</b>	0.87 in (22 mm)		
	<b>Interface</b>	ATA-8, SATA 3.0		
	<b>Performance</b>	<b>Sequential Read</b>	<b>Sequential Write</b>	
		Between 520 MB/s and 530 MB/s	Between 380 MB/s and 500 MB/s	
	<b>Logical Blocks</b>	250,069,680		
	<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [case temp]		
	<b>Features</b>	ATA Security; ATA-8; SATA 3.0; DIPM; TRIM; DVESLP		
<b>256 GB SATA-3 Solid State Drive TLC</b>	<b>Drive Weight</b>	10 grams		
	<b>Capacity</b>	256 GB		
	<b>Height</b>	0.09 in (2.3 mm)		
	<b>Width</b>	0.87 in (22 mm)		
	<b>Interface</b>	ATA-8, SATA 3.0		
	<b>Performance</b>	<b>Sequential Read</b>	<b>Sequential Write</b>	
		Up to 515 MB/s	Up to 490 MB/s	
	<b>Logical Blocks</b>	500,118,192		
	<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [case temp]		
	<b>Features</b>	ATA Security; ATA-8; SATA 3.0; DIPM; TRIM; DVESLP		

### Technical Specifications

#### NETWORKING/COMMUNICATIONS

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

<b>Wireless LAN Standards</b>	<ul style="list-style-type: none"> <li>IEEE 802.11a</li> <li>IEEE 802.11b</li> <li>IEEE 802.11g</li> <li>IEEE 802.11n</li> <li>IEEE 802.11ac</li> </ul>
<b>Interoperability</b>	Wi-Fi certified
<b>Frequency Band</b>	802.11b/g/n <ul style="list-style-type: none"> <li>• 2.402 – 2.482 GHz</li> </ul> <p>Note:</p> <p style="color: blue;">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>
	802.11a/n <ul style="list-style-type: none"> <li>• 4.9 – 4.95 GHz (Japan)</li> <li>• 5.15 – 5.25 GHz</li> <li>• 5.25 – 5.35 GHz</li> <li>• 5.47 – 5.725 GHz</li> <li>• 5.825 – 5.850 GHz</li> </ul> <p>Note: Indonesia no support this band)</p>
<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, and 80MHz)</li> </ul>
<b>Modulation</b>	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
<b>Security<sup>1</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> </ul>

### Technical Specifications

	<ul style="list-style-type: none"> <li>• WPA2 certification</li> <li>• IEEE 802.11i</li> <li>• Cisco Certified Extensions, all versions through CCX4 and CCX Lite</li> <li>• WAPI</li> </ul>
<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 : +16dBm minimum</li> <li>• 802.11g : +14dBm minimum</li> <li>• 802.11a : +14dBm minimum</li> <li>• 802.11n HT20(2.4GHz) : +14dBm minimum</li> <li>• 802.11n HT40(2.4GHz) : +12dBm minimum</li> <li>• 802.11n HT20(5GHz) : +14dBm minimum</li> <li>• 802.11n HT40(5GHz) : +12dBm minimum</li> </ul>
<b>Power Consumption</b>	Transmit: 2.0 W (max)  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
<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 : -88dBm maximum  802.11a, 54Mbps : -74dBm maximum  802.11n, MCS07 : -69dBm maximum  802.11n, MCS15 : -66dBm maximum  802.11ac, 1SS, MCS-0 : -86dBm maximum

### Technical Specifications

	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
	Or
	Type 1630 : 2.3 x 16.0 x 30.0 mm
<b>Weight</b>	Type 2230 : 2.8g
	Or
	Type 1630 : 2g
<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).

### Technical Specifications

#### HP 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>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.

#### 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

### Technical Specifications

<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>Certifications</b>	Self-configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
<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>1,2</sup>
	Service Discovery Application Profile (SDAP)
	Dial-Up Networking (DUN) <sup>1,1</sup>
	Generic Object Exchange Profile (GOEP) <sup>1,2</sup>
	Object Push Profile (OPP) <sup>1,2</sup>
<b>Certifications</b>	Hard Copy Cable Replacement (HCRP) <sup>1,2</sup>
<b>Bluetooth Profiles Supported</b>	Personal Area Networking Profile (PAN) <sup>1,0</sup>
	Human Interface Device Profile (HID) <sup>1,0</sup>
	Hands Free Profile (HFP) <sup>1.5/1.6</sup>
	Advanced Audio Distribution Profile (A2DP) <sup>1.3</sup>
	Audio Video Remote Control Profile (AVRCP) <sup>1.3/1.4</sup>
<b>Bluetooth V4.1/V4.2 support feature</b>	V4.1: ESR5/6/7 compliant
	V4.2: ESR8 compliant, LE Secure Connection – Basic.

