Overview

HP ZBook Power G10 Mobile Workstation PC
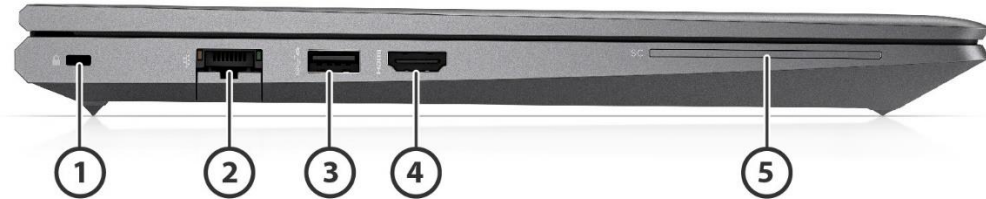

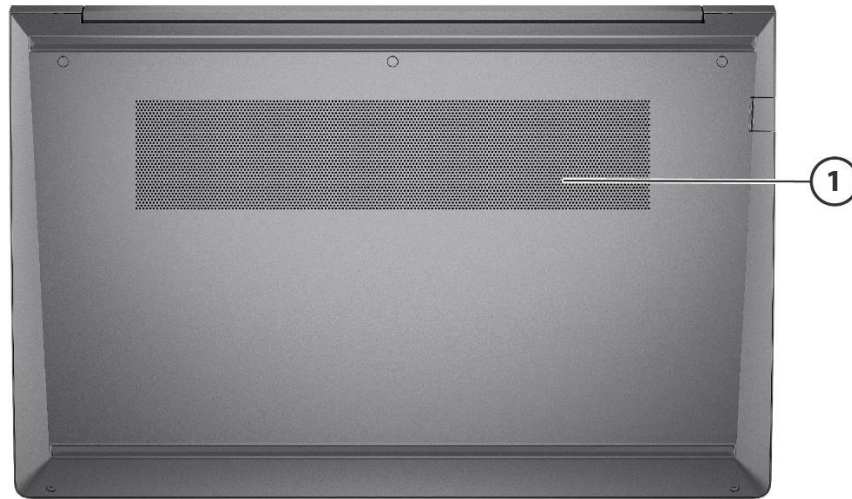|	**Right**
1. Webcam LED (Optional)	10. Power connector
2. Internal Microphones (2)	11. USB Type-C® with Thunderbolt™ 4
3. Webcam	12. USB 3.2 Gen 1
4. IR Camera (Optional)	13. USB 3.2 Gen 1
5. Camera Shutter	14. Audio Combo Jack
6. IR Camera LEDs (Optional)	15. Touch Fingerprint Sensor (Select models)
7. Glass Clickpad	16. Speakers
8. Power Button Key	
9. LED Indicator	

QuickSpecs

Overview

Left

1. Nano Security Lock Slot (Lock sold separately)
2. RJ-45
3. SuperSpeed USB Type-A 5Gbps signaling rate (Charging)
4. HDMI 2.1 port
5. Smart Card Reader (optional)

QuickSpecs

Overview

Bottom

1. Fan Venting

QuickSpecs

Overview

At A Glance

- Ultraslim design with precision-crafted all-metal chassis for a premium look and feel
- 13th Generation Intel® Core™ i5, i7, i9 H series Processors up to fourteen-core
- Preinstalled with Windows 11 versions or FreeDOS
- 5MP camera (with 88 degree Field of View) with HP Auto Frame allows you to move around without losing viewers' attention during video calls
- New DDR5 5200 memory with up to 64GB capacity and PCI Gen4 SSDs provide fast access to your work
- Choice of displays:
  - 39.6 cm (15.6") diagonal FHD (1920x1080) Anti-Glare, UWVA, Touch on Panel (TOP), 45% CG, 250nits, eDP 1.2, bent type LCD panel
  - 39.6 cm (15.6") diagonal FHD (1920x1080) Anti-Glare, UWVA, 45% CG, 250nits, eDP 1.2, bent type LCD panel
  - 39.6 cm (15.6") diagonal FHD (1920 x 1080) Anti-Glare, UWVA, Low Blue Light, 100% CG, 400nits, eDP 1.4, Low-Power, bent type LCD panel
  - 39.6 cm (15.6") diagonal QHD (2560 x 1440) Anti-Glare, UWVA, Low Blue Light, 100% CG, 300nits, eDP 1.4, bent type LCD panel
- Premium keyboard layout to include easy use of discrete PgUp/Dn, End, and Home keys
- Optional NVIDIA RTX A500/A1000/2000 ada/3000 ada pro graphics for improved performance for heavier graphics workloads.
- HP Wolf Security for Business creates a hardware-enforced, always-on, resilient defense.
- Larger Clickpad surface for easier, more intuitive input
- Undergoes MIL-STD 810H 19 tests
- Supports fast charging (50% in 30 minutes) with no impact on battery recharge cycles
- Designed to support all HP docking options

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

Features

OPERATING SYSTEM

Preinstalled OS   Windows 11 Pro [2]
Windows 11 Pro Education [2]
Windows 11 Home - HP recommends Windows 11 Pro for business [2]
Windows 11 Home Single Language - HP recommends Windows 11 Pro for business [2]
Windows 11 Pro (Windows 11 Enterprise or Windows 10 Enterprise available with a Volume Licensing Agreement)[2]
Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade)[2,3]
FreeDOS

[2] 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 is automatically updated and enabled. High speed internet and Microsoft account required. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com.
[3] This system is preinstalled with Windows 10 Pro software and also comes with a license for Windows 11 Pro software and provision for recovery software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.

NOTE: Your product does not support Windows 8 or Windows 7. 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. A full list of HP products and the Windows 10 versions tested is available on the HP support website. https://support.hp.com/us-en/document/c05195282

PROCESSOR

13th Generation Intel® Core™ i5-13500H with Intel® Iris® Xe Graphics (2.6 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 18 MB L3 cache, 4 P-cores and 8 E-cores, 16 threads) [1,2,3,4]

13th Generation Intel® Core™ i5-13600H with Intel® Iris® Xe Graphics (2.8 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 18 MB L3 cache, 4 P-cores and 8 E-cores, 16 threads), supports Intel® vPro® Technology [1,2,3,4,5]

13th Generation Intel® Core™ i7-13700H with Intel® Iris® Xe Graphics (2.4 GHz base frequency, up to 5.0 GHz with Intel® Turbo Boost Technology, 24 MB L3 cache, 6 P-cores and 8 E-cores, 20 threads); [1,2,3,4]

13th Generation Intel® Core™ i7-13800H with Intel® Iris® Xe Graphics (2.5 GHz base frequency, up to 5.2 GHz with Intel® Turbo Boost Technology, 24 MB L3 cache, 6 P-cores and 8 E-cores, 20 threads), supports Intel® vPro® Technology; [1,2,3,4,5]

13th Generation Intel® Core™ i9-13900HK with Intel® Iris® Xe Graphics (2.6 GHz base frequency, up to 5.4 GHz with Intel® Turbo Boost Technology, 24 MB L3 cache, 6 P-cores and 8 E-cores); [1,2,3,4]

13th Generation Intel® Core™ i9-13900H with Intel® Iris® Xe Graphics (2.6 GHz base frequency, up to 5.4 GHz with Intel® Turbo Boost Technology, 24 MB L3 cache, 6 P-cores and 8 E-cores, 20 threads), supports Intel® vPro® Technology [1,2,3,4,5]

[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, branding and/or naming is not a measurement of higher performance.
[2] Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
[3] Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.
[4] 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.

