Overview

HP ProDesk 600 G6 Desktop Mini PC

1. Type-C® SuperSpeed USB 10Gbps signaling rate port (charge support up to 5V/3A)
2. Type-A SuperSpeed USB 10Gbps signaling rate port
3. Type-A SuperSpeed USB 5Gbps signaling rate port (charge support up to 5V/1.5A)
4. Combo Audio Jack with CTIA and headset support
5. Dual-state power button
6. Hard drive activity light

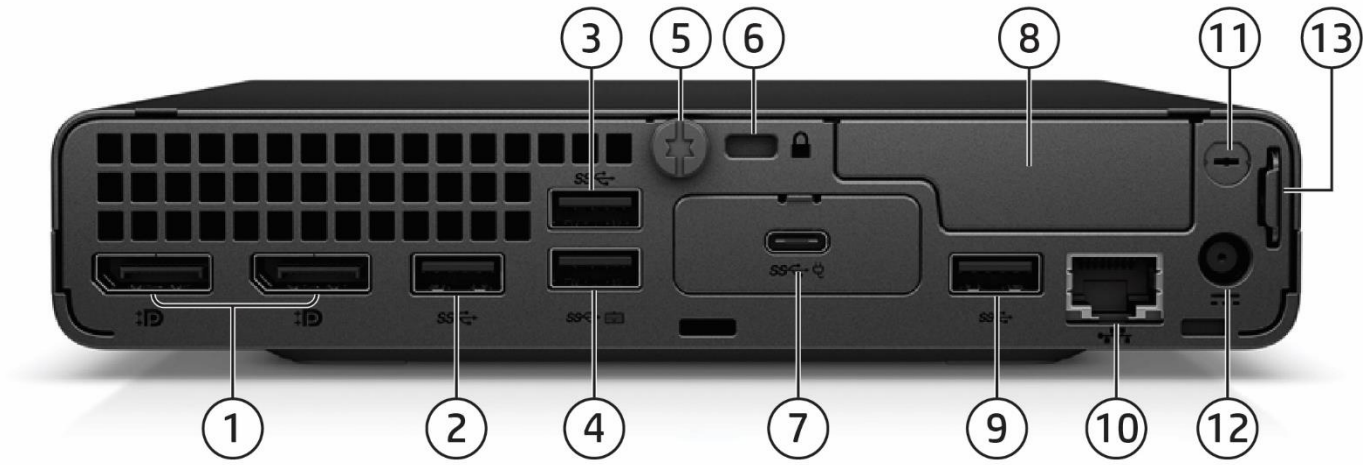
Not Shown

(3) M.2 (1 as M.2 2230 socket for WLAN/BT and 2 as M.2 2280 socket for storage)

(1) 2.5" internal storage drive bay

Overview

HP ProDesk 600 G6 Desktop Mini PC

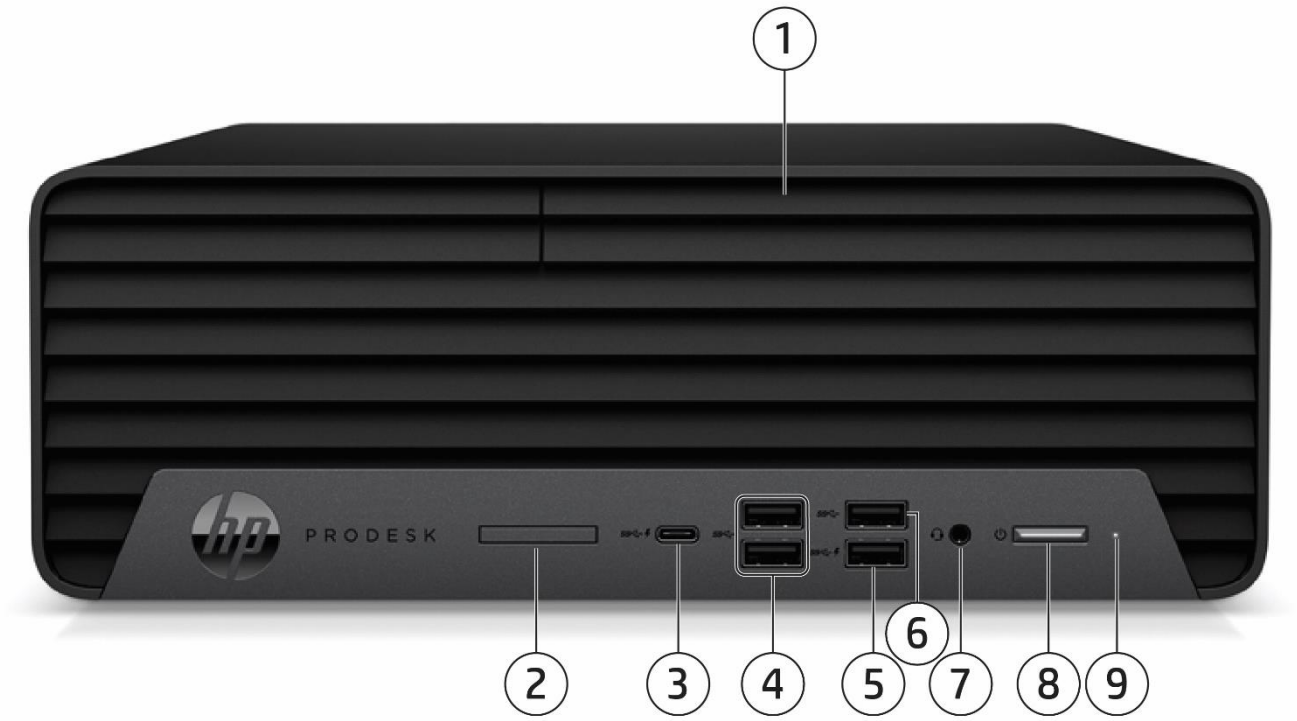


1. (2) Dual-Mode DisplayPort™ 1.4 (DP++)
2. Type-A SuperSpeed USB 5Gbps signaling rate port
3. Type-A SuperSpeed USB 5Gbps signaling rate port (Supporting wake from S4/S5 with keyboard/mouse connected and enabled in BIOS)
4. Type-A SuperSpeed USB 10Gbps signaling rate port (Supporting wake from S4/S5 with keyboard/mouse connected and enabled in BIOS)
5. Cover release thumbscrew
6. Standard cable lock slot (10 mm)
7. Flex Port 1, choice of:
   - Thunderbolt™ 3[1]
   - DisplayPort
   - HDMI 2.0a
   - VGA
   - Serial[1]
   - Type-C® SuperSpeed USB 10Gbps signaling rate port w/ DisplayPort™ Alt Mode and power intake via USB Type-C® Power Delivery up to 100W
8. Flex Port 2[2], choice of:
   - 2x Type-A Hi-Speed USB 480Mbps signaling rate port
   - Serial
9. Type-A SuperSpeed USB 10Gbps signaling rate port
10. RJ45 network connector
11. External WLAN antenna opening[2]
12. Power connector
13. Retractable Padlock loop

1. Sold separately or as an optional feature
2. Must be configured at time of purchase

Overview

HP ProDesk 600 G6 Small Form Factor PC



1. Slim optical drive (optional)
2. SD card 4.0 reader (optional)
3. Type-C® SuperSpeed USB 10Gbps signaling rate port (charge support up to 5V/3A)
4. (2) Type-A SuperSpeed USB 10Gbps signaling rate port
5. Type-A SuperSpeed USB 5Gbps signaling rate port (charge support up to 5V/1.5A)
6. Type-A SuperSpeed USB 5Gbps signaling rate port
7. Combo Audio Jack with CTIA and headset support
8. Dual-state power button
9. Hard drive activity light

Not Shown

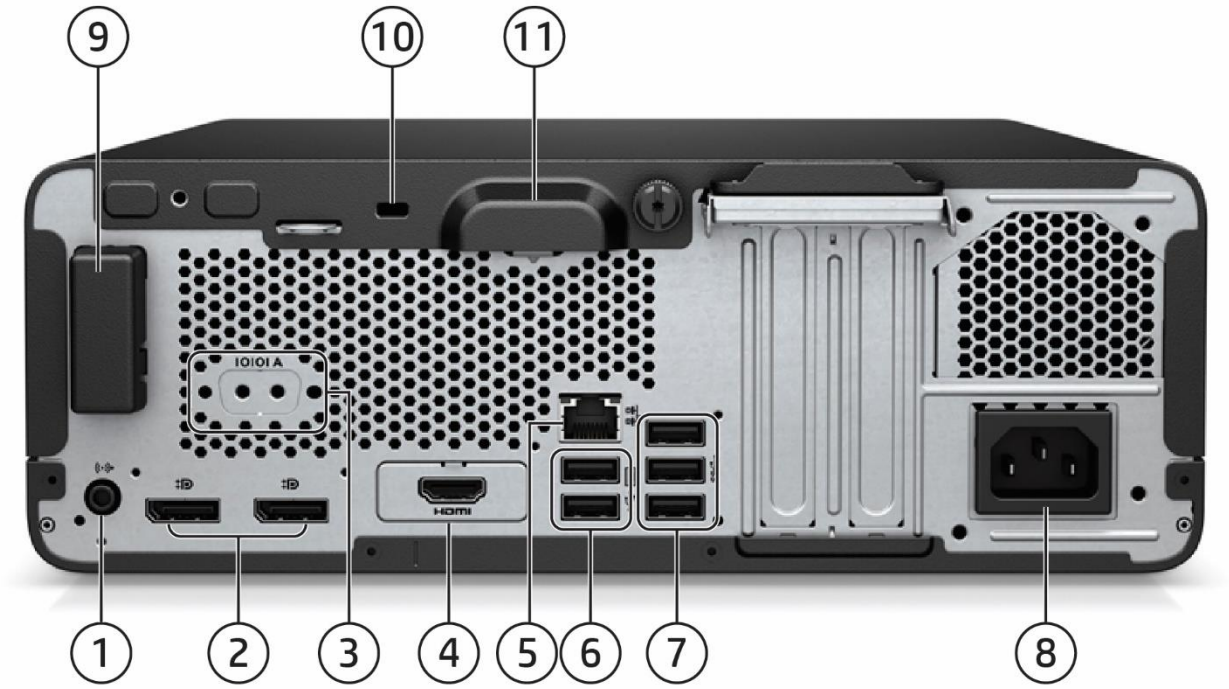
(1) PCI Express x16

(1) PCI Express x4

(2) M.2 (1 as M.2 2230 socket for WLAN/BT and 1 as M.2 2280 socket for storage)

Overview

HP ProDesk 600 G6 Small Form Factor PC



1. Audio-out connector
2. (2) Dual-Mode DisplayPort™ 1.4 (DP++)
3. Serial port (optional)
4. Flex Port choice of:
   - DisplayPort™1.4
   - VGA
   - HDMI 2.0a
   - Serial
   - Dual Type-A SuperSpeed USB 5Gbps signaling rate
   - Type-C® SuperSpeed USB 10Gbps signaling rate with DisplayPort™ Alt mode
5. RJ45 network connector
6. (2) Type-A Hi-Speed USB 480Mbps signaling rate port (Supporting wake from S4/S5 with keyboard/mouse connected and enabled in BIOS)
7. (3) Type-A SuperSpeed USB 5Gbps signaling rate port
8. Power cord connector
9. Internal WLAN antenna cover (optional)
10. Standard cable lock slot
11. Integrated accessory cable lock

Not Shown

Port

Optional Thunderbolt™ 3 port card

Optional PS/2 & serial port card[1] (connected with mainboard via flyer cable)

Optional parallel port[1]

Optional 4 serial port PCIe card[1] (1 to 4 serial port dongle)

Bay

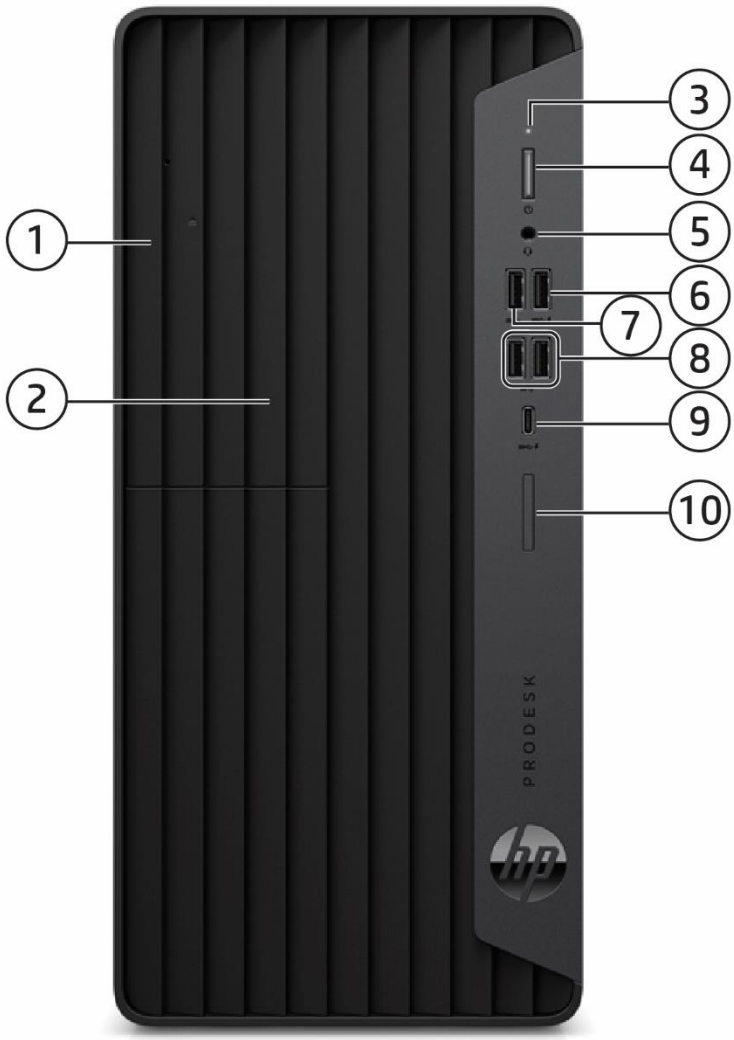
(1) 9.5mm internal optical drive bay

(1) 3.5" internal storage drive bay or (2) 2.5" internal storage drive bays[2]

1. Each of the legacy port options would occupy one rear slot
2. SFF can be configured with either (1) 3.5” or (2) 2.5” internal storage drive (2.5-inch drive needs adapter that can only be purchased when configuring the PC from factory with a 2.5” drive)

Overview

HP ProDesk 600 G6 Microtower PC



1. Slim optical drive (optional)
2. 5.25-inch drive bay (optional)
3. Hard drive activity light
4. Dual-state power button
5. Combo Audio Jack with CTIA and headset support
6. Type-A SuperSpeed USB 10Gbps signaling rate port (charge support up to 5V/1.5A)
7. Type-A SuperSpeed USB 10Gbps signaling rate port
8. (2) Type-A SuperSpeed USB 10Gbps signaling rate port
9. Type-C® SuperSpeed USB 10Gbps signaling rate port (charge support up to 5V/3A)
10. SD card 4.0 reader (optional)

Not Shown

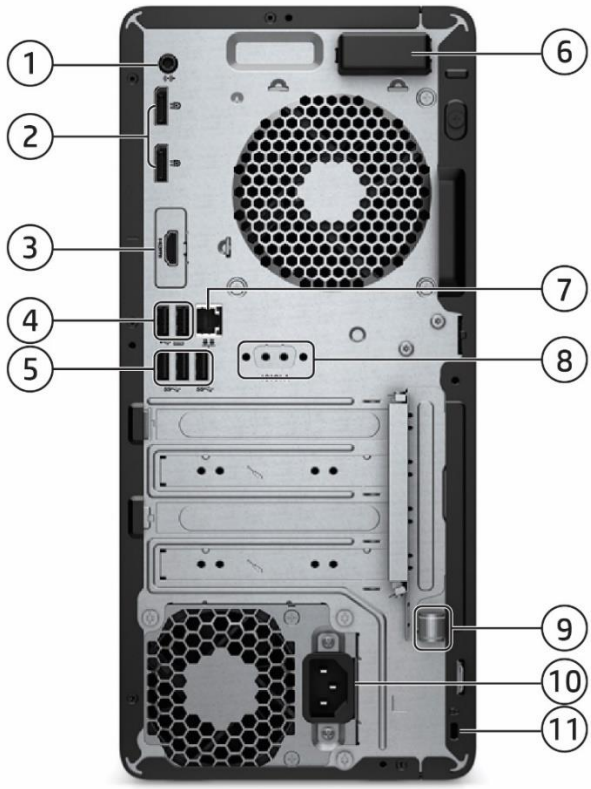
(2) PCI Express x16 (one wired as an x4)

(1) PCI Express x1

(3) M.2 (1 as M.2 2230 socket for WLAN/BT and 2 as M.2 2280 socket for storage)

