

Overview

HP EliteBook x360 1020 G2 Notebook PC



Front

- | | |
|-----------------------------|---|
| 1. Internal microphones (2) | 6. Glass clickpad |
| 2. Webcam | 7. Power button |
| 3. IR Camera | 8. Security lock slot (Lock sold separately.) |
| 4. Webcam LED | 9. Audio combo jack |
| 5. Fingerprint reader | |

Overview



Rear

1. HDMI port (Cable not included.)
2. USB Type-C™ with Thunderbolt™
3. USB Type-C™ with Thunderbolt™
4. Volume up/down

Overview

At a Glance

1. Preinstalled with Windows 10 versions
 2. All metal CNC Al chassis that is .55 inches (1.39 cm) thin
 3. Display choices include 31.75 cm (12.5") diagonal IPS UWVA, FHD touch screen or UHD touch screen.
 - Get added protection in open or public places with the optional HP Sure View integrated privacy screen¹
 4. A 360° convertible notebook with 5 usage modes
 5. Passed 12 MIL-SPEC 810G testing, plus an additional 120,000 hours of reliability testing through HP's Total Test Process²
 6. Choice of 7th Generation Intel® Core™ i5, i7 Processors with integrated Intel® HD Graphics
 7. Weight starting at 2.50 lbs (1.13 kg)
 8. Optional full size HP Active Pen with App Launch, designed with Wacom technology
 9. HP 720p HD webcam, dual array microphones, and integrated premium stereo speakers for video audio and conferencing
 10. Engage teams, clients, and vendors with the crystal-clear audio by Bang & Olufsen and the high-performance HP Premium Collaboration Keyboard
 11. Never forget your password with your choice of simple authentication methods, including the IR camera for face recognition and Touch Fingerprint Sensor for Windows Hello
 12. Choice of Solid State Drive storage drives up to 1 TB
 13. Up to 16 GB total system memory
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1. HP Sure View is optional and must be configured at purchase.
 2. MIL-STD-810G testing 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.



Features

PRODUCT NAMES

HP EliteBook x360 1020 G2 Notebook PC

OPERATING SYSTEMS

Preinstalled

Windows 10 Pro 64 – HP recommends Windows 10 Pro.³
Windows 10 Pro (National Academic License)^{3,4}
Windows 10 Home 64³
Windows 10 Home Single Language 64³

3. 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/>.
 4. **NOTE:** 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
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PROCESSORS

Intel® Core™ i7-7600U with Intel® HD Graphics 620 (2.8 GHz, up to 3.9 GHz with Intel® Turbo Boost Technology, 4 MB cache, 2 cores)^{5,6,7}

Intel® Core™ i7-7500U with Intel® HD Graphics 620 (2.7 GHz, up to 3.5 GHz with Intel® Turbo Boost Technology, 4 MB cache, 2 cores)^{5,6,7}

Intel® Core™ i5-7300U with Intel® HD Graphics 620 (2.6 GHz, up to 3.5 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores)^{5,6,7}

Intel® Core™ i5-7200U with Intel® HD Graphics 620 (2.5 GHz, up to 3.1 GHz with Intel® Turbo Boost Technology, 3 MB cache, 2 cores)^{5,6,7}

Processors Family

7th Generation Intel® Core™ i7 processor (i7-7600U model)

7th Generation Intel® Core™ i7 processor (i7-7500U model)

7th Generation Intel® Core™ i5 processor (i5-7300U model)

7th Generation Intel® Core™ i5 processor (i5-7200U model)

5. 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.
 6. Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
 7. **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>.
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Features

CHIPSET

Integrated with processor

GRAPHICS

Integrated

Intel® HD Graphics 620⁸

8. HD content required to view HD images.
-

DISPLAY

Touch

HP Sure View integrated privacy screen 31.75 cm (12.5") diagonal FHD IPS eDP ultra-slim LED-backlit touch screen, 700 cd/m², 100% sRGB, direct bonded with Corning® Gorilla® Glass 4 (1920 x 1080) ^{8,9,10}