Features

[5] Intel vPro® requires Windows 10 Pro 64 bit or higher, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or Wi-Fi 6E WLAN and TPM 2.0. Some functionality requires additional 3rd party software in order to run. Features of vPro® Essentials and Enterprise vary. See http://intel.com/vpro

Features

CHIPSET

Chipset is integrated with processor

INTEL® CORE™ I5 WITH VPRO/CORE™ I7 WITH VPRO/ CORE™ I9 with VPRO TECHNOLOGY CAPABLE

Intel® Core™ i5 with vPro®, Core™ i7 with vPro®, Core™ i9 with vPro® technology is a selectable feature that is available on units configured with select processors, a qualified Intel® WLAN module and a preinstalled Windows® operating system. It provides advances in remote manageability, security, energy efficient performance, and wireless connectivity. Intel® Active Management Technology (iAMT) offers built-in manageability and proactive security for networked mobile workstations, even when they are powered off* or when the operating system is inoperable. It can help identify threats before they reach the network, isolate infected systems, and update regardless of their power state.[1,2]

[1] Requires a Windows operating system, network hardware and software, connection with a power source, and a direct (non-VPN) corporate network connection which is either cable or wireless LAN.
[2] Intel vPro® requires Windows 10 Pro 64 bit or higher, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or Wi-Fi 6E WLAN and TPM 2.0. Some functionality requires additional 3rd party software in order to run. Features of vPro® Essentials and Enterprise vary. See http://intel.com/vpro, see data sheet

GRAPHICS

Integrated

Intel® Iris® Xe Graphics [1, 3, 4, 5, 6]

Discrete

NVIDIA RTX A500 (4GB) [1,2,3,4,5]
NVIDIA RTX A1000 (6 GB) [1,2,3,4,5]
NVIDIA RTX 2000 Ada (8GB) [1,2,3,4,5]
NVIDIA RTX 3000 Ada (8GB) [1,2,3,4,5]

Supports

Support HD decode, DX12, HDMI 2.1, HDCP 2.3

[1] UHD content required to view UHD images.
[2] Discrete configurations support 4 independent displays when on the HP Thunderbolt Dock G2 (120W) (sold separately) - Max. resolution = 2.5K @60Hz (DP1) & 2.5K @60Hz (DP2) & FHD (VGA) OR 4K @60Hz (one DP Port) & 4K @60Hz (Type-C output port using a Type C-to-DP adapter).
[3] Support HD decode, DX12, HDMI 2.0b, HDCP 2.3 via DP up to 4K @ 60Hz and via HDMI up to 4096x2304 @ 60Hz
[4] HDMI cable Sold Separately
[5] Shared video memory (UMA) uses part of the total system memory for video performance. System memory dedicated to video performance is not available for other use by other programs.
[6] Intel® Iris® Xe Graphics capabilities require system to be configured with Intel® Core™ i5, i7, or i9 processors and dual channel memory. Intel® Iris® Xe Graphics with Intel® Core™ i5, i7, or i9 processors and single channel memory will only function as UHD graphics.

Features

DISPLAY

Non-touch
- 39.6 cm (15.6") diagonal FHD (1920x1080) Anti-Glare, UWVA, 45% CG, 250nits, eDP 1.2, bent type LCD panel
- 39.6 cm (15.6") diagonal FHD (1920 x 1080) Anti-Glare, UWVA, Low Blue Light, 100% CG, 400nits, eDP 1.4, Low-Power, bent type LCD panel
- 39.6 cm (15.6") diagonal QHD (2560 x 1440) Anti-Glare, UWVA, Low Blue Light, 100% CG, 300nits, , eDP 1.4, bent type LCD panel

Touch
- 39.6 cm (15.6") diagonal FHD (1920x1080) Anti-Glare, UWVA, Touch on Panel (TOP), 45% CG, 250nits, eDP 1.2, bent type LCD panel

Displays support
Supports up to 4 displays through the HP Thunderbolt 280W G4 Dock

[1]HD content required to view HD images.
[2]Sold separately or as an optional feature.
[3]Resolutions are dependent upon monitor capability, and resolution and color depth settings.
[4]Actual brightness will be lower with touchscreen.

Features

DOCKING

Docking station model #1	HP Thunderbolt™ 280W G4 Dock
Total number of supported displays (incl.the notebook) display)	4
Max.resolutions supported	Quad 4K @60Hz Dual 8K single cable@30 for Thunderbolt™ hosts or USB-C® hosts DisplayPort™ 1.4 with DSC in high res mode
Dock Connectors	2x DisplayPort™, 1xVGA, 1xThunderbolt™, 1xUSB-C® alt-mode
Technical limitations	Thunderbolt™ Hosts: Maximum of (4) displays with maximum resolution of 5K@ 30Hz running Thunderbolt™ host. Max resolution possible is dual 8K displays @ 60Hz running Thunderbolt™ host or running a non-Thunderbolt™ host in High Resolution mode @30Hz Non-Thunderbolt™ hosts: The highest resolution for dual displays running a non-Thunderbolt™ host in multi-function mode is (1) 5K dual cable (using both DisplayPort™ ports) +(1) 4K on USB-C® DisplayPort™ port Non-Thunderbolt™ hosts support (3) displays with a max resolution of: (2) 5K single cable + (1) 4K UHD @ 60 Hz in high resolution mode. In multi-function mode the maximum resolution for (3) displays is (2) 5K single cable @ 30Hz + (1) 4K UHD @ 30Hz.

Features

STORAGE AND DRIVES*

Max Storage
8TB through two m.2 NVMe drivers

(Up to 2) m.2 storage (NVMe PCIe Gen4 SSDs)

Primary M.2 Storage
2 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC
1 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC
4 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC
512 GB PCIe® Gen4x4 NVMe™ M.2 SSD TLC
512 GB PCIe® Gen4x4 NVMe™ SED TLC OPAL2
512 GB PCIe® NVMe™ Value M.2 SSD

Secondary M.2 Storage
2 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC
1 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC
4 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC
512 GB PCIe® Gen4x4 NVMe™ M.2 SSD TLC
512 GB PCIe® Gen4x4 NVMe™ SED TLC OPAL2

* For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB of disk is reserved for system recovery software.

DRIVE CONTROLLERS

M.2 Storage Bay (PCIe NVMe)	PCIe® Gen4 x4 lanes NVMe™ Solid State Drive
RAID:	RAID 0/1 is supported (and available from factory)

MEMORY

Maximum Memory
64GB DDR5-5200
Memory
64GB DDR5-5200 (2x32GB)
32GB DDR5-5200 (2x16GB)
32GB DDR5-5200 (1x32GB)
16GB DDR5-5200 (2x8GB)
16GB DDR5-5200 (1x16GB)
8GB DDR5-5200 (1x8GB)

Memory Slots
2 SODIMM
DDR5 SODIMMS, system runs at 5200
Supports Dual Channel Memory

[1] 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.

