

### Overview

#### HP ProStudio 2 All-in-One G2a 24 Desktop PC

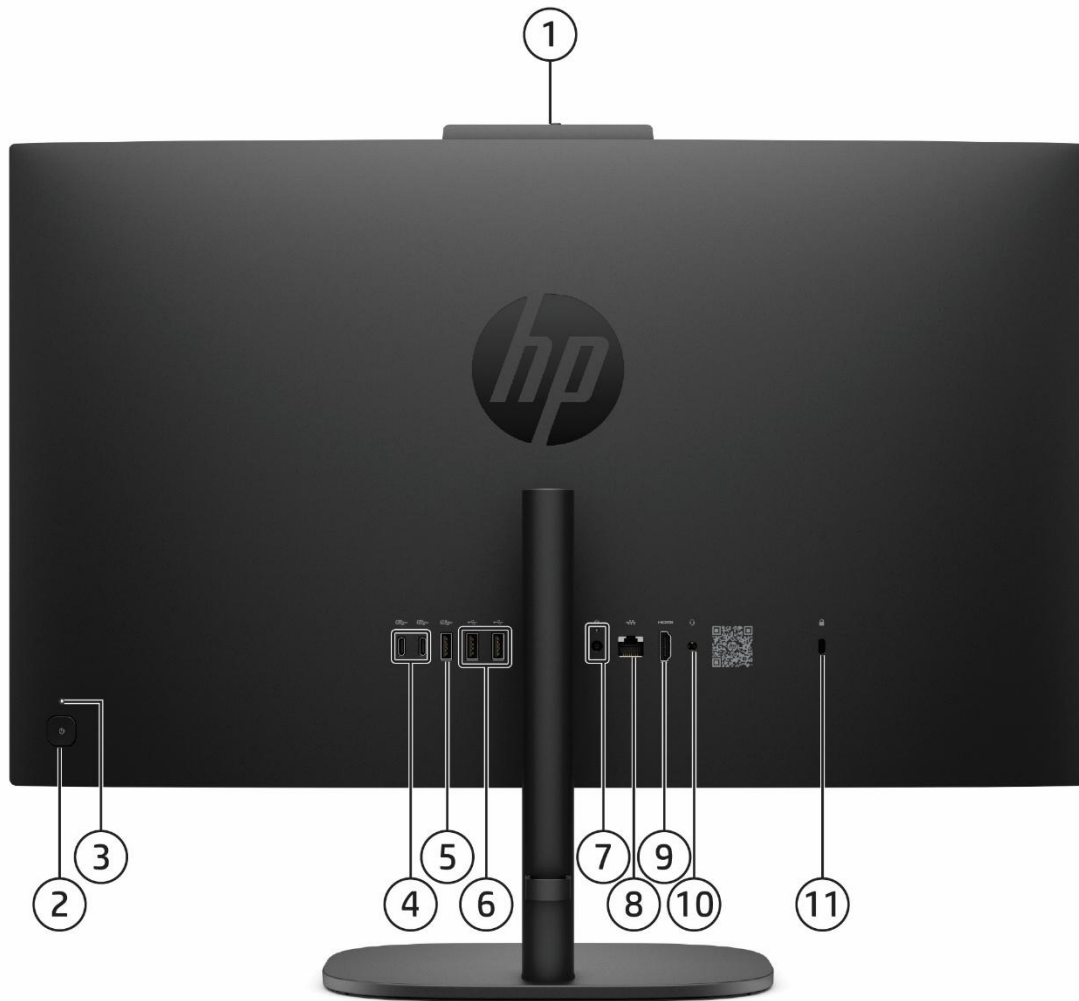


**Front**

1. 5MP IR webcam and microphone
2. Dual 3W Speakers (downfiring)

### Overview

### HP ProStudio 2 All-in-One G2a 24 Desktop PC



#### Rear (Full-Featured)

- |  |                                     |
|--|-------------------------------------|
| 1. 5MP IR webcam and microphone  | 7. Power Connection                 |
| 2. Power button  | 8. RJ-45 Network Adapter            |
| 3. Power signaling light   | 9. HDMI 2.0b Output                 |
| 4. (2) Type C: USB 3.2 Gen2 SuperSpeed 10Gbps w/ DisplayPort™ Alt Mode | 10. Microphone/Headphone Combo Jack |
| 5. (1) Type A USB 3.2 Gen2 SuperSpeed 10Gbps                           | 11. Kensington Lock                 |
| 6. (2) Type A USB 2.0  |                                     |