### Technical Specifications

#### POWER

<b>HP 45 Watt Smart AC adapter</b>	<b>Dimensions (H x W x D)</b>	95x40x26.5mm	
	<b>Weight</b>	200g +/- 10g	
	<b>Input</b>	Input Efficiency	87.74 % at 115 Vac and 88.4 % at 230Vac
		Input frequency range	47 ~ 63 Hz
		Input AC current	Max. 1.4 A at 90 Vac
	<b>Output</b>	Output power	45W
		DC output	19.5V
		Hold-up time	5ms at 115 Vac input
		Output current protection	<8.0A
	<b>Connector</b>	C6 (3pin/with grounded, with Smart ID DC connector)	
	<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>	<p>*CE Mark - full compliance with LVD and EMC directives</p> <p>* 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.</p> <p>* MTBF - over 200,000 hours at 25°C ambient condition.</p>	
	<b>Dimensions (H x W x D)</b>	127.0x51.0x30.0mm	

### Technical Specifications

<b>HP 65W EM Smart AC Adapter</b>	<b>Weight</b>	350g +/- 10g	
	<b>Input</b>		
		Input Efficiency	88.0 % at 115 Vac and 89.0 % at 230Vac
		Input frequency range	47 ~ 63 Hz
		Input AC current	Max. 1.7 A at 90 Vac
	<b>Output</b>	Output power	65W
		DC output	19.5V
		Hold-up time	5ms at 115 Vac input
		Output current protection	<11.0A
	<b>Connector</b>	C6 (3pin/with grounded, with Smart ID DC connector)	
	<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>Cells/Type</b>	3-cell Prismatic	



### Technical Specifications

<b>Watt-hour capacity</b>	41Whr
<b>Temperature</b>	<b>Operating (Charging)</b> 32° to 113° F (0° to 45° C)
	<b>Operating (Discharging)</b> 14° to 140° F (-10° to 60° C)
	<b>Non-operating</b> -4° to 140° F (-20° to 60° C)

#### HP 3-cell Li-Ion Prismatic Battery (41 WHr)

<b>Warranty</b>	Batteries have a default one year limited warranty except for Long Life batteries which will have same 1-year or 3-year limited warranty as the platform
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**NOTE:** Batteries have a default one year limited warranty except for Long Life batteries which will have same 1-year or 3-year limited warranty as the platform.

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### COUNTRY OF ORIGIN

China

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

Type	Description	Part Number
<b>Carrying Cases</b>	HP Essential Top Load Case (up to 15.6")	H2W17AA#xxx
	HP Essential Backpack (up to 15.6")	H1D24AA
	HP Slim Top Load	F3W15AA
	HP Slim Backpack	F3W16AA
	HP ProBook x360 Protective Case	1JS00AA
<b>Docking</b>	HP USBC Travel Dock	T0K29AA
	HP Elite USBC Dock	X7W54AA#xxx
	HP 3005pr USB3 Port Replicator	Y4H06AA
<b>Input/Output</b>	HP Slim USB Keyboard & Mouse Bundle	T6T83AA#xxx
	HP 3-Button Laser Mouse	H4B81AA#xxx
	HP 2.4GHz Wireless Mouse	L0Z84AA#xxx
	HP Slim Wireless keyboard and mouse	T6L04AA#xxx
	HP HDMI to VGA Adapter	H4F02AA
	HP Stereo USB Headset	T1A67AA
	HP Stereo 3.5mm Headset	T1A66AA
	HP Active Pen with Spare Tips PN	1FH00AA#xxx
<b>Power</b>	HP 45W Smart AC Adapter 4.5mm	H6Y88AA#xxx
	HP 65W Smart AC Adapter	H6Y89AA#xxx
	HP Notebook Powerbank	N9F71AA#xxx
<b>Storage</b>	HP External USB Optical Drive	F2B56AA
<b>Security</b>	HP Keyed Cable Lock 10mm	T1A62AA
<b>Monitors</b>	HP S140u 14-inch USB Portable Monitor	G8R65AA
	HP ProDisplay P240va 23.8-inch Monitor	N3H14AA
	HP EliteDisplay E230t 23-inch Touch Monitor	W2Z50AA

### Summary of Changes

Date of change	Version History	Description of change
April 13, 2017	V1	Quickspec Launched
April 20, 2017	V1 to V2	At a glance section updated, Battery life and Weight updated
April 26, 2017	V2 to V3	Processor Section updated (i5 coming soon note removed)
April 19, 2017	V3 to V4	Dimensions updated
July 6, 2017	V4 to V5	System Unit section added
October 2, 2017	V5 to V6	Touchpoint removed
November 8, 2017	V6 to V7	Options and Accessories Section updated
March 20, 2018	V7 to V8	Display section updated
May 4, 2018	V8 to V9	Environmental tab

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