

### Overview

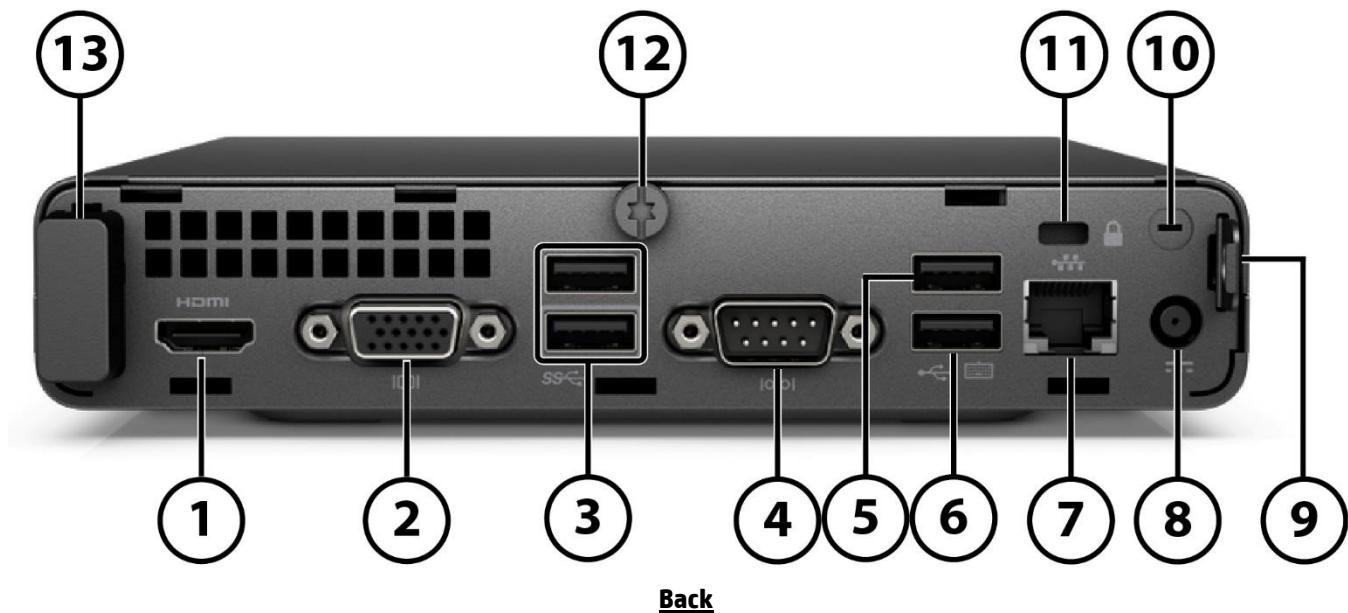
#### HP 260 G3 Desktop Mini Business PC



#### Front

1. (2) USB 3.1 Gen 1 (5 Gbits/s data speed)
2. Combo Microphone/Headphone Jack
3. Hard drive activity light
4. Dual-state power button

### Overview



Back

1. HDMI 1.4
2. VGA
3. (2) USB 3.1 Gen 1 ports (5 Gbits/s data speed)
4. Serial port
5. (1) USB 2.0 ports
6. (1) USB 2.0 ports (Supporting wake from S4/S5 with keyboard/mouse connected and enabled in BIOS)
7. RJ45 network connector
8. Power connector
9. Padlock loop
10. External WLAN antenna opening <sup>1</sup>
11. Standard lock slot (10 mm)
12. Cover release thumbscrew
13. Internal WLAN antenna cover

1. Must be configured at time of purchase

### Overview

#### AT A GLANCE

- 7th Generation Intel® processors (up to Core™ i5)<sup>1</sup>, featuring integrated Intel® HD Graphics
- Choice of Windows 10 Home, Windows 10 Professional, and FreeDOS 2.0
- 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 enabling support for legacy peripherals
- Integrated Realtek RTL8111HSH-CG Gigabit Network Connection
- Optional Wi-Fi 802.11ac connectivity
- Integrated HD audio featuring Conexant CX20632
- Trusted Platform Module (TPM) 2.0
- VESA mounting incorporated into chassis design
- Dust filter available for Desktop Mini
- High efficiency energy saving power supply
- ENERGY STAR® certified. EPEAT® 2019 registered where applicable. Registration may vary by country. See <http://www.epeat.net> for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at <http://www.hp.com/go/options>
- PC chassis and all internal components and modules are manufactured with low halogen content<sup>2</sup>
- 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 5 years Next Business Day Onsite Hardware Support