Overview

HP ProDesk 600 G6 Microtower PC



1. Audio-out connector
2. (2) Dual-Mode DisplayPort™ 1.4 (DP++)
3. Flex Port, choice of:
   - DisplayPort™1.4
   - VGA
   - HDMI 2.0a
   - Serial
   - Dual Type-A SuperSpeed USB 5Gbps signaling rate
   - Type-C® SuperSpeed USB 10Gbps signaling rate with DisplayPort™ Alt mode
4. (2) Type-A Hi-Speed USB 480Mbps signaling rate port (Supporting wake from S4/S5 with keyboard/mouse connected and enabled in BIOS)
5. (3) Type-A SuperSpeed USB 5Gbps signaling rate port
6. Internal WLAN antenna cover (optional)
7. RJ45 network connector
8. Serial port (optional)
9. Integrated accessory cable lock
10. Power cord connector
11. Standard cable lock slot

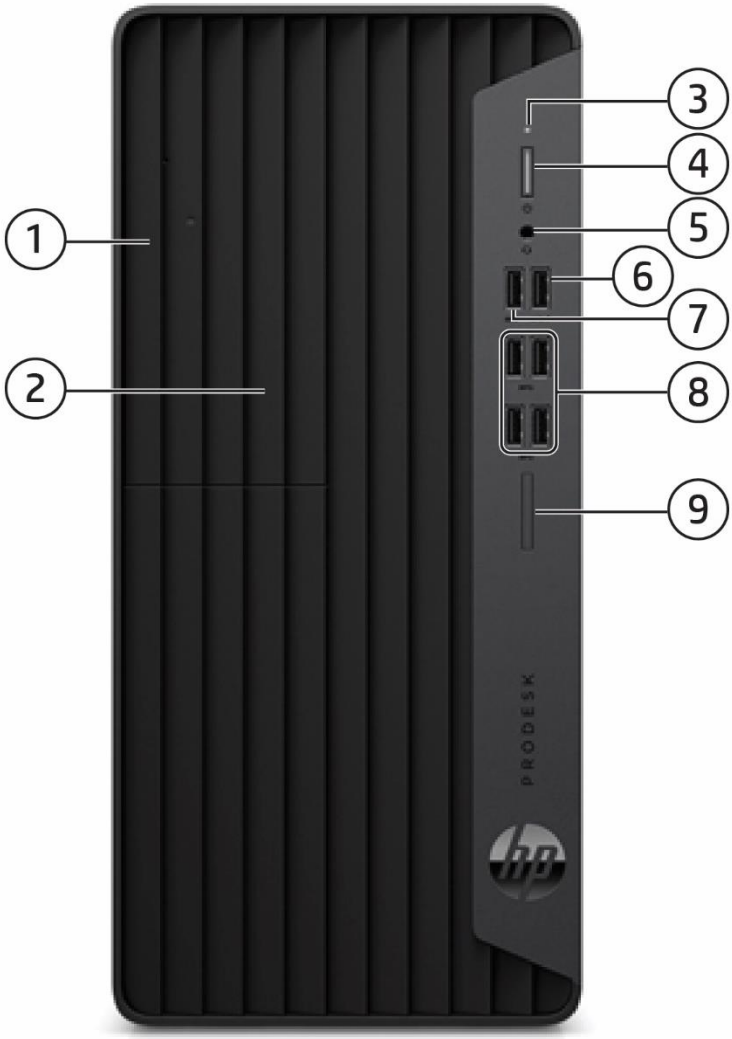
Not Shown

Port	Bay
Optional Thunderbolt™ 3 port card	(1) 5.25” internal half-height drive bay or (1) 3.5” internal storage drive bay
Optional PS/2 & serial port card[1] (connected with mainboard via flyer cable)	(1) 3.5” internal storage drive bay or (1) 2.5" internal storage drive bay
Optional parallel port[1]	(1) 2.5" internal storage drive bay
Optional 4 serial port PCIe card[1] (1 to 4 serial port dongle)	(1) 9.5mm internal optical drive bay

1. Each of the legacy options will occupy one rear slot.

Overview

HP ProDesk 600/680 G6 PCI Microtower PC



1. Slim optical drive (optional)
2. 5.25-inch drive bay (optional)
3. Hard drive activity light
4. Dual-state power button
5. Combo Audio Jack with CTIA and headset support
6. Type-A SuperSpeed USB 5Gbps signaling rate port (charge support up to 5V/1.5A)
7. Type-A SuperSpeed USB 5Gbps signaling rate port
8. (4) Type-A SuperSpeed USB 10Gbps signaling rate port
9. SD card 4.0 reader (optional)

Not Shown

(2) PCI Express x16 (one wired as an x4)

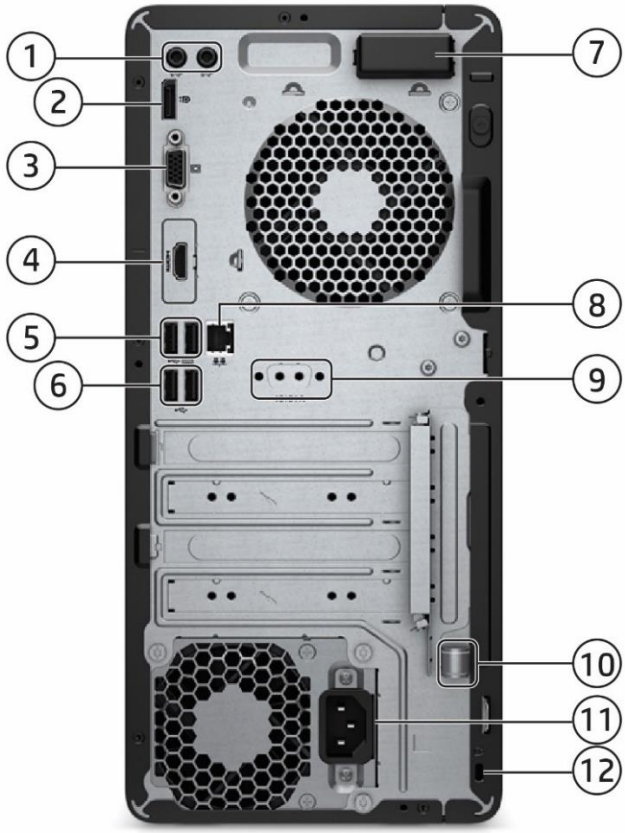
(1) PCI Express x1

(1) PCI x1

(3) M.2 (1 as M.2 2230 socket for WLAN/BT and 2 as M.2 2280 socket for storage)

Overview

HP ProDesk 600/680 G6 PCI Microtower PC



1. Audio-in/out connector
2. Dual-Mode DisplayPort™ 1.4a (DP++)
3. VGA port
4. Flex Port, choice of:
   - DisplayPort™1.4
   - HDMI 2.0a
   - VGA
   - Serial
5. (2) Type-A SuperSpeed USB 5Gbps signaling rate port (Supporting wake from S4/S5 with keyboard/mouse connected and enabled in BIOS)
6. (2) Type-A SuperSpeed USB 5Gbps signaling rate port
7. Internal WLAN antenna cover (optional)
8. RJ45 network connector
9. Serial port (optional)
10. Integrated accessory cable lock
11. Power cord connector
12. Standard cable lock slot

Not Shown

Port

Optional PS/2 & serial port card[1] (connected with mainboard via flyer cable)

Optional parallel port[1]

Optional 4 serial port PCIe card[1] (1 to 4 serial port dongle)

Bay

(1) 5.25” internal half-height drive bay or (1) 3.5” internal storage drive bays

(1) 3.5” internal storage drive bay or (1) 2.5" internal storage drive bay

(1) 2.5" internal storage drive bay

(1) 9.5mm internal optical drive bay

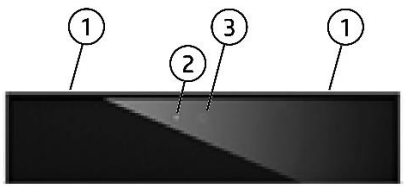
1. Each of the legacy options will occupy one rear slot.

Overview

HP ProOne 600 G6 22 All-in-One PC (Touch & Non-Touch)

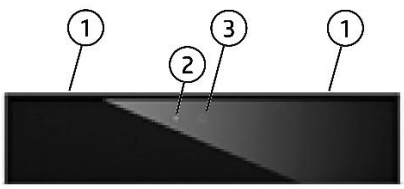
1. Pull-up webcam (optional)
2. Combo Audio Jack with CTIA and OMTP headset support
3. Speakers (optional)
4. SD media card reader (optional)
5. On-screen display (OSD) buttons
6. Power activity light.
7. Power button
8. Type-A SuperSpeed USB 10Gbps signaling rate port (charge support up to 5V/1.5A)
9. Type-C® SuperSpeed USB 10Gbps signaling rate port (charge support up to 5V/3A)

HD webcam (optional)



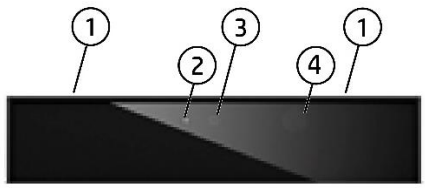
1. Dual microphones
2. Webcam light
3. HD webcam

5MP webcam (optional)



1. Dual microphones
2. Webcam light
3. 5MP webcam

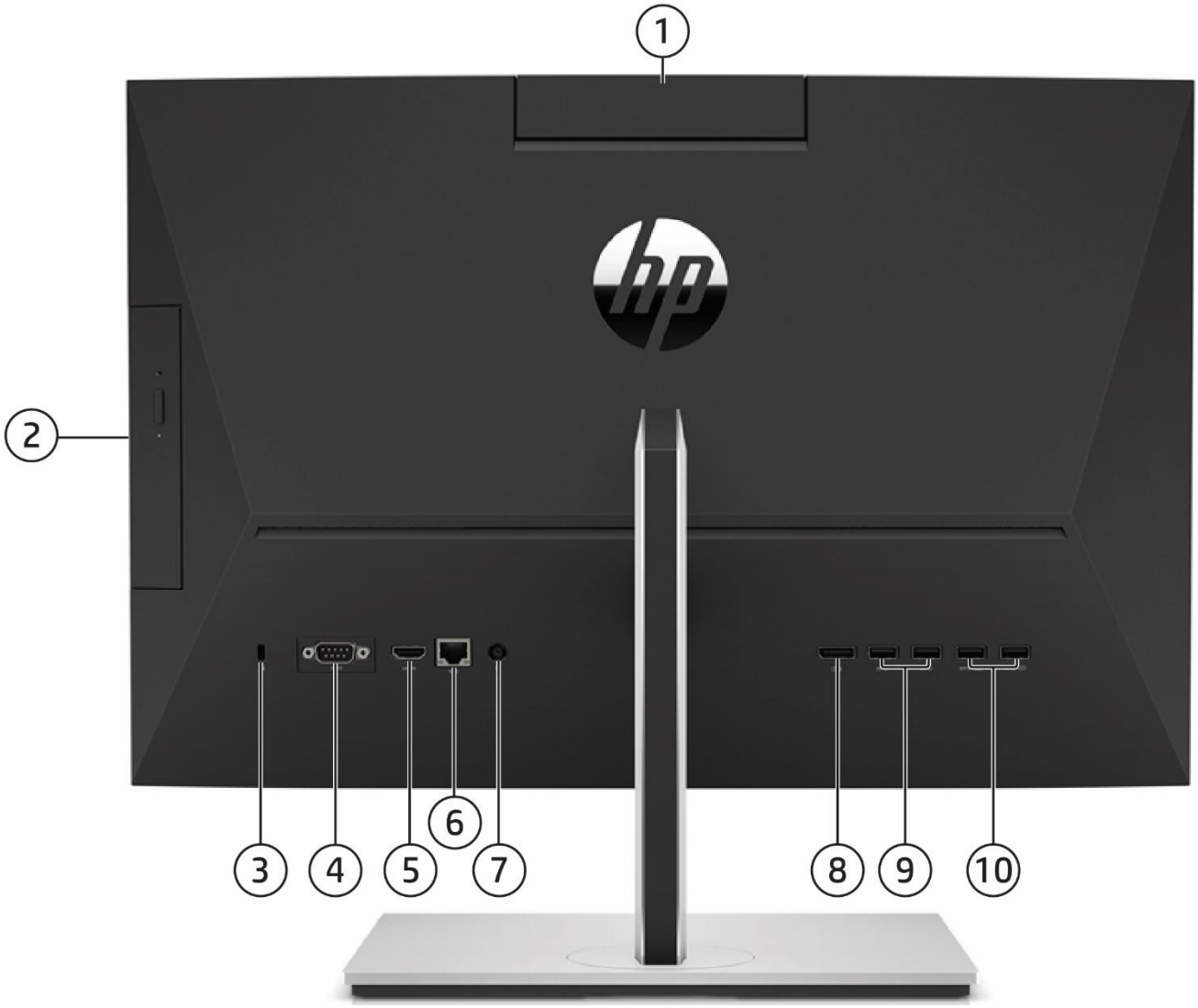
5MP webcam with Infrared (IR) sensors (optional)



1. Dual microphones
2. Webcam light
3. IR/5MP webcam
4. IR light

Overview

HP ProOne 600 G6 22 All-in-One PC (Touch & Non-Touch)



1. Pull-up webcam (optional)
2. Optical disc drive (optional)
3. Standard cable lock slot
4. Flex Port, choice of:
   - DisplayPort™
   - Serial
   - HDMI 2.0a
5. HDMI-in
6. RJ45 network connector
7. Power connector
8. Dual-Mode DisplayPort™ 1.4 (DP++)
9. (2) Type-A SuperSpeed USB 5Gbps signaling rate port
10. (2) Type-A SuperSpeed USB 5Gbps signaling rate port (Supporting wake from S4/S5 with keyboard/mouse connected and enabled in BIOS)

Standard Features and Configurable Components

AT A GLANCE

- Choice of four form factors: Microtower, Small Form Factor, Desktop Mini, and All-in-One
- HP developed and engineered UEFI V2.7 BIOS supporting security, manageability and software image stability
- Latest commercial class Intel® 400 Series chipsets supporting latest Intel® 10th Generation Core™ processors[1], featuring integrated Intel® UHD Graphics
    - Intel Standard Manageability (ISM) comes standard for Intel® Core™ and Pentium™ configurations
    - Optional Intel® vPro™ Technology upgrade with selected Core™ i5 and Core™ i7 processors (vPro™ is optional and requires factory configuration)[5]
- Support of true 65W desktop class processors on all form factors
- Intel® Optane memory and storage available as optional feature
- Choice of Windows 10 Professional, Windows 10 Home, and FreeDOS
- Integrated 10/100/1000 Ethernet Controller, with optional Wi-Fi 6 (802.11ax) and Wi-Fi 5 (802.11ac) and Bluetooth®
- Up to 128 GB of DDR4 Synchronous Dynamic Random Access Memory (SDRAM) on MT and SFF, and up to 64 GB on DM and AiO
- Support for up to three video outputs via two standard video connectors and an optional third video port connector which provides the following choices: DisplayPort™, HDMI, VGA, or USB Type-C® with DisplayPort™ Output on MT/SFF/DM
- Reduce clutter on DM with single cable connection for power and video through USB Type-C® enabled displays with the optional USB Type-C® port w/ DisplayPort Alt Mode and power intake via USB Type-C® Power Delivery up to 100W; reduce desktop footprint with the DM mounted behind a USB-C™ enabled display or enable a “All-in-One” experience by docking into HP Mini-in-One 24 Display
- New flexibility is delivered by the All-in-One that can be used as a full PC or as an additional display for another desktop or laptop PC via the new HDMI in functionality
- Multiple HDD data drives set up in a SATA RAID array for MT/SFF and support RAID 1 configured from factory.
- Enable NVDIA® GeForce® VR ready[2] discrete graphic card and compatible with HP Reverb VR Headset[7] on MT with 550W PSU.
- Optional Serial port available on all form factors
- Optimized chassis design for SFF enabling dual 2.5" internal storage drives
- Integrated accessory cable lock helps secure cabled mouse and keyboard on MT/SFF
- Trusted Platform Module (TPM) 2.0[3]
- HP Sure Run Gen3
- HP Sure Recover Gen3
- HP SureSense
- HP SureStart Gen6
- HP BIOSphere Gen6
- HP Client Security Manager Gen6
- HP Sure Click
- HP Manageability Integration Kit Gen4
- HP Image Assistant Gen5
- HP Support Assistant
- High efficiency energy saving power supply
- ENERGY STAR® certified. EPEAT ® 2019 registered where applicable. EPEAT® registration varies by country. See http://www.epeat.net for registration status by country.[6]
- TUV Low Blue Light certified for All-in-One. To reach maximum performance, Low Blue Light setting should be enabled in On-screen display (OSD) settings and Night light mode should be turned on in Windows®
- Optimized for Microsoft Teams for All-in-One
- Low halogen[4]
- All form factors undergo up to 13 MIL-STD tests[8]
- Dust filter available for MT/SFF/DM
- 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
- Compliance with CE (Class B) / FCC (Class B) / UL (UL60950-1 / UL62368-1) / CSA (CSA C22.2 No.60950-1-07 / CSA C22.2 No. 62368-1-14) / ICES-003 / CCC / VCCI (Class B) / KCC (Class B)

Standard Features and Configurable Components

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. VR-ready as optional feature, requires specific configuration for support
3. In some scenarios, machines pre-configured with Windows OS or FreeDOS might ship with TPM turned off
4 External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.
5. Some functionality of vPro technology, such as Intel Active management technology and Intel Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel vPro technology is dependant on 3rd party software providers. Compatibility of this generation of Intel vPro technology-based hardware with future "virtual appliances" is yet to be determined.
6. Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit http://www.epeat.net for more information.
7. Availability may vary by country.
8. MIL-STD drop test not performed for All-in-Ones. MIL-STD testing is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack.