### Overview

### HP ProStudio 2 All-in-One G2a 24 AI Desktop PC

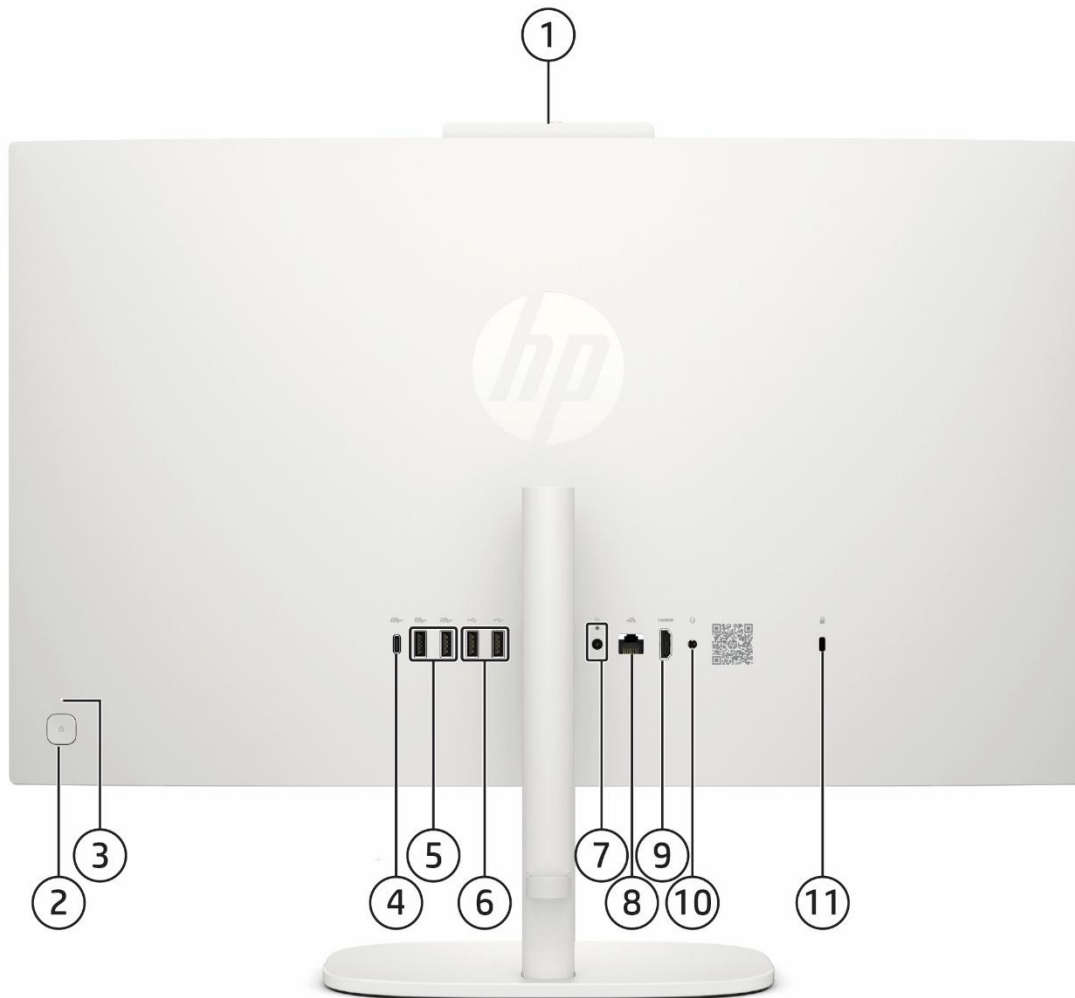


**Front**

1. 5MP IR webcam and microphone (optional) or FHD webcam and microphone (optional)
2. 2W dual Speakers and microphone (optional)

### Overview

### HP ProStudio 2 All-in-One G2a 24 Desktop PC



#### Rear (De-Featured)

- |  |                                     |
|--|-------------------------------------|
| 1. 5MP IR webcam and microphone (optional) or FHD webcam and microphone (optional) | 7. Power Connection                 |
| 2. Power button  | 8. RJ-45 Network Adapter            |
| 3. Power indicating light  | 9. HDMI 2.0b Output                 |
| 4. (1) Type C USB 3.2 Gen2 SuperSpeed 10Gbps w/ DisplayPort™ Alt Mode              | 10. Microphone/Headphone Combo Jack |
| 5. (2) Type A USB 3.2 Gen2 SuperSpeed 10Gbps                                       | 11. Kensington Lock                 |
| 6. (2) Type A USB 2.0  |                                     |

### Features

#### PRODUCT NAME

HP ProStudio 2 All-in-One G2a 24 Desktop PC

#### OPERATING SYSTEMS

<b>Preinstalled</b>	Windows 11 Pro <sup>1</sup> Windows 11 Home - HP recommends Windows 11 Pro for Business <sup>1</sup> Windows 11 Home Single Language - HP recommends Windows 11 Pro for Business <sup>1</sup> FreeDOS
<b>Pre-installed (other)</b>	FreeDOS

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 is automatically updated and enabled. High speed internet and Microsoft account required. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.

#### PROCESSORS\*

##### **AMD Ryzen™ AI 7 445<sup>1</sup>**

Up to 4.6 GHz max boost clock  
8 MB L3 cache, 6 cores  
Integrated Radeon™ Graphics with AMD Ryzen™ AI (50 NPU TOPS)  
Supports DDR5 memory up to 64GB 3200 MHz data rate<sup>2</sup>

##### **AMD Ryzen™ 5 220<sup>1</sup>**

3.2 GHz base clock, up to 4.9 GHz max boost clock  
16 MB L3 cache, 6 cores  
AMD Radeon™ 740M  
Supports DDR5 memory up to 5600 MHz data rate<sup>2</sup>

##### **AMD Ryzen™ 5 40<sup>1</sup>**

2.8 GHz base clock, up to 4.3 GHz max boost clock  
4 MB L3 cache, 4 cores  
AMD Radeon™ 610M  
Supports LPDDR5 memory up to 5500 MHz data rate<sup>2</sup>

##### **AMD Ryzen™ 3 30<sup>1</sup>**

2.4 GHz base clock, up to 4.1 GHz max boost clock  
4 MB L3 cache, 4 cores  
AMD Radeon™ 610M  
Supports LPDDR5 memory up to 5500 MHz data rate<sup>2</sup>

##### **AMD Athlon™ Silver 10<sup>1</sup>**

2.4 GHz base clock, up to 3.5 GHz max boost clock  
4 MB L3 cache, 2 cores  
Integrated Radeon™ 610M  
Supports LPDDR5 memory up to 5500 MT/s data rate<sup>2</sup>

1. Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. AMD's numbering is not a measurement of clock speed.

2. Actual data rate is determined by both the system's configured processor and memory module installed.

**NOTE:** In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on <http://www.support.hp.com>.

### Features

#### GRAPHICS

AMD Radeon™ Graphics  
AMD Radeon™ 740M  
AMD Radeon™ 610M

**NOTE:** AMD integrated Radeon™ Vega Graphics varies by processor

#### DISPLAY

##### Non-Touch

23.8 inch FHD (1920x1080) Anti-Glare LCD 350nits LowBlueLight IPS 100Hz – FF only

23.8 inch FHD (1920x1080) Anti-Glare LCD 250nits LowBlueLight IPS 60Hz – DF only

#### STORAGE AND DRIVES\*

**NOTE:** Starting from November 1<sup>st</sup>, 2023, all shipments will require Windows to be installed when selecting a SSD.

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

256GB 2280 PCIe NVMe Solid State Drive

512GB 2280 PCIe NVMe Solid State Drive

1TB 2280 PCIe NVMe Solid State Drive

2TB 2280 PCIe NVMe Solid State Drive

**NOTE:** For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB is reserved (for Windows) for system recovery software.

### Features

#### MEMORY

**Maximum**

DDR5 SODIMM up to 5200MT/s

**Memory Slots**

SODIMM up to 2 slots

**Available Configurations**

8GB (8GB x1)

12GB (12GB x1)

16GB (8GB x2)

16GB (16GB x1)

24GB (24GB x1)

32GB (16GB x2)

32GB (32GB x1)

1. Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.