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. 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.**

### Standard Features and Configurable Modules

## OPERATING SYSTEMS

### Preinstalled (Windows)

Windows® 10 Pro 64<sup>1</sup>

Windows® 10 Pro 64 (National Academic License)<sup>1,2</sup>

Windows® 10 Home 64<sup>1</sup>

Windows® 10 Home Single Language 64<sup>1</sup>

### Pre-installed (Other)

FreeDOS 2.0

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 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>

## PROCESSOR

### Intel® 7th Generation Core™ Processors

Intel® Core™ i5-7200U Processor<sup>1</sup>

15W

2.5 GHz base frequency

Up to 3.1 GHz max. turbo frequency with Intel® Turbo Boost Technology<sup>2</sup>

3 MB cache, 2 cores, 4 threads

Intel® HD Graphics 620

Supports DDR4 memory up to 2133 MT/s data rate

Intel® Core™ i3-7130U Processor<sup>1</sup>

15W

2.7 GHz base frequency

3 MB cache, 2 cores, 4 threads

Intel® HD Graphics 620

Supports DDR4 memory up to 2133 MT/s data rate

### Intel® 7th Generation Pentium® Processors

Intel® Pentium® Gold 4415U Processor<sup>1</sup>

15W

2.3 GHz base frequency

2 MB cache, 2 cores, 4 threads

Intel® HD Graphics 610

Supports DDR4 memory up to 2133 MT/s data rate

### Standard Features and Configurable Modules

#### Intel® 7th Generation Celeron® Processors

Intel® Celeron® 3865U Processor<sup>1</sup>

15W

1.8 GHz base frequency

2 MB cache, 2 cores, 2 threads

Intel® HD Graphics 610

Supports DDR4 memory up to 2133 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](http://www.intel.com/technology/turboboost) for more information.

## GRAPHICS

#### Integrated

Intel® HD Graphics 620

Intel® HD Graphics 610

**NOTE:** Intel® integrated HD Graphics varies by processor

## MEMORY

#### Type

DDR4-2133 (Transfer rates up to 2133 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. Memory modules support data transfer rates up to 2133 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.

### Standard Features and Configurable Modules

## STORAGE AND DRIVES

### 2.5 inch SATA Hard Disk Drives (HDD)

500GB 7200RPM 2.5in SATA HDD

1TB 7200RPM 2.5in SATA HDD

### 2.5 inch Solid State Drives (SSD)

128GB 2.5in SATA Three Layer Cell SSD

256GB 2.5in SATA Three Layer Cell SSD

### M.2 PCIe NVMe Solid State Drives (SSD)

128GB M.2 2280 PCIe NVMe 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

**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.

## NETWORKING/COMMUNICATIONS

### Networking

Realtek RTL8111HSH-CG Gigabit Network Connection

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

Realtek RTL8822BE 802.11ac 2x2 with Bluetooth® M.2 Combo Card

Realtek RTL8821CE 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.

## AUDIO/MULTIMEDIA

HD audio with Conexant CX20632 Codec

Combo Microphone/Headphone Jack

### Standard Features and Configurable Modules

### Standard Features and Configurable Modules

#### KEYBOARDS/POINTING DEVICES/BUTTONS AND FUNCTIONS KEYS

##### Keyboard

- HP USB Business Slim Standalone Wired Keyboard
- HP USB Conferencing Wired Keyboard
- USB Wired Keyboard

##### Mouse

- HP Optical Mouse
- USB Hardened Mouse

**NOTE:** Availability may vary by country

---

### PORTS

#### Internal slots and Ports

- (1) M.2 PCIe x1 2230 (for WLAN)
- (1) M.2 PCIe x4 2280/2230 Combo (for storage)
- (1) Desktop Mini SATA storage connector

#### Front I/O Ports

- (2) USB 3.1 Gen 1 ports
- (1) Microphone/Headphone Combo Jack

#### Rear I/O Ports

- (1) HDMI port
- (1) VGA port
- (1) Serial port
- (2) USB 3.1 Gen 1 ports
- (2) USB 2.0 ports
- RJ45 network 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

- (1) 2.5" SATA Storage Drive Bay

### Standard Features and Configurable Modules

## SOFTWARE COMPONENTS AND APPLICATIONS WITH WINDOWS

### Software

- HP Hotkey Support
- HP Support Assistant<sup>1</sup>
- HP JumpStarts
- Buy Office (Sold separately)