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

PRODUCT NAME

HP ProDesk 600 G6 Desktop Mini PC
HP ProDesk 600 G6 Small Form Factor PC
HP ProDesk 600 G6 Microtower PC
HP Prodesk 600 G6 PCI Microtower PC
HP Prodesk 680 G6 PCI Microtower PC
HP ProOne 600 G6 22 All-in-One PC

OPERATING SYSTEM

Preinstalled	Windows 11 Pro (Windows 11 Enterprise or Windows 10 Enterprise available with a Volume Licensing Agreement)[1] Windows 11 Pro Education[1] Windows 11 Home - HP recommends Windows 11 Pro for business[1] FreeDOS
Web Support	Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade)[1,2]

1. Device comes with Windows 10 and a free Windows 11 upgrade or may be preloaded with Windows 11. Upgrade timing may vary by device. Features and app availability may vary by region. Certain features require specific hardware (see Windows 11 Specifications).
2. Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows is automatically updated and enabled. High speed interneet and Microsoft account required. ISP fees apply and additional requirements may apply over time for updates.
See http://www.windows.com.

NOTE: HP tested Windows 10, version 1909 on this platform. For testing information on newer versions of Windows 10, please see https://support.hp.com/document/c05195282.

Standard Features and Configurable Components

SUPPORTED VERSIONS

HP tested Windows 10, version 1809 on this platform. For testing information on newer versions of Windows 10, please see https://support.hp.com/document/c05195282

CHIPSET

	DM	SFF	MT	AiO
Intel® Q470	X	X	X	X

Standard Features and Configurable Components

PROCESSORS

Intel® 10th Generation Core™ Processors	DM	SFF	MT	AiO
Intel® Core™ i7-10700 Processor[1] 65W 2.9 GHz base frequency Up to 4.8 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 16 MB cache, 8 cores, 16 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2933 MT/s data rate Supports Intel® vPro™ Technology and Intel® Stable Image Platform Program (SIPP)[3]	X	X	X	X
Intel® Core™ i7-10700T Processor[1] 35W 2.0 GHz base frequency Up to 4.5 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 16 MB cache, 8 cores, 16 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2933 MT/s data rate Supports Intel® vPro™ Technology and Intel® Stable Image Platform Program (SIPP)[3]	X			X
Intel® Core™ i5-10600 Processor[1] 65W 3.3 GHz base frequency Up to 4.8 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 12 MB cache, 6 cores, 12 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate Supports Intel® vPro™ Technology and Intel® Stable Image Platform Program (SIPP)[3]	X	X	X	X
Intel® Core™ i5-10600T Processor[1] 35W 2.4 GHz base frequency Up to 4.0 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 12 MB cache, 6 cores, 12 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate Supports Intel® vPro™ Technology and Intel® Stable Image Platform Program (SIPP)[3]	X			X

Standard Features and Configurable Components

	DM	SFF	MT	AiO
Intel® Core™ i5-10500 Processor[1] 65W 3.1 GHz base frequency Up to 4.5 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 12 MB cache, 6 cores, 12 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate Supports Intel® vPro™ Technology and Intel® Stable Image Platform Program (SIPP)[3]	X	X	X	X
Intel® Core™ i5-10500T Processor[1] 35W 2.3 GHz base frequency Up to 3.8 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 12 MB cache, 6 cores, 12 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate Supports Intel® vPro™ Technology and Intel® Stable Image Platform Program (SIPP)[3]	X			X
Intel® Core™ i5-10400 Processor[1] 65W 2.9 GHz base frequency Up to 4.3 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 12 MB cache, 6 cores, 12 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate	X	X	X	X
Intel® Core™ i5-10400T Processor[1] 35W 2.0 GHz base frequency Up to 3.6 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 12 MB cache, 6 cores, 12 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate	X			X
Intel® Core™ i3 10325 processor[1] 65W 3.9 GHz Base frequency 8MB cache, 4 cores Intel® UHD Graphics 630	X	X	X	X

Standard Features and Configurable Components

	DM	SFF	MT	AiO
Intel® Core™ i3-10320 Processor[1] 65W 3.8 GHz base frequency Up to 4.6 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 8 MB cache, 4 cores, 8 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate	X	X	X	X
Intel® Core™ i3 10305 processor[1] 65W 3.8 GHz base frequency 8MB cache, 4 cores with Intel® UHD Graphics 630	X	X	X	X
Intel® Core™ i3 10305T processor[1] 35W 3.0 GHz base frequency 8MB cache, 4 cores with Intel® UHD Graphics 630	X			X
Intel® Core™ i3-10300 Processor[1] 65W 3.7 GHz base frequency Up to 4.4 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 8 MB cache, 4 cores, 8 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate	X	X	X	X
Intel® Core™ i3-10300T Processor[1] 35W 3.0 GHz base frequency Up to 3.9 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 8 MB cache, 4 cores, 8 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate	X			X
Intel® Core™ i3 10105 processor[1] 65W 3.7 GHz base frequency 6MB cache, 4 cores with Intel® UHD Graphics 630	X	X	X	X
Intel® Core™ i3 10105T processor[1] 35W 3.0 GHz base frequency 6MB cache, 4 cores with Intel® UHD Graphics 630	X			X

Standard Features and Configurable Components

	DM	SFF	MT	AiO
Intel® Core™ i3-10100 Processor[1] 65W 3.6 GHz base frequency Up to 4.3 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 6 MB cache, 4 cores, 8 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate	X	X	X	X
Intel® Core™ i3-10100T Processor[1] 35W 3.0 GHz base frequency Up to 3.8 GHz max. turbo frequency with Intel® Turbo Boost Technology[2] 6 MB cache, 4 cores, 8 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate	X			X

Intel® Pentium® Processors	DM	SFF	MT	AiO
Intel® Pentium® Gold G6605 processor[1] 65W 4.3GHz base frequency 4 MB cache, 2 cores with Intel® UHD Graphics 630	X	X	X	X
Intel® Pentium® Gold G-6600 Processor[1] 58W 4.2 GHz base frequency 4 MB cache, 2 cores, 4 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate	X	X	X	X
Intel® Pentium® Gold G6505 processor[1] 65W 4.2GHz base frequency 4 MB cache, 2 cores with Intel® UHD Graphics 630	X	X	X	X
Intel® Pentium® Gold G6505T processor[1] 35W 3.6GHz base frequency 4 MB cache, 2 cores with Intel® UHD Graphics 630	X			X
Intel® Pentium® Gold G-6500 Processor[1] 58W 4.1 GHz base frequency 4 MB cache, 2 cores, 4 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate	X	X	X	X

Standard Features and Configurable Components

	DM	SFF	MT	AiO
Intel® Pentium® Gold G-6500T Processor[1] 35W 3.5 GHz base frequency 4 MB cache, 2 cores, 4 threads Intel® UHD Graphics 630 Supports DDR4 memory up to 2666 MT/s data rate	X			X
Intel® Pentium® Gold G6405 processor[1] 65W 4.1GHz base frequency 4 MB cache, 2 cores with Intel® UHD Graphics 610	X	X	X	X
Intel® Pentium® Gold G6405T processor[1] 35W 3.5GHz base frequency 4 MB cache, 2 cores with Intel® UHD Graphics 610	X			X
Intel® Pentium® Gold G-6400 Processor[1] 58W 4.0 GHz base frequency 4 MB cache, 2 cores, 4 threads Intel® UHD Graphics 610 Supports DDR4 memory up to 2666 MT/s data rate	X	X	X	X
Intel® Pentium® Gold G-6400T Processor[1] 35W 3.4 GHz base frequency 4 MB cache, 2 cores, 4 threads Intel® UHD Graphics 610 Supports DDR4 memory up to 2666 MT/s data rate	X			X

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 mea configuration surement 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 . See www.intel.com/technology/turboboost for more information.
3. Some functionality of vPro technology, such as Intel Active management technology and Intel Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel vPro technology is dependent on 3rd party software providers. Compatibility with future "virtual appliances" is yet to be determined.

NOTE: Memory speed 2666 and 2933 MT/s can be achieved via two UDIMMs per channel (2DPC) when populated with the same part number.

Standard Features and Configurable Components

GRAPHICS

Integrated Graphics	DM	SFF	MT	AiO
Intel® UHD Graphics 630 (integrated on 10th gen Core i7/i5/i3 processors and Pentium® Gold G-6600, G-6500, and G-6500T)	X	X	X	X
Intel® UHD Graphics 610 (integrated on Pentium® Gold G-6400, G-6400T)	X	X	X	X

Optional Discrete Graphics Solutions	DM	SFF	MT*	AiO
AMD® Radeon™ RX 550X 4GB FH DP+HDMI		X	X	
AMD® Radeon™ R7 430 2GB DP+VGA		X	X	
AMD® Radeon™ R7 430 2GB 2DP		X	X	
AMD® Radeon™ 520 1GB VGA+DP			X	
AMD® Radeon™ 630 with 2GB GDDR5**				X
NVIDIA® GeForce® RTX 2060 super 8GB DP+HDMI+DVI-D***			X	
NVIDIA® T400 2GB GDDR6 mDP Graphics card		X	X	

*standard 180W MT can support one single graphics card up to 75W or dual graphics cards up to 35W each.
**AMD® Radeon™ 630 with 2GB GDDR5 must be configured at purchase
***NVIDIA® GeForce® RTX 2060 super 8GB DP+HDMI+DVI-D requires 550W power supply

Adapters and Cables	DM	SFF	MT	AiO
HP DisplayPort™ Cable	X	X	X	X
HP DisplayPort™ to DVI-D Adapter	X	X	X	X
HP DisplayPort™ to HDMI True 4K Adapter	X	X	X	X
HP DisplayPort™ to VGA Adapter	X	X	X	X
HP USB to Serial Port Adapter	X	X	X	X

STORAGE

3.5 inch SATA Hard Disk Drives (HDD)	DM	SFF	MT	AiO
500GB 7200RPM 3.5in SATA HDD		X	X	
1TB 7200RPM 3.5in SATA HDD		X	X	
2TB 7200RPM 3.5in SATA HDD		X	X	

2.5 inch SATA Hard Disk Drives (HDD)	DM	SFF	MT	AiO
500GB 7200RPM 2.5in SATA HDD	X	X	X	X
1TB 7200RPM 2.5in SATA HDD	X	X	X	X
1TB 5400RPM 2.5in SATA HDD	X	X	X	X
2TB 5400RPM 2.5in SATA HDD	X	X	X	X
500GB 7200RPM 2.5in Self Encrypted OPAL2 SATA HDD*	X	X	X	X
500GB 7200RPM 2.5in Self Encrypted Federal Information Processing Standard SATA HDD*	X	X	X	X

Standard Features and Configurable Components

M.2 PCIe NMVe Solid State Drives (SSD)	DM	SFF	MT	AiO
256GB M.2 2280 PCIe NVMe SSD	X	X	X	X
512GB M.2 2280 PCIe NVMe SSD	X	X	X	X
128GB M.2 2280 PCIe NVMe Three Layer Cell SSD	X	X	X	X
256GB M.2 2280 PCIe NVMe Three Layer Cell SSD	X	X	X	X
512GB M.2 2280 PCIe NVMe Three Layer Cell SSD	X	X	X	X
1TB M.2 2280 PCIe NVMe Three Layer Cell SSD	X	X	X	X
2TB M.2 2280 PCIe NVMe Three Layer Cell SSD	X	X	X	X
256GB M.2 2280 PCIe NVMe Self Encrypted OPAL2 Three Layer Cell SSD*	X	X	X	X
512GB M.2 2280 PCIe NVMe Self Encrypted OPAL2 Three Layer Cell SSD*	X	X	X	X
256GB Intel® Optane™ Memory H10 with Solid State Storage*	X	X	X	X
512GB Intel® Optane™ Memory H10 with Solid State Storage*	X	X	X	X

Optical Disc Drives	DM	SFF	MT	AiO
HP 9.5mm Slim DVD-ROM Drive[1]		X	X	X
HP 9.5mm Slim DVD Writer Drive[2]		X	X	X
HP 9.5mm Slim Blu-Ray Writer Drive[3]		X	X	X

1. HD-DVD disks cannot be played on this drive. No support for DVD-RAM. Actual speeds may vary. Don't copy copyright-protected materials. Double Layer discs can store more data than single layer discs. Discs burned with this drive may not be compatible with many existing single-layer DVD drives and players.
2. Don't copy copyright-protected materials.
3. With Blu-Ray, certain disc, digital connection, compatibility and/or performance issues may arise, and do not constitute defects in the product. Flawless playback on all systems is not guaranteed. In order for some Blu-ray titles to play, they may require a DVI or HDMI digital connection and your display may require HDCP support. HD-DVD movies cannot be played on this Desktop PC.

Media Card Reader	DM	SFF	MT	AiO
SD 4.0 with 5-in-1 Interface (Supports SD, SDXC, SDHC, UHS-I, UHS-II)		X	X	
SD 3.0 with 4-in-1 Interface (Supports SD, SDXC, SDHC, UHS-I)				X

Standard Features and Configurable Components

MEMORY

	DM	SFF	MT	AiO
DDR4-2666 (Transfer rates up to 2666 MT/s*), 2 SODIMM	X			X
DDR4-3200 (Transfer rates up to 2933 MT/s**), 2 SODIMM	X			X
DDR4-2666 (Transfer rates up to 2666 MT/s*), 4 DIMM		X	X	
DDR4-3200 (Transfer rates up to 2933 MT/s**), 4 DIMM		X	X	

NOTE*: for i5 and below processor.
NOTE**: for i7 and i9 processor.
NOTE:

1. Actual system speed is determined by the processor configured. See processor specifications for supported memory data rate.
2. Memory speed 2666 and 2933 MT/s can be achieved via two UDIMMs per channel (2DPC) when populated with the same part number.
3. All memory slot are customer accessible/upgradeable.
4. For system configured with more than 3GB of memory and a 32-bit operation system, all memory may not be available due to system resource requirements. Addressing memory above 4 GB requires a 64-bit operating system.

Memory Configuration

4GB (4GB x 1)	X	X	X	X
8GB (4GB x 2)	X	X	X	X
8GB (8GB x 1)	X	X	X	X
16GB (8GB x 2)	X	X	X	X
16GB (16GB x 1)	X	X	X	X
32GB (32GB x 1)	X	X	X	X
32GB (16GB x 2)	X	X	X	X
32GB (8GB x 4)		X	X	
64GB (32GB x 2)	X	X	X	X
64GB (16GB x 4)		X	X	
128GB (32GB x 4)		X	X	

NETWORKING/COMMUNICATIONS

Ethernet (RJ-45)	DM	SFF	MT	AiO
Intel® I219-LM 1 Gigabit Network Connection LOM (vPro)	X	X	X	X
Intel® I210-T1 PCIe x1 Gigabit Network Interface Card (optional)		X	X	
Wireless[1]				
Intel® Wi-Fi 6 AX201 802.11ax 2x2 with Bluetooth® 5.2 Wireless Card M.2 vPro™	X	X	X	X
Intel® Wi-Fi 6 AX201 802.11ax 2x2 with Bluetooth® 5.2 Wireless Card M.2 non-vPro™	X	X	X	X
Realtek RTL8822CE 802.11ac 2x2 with Bluetooth® 5.0 Wireless Card M.2	X	X	X	X
Realtek RTL8821CE 802.11ac 1x1 with Bluetooth® 4.2 Wireless Card M.2	X	X	X	X

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

KEYBOARDS AND POINTING DEVICES

Keyboards	DM	SFF	MT	AiO
HP PS/2 Business Slim Standalone Wired Keyboard		X	X	
HP Wired Desktop 320K Keyboard	X	X	X	X
HP USB Business Slim Wired SmartCard CCID Keyboard	X	X	X	X
HP USB & PS/2 Washable Standalone Wired Keyboard	X	X	X	X
HP USB Wired Keyboard	X	X	X	X
HP Universal USB Wired Keyboard	X	X	X	X

Keyboard & Mouse Combo	DM	SFF	MT	AiO
HP Premium Wireless Keyboard and Mouse	X	X	X	X
HP Premium USB Wired Keyboard and Mouse	X	X	X	X
HP Business Slim Wireless Keyboard and Mouse	X	X	X	X
HP USB PS/2 Washable Keyboard and Mouse Wired	X	X	X	X

Mouse	DM	SFF	MT	AiO
HP PS/2 Mouse		X	X	
HP Wired Desktop 320M Mouse	X	X	X	X
HP USB Optical Wired Mouse	X	X	X	X
HP USB Hardened Optical Wired Mouse	X	X	X	X
HP USB 1000dpi Laser Mouse	X	X	X	X
HP USB & PS/2 Washable Wired Mouse Standalone	X	X	X	X
HP USB Premium Wired Mouse	X	X	X	X
HP USB Fingerprint Mouse	X	X	X	X

NOTE: Availability may vary by country

Standard Features and Configurable Components

SECURITY

	DM	SFF	MT	AiO
TPM 2.0 (FW: 7.85) endpoint security controller (Infineon SLB9670) shipped with Windows 10. Common Criteria EAL4+ Certified. FIPS 140-2 Level 2 Certified.	X	X	X	X
Solenoid Lock & Intrusion Sensor (Optional)			X	
Intrusion Sensor (Optional)		X		
Intrusion Sensor (integrated in the system board, can be enabled/disabled through BIOS)	X			X
Support for chassis cable lock devices	X (10 mm barrel or smaller)	X	X	X
Support for chassis padlocks devices	X	X	X	
Support for table lock				X
SATA port disablement (via BIOS)	X	X	X	X
Serial, USB enable / disable (via BIOS)	X	X	X	X
Intel® Identify Protection Technology (IPT)[1]	X	X	X	X
Removable media write/boot control	X	X	X	X
Power-on password (via BIOS)	X	X	X	X
Setup password (via BIOS)	X	X	X	X

1. Models configured with Intel® Core™ processors have the ability to utilize advanced security protection for online transactions. IPT, used in conjunction with participating web sites, provides double identity authentication by adding a hardware component in addition to the usual username and password. IPT is initialized through an HP Client Security module.