QuickSpecs

Features

NETWORKING/COMMUNICATIONS

WLAN[1,2]

Intel® AX211 Wi-Fi6E+Bluetooth® 5.3 M.2 1216 160MHz CNVi World-Wide WLAN vPro® wireless card
Intel® AX211 Wi-Fi6E+Bluetooth® 5.3 M.2 1216 160MHz CNVi World-Wide WLAN non-vPro® wireless card

[1] Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, and Windows 10 to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. And available in countries where Wi-Fi 6E is supported.
[2] Intel vPro® requires Windows 10 Pro 64 bit or higher, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or Wi-Fi 6E WLAN and TPM 2.0. Some functionality requires additional 3rd party software in order to run. Features of vPro® Essentials and Enterprise vary. See http://intel.com/vpro

Near Field Communication (NFC) module

No Near Field Communication (NFC) module

NFC Mirage WNC XRAV-1

Miracast

Native Miracast Support

NOTE: Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.

AUDIO/MULTIMEDIA

Audio
2 Integrated stereo speakers
Discrete Amplifiers
Integrated dual array microphone

Speaker Power
1W/8ohm Per speaker

Camera[1, 2]
HD camera
5 MP+IR camera

Sensors
Adaptive Color Sensor
Hall effect Sensor
HP Sure Platform
Motion AI LSM6DSL
Thermal Sensor
HP Tamper Lock[3]

[1] HD content required to view HD images.

[2] Windows Hello face authentication utilizes a camera specially configured for near infrared (IR) imaging to authenticate and unlock Windows devices as well as unlock your Microsoft Passport.
[3] HP Tamper Lock must be enabled by the customer or your administrator.

Features

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard*
HP Premium Keyboard, spill resistant, Backlit keyboard and DuraKeys
HP Premium Keyboard, spill resistant, Non-Backlit keyboard and DuraKeys

Pointing Devices
Clickpad with multi-touch gesture support, taps enabled as default
Microsoft Precision Touchpad Default Gestures Support

Function Keys
ESC: system information
F1 - Display Switching
F2 - Blank
F3 - Brightness Down
F4 - Brightness Up
F5 - Audio Mute
F6 - Volume Down
F7 - Volume Up
F8 - Mic Mute
F9 - Blank or Backlit Toggle
F10 - Insert
F11 - Airplane Mode
F12 - HP Command Center
home
end
Power Button (with LED)
delete
Hidden Keys
Fn+R - Break
Fn+S - Sys Rq
Fn+C - Scroll Lock

*Backlit keyboard is an optional feature.

SOFTWARE AND SECURITY

Software
HP PC Hardware Diagnostics Windows
Touchpoint Customizer for Commercial
myHP
HP Smart Support[24]
HP Connection Optimizer[10]
HP Mac Address Manager
HP Hotkey Support
HP Support Assistant[1]
HP Notifications
HP Privacy Settings
HP Power Manager[3]
Buy Microsoft Office (Microsoft Office sold separately and requires Internet access for activation.)
HP Performance Advisor[5]

Manageability Features
HP Connect for Microsoft Endpoint Manager[26]
HP Image Assistant Gen5 (download)
HP Manageability Integration Kit (download)[12]

Features

HP Client Management Script Library (download)
HP Patch Assistant (download)[27]
HP Driver Packs (download)
HP Cloud Recovery [28]
HP Client Catalog (download)

Security Management
HP Wolf Security of Business [29] includes:
HP Sure Click [30]
HP Sure Sense[19]
HP Sure Run Gen5[31]
HP Sure Recover Gen5[14]
HP Sure Start Gen7[16]
HP Tamper Lock[4]
HP Sure Admin[23]
HP Client Security Manager Gen7[18]

BIOS
HP BIOSphere Gen6[6]
HP Secure Erase[17]
Absolute Persistence Module[7]
HP DriveLock & Automatic DriveLock
BIOS Update via Network
HP Wake on WLAN
HP Fingerprint Sensor[32]
Secured-Core PC Enable[20]
TPM 2.0 Embedded Security Chip (Common Criteria EAL4+ Certified) (FIPS 140-2 Level 2 Certified)

For more information on HP Client Security Software Suite, refer to http://www.hp.com/go/clientsecurity.

[1] HP Support Assistant - Requires Windows and Internet Access.
[3] HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.
[4] HP Tamper Lock must be enabled by the customer or your administrator.
[5] HP Performance Advisor is ready and waiting to help you get the most out of your HP Workstation from day one—and every day after. Learn more or download at: https://www.hp.com/us-en/workstations/performanceadvisor.html
[6] HP BIOSphere Gen6 is available on select HP Pro, Elite and ZBook PCs. See product specifications for details. Features may vary depending on the platform and configurations.
[7] Absolute Persistence Module: 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.
[10] HP Connection Optimizer requires Windows 10 and beyond version.
[12] HP Manageability Integration Kit can be downloaded from http://www.hp.com/go/clientmanagement.
[14] HP Sure Recover Gen5 with Embedded Reimaging is an optional feature which requires Windows 10 and higher must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module
[15] HP Sure Recover with Embedded Reimaging Gen3 is an optional feature which must be configured at purchase with a base unit that has the On System Recovery (OSR) module . See product specifications for availability You must back up important files, data, photos, videos, etc. before use to avoid loss of data. HP Sure Recover with Embedded Reimaging (Gen1) does not support platforms with Intel® Optane™.
[16] HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher
[17] HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.
[18] HP Client Security Manager Gen7 requires Windows and is available on select HP Pro, Elite and ZBook PCs. See product specifications for details.
[19] HP Sure Sense is available on select HP PCs with Windows 10 Pro, Windows 10 Enterprise, Windows 11 Pro, or Windows 11 Enterprise OS.

Features

[20] Secured-core PC requires an Intel® vPro® or AMD Ryzen™ Pro processor. Requires 8 GB or more system memory. Secured-core PC functionality can be enabled from the factory.

[23] HP Sure Admin requires Windows 10, HP BIOS, HP Manageability Integration Kit from http://www.hp.com/go/clientmanagement and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store.

[24] HP Smart Support requires HP TechPulse to be installed. For more information about how to enable or to download HP Smart Support, please visit http://www.hp.com/smart-support .

[26] HP Connect for Microsoft Endpoint Manager is available from the Azure Market Place for HP Pro, Elite, Z and Point-of-Sale PCs managed with Microsoft Endpoint Manager. Subscription to Microsoft Endpoint Manager required and sold separately. Network connection required.

[27] HP Patch Assistant available on select HP PCs with the HP Manageability Kit that are managed through Microsoft System Center Configuration Manager. HP Manageability Integration Kit can be downloaded from http://www8.hp.com/us/en/ads/clientmanagement/overview.html.

[28] HP Cloud Recovery is available for Z by HP, HP Elite and Pro desktops and laptops PCs with Intel® or AMD processors and requires an open, wired network connection. **NOTE:** You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Detail please refer to: https://support.hp.com/us-en/document/c05115630.

[29] HP Wolf Security for Business requires Windows 10 or higher, includes various HP security features and is available on HP Pro, Elite, RPOS and Workstation products. See product details for included security features and OS requirement.

[30] HP Sure Click requires Windows 10 Pro or higher or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.

[31] HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.