### Security Management

- McAfee LiveSafe™ (1 year subscription)<sup>2</sup>

### Manageability

- HP Cloud Recovery<sup>3</sup>

1. HP Support Assistant requires Windows and Internet access.

2. Availability may vary by country.

3. HP Cloud Recovery is available for 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>.

---

## POWER

### Power Supply

- External 65-watt power adapter

---

### Standard Features and Configurable Modules

### WEIGHT AND DIMENSIONS

#### System

Dimensions	6.97 x 6.89 x 1.35 in (177 x 175 x 34.2 mm)
Weight <sup>1</sup>	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)
Weight	7.36 lbs (3.34 kg)

#### Palletization and Container

Type	Air Shipment
Pallet Size	47.24 x 39.37 x 4.96 in 1200 x 1000 x 126 mm
Pallet Profile	1 unit/carton 18 cartons/layer 5 or 6 layers per pallet max depending on details of air freight 90 or 108 units per pallet depending on details of air freight
Pallet Size Loaded	47.24 x 39.37 x 57.64 in 1200 x 1000 x 1464 mm

1. Configured with 1 SATA Drive

### Standard Features and Configurable Modules

## UNIT ENVIRONMENT AND OPERATING CONDITIONS

### Environmental and Industry

- 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)<sup>1</sup>

**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.

## CERTIFICATIONS

EPEAT® 2019<sup>1</sup>

WEEE (Waste, Electric and electronic equipment)

ENERGY STAR®

CEL

FCC

UL

RoHS

1. EPEAT® 2019 registered where applicable. EPEAT registration varies by country. See <http://www.epeat.net> for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at <http://www.hp.com/go/options>.

### Standard Features and Configurable Modules

### SERVICE AND SUPPORT

On-site Warranty<sup>1</sup>: Available three-year (3-3-3) or one-year (1-1-1) limited warranty (varies by country) delivers on-site, next business day<sup>2</sup> service for parts and labor and complimentary limited technical support<sup>3</sup>. 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<sup>4</sup>. To choose the right level of service for your HP product, visit HP Care Pack Central: <http://www.hp.com/go/cpc>.

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](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.

### Technical Specifications – Graphics

#### GRAPHICS

##### Intel® HD Graphics (integrated)<sup>1</sup>

<b>Output Connectors</b>	HDMI, VGA
<b>Maximum Graphics Memory</b>	32GB; however, 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.
<b>Maximum Color Depth</b>	32 bits/pixel
<b>Graphics/Video API Support</b>	DirectX 12 OpenGL 4.4

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

### Technical Specifications – Storage

#### STORAGE

##### 500GB 7200RPM 2.5in SATA HDD

<b>Capacity</b>	500GB
<b>Rotational Speed</b>	7,200 rpm
<b>Interface</b>	SATA 6 Gb/s
<b>Buffer Size</b>	16 MB
<b>Logical Blocks</b>	976,773,168
<b>Seek Time</b>	12 ms (Average)
<b>Height</b>	0.267 in/6.8 mm (nominal)
<b>Width</b>	2.75 in/70 mm (nominal)
<b>Operating Temperature</b>	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

<b>Capacity</b>	1TB
<b>Rotational Speed</b>	7,200 rpm
<b>Interface</b>	SATA 6 Gb/s
<b>Buffer Size</b>	32 MB
<b>Logical Blocks</b>	1,953,525,168
<b>Seek Time</b>	12 ms (Average)
<b>Height</b>	0.374 in/9.5 mm (nominal)
<b>Width</b>	2.75 in/70 mm (nominal)
<b>Operating Temperature</b>	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.

##### 128GB 2.5in SATA Three Layer Cell SSD

<b>Drive Weight</b>	<50g
<b>Capacity</b>	128GB
<b>Height</b>	7mm
<b>Length</b>	100.45mm
<b>Width</b>	69.85mm
<b>Interface</b>	SATA 3.0 (6Gb/s)
<b>Maximum Sequential Read</b>	Up to 530MB/s
<b>Maximum Sequential Write</b>	Up to 380MB/s
<b>Logical Blocks</b>	250,069,680
<b>Operating Temperature</b>	0° to 70°C (32° to 158°F) [ambient temp]
<b>Features</b>	DIPM; TRIM