PORTS

Internal Slots and Ports

	DM	SFF	MT		AiO
			600	600/680 PCI	
M.2 PCIe	(1) M.2 PCIe x1 2230 (for WLAN) (2) M.2 PCIe x4 2280 (for storage)	(1) M.2 PCIe x1 2230 (for WLAN) (1) M.2 PCIe x4 2280 (for storage)	(1) M.2 PCIe x1 2230 (for WLAN) (2) M.2 PCIe x4 2280 (for storage)		(1) M.2 PCIe x1 2230 (for WLAN) (1) M.2 PCIe x4 2280 (for storage)
PCI Express v3.0 x1			1	1	
PCI Express v3.0 x4		1			
PCI Express v3.0 x16 (wired as x4)			1	1	
PCI Express v3.0 x16		1	1	1	
PCI x1				1	
SATA port		3	4		
Integrated SATA storage connector	1				1

Standard Features and Configurable Components

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	**DM**	**SFF**	**MT**	**AiO**
5.25" Half Height			1[3]	
9.5mm Slim Optical Disc Drive (ODD)		1	1	1[1]
SD Card Reader		1	1	1
2.5" Internal Storage Drive	1	2[2]	1	1
3.5" Internal Storage Drive		1[2]	1[4]	

1. Must be configured at time of purchase
2. SFF can be configured with either (1) 3.5" or (2) 2.5" internal storage drive (2.5-inch drive needs adapter that can only be purchased when configuring the PC from factory with a 2.5" drive.)
3. MT's 5.25" legacy bay can be configured as either (1) 5.25 half-height drive bay or (1) 3.5" internal storage drive bay (3.5-inch drive needs an adapter cage that can be purchased when configuring the PC from factory with a 3.5" drive or buy the adapter cage individually as an after-market-options part).
4. MT's 3.5" bay can be configured as either (1) 3.5" internal storage drive bay or (1) 2.5" internal storage drive bay (2.5-inch drive needs an adapter that can only be purchased when configuring the PC from factory with a 2.5" drive).

Standard User Accessible Ports

	DM	**SFF**	**MT**		**AiO**
			600	**600/680 PCI**	
Type-A Hi-Speed USB 480Mbps signaling rate port		2 (rear)	2 (rear)		
Type-A SuperSpeed USB 5Gbps signaling rate port	1 (front) 2 (rear)	2 (front) 3 (rear)	3 (rear)	2 (front) 4 (rear)	4 (rear)
Type-A SuperSpeed USB 10Gbps signaling rate port	1 (front) 2 (rear)	2 (front)	4 (front)	4 (front)	1 (side)
Type-C® SuperSpeed USB 10Gbps signaling rate port	1 (front)	1 (front)	1 (front)		1 (side)
Video	2 DisplayPort™ 1.4 (rear)	2 DisplayPort™ 1.4 (rear)	2 DisplayPort™ 1.4 (rear)	1 DisplayPort™ 1.4 (rear) 1 VGA (rear)[2]	1 HDMI 1.4 in (rear) 1 DisplayPort™ 1.4 (rear)
Audio	1 Combo Audio Jack with CTIA and headset support (front)	1 Combo Audio Jack with CTIA and headset support (front)	1 Combo Audio Jack with CTIA and headset support (front)		1 Combo Audio Jack with CTIA and OMTP headset support (side)
Network Interface	1 RJ45 (rear)	1 RJ45 (rear)	1 RJ45 (rear)		1 RJ45 (rear)

Rear Configurable Non-PCIe/PCI Slot User Accessible Ports

Flexible Port 1, choice of one of the following:	DM	SFF	MT 600	MT 600/680 PCI	AiO
Type-A USB		2 Type-A SuperSpeed USB 5Gbps signaling rate port	2 Type-A SuperSpeed USB 5Gbps signaling rate port		
Type-C® USB	1 SuperSpeed USB 10Gbps signaling rate port w/ DisplayPort™ Alt Mode and power intake via USB Type-C® Power Delivery up to 100W	1 SuperSpeed USB 10Gbps signaling rate port w/ DisplayPort™ Alt Mode	1 SuperSpeed USB 10Gbps signaling rate port w/ DisplayPort™ Alt Mode		
Thunderbolt™ 3	1[1]				
Video	1 DisplayPort™ 1.4 or HDMI 2.0a or VGA	1 DisplayPort™ 1.4 or HDMI 2.0a or VGA	1 DisplayPort™ 1.4 or HDMI 2.0a or VGA		1 DisplayPort™ 1.4 or HDMI 2.0a
Serial (RS-232)	1[1]	1	1		1

1. Sold separately or as an optional feature

Flexible Port 2, choice of one of the following:

	DM	SFF	MT 600	MT 600/680 PCI	AiO
Type-A USB	2 Hi-Speed USB 480Mbps signaling rate[1]				
Thunderbolt™ 3		1	1		
Serial (RS-232)	1[1]	1[1]	1[1]		

1. Must be configured at time of purchase

USB SPECIFICATION AND MARKETING NAME MAPPING TABLE

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

SOFTWARE COMPONENTS AND APPLICATIONS WITH WINDOWS

Preinstalled Software

BIOS
HP BIOSphere Gen6[1]
HP Secure Erase[2]
HP DriveLock & Automatic DriveLock[3]
BIOS Update via Network
Absolute Persistence Module[4]
Pre-boot Authentication

Software
HP Desktop Support Utility
HP JumpStart
HP Privacy Settings
HP Setup Integrated OOBE
HP Support Assistant[5]
HP Noise Cancellation Software
Buy Office (sold separately)
HP Smart Support[6]

Manageability Features
HP Driver Packs[7]
HP System Software Manager (SSM) (download)
HP BIOS Config Utility (BCU) (download)
HP Cloud Recovery[8]
HP Client Catalog (download)
HP Image Assistant Gen5
HP Manageability Integration Kit for Microsoft System Center Configuration Management Gen4[9]
Ivanti Management Suite (download)[10]

Client Security Software
HP Client Security Manager Gen6[11]
HP Power On Authentication
Windows Defender[12]

Security Management
Trusted Platform Module TPM 2.0 Embedded Security Chip shipped with Windows 10. (Common Criteria EAL4+ Certified)
Serial, USB enable/disable (via BIOS)
Power-on password (via BIOS)
Setup password (via BIOS)
Support for chassis padlocks and cable lock devices
HP Sure Sense[13]
HP Sure Click[14]
HP Sure Start Gen6[15]
HP Sure Run Gen3[16]
HP Sure Recover Gen3[17]

1. HP BIOSphere Gen6 is available on select HP Pro and Elite PCs. Features may vary depending on the platform and configurations.
2. Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88. “Clear” sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.
3. Storage Drivelock does not work with Self Encrypting or Optane based storage.
4. Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: http://www.absolute.com/company/legal/agreements/computrace-agreement. Data Delete is an optional service provided by

Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.
5. HP Support Assistant requires Windows and Internet access.
6. HP Smart Support is available to commercial customers through your HP Service Representative and HP Factory Configuration Services; or it can be downloaded at: http://www.hp.com/smart-support. HP Smart Support automatically collects the telemetry necessary upon initial boot of the product to deliver device-level configuration data and health insights.
7. HP Driver Packs not preinstalled, however available for download at http://www.hp.com/go/clientmanagement.
8. 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.
9. HP Manageability Integration Kit can be downloaded from http://www8.hp.com/us/en/ads/clientmanagement/overview.html
10. Ivanti Management Suite subscription required.
11. HP Client Security Manager Gen6 requires Windows and is available on the select HP Elite and Pro PCs.
12. Windows Defender Opt In, Windows 10, and internet connection required for updates.
13. HP Sure Sense requires Windows 10.
14. HP Sure Click requires Windows 10 and supports Microsoft Internet Explorer, Google Chrome™, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode, when Microsoft Office or Adobe Acrobat are installed.
15. HP Sure Start Gen6 is available on select HP PCs.
16. HP Sure Run Gen3 is available on select Windows 10 based HP Pro, Elite and Workstation PCs with select Intel® or AMD processors.
17. HP Sure Recover Gen3 requires an open network connection. You must back up important files, data, photos, videos, etc. before use to avoid loss of data.

UNIT ENVIRONMENT AND OPERATING CONDITIONS

General Unit Operating Guidelines

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

Temperature Range	Operating: 5° to 35° C[1] Non-Operating for AiO: -20° to 60° C[1] Non-Operating for MT/SFF/DM: -30° to 60° C[1]
Relative Humidity	Operating: 5% to 90% (non-condensing at ambient) Non-operating: 5% to 90% (non-condensing at ambient)
Maximum Altitude (unpressurized)	Operating: 5000m Non-operating: 50000ft (15240 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.

ENVIRONMENTAL & INDUSTRY

HP Prodesk 600 G6 Desktop Mini PC

Eco-Label Certifications & declarations	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT Gold registered in the United States. See http://www.epeat.net for registration status in your country. • TCO Certified • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • Korea Eco-label • Japan PC Green label • Commission Regulation (EC) No 617/2013 (ErP Lot 3)		
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Desktop model is based on a Typically Configured Desktop.		
Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	4.663 watt	4.699watt	4.6268 watt
Normal Operation (Long idle)	4.469 watt	4.472watt	4.462watt
Sleep	0.676 watt	0.726watt	0.656watt
Off	0.668 watt	0.669watt	0.666watt
	NOTE: Energy efficiency data listed is for an ENERGY STAR® certified product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are certified with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® certified configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	15.901 BTU/hr	16.024 BTU/hr	15.777 BTU/hr
Normal Operation (Long idle)	15.239 BTU/hr	15.25 BTU/hr	15.215 BTU/hr
Sleep	2.305 BTU/hr	2.476 BTU/hr	2.237 BTU/hr
Off	2.278 BTU/hr	2.281 BTU/hr	2.271 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_{Wad}, bels)	Sound Pressure (L_{pAm}, decibels)	
Typically Configured – Idle	2.7	16	
Fixed Disk – Random writes	2.7	17	

Standard Features and Configurable Components

Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include: • 2 SODIMM memory slots • Interchangeable M.2 PCIe NVME SSD & 2.5" SATA HDD Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater 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 a minimum of 35% post-consumer recycled (PCR) plastic (by wt.); including 10% ITE-derived post-consumer recycled plastic.* • This product is 95.1% recycle-able when properly disposed of at end of life. *Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard.		
Packaging Materials (vary by country)	**External:**	External Paper/Corrugated	562g
	Internal:	PLASTIC/Polyethylene Expanded – EPE	79g
		PLASTIC/Polyethylene low density – LDPE	16g
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		

Standard Features and Configurable Components

	• Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)
Packaging Usage	HP follows these guidelines to decrease the environmental impact of product packaging: • Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials. • Eliminate the use of ozone-depleting substances (ODS) in packaging materials. • Design packaging materials for ease of disassembly. • Maximize the use of post-consumer recycled content materials in packaging materials. • Use readily recyclable packaging materials such as paper and corrugated materials. • Reduce size and weight of packages to improve transportation fuel efficiency. • Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.
End-of-life Management and Recycling	HP 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.
End-of-life Management and Recycling	For more information about HP's commitment to the environment: Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html ISO 14001 certificates: http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/PC_GBU_Product_Design_ISO_14K_Certificate.pdf and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

HP ProDesk 600 G6 Small Form Factor PC

Eco-Label Certifications & declarations	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT Gold registered in the United States. See http://www.epeat.net for registration status in your country. • TCO Certified • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • Korea Eco-label • Japan PC Green label • Commission Regulation (EC) No 617/2013 (ErP Lot 3)		
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	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**

Standard Features and Configurable Components

ENERGY STAR® test method)			
Normal Operation (Short idle)	5.40 watt	5.27 watt	5.39 watt
Normal Operation (Long idle)	4.25 watt	4.08 watt	4.19 watt
Sleep	0.79 watt	0.79 watt	0.79 watt
Off	0.67 watt	0.67 watt	0.67 watt
	NOTE: Energy efficiency data listed is for an ENERGY STAR® certified product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are certified with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® certified configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	18.414 BTU/hr	17.9707 BTU/hr	18.3799 BTU/hr
Normal Operation (Long idle)	14.4925 BTU/hr	13.9128 BTU/hr	14.2879 BTU/hr
Sleep	2.6939 BTU/hr	2.6939 BTU/hr	2.6939 BTU/hr
Off	2.2847 BTU/hr	2.2847 BTU/hr	2.2847 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_{Wad}, bels)	Sound Pressure (L_{pAm}, decibels)	
Typically Configured – Idle	3.2	24	
Fixed Disk – Random writes	3.2	24	
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: • 4 DIMM memory slots • Interchangeable M.2 PCIe NVME SSD & 2.5”/3.5” SATA HDD Spare parts are available throughout the warranty period and or for up to 5 years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater 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 a minimum of 35% post-consumer recycled (PCR) plastic (by wt.); including 10% ITE-derived post-consumer recycled plastic.*		

Standard Features and Configurable Components

	• This product is 95.1% recycle-able when properly disposed of at end of life. *Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard.		
Packaging Materials (vary by country)	**External:**	PAPER/Corrugated	1019g
	Internal:	PLASTIC/Expanded Polyethylene – EPE or PAPER/molded fiber-pulp	414g
		PLASTIC/Polyethylene low density – LDPE	29g
		PAPER/Molded Pulp	
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)		
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. Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html ISO 14001 certificates: http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/PC_GBU_Product_Design_ISO_14K_Certificate.pdf and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

HP ProDesk 600 G6 Microtower Series

Eco-Label Certifications & declarations	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT Gold registered in the United States. See http://www.epeat.net for registration status in your country. • TCO Certified • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • Korea Eco-label • Japan PC Green label • Commission Regulation (EC) No 617/2013 (ErP Lot 3)		
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)	12.199 W	12.43 W	12.032 W
Normal Operation (Long idle)	10.563 W	10.924 W	10.335 W
Sleep	0.793 W	0.815 W	0.795 W
Off	0.701 W	0.699 W	0.71 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.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	41.60 BTU/hr	42.39 BTU/hr	41.03 BTU/hr
Normal Operation (Long idle)	36.02 BTU/hr	37.25 BTU/hr	35.24 BTU/hr
Sleep	2.71 BTU/hr	2.78 BTU/hr	2.71 BTU/hr
Off	2.4 BTU/hr	2.38 BTU/hr	2.42 BTU/hr

Standard Features and Configurable Components

	NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.	
Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	Sound Power (L_{Wad}, bels)	Sound Pressure (L_{pAm}, decibels)
Typically Configured – Idle	3.26	22.4
Fixed Disk – Random writes	3.42	23.5
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: • 4 DIMM memory slots • Interchangeable M.2 PCIe NVME SSD & 2.5”/3.5” SATA HDD Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.	
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater 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 1680.1 (EPEAT) standard at the <Gold> level, see www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 44.4% post-consumer recycled plastic (by wt.) • This product is 93.7% recycle-able when properly disposed of at end of life.	
Packaging Materials (vary by country)	**External:**	PAPER/Corrugated 1110 g
		PAPER/Molded Pulp 620 g
	Internal:	PLASTIC/Polyethylene low density 32 g
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	

Standard Features and Configurable Components

	• Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user. • Ozone Depleting Substances • Polybrominated Biphenyls (PBBs) • Polybrominated Biphenyl Ethers (PBBEs) • Polybrominated Biphenyl Oxides (PBBOs) • Polychlorinated Biphenyl (PCB) • Polychlorinated Terphenyls (PCT) • Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications. • Radioactive Substances • Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)
Packaging Usage	HP follows these guidelines to decrease the environmental impact of product packaging: • Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials. • Eliminate the use of ozone-depleting substances (ODS) in packaging materials. • Design packaging materials for ease of disassembly. • Maximize the use of post-consumer recycled content materials in packaging materials. • Use readily recyclable packaging materials such as paper and corrugated materials. • Reduce size and weight of packages to improve transportation fuel efficiency. • Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.
End-of-life Management and Recycling	HP Inc. offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.
HP Inc. Corporate Environmental Information	For more information about HP's commitment to the environment: Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html ISO 14001 certificates: http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/PC_GBU_Product_Design_ISO_14K_Certificate.pdf and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

HP ProDesk 600 PCI G6 Microtower PC

Eco-Label Certifications & declarations	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT Gold registered in the United States. See http://www.epeat.net for registration status in your country. • TCO Certified • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA)

Standard Features and Configurable Components

	• Taiwan Green Mark • Korea Eco-label • Japan PC Green label • Commission Regulation (EC) No 617/2013 (ErP Lot 3)		
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)	12.199 W	12.43 W	12.032 W
Normal Operation (Long idle)	10.563 W	10.924 W	10.335 W
Sleep	0.793 W	0.815 W	0.795 W
Off	0.701 W	0.699 W	0.71 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.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	41.60 BTU/hr	42.39 BTU/hr	41.03 BTU/hr
Normal Operation (Long idle)	36.02 BTU/hr	37.25 BTU/hr	35.24 BTU/hr
Sleep	2.71 BTU/hr	2.78 BTU/hr	2.71 BTU/hr
Off	2.4 BTU/hr	2.38 BTU/hr	2.42 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_{Wad}, bels)	Sound Pressure (L_{pAm}, decibels)	
Typically Configured – Idle	3.26	22.4	
Fixed Disk – Random writes	3.42	23.5	
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: • 4 DIMM memory slots • Interchangeable M.2 PCIe NVME SSD & 2.5"/3.5" SATA HDD Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater than 1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell)		

Standard Features and Configurable Components

	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 1680.1 (EPEAT) standard at the <Gold> level, see www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 44.4% post-consumer recycled plastic (by wt.) • This product is 93.7% recycle-able when properly disposed of at end of life.		
Packaging Materials (vary by country)	**External:**	PAPER/Corrugated	1110 g
		PAPER/Molded Pulp	620 g
	Internal:	PLASTIC/Polyethylene low density	32 g
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)		
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.		