**NOTE:** Actual data rate is determined by both the system's configured processor and memory module installed.

#### NETWORKING/COMMUNICATIONS

**Wireless LAN**

Realtek® 8852BE-VT Wi-Fi 6<sup>1</sup> +Bluetooth® 5.4 WW WLAN<sup>2</sup>

Mediatek MT7920 Wi-Fi 6 +Bluetooth 5.4 WW WLAN

Realtek 8922AE-VS Wi-Fi 7 +Bluetooth 6.0 WW WLAN

**Ethernet (RJ-45) Integrated**

Realtek® RTL8111HSH-CG Gigabit Ethernet Controller

1. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11 ax) is backwards compatible with prior 802.11 specs.

2. Must be configured at time of purchase.

3. Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 5 (802.11 ac) is backwards compatible with prior 802.11 specs.

#### AUDIO/MULTIMEDIA

**High Definition Audio**

Integrated Realtek ALC3274 Audio Codec

High performance integrated stereo speakers

3.5mm combo (microphone/headphone) jack

**Webcams & Mic**

Integrated tiltable 5MP webcam (Pixel size: 1.12µm x 1.12µm), Up to 30 frames/sec, dual array microphone included

### Features

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

##### **Keyboards**

HP 175 Wired Keyboard

HP 275 Wireless Keyboard

##### **Mice**

HP 175 Wired Mouse

HP 275 Wireless Mouse

**NOTE:** Availability may vary by country

### Features

#### SOFTWARE AND SECURITY

##### HP Support

HP PC Hardware Diagnostics  
HP Cloud Recovery  
HP Support Assistant

##### Internet Security and Antivirus

McAfee LiveSafe (30-day subscription)<sup>1</sup>

##### Product Setup

myHP

##### Security Features

Trusted Platform Module (TPM) 2.0 (firmware)<sup>2,3</sup>

##### Productivity

Xerox® DocuShare® (90 days free trial offer)<sup>4</sup>  
Microsoft 365 (sold separately and requires Internet access for activation)

##### BIOS

Administrator Password  
Self recovery  
Hard drive utilities  
HP Secure erase feature  
Secure Boot  
UEFI Self Certification Level: 2.9

1. 30 days trial period. Internet access required to receive updates. First update included. Subscription required for updates thereafter
2. TPM feature will not be supported on machines pre-configured with FreeDOS and Linux
3. In selected countries, machines pre-configured with Windows OS will be shipped with TPM disabled.
4. Simply sign up and start using Xerox® DocuShare® Go. No credit card. No obligation. Data will become unavailable unless a subscription is entered before the end of the 90 days free trial period. See visit <https://xerox.com/docusharego> for details.

### Features

#### POWER

##### Power Supply

HP Smart 90W External AC power adapter

#### PORTS/SLOTS

##### Rear I/O Ports

Two (2) Type-C SuperSpeed USB 10Gbps signaling rate ports (FF)

One (1) Type-C SuperSpeed USB 10Gbps signaling rate ports (DF) One (1) Type-A SuperSpeed USB 10 Gbps port (FF)

Two (2) Type-A SuperSpeed USB 10Gbps signaling rate ports (DF)

Two (2) Type-A Hi-Speed USB 480Mbps signaling rate ports

One (1) RJ-45 (network) jack

One (1) HDMI 2.0out connector

One (1) Microphone/Headphone Combo Jack

One (1) DC in power

##### Internal I/O Ports

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

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

### Features

#### WEIGHTS & DIMENSIONS

##### Weight

<b>23.8 Non-Touch Product Weight (Unboxed)</b>	5.28 kg, 11.64 lbs
<b>23.8 Shipping Weight (Boxed)</b>	8.80 kg, 19.40 lbs
<b>23.8 Shipping Weight (Pallet)</b>	225.2 kg, 496.5 lbs

##### Dimension

##### 23.8 System Dimensions

**Height Adjustable Stand** 54.03 x 18.49 x 47.57 cm, 21.27 x 7.27 x 18.73 in

**Fixed Height Stand** 54.03 x 18.49 x 43.67 cm, 21.27 x 7.27 x 16.87 in

**23.8 Shipping Dimensions (Boxed)** 64.1 x 27.7 x 52.5 cm, 25.2 x 10.9 x 20.6 in

**23.8 Shipping Dimensions (Pallet)** 1200 x 1000 x 2235 mm  
47.24 x 39.37 x 88 in

**23.8 Pallet Quantity (Sea/ Rail)** 24

**23.8 Pallet Quantity (Air)** 12

### Features

#### UNIT ENVIRONMENT AND OPERATING CONDITIONS<sup>9</sup>

- 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.
- Low halogen (chassis, all internal components and modules)<sup>1</sup>

<b>Temperature Range</b>	Operating: 50° to 95° F (10° to 35° C)* Non-operating: -22° to 140° F (-30° to 60° C)
<b>Relative Humidity</b>	Operating: 10% to 90% (non-condensing at ambient) Non-operating: 5% to 95% (non-condensing at ambient)
<b>Maximum Altitude (unpressurized)</b>	Operating: 5000m Non-operating: 50000ft (15240 m)

1. External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.

**NOTE:** 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.

#### ENVIRONMENTAL & INDUSTRY

##### HP ProStudio 2 All-in-One G2a 24 Desktop PC (De-Featured)

###### 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® Gold registered in the United States. See <http://www.epeat.net> for registration status in your country.

###### Sustainable Impact Specifications

- [Product Carbon Footprint \(hp.com\)](#)
- At least 60% post-consumer recycled plastic<sup>1</sup>
- At least 30% recycled metal<sup>2</sup>
- External Power Supply 90% Efficiency
- Low halogen<sup>3</sup>
- 100% of HP paper-based packaging is from recycled or certified sustainable sources<sup>4</sup>
- Outside Box and corrugated cushions are 100% sustainably sourced and recyclable
- Molded Paper Pulp Cushion inside box is 100% sustainably sourced and recyclable (MPP frame)
- Recycled Plastic cushions

###### 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”.

### Features

#### Energy Consumption

(in accordance with US ENERGY STAR® test method)

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	13.92 W	14.00 W	13.72 W
Normal Operation (Long idle)	1.92 W	2.04 W	1.66 W
Sleep	1.92 W	2.04 W	1.66 W
Off	0.17 W	2.04 W	0.17 W

**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. Search keyword generator on HP's 3rd party option store for solar generator accessories at <http://www.hp.com/go/options>.