### 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.

#### 256GB 2.5in SATA Three Layer Cell SSD

<b>Drive Weight</b>	<62g
<b>Capacity</b>	256GB
<b>Height</b>	7mm
<b>Length</b>	100.45mm
<b>Width</b>	69.85mm
<b>Interface</b>	SATA 3.0 (6Gb/s)
<b>Maximum Sequential Read</b>	Up to 530MB/s
<b>Maximum Sequential Write</b>	Up to 450MB/s
<b>Logical Blocks</b>	500,118,192
<b>Operating Temperature</b>	0° to 70°C (32° to 158°F) [ambient temp]
<b>Features</b>	DIPM; TRIM

**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.

#### 128GB M.2 2280 PCIe NVMe SSD

<b>Drive Weight</b>	< 10g
<b>Capacity</b>	128GB
<b>Height</b>	2.38mm
<b>Length</b>	80mm
<b>Width</b>	22mm
<b>Interface</b>	PCIE Gen3
<b>Maximum Sequential Read</b>	Up to 1400MB/s
<b>Maximum Sequential Write</b>	Up to 395MB/s
<b>Logical Blocks</b>	250,069,680
<b>Operating Temperature</b>	0° to 70°C (32° to 158°F) [ambient temp]
<b>Features</b>	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.

#### 256GB M.2 2280 PCIe NVMe SSD

<b>Drive Weight</b>	< 10g
<b>Capacity</b>	256GB
<b>Height</b>	2.38mm
<b>Length</b>	80mm
<b>Width</b>	22mm



### Technical Specifications – Storage

<b>Interface</b>	PCIE Gen3
<b>Maximum Sequential Read</b>	Up to 1600MB/s
<b>Maximum Sequential Write</b>	Up to 780MB/s
<b>Logical Blocks</b>	500,118,192
<b>Operating Temperature</b>	0° to 70°C (32° to 158°F) [ambient temp]
<b>Features</b>	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.

### 512GB M.2 2280 PCIe NVMe SSD

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

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

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

### Technical Specifications – Storage

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

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

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

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

### Technical Specifications – Audio

#### HIGH DEFINITION AUDIO

<b>Type</b>	Integrated
<b>HD Stereo Codec</b>	Conexant CX20632
<b>Audio I/O Ports</b>	1 Headset connector supporting CTIA style headset
<b>Internal Speaker Amplifier</b>	2W class D mono amplifier for the internal speaker only. External speakers must be powered externally
<b>Multi-streaming Capable</b>	Playback multi-streaming allows independent audio streams to be sent to/from the front jacks and integrated speaker.
<b>Sampling</b>	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
<b>Wavetable Syntheses</b>	Yes - Uses OS soft wavetable
<b>Analog Audio</b>	Yes
<b># of Channels on Line-Out</b>	Stereo (Left & Right channels)
<b>Internal Speaker</b>	Yes

### Technical Specifications – Power Supply

#### POWER SUPPLY

<b>Operating Voltage Range</b>	90Vac~264Vac
<b>Rated Voltage Range</b>	100Vac~240Vac
<b>Rated Line Frequency</b>	50Hz~60Hz
<b>Operating Line Frequency</b>	47Hz~63Hz
<b>Rated Input Current</b>	65W≤1.7A
<b>Rated Input Current with Energy Efficient* Power Supply</b>	65W≤1.7A Average efficiency 88% at 115V Average efficiency 89% at 230V
<b>DC Output</b>	+19.5VV
<b>Current Leakage (NFPA 99: 2102)</b>	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.
<b>Power cord length</b>	6.0 ft. (1.83 m)

### Technical Specifications – Networking and Communications

#### NETWORKING

##### Realtek RTL8111HSH-CG Gigabit Network Connection

<b>Connector</b>	RJ-45
<b>System Interface</b>	PCIe + SMBus
<b>Data rates supported</b>	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 802.3 clauses 40) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s
<b>IEEE Compliance</b>	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)
<b>Performance</b>	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload (ARP & NS) Large send offload and Giant send offload Receiving Side Scaling Jumbo Frame 9K
<b>Power consumption</b>	Cable Disconnection: 25mW 100Mbps Full Run: 450mW 1000bp Full Run: 1000mW WoL Enable(S3/S4/S5): 50mW WoL Disable(S3/S4/S5): 25mW
<b>Power Management</b>	ACPI compliant – multiple power modes Situation-sensitive features reduce power consumption Advanced link down power saving for reducing link down power consumption
<b>Management Interface</b>	Auto MDI/MDIX Crossover cable detection
<b>IT Manageability</b>	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