Standard Features and Configurable Components

End-of-life Management and Recycling	HP Inc. offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.
HP Inc. Corporate Environmental Information	For more information about HP's commitment to the environment: Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html ISO 14001 certificates: http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/PC_GBU_Product_Design_ISO_14K_Certificate.pdf and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

HP ProDesk 680 PCI G6 Microtower PC

Eco-Label Certifications & declarations	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT Gold registered in the United States. See http://www.epeat.net for registration status in your country. • TCO Certified • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • Korea Eco-label • Japan PC Green label • Commission Regulation (EC) No 617/2013 (ErP Lot 3)		
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)	12.199 W	12.43 W	12.032 W
Normal Operation (Long idle)	10.563 W	10.924 W	10.335 W
Sleep	0.793 W	0.815 W	0.795 W
Off	0.701 W	0.699 W	0.71 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		

Standard Features and Configurable Components

	STAR® certified configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	41.60 BTU/hr	42.39 BTU/hr	41.03 BTU/hr
Normal Operation (Long idle)	36.02 BTU/hr	37.25 BTU/hr	35.24 BTU/hr
Sleep	2.71 BTU/hr	2.78 BTU/hr	2.71 BTU/hr
Off	2.4 BTU/hr	2.38 BTU/hr	2.42 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_{Wad}, bels)	Sound Pressure (L_{pAm}, decibels)
Typically Configured – Idle	3.26	22.4
Fixed Disk – Random writes	3.42	23.5

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: • 4 DIMM memory slots • Interchangeable M.2 PCIe NVME SSD & 2.5”/3.5” SATA HDD Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater 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 1680.1 (EPEAT) standard at the <Gold> level, see www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 44.4% post-consumer recycled plastic (by wt.) • This product is 93.8% recycle-able when properly disposed of at end of life.

Packaging Materials (vary by country)	**External:**	PAPER/Corrugated	1110 g
		PAPER/Molded Pulp	620 g
	Internal:	PLASTIC/Polyethylene low density	32 g

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

Standard Features and Configurable Components

	• 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)
Packaging Usage	HP follows these guidelines to decrease the environmental impact of product packaging: • Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials. • Eliminate the use of ozone-depleting substances (ODS) in packaging materials. • Design packaging materials for ease of disassembly. • Maximize the use of post-consumer recycled content materials in packaging materials. • Use readily recyclable packaging materials such as paper and corrugated materials. • Reduce size and weight of packages to improve transportation fuel efficiency. • Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.
End-of-life Management and Recycling	HP Inc. offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.
HP Inc. Corporate Environmental Information	For more information about HP's commitment to the environment: Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html ISO 14001 certificates: http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/PC_GBU_Product_Design_ISO_14K_Certificate.pdf and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

Standard Features and Configurable Components

HP ProDesk 600 G6 22 All-in-One PC

Eco-Label Certifications & declarations	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT Gold registered in the United States. See http://www.epeat.net for registration status in your country. • TCO Certified • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • Korea Eco-label • Japan PC Green label • Commission Regulation (EC) No 617/2013 (ErP Lot 3)		
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)	17.07 W	18.19 W	16.43 W
Normal Operation (Long idle)	5.53 W	6.28 W	4.29 W
Sleep	0.94 W	1.01 W	0.86 W
Off	0.75 W	0.76 W	0.66 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.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	58.2087 BTU/hr	62.0279 BTU/hr	56.0263 BTU/hr
Normal Operation (Long idle)	18.8573 BTU/hr	21.4148 BTU/hr	14.6289 BTU/hr
Sleep	3.2054 BTU/hr	3.441 BTU/hr	2.9326 BTU/hr
Off	2.5575 BTU/hr	2. 5916BTU/hr	2.2506 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_{Wad}, bels)	Sound Pressure (L_{pAm}, decibels)	
Typically Configured – Idle	2.8	17.2	
Fixed Disk – Random writes	3.3	20	
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:		

Standard Features and Configurable Components

	• 2 SODIMM memory slots • Interchangeable M.2 PCIe NVME SSD & 2.5" SATA HDD Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater 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 a minimum of 50% post-consumer recycled (PCR) plastic (by wt.); including 10% ITE-derived post-consumer recycled plastic.* • This product is 95.1% recycle-able when properly disposed of at end of life. *Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard.		
Packaging Materials (vary by country)	**External:**	PAPER/Corrugated	1446 g
	Internal:	PLASTIC/Polyethylene Expanded – EPE	432 g
		PLASTIC/Polyethylene low density – LDPE	36 g
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)		

Standard Features and Configurable Components

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. Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html ISO 14001 certificates: http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/PC_GBU_Product_Design_ISO_14K_Certificate.pdf and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

SERVICE AND SUPPORT

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

1. Terms and conditions may vary by country. Certain restrictions and exclusions apply. Other warranty variations may be offered in your region.
2. On-site service may be provided pursuant to a service contract between HP and an authorized HP third-party provider, and is not available in certain countries. Global service response times are based on commercially reasonable best effort and may vary by country.
3. Technical telephone support applies only to HP-configured and third-party HP qualified hardware and software. Toll-free calling and 24 x 7 support may not be available in some countries.
4. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.

PROCESSORS

Intel® 10th Generation Core™ Processors

All HP ProDesk & ProOne 600 G6 Business PC models featuring this technology include processors that are part of the Intel® Stable Image Platform Program (SIPP) designed to ensure the stability promise inherent in the value proposition of the HP ProDesk and ProOne 600 G6 Business PC.

Intel® Advanced Management Technology (AMT) v12[1] – An advanced set of remote management features and functionality which provides network administrators the latest and most effective tools to remotely discover, heal, and protect networked client systems regardless of the system's health or power state. AMT 12 includes the following advanced management functions:

- Support for configuration of Intel AMT 12.0 capabilities
- No reset after provisioning
- Support for Intel Enterprise Digital Fence
- The Platform Discovery Utility can now discover these additional Intel products:
  - Intel Identity Protection Technology with One Time Password
  - Public Key Infrastructure
  - Multi Factor Authentication
- Profile Editor and Profile Editor Plugin Interface
- Required Permissions for Solutions Framework

1. Intel® Active Management Technology requires an Intel® AMT-enabled chipset, network hardware and software, as well as connection with a power source and a corporate network connection. Setup requires configuration by the purchaser and may require scripting with the management console or further integration into existing security frameworks to enable certain functionality. It may also require modifications of implementation of new business processes.

DISPLAY PANEL SPECIFICATIONS[1]

HP ProOne 600 G6 22 All-in-One PC

21.5" diagonal IPS widescreen WLED backlit anti-glare LCD (1920 x 1080)
Non-touch or optional touch
Projected Capacitive Touch supports up to 10 touch-points
Non-touch supports HW low blue light feature

Type	IPS WLED Backlit LCD
Active area (mm)	476.064 x 267.786
Native Resolution (HxV)	1920 x 1080
Refresh Rate	60 Hz @ 1920 x 1080
Aspect ratio	16:9
Pixel pitch (HxV)(mm)	0.24795 x 0.24795
Contrast ratio (typical)	1000:1
Brightness (typical)	250nits
Viewing angle (typical) (HxV)	178° x 178°
Backlight lamp life (to half brightness)	30,000 hours minimum
Color support	Up to 16.7 million colors with the use of FRC technology
Color gamut (typical)	NTSC 72%
Anti-glare	Yes
Response Time	14ms (Typical)
Default color temperature	Warm (6500K)
Hardware based low blue light	Available on non-touch variant

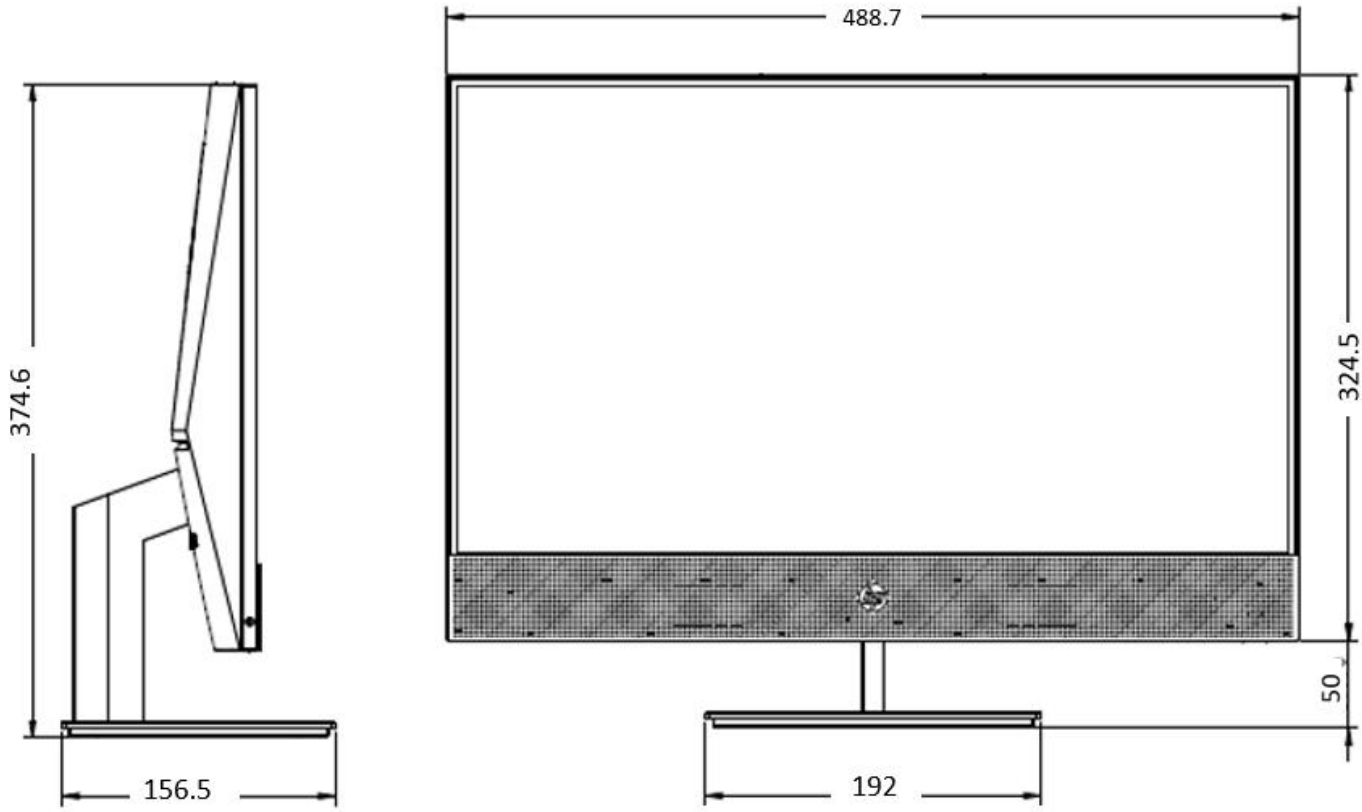
1. All specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower

Technical Specifications – All-in-One Stand Specifications

ALL-IN-ONE STAND SPECIFICATIONS

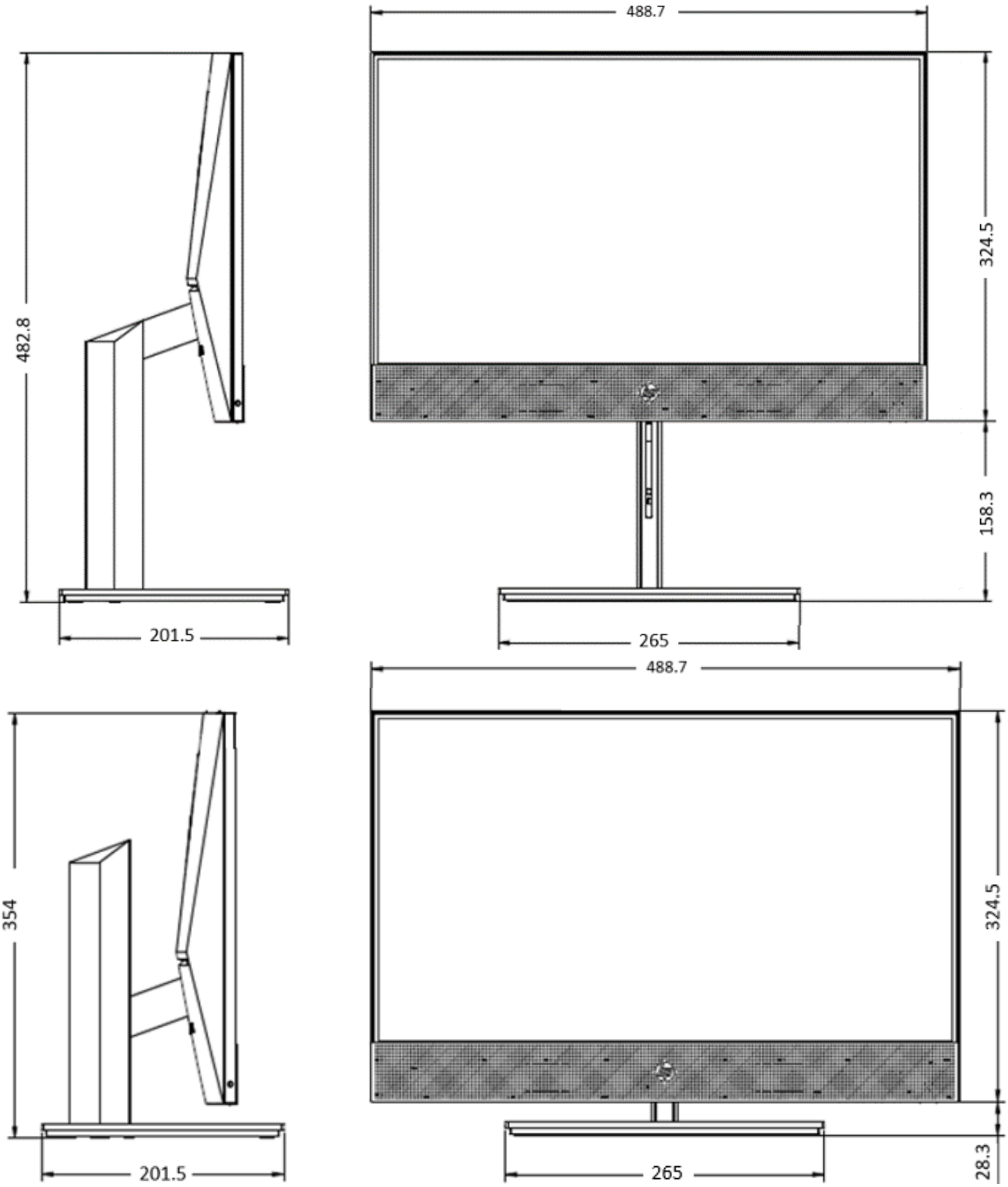
HP ProOne 600 G6 22 All-in-One PC

Cantilever Stand (Fixed Height Tilt Stand)	**Tilt Angle**	-5° to +20°
	Rotation (Swivel)	None
	Pivot	None



Technical Specifications – All-in-One Stand Specifications

Adjustable Height Stand	**Height Adjustment (Landscape Mode)**	5.12 in / 130 mm
	Height Adjustment (Portrait Mode)	N/A
	Tilt Angle	-5° to +20°
	Rotation (Swivel)	±45°
	Pivot	None



GRAPHICS

Intel® UHD Graphics (integrated)

Graphics Controller	Integrated
DisplayPort™	Multimode capable; supports HDCP, Display Port Audio (2 streams), HBR2 link rates and Multi-Stream Technology for a maximum of 3 displays connected to any output controlled by Intel® Graphics
HDMI	Supports HDMI 2.0a features Supports HDCP 2.2 Supports audio over HDMI
VGA	VGA output
USB-C™ DP Alt Mode	DisplayPort™ over the USB-C™ module
Memory	The actual amount of maximum graphics memory can be >4GB. System memory is allocated for graphics as needed using Intel's Dynamic Video Memory Technology (DVMT), to provide an optimal balance between graphics and system memory use.
Maximum Color Depth	up to 10 bits/color
Graphics/Video API Support	HEVC 10b Enc/Dec HW VP9 10b Dec HW HDR Rec. 2020 DX12
Max. Resolution (VGA)	2048 x 1536@60Hz
Max. Resolution (HDMI)	4096 x 2160@60Hz
Max. Resolution (DP)	4096 x 2160@60Hz