31.75 cm (12.5") diagonal FHD IPS eDP ultra-slim LED-backlit touch screen, 400 cd/m², 100% sRGB, direct bonded with Corning® Gorilla® Glass 4 (1920 x 1080) ^{8,9}

31.75 cm (12.5") diagonal 4K IPS eDP ultra-slim LED-backlit touch screen, 400 cd/m², 134% sRGB, direct bonded with Corning® Gorilla® Glass 4 (3840 x 2160) ^{8,9}

8. HD content required to view HD images.
 9. Resolutions are dependent upon monitor capability, and resolution and color depth settings.
 10. HP Sure View is optional and must be configured at purchase.
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STORAGE AND DRIVES

Supports M.2 SS/DS 2280 Solid State Drive

128 GB M.2 SATA SSD¹¹

256 GB M.2 SATA TLC SSD¹¹

256 GB M.2 PCIe Gen 3x4 NVMe TLC SSD¹¹

360 GB M.2 PCIe Gen 3x4 TLC SSD¹¹

512 GB M.2 PCIe Gen 3x4 NVMe TLC SSD¹¹

1 TB M.2 PCIe Gen 3x4 NVMe TLC SSD¹¹

11. 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.
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MEMORY

Memory soldered down

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

Supports Dual Channel Memory

On board (Customer non-accessible)



Features

Maximum

16 GB LPDDR3-1866 SDRAM

Configurations

8 GB LPDDR3-1866 SDRAM

16 GB LPDDR3-1866 SDRAM

NETWORKING/COMMUNICATIONS

Wireless LAN (WLAN)

Intel® Dual Band Wireless-AC 8265 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo (vPro™)¹²

NFC

HP Module with NXP NFC Controller NPC300 I2C NCI

Communications

Optional Near Field Communication (NFC)

Compatible with Miracast-certified devices

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.

AUDIO/MULTIMEDIA

Audio

Audio by Bang & Olufsen
Premium Stereo Speakers
Dual microphone array

Camera

IR camera for face authentication with Windows Hello

Webcam

720p HD webcam^{8,13}

8. HD content required to view HD images.
13. Internet access required.

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

Full size
HP Premium Collaboration Keyboard
Backlit
DuraKeys
Spill-resistant

Pointing Device

ClickPad (Glass Cover)



Features

Taps enabled as default
Gestures enabled by default

Pen

Optional full size HP Active Pen with App Launch, designed with Wacom technology¹⁴

14. Sold separately or as an optional feature.

SOFTWARE AND SECURITY

Software

HP Native Miracast Support¹⁵
HP LAN-Wireless Protection
HP Wireless Wakeup
HP Sure Connect
HP Velocity
HP 3D DriveGuard 6
HP ePrint + JetAdvantage¹⁶
HP Hotkey Support
HP Recovery Manager
HP Jumpstart
HP Support Assistant¹⁷
HP Noise Cancellation Software
Buy Office
Bing Search

Manageability Features

HP Driver Packs¹⁸
HP System Software Manager
HP BIOS Config Utility (BCU)
HP Client Catalog
HP Management Integration Kit for Microsoft System Center Configuration Manager¹⁹
LANDESK Management²⁰

Security Management

HP BIOSphere Gen3²¹
HP DriveLock and Automatic DriveLock
BIOS Update via Network
HP Sure Start Gen3
Trusted Platform Module TPM 2.0 Embedded Security Chip (SLB9670 -Common Criteria EAL4 + Certified)
SATA 0,1 port disablement (viaBIOS)
RAID configurations



Features

Serial, USB enable/disable (viaBIOS)

Power-on password (viaBIOS)

