Overview

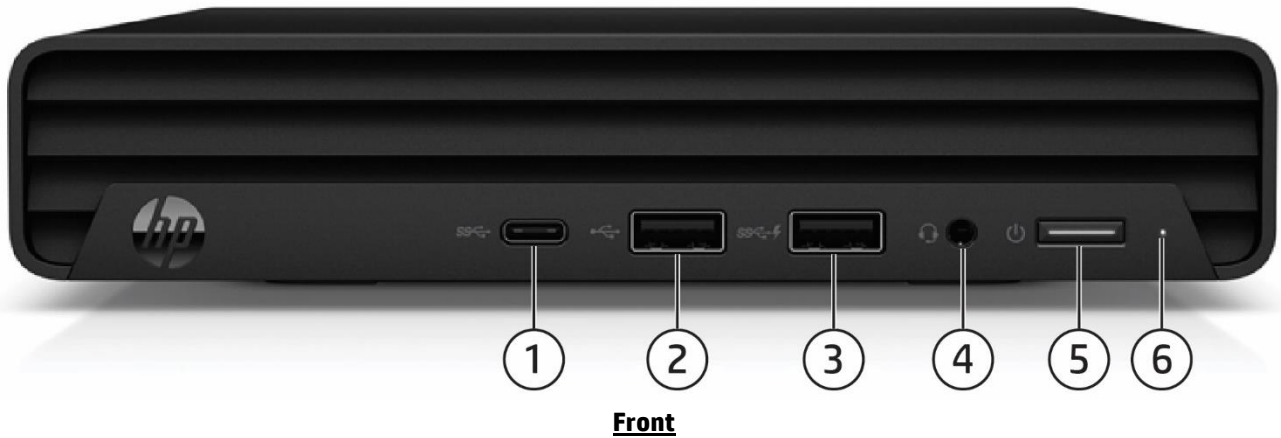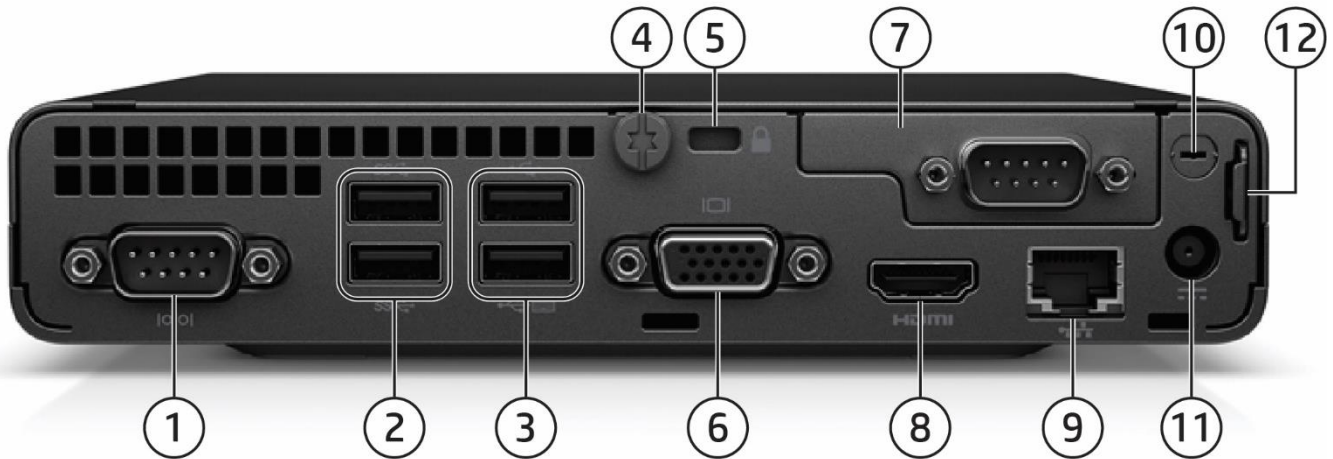**HP 260 G4 Desktop Mini PC**

Front

1. Type-C® SuperSpeed USB 10Gbps signaling rate port (charge support up to 5V/3A)
2. Type-A Hi-Speed USB 480Mbps signaling rate port
3. Type-A SuperSpeed USB 5Gbps signaling rate port (charge support up to 5V/1.5A)

Not Shown
(2) M.2 (1 as M.2 2230 socket for WLAN/BT and 1 as M.2 2280 socket for storage)
(1) 2.5" internal storage drive bay

4. Combo Audio Jack with CTIA and OMTP headset support
5. Dual-state power button
6. Hard drive activity light

Not all configuration components are available in all regions/countries.
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Overview

HP 260 G4 Desktop Mini PC

<u>Back</u>

1. Serial
2. (2) Type-A SuperSpeed USB 5Gbps signaling rate port
3. (2) Type-A Hi-Speed USB 480Mbps signaling rate port (supporting wake from S4/S5 with keyboard/mouse connected and enabled in BIOS)
4. Cover release thumbscrew
5. Standard cable lock slot (10 mm)