#### Heat Dissipation\*

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	48 BTU/hr	48 BTU/hr	47 BTU/hr
Normal Operation (Long idle)	7 BTU/hr	7 BTU/hr	6 BTU/hr
Sleep	7 BTU/hr	7 BTU/hr	6 BTU/hr
Off	1 BTU/hr	7 BTU/hr	1 BTU/hr

**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 <sub>WAd</sub> , bels)	Sound Pressure (L <sub>pAm</sub> , decibels)
Typically Configured – Idle	2.4	14
Fixed Disk – Random writes	3.3	21

#### 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:

#### 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).
- This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see <http://www.epeat.net>
- Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.
- This product is 96.8% recycle-able when properly disposed of at end of life.

### Features

#### Packaging Materials

<b>External:</b>	PAPER/Corrugated	1932 g
	PAPER/Molded Pulp	1840 g
<b>Internal:</b>	PLASTIC/EPE (Expanded Polyethylene)	11 g
	PLASTIC/Polyethylene low density	49 g

The plastic packaging material contains at least 30% recycled content.

The corrugated paper packaging materials contains at least 35% recycled content. HP Inc. complies fully with materials regulations. We were among the first companies to extend the restrictions in the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive to our products worldwide through the HP GSE. HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam.

#### RoHS Compliance

We believe the RoHS directive and similar laws play an important role in promoting industry-wide elimination of substances of concern. We have supported the inclusion of additional substances—including PVC, BFRs, and certain phthalates—in future RoHS legislation that pertains to electrical and electronics products.

We met our voluntary objective to achieve worldwide compliance with the new EU RoHS requirements for virtually all relevant products by July 2013, and we will continue to extend the scope of the commitment to include further restricted substances as regulations continue to evolve.

To obtain a copy of the HP RoHS Compliance Statement, see [HP RoHS position statement](#).

#### Material Usage

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

### Features

#### 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 certifications:

<http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842>  
and

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

#### Footnotes

1. Recycled plastic is expressed as a percentage of the total weight plastic. Post-consumer recycled is based on the definition set in the EPEAT standard for computers, IEEE 1680.1-2018 standard.
2. Recycled metal is expressed as a percentage of the total weight of the metal according to ISO 14021 definitions for metal parts over 25 grams.
3. External power supplies, WWAN modules, power cords, cables and peripherals excluded. Service parts obtained after purchase may not be Low Halogen.
4. HP paper and fiber-based packaging for PCs, displays, home and office print, and supplies is reported by suppliers as recycled or certified, with a minimum of 97% by volume verified by HP. Packaging is the box that comes with the product and all paper-based materials inside the box. Packaging for personal systems accessories and spare parts is not included. Plastic cushions are made from >90% recycled plastic.

### Features

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- At least 30% recycled metal<sup>2</sup>
- External Power Supply 90% Efficiency
- Low halogen<sup>3</sup>
- 100% of HP paper-based packaging is from recycled or certified sustainable sources<sup>4</sup>
- Outside Box and corrugated cushions are 100% sustainably sourced and recyclable
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##### 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, 50Hz
Normal Operation (Short idle)	13.92 W	14.00 W	13.72 W
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Off	0.17 W	2.04 W	0.17 W

**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. Search keyword generator on HP's 3rd party option store for solar generator accessories at <http://www.hp.com/go/options>.

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	Sound Power (L <sub>WAd</sub> , bels)	Sound Pressure (L <sub>pAm</sub> , decibels)
Typically Configured – Idle	2.4	14
Fixed Disk – Random writes	3.3	21

### Features

#### 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:

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 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).
- This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see <http://www.epeat.net>
- Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.
- This product is 96.8% recycle-able when properly disposed of at end of life.

#### 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)
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- Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
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#### Packaging Materials

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- 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 certifications:

<http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842>  
and

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

### Features

#### Footnotes

1. Recycled plastic is expressed as a percentage of the total weight plastic. Post-consumer recycled is based on the definition set in the EPEAT standard for computers, IEEE 1680.1-2018 standard.
2. Recycled metal is expressed as a percentage of the total weight of the metal according to ISO 14021 definitions for metal parts over 25 grams.
3. External power supplies, WWAN modules, power cords, cables and peripherals excluded. Service parts obtained after purchase may not be Low Halogen.
4. HP paper and fiber-based packaging for PCs, displays, home and office print, and supplies is reported by suppliers as recycled or certified, with a minimum of 97% by volume verified by HP. Packaging is the box that comes with the product and all paper-based materials inside the box. Packaging for personal systems accessories and spare parts is not included. Plastic cushions are made from >90% recycled plastic.

### ALL-IN-ONE DISPLAY PANEL SPECIFICATIONS

#### 23.8" diagonal FHD IPS anti-glare WLED-backlit (1920 x 1080)

Non-touch

<b>Type</b>	IPS WLED Backlit LCD
<b>Active area (mm)</b>	527.04 x 296.46
<b>Native resolution (HxV)</b>	1920 x 1080
<b>Refresh rate</b>	100Hz @ 1920 x 1080
<b>Aspect ratio</b>	16:9
<b>Pixel pitch (HxV)(mm)</b>	0.2745 x 0.2745
<b>Contrast ratio (typical)</b>	1000:1
<b>Brightness (typical)</b>	250nits
<b>Viewing angle (typical) (HxV)</b>	178 ° x 178 °
<b>Backlight lamp life (to half brightness)</b>	30,000 hours minimum
<b>Color support</b>	Up to 16.7 million colors with the use of FRC technology
<b>Color gamut (typical)</b>	NTSC 72%
<b>Anti-glare</b>	Yes
<b>Response time (typical)</b>	14ms
<b>Default color temperature</b>	Warm (6500K)