Setup password (viaBIOS)²²

Support for chassis padlocks and cable lock devices

Integrated hood sensor

Absolute Persistence Module²³

HP Client Security Suite Gen3 including HP Security Manager with Credential Manager and Password Manager²⁴

HP Client Security Suite Gen3 including Power On Authentication

Microsoft Defender²⁵

HP WorkWise²⁶

HP Sure Click

15. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming media players that also support Miracast. You can use Miracast to share what you're doing on your PC and present a slide show. For more information:
<http://windows.microsoft.com/en-us/windows-8/project-wireless-screen-miracast>
16. HP ePrint Drive 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 www.hp.com/go/eprintcenter). Print times and connection speeds may vary.
17. HP Support Assistant requires Windows and Internet Access.
18. HP Driver Packs is not preinstalled, however available for download at
<http://www.hp.com/go/clientmanagement>.
19. HP Management Integration Kit for Microsoft System Center Configuration Manager and HP Management Integration Kit can be downloaded from
<http://www8.hp.com/us/en/ads/clientmanagement/overview.html>
20. LANDESK Management subscription required.
21. HP BIOSphere Gen3 requires Intel® 7th or 8th Generation processors.
22. HP Password Manager requires Internet Explorer or Chrome or FireFox. Some websites and applications may not be supported. User may need to enable or allow the add-on / extension in the internet browser.
23. 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.
24. HP Client Security Suite Gen3 requires Windows and Intel® or AMD 7th or 8th Generation processors.
25. Microsoft Defender Opt in and internet connection required for updates.
26. HP WorkWise Smartphone app is available as a free download on the App Store and Google Play.



Features

POWER

Power Supply

65 W USB Type-C™ AC adapter

Primary Battery

4-cell, long life 49.28 Wh Li-ion
Supports battery fast charge

NOTE: Battery is internal and not replaceable by customer.

Power Cord

Power cord included is 1.0 m (+/- 0.1 m)

Battery life

Up to 15 hours 30 minutes (FHD)²⁷
Up to 9 hours 15 minutes (UHD)²⁷

27. 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 for additional details.

WEIGHTS & DIMENSIONS

Weight

Starting at 2.5 lb²⁸
Starting at 1.13 kg²⁸

Dimensions (w x d x h)

11.41 x 8.02 x 0.53 in
29 x 20.38 x 1.39 cm

28. Weight varies by configuration and components.

PORTS/SLOTS

2 USB 3.1 Type-C™ with Thunderbolt™ support
1 HDMI 1.4a²⁹
1 Headphone/microphone combo jack

29. HDMI cable sold separately.

Features

ENVIRONMENTAL & INDUSTRY

Environmental Data	Eco-Label Certifications & declarations	<p>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:</p> <ul style="list-style-type: none"> IT ECO declaration US ENERGY STAR® US Federal Energy Management Program (FEMP) EPEAT[®] Gold registered in the United States. See http://www.epeat.net for registration status in your country. Search keyword <i>generator</i> on HP's 3rd party option store for solar energy accessory at http://www.hp.com/go/options. TCO or TCO Certified Edge 		
System Configuration	<p>The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a "Typically Configured Notebook".</p>			
Energy Consumption (in accordance with US ENERGY STAR® test method)	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz	
Normal Operation (Sort idle)	5.71 W	5.81 W	6.01 W	
Normal Operation (Long idle)	1.84 W	1.52 W	1.49 W	
Sleep	0.53 W	0.52 W	0.48 W	
Off	0.35 W	0.37 W	0.35 W	
	<p>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.</p>			
Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz	
Normal Operation (Short idle)	20 BTU/hr	20 BTU/hr	21 BTU/hr	
Normal Operation (Long idle)	6 BTU/hr	5 BTU/hr	5 BTU/hr	
Sleep	2 BTU/hr	2 BTU/hr	2 BTU/hr	
Off	1 BTU/hr	1 BTU/hr	1 BTU/hr	
	<p>*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.</p>			
Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	Sound Power (L _{WAd} , bels)		Sound Pressure (L _{pAm} , decibels)	
Typically Configured – Idle	2.8		27.6	
Fixed Disk – Random writes	3		30	