AMD® Radeon™ RX 550X 4 GB PCIe x16

Engine Clock	1183MHz
Memory Clock	6 Gbps
Memory Size(width)	4 GB(128-bit)
Memory Type	GDDR5
Max. Resolution(HDMI)	4096x2160 @ 60Hz
Max. Resolution(DP)	5120x2880 @ 60Hz
Multi Display Support	2 displays
HDCP Compliance	Yes
Rear I/O connectors(bracket)	HDMI, DP
Cooling(active/passive)	Active fan-sink (Active cooling with dynamic speed)
Total power consumption(W)	<50W
PCB form-factor with bracket	LP (low profile) PCB with FH/LP bracket

AMD® Radeon™ RX 580 8GB GDDR5 Graphics Card

Engine Clock	1266 MHz
Memory Clock	4000 MHz
Memory Size(width)	8 GB (256-bit)
Memory Type	256M x 32 GDDR5
Max. Resolution(HDMI)	4096x2160@60Hz

Technical Specifications – Graphics

Max. Resolution(DP)	5120x3200@60Hz
Multi Display Support	4 displays
HDCP Compliance	Yes
Rear I/O connectors(bracket)	HDMI + DPx3
Cooling(active/passive)	Active fan-sink (Active cooling with dynamic speed)
Total power consumption(W)	<150W
PCB form-factor with bracket	ATX (Full height) PCB with ATX dual slot bracket

AMD® Radeon™ R7 430 2GB VGA+DP 64bit Graphics Card

Engine Clock	780 MHz
Memory Clock	1100 MHz
Memory Size(width)	2 GB(64-bit)
Memory Type	256M x 32 GDDR5
Max. Resolution(HDMI)	2048x1536
Max. Resolution(DP)	4096x2160@60Hz
Multi Display Support	2 displays
HDCP Compliance	Yes
Rear I/O connectors(bracket)	VGA+DP
Cooling(active/passive)	Active fan-sink (Active cooling with dynamic speed)
Total power consumption(W)	<50W
PCB form-factor with bracket	LP PCB with FH/LP bracket

AMD® Radeon™ R7 430 2GB GDDR5 2DP 64 bit Graphics Card

Engine Clock	780 MHz
Memory Clock	1100 MHz
Memory Size(width)	2 GB(64-bit)
Memory Type	256M x 32 GDDR5
Max. Resolution(DP)	4096x2160@60Hz
Multi Display Support	2 displays
HDCP Compliance	yes
Rear I/O connectors(bracket)	DPx2
Cooling(active/passive)	Active fan-sink (Active cooling with dynamic speed)
Total power consumption(W)	<50W
PCB form-factor with bracket	LP PCB with FH/LP bracket

AMD Radeon™ 520 1GB Graphics Card

Engine Clock	780 MHz
Memory Clock	1150 MHz
Memory Size(width)	1 GB (32-bit)
Memory Type	256M x 32 GDDR5
Max. Resolution(DP)	2048x1536@60Hz
Multi Display Support	2 displays
HDCP Compliance	Yes
Rear I/O connectors(bracket)	VGA+DP

Technical Specifications – Graphics

Cooling(active/passive)	Active fan-sink (Active cooling with dynamic speed)
Total power consumption(W)	<50W
PCB form-factor with bracket	PCB with FH bracket

AMD Radeon™ 630 with 2 GB GDDR5 Graphics Card

Memory	2 GB 64-bit wide frame buffer operating at 1125MHz.
Controller Clock Speed	AMD Radeon™ 630 GPU operating at 1024 MHz
Architecture	Hybrid Graphics AMD GPU uses Intel graphics controller for display control
Bus Connection	PCIE 3.0 x8
Graphics /API support	DIRECTX 12, Open GL 4.5, Open CL2.0, UVD, Mantle, AMD LiquidVR™
Display support	Same as for the Intel integrated graphics solution
Max. Resolution (HDMI)	4096 X 2160@60Hz
Max. Resolution (DP)	4096 X 2160@60Hz

NVIDIA® GeForce® RTX 2060 Super 8 GB Graphics Card

Engine Clock	1650 MHz
Memory Clock	7000 MHz
Memory Size(width)	8 GB(256-bit)
Memory Type	256M x 32 GDDR6
Max. Resolution(DVI)	2560x1600@60Hz
Max. Resolution(HDMI)	4096x2160@60Hz
Max. Resolution(DP)	7680x4320@60Hz
Multi Display Support	3 displays
HDCP Compliance	Yes
Rear I/O connectors(bracket)	DVI+HDMI+DP
Cooling(active/passive)	Active fan-sink (Active cooling with dynamic speed)
Total power consumption(W)	<175W
PCB form-factor with bracket	ATX (Full height) PCB with ATX dual slot bracket

NVIDIA® T400 2GB GDDR6 mDP Graphics card

Engine Clock	2100 MHz
Memory Clock	5001 MHz
Memory Size(width)	2GB (64-bit)
Memory Type	256M x 16 GDDR6
Max. Resolution(DP)	7680x4320@120Hz
Multi Display Support	4 displays
HDCP Compliance	Yes
Rear I/O connectors(bracket)	mDPx3
Cooling(active/passive)	Active fan-sink (Active cooling with dynamic speed)
Total power consumption (W)	30W
PCB form-factor with bracket	LP PCB with LP bracket
Memory Clock	5001 MHz

HARD DISK AND SOLID STATE STORAGE

500GB 7200RPM 3.5in SATA HDD

Capacity	500GB
Rotational Speed	7,200 rpm
Interface	SATA 6.0 Gb/s
Buffer Size	32MB
Logical Blocks	976,773,168
Seek Time	11 ms (Average)
Height	1in/2.54cm
Width	Media diameter: 3.5 in/8.89 cm Physical size: 4 in/10.2 cm
Operating Temperature	41° to 131° F (5° to 55° C)

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

1TB 7200RPM 3.5in SATA HDD

Capacity	1TB
Rotational Speed	7,200 rpm
Interface	SATA 6 Gb/s
Buffer Size	64MB
Logical Blocks	1,953,525,168
Seek Time	11 ms (Average)
Height	1in/2.54cm
Width (nominal)	Media diameter: 3.5 in/8.89 cm Physical size: 4 in/10.2 cm
Operating Temperature	41° to 131° F (5° to 55° C)

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

2TB 7200RPM 3.5in SATA HDD

Capacity	2TB
Rotational Speed	7,200 rpm
Interface	SATA 6 Gb/s
Buffer Size	64MB
Logical Blocks	3,907,050,336
Seek Time	11 ms (Average)
Height	1.028in/26.11mm
Width (nominal)	Media diameter: 3.5 in/88.9 mm Physical size: 4 in/102 mm
Operating Temperature	41° to 131° F (5° to 55° C)

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

500GB 7200RPM 2.5in SATA HDD

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

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

1TB 7200RPM 2.5in SATA HDD

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

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

1TB 5400RPM 2.5in SATA HDD

Capacity	1 TB
Rotational Speed	5,400 rpm
Interface	SATA 6 Gb/s
Buffer Size	Up to 128 MB
Logical Blocks	1,953,525,168
Seek Time	12ms (Average)
Height	0.283 in/7.2 mm (Max.)
Width (nominal)	2.75 in/70 mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

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

2TB 5400RPM 2.5in SATA HDD

Capacity	2TB
Rotational Speed	5,400 rpm
Interface	SATA 6 Gb/s
Buffer Size	128MB

Technical Specifications – Storage

Logical Blocks	3,907,050,336
Seek Time	12 ms (Average)
Height	0.374in/9.5mm (nominal)
Width (nominal)	2.75in/70mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

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

Technical Specifications – Storage

500GB 7200RPM 2.5in Self Encrypted OPAL2 SATA HDD

Capacity	500GB
Architecture	Self-Encrypting (SED) Solid State Drive with SATA interface
Interface	SATA 6 Gb/s
Buffer Size	128MB
Logical Blocks	976,773,168
Seek Time	12 ms (Average)
Height	0.283in/7.2mm (Max)
Width	2.75in/70mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

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

500GB 7200RPM 2.5in Self Encrypted Federal Information Processing Standard SATA HDD

Capacity	500GB
Architecture	Self-Encrypting (SED) Solid State Drive with SATA interface
Interface	SATA 6 Gb/s
Buffer Size	128MB
Logical Blocks	976,773,168
Seek Time	12 ms (Average)
Height	0.283in/7.2mm (Max)
Width	2.75in/70mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

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

256GB M.2 2280 PCIe NVMe SSD

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

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

512GB M.2 2280 PCIe NVMe SSD

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

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

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

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

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 Three Layer Cell SSD

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

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

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

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

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

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

Drive Weight	< 10g
Capacity	1TB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Maximum Sequential Read	Up to 3480MB/s
Maximum Sequential Write	Up to 3037MB/s
Logical Blocks	2,000,409,264
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	TRIM; ASPM L1.2

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

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

Drive Weight	< 10g
Capacity	2TB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Maximum Sequential Read	Up to 3500MB/s
Maximum Sequential Write	Up to 3000MB/s
Logical Blocks	3,907,029,168
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	TRIM; ASPM L1.2

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

Technical Specifications – Storage

256GB M.2 2280 PCIe NVMe Self Encrypted OPAL2 Three Layer Cell SSD

Drive Weight	< 10g
Capacity	256GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Maximum Sequential Read	Up to 2700MB/s
Maximum Sequential Write	Up to 1000MB/s
Logical Blocks	500,118,192
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	APST; ASPM L1.2; NVME spec 1.2; TCG-OPAL2 security

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 Self Encrypted OPAL2 Three Layer Cell SSD

Drive Weight	< 10g
Capacity	512GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Maximum Sequential Read	Up to 2900MB/s
Maximum Sequential Write	Up to 1100MB/s
Logical Blocks	1,000,215,216
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	APST; ASPM L1.2; NVME spec 1.2; TCG-OPAL2 security

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 Intel® PCIe® NVMe™ QLC + 16GB Intel® Optane™

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

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

Technical Specifications – Storage

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

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

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

HP 9.5mm Slim DVD-ROM Drive

Height	9.5 mm height
Orientation	Either horizontal or vertical
Interface type	SATA/ATAPI
Dimensions (W x H x D)	5.04 x 0.37 x 5.0 in (128 x 9.5 x 127 mm) without bezel
Weight (max)	Up to 0.31 lb (140g) without bezel
Read Speeds	DVD+R/-R/+RW/ -RW/+R DL /-R DL Up to 8X DVD-ROM Up to 8X CD-ROM, CD-R Up to 24X CD-RW Up to 24X
Access time (typical reads, including settling)	Random: DVD-ROM: 170 ms (typical), CD-ROM: 170 ms (typical) Full stroke: DVD-ROM: 320 ms (typical), CD-ROM: 320 ms (typical)
Power	Source Slimline SATA DC power receptacle DC Power Requirement 5 VDC ± 5%-100 mV ripple p-p DC Current 5 VDC (< 1000 mA typical, 1600 mA maximum)
Environmental conditions (operating – non-condensing)	Temperature 41° to 122° F (5° to 50° C) Relative Humidity 10% to 80% Maximum Wet Bulb Temperature 84° F (29° C)

HP 9.5mm Slim DVD Writer Drive

Height	9.5 mm height
Orientation	Either horizontal or vertical
Interface type	SATA/ATAPI
Disc recording capacity	Up to 8.5 GB DL or 4.7 GB standard
Dimensions (W x H x D)	5.04 x 0.37 x 5.0 in (128 x 9.5 x 127 mm) without bezel
Weight (max)	0.31 lb (140 g)
Write Speeds	DVD-R DL – Up to 6X DVD+R – Up to 8X DVD+RW – Up to 8X

	DVD+R DL – Up to 6X DVD-R – Up to 8X DVD-RW – Up to 6X CD-R – Up to 24X CD-RW – Up to 10X
Read Speeds	DVD-RW, DVD+RW – Up to 8X DVD-R DL, DVD+R DL – Up to 8X DVD+R, DVD-R – Up to 8X DVD-ROM DL, DVD-ROM – Up to 8X CD-ROM, CD-R – Up to 24X CD-RW – Up to 24X
Access time (typical reads, including settling)	Random DVD-ROM: 170 ms (typical), CD-ROM: 170 ms (typical) Full Stroke DVD-ROM: 320 ms (typical), CD-ROM: 320 ms (typical) Stop Time 6 seconds (typical)
Power	Source Slimline SATA DC power receptacle DC Power Requirement 5 VDC ± 5%-100 mV ripple p-p DC Current 5 VDC (< 1000 mA typical, 1600 mA maximum)
Environmental conditions (operating – non-condensing)	Temperature 41° to 122° F (5° to 50° C) Relative Humidity 10% to 80% Maximum Wet Bulb Temperature 84° F (29° C)

HP 9.5mm Slim Blu-Ray Writer Drive

Height	9.5 mm height
Orientation	Either horizontal or vertical
Interface type	SATA/ATAPI
Disc recording capacity	Up to 128 GB QL, 100 GB TL, 50 GB DL or 25 GB standard SL
Dimensions (W x H x D)	5.04 x 0.37 x 5.0 in (128 x 9.5 x 127 mm) without bezel
Weight (max)	0.29 lb (132 g)
Write Speeds	BD-R SL/DL Up to 6X BD-R TL/QL Up to 4X BD-RE Up to 2X DVD-R Up to 8X DVD-R DL – Up to 6X DVD-RW Up to 6X DVD+R Up to 8X DVD+R DL – Up to 6X DVD+RW Up to 8X DVD-RAM Up to 5X CD-R Up to 24X CD-RW Up to 10X
Read Speeds	BD-ROM Up to 6X BD-R Up to 6X BD-RE SL/DL Up to 6X BD-RE TL Up to 4X DVD-ROM Up to 8X DVD-R SL/DL Up to 8X DVD-R Up to 8X DVD-RW Up to 8X DVD+R SL/DL Up to 8X DVD+R Up to 8X DVD+RW Up to 8X

Technical Specifications – Storage

	BDMV (AACS Compliant Disc) Up to 6x/2x (Read/Play) DVD-RAM Up to 5x DVD-Video (CSS Compliant Disc) Up to 8x/4x (Read/Play) CD-R/RW/ROM Up to 24x CD-DA (DAE) Up to 24X/10X (Read/Play)
Access time (typical reads, including settling)	Random BD-ROM: 205 ms (typical), DVD-ROM: 185 ms (typical), CD-ROM: 165 ms (typical) Full Stroke BD-ROM: 350 ms (typical), DVD-ROM: 345 ms (typical), CD-ROM: 340 ms (typical)
Power	Source Slimline SATA DC power receptacle DC Power Requirement 5 VDC ± 5%-100 mV ripple p-p DC Current 5 VDC -1200 mA typical, 2000 mA maximum
Environmental conditions (operating – non-condensing)	Temperature 41° to 122° F (5° to 50° C) Relative Humidity 10% to 80% Maximum Wet Bulb Temperature 84° F (29° C)

NETWORKING AND COMMUNICATIONS

Intel® I219-LM 1 Gigabit Network Connection LOM (vPro)	
Connector	RJ-45
System Interface	PCI (Intel proprietary) + SMBus
Data rates supported	10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30) 1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023 clauses 40) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s
IEEE Compliance	IEEE 802.1p QoS (Quality of Service) Support IEEE 802.1q VLAN support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable) IEEE 802.3az EEE (Energy Efficient Ethernet)
Performance	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload (ARP & NS) Large send offload and Giant send offload Receiving Side Scaling (Hash Mode Only) Jumbo Frame 9K
Power consumption	Cable Disconnetion: 25mW 100Mbps Full Run: 450mW 1000bp Full Run: 1000mW WoL Enable(S3/S4/S5): 50mW WoL Disable(S3/S4/S5): 25mW
Power Management	ACPI compliant – multiple power modes Situation-sensitive features reduce power consumption Advanced link down power saving for reducing link down power consumption
Management Interface	Auto MDI/MDIX Crossover cable detection
IT Manageability	Wake-on-LAN from modern standby or sleep state (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
Security & Manageability	Intel® vPro® support with appropriate Intel® chipset components

Intel® Ethernet Controller I210-AT Add-On Card	
Connector	RJ-45
System Interface	PCI (Intel proprietary) + SMBus
Data rates supported	10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30) 1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023 clauses 40) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s
IEEE Compliance	IEEE 802.1p QoS (Quality of Service) Support IEEE 802.1q VLAN support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable) IEEE 802.3az EEE (Energy Efficient Ethernet)
Performance	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload (ARP & NS) Large send offload and Giant send offload Receiving Side Scaling Jumbo Frame 9K