### Technical Specifications – Networking and Communications

#### Realtek RTL8822BE 802.11ac 2x2 with Bluetooth® M.2 Combo Card

<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac	
<b>Interoperability</b>	Wi-Fi certified	
<b>Frequency Bands</b>	802.11b/g/n	<ul style="list-style-type: none"> <li>2.402 – 2.482 GHz</li> </ul> <p>Note: The FCC has declared as of January 1, 2015 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.</p>
	802.11a/n	<ul style="list-style-type: none"> <li>4.9 – 4.95 GHz (Japan)</li> <li>5.15 – 5.25 GHz</li> <li>5.25 – 5.35 GHz</li> <li>5.47 – 5.725 GHz</li> <li>5.825 – 5.850</li> </ul>
<b>Data Rates</b>	<ul style="list-style-type: none"> <li>802.11b: 1, 2, 5.5, 11 Mbps</li> <li>802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz)</li> <li>802.11ac : MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, and 80MHz)</li> </ul>	
<b>Modulation</b>	<p>Direct Sequence Spread Spectrum</p> <p>BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM</p>	
<b>Security<sup>3</sup></b>	<ul style="list-style-type: none"> <li>IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only</li> <li>AES-CCMP: 128 bit in hardware</li> <li>802.1x authentication</li> <li>WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.</li> <li>WPA2 certification</li> <li>IEEE 802.11i</li> <li>Cisco Certified Extensions, all versions through CCX4 and CCX Lite</li> <li>WAPI</li> </ul>	
	<p><small><sup>1</sup> Check latest software/driver release for updates on supported security features.</small></p>	
<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)	
<b>Roaming<sup>2</sup></b>	IEEE 802.11 compliant roaming between access points	

### Technical Specifications – Networking and Communications

<b>Output Power<sup>2</sup></b>	<ul style="list-style-type: none"> <li>802.11b : +14dBm minimum</li> <li>802.11g : +12dBm minimum</li> <li>802.11a : +12dBm minimum</li> <li>802.11n HT20(2.4GHz) : +12dBm minimum</li> <li>802.11n HT40(2.4GHz) : +12dBm minimum</li> <li>802.11n HT20(5GHz) : +10dBm minimum</li> <li>802.11n HT40(5GHz) : +10dBm minimum</li> <li>802.11ac VHT80(5GHz) : +10dBm minimum</li> </ul>	
<b>Power Consumption</b>	<ul style="list-style-type: none"> <li>Transmit mode2.0 W</li> <li>Receive mode1.6 W</li> <li>Idle mode (PSP)180 mW(WLAN Associated)</li> <li>Idle mode50 mW(WLAN unassociated)</li> <li>Connected Standby 10mW</li> <li>Radio disabled8 mW</li> </ul>	
<b>Power Management</b>	ACPI and PCI Express compliant power management 802.11 compliant power saving mode	
<b>Receiver Sensitivity<sup>3</sup></b>	<ul style="list-style-type: none"> <li>802.11b, 1Mbps : -93.5dBm maximum</li> <li>802.11b, 11Mbps : -84dBm maximum</li> <li>802.11a/g, 6Mbps : -86dBm maximum</li> <li>802.11a/g, 54Mbps : -72dBm maximum</li> <li>802.11n, MCS07 : -67dBm maximum</li> <li>802.11n, MCS15 : -64dBm maximum</li> <li>802.11ac, MCS0 : -84dBm maximum</li> <li>802.11ac, MCS9 : -59dBm maximum</li> </ul>	
	3 Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).	
<b>Antenna type</b>	High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications	
<b>Form Factor</b>	PCI-Express M.2 MiniCard	
<b>Dimensions</b>	Type 2230 : 2.3 x 22.0 x 30.0 mm	
<b>Weight</b>	Type 2230 : 2.8g	
<b>Operating Voltage</b>	3.3v +/- 9%	
<b>Temperature</b>	<b>Operating:</b> <b>Non-operating:</b>	14° to 158° F (-10° to 70° C) -40° to 176° F (-40° to 80° C)
<b>Humidity</b>	<b>Operating:</b> <b>Non-operating:</b>	10% to 90% (non-condensing) 5% to 95% (non-condensing)