#### 23.8" diagonal FHD VA anti-glare WLED-backlit (1920 x 1080)

Non-touch

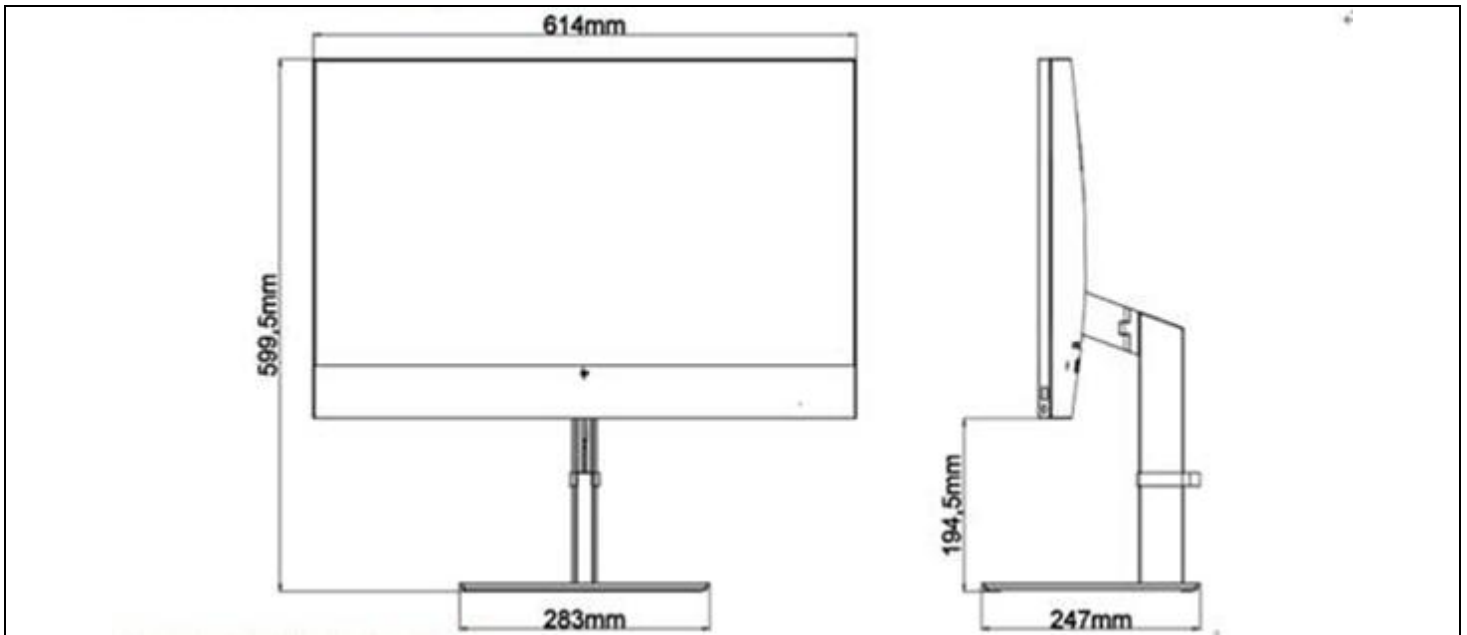
<b>Type</b>	IPS WLED Backlit LCD
<b>Active area (mm)</b>	527.04 x 296.46
<b>Native resolution (HxV)</b>	1920 x 1080
<b>Refresh rate</b>	100Hz @ 1920 x 1080
<b>Aspect ratio</b>	16:9
<b>Pixel pitch (HxV)(mm)</b>	0.2745 x 0.2745
<b>Contrast ratio (typical)</b>	1000:1
<b>Brightness (typical)</b>	350nits
<b>Viewing angle (typical) (HxV)</b>	178 ° x 178 °
<b>Backlight lamp life (to half brightness)</b>	30,000 hours minimum
<b>Color support</b>	Up to 16.7 million colors with the use of FRC technology
<b>Color gamut (typical)</b>	NTSC 72%
<b>Anti-glare</b>	Yes
<b>Response time (typical)</b>	14ms
<b>Default color temperature</b>	Warm (6500K)

### Technical Specifications – Stand

#### ALL-IN-ONE STAND SPECIFICATIONS

<b>Standard stand:</b>	<b>Tilt angle</b>	-5° to +20°
	<b>Rotation (Swivel)</b>	None

<b>Adjustable Height Stand:</b>	Height - Vertical/Landscape Adjustment	130mm (±2 mm)
	Portrait Adjustment	No portrait
	Tilt Angle	-5° to +18° (±2°) in landscape and portrait
	Rotation (Swivel)	86° (±4°) (45 left, 45 right)
	Pivot	No pivot



#### STORAGE AND DRIVES

**NOTE:** Starting from November 1<sup>st</sup>, 2023, all shipments will require Windows to be installed when selecting a SSD.

**NOTE:** For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36GB (for Windows) 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
<b>Interface</b>	PCIe Gen4
<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 36GB (for Windows) 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 Gen4
<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 36GB (for Windows) of system disk is reserved for the system recovery software.

### Technical Specifications – Storage

#### 1TB M.2 2280 PCIe NVMe SSD

<b>Drive Weight</b>	< 10g
<b>Capacity</b>	1TB
<b>Height</b>	2.38mm
<b>Length</b>	80mm
<b>Width</b>	22mm
<b>Interface</b>	PCIe Gen4
<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 36GB (for Windows) 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 Gen4
<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 36GB (for Windows) of system disk is reserved for the system recovery software.

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

<b>Drive Weight</b>	< 10g
<b>Capacity</b>	1 TB
<b>Height</b>	2.38mm
<b>Length</b>	80mm
<b>Width</b>	22mm
<b>Interface</b>	PCIe Gen4
<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 36GB (for Windows) of system disk is reserved for the system recovery software.