Technical Specifications – Networking and Communications

Power consumption	Cable Disconnetion: 25mW 100Mbps Full Run: 450mW 1000bp Full Run: 1000mW WoL Enable(S3/S4/S5): 50mW WoL Disable(S3/S4/S5): 25mW
Power Management	ACPI compliant – multiple power modes Situation-sensitive features reduce power consumption Advanced link down power saving for reducing link down power consumption
Management Interface	Auto MDI/MDIX Crossover cable detection
IT Manageability	Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only)
Security & Manageability	PXE 2.1 Remote Boot

Intel Wi-Fi 6 AX201 + BT5.2 Wireless Card (802.11ax 2x2, non-vPro, supporting gigabit file transfer speeds)	
Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
Interoperability	Features Wi-Fi 6 technology
Frequency Band	802.11b/g/n/ax • 2.402 – 2.482 GHz 802.11a/n/ac/ax • 4.9 – 4.95 GHz (Japan) • 5.15 – 5.25 GHz • 5.25 – 5.35 GHz • 5.47 – 5.725 GHz • 5.825 – 5.850 GHz
Data Rates	• 802.11b: 1, 2, 5.5, 11 Mbps • 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz) • 802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, ,80MHz & 160MHz) • 802.11ax: MCS0 ~ MCS11, (1SS and 2SS) (20MHz, 40MHz, ,80MHz & 160MHz)
Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
Security	• IEEE compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • IEEE 802.11i • WAPI
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points

Technical Specifications – Networking and Communications

Output Power	• 802.11b: +18.5dBm minimum • 802.11g: +17.5dBm minimum • 802.11a: +18.5dBm minimum • 802.11n HT20(2.4GHz): +15.5dBm minimum • 802.11n HT40(2.4GHz): +14.5dBm minimum • 802.11n HT20(5GHz): +15.5dBm minimum • 802.11n HT40(5GHz): +14.5dBm minimum • 802.11ac VHT80(5GHz): +11.5dBm minimum • 802.11ac VHT160(5GHz): +11.5dBm minimum • 802.11ax HT40(2.4GHz): +10dBm minimum • 802.11ax VHT160(5GHz): +10dBm minimum
Power Consumption	• Transmit mode 2.0 W • Receive mode 1.6 W • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode 50 mW (WLAN unassociated) • Connected Standby 10mW • Radio disabled 8 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
Receiver Sensitivity	•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(HT40): -59dBm maximum •802.11ax, MCS11(VHT160): -58.5dBm maximum
Antenna type	High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express M.2 MiniCard with CNVi Interface
Dimensions	1. Type 2230: 2.3 x 22.0 x 30.0 mm 2. Type 1216: 1.67 x 12.0 x 16.0 mm
Weight	1. Type 2230: 2.8g 2. Type 126: 1.3g
Operating Voltage	3.3v +/- 9%
Temperature	Operating: 14° to 158° F (–10° to 70° C) Non-operating: –40° to 176° F (–40° to 80° C)
Humidity	Operating: 10% to 90% (non-condensing) Non-operating: 5% to 95% (non-condensing)
Altitude	Operating: 0 to 10,000 ft (3,048 m) Non-operating: 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED Off – Radio ON
HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2 Wireless Card Technology	
Bluetooth Specification	4.0/4.1/4.2/5.0/5.1/5.2 Wireless Card Compliant
Frequency Band	2402 to 2480 MHz
Number of Available Channels	Legacy: 0~79 (1 MHz/CH) BLE: 0~39 (2 MHz/CH)

Technical Specifications – Networking and Communications

Data Rates and Throughput	Legacy: 3 Mbps data rate; throughput up to 2.17 Mbps BLE: 1 Mbps data rate; throughput up to 0.2 Mbps Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)
Transmit Power	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 9.5 dBm for BR and EDR.
Power Consumption	Peak (Tx): 330 mW Peak (Rx): 230 mW Selective Suspend: 17 mW
Bluetooth Software Supported Link Topology	Microsoft Windows Bluetooth Software
Power Management	Microsoft Windows ACPI, and USB Bus Support
Certifications	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
Power Management Certifications	ETS 300 328, ETS 300 826 Low Voltage Directive IEC60950-1/IEC62368-1 UL, CSA, and CE Mark
Bluetooth Profiles Supported	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode LE Link Layer LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels Train Nudging & Interlaced Scan BT4.2 ESR08 Compliance LE Secure Connection- Basic/Full LE Privacy 1.2 –Link Layer Privacy LE Privacy 1.2 –Extended Scanner Filter Policies LE Data Packet Length Extension FAX Profile (FAX) Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP)

Intel Wi-Fi 6 AX201 + BT5.2 Wireless Card (802.11ax 2x2, vPro, supporting gigabit file transfer speeds)	
Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
Interoperability	Features Wi-Fi 6 technology

Technical Specifications – Networking and Communications

Frequency Band	802.11b/g/n/ax • 2.402 – 2.482 GHz 802.11a/n/ac/ax • 4.9 – 4.95 GHz (Japan) • 5.15 – 5.25 GHz • 5.25 – 5.35 GHz • 5.47 – 5.725 GHz • 5.825 – 5.850 GHz
Data Rates	• 802.11b: 1, 2, 5.5, 11 Mbps • 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz) • 802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, ,80MHz & 160MHz) • 802.11ax: MCS0 ~ MCS11, (1SS and 2SS) (20MHz, 40MHz, ,80MHz & 160MHz)
Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
Security	• IEEE compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • IEEE 802.11i • WAPI
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power	• 802.11b: +18.5dBm minimum • 802.11g: +17.5dBm minimum • 802.11a: +18.5dBm minimum • 802.11n HT20(2.4GHz): +15.5dBm minimum • 802.11n HT40(2.4GHz): +14.5dBm minimum • 802.11n HT20(5GHz): +15.5dBm minimum • 802.11n HT40(5GHz): +14.5dBm minimum • 802.11ac VHT80(5GHz): +11.5dBm minimum • 802.11ac VHT160(5GHz): +11.5dBm minimum • 802.11ax HT40(2.4GHz): +10dBm minimum • 802.11ax VHT160(5GHz): +10dBm minimum
Power Consumption	• Transmit mode:2.0 W • Receive mode:1.6 W • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode:50 mW (WLAN unassociated) • Connected Standby/Modern Standby: 10mW • Radio disabled: 8 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
Receiver Sensitivity	• 802.11b, 1Mbps: -93.5dBm maximum • 802.11b, 11Mbps: -84dBm maximum • 802.11a/g, 6Mbps: -86dBm maximum • 802.11a/g, 54Mbps: -72dBm maximum • 802.11n, MCS07: -67dBm maximum • 802.11n, MCS15: -64dBm maximum • 802.11ac, MCS0: -84dBm maximum • 802.11ac, MCS9: -59dBm maximum • 802.11ax, MCS11(HT40): -59dBm maximum • 802.11ax, MCS11(VHT160): -58.5dBm maximum

Technical Specifications – Networking and Communications

Antenna type	High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express M.2 MiniCard with CNVi Interface
Dimensions	1. Type 2230: 2.3 x 22.0 x 30.0 mm 2. Type 1216: 1.67 x 12.0 x 16.0 mm
Weight	1. Type 2230: 2.8g 2. Type 126: 1.3g
Operating Voltage	3.3v +/- 9%
Temperature	Operating: 14° to 158° F (–10° to 70° C) Non-operating: –40° to 176° F (–40° to 80° C)
Humidity	Operating: 10% to 90% (non-condensing) Non-operating: 5% to 95% (non-condensing)
Altitude	Operating: 0 to 10,000 ft (3,048 m) Non-operating: 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED White – Radio ON
HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2 Wireless Card Technology	
Bluetooth Specification	4.0/4.1/4.2/5.0/5.1/5.2 Wireless Card Compliant
Frequency Band	2402 to 2480 MHz
Number of Available Channels	Legacy: 0~79 (1 MHz/CH) BLE: 0~39 (2 MHz/CH)
Data Rates and Throughput	Legacy: 3 Mbps data rate; throughput up to 2.17 Mbps BLE: 1 Mbps data rate; throughput up to 0.2 Mbps Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)
Transmit Power	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 9.5 dBm for BR and EDR.
Power Consumption	Peak (Tx): 330 mW Peak (Rx): 230 mW Selective Suspend: 17 mW
Bluetooth Software Supported Link Topology	Microsoft Windows Bluetooth Software
Power Management	Microsoft Windows ACPI, and USB Bus Support
Certifications	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
Power Management Certifications	ETS 300 328, ETS 300 826 Low Voltage Directive IEC60950-1/IEC62368-1 UL, CSA, and CE Mark
Bluetooth Profiles Supported	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode LE Link Layer LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels Train Nudging & Interlaced Scan BT4.2 ESR08 Compliance LE Secure Connection- Basic/Full LE Privacy 1.2 –Link Layer Privacy LE Privacy 1.2 –Extended Scanner Filter Policies LE Data Packet Length Extension FAX Profile (FAX) Basic Imaging Profile (BIP)2 Headset Profile (HSP)

	Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP)
Security & Manageability	Intel® vPro™ support with appropriate Intel® chipset components

Technical Specifications – Networking and Communications

Realtek RTL8821CE 802.11ac 1x1 Wi-Fi® and Bluetooth® 4.2 Wireless Card	
Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
Interoperability	Wi-Fi® certified
Frequency Band	802.11b/g/n • 2.402 – 2.482 GHz 802.11a/n/ac • 4.9 – 4.95 GHz (Japan) • 5.15 – 5.25 GHz • 5.25 – 5.35 GHz • 5.47 – 5.725 GHz • 5.825 – 5.850 GHz
Data Rates	• 802.11b: 1, 2, 5.5, 11 Mbps • 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz) • 802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, and 80MHz)
Modulation	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
Security	• IEEE and Wi-Fi® compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • IEEE 802.11i • WAPI
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power	• 802.11b: +14dBm minimum • 802.11g: +12dBm minimum • 802.11a: +12dBm minimum • 802.11n HT20(2.4GHz): +12dBm minimum • 802.11n HT40(2.4GHz): +12dBm minimum • 802.11n HT20(5GHz): +10dBm minimum • 802.11n HT40(5GHz): +10dBm minimum • 802.11ac VHT80(5GHz): +10dBm minimum
Power Consumption	• Transmit mode 2.0 W • Receive mode 1.6 W • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode 50 mW (WLAN unassociated) • Connected Standby 10mW • Radio disabled 8 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode

Technical Specifications – Networking and Communications

Receiver Sensitivity	802.11b, 1Mbps: -93.5dBm maximum 802.11b, 11Mbps: -84dBm maximum 802.11a/g, 6Mbps: -86dBm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11n, MCS07: -67dBm maximum 802.11n, MCS15: -64dBm maximum 802.11ac, MCS0: -84dBm maximum 802.11ac, MCS9: -59dBm maximum
Antenna type	High efficiency antenna. One embedded dual band 2.4/5 GHz antenna is provided to the card to support WLAN communications and Bluetooth communications
Form Factor	PCI-Express M.2 MiniCard
Dimensions	Type 2230: 2.3 x 22.0 x 30.0 mm
Weight	Type 2230: 2.8g
Operating Voltage	3.3v +/- 9%
Temperature	Operating: 14° to 158° F (–10° to 70° C) Non-operating: –40° to 176° F (–40° to 80° C)
Humidity	Operating: 10% to 90% (non-condensing) Non-operating: 5% to 95% (non-condensing)
Altitude	Operating: 0 to 10,000 ft (3,048 m) Non-operating: 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED OFF – Radio ON
HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Card Technology	
Bluetooth Specification	4.0/4.1/4.2 Wireless Card Compliant
Frequency Band	2402 to 2480 MHz
Number of Available Channels	Legacy: 0~79 (1 MHz/CH) BLE: 0~39 (2 MHz/CH)
Data Rates and Throughput	Legacy: 3 Mbps data rate; throughput up to 2.17 Mbps BLE: 1 Mbps data rate; throughput up to 0.2 Mbps Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)
Transmit Power	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.
Power Consumption	Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW
Electrical Interface	USB 2.0 compliant
Bluetooth Software Supported Link Topology	Microsoft Windows Bluetooth Software
Power Management	Microsoft Windows ACPI, and USB Bus Support
Certifications	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
Power Management Certifications	ETS 300 328, ETS 300 826 Low Voltage Directive IEC60950-1/IEC62368-1 UL, CSA, and CE Mark

Bluetooth Profiles Supported	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode LE Link Layer LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels Train Nudging & Interlaced Scan BT4.2 ESR08 Compliance LE Secure Connection- Basic/Full LE Privacy 1.2 –Link Layer Privacy LE Privacy 1.2 –Extended Scanner Filter Policies LE Data Packet Length Extension FAX Profile (FAX) Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP)

Realtek RTL8822CE 802.11ac 2x2 Wi-Fi® + BT5.0 Wireless Card	
Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
Interoperability	Wi-Fi® certified
Frequency Band	802.11b/g/n • 2.402 – 2.482 GHz 802.11a/n/ac • 4.9 – 4.95 GHz (Japan) • 5.15 – 5.25 GHz • 5.25 – 5.35 GHz • 5.47 – 5.725 GHz • 5.825 – 5.850 GHz
Data Rates	• 802.11b: 1, 2, 5.5, 11 Mbps • 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps • 802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz) • 802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz & 80MHz)
Modulation	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
Security	• IEEE and Wi-Fi® compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • IEEE 802.11i • WAPI

Technical Specifications – Networking and Communications

Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power	• 802.11b: +18.5dBm minimum • 802.11g: +17.5dBm minimum • 802.11a: +18.5dBm minimum • 802.11n HT20(2.4GHz): +15.5dBm minimum • 802.11n HT40(2.4GHz): +14.5dBm minimum • 802.11n HT20(5GHz): +15.5dBm minimum • 802.11n HT40(5GHz): +14.5dBm minimum • 802.11ac VHT80(5GHz): +11.5dBm minimum • 802.11ac VHT160(5GHz): +11.5dBm minimum
Power Consumption	• Transmit mode:2.0 W • Receive mode:1.6 W • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode:50 mW (WLAN unassociated) • Connected Standby/Modern Standby: 10mW • Radio disabled: 8 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
Receiver Sensitivity	802.11b, 1Mbps: -93.5dBm maximum 802.11b, 11Mbps: -84dBm maximum 802.11a/g, 6Mbps: -86dBm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11n, MCS07: -67dBm maximum 802.11n, MCS15: -64dBm maximum 802.11ac, MCS0: -84dBm maximum 802.11ac, MCS9: -59dBm maximum
Antenna type	High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express M.2 MiniCard with CNVi Interface
Dimensions	1. Type 2230: 2.3 x 22.0 x 30.0 mm 2. Type 1216: 1.67 x 12.0 x 16.0 mm
Weight	1. Type 2230: 2.8g 2. Type 126: 1.3g
Operating Voltage	3.3v +/- 9%
Temperature	Operating: 14° to 158° F (–10° to 70° C) Non-operating: –40° to 176° F (–40° to 80° C)
Humidity	Operating: 10% to 90% (non-condensing) Non-operating: 5% to 95% (non-condensing)
Altitude	Operating: 0 to 10,000 ft (3,048 m) Non-operating: 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED OFF – Radio ON
HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0 Wireless Card Technology	
Bluetooth Specification	4.0/4.1/4.2/5.0 Wireless Card Compliant
Frequency Band	2402 to 2480 MHz
Number of Available Channels	Legacy: 0~79 (1 MHz/CH) BLE: 0~39 (2 MHz/CH)
Data Rates and Throughput	Legacy: 3 Mbps data rate; throughput up to 2.17 Mbps BLE: 1 Mbps data rate; throughput up to 0.2 Mbps Legacy: Synchronous Connection Oriented links up to 3, 64 kbps, voice channels

	Legacy: Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)
Transmit Power	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.
Power Consumption	Peak (Tx): 330 mW Peak (Rx): 230 mW Selective Suspend: 17 mW
Bluetooth Software Supported Link Topology	Microsoft Windows Bluetooth Software
Power Management	Microsoft Windows ACPI, and USB Bus Support
Certifications	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
Power Management Certifications	ETS 300 328, ETS 300 826 Low Voltage Directive IEC60950-1/IEC62368-1 UL, CSA, and CE Mark
Bluetooth Profiles Supported	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode LE Link Layer LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels Train Nudging & Interlaced Scan BT4.2 ESR08 Compliance LE Secure Connection- Basic/Full LE Privacy 1.2 –Link Layer Privacy LE Privacy 1.2 –Extended Scanner Filter Policies LE Data Packet Length Extension FAX Profile (FAX) Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP)

I/O DEVICES

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

Technical Specifications – Input/Output Devices

HP USB Business Slim Wired SmartCard CCID Keyboard		
Physical Characteristics	Keys	104, 105, 109 layout (depending upon country)
	Dimensions (L x W x H)	17.34 x 5.68 x 0.78in (440.6 x 144.5 x 1.98 cm)
	Weight	1.32 lb (598g)
Electrical	Operating voltage	5 VDC, +/-5%
	Power consumption	100mA (All LED on)
	System interface	USB Type A plug connector
	ESD	Contact Discharge: 8 KV Air Discharge: 12.5 KV
	EMI - RFI	Conforms to FCC rules for a Class B computing device
Mechanical	Keycaps	Low-profile design
	Switch actuation	60±10g nominal peak force with tactile feedback
	Switch life	10 million keystrokes (Life tester)
	Switch type	Contamination-resistant switch membrane
	Key-leveling mechanisms	For all double-wide and greater-length keys
	Cable length	6 ft (1.8 m)
Environmental	Acoustics	43-dBA maximum sound pressure level
	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-22° to 140° F (-30° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Operating shock	40 g, six surfaces
	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
	Drop (out of box)	26 in (66 cm) on carpet, six-drop sequence
	Drop (in box)	30 in (76.2 cm) on concrete, 16-drop sequence
Approvals	CE Marking, TUV, EAC, FCC, cULus/CSAus, ICES, RCM, VCCI, KCC, BSMI	
Ergonomic compliance	ISO 9241-4, TUVGS	