[32] HP Fingerprint Reader is an optional feature that requires Windows 10 IoT and must be configured at purchase.

Features

POWER

Power Supply
HP Smart 150 W External AC power adapter

Battery
HP Long Life 6-cell, 83 Wh Polymer

Power Cord
3-wire plug – 1m

Battery life
Up to 14 hours 30 minutes

[1] MobileMark18 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.
[2] Supports HP Fast Charge Technology
[5] Actual battery Watt-hours (Wh) will vary from design capacity. Battery capacity will naturally decrease with shelf life, time, usage, environment, temperature, system configuration, loaded apps, features, power management settings and other factors.

ENVIRONMENTAL

ENERGY STAR® certified
EPEAT® registered where applicable. EPEAT ® registration varies by country. See www.epeat.net for registration status by country.
EPEAT® Gold[1]
TCO 8.0 Certified
RCTA DO-160G
Medical EMC: IEC 60601-1-2:2014 EN60601-1-2: 2015
SEPA
GS Mark
Eyesafe Certification - Worldwide

Sustainable Impact Specifications
Recycled Aluminum and Magnesium, 75% PCR w/30% ITE plastics

[1] Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.

Features

WEIGHTS & DIMENSIONS

Dimensions (w x d x h)
35.94 x 23.39 x 2.28 cm
14.15 x 9.21 x 0.9 in

Weights*
Starting at 2.00kg (4.43 lb)

*Weight will vary by configuration. Does not include power adapter.

PORTS/SLOTS

1 Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)
3 Super Speed USB Type-A 5Gbps signaling rate (1 charging)
1 HDMI 2.1
1 Headphone/microphone combo jack
1 Nano Security Lock Slot (Lock sold separately)
1 Smartcard reader (Optional)
1 nano SIM card slot

*SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.
*HDMI cable sold separately.

COMPATIBILITY

HP Wired USB-A Stereo Headset	428K6AA
HP Renew Business 17.3 Laptop Backpack	3E2U5AA
HP Universal USB-C Multiport Hub	50H55AA
HP Multi-Device 635 Black Wireless Mouse	1D0K2AA
HP 975 USB+Bluetooth® Dual-Mode Wireless Keyboard	3Z726AA

SERVICE AND SUPPORT

1-year warranty and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty except for HP Long Life batteries which will follow the one or three year warranty of 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.

[1] HP Care Packs are sold separately. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit http://www.hp.com/go/cpc. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.

SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	Nominal Operating Voltage	19.5V

Features

	System in idle mode + max panel brightness	6.36W
	Integrated graphics	Yes
	Discrete Graphics	Yes
	Max Operating Power	<150W
Temperature	**Operating**	32° to 95° F (0° 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%, 101.6° F (38.7° C) maximum wet bulb temperature
Shock	**Operating**	40G, 2ms
	Non-operating	240G, 2ms
Random Vibration	**Operating**	1.043 grms
	Non-operating	3.5 grms
Maximum Altitude (unpressurized)	**Operating**	-50 to 10,000 ft (-15.24 to 3,048 m)
	Non-operating	-50 to 40,000 ft (-15.24 to 12,192 m)
Temperature Derating with Altitude	**Operating**	1.8°F / 1000 ft (1°C / 304.8 m)
Planned Industry Standard Certifications	**Regulatory Model Number**	HSN-Q36C
	CSA/UL 62368-1	Yes
	CSA	Yes
	FCC/ICES/CISPR/VCCI	Yes
	ENERGY STAR®	Select models[1]
	EPEAT Gold	EPEAT Gold in United States[2]
	TCO	Yes
	China CCC/SRRC	Yes
	Korea KCC/KC/KES	Yes
	Taiwan BSMI/NCC	Yes
	CE MARKING	Yes
	EAEU compliance	Yes
	CITC	Yes
	WW RoHS	Yes
	EAEU compliance	Yes
	Saudi Arabian Compliance	Yes
	Ukraine NSoC/TEC	Yes
	Low Bluw Light	Yes

[1]Configurations of the HP ZBook Power G10 Mobile Workstation PC that are ENERGY STAR® qualified are identified as HP ZBook Power G10 Mobile Workstation PC ENERGY STAR on HP websites and on http://www.energystar.gov.
[2] Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.

QuickSpecs

Technical Specifications – Displays

DISPLAYS

Panel LCD 15.6 inch FHD (1920x1080) Anti-Glare WLED UWVA 45percent cg 250nits eDP 1.2 w/o PSR bent Touch on Panel NWBZ	**Outline Dimensions** (W x H)	350.96 x 205.54 mm (max)	
	Active Area	344.16 x 193.59 mm (typ.)	
	Weight	380 g (max)	
	Diagonal Size	15.6 inch	
	Thickness	3.2 mm / 5.2 mm (max)	
	Interface	eDP 1.2	
	Surface Treatment	Anti-Glare On-cell	
	Touch enabled	Yes	
	Contrast Ratio	600:1 (typ)	
	Refresh Rate	60 Hz	
	Brightness	250 nits (typ)	
	Pixel Resolution	**Pitch**	1920 x 1080 (FHD)
		Format	RGB Stripe
	Backlight	LED	
	Color Gamut Coverage	NTSC 45%	
	Color Depth	6	
	Viewing Angle	UWVA 85/85/85/85	
	Low Blue Light	No	
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	2.54 (Max) / 3.12 (Max)	

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

15.6 in FHD (1920 x 1080) Anti-Glare UWVA Low Blue Light sRGB NB2X 400 eDP 1.4+PSR2 Low-Power 100 bent LCD Panel	**Outline Dimensions** (W x H)	349.460 x 204.790 (max)	
	Active Area	344.160 x 193.590 mm (typ)	
	Weight	310 g (max)	
	Diagonal Size	15.6 (inch)	
	Thickness	2.6 mm / 4.8 mm (max)	
	Interface	eDP1.4	
	Surface Treatment	Anti-Glare	
	Touch enabled	No	
	Contrast Ratio	1200:1 (typ)	
	Refresh Rate	60 Hz	
	Brightness	400 nits (typ)	
	Pixel Resolution	**Pitch**	1920 x 1080 (FHD)
		Format	RGB Stripe
	Backlight	WLED	
	Color Gamut Coverage	sRGB 100%	
	Color Depth	8	
	Viewing Angle	UWVA 89/89/89/89	
	Low Blue Light	Yes	

Technical Specifications – Displays

	Power Consumption (W, EBL@ 150nits max/ 200nits max)	1.27 (max) / 1.5 (max)

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

15.6 inch FHD (1920x1080) Anti-Glare WLED UWVA 45percent cg 250nits eDP 1.2 w/o PSR bent NWBZ	**Outline Dimensions** (W x H)	350.960 x 205.540 (max)	
	Active Area	344.160 x 193.590 mm (typ)	
	Weight	370 g (max)	
	Diagonal Size	15.6	
	Thickness	3.0 mm / 5.0 mm (max)	
	Interface	eDP 1.2	
	Surface Treatment	Anti-Glare	
	Touch enabled	No	
	Contrast Ratio	600:1 (typ)	
	Refresh Rate	60 Hz	
	Brightness	250 nits (typ)	
	Pixel Resolution	**Pitch**	1920 x 1080 (FHD)
		Format	RGB Stripe
	Backlight	LED	
	Color Gamut Coverage	NTSC 45%	
	Color Depth	6 (Hi FRC w/ condition to enable)	
	Viewing Angle	UWVA 85/85/85/85	
	Low Blue Light	No	
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	2.62 (Max) / 3.27 (Max)	