6. VGA
7. Flex Port, choice of Serial[1]
8. HDMI 1.4
9. RJ45 network connector
10. External WLAN antenna opening[1]
11. Power connector
12. Retractable Padlock loop

1. Must be configured at time of purchase

Not all configuration components are available in all regions/countries.
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Overview

AT A GLANCE

- 10th Generation Intel® processors[1] (up to Core™ i5), featuring integrated Intel® UHD Graphics
- Choice of Windows 10 Professional, Windows 10 Home, and FreeDOS
- Up to 32GB of DDR4 Synchronous Dynamic Random Access Memory (SDRAM)
- Optional M.2 PCIe NVMe solid state drives (SSD) enabling faster system startup and application launches
- Support for up to two monitors via two standard HDMI 1.4 and VGA connectors
- Serial port support comes standard, with ability to configure one additional for a total of two, enabling support for legacy peripherals
- Integrated 10/100/1000 Ethernet Controller
- Optional Wi-Fi 5 (802.11ac) connectivity
- Trusted Platform Module (TPM) 2.0[2]
- VESA mounting incorporated into chassis design
- Dust filter available
- High efficiency energy saving power supply
- PC chassis and all internal components and modules are manufactured with low halogen content[3]
- Protected by HP Services, including limited warranties up to 3-3-3 (terms and conditions vary by country; certain restrictions and exclusions apply); Care Packs available with up to 3 years Next Business Day Onsite Hardware Support
- Compliance with CE (Class B) / FCC (Class B) / UL (UL60950-1 / UL62368-1) / CSA (CSA C22.2 No.60950-1-07 / CSA C22.2 No. 62368-1-14) / ICES-003 / CCC / VCCI (Class B) / KCC (Class B)

1. Multi core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 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. In some scenarios, machines pre-configured with Windows OS might ship with TPM turned off.
3. External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.

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

Not all configuration components are available in all regions/countries.

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Standard Features and Configurable Modules

OPERATING SYSTEMS

Preinstalled (Windows)

Windows® 10 Pro 64 – HP recommends Windows 10 Pro [1]
Windows® 10 Pro 64 (National Academic License)[1,2]
Windows® 10 Home 64[1]

Web Support

Windows® 10 Enterprise 64 (Web Support)[1]

1. Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com/
2. Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see https://aka.ms/ProEducation for Windows 10 Pro Education feature information.
NOTE: Your product does not support Windows 8 or Windows 7In 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

PROCESSORS

Intel® 10th Generation Core™ Processors
Intel® Core™ i5-10210U Processor[1]
15W
1.6 GHz base frequency
Up to 4.2 GHz max. turbo frequency with Intel® Turbo Boost Technology[2]
6 MB cache, 4 cores, 8 threads
Intel® UHD Graphics
Supports DDR4 memory up to 2666 MT/s data rate

Intel® Core™ i3-10110U Processor[1]
15W
2.1 GHz base frequency
Up to 4.1 GHz max. turbo frequency with Intel® Turbo Boost Technology[2]
4 MB cache, 2 cores, 4 threads
Intel® UHD Graphics
Supports DDR4 memory up to 2666 MT/s data rate

Intel® Pentium® Processors
Intel® Pentium® Gold 6405U Processor[1]
15W
2.4 GHz base frequency
2 MB cache, 2 cores, 4 threads
Intel® UHD Graphics
Supports DDR4 memory up to 2400 MT/s data rate

Intel® Generation Celeron® Processors
Intel® Celeron® 5205U Processor[1]
15W
1.9 GHz base frequency
2 MB cache, 2 cores, 2 threads

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Standard Features and Configurable Modules

Intel® UHD Graphics
Supports DDR4 memory up to 2400 MT/s data rate

1: Multi-core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 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. Intel® Turbo Boost technology requires a PC with a processor with Intel Turbo Boost capability. Intel Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.

GRAPHICS

Integrated

Intel® UHD Graphics

NOTE: Intel® integrated UHD Graphics varies by processor

STORAGE*

2.5 inch SATA Hard Disk Drives (HDD)

500GB 7200RPM 2.5in SATA HDD

1TB 7200RPM 2.5in SATA HDD

2TB 5400RPM 2.5in SATA HDD

M.2 PCIe NMVe Solid State Drives (SSD)

256GB M.2 2280 PCIe NVMe SSD

512GB M.2 2280 PCIe NVMe SSD

128GB M.2 2280 PCIe NVMe Three Layer Cell SSD

256GB M.2 2280 PCIe NVMe Three Layer Cell SSD

512GB M.2 2280 PCIe NVMe Three Layer Cell SSD

1TB M.2 2280 PCIe NVMe Three Layer Cell SSD

*NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

Not all configuration components are available in all regions/countries.
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Standard Features and Configurable Modules

MEMORY

Type

DDR4-2666 (Transfer rates up to 2666 MT/s)

Maximum

32 GB capacity

Memory Configurations

2 SODIMMs

4 GB (4 GB x 1)

8 GB (4 GB x 2)

8 GB (8 GB x 1)

16 GB (8 GB x 2)

16 GB (16 GB x 1)

32 GB (16 GB x 2)

NOTE: For systems configured with more than 3 GB of memory and a 32-bit operating system, all memory may not be available due to system resource requirements. Addressing memory above 4 GB requires a 64-bit operating system.
NOTE: Memory modules support data transfer rates up to 2666 MT/s; actual data rate is determined by the system's configured processor. See processor specifications for supported memory data rate.
NOTE: All memory slots are customer accessible / upgradeable.