Features

	Optical Drive – Sequential reads		
	Longevity and Upgrading	<p>This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include:</p> <ul style="list-style-type: none"> • 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?? <p>Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.</p>	
	Batteries	<p>This battery(s) in this product comply with EU Directive 2006/66/EC</p> <p>Batteries used in the product do not contain: Mercury greater the 1ppm by weight Cadmium greater than 20ppm by weight</p> <p>Battery description: CR2032 (coin cell) Battery type: Lithium Battery description: 6-cell high capacity Lithium-Ion battery (optional 8 cell available) Battery type:</p>	
	Additional Information	<ul style="list-style-type: none"> • This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <Gold> level, see www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 0.0% post-consumer recycled plastic (by wt.) • This product is 95.5% recycle-able when properly disposed of at end of life. 	
	Packaging Materials	External:	PAPER/Corrugated 340 g
		Internal:	PLASTIC/Polyethylene Expanded - EPE 41 g
			PLASTIC/Polyethylene low density - LDPE 13 g
			PLASTIC/Polypropylene - PP 3 g
		The plastic packaging material contains at least 50% recycled content.	
		The corrugated paper packaging materials contains at least 70% recycled content.	
	Material Usage	<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 http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf):</p>	



Features

		<ul style="list-style-type: none"> • 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, has been voluntarily removed from most applications. • Radioactive Substances • Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)
	<p>Packaging Usage</p>	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p> <ul style="list-style-type: none"> • 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.
	<p>End-of-life Management and Recycling</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: 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.</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: 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.</p>



Features

	<p>HP, Inc. Corporate Environmental Information</p>	<p>For more information about HP's commitment to the environment:</p> <p>Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html</p> <p>Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html</p> <p>ISO 14001 certificates: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842 and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</p>
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SERVICE AND SUPPORT

HP Services offers a 1-year limited warranty and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty. Long Life batteries will have same warranty as the platform. 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>.²⁸

28. 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. 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.

CERTIFICATION AND COMPLIANCE

ENERGY STAR® certified
 EPEAT® Gold²⁹

29. EPEAT® registered where applicable. EPEAT registration varies by country. See <http://www.epeat.net> for registration status by country.



Technical Specifications

DISPLAYS

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

12.5 inch FHD (1920x1080) BrightView WLED UWVA 72percent cg 400nits eDP 1.3 + PSR ultraslim NB	Outline Dimensions (W x H x D)	282.7 x 179.82 (mm) max
	Active Area	276.48 x 155.52 (mm)
	Weight	170 g max
	Diagonal Size	12.5 (inch)
	Surface Treatment	Bright-View (BV)
	Touch enabled	Yes
	Contrast Ratio	800:1 (typical)
	Refresh Rate	60Hz
	Brightness	400 nits
	Pixel Resolution	
	Format	RGB
	Configuration	1920 x 1080 (FHD)
	Interface	
	LCD Mode	eDP 1.3 + PSR
	PPI	176
	Viewing Angle	UWVA 85/85/85/85

12.5 inch UHD (3840x2160) Anti-Glare WLED UWVA 95percent cg 400nits eDP 1.3 + PSR ultraslim 2.2mm NB	Outline Dimensions (W x H x D)	282.38 x 179.26 (mm) max
	Active Area	276.48 x 155.52 (mm)
	Weight	185 g max
	Diagonal Size	12.5 (inch)
	Surface Treatment	Bright-View (BV)
	Touch enabled	Yes
	Contrast Ratio	1000:1 (typical)
	Refresh Rate	60Hz
	Brightness	400 nits
	Pixel Resolution	
	Format	RGB
	Configuration	3840 x 2160 (UHD)
	Interface	eDP 1.3 + PSR
	LCD Mode	
	PPI	352
	Viewing Angle	UWVA 85/85/85/85