### Technical Specifications – Networking and Communications

<b>Altitude</b>	<b>Operating:</b> <b>Non-operating:</b>	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
<b>HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology</b>		
<b>Bluetooth Specification</b>	4.0/4.1/4.2 Compliant	
<b>Frequency Band</b>	2402 to 2480 MHz	
<b>Number of Available Channels</b>	Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)	
<b>Data Rates and Throughput</b>	Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps BLE : 1 Mbps data rate; throughput up to 0.2 Mbps Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)	
<b>Transmit Power</b>	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.	
<b>Receiver Sensitivity Legacy</b>		
<b>Power Consumption</b>	Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW	
<b>Electrical Interface</b>	USB 2.0 compliant	
<b>Bluetooth Software Supported Link Topology</b>	Microsoft Windows Bluetooth Software	
<b>Power Management</b>	Microsoft Windows ACPI, and USB Bus Support	
<b>Certifications</b>	FCC (47 CFR) Part 15C, Section 15.247 & 15.249	
<b>Power Management Certifications</b>	ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark	
<b>Bluetooth Profiles Supported</b>	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	

### Technical Specifications – Networking and Communications

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

#### Realtek RTL8821CE 802.11ac 1x1 with Bluetooth® M.2 Combo Card

<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac	
<b>Interoperability</b>	Wi-Fi certified	
<b>Frequency Band</b>	802.11b/g/n	<ul style="list-style-type: none"> <li>2.402 – 2.482 GHz</li> </ul> <p><b>NOTE:</b> The FCC has declared as of January 1, 2015 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.</p>
	802.11a/n	<ul style="list-style-type: none"> <li>4.9 – 4.95 GHz (Japan)</li> <li>5.15 – 5.25 GHz</li> <li>5.25 – 5.35 GHz</li> <li>5.47 – 5.725 GHz</li> <li>5.825 – 5.850</li> </ul>
<b>Data Rates</b>	<ul style="list-style-type: none"> <li>802.11b: 1, 2, 5.5, 11 Mbps</li> <li>802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz)</li> <li>802.11ac : MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, and 80MHz)</li> </ul>	
<b>Modulation</b>	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM	
<b>Security<sup>3</sup></b>	<ul style="list-style-type: none"> <li>IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only</li> <li>AES-CCMP: 128 bit in hardware</li> <li>802.1x authentication</li> <li>WPA, WPA2: 802.1x, WPA-PSK, WPA2-PSK, TKIP, and AES.</li> <li>WPA2 certification</li> <li>IEEE 802.11i</li> <li>Cisco Certified Extensions, all versions through CCX4 and CCX Lite</li> </ul>	

### Technical Specifications – Networking and Communications

	<ul style="list-style-type: none"> <li>• WAPI</li> </ul> <p><small>1 Check latest software/driver release for updates on supported security features.</small></p>
<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
<b>Roaming<sup>2</sup></b>	IEEE 802.11 compliant roaming between access points
<b>Output Power<sup>2</sup></b>	<ul style="list-style-type: none"> <li>• 802.11b : +14dBm minimum</li> <li>• 802.11g : +12dBm minimum</li> <li>• 802.11a : +12dBm minimum</li> <li>• 802.11n HT20(2.4GHz) : +12dBm minimum</li> <li>• 802.11n HT40(2.4GHz) : +12dBm minimum</li> <li>• 802.11n HT20(5GHz) : +10dBm minimum</li> <li>• 802.11n HT40(5GHz) : +10dBm minimum</li> <li>• 802.11ac VHT80(5GHz) : +10dBm minimum</li> </ul>
<b>Power Consumption</b>	<ul style="list-style-type: none"> <li>• Transmit mode2.0 W</li> <li>• Receive mode1.6 W</li> <li>• Idle mode (PSP)180 mW(WLAN Associated)</li> <li>• Idle mode50 mW(WLAN unassociated)</li> <li>• Connected Standby 10mW</li> <li>• Radio disabled8 mW</li> </ul>
<b>Power Management</b>	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
<b>Receiver Sensitivity<sup>3</sup></b>	<ul style="list-style-type: none"> <li>• 802.11b, 1Mbps : -93.5dBm maximum</li> <li>• 802.11b, 11Mbps : -84dBm maximum</li> <li>• 802.11a/g, 6Mbps : -86dBm maximum</li> <li>• 802.11a/g, 54Mbps : -72dBm maximum</li> <li>• 802.11n, MCS07 : -67dBm maximum</li> <li>• 802.11n, MCS15 : -64dBm maximum</li> <li>• 802.11ac, MCS0 : -84dBm maximum</li> <li>• 802.11ac, MCS9 : -59dBm maximum</li> </ul> <p><small>3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).</small></p>
<b>Antenna type</b>	High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
<b>Form Factor</b>	PCI-Express M.2 MiniCard
<b>Dimensions</b>	Type 2230 : 2.3 x 22.0 x 30.0 mm