### Technical Specifications - Audio

#### HIGH DEFINITION AUDIO

<b>Type</b>	Integrated
<b>HD Audio Codec</b>	Realtek ALC3274 Audio Codec
<b>Audio I/O Ports</b>	Rear 3.5mm combo (microphone/headphone) jack (32 Ohm) supporting CTIA and OMTP style headset Microphone (2K Ohm)
<b>Analog Audio</b>	Yes
<b>Internal Speaker Amplifier</b>	2W per channel stereo amplifier for the internal speakers only
<b>Internal Speaker</b>	Yes - Stereo Speaker
<b>DAC Sampling Rates</b>	44.1 kHz/48 kHz/96 kHz/192 kHz
<b>ADC Sampling Rates</b>	44.1 kHz/48 kHz/96 kHz/192 kHz

### INPUT/OUTPUT DEVICES

HP 175 Wired Keyboard		
<b>Physical Characteristics</b>	Keys	110keys (US);111(UK);113(JP, BR)
	Dimensions (LxWxH)	428.83x117.37x19.1 (mm) ;16.88 × 4.62 × 0.75 (in)
	Weight	435 (g) ;0.96 (lb)
<b>Electrical</b>	Operating voltage	4.75~5.25V
	Power consumption	100mA
	System Interface	USB
	ESD	Contact Discharge: 8 KV Air Discharge: 15 KV
	EMI - RFI	6 ft (1.8 M)
<b>Mechanical</b>	Key Structure (Switch type and feeling) (Plunger)	Conforms to FCC rules for a Class B computing device
	Key actuation	Plunger, Key travel: 2.5mm +/-0.2mm at 120gf, low profile key travel
	Key life	60±8g nominal peak force with tactile feedback
<b>Environmental</b>	Operating temperature	10 million keystrokes (Life tester)
	Non-operating temperature	50° to 122° F (10° to 50° C)
	Operating humidity	-32° to 140° F (-40° to 60° C)
	Non-operating humidity	10% to 90% (non-condensing at ambient)
	Drop (out of box)	20% to 80% (non-condensing at ambient)
	Drop (in box)	6 faces, 76cm, rigid surface
<b>Approvals</b>	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC, EAC, BIS	

HP 275 Wireless Keyboard		
<b>Physical Characteristics</b>	Keys	107keys (US); 108keys (UK); 110 keys (JP, BR)
	Dimensions (LxWxH)	428.83 x 117.37 x 19.1 (mm); 16.88 x 4.62 x 0.75 (in)
	Weight	416 (g); 0.92 (lb)
<b>Electrical</b>	Operating voltage	2.2V~3.3V(BATTERY)
	Power consumption	30mA
	System Interface	2.4GHz Wireless
	ESD	Contact Discharge: 8 KV Air Discharge: 15 KV
	EMI - RFI	Conforms to FCC rules for a Class B computing device
<b>Mechanical</b>	Key Structure (Switch type and feeling) (Plunger)	Plunger, Key travel: 2.5mm +/-0.2mm at 120gf, low profile key travel
	Key actuation	60±8g nominal peak force with tactile feedback
	Key life	10 million keystrokes (Life tester)
<b>Environmental</b>	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-32° to 140° F (-40° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Drop (out of box)	6 faces, 76cm, rigid surface
	Drop (in box)	6 faces, 1 corner and 3 edges on rigid surface, drop Height: 91cm

### Technical Specifications – Input/Output

<b>Approvals</b>	CB; FCC; IC; UL; ENCOM; ANATEL; SUBTEL; RCM; WPC; BIS; CONATEL; TRA; CE; TUV GS; ICASA; SRRC; DJID; TELEC; VCCI; KCC; SIRIM; NTC; IMDA; NCC; BSMI; NBTC
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<b>HP 175 Wired Mouse</b>		
<b>Dimensions (LxWxH)</b>	123x65x39 (mm); 4.84x2.56x1.54 (in)	
<b>Weight</b>	80 (g);0.18 (lb)	
<b>Environmental</b>	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-32° to 140° F (-40° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Drop (out of box)	6 faces, 76cm, rigid surface
	Drop (in box)	6 faces, 1 corner and 3 edges on rigid surface, drop Height: 91 cm
<b>Electrical</b>	Operating voltage	4.75~5.25V
	Power consumption (typical)	100mA
	Resolution	1,200 DPI
	Sensor	Optical USB mouse sensor
	System Interface	USB
	Cable length	6 ft (1.8 M)
<b>Regulatory approvals</b>	Compliant	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC, EAC

<b>HP 275 Wireless Mouse</b>		
<b>Dimensions (LxWxH)</b>	123x65x39 (mm); 4.84x2.56x1.54 (in)	
<b>Weight</b>	73 (g);0.161 (lb) (no Battery )	
<b>Environmental</b>	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-32° to 140° F (-40° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Drop (out of box)	6 faces, 76cm, rigid surface
	Drop (in box)	6 faces, 1 corner and 3 edges on rigid surface, drop Height: 91 cm
<b>Electrical</b>	Operating voltage	1.5VDC
	Power consumption (typical)	30mA
	Resolution	1,200 DPI
	Sensor	Optical mouse sensor
	System Interface	2.4GHz Wireless
	Cable length	NA
<b>Regulatory approvals</b>	Compliant	CB; FCC; IC; UL; ENCOM; ANATEL; SUBTEL; RCM; WPC; CONATEL; TRA; CE; TUV GS; ICASA; SRRC; DJID; TELEC; VCCI; KCC; SIRIM; NTC; IMDA; NCC; BSMI; NBTC

### NETWORKING/COMMUNICATIONS

<b>Realtek® RTL8111HSH-CG Gigabit Ethernet Controller</b>	
<b>Ethernet Features</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 8023 clauses 40) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s 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) Jumbo Frame 9K Auto MDI/MDIX Crossover cable detection
<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>Performance Features</b>	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload (ARP & NS) Large send offload and Giant send offload Receiving Side Scaling
<b>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
<b>Interface</b>	PCI Express 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ
<b>NIC Device Driver Name</b>	PCIe GBE Ethernet Family Controller

### WLAN\*

<b>Realtek® 8852BE Wi-Fi 6<sup>1</sup> (802.11 ax) 2x2 with Bluetooth® Wireless Card M.2</b>	
<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
<b>Interoperability</b>	Wi-Fi® certified
<b>Frequency Band</b>	802.11b/g/n/ax • 2.402 – 2.482 GHz 802.11a/n/ac/ax • 4.9 – 4.95 GHz (Japan) • 5.15 – 5.25 GHz • 5.25 – 5.35 GHz