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

15.6 in QHD (2560 x 1440) Anti-Glare UWVA Low Blue Light sRGB NWBZ 300 eDP 1.4+PSR2 100 120Hz bent LCD Panel	**Outline Dimensions (W x H)**	350.960 x 205.550 (max)	
	Active Area	344.2176 x 193.6224 mm	
	Weight	300 g (max)	
	Diagonal Size	15.6	
	Thickness	2.6mm /4.6 mm (Max)	
	Interface	eDP 1.4	
	Surface Treatment	Anti-Glare	
	Touch Enabled	No	
	Contrast Ratio	1000:1(typ)	
	Refresh Rate	120 Hz	
	Brightness	300 nits (typ)	
	Pixel Resolution	**Pitch**	2560x1440 (QHD)
		Format	RGB Stripe

Technical Specifications – Displays

Backlight	WLED
Color Gamut Coverage	sRGB 100%
Color Depth	8
Viewing Angle	UWVA 89/89/89/89
Low Blue Light	Yes
Power Consumption (W, EBL@ 150nits max/ 200nits max)	3.41 (max) / 4.06 (max)

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

QuickSpecs

Technical Specifications – Storage

STORAGE AND DRIVES

SSD 512GB 2280 PCIe-4x4 NVMe Three Layer Cell

Form Factor	M.2 2280
Capacity	512GB
NAND Type	TLC
Height	0.09 in (2.3 mm)
Width	0.87 in (22 mm)
Weight	0.02 lb (10 g)
Interface	PCIe NVMe Gen4X4

Performance	**Minimum Sequential Read**	**Minimum Sequential Write**
	6400 MB/s ±10%	3500 MB/s ±10%

Logical Blocks	1,000,215,215
Operating Temperature	32° to 158°F (0° to 70℃) [ambient temp]
Features	Pyrite 2.0; TRIM; L1.2

NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35 GB (for Windows 10) is reserved for system recovery software.

SSD 1TB 2280 PCIe-4x4 NVMe Three Layer Cell

Form Factor	M.2 2280
Capacity	1TB
NAND Type	TLC
Height	0.09 in (2.3 mm)
Width	0.87 in (22 mm)
Weight	0.02 lb (10 g)
Interface	PCIe NVMe Gen4X4

Performance	**Minimum Sequential Read**	**Minimum Sequential Write**
	6400 MB/s ±10%	5000 MB/s ±10%

Logical Blocks	2,000,409,264
Operating Temperature	32° to 158°F (0° to 70℃) [ambient temp]
Features	Pyrite 2.0; TRIM; L1.2

NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35 GB (for Windows 10) is reserved for system recovery software.

SSD 2TB 2280 PCIe-4x4 NVMe Three Layer Cell

Form Factor	M.2 2280
Capacity	2TB
NAND Type	TLC
Height	0.09 in (2.3 mm)
Width	0.87 in (22 mm)
Weight	0.02 lb (10 g)
Interface	PCIe NVMe Gen4X4

Performance	**Minimum Sequential Read**	**Minimum Sequential Write**
	6400 MB/s ±10%	5000 MB/s ±10%

Logical Blocks	4,000,797,360
Operating Temperature	32° to 158°F (0° to 70℃) [ambient temp]
Features	Pyrite 2.0; TRIM; L1.2

Technical Specifications – Storage

NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35 GB (for Windows 10) is reserved for system recovery software.

512GB PCIe-4x4 2280 NVME Self Encrypted OPAL2 Three Layer Cell Solid State Drive

Form Factor	M.2 2280	
Capacity	512GB	
NAND Type	Opal2 TLC	
Height	0.09 in (2.3 mm)	
Width	0.87 in (22 mm)	
Weight	0.02 lb (10 g)	
Interface	PCIe NVMe Gen4X4	
Performance	**Minimum Sequential Read**	**Minimum Sequential Write**
	6400 MB/s ±10%	3500 MB/s ±10%
Logical Blocks	1,000,215,215	
Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
Features	TCG Opal 2.0; TRIM; L1.2	

NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35 GB (for Windows 10) is reserved for system recovery software.

4TB PCIe-4x4 2280 NVMe Three Layer Cell double-sided M.2 Solid State Drive

Form Factor	M.2 2280	
Capacity	4TB	
NAND Type	TLC	
Height	0.09 in (2.3 mm)	
Width	0.87 in (22 mm)	
Weight	15g	
Interface	PCIe NVMe Gen4X4	
Performance	**Minimum Sequential Read**	**Minimum Sequential Write**
	6400 MB/s ±10%	5000 MB/s ±10%
Logical Blocks	8,001,594,720	
Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
Features	Pyrite 2.0; TRIM; L1.2	

NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35 GB (for Windows 10) is reserved for system recovery software.

SSD 512GB 2280 PCIe NVMe Value

Form Factor	M.2 2280	
Capacity	512GB	
NAND Type	TLC	
Height	0.09 in (2.3 mm)	
Width	0.87 in (22 mm)	
Weight	0.02 lb (10 g)	
Interface	PCIe NVMe	
Performance	**Minimum Sequential Read**	**Minimum Sequential Write**
	2200 MB/s ±10%	1000 MB/s ±10%
Logical Blocks	1000215216	
Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
Features	Pyrite 2.0; TRIM; L1.2	

Technical Specifications – Storage

NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35 GB (for Windows 10) is reserved for system recovery software.

QuickSpecs

Technical Specifications – Networking

NETWORKING/COMMUNICATION

Intel® AX211 Wi-Fi 6E +Bluetooth® 5.3 M.2 160MHz CNVi WLAN vPro® wireless card	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
	Interoperability	Wi-Fi certified
	Frequency Band	802.11b/g/n/ax • 2.402 – 2.482 GHz 802.11a/n/ac/ax • 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 • 5.955 – 6.415 GHz • 6.435 – 6.515 GHz • 6.535 – 6.875 GHz • 6.895 – 7.115 GHz
	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: max 300Mbps • 802.11ac : 1733Mbps • 802.11ax : max 2.4Gbps
	Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM , 1024QAM
	Security[1]	• 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 • WPA3 certification • IEEE 802.11i • WAPI
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points

Technical Specifications – Networking

Output Power[2]	• 802.11b : +17dBm minimum • 802.11g : +16dBm minimum • 802.11a : +17dBm minimum • 802.11n HT20(2.4GHz) : +14dBm minimum • 802.11n HT40(2.4GHz) : +13dBm minimum • 802.11n HT20(5GHz) : +14dBm minimum • 802.11n HT40(5GHz) : +13dBm minimum • 802.11ac VHT80(5GHz) : +10dBm minimum • 802.11ac VHT160(5GHz) : +10dBm minimum • 802.11ax HE40(2.4GHz) : +12dBm minimum • 802.11ax HE80(5GHz) : +10dBm minimum • 802.11ax HE160(5GHz) : +10dBm minimum
Power Consumption	• Transmit mode 2.0 W • Receive mode 1.6 W • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode 50 mW (WLAN unassociated) • Connected Standby 10mW • 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(VHT80) : –84dBm maximum • 802.11ac, MCS9(VHT80) : –59dBm maximum • 802.11ac, MCS9(VHT160) : –58.5dBm maximum •802.11ax, MCS11(HE40): –57dBm maximum •802.11ax, MCS11(HE80): –54dBm maximum •802.11ax, MCS11(HE160): –53.5dBm 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
Dimensions	1. Type 2230 : 2.3 x 22.0 x 30.0 mm 2. Type 1216: 1.67 x 12.0 x 16.0 mm
Weight	1. Type 2230 : 2.8g 2. Type 1216: 1.3g
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 Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)