NETWORKING/COMMUNICATIONS

Networking

Realtek RTL8111HSH-CG Gigabit Network Connection

Wireless[1]

Realtek RTL8822CE Wi-Fi 5 (802.11ac) 2x2 with Bluetooth® M.2 Combo Card

Realtek RTL8821CE Wi-Fi 5 (802.11ac) 1x1 with Bluetooth® M.2 Combo Card

1. Wireless access point and Internet service required and not included. Availability of public wireless access points limited.

KEYBOARDS/POINTING DEVICES

Keyboard

HP Wired Desktop 320K Keyboard
HP USB Business Slim Standalone Wired Keyboard
HP Universal USB Wired Keyboard

Mouse

HP Wired Desktop 320M Mouse
HP USB Optical Wired Mouse
HP USB Hardened Optical Wired Mouse

NOTE: Availability may vary by country

Not all configuration components are available in all regions/countries.
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Standard Features and Configurable Modules

SECURITY

TPM 2.0 (FW: 7.85) endpoint security controller (Infineon SLB9670) shipped with Windows 10. Common Criteria EAL4+ Certified. FIPS 140-2 Level 2 Certified.

Intrusion Sensor (integrated in the system board, can be enabled/disabled through BIOS)

Support for chassis cable lock devices

Support for chassis padlocks devices

SATA port disablement (via BIOS)

Serial, USB enable/disable (via BIOS)

Removable media write/boot control

Power-on password (via BIOS)

Setup password (via BIOS)

PORTS

Internal slots and Ports

(1) M.2 PCIe x1 2230 (for WLAN)

(1) M.2 PCIe x4 2280 (for storage)

(1) Integrated SATA storage connector

NOTE: For Desktop Mini with M.2 Storage config, there will be no SATA drive bracket. If you plan to use or upgrade the storage with any 2.5" SATA drive, please select a DM SATA Drive Bracket (available as both factory configured and after market option).

Bays

2.5" Internal Storage Drive

Standard User Accessible Ports

Front	(1) Type-C® SuperSpeed USB 10Gbps signaling rate port
	(1) Type-A Hi-Speed USB 480Mbps signaling rate port
	(1) Type-A SuperSpeed USB 5Gbps signaling rate port
	(1) Combo Audio Jack with CTIA and OMTP headset support
Rear	(2) Type-A SuperSpeed USB 5Gbps signaling rate port
	(2) Type-A Hi-Speed USB 480Mbps signaling rate port
	(1) VGA
	(1) HDMI 1.4
	(1) RJ45
	(1) Serial (RS-232)

Configurable Non-PCIe/PCI Slot User Accessible Ports

Rear	Flexible Port, choice of Serial (RS-232)

Not all configuration components are available in all regions/countries.
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Standard Features and Configurable Modules

USB SPECIFICATION AND MARKETING NAME MAPPING TABLE

Marketing Name	Technical Terminology
Hi-Speed USB 480Mbps signaling rate	USB 2.0
SuperSpeed USB 5Gbps signaling rate	USB 3.2 Gen 1
SuperSpeed USB 10Gbps signaling rate	USB 3.2 Gen 2
SuperSpeed USB 20Gbps signaling rate	USB 3.2 Gen 2x2

Not all configuration components are available in all regions/countries.
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Standard Features and Configurable Modules

SOFTWARE COMPONENTS AND APPLICATIONS WITH WINDOWS

Software

HP Desktop Support Utilities

HP JumpStarts

HP Support Assistant[1]

Buy Office (Sold separately)

Manageability Features

HP Cloud Recovery[2]

Client Security Software

Windows Defender[3]

McAfee LiveSafe™ (1 year subscription)[4]

Security Management

Serial, USB enable/disable (via BIOS)

Power-on password (via BIOS)

Setup password (via BIOS)

1. HP Support Assistant requires Windows and Internet access.
2. HP Cloud Recovery is available for select HP 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.
3. Windows Defender Opt In, Windows 10, and internet connection required for updates.
4. Availability may vary by country. McAfee LiveSafe 30-day free trial offer (Internet access required. First 30 days included. Subscription required for live updates afterwards.)