### Technical Specifications - Networking

	<ul style="list-style-type: none"> <li>• 5.47 – 5.725 GHz</li> <li>• 5.825 – 5.850 GHz</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: max 300Mbps</li> <li>• 802.11ac : max 866.7Mbps</li> <li>• 802.11ax : max 1201Mbps</li> </ul>
<b>Modulation</b>	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
<b>Security<sup>2</sup></b>	<ul style="list-style-type: none"> <li>• IEEE and WiFi certified 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>• WPA3 certification</li> <li>• IEEE 802.11i</li> <li>• WAPI</li> </ul>
<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
<b>Roaming</b>	IEEE 802.11 compliant roaming between access points
<b>Output Power<sup>3</sup></b>	<ul style="list-style-type: none"> <li>• 802.11b: +18.5dBm minimum</li> <li>• 802.11g: +17.5dBm minimum</li> <li>• 802.11a: +18.5dBm minimum</li> <li>• 802.11n HT20(2.4GHz): +15.5dBm minimum</li> <li>• 802.11n HT40(2.4GHz): +14.5dBm minimum</li> <li>• 802.11n HT20(5GHz): +15.5dBm minimum</li> <li>• 802.11n HT40(5GHz): +14.5dBm minimum</li> <li>• 802.11ac VHT80(5GHz): +11.5dBm minimum</li> <li>• 802.11ax HE40(2.4GHz): +10dBm minimum</li> <li>• 802.11ax HE80(5GHz): +10dBm minimum</li> </ul>
<b>Power Consumption</b>	<ul style="list-style-type: none"> <li>• Transmit mode:2.5 W</li> <li>• Receive mode:2 W</li> <li>• Idle mode: (PSP) 180 mW (WLAN Associated)</li> <li>• Idle mode:50 mW (WLAN unassociated)</li> <li>• Connected Standby/Modern Standby: 10mW</li> <li>• Radio disabled: 8 mW</li> </ul>
<b>Power Management</b>	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
<b>Receiver Sensitivity<sup>4</sup></b>	<p>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              •802.11ax, MCS11(HE40): -57dBm maximum              •802.11ax, MCS11(HE80): -54dBm maximum</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

### Technical Specifications - Networking

<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>	Operating Non-operating	14° to 158° F (–10° to 70° C) –40° to 176° F (–40° to 80° C)
<b>Humidity</b>	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
<b>Altitude</b>	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	LED Amber – Radio OFF; LED White – Radio ON	
<p>1. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11ax) is backwards compatible with prior 802.11 specs.</p> <p>2. Check latest software/driver release for updates on supported security features.</p> <p>3. Maximum output power may vary by country according to local regulations.</p> <p>4. 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).</p>		
<b>HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2 Wireless Card Technology</b>		
<b>Bluetooth® Specification</b>	4.0/4.1/4.2/5.0/5.1/5.2 Wireless Card 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>Power Consumption</b>	Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW	
<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 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	

### Technical Specifications - Networking

	<p>LE Privacy 1.2 –Link Layer Privacy          LE Privacy 1.2 –Extended Scanner Filter Policies          LE Data Packet Length Extension          FAX Profile (FAX)          Basic Imaging Profile (BIP)2          Headset Profile (HSP)          Hands Free Profile (HFP)          Advanced Audio Distribution Profile (A2DP)          BT5.1          ESR9/10 Compliance          LE Advertisement Extensions          Channel Selection Algo          Limited High Duty Cycle Non-Connectable Advertising          2Mbps LE          LE Long Range</p>
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<b>Realtek RT 8852BE-VS Wi-Fi 6<sup>1</sup> (802.11ax) 1x1 with Bluetooth® Wireless Card M.2</b>	
<b>Wireless LAN Standards</b>	<p>IEEE 802.11a            IEEE 802.11b            IEEE 802.11g            IEEE 802.11n            IEEE 802.11ac</p>
<b>Interoperability</b>	Wi-Fi® certified
<b>Frequency Band</b>	<p>802.11b/g/n            • 2.402 – 2.482 GHz            802.11a/n            • 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</p>
<b>Data Rates</b>	<ul style="list-style-type: none"> <li>• 802.11b: 1, 2, 5.5, 11 Mbps</li> <li>• 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>• 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>• 802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz)</li> <li>• 802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, and 80MHz)</li> </ul>
<b>Modulation</b>	<p>Direct Sequence Spread Spectrum            BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM</p>
<b>Security<sup>2</sup></b>	<ul style="list-style-type: none"> <li>• IEEE 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>
<b>Network Architecture Models</b>	<p>Ad-hoc (Peer to Peer)            Infrastructure (Access Point Required)</p>
<b>Roaming</b>	IEEE 802.11 compliant roaming between access points
<b>Output Power<sup>3</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> </ul>

### Technical Specifications - Networking

	<ul style="list-style-type: none"> <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 mode 2.0 W</li> <li>• Receive mode 1.6 W</li> <li>• Idle mode (PSP) 180 mW (WLAN Associated)</li> <li>• Idle mode 50 mW (WLAN unassociated)</li> <li>• Connected Standby 10mW</li> <li>• Radio disabled 8 mW</li> </ul>	
<b>Power Management</b>	ACPI and PCI Express compliant power management 802.11 compliant power saving mode	
<b>Receiver Sensitivity<sup>4</sup></b>	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	
<b>Antenna type</b>	High efficiency antenna. One embedded dual band 2.4/5 GHz antenna is provided to the card to support WLAN 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>	Operating	14° to 158° F (-10° to 70° C)
	Non-operating	-40° to 176° F (-40° to 80° C)
<b>Humidity</b>	Operating	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
<b>Altitude</b>	Operating	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	LED Amber – Radio OFF; LED White – Radio ON	
<p>1. Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 5 (802.11 ac) is backwards compatible with prior 802.11 specs.</p> <p>2. Check latest software/driver release for updates on supported security features.</p> <p>3. Maximum output power may vary by country according to local regulations.</p> <p>4. 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).</p>		
<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)	

### Technical Specifications - Networking

<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>Power Consumption</b>	Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW
<b>Bluetooth® Software Supported</b>	Microsoft Windows Bluetooth® Software
<b>Link Topology</b>	
<b>Power Management</b>	Microsoft Windows ACPI, and USB Bus Support
<b>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 FAX Profile (FAX) Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP)

<b>Realtek RTL8852BE-VT 802.11ax 2x2 Wi-Fi™ + Bluetooth® 5.4 Wireless Card</b> (802.11ax 2x2, supporting gigabit data rate) <sup>1</sup>	
<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
<b>Interoperability</b>	Wi-Fi certified modules