LED Activity	LED Amber – Radio Off; LED Off – Radio ON

Technical Specifications – Networking

HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2/5.3 Wireless Technology

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 + 9.5 dBm for BR and EDR.
Power Consumption	Peak (Tx): 330 mW Peak (Rx): 230 mW Selective Suspend: 17 mW
Bluetooth Software Supported Link Topology	Microsoft Windows Bluetooth Software
Power Management	Microsoft Windows ACPI, and USB Bus Support
Certifications	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
Power Management Certifications	ETS 300 328, ETS 300 826 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 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) BT5.2 ESR9/10 Compliance LE Advertisement Extensions Channel Selection Algo Limited High Duty Cycle Non-Connectable Advertising 2Mbps LE LE Long Range BT5.3 Host to Controller Encryption Key Control Enahancements Compliance to the latest Errata Section 12.3 of BT 5.3 specification

Technical Specifications – Networking

*Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, and Windows 11 to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. And available in countries where Wi-Fi 6E is supported.

Intel® AX211 Wi-Fi 6E +Bluetooth® 5.3 M.2 160MHz CNVi WLAN non-vPro® wireless card	**Wireless LAN Standards**	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
	Interoperability	Wi-Fi certified
	Frequency Band	802.11b/g/n/ax • 2.402 – 2.482 GHz 802.11a/n/ac/ax • 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 • 5.955 – 6.415 GHz • 6.435 – 6.515 GHz • 6.535 – 6.875 GHz • 6.895 – 7.115 GHz
	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: max 300Mbps • 802.11ac : 1733Mbps • 802.11ax : max 2.4Gbps
	Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM , 1024QAM
	Security[1]	• 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 • WPA3 certification • IEEE 802.11i • WAPI
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)

Technical Specifications – Networking

Roaming	IEEE 802.11 compliant roaming between access points
Output Power[2]	• 802.11b : +17dBm minimum • 802.11g : +16dBm minimum • 802.11a : +17dBm minimum • 802.11n HT20(2.4GHz) : +14dBm minimum • 802.11n HT40(2.4GHz) : +13dBm minimum • 802.11n HT20(5GHz) : +14dBm minimum • 802.11n HT40(5GHz) : +13dBm minimum • 802.11ac VHT80(5GHz) : +10dBm minimum • 802.11ac VHT160(5GHz) : +10dBm minimum • 802.11ax HE40(2.4GHz) : +12dBm minimum • 802.11ax HE80(5GHz) : +10dBm minimum • 802.11ax HE160(5GHz) : +10dBm minimum
Power Consumption	• Transmit mode 2.0 W • Receive mode 1.6 W • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode 50 mW (WLAN unassociated) • Connected Standby 10mW • 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(VHT80) : –84dBm maximum • 802.11ac, MCS9(VHT80) : –59dBm maximum • 802.11ac, MCS9(VHT160) : –58.5dBm maximum •802.11ax, MCS11(HE40): –57dBm maximum •802.11ax, MCS11(HE80): –54dBm maximum •802.11ax, MCS11(HE160): –53.5dBm 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
Dimensions	1. Type 2230 : 2.3 x 22.0 x 30.0 mm 2. Type 1216: 1.67 x 12.0 x 16.0 mm
Weight	1. Type 2230 : 2.8g 2. Type 1216: 1.3g
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 Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)

Technical Specifications – Networking

LED Activity	LED Amber – Radio OFF; LED OFF – Radio ON

HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2/5.3 Wireless Technology

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 + 9.5 dBm for BR and EDR.
Power Consumption	Peak (Tx): 330 mW Peak (Rx): 230 mW Selective Suspend: 17 mW
Bluetooth Software Supported Link Topology	Microsoft Windows Bluetooth Software
Power Management	Microsoft Windows ACPI, and USB Bus Support
Certifications	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
Power Management Certifications	ETS 300 328, ETS 300 826 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 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) BT5.2 ESR9/10 Compliance LE Advertisement Extensions Channel Selection Algo Limited High Duty Cycle Non-Connectable Advertising 2Mbps LE LE Long Range BT5.3

Technical Specifications – Networking

	Host to Controller Encryption Key Control Enahancements
	Compliance to the latest Errata Section 12.3 of BT 5.3 specification
Security & Manageability	Intel® vPro® support with appropriate Intel® chipset components

*Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, and Windows 11 to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. And available in countries where Wi-Fi 6E is supported.

NFC NXP NPC300

Dimensions (L x W x H)	17 x 10 x 2.0 mm
Chipset	NPC300
System interface	I2C
NFC RF standards	ISO/IEC 14443 A ISO/IEC 14443 B ISO/IEC 15693 ISO/IEC 18092 ECMA-340 NFCIP-1 Target and Initiator ECMA-320 NFCIP-2
NFC Forum Support	Tag Type 1, Type 2, Type3 and Type 4, NFCIP-1 and NFCIP-2
Reader (PCD-VCD) Mode	ISO/IEC 14443 A ISO/IEC 14443 B ISO/IEC 15693 MIFARE 1K MIFARE 4K MIFARE DESFire FeliCa Jewel and Topaz cards
Card Emulation (PICC-VICC) Mode	ISO/IEC 14443 A ISO/IEC 14443 B and B' MIFARE FeliCa
Frequency	13.56 MHz
NFC Modes Supported	Reader/Writer, Peer-to-Peer
Raw RF Data Rates	106, 212, 424, 848 kbps
Operating temperature	0°C to 70°C
Storage temperature	-20°C to 125°C
Humidity	10-90% operating 5-95% non-operating
Supply Operating voltage	4.35 to 5.25 Volts
I/O Voltage	1.8V or 3.3V

Power Consumption	**Booster enable, VCC_BOOST = 5V) Mode Power Consumption, Typical**	VBAT= 3.3V,	
		Polling	7.3 mA
		Detected Test Tag Type 1	Total 283.8 mA Net Module 236.8 mA
		Detected Test Tag Type 2	Total 288.8 mA Net Module 241.8 mA
		Detected Test Tag Type 3	Total 287.7 mA Net Module 240.7 mA

Technical Specifications – Networking

	Detected Test Tag Type 4	Total 282.3 mA Net Module 235.3 mA
Antenna		Antenna connector, 0.5mm pitch, 7 connector FPC. Antenna matching is external to module.