UNIT ENVIRONMENT AND OPERATING CONDITIONS

General Unit Operating Guidelines
  • Keep the computer away from excessive moisture, direct moisture and the extremes of heat and cold, to ensure that unit is operated within the specified operating range.
  • Leave a 10.2 cm (4 in) clearance on all vented sides of the computer to permit the required airflow.
  • Never restrict airflow into the computer by blocking any vents or air intakes.
  • Do not stack computers on top of each other or place computers so near each other that they are subject to each other's re-circulated or preheated air.
  • Occasionally clean the air vents on the front, back, and any other vented side of the computer. Lint, dust and other foreign matter can block the vents and limit the airflow.
  • If the computer is to be operated within a separate enclosure, intake and exhaust ventilation must be provided on the enclosure, and the same operating guidelines listed above will still apply.

Temperature Range	Operating:	50° to 95° F (10° to 35° C)[1]
	Non-operating:	-22° to 140° F(-30° to 60° C)
Relative Humidity	Operating:	10% to 90% (non-condensing at ambient)
	Non-operating:	0% to 95% (non-condensing at ambient)
Maximum Altitude (unpressurized)	Operating:	10,000 ft (3048 m)
	Non-operating:	30,000 ft (9144 m)

1. Operating temperature is de-rated 1.0 deg C per 300 m (1000 ft) to 3000 m (10,000 ft) above sea level, no direct sustained sunlight. Maximum rate of change is 10 deg C/Hr. The upper limit may be limited by the type and number of options installed.

Not all configuration components are available in all regions/countries.
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Standard Features and Configurable Modules

Not all configuration components are available in all regions/countries.
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Standard Features and Configurable Modules

ENVIRONMENTAL & INDUSTRY

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 • TCO certified
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Desktop model is based on a "Typically Configured Desktop".

Energy Consumption (in accordance with US ENERGY STAR® test method)

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation (Short idle)			
Normal Operation (Long idle)			
Sleep			
Off			

NOTE: Energy efficiency data listed is for an ENERGY STAR® certified product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are certified with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® certified configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.

Heat Dissipation*

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation (Short idle)			
Normal Operation (Long idle)			
Sleep			
Off			

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		
Fixed Disk – Random writes		

Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include: • 2 SODIMM memory slots • Interchangeable M.2 PCIe NVME SSD & 2.5" SATA HDD Spare parts are available throughout the warranty period and or for up to 5 years after the end of production.
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the1ppm by weight

Not all configuration components are available in all regions/countries.

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Standard Features and Configurable Modules

Cadmium greater than 20ppm by weight

Additional Information	Battery size: CR2032 (coin cell) Battery type: Lithium - 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). - Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. - This product contains 0% post-consumer recycled plastic (by wt.) - This product is 95.1% recycle-able when properly disposed of at end of life.

Packaging Materials	**External:**	PAPER/Corrugated
	Internal:	PLASTIC/Expanded Polyethylene – EPE Or PAPER/molded fiber-pulp PLASTIC/Polyethylene low density - LDPE

The plastic packaging material contains at least 50% recycled content.

The corrugated paper packaging materials contains at least 70% recycled content.

Material Usage	This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf):

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

Not all configuration components are available in all regions/countries.

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Standard Features and Configurable Modules

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 Inc. offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

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

SERVICE AND SUPPORT

On-site Warranty[1]: Three-year (3-3-3) or one-year (1-1-1) limited warranty delivers three years or one year of on-site, next business day[2] service for parts and labor and includes free support 24 x 7[3]. Three-year onsite and labor are not available in all countries. Service offers terms up to 5 years by choosing an optional HP Care Pack. To choose the right level of service for your HP product, visit HP Care Pack Central: http://www.hp.com/go/cpc.[4]

1. Terms and conditions may vary by country. Certain restrictions and exclusions apply. Other warranty variations may be offered in your region.

2. On-site service may be provided pursuant to a service contract between HP and an authorized HP third-party provider, and is not available in certain countries. Global service response times are based on commercially reasonable best effort and may vary by country.

3. Technical telephone support applies only to HP-configured and third-party HP qualified hardware and software. Toll-free calling and 24 x 7 support may not be available in some countries.

4. 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.

Not all configuration components are available in all regions/countries.
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Technical Specifications – Graphics

GRAPHICS

Intel® UHD Graphics (integrated)[1]

Graphics Controller	Integrated
HDMI	Supports HDMI 1.4 features Supports HDCP 2.2 Supports audio over HDMI
VGA	VGA output
Memory	The actual amount of maximum graphics memory can be >4GB. System memory is allocated for graphics as needed using Intel's Dynamic Video Memory Technology (DVMT), to provide an optimal balance between graphics and system memory use.
Maximum Color Depth	up to 10 bits/color
Graphics/Video API Support	HEVC 10b Enc/Dec HW VP9 10b Dec HW HDR Rec. 2020 DX12
Max. Resolution (VGA)	2048 x 1536@60Hz
Max. Resolution (HDMI)	4096 x 2160@60Hz

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

Not all configuration components are available in all regions/countries.
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Technical Specifications – Storage