Technical Specifications

STORAGE AND DRIVES

HARD DRIVES

SSD 128GB 2280 M2 SATA-3 TLC	Drive Weight	0.02 lb (10 g)
	Capacity	128GB
	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	ATA-8, SATA 3.0
	Performance	
	Maximum Sequential Read	Up To 520 MB/s
	Maximum Sequential Write	Up To 450 MB/s
	Logical Blocks	250,069,680
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	DIPM; TRIM; DEVSLP

SSD 128GB 2280 M2 SATA-3 Value	Drive Weight	0.02 lb (10 g)
	Capacity	128GB
	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	ATA-8, SATA 3.0
	Performance	
	Maximum Sequential Read	Up To 535 MB/s
	Maximum Sequential Write	Up To 515 MB/s
	Logical Blocks	250,069,680
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	DIPM; TRIM; DEVSLP

SSD 1TB 2280 PCIe-3x4 NVMe TLC	Drive Weight	0.02 lb (10 g)
	Capacity	1024GB
	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	PCIe NVMe Gen3X4
	Performance	
	Maximum Sequential Read	Up To 2800 MB/s
	Maximum Sequential Write	Up To 1600 MB/s
	Logical Blocks	2,000,409,264
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	TRIM; L1.2



Technical Specifications

SSD 256GB 2280 M2 PCIe-3x4 SS NVMe TLC	Drive Weight	0.02 lb (10 g)
	Capacity	256GB
	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	PCIe NVMe Gen3X4
	Performance	
	Maximum Sequential Read	Up To 2600 MB/s
	Maximum Sequential Write	Up To 900 MB/s
	Logical Blocks	500,118,192
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	TRIM; L1.2

SSD 256GB 2280 M2 SATA-3 Self Encrypted OPAL2 TLC	Drive Weight	0.02 lb (10 g)
	Capacity	256GB
	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	ATA-8, SATA 3.0
	Performance	
	Maximum Sequential Read	Up To 530 MB/s
	Maximum Sequential Write	Up To 515 MB/s
	Logical Blocks	500,118,192
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	DIPM; TRIM; DEVSLP

SSD 360GB 2280 PCIe-3x4 NVMe TLC	Drive Weight	0.02 lb (10 g)
	Capacity	360GB
	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	PCIe NVMe Gen3X4
	Performance	
	Maximum Sequential Read	Up To 1700 MB/s
	Maximum Sequential Write	Up To 600 MB/s
	Logical Blocks	703,282,608
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	TRIM; L1.2



Technical Specifications

SSD 512GB 2280 M2 PCIe-3x4 SS NVMe TLC	Drive Weight	0.02 lb (10 g)
	Capacity	512GB
	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	PCIe NVMe Gen3X4
	Performance	
	Maximum Sequential Read	Up To 2600 MB/s
	Maximum Sequential Write	Up To 1400 MB/s
	Logical Blocks	1,000,215,216
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	TRIM; L1.2

SSD 512GB 2280 M2 SATA-3 TLC FIPS	Drive Weight	0.02 lb (10 g)
	Capacity	512GB
	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	ACS-3, SATA 3.2
	Performance	
	Maximum Sequential Read	Up To 530 MB/s
	Maximum Sequential Write	Up To 400 MB/s
	Logical Blocks	1,000,215,216
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	DIPM; TRIM; DEVSLP

NETWORKING/COMMUNICATIONS

WLAN

Intel 802.11a/b/g/n/ac (2x2) WiFi and Bluetooth® 4.2 Combo	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac	
	Interoperability	Wi-Fi certified	
	Frequency Band	802.11b/g/n	<ul style="list-style-type: none"> 2.402 – 2.482 GHz
		802.11a/n	<ul style="list-style-type: none"> 4.9 – 4.95 GHz (Japan) 5.15 – 5.25 GHz 5.25 – 5.35 GHz 5.47 – 5.725 GHz 5.825 – 5.850 GHz
		Data Rates	802.11b: 1, 2, 5.5, 11 Mbps