AUDIO

HD Stereo Codec	Realtek ALC3247
Audio I/O Ports	Headset : CTIA only and Headphone-out
Internal Speaker Amplifier	Realtek ALC3247 Class D
Multi-streaming Capable	Playback multi-streaming can be enabled in the audio control panel to allow independent audio. Following MSFT Behaviour
Sampling	streams to be sent to/from the front and rear jacks or integrated speaker.
Wavetable Syntheses	DAC: 48000Hz ADC: 48000Hz
Analog Audio	Support 3.5mm Headset : CTIA only and Headphone-out
# of Channels on Line-Out	No line out
Internal Speaker	Yes

FINGERPRINT READER

Sensor vendor	ELAN 80SW
Sensor type	Capacitive
DPI resolution	508 DPI
Scan area	80x80 pixels
False Rejection Rate	<3%
False Acceptance Rate	< 0.001%
Mobile Voltage Operation	2.7~3.6V
Operating Temperature	-20°C - +80°C
Current Consumption Image	35mA peak
Low Latency Wait For Finger	300uA
Capture Rate	Capture Rate: 50 frame/sec
ESD Resistance	IEC 61000-4-2 4B (+15KV)
Detection Matrix	508 dpi / 4x4mm sensor area

POWER

AC Adapter 150 Watt Smart PFC Slim Barrel 4.5mm Right Angle	**Dimensions**	5.43 x 2.59 x 0.39 in (13.8x6.6x2.2cm)
	Weight	0.716 lb (325 g) max (Not including power cord. Power cord varies by country.)

QuickSpecs

Technical Specifications – Networking

Input	**Input Efficiency**	88% at 115 Vac and 89% at 230Vac
	Input frequency range	47 ~ 63 Hz
	Input AC current	2.7 A at 90 Vac
Output	**Output power**	150W
	DC output	19.5V
	Hold-up time	100% load 5ms at 115 Vac input
	Output current limit	<16.0A
Connector	C6	
	DC Plug	4.5mm Barrel Type
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 5000m)
	Humidity	20% to 95
	Storage Humidity	10% to 95%
EMI and Safety Certifications	*CE Mark - full compliance with LVD and EMC directives *Worldwide safety standards - IEC60950-1 and IEC62368-1 : 2018, EN62368-1:2014+A11, UL62368-1 *Agency approvals - C-UL-US, TUV/GS, TUV/PSE, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC and CECP, CU(EAC), EAEU, KCC(Safety+EMC), NOM-001 and 029 NYCE, NRcan, NRCS, ISC, SEC, PSB, Argentina S-mark, Australia GEMS and RCM, BIS, BSMI, UAE, UKCA DoC	

QuickSpecs

Technical Specifications – Power

Battery 6 Cell WHr 83 Long Life -PL Fast Charge	**Dimensions (H x W x L)**	7.78 x 316.1 x70.2mm (0.306 x 12.44 x 2.763 inch)	
	Weight	0.31kg (0.683lb)	
	Cells/Type	6cell Lithium-Ion Polymer cell / 685257	
	Energy	Voltage	11.58V
		Amp-hour capacity	7.170Ah
		Watt-hour capacity	83Wh
	Temperature	Operating (Charging)	32˚ to 113˚ F (0˚ to 45˚ C)
		Operating (Discharging)	14˚ to 122˚ F (-10˚ to 60˚ C)
	Fuel Gauge LED	NA	
	Warranty	Refer to http://www.hp.com/support/batterywarranty/ for battery warranty information.	
	Optional Travel Battery Available	N/A	

*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.

Technical Specifications – Environmental

ENVIRONMENTAL DATA

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®
- US Federal Energy Management Program (FEMP)
- EPEAT□ Gold registered in the United States. See http://www.epeat.net for registration status in your country.
- TCO Certified
- China Energy Conservation Program (CECP)
- China State Environmental Protection Administration (SEPA)
- Taiwan Green Mark
- Korea Eco-label
- Japan PC Green label*

Sustainable Impact Specifications	• Ocean-bound plastic in Speaker • 14.3% post-consumer recycled plastic • 50% recycled metal • Low halogen • Outside Box and corrugated cushions are 100% sustainably sourced and recyclable • Molded Paper Pulp Cushion inside box is 100% sustainably sourced and recyclable • Bulk packaging available
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a "Typically Configured Notebook".

Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	6.25 W	6.11 W	6.13 W
Normal Operation (Long idle)	1.42 W	1.5 W	1.4 W
Sleep	1.42 W	1.5 W	1.4 W
Off	0.4 W	0.42 W	0.4 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.

Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	21.4 BTU/hr	20.9 BTU/hr	21.0 BTU/hr
Normal Operation (Long idle)	4.9 BTU/hr	5.1 BTU/hr	4.8 BTU/hr
Sleep	4.9 BTU/hr	5.1 BTU/hr	4.8 BTU/hr
Off	1.4 BTU/hr	1.4 BTU/hr	1.4 BTU/hr

Technical Specifications – Environmental

*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_{Wad}, bels)	Sound Pressure (L_{pAm}, decibels)
Typically Configured – Idle	2.6	13.9
Fixed Disk – Random writes	2.6	14.5
Optical Drive – Sequential reads	3.4	32.3

Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.
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 - Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. - This product is 94.3% recycle-able when properly disposed of at end of life.

Packaging Materials	**External:**	PAPER/Corrugated	245g
		PAPER/Corrugated	50g
		PAPER/Molded pulp	170g
	Internal:	PLASTIC/Polyethylene low density-LDPE	10g

The plastic packaging material contains at least 0.0% recycled content.

The corrugated paper packaging materials contains at least 58.8% recycled content.

RoHS Compliance	HP Inc. complies fully with materials regulations. We were among the first companies to extend the restrictions in the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive to our products worldwide through the HP GSE. HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam. We believe the RoHS directive and similar laws play an important role in promoting industry-wide elimination of substances of concern. We have supported the inclusion of additional substances—including PVC, BFRs, and certain phthalates—in future RoHS legislation that pertains to electrical and electronics products. We met our voluntary objective to achieve worldwide compliance with the new EU RoHS requirements for virtually all relevant products by July 2013, and we will continue to extend the scope of the commitment to include further restricted substances as regulations continue to evolve.

Technical Specifications – Environmental

To obtain a copy of the HP RoHS Compliance Statement, see HP RoHS position statement.

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/supplychain/gen_specifications.html):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants – may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Bis(2-Ethylhexyl) phthalate (DEHP)
- Benzyl butyl phthalate (BBP)
- Dibutyl phthalate (DBP)
- Diisobutyl phthalate (DIBP)
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user.
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

Packaging Usage

HP follows these guidelines to decrease the environmental impact of product packaging:
- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

End-of-life Management and Recycling

HP 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.

Technical Specifications – Environmental

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.