STORAGE

500GB 7200RPM 2.5in SATA HDD

Capacity	500 GB
Rotational Speed	7,200 rpm
Interface	SATA 6 Gb/s
Buffer Size	Up to 128 MB
Logical Blocks	976,773,168
Seek Time	12 ms (Average)
Height	0.283 in/7.2 mm (Max)
Width	2.75 in/70 mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

1TB 7200RPM 2.5in SATA HDD

Capacity	1 TB
Rotational Speed	7,200 rpm
Interface	SATA 6 Gb/s
Buffer Size	Up to 128 MB
Logical Blocks	1,953,525,168
Seek Time	12 ms (Average)
Height	0.374 in/9.5 mm (Max.)
Width	2.75 in/70 mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

2TB 5400RPM 2.5in SATA HDD

Capacity	2 TB
Rotational Speed	5,400 rpm
Interface	SATA 6 Gb/s
Buffer Size	128 MB
Logical Blocks	3,907,050,336
Seek Time	12 ms (Average)
Height	0.374 in/9.5 mm (Max.)
Width (nominal)	2.75 in/70 mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

Technical Specifications – Storage

256 GB M.2 2280 PCIe NVMe SSD

Drive Weight	< 10g
Capacity	256 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Maximum Sequential Read	Up to 1600MB/s
Maximum Sequential Write	Up to 780MB/s
Logical Blocks	500,118,192
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	APST; ASPM L1.2; NVME spec 1.2

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

512 GB M.2 2280 PCIe NVMe SSD

Drive Weight	< 10g
Capacity	512 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Maximum Sequential Read	Up to 1600MB/s
Maximum Sequential Write	Up to 860MB/s
Logical Blocks	1,000,215,216
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	APST; ASPM L1.2; NVME spec 1.2

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

128 GB M.2 2280 PCIe NVMe Three Layer Cell SSD

Drive Weight	< 10g
Capacity	128 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Maximum Sequential Read	Up to 2800MB/s
Maximum Sequential Write	Up to 600MB/s
Logical Blocks	250,069,680
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	APST; ASPM L1.2; NVME spec 1.2

Not all configuration components are available in all regions/countries.
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Technical Specifications – Storage

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

256 GB M.2 2280 PCIe NVMe Three Layer Cell SSD

Drive Weight	< 10g
Capacity	256GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Maximum Sequential Read	Up to 2700MB/s
Maximum Sequential Write	Up to 1000MB/s
Logical Blocks	500,118,192
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	APST; ASPM L1.2; NVME spec 1.2

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

512 GB M.2 2280 PCIe NVMe Three Layer Cell SSD

Drive Weight	< 10g
Capacity	512 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Maximum Sequential Read	Up to 2900MB/s
Maximum Sequential Write	Up to 1100MB/s
Logical Blocks	1,000,215,216
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	APST; ASPM L1.2; NVME spec 1.2

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

1 TB M.2 2280 PCIe NVMe Three Layer Cell SSD

Drive Weight	< 10g
Capacity	1 TB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Maximum Sequential Read	Up to 3480MB/s
Maximum Sequential Write	Up to 3037MB/s
Logical Blocks	2,000,409,264

Not all configuration components are available in all regions/countries.

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Technical Specifications – Storage

Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	TRIM; ASPM L1.2

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

256 GB Intel® PCIe® NVMe™ QLC + 32 GB Intel® Optane™

Drive Weight	< 10g
Capacity	256 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIe Gen3
Maximum Sequential Read	Up to 1450MB/s
Maximum Sequential Write	Up to 500MB/s
Logical Blocks	500,118,192
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	TRIM; ASPM L1.2

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

512 GB Intel® PCIe® NVMe™ QLC + 32 GB Intel® Optane™

Drive Weight	< 10g
Capacity	512 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIe Gen3
Maximum Sequential Read	Up to 2400MB/s
Maximum Sequential Write	Up to 1300MB/s
Logical Blocks	1,000,215,215
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	TRIM; ASPM L1.2

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.

Not all configuration components are available in all regions/countries.
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Technical Specifications – Networking

NETWORKING AND COMMUNICATIONS

Realtek RTK8111HSH 10/100/1000 Integrated NIC

	Connector	RJ-45
	System Interface	PCIe + SMBus
	Data rates supported	10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30) 1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023 clauses 40) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s
	IEEE Compliance	IEEE 802.1p QoS (Quality of Service) Support IEEE 802.1q VLAN support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable) IEEE 802.3az EEE (Energy Efficient Ethernet)
	Performance	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload (ARP & NS) Large send offload and Giant send offload Receiving Side Scaling Jumbo Frame 9K
	Power consumption	Cable Disconnection: 25mW 100Mbps Full Run: 450mW 1000bp Full Run: 1000mW WoL Enable(S3/S4/S5): 50mW WoL Disable(S3/S4/S5): 25mW
	Power Management	ACPI compliant – multiple power modes Situation-sensitive features reduce power consumption Advanced link down power saving for reducing link down power consumption
	Management Interface	Auto MDI/MDIX Crossover cable detection
	IT Manageability	Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30)) Comprehensive diagnostic and configuration software suite Virtual Cable Doctor for Ethernet cable status