Technical Specifications

	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> •IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only •AES-CCMP: 128 bit in hardware •802.1x authentication •WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. •WPA2 certification •IEEE 802.11i •Cisco Certified Extensions, all versions through CCX4 and CCX Lite •WAPI
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power[2]	<ul style="list-style-type: none"> • 802.11b : +14dBm minimum • 802.11g : +12dBm minimum • 802.11a : +12dBm minimum • 802.11n HT20(2.4GHz) : +12dBm minimum • 802.11n HT40(2.4GHz) : +12dBm minimum • 802.11n HT20(5GHz) : +10dBm minimum • 802.11n HT40(5GHz) : +10dBm minimum • 802.11ac VHT80(5GHz) : +10dBm minimum
Power Consumption	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 Radio disabled 8 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
Receiver Sensitivity[3]	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 802.11ac, MCS0 : -84dBm maximum 802.11ac, MCS9 : -59dBm maximum
Antenna type	High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express M.2 MiniCard

Technical Specifications

Dimensions	Type 2230 : 2.3 x 22.0 x 30.0 mm
Weight	Type 2230 : 2.8g
Operating Voltage	3.3v +/- 9%
Temperature	Operating 14° to 158° F (–10° to 70° C) Non-operating –40° to 176° F (–40° to 80° C)
Humidity	Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing)
Altitude	Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED White – Radio ON

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

Bluetooth Specification	4.0/4.1/4.2 Compliant
Frequency Band	2402 to 2480 MHz
Number of Available Channels	Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)
Data Rates and Throughput	Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps BLE : 1 Mbps data rate; throughput up to 0.2 Mbps Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)
Transmit Power	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.
Power Consumption	Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW
Electrical Interface	USB 2.0 compliant
Bluetooth Software Supported	Microsoft Windows Bluetooth Software
Link Topology	
Power Management	Microsoft Windows ACPI, and USB Bus Support
Certifications	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
Power Management	ETS 300 328, ETS 300 826
Certifications	Low Voltage Directive IEC950
	UL, CSA, and CE Mark
Bluetooth Profiles Supported	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



Technical Specifications

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)

POWER

AC Adapter 65 Watt nPFC USB type C	Dimensions (H x W x D)	2.91 x 2.91 x 1.12 in (7.4 x 7.4 x 2.85 cm)	
	Weight	0.54 lb (245g) max	
Output	Input Efficiency	81.5% min at 115 Vac/ 230Vac @ 5V/3A 86.7% min at 115 Vac/ 230Vac @ 9V/3A 88% min at 115 Vac/ 230Vac @ 10V/5A 88% min at 115 Vac/ 230Vac @ 12V/5A 89% min at 115 Vac/ 230Vac @ 15V/4.33A 89% min at 115 Vac/ 230Vac @ 20V/3.25A	
	Input frequency range	47 to 63 Hz	
	Input AC current	1.7 A at 90 VAC and maximum load	
	Output power	65W	
	DC output	5V/9V/10V/12V/15V/20V	
	Hold-up time	5 msec at 115 VAC input	
	Output current limit	<8.0A	
	Connector	Duck head / duck head power cord, without Smart ID DC connector	
	Environmental Design	Operating temperature	32° to 95° F (0° to 35° C)
		Non-operating (storage) temperature	-4° to 185° F (-20° to 85° C)
Altitude		0 to 16,400 ft (0 to 5,000 m)	
Humidity		5% to 95%	
Storage Humidity		5% to 95%	
EMI and Safety Certifications		*CE Mark - full compliance with LVD and EMC directives	
		* Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE.	
		* MTBF - over 100,000 hours at 25°C ambient condition.	