HP Inc. Corporate Environmental Information

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

Global Citizenship Report
http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html
Eco-label certifications
http://www8.hp.com/us/en/hp-information/environment/ecolabels.html
ISO 14001 certificates:
http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842
and
http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

Footnotes

- Percentage of ocean-bound plastic contained in each component varies by product
- Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard.
- External power supplies, WWAN modules, power cords, cables and peripherals excluded.
- 100% outer box packaging and corrugated cushions made from sustainably sourced certified and recycled fibers.
- Fiber cushions made from 100% recycled wood fiber and organic materials.
- Plastic cushions are made from >90% recycled plastic.
- Recycled metal is expressed as a percentage of the total weight of the metal according to ISO 14021 definitions for metal parts over 25 grams

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

Type	Description	Part #
Cases	HP Prelude Pro Recycle Backpack	1X644AA
	HP Prelude Pro Recycle Top Load	1X645AA
	HP Prelude 15.6 Top Load	1E7D7AA
	HP Prelude 15.6 Top Load	2Z8P4AA
	HP Prelude 15.6 Top Load	50P31AA
	HP Prelude 15.6 Backpack	1E7D6AA
	HP Prelude 15.6 Backpack	2Z8P3AA
	HP Prelude 15.6 Backpack	50P32AA
	HP Renew Business 17.3 Laptop Backpack	3E2U5AA
	HP Renew Business 17.3 Laptop Bag	3E2U6AA
	HP Renew Business 15.6 Laptop Bag	3E5F8AA
	HP Renew Executive 16 Laptop Backpack	6B8Y1AA
	HP Renew Executive 16 Laptop Bag	6B8Y2AA
	HP Travel 25 Liter 15.6 Iron Gray Laptop Backpack	6B8U4AA
	HP Travel 25 Liter 15.6 Iron Gray Laptop Backpack	6H2D8AA
	HP Travel 18 Liter 15.6 Iron Gray Laptop Backpack	6B8U6AA
	HP Travel 18 Liter 15.6 Iron Gray Laptop Backpack	6H2D9AA
Docking Station	HP USB-C Dock G5	26D32AA
	HP USB-C Dock G5	5TW10AA
	HP USB-C/A Universal Dock G2	5TW13AA
	HP USB-C/A Universal Dock G2 TAA	7UP88AA
	HP Thunderbolt 120W G4 Dock	4J0A2AA
	HP Thunderbolt 280W G4 Dock w/Combo Cable	4J0G4AA
Adapter/Dongle	HP HDMI to VGA Adapter	H4F02AA
	HP USB-C to USB 3.0 Adapter	N2Z63AA
	HP USB-C to DisplayPort Adapter	N9K78AA
	HP USB-C to VGA Adapter	N9K76AA
	HP USB-C to VGA Adapter	P7Z54AA
	HP USB-C to HDMI 2.0 Adapter	1WC36AA
	HP USB-C to HDMI 2.0 Adapter	2PC54AA
	HP 7.4 mm to 4.5 DC dongle	K0Q39AA
	HP USB-C to RJ45 Adapter G2	4Z527AA
	HP USB-C to RJ45 Adapter G2	4Z534AA
	HP USB 3.0 to Gig RJ45 Adapter G2	4Z7Z7AA
	HP USB-C to USB-C 100W Cable	5AR72AA
Audio/Video	HP USB G2 Stereo Headset	428H5AA
	HP USB G2 Stereo Headset	428K6AA
	HP 3.5mm G2 Stereo Headset	428H6AA
	HP 3.5mm G2 Stereo Headset	428K7AA
	HP 365 BT Speaker	567D3AA

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

	HP 325 FHD USB-A Webcam	53X27AA
	HP 965 4K Streaming Webcam	695J5AA
	HP 620 FHD Webcam	6Y7L2AA
Hub	HP USB-C to USB-A Hub	Z6A00AA
Storage	HP 512GB PCIe-4x4 NVMe M.2 Solid State Drive	5R8X9AA
	HP 1TB PCIe-4x4 NVMe M.2 Solid State Drive	5R8Y0AA
	HP 2TB PCIe-4x4 NVMe TLC M.2 Solid State Drive	6D8L6AA
	HP USB External DVDRW Drive	F2B56AA,Y3T76AA
Keyboard/Combo	HP 320K Wired Keyboard	9SR37AA
	HP 125 Wired Keyboard	266C9AA
	HP 975 USB+BT Dual-Mode Wireless Keyboard	3Z726AA
	HP 455 Programmable Wireless Keyboard	4R177AA
	HP 355 Compact Multi-Device Keyboard	692S9AA
	HP Wireless Rechargeable 950MK Mouse and Keyboard	3M165AA
	HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA
	HP 235 Wireless Mouse and Keyboard Combo	1Y4D0AA
	HP 225 Wired Mouse and Keyboard Combo	286J4AA
	HP 225 Antimicrobial Wired Mouse and Keyboard Combo	286K3AA
	HP 655 Wireless Keyboard and Mouse Combo	4R009AA
	HP 155 Wired Mouse and Keyboard Combo	5B8C0AA
Display	HP Z24f G3 FHD Display	3G828AA
	HP Z27q G3 QHD Display	1C4Z7AA
	HP Z24n G3 WUXGA Display	1C4Z5AA
	HP Z34c G3 WQHD Curved Display	30A19AA
	HP Z24q G3 QHD Display	4Q8N4AA
	HP Z24m G3 QHD Conferencing Display	4Q8N9AA
	HP Z32k G3 4K USB-C Display	50U19AA
Mouse	HP Wired 320M Mouse	9VA80AA
	HP Travel USB Mouse	G1K28AA
	HP Premium Wireless Mouse	1JR31AA
	HP Travel Bluetooth Mouse	6SP30AA
	HP Multi-Device 635 Black Wireless Mouse	1D0K2AA
	HP Creator 935 Black Wireless Mouse	1D0K8AA
	HP 235 Slim Wireless Mouse	4E407AA
	HP 128 LSR Wired Mouse	265D9AA
	HP 125 Wired Mouse	265A9AA
	HP 435 Multi-Device Wireless Mouse	3B4Q5AA
	HP 155 Wired Mouse	5B8B7AA
	HP 715 Rechargeable Multi-Device Bluetooth Mouse	6E6F0AA

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

	HP 925 Ergonomic Vertical Wireless Mouse	6H1A5AA
Power Adapter	HP 150W Slim Smart 4.5mm AC Adapter	4SC18AA
	HP ZBook 200W Slim Smart 4.5mm AC Adapter	491C7AA
	HP ZBook 230W Slim Smart 4.5mm AC Adapter	6E6M1AA
Security	HP Nano Keyed Cable Lock	1AJ39AA
	HP Nano Master Keyed Cable Lock	1AJ40AA
	HP Sure Key Cable Lock	6UW42AA
	HP Nano Combination Cable Lock	63B28AA
	HP Essential Nano Combination Cable Lock	63B31AA

Intel, Core, and Celeron, Thunderbolt and vPro are registered trademarks or trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries. Bluetooth is a registered trademark of its proprietor used by HP Inc. under license. AMD, FirePro, and Enduro are trademarks of Advanced Micro Devices, Inc. Adobe is a trademark of Adobe Systems Incorporated. Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation in the United States and/or other countries. Qualcomm and Snapdragon are trademarks of Qualcomm, Inc. SD, SDHC, and SDXC are trademarks or registered trademarks of SD-3C in the United States, other countries or both. USB Type-C and USB-C are trademarks of USB Implementers Forum. ENERGY STAR® is a registered trademark mark of the U.S. Environmental Protection Agency.

Date of change:	Version History:		Description of change:
June 6, 2023	From v1 to v2	Changed	STORAGE AND DRIVES section
June 28, 2023	From v2 to v3	Changed	PROCESSOR section
July 5, 2023	From v3 to v4	Changed	ENVIRONMENTAL DATA section