### Technical Specifications - Networking

<b>Frequency Band</b>	<p>802.11b/g/n/ax</p> <ul style="list-style-type: none"> <li>•2.402 – 2.482 GHz</li> </ul> <p>802.11a/n/ac/ax</p> <ul style="list-style-type: none"> <li>•4.9 – 4.95 GHz (Japan)</li> <li>•5.15 – 5.25 GHz</li> <li>•5.25 – 5.35 GHz</li> <li>•5.47 – 5.725 GHz</li> <li>•5.825 – 5.850 GHz</li> </ul>
<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: max 300Mbps</li> <li>•802.11ac: max 866.7Mbps</li> <li>•802.11ax: max 1201Mbps</li> </ul>
<b>Modulation</b>	Direct Sequence Spread Spectrum, OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
<b>Security<sup>2</sup></b>	<ul style="list-style-type: none"> <li>•IEEE and WiFi certified 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>•WPA3 certification</li> <li>•IEEE 802.11i</li> <li>•WAPI</li> </ul>
<b>Network Architecture Models</b>	<p>Ad-hoc (Peer to Peer)</p> <p>Infrastructure (Access Point Required)</p>
<b>Roaming</b>	IEEE 802.11 compliant roaming between access points
<b>Output Power<sup>3</sup></b>	<ul style="list-style-type: none"> <li>•802.11b: +18.5dBm minimum</li> <li>•802.11g: +17.5dBm minimum</li> <li>•802.11a: +18.5dBm minimum</li> <li>•802.11n HT20(2.4GHz): +15.5dBm minimum</li> <li>•802.11n HT40(2.4GHz): +14.5dBm minimum</li> <li>•802.11n HT20(5GHz): +15.5dBm minimum</li> <li>•802.11n HT40(5GHz): +14.5dBm minimum</li> <li>•802.11ac VHT80(5GHz): +11.5dBm minimum</li> <li>•802.11ax HE40(2.4GHz): +10dBm minimum</li> <li>•802.11ax HE80(5GHz): +10dBm minimum</li> </ul>
<b>Power Consumption</b>	<ul style="list-style-type: none"> <li>•Transmit mode: 2.5 W</li> <li>•Receive mode: 2 W</li> <li>•Idle mode (PSP): 180 mW (WLAN Associated)</li> <li>•Idle mode: 50 mW (WLAN unassociated)</li> <li>•Connected Standby/Modern Standby: 10mW</li> <li>•Radio disabled: 8 mW</li> </ul>
<b>Power Management</b>	<p>ACPI and PCI Express compliant power management</p> <p>802.11 compliant power saving mode</p>

### Technical Specifications - Networking

<b>Receiver Sensitivity<sup>4</sup></b>	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 •802.11ax, MCS11(HE40): -57dBm maximum •802.11ax, MCS11(HE80): -54dBm maximum
<b>Antenna type</b>	High efficiency antenna with spatial diversity. 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>	1. Type 2230: 2.4 x 22.0 x 30.0 mm
<b>Weight</b>	1. Type 2230: 2.8g
<b>Operating Voltage</b>	3.3v +/- 9%
<b>Temperature</b>	Operating: 14° to 158° F (-10° to 70° C) Non-operating: -40° to 176° F (-40° to 80° C)
<b>Humidity</b>	Operating: 10% to 90% (non-condensing) Non-operating: 5% to 95% (non-condensing)
<b>Altitude</b>	Operating: 0 to 10,000 ft (3,048 m) Non-operating: 0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	LED Amber – Radio OFF; LED OFF – Radio ON
<b>HP Integrated Module with Bluetooth® 4.0/4.1/4.2/5.0/5.1/5.2/5.3/5.4 Wireless Card Technology</b>	
<b>Bluetooth® Specification</b>	4.0/4.1/4.2/5.0/5.1/5.2/5.3/5.4 wireless card 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>Power Consumption</b>	Peak (Tx): 330 mW Peak (Rx): 230 mW Selective Suspend: 17 mW
<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/E, Section 15.247, 15.249  ETSI 300 328, ETSI 301 893

### Technical Specifications - Networking

<b>Bluetooth® Profiles Supported</b>	<ul style="list-style-type: none"> <li>Bluetooth 4.1-ESR 5/6/7 Compliance</li> <li>LE Link Layer Ping</li> <li>LE Dual Mode</li> <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>Bluetooth 4.2 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> <li>Bluetooth 5.1</li> <li>ESR9/10 Compliance</li> <li>LE Advertisement Extensions</li> <li>Channel Selection Algo</li> <li>Limited High Duty Cycle Non-Connectable Advertising</li> <li>2Mbps LE</li> <li>LE Long Range</li> </ul>
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1. Wi-Fi 6 is designed to support gigabit data rate when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 80MHz and higher channels. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11ax) is backwards compatible with prior 802.11 specs.
2. The FCC has declared as of September 1, 2014 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.
3. 1. Check latest software/driver release for updates on supported security features.
4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

### Technical Specifications - Power

#### POWER

<b>Efficiency</b>	90W EPS, 88% average efficiency at 115V & 89% at 230Vac
<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>	≤1.6A
<b>Rated Input Current with Energy Efficient* Power Supply</b>	≤1.6A
<b>DC Output</b>	+19.5V
<b>Current Leakage (NFPA 99: 2102)</b>	Less than 500 microamps of leakage current at 120 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 120 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>Dimensions</b>	102 x 55 x 30 mm

### ADDITIONAL FEATURES

**SMART Technology (Self-Monitoring, Analysis and Reporting Technology)**

Description

Allows hard drives to monitor their own health and to raise flags if imminent failures were predicted

### Summary of Changes

#### SUMMARY OF CHANGES

Date of change:	Version History:		Description of change:
January 28, 2026	V1 to V2	Update	Rear call image updated for AI version
February 2, 2026	V2 to V3	Correction	Call out images correction
February 9, 2026	V3 to V4	Update	FF rear call out image USB port changed to: (2) Type C: USB 3.2 Gen2 SuperSpeed 10Gbps w/ DisplayPort™ Alt Mode
March 10, 2026	V4 to V5	Update	Keyboards and pointing dev. section updated
April 9, 2026	V5 to V6	Update	All-in-One G2a 24 Desktop PC environmental table, Call outs, Storage and drives, Memory and Ports/slots sections updated.
May 26, 2026	V6 to V7	Removal	“and LPDDR5x memory up to 7500 MHz” from AMD Ryzen™ 5 220
May 27, 2026	V7 to V8	Update	BIOS and Environmental data updated
June 12, 2026	V8 to V9	Update	Eco-Label Certifications & declarations updated in Environmental section
	V9 to V10		
	V10 to V11		

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