Battery ET 4 Cell WHr 49 Long Life -PL Fast Charge	Dimensions (H x W x L)	7.65 x 90.9 x 252mm (0.3 x 3.57 x 9.92 inch)
	Weight	0.198 kg (0.436lb)



Technical Specifications

Cells/Type	ATL: 3841B3 + 654462 Coslight: 4041B3G + 674363G		
Energy	Voltage	7.70V	
	Amp-hour capacity	6470mAh / 6146mAh	
	Watt-hour capacity	49.81 Wh / 47.31 Wh	
Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)	
	Operating (Discharging)	14° to 122° F (-10° to 60° C)	
	Non-operating	-4° to 122° F (-20° to 60° C)	
Battery Re-Charge Time	System in OFF or Standby Mode	<3 hours	
Fuel Gauge LED	No		
Warranty	15 months		
Optional Travel Battery Available	No		

Country of Origin

China



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

Type	Description	Part Number
Cases	HP Business Slim Top Load	H5M91AA
	HP Business Backpack	H5M90AA
Docking	HP Elite Thunderbolt 3 90W Dock	1DT93AA#xxx
	HP Thunderbolt Dock 120W G2	TBD
	HP USB-C Mini Dock	1PM64AA#xxx
	HP USB-C Universal Dock	1MK33AA#xxx
	HP Elite USB-C Dock	Z9R42AA#xxx
	HP Elite USB-C Dock G3	2DW60AA
	HP USB-C Travel Dock	TOK29AA
I/O Devices	HP Comfort Grip Wireless Mouse	H2L63AA
	HP Wireless Premium Mouse	1JR31AA
	HP USB Premium Mouse	1JR32AA
	HP Wireless (Link-5) Keyboard	T6U20AA
	HP Slim USB Keyboard and Mouse	T6T83AA
	HP USB-C to USB-A Hub	Z6A00AA
	HP USB-C to VGA Adapter	N9K76AA
	HP USB-C to DisplayPort Adapter	N9K78AA
	Power	HP 65W USB-C Power Adapter
HP USB-C Notebook Power Bank		1TZ86AA
Storage	HP External USB Optical Drive	F2B56AA
Security	HP Nano Cable Lock	1AJ40AA
UCC	HP Conferencing Keyboard	K8P74AA#xxx
	HP USB Collaboration Keyboard	Z9N38AA#xxx
	HP Wireless Collaboration Keyboard	Z9N39AA#xxx
	HP UC Wireless Mono Headset	W3K08AA
	HP UC Wireless Duo Headset	W3K09AA
	HP UC Speaker Phone	K7V16AA
	HP UC Wired Headset	K7V17AA
Displays	HP EliteDisplay S140u USB Portable Monitor	G8R65AA
	HP EliteDisplay S340c 34-inch Curved Monitor	V4G46AA
	HP EliteDisplay S240n 23.8-inch Micro Edge Monitor	W9A88AA
	HP EliteDisplay E272q 27-inch QHD Monitor	M1P04AA
	HP EliteDisplay E230t 23-inch Touch Monitor	W2Z50AA
	HP EliteDisplay E240c 23.8-inch Collaboration Monitor	M1P00A8



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

Date of change:	Version History:		Description of change:
August 28, 2017	From V1 to V2	Update	Battery life information changed to "TBD"
September 11, 2017	From V2 To V3	Update	Incorrect header fixed on two pages
October 18, 2017	From V3 to V4	Update	Battery and Keyboard sections updated
November 6, 2017	From V4 to V5	Update	Note added to primary battery on Power section
November 13, 2017	From V5 to V6	Update	Display section updated
February 7, 2018	From V6 to V7	Update	Footnote n.10 removed from page 6 and replaced
May 8, 2018	From V7 to V8	Added	Environmental tab
July 11, 2018	From V8 to V9	Update	Warranty

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