Realtek RTL8821CE 802.11ac 1x1 Wi-Fi® and Bluetooth® 4.2 Combo

Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
Interoperability	Wi-Fi® CERTIFIED™
Frequency Band	802.11b/g/n

Not all configuration components are available in all regions/countries.
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Technical Specifications – Networking

	• 2.402 – 2.482 GHz 802.11a/n/ac • 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 • 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	• IEEE and Wi-Fi® 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 • WAPI
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power	• 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 mode2.0 W • Receive mode1.6 W • Idle mode (PSP)180 mW(WLAN Associated) • Idle mode50 mW(WLAN unassociated) • Connected Standby 10mW • Radio disabled8 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
Receiver Sensitivity	• 802.11b, 1Mbps : -93.5dBm maximum • 802.11b, 11Mbps : -84dBm maximum

Not all configuration components are available in all regions/countries.

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Technical Specifications – Networking

	• 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. One embedded dual band 2.4/5 GHz antenna is provided to the card to support WLAN communications and Bluetooth communications	
Form Factor	PCI-Express M.2 MiniCard	
Dimensions	Type 2230 : 2.3 x 22.0 x 30.0 mm	
Weight	Type 2230 : 2.8g	
Operating Voltage	3.3v +/- 9%	
Temperature	Operating: Non-operating:	14° to 158° F (-10° to 70° C) -40° to 176° F (-40° to 80° C)
Humidity	Operating: Non-operating:	10% to 90% (non-condensing) 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)

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 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 IEC60950-1/IEC62368-1 UL, CSA, and CE Mark
Bluetooth Profiles Supported	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode

Not all configuration components are available in all regions/countries.
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Technical Specifications – Networking

	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)

Realtek RTL8822CE 802.11ac 2x2 Wi-Fi + BT5		
Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v	
Interoperability	Wi-Fi® CERTIFIED™	
Frequency Band	802.11b/g/n	• 2.402 – 2.482 GHz
	802.11a/n/ac	• 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 4.9 – 4.95 GHz (Japan)
Data Rates	• 802.11b: 1, 2, 5.5, 11 Mbps • 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz) • 802.11ac : MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz & 80MHz)	
Modulation	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM	
Security	• IEEE and Wi-Fi® compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware	

Not all configuration components are available in all regions/countries.
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Technical Specifications – Networking

	• 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 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
Output Power	• 802.11b : +18.5dBm minimum • 802.11g : +17.5dBm minimum • 802.11a : +18.5dBm minimum • 802.11n HT20(2.4GHz) : +15.5dBm minimum • 802.11n HT40(2.4GHz) : +14.5dBm minimum • 802.11n HT20(5GHz) : +15.5dBm minimum • 802.11n HT40(5GHz) : +14.5dBm minimum • 802.11ac VHT80(5GHz) : +11.5dBm minimum • 802.11ac VHT160(5GHz) : +11.5dBm 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/Modern Standby: 10mW • Radio disabled: 8 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
Receiver Sensitivity	• 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 front 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 with CNVi Interface
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 126: 1.3g
Operating Voltage	3.3v +/- 9%

Not all configuration components are available in all regions/countries.
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Technical Specifications – Networking

Temperature	Operating: Non-operating:	14° to 158° F (–10° to 70° C) -40° to 176° F (-40° to 80° C)
Humidity	Operating: Non-operating:	10% to 90% (non-condensing) 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)

HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0 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 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 IEC60950-1/IEC62368-1 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

Not all configuration components are available in all regions/countries.
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Technical Specifications – Networking

	FAX Profile (FAX)
	Basic Imaging Profile (BIP)2
	Headset Profile (HSP)
	Hands Free Profile (HFP)
	Advanced Audio Distribution Profile (A2DP)Advanced Audio Distribution Profile (A2DP)

Not all configuration components are available in all regions/countries.
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Technical Specifications – I/O Devices

INPUT/OUTPUT DEVICES

HP Business Slim Standalone Wired Keyboard		
Physical Characteristics	Keys	104, 105, 106, 107, 109 layout (depending upon country)
	Dimensions (L x W x H)	171.97 x 68.35 x 8.27 in (436.8± 1.5 x 137.6± 1.0 x 21.0± 1.0 cm)
	Weight	1.32 lb (0.6± 0.08 kg)
Electrical	Operating voltage	4.4-5.25VDC
	Power consumption	50-mA maximum (with 5 VDC power supplied and three LEDs ON)
	System interface	USB or PS/2
	ESD	Contact Discharge: 2, 4,6,8KV Air Discharge: 2, 4, 8,10,12.5KV
	EMI - RFI	Conforms to FCC rules for a Class B computing device
Mechanical	Keycaps	Low-profile design
	Switch actuation	60±12.5g nominal peak force with tactile feedback
	Switch life	10 million keystrokes (Life tester)
	Switch type	Contamination-resistant switch membrane
	Key-leveling mechanisms	For all double-wide and greater-length keys
	Cable length	6 ft (1.8 m)
Environmental	Acoustics	43-dBA maximum sound pressure level
	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	Minus 30 degress to 60 degress Celsius
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Operating shock	40 g, six surfaces
	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
	Drop (out of box)	26 in (66 cm) on carpet, six-drop sequence
	Drop (in box)	30 in (76.2 cm) on concrete, 16-drop sequence
Approvals	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC	
Ergonomic compliance	ANSI HFS 100, ISO 9241-4, and TUVGS	

HP Universal USB Wired Keyboard		
Physical Characteristics	Keys	104, 105 layout (depending upon country)

Not all configuration components are available in all regions/countries.