### Technical Specifications – Networking and Communications

<b>Weight</b>	Type 2230 : 2.8g	
<b>Operating Voltage</b>	3.3v +/- 9%	
<b>Temperature</b>	<b>Operating:</b> <b>Non-operating:</b>	14° to 158° F (-10° to 70° C) -40° to 176° F (-40° to 80° C)
<b>Humidity</b>	<b>Operating:</b> <b>Non-operating:</b>	10% to 90% (non-condensing) 5% to 95% (non-condensing)
<b>Altitude</b>	<b>Operating:</b> <b>Non-operating:</b>	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

<b>Bluetooth Specification</b>	4.0/4.1/4.2 Compliant
<b>Frequency Band</b>	2402 to 2480 MHz
<b>Number of Available Channels</b>	Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)
<b>Data Rates and Throughput</b>	Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps BLE : 1 Mbps data rate; throughput up to 0.2 Mbps Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)
<b>Transmit Power</b>	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.

#### Receiver Sensitivity Legacy

<b>Power Consumption</b>	Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW
<b>Electrical Interface</b>	USB 2.0 compliant
<b>Bluetooth Software Supported Link Topology</b>	Microsoft Windows Bluetooth Software
<b>Power Management</b>	Microsoft Windows ACPI, and USB Bus Support
<b>Certifications</b>	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
<b>Power Management Certifications</b>	ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
<b>Bluetooth Profiles Supported</b>	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode

### Technical Specifications – Networking and Communications

	<ul style="list-style-type: none"><li>LE Link Layer</li><li>LE Low Duty Cycle Directed Advertising</li><li>LE L2CAP Connection Oriented Channels</li><li>Train Nudging &amp; Interlaced Scan</li><li>BT4.2 ESR08 Compliance</li><li>LE Secure Connection- Basic/Full</li><li>LE Privacy 1.2 –Link Layer Privacy</li><li>LE Privacy 1.2 –Extended Scanner Filter Policies</li><li>LE Data Packet Length Extension</li><li>FAX Profile (FAX)</li><li>Basic Imaging Profile (BIP)2</li><li>Headset Profile (HSP)</li><li>Hands Free Profile (HFP)</li><li>Advanced Audio Distribution Profile (A2DP)</li></ul>
--	---

### Technical Specifications – Networking and Communications

#### ENVIRONMENTAL

##### Eco-Label Certifications & declarations

This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

- IT ECO declaration
- US ENERGY STAR®
- EPEAT® 2019 registered where applicable. EPEAT registration varies by country. See <http://www.epeat.net> for registration status by country.
- 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)

Normal Operation (Short idle)  
Normal Operation (Long idle)  
Sleep  
Off

	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 60Hz</b>
Normal Operation (Short idle)	4.5350	4.5700	4.3930
Normal Operation (Long idle)	4.0470	4.2030	3.9670
Sleep	0.3880	0.4210	0.3820
Off	0.3500	0.3880	0.3490

**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 compliant 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. Search keyword generator on HP's 3rd party option store for solar generator accessories at [www.hp.com/go/options](http://www.hp.com/go/options)

##### Heat Dissipation\*

Normal Operation (Short idle)  
Normal Operation (Long idle)  
Sleep  
Off

	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 60Hz</b>
Normal Operation (Short idle)	15.4644	15.5837	14.9801
Normal Operation (Long idle)	13.8003	14.3322	13.5275
Sleep	1.3231	1.4356	1.3026
Off	1.1935	1.3231	1.1901

**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)

Typically Configured – Idle  
Fixed Disk – Random writes

Longevity and Upgrading

Sound Power (L<sub>WA</sub>, bels)

Sound Pressure (L<sub>PA</sub>, decibels)

3.1

20

4.4

33

This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include:

Spare parts are available throughout the warranty period and or for up to 5 years after the end of production.

### Technical Specifications – Networking and Communications

**Batteries**

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

Mercury greater than 1ppm by weight

Cadmium greater than 20ppm by weight

Battery size: CR2032 (coin cell)

Battery type: Lithium

**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).
- 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

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

### Technical Specifications – Networking and Communications

#### Packaging Usage

- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

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.