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Technical Specifications – I/O Devices

	Dimensions (L x W x H)	18.15 x 6.02 x 1.08 in (461 x 153 x 27.4 mm)
	Weight	1.32 lb (600g) min
Electrical	Operating voltage	5 VDC, +/-5%
	Power consumption	50mA Max (All LED on)
	System interface	USB Type A plug connector
	ESD	Contact Discharge: 8 KV Air Discharge: 15 KV
	EMI - RFI	Conforms to FCC rules for a Class B computing device
Mechanical	Keycaps	Mid-profile design
	Switch actuation	60±10g nominal peak force with tactile feedback
	Switch life	10 million keystrokes (Life tester)
	Switch type	Contamination-resistant switch membrane
	Key-leveling mechanisms	For all double-wide and greater-length keys
	Cable length	6 ft (1.8 m)
	Microsoft PC 99 - 2001	Mid-profile design
Environmental	Acoustics	43-dBA maximum sound pressure level
	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-22° to 140° F (-30° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Operating shock	40 g, six surfaces
	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
	Drop (out of box)	26 in (66 cm) on carpet, six-drop sequence
	Drop (in box)	30 in (76.2 cm) on concrete, 16-drop sequence
Approvals	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC, EAC	
Ergonomic compliance	TUVGS	

HP USB Universal Wired Mouse		
Dimensions (H x L x W)	4.53 x 2.50 x 1.40 in (115 x 63.46 x 35.48 mmm)	
Weight	0.18lb (80g)	
Environmental	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-22° to 140° F (-30° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Operating shock	40 g, six surfaces

Not all configuration components are available in all regions/countries.
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QuickSpecs

Technical Specifications – I/O Devices

	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
Electrical	Operating voltage	5 VDC, +/-5%
	Power consumption (typical)	50mA Max
	Resolution	1,000 DPI
	Sensor	Pixart PAN3606DL
	Tracking speed	30 inch/sec (max)
	Tracking acceleration	9G(max), 1G=9.8m/s2
Mechanical	Connector	USB 2.0
	Cable length	6 ft (1.8 m)
	Color	Jack Black
Regulatory approvals	Compliant	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC, EAC

HP Optical Mouse		
Dimensions (H x L x W)	4.53 x 2.48 x1.46 in (115.2x 63 x37 mm)	
Weight	0.22lb (101.6g)	
Environmental	Operating temperature	41° to 122° F (5° to 50° C)
	Non-operating temperature	(-4° to 140° F)(-20° to 60° C)
	Operating humidity	10% to 85% (non-condensing at ambient)
	Non-operating humidity	5% to 95% (non-condensing at ambient)
	Operating shock	40 g, six surfaces
	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
Electrical	Tracking speed	30 inch/sec (max)
	Tracking acceleration	8G(max), 1G=9.8m/s2
	System interface	USB or PS/2
Mechanical	Switch actuation	60±15g nominal peak force with tactile feedback
	Switch life	3 million keystrokes (Life tester)
	Switch type	Contamination-resistant switch membrane
	Key-leveling mechanisms	For all double-wide and greater-length keys
	Cable length	6 ft (1.8 m)
	Color	Jack Black
Regulatory approvals	Compliant	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC

Not all configuration components are available in all regions/countries.

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Technical Specifications – Audio

AUDIO/MULTIMEDIA

Type	Integrated
HD Stereo Codec	Realtek ALC3205
Audio I/O Ports	Front: Headset connector supports a CTIA and OMTP style headset and is retaskable as a Line-in, Line-out, Microphone-in or Headphone-out port
Internal Speaker Amplifier	2W class D mono amplifier for the internal speaker only. External speakers must be powered externally
Multi-streaming Capable	Playback multi-streaming allows independent audio streams to be sent to/from the front jacks and integrated speaker.
Sampling	Independent sampling rates for DAC's and ADC's; supports resolutions from 16 to 24-bit; 44.1 kHz to 192 kHz for DAC and 44.1 kHz to 96 kHz for ADC
Wavetable Syntheses	Yes - Uses OS soft wavetable
Analog Audio	Yes
# of Channels on Line-Out	Stereo (Left & Right channels)
Internal Speaker	Yes

Not all configuration components are available in all regions/countries.
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Technical Specifications – Power