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

#### Global Citizenship Report

<http://www.hp.com/hpinfo/globalscitizenship/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/globalscitizenship/environment/pdf/cert.pdf>

#### HP Inc. Corporate Environmental Information

After-Market Options (availability may vary by region)

<b>Type</b>	<b>Description</b>	<b>Part Number</b>
<b>Display Bracket</b>	HP B300 PC Mounting Bracket	2DW53A
	HP B500 PC Mounting Bracket	2DW52A
	HP Flat Panel Monitor Quick Release	EM870AA
	HP Quick Release Bracket 2	6KD15AA
<b>Desktop Mini Accessories</b>	HP Desktop Mini 500GB HDD/I/O Expansion Module	K9Q82AA
	HP Desktop Mini 65W Power Supply Kit	L2X04AA
	HP Desktop Mini DVD-Writer ODD Expansion Module	K9Q83AA
	HP Desktop Mini G3/G4 Port Cover Kit	1ZE52AA
	HP Desktop Mini I/O Expansion Module	K9Q84AA
	HP Desktop Mini LockBox V2	3EJ57AA
	HP Desktop Mini Security/Dual VESA Sleeve v2	2JA32AA
	HP Desktop Mini Vertical Chassis Stand	G1K23AA
	HP DM VESA Power Supply Holder Kit	1RL87AA
	HP G4 Mini 2.5-inch SATA Drive Bay Kit	3TK91AT
<b>Graphics Options</b>	HP HDMI Standard Cable Kit	T6F94AA
<b>Security Hardware</b>	HP Dual Head Keyed Cable Lock	T1A64AA
	HP Keyed Cable Lock 10mm	T1A62AA
<b>Data Storage Drives</b>	HP PCIe NVME TLC 256GB SSD M.2 Drive	1CA51AA
	Intel Optane 118GB M.2 SSD	4RV34AA
	Intel Optane Memory 16GB	1WV97AA
	HP 256GB SATA TLC Non-SED Solid State Drive	P1N68AA
<b>Input Devices</b>	HP Conferencing Keyboard	K8P74AA
	HP USB Business Slim Keyboard	N3R87AA
	HP USB Collaboration Keyboard	Z9N38AA
	HP USB Hardened Mouse	P1N77AA
	HP USB Mouse	QY777AA
<b>Adapter</b>	HP USB to Serial Port Adapter	J7B60AA
<b>System Memory</b>	HP 4GB DDR4-2666 SODIMM	3TK86AA
	HP 8GB DDR4-2666 SODIMM	3TK88AA
	HP 16GB DDR4-2666 SODIMM	3TK84AA
<b>Multimedia Devices</b>	HP Business Headset v2	T4E61AA
	HP USB Business Speakers v2	N3R89AA

---

© Copyright 2019 HP Development Company, L.P.

The information contained herein is subject to change without notice. The only warranties for HP products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft and Windows are registered trademarks or trademarks of Microsoft Corporation in the U.S. and/or other countries. Intel, Celeron®, Core, Pentium are registered trademarks or trademarks of Intel Corporation in the U.S. and/or other countries. Bluetooth is a trademark of its proprietor, used by HP Inc. under license. NVIDIA, GeForce, Kepler and NVS are trademarks and/or registered trademarks of NVIDIA Corporation in the U.S. and other countries. AMD and Radeon are trademarks of Advanced Micro Devices, Inc. ENERGY STAR is a registered trademark owned by the U.S. Environmental Protection Agency.

DisplayPort™ and the DisplayPort™ logo are trademarks owned by the Video Electronics Standards Association (VESA®) in the United States and other countries.

### Change Log

<b>Date of change:</b>	<b>Version History:</b>		<b>Description of change:</b>
July 13, 2018	From v1 to v2	Update	EPEAT Gold updated to EPEAT Silver/Back image on call outs updated
February 5, 2019	From v2 to v3	Update	HP PhoneWise, HP ePrinter + Jet advantage and HP Velocity removed
June 17, 2019	From v3 to v4	Update	EPEAT references updated 512GB M.2 added to Storage section Environmental section bullet overset corrected
June 20. 2019	From v4 to v5	Update	Hp Cloud recovery and its disclaimer added to software section
August 16, 2019	From v5 to v6	Update	Cable lock slot upgraded to Standard