POWER SUPPLY

Operating Voltage Range	90Vac~264Vac
Rated Voltage Range	100Vac~240Vac
Rated Line Frequency	50Hz~60Hz
Operating Line Frequency	47Hz~63Hz
Rated Input Current with Energy Efficient* Power Supply	65W≦ 1.6A Average efficiency 88% at 115V Average efficiency 89% at 230V
DC Output	+19.5V
Current Leakage (NFPA 99: 2102)	Less than 500 microamps of leakage current at 264 Vac with the ground wire disconnected, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1. Less than 100 microamps of leakage current at 264 Vac with the ground wire intact with normal polarity, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1.
Power cord length	6.0 ft. (1.83 m)
Dimensions	102 x 55 x 30 mm

Not all configuration components are available in all regions/countries.
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Technical Specifications – Weights and Dimensions

WEIGHT AND DIMENSIONS[1]

System

Dimensions	6.97 x 6.89 x 1.35 in 177 x 175 x 34.2 mm
Weight[2]	2.74 lbs 1.25 kg
Volume	64 cu in 1.05 L

Packaging dimensions and weight

Dimensions	19.57 x 5.04 x 8.78 in 497 x 128 x 223 mm **MPP:** 19.61 x 9.25 x 5.20 in 498 x 235 x 132 mm
Weight	7.36 lbs 3.34 kg **MPP:** 7.50 lbs 3.40 kg

Palletization and Container

Pallet Profile	1 unit/carton 18 cartons/layer 5~6 layers per pallet max depending on details of air freight 90~108 units per pallet depending on details of air freight **MPP:** 1 unit/carton 10 cartons/layer 10~19 layers per pallet max depending on details of ground/sea freight 100~190 units per pallet depending on details of ground/sea freight
Pallet Size Loaded	45.354 x 39.13 x 57.80 in 1152 x 994 x 1468 mm **MPP:** 46.26 x 39.21 x 103.74 in 1175 x 996 x 2635 mm

1. Packaging material used will vary by country
2. Configured with 1 SATA Drive

Not all configuration components are available in all regions/countries.
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After-Market Options (availability may vary by region)

Type	Description	Part Number
Graphics Solutions	HP HDMI Standard Cable Kit	T6F94AA
	HP HDMI to VGA Adapter	H4F02AA
Desktop Mini Accessories	HP Desktop Mini 2.5" SATA Drive Bay kit v2	13L70AA
	HP Desktop Mini LockBox V2	3EJ57AA
	HP Desktop Mini DVD-Writer ODD Expansion Module	K9Q83AA
	HP Desktop Mini I/O Expansion Module	K9Q84AA
	HP Desktop Mini Security/Dual VESA Sleeve v3	13L67AA
	HP Desktop Mini Security/Dual VESA Sleeve v3 With Power Supply Holder	13L68AA
	HP B300 PC Mounting Bracket with Power Supply Holder	7DB37AA
	HP Desktop Mini Vertical Chassis Stand	G1K23AA
	HP DM Power Supply Holder Kit v2	7DB38AA
Data Storage Drives	HP PCIe NVME TLC 256GB SSD M.2 Drive	1CA51AA
	HP PCIe NVME TLC 512GB SSD M.2 Drive	X8U75AA
Input Devices	HP Wired Desktop 320K Keyboard	9SR37AA
	HP USB Business Slim Keyboard	N3R87AA
	HP USB Business Slim SmartCard CCID Keyboard	Z9H48AA
	HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA
	HP USB Business Slim Keyboard and Mouse and Mousepad	T4E63AA
	HP Wired Desktop 320M Mouse	9VA80AA
	HP USB Optical Mouse	QY777AA
Intel® Optane™ Memory	Intel® Optane™ Memory 16GB (Cache)	1WV97AA
	512GB Intel® Optane™ Memory H10 with SSD	6VF55AA
System Memory	HP 4GB DDR4-2666 SODIMM	3TK86AA
	HP 8GB DDR4-2666 SODIMM	3TK88AA
	HP 16GB DDR4-2666 SODIMM	3TK84AA
Multimedia Devices	HP Business Headset v2	T4E61AA
	HP S101 Speaker Bar	5UU40AA
Security Devices	HP Dual Head Keyed Cable Lock	T1A64AA
	HP Keyed Cable Lock 10mm	T1A62AA
	HP Master Keyed Cable Lock 10mm	T1A63AA

Not all configuration components are available in all regions/countries.
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After-Market Options (availability may vary by region)

Stands and Mounting Accessories	HP B250 PC Mounting Bracket	8RA46AA
	HP B300 PC Mounting Bracket	2DW53AA
	HP B500 PC Mounting Bracket	2DW52AA
	HP Quick Release Bracket 2	6KD15AA

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QuickSpecs

Change Log

Date of change:	Version History:		Description of change:
	From v1 to v2		
	From v2 to v3		
	From v3 to v4		
	From v4 to v5		
	From v5 to v6		
	From v6 to v7		