Technical Specifications – Input/Output Devices

HP USB & PS/2 Washable Standalone Wired Keyboard		
Physical Characteristics	Keys	104, 105 layout (depending upon country)
	Dimensions (L x W x H)	17.68 x 6.68 x 1.22 in (449.18 x 169.66 x31.2 mm)
	Weight	1.57 lb (710g)
Electrical	Operating voltage	5V +- 5%
	Power consumption	50mA
	System interface	USB Type A plug connector
	ESD	Contact Discharge: 8 KV Air Discharge: 15 KV
	EMI - RFI	Conforms to FCC rules for a Class B computing device
Mechanical	Keycaps	Low-profile design
	Switch actuation	55±10g nominal peak force with tactile feedback
	Switch life	20 million keystrokes (Life tester)
	Switch type	Contamination-resistant switch membrane
	Key-leveling mechanisms	For all double-wide and greater-length keys
	Cable length	7.2 ft (2.2 m)
Environmental	Acoustics	43-dBA maximum sound pressure level
	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-4° to 149° F (-20° to 65° C)
	Operating humidity	10% to 95% (non-condensing at ambient)
	Non-operating humidity	0% to 95% (non-condensing at ambient)
	Operating shock	40 g, six surfaces
	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
	Drop (out of box)	26 in (66 cm) on carpet, six-drop sequence
	Drop (in box)	30 in (76.2 cm) on concrete, 16-drop sequence
Approvals	UL, cUL, FCC, CE, TUV GS, VCCI, BSMI, RCM, KCC, USB-IF, WHQL, EN/IEC 60601-1, IP66/NEMA4X	
Ergonomic compliance	ANSI HFS 100, ISO 9241-4, and TUVGS	

Technical Specifications – Input/Output Devices

HP Premium Standalone Wireless Keyboard		
Physical Characteristics	Keys	104, 105 layout (depending upon country)
	Dimensions (L x W x H)	17.04 x 5.55 x 0.52 in (433 x 141 x13.2 mm)
	Weight	1.54 lb (698g)
Electrical	Operating voltage	5 VDC, +/-5%
	Power consumption	35mA (All LED on)
	System interface	USB Type A plug connector
	ESD	Contact Discharge: 8 KV Air Discharge: 15 KV
	EMI - RFI	Conforms to FCC rules for a Class B computing device
Mechanical	Keycaps	Low-profile design
	Switch actuation	60±10g nominal peak force with tactile feedback
	Switch life	10 million keystrokes (Life tester)
	Switch type	Contamination-resistant switch membrane
	Key-leveling mechanisms	For all double-wide and greater-length keys
	Cable length	6 ft (1.8 m)
Environmental	Acoustics	43-dBA maximum sound pressure level
	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-22° to 140° F (-30° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Operating shock	40 g, six surfaces
	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
	Drop (out of box)	26 in (66 cm) on carpet, six-drop sequence
	Drop (in box)	30 in (76.2 cm) on concrete, 16-drop sequence
Approvals	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC	
Ergonomic compliance	TUVGS	

Technical Specifications – Input/Output Devices

HP USB Premium Wired Keyboard		
Physical Characteristics	Keys	104, 105 layout (depending upon country)
	Dimensions (L x W x H)	17.04 x 5.55 x 0.52 in (433 x 141 x13.2 mm)
	Weight	1.54 lb (698g)
Electrical	Operating voltage	5 VDC, +/-5%
	Power consumption	35mA (All LED on)
	System interface	USB Type A plug connector
	ESD	Contact Discharge: 8 KV Air Discharge: 15 KV
	EMI - RFI	Conforms to FCC rules for a Class B computing device
Mechanical	Keycaps	Low-profile design
	Switch actuation	60±10g nominal peak force with tactile feedback
	Switch life	10 million keystrokes (Life tester)
	Switch type	Contamination-resistant switch membrane
	Key-leveling mechanisms	For all double-wide and greater-length keys
	Cable length	6 ft (1.8 m)
Environmental	Acoustics	43-dBA maximum sound pressure level
	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-22° to 140° F (-30° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Operating shock	40 g, six surfaces
	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
	Drop (out of box)	26 in (66 cm) on carpet, six-drop sequence
	Drop (in box)	30 in (76.2 cm) on concrete, 16-drop sequence
Approvals	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC	
Ergonomic compliance	TUVGS	

Technical Specifications – Input/Output Devices

HP USB Wired Keyboard		
Physical Characteristics	Keys	104, 105, 106, 108, 109 layouts
	Dimensions (L x W x H)	18.12 x 6.47 x 1.10 in (460.28 x 164.31 x 27.88 mm)
	Weight	1.98 lb (900g) min
Electrical	Operating voltage	5 VDC, +/-5%
	Power consumption	50mA Max (All LED on)
	System interface	USB Type A plug connector
	ESD	Contact Discharge: 8 KV Air Discharge: 15 KV
	EMI - RFI	Conforms to FCC rules for a Class B computing device
Mechanical	Keycaps	Low-profile design
	Switch actuation	60±14g nominal peak force with tactile feedback
	Switch life	20 million keystrokes (Life tester)
	Switch type	Contamination-resistant switch membrane
	Key-leveling mechanisms	For all double-wide and greater-length keys
	Cable length	6 ft (1.8 m)
Environmental	Acoustics	43-dBA maximum sound pressure level
	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-22° to 140° F (-30° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Operating shock	40 g, six surfaces
	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
	Drop (out of box)	26 in (66 cm) on carpet, six-drop sequence
	Drop (in box)	30 in (76.2 cm) on concrete, 16-drop sequence
Approvals	CUL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC, EAC	
Ergonomic compliance	TUVGS	

HP Universal USB Wired Keyboard		
Physical Characteristics	Keys	104, 105 layout (depending upon country)
	Dimensions (L x W x H)	18.15 x 6.02 x 1.08 in (461 x 153 x 27.4 mm)
	Weight	1.32 lb (600g) min
Electrical	Operating voltage	5 VDC, +/-5%

Technical Specifications – Input/Output Devices

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

HP Universal USB Wired Mouse		
Dimensions (H x L x W)	4.53 x 2.50 x 1.40 in (115 x 63.46 x 35.48 mmm)	
Weight	0.18lb (80g)	
Environmental	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-22° to 140° F (-30° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Operating shock	40 g, six surfaces
	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
Electrical	Operating voltage	5 VDC, +/-5%
	Power consumption (typical)	50mA Max

Technical Specifications – Input/Output Devices

	Resolution	1,000 DPI
	Sensor	Pixart PAN3606DL
	Tracking speed	30 inch/sec (max)
	Tracking acceleration	9G(max), 1G=9.8m/s2
Mechanical	Connector	USB 2.0
	Cable length	6 ft (1.8 m)
	Color	Jack Black
Regulatory approvals	Compliant	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC, EAC

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

HP USB 1000dpi Laser Mouse		
Dimensions (H x L x W)	115 * 62.9 * 37 mm (L * W * H)	
Weight	0.22lb (101.6g)	
Environmental	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-22° to 140° F (-30° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Operating shock	40 g, six surfaces

Technical Specifications – Input/Output Devices

	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
Electrical	Operating voltage	5 VDC, +/-5%
	Power consumption (typical)	100mA
	Resolution	1,000 DPI
	Sensor	PixArt vendor Laser USB mouse sensor
	Tracking speed	30 inch/sec (max)
	Tracking acceleration	8G(max), 1G=9.8m/s2
Mechanical	Connector	USB 2.0
	Cable length	6 ft (1.8 m)
	Color	Jack Black
Regulatory approvals	Compliant	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC, EAC

HP USB Premium Wired Mouse		
Dimensions (H x L x W)	4.21 x 2.64 x 1.52 in (107 x 67 x 38.7 mmm)	
Weight	0.19lb (90g)	
Environmental	Operating temperature	50° to 122°F (10° to 50° C)
	Non-operating temperature	-22° to 140°F (-30° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Operating shock	50 g, 6 surfaces
	Non-operating shock	80 g, 6 surfaces
	Operating vibration	2 g peak acceleration
	Non-operating vibration	4 g peak acceleration
Electrical	Operating voltage	5 VDC, +/-5%
	Power consumption (typical)	12mA
	Resolution	800, 1200, 1600 DPI
	Sensor	Pixart PAN3606DL
	Tracking speed	30 inch/sec (max)
	Tracking acceleration	8G(max), 1G=9.8m/s2
Mechanical	Connector	USB 2.0
	Cable length	6 ft (1.8 m)
	Color	Jack Black
Regulatory approvals	Compliant	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, C-Tick, KC

Technical Specifications – Input/Output Devices

HP USB Fingerprint Mouse		
Dimensions (H x L x W)	107 x 67 x 38.7 mm	
Weight	85 g	
Environmental	Operating temperature	50° to 122° F (10° to 50° C)
	Non-operating temperature	-22° to 140° F (-30° to 60° C)
	Operating humidity	10% to 90% (non-condensing at ambient)
	Non-operating humidity	20% to 80% (non-condensing at ambient)
	Operating shock	40 g, six surfaces
	Non-operating shock	80 g, six surfaces
	Operating vibration	2-g peak acceleration
	Non-operating vibration	4-g peak acceleration
Electrical	Operating voltage	5 VDC, +/-5%
	Power consumption (typical)	130mA
	Resolution	1,200 DPI
	Sensor	PixArt vendor Laser USB mouse sensor
	Tracking speed	30 inch/sec (max)
	Tracking acceleration	8G(max), 1G=9.8m/s2
Mechanical	Connector	USB 2.0
	Cable length	6 ft (1.8 m)
	Color	Jack Black
Regulatory approvals	Compliant	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, RCM, KCC, EAC

AUDIO/MULTIMEDIA

HP ProDesk 600 G6 Desktop Mini PC

Type	Integrated
HD Stereo Codec	Realtek ALC3205 / Realtek ALC 3867
Audio I/O Ports	Front: Headset connector supports a CTIA and style headset and is re-taskable as a Line-in, Line-out, Microphone-in or Headphone-out port
Internal Speaker Amplifier	2W class D mono amplifier for the internal speaker only. External speakers must be powered
Multi-streaming Capable	Playback multi-streaming can be enabled in the audio control panel to allow independent audio streams to be sent to/from the front and rear jacks or integrated speaker.
Sampling	Independent sampling rates for DAC's and ADC's; supports resolutions from 16 to 24-bit; 44.1 kHz to 192 kHz for DAC and 44.1 kHz to 96 kHz for ADC
Wavetable Syntheses	Yes - Uses OS soft wavetable
Analog Audio	Yes
# of Channels on Line-Out	Stereo (Left & Right channels)
Internal Speaker	Yes

HP ProDesk 600 G6 Small Form Factor PC

Type	Integrated
HD Stereo Codec	Realtek ALC3205 / Realtek ALC 3867
Audio I/O Ports	Front: Headset connector supports a CTIA and style headset and is re-taskable as a Line-in, Line-out, Microphone-in or Headphone-out port Rear: Line-out, 3.5mm and support stereo
Internal Speaker Amplifier	2W class D mono amplifier for the internal speaker only. External speakers must be powered
Multi-streaming Capable	Playback multi-streaming can be enabled in the audio control panel to allow independent audio streams to be sent to/from the front and rear jacks or integrated speaker
Sampling	Independent sampling rates for DAC's and ADC's; supports resolutions from 16 to 24-bit; 44.1 kHz to 192 kHz for DAC and 44.1 kHz to 96 kHz for ADC
Wavetable Syntheses	Yes - Uses OS soft wavetable
Analog Audio	Yes
# of Channels on Line-Out	Stereo (Left & Right channels)
Internal Speaker	Yes

HP ProDesk 600 G6 Microtower PC

Type	Integrated
HD Stereo Codec	Realtek ALC3205 / Realtek ALC 3867
Audio I/O Ports	Front: Headset connector supports a CTIA and style headset and is re-taskable as a Line-in, Line-out, Microphone-in or Headphone-out port Rear: Line-Out port, 3.5mm and support stereo Line-in*, 3.5mm and support stereo
Internal Speaker Amplifier	2W class D mono amplifier for the internal speaker only. External speakers must be powered
Multi-streaming Capable	Playback multi-streaming allows independent audio streams to be sent to/from the front and rear jacks or integrated speaker.
Sampling	Independent sampling rates for DAC's and ADC's; supports resolutions from 16 to 24-bit; 44.1 kHz to 192 kHz for DAC and 44.1 kHz to 96 kHz for ADC
Wavetable Syntheses	Yes - Uses OS soft wavetable
Analog Audio	Yes
# of Channels on Line-Out	Stereo (Left & Right channels)

Technical Specifications – Audio/Multimedia

Internal Speaker	Yes

*Line-in port only available on product with legacy PCI version

HP ProOne 600 G6 All-in-One PC

Type	Integrated
HD Stereo Codec	Realtek ALC3252
Audio I/O Ports	Side 3.5mm headset connector supports an OMTP and CTIA style headset and is re-taskable as a Line-in, Line-out, Microphone-in or Headphone-out port
Internal Speaker Amplifier	2W per channel class D stereo amplifier for the internal speakers only
Multi-streaming Capable	Playback multi-streaming allows independent audio streams to be sent to/from the side jack and integrated speakers.
Sampling	Independent sampling rates for DAC's and ADC's; supports resolutions from 16 to 24-bit; 44.1 kHz to 192 kHz for DAC and 44.1 kHz to 96 kHz for ADC
Wavetable Syntheses	Yes - Uses OS soft wavetable
Analog Audio	Yes
# of Channels on Line-Out	Stereo (Left & Right channels)
Internal Speaker	Yes - Stereo

INTEGRATED WEBCAM AND MICROPHONE

Optional integrated 1 MP HD RGB webcam & microphone; maximum resolution of 1280 x 720
Optional integrated 5 MP RGB webcam & microphone; maximum resolution of 2592 x 1944
Optional integrated 5 MP RGB webcam with IR sensor & microphone; maximum resolution of 2592 x 1944

POWER

	DM	SFF	MT	AiO
External Power Supplies	65W EPS, 88% average efficiency at 115V & 89% at 230Vac 90W EPS, active PFC, when using 65W CPU, 88% average efficiency at 115V & 89% at 230Vac	N/A	N/A	90W EPS, active PFC, 88% efficiency in 115Vac / 89% efficiency in 230Vac 120W EPS, active PFC, 88% efficiency in 115Vac / 89% efficiency in 230Vac 150W EPS, active PFC, 88% efficiency in 115Vac / 89% efficiency in 230Vac
80 PLUS Gold	N/A	180W active PFC / 80 PLUS Gold 87/90/87% efficient at 20/50/100% load (115V) 90/92/89% efficient at 20/50/100% load (230V)	180W active PFC / 80 PLUS Gold 87/90/87% efficient at 20/50/100% load (115V) 90/92/89% efficient at 20/50/100% load (230V)	N/A
80 PLUS Platinum	N/A	210W active PFC 90/92/89% efficient at 20/50/100% load (115V) 91/93/90% efficient at 20/50/100% load (230V)	260W active PFC / 80 PLUS Platinum 550W active PFC / 80 PLUS Platinum 90/92/89% efficient at 20/50/100% load (115V) 91/93/90% efficient at 20/50/100% load (230V)	N/A
Operating Voltage Range	90Vac~264Vac	90Vac~264Vac	90Vac~264Vac	90Vac~264Vac
Rated Voltage Range	100Vac~240Vac	100Vac~240Vac	100Vac~240Vac	100Vac~240Vac
Rated Line Frequency	50HZ~60HZ	50HZ~60HZ	50HZ~60HZ	50HZ~60HZ
Operating Line Frequency	47HZ~63HZ	47HZ~63HZ	47HZ~63HZ	47HZ~63HZ
Rated Input Current with Energy Efficient* Power Supply	65W≦1.6A 90W≦1.7A	180W Gold ≦2.3A 210W Platinum ≦2.5A	180W Gold≦2.3A 260W Platinum≦3.1A 550W Platinum≦6.6A	90W≦1.7A 120W≦2.2A 150W≦2.5A
DC Output	+19.5V	+12V	+12V	+19.5V

Technical Specifications – Power

	DM	SFF	MT	AiO
Current Leakage (NFPA 99: 2012)	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.	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.	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.	Less than 500 microamps of leakage current at 264 Vac with the ground wire disconnected, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1. Less than 100 microamps of leakage current at 264 Vac with the ground wire intact with normal polarity, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1.
Power Supply Fan	N/A	50 mm variable speed	70 mm variable speed	N/A
Power cord length	6.0 ft. (1.83m)	6.0 ft. (1.83m)	6.0 ft. (1.83m)	6.0 ft. (1.83m)
Dimensions	65W: 102 x 55 x 30mm 90W: 126 x 50 x 30mm	200 x 85 x 53 mm	165 x 95 x 73 mm	90W: 126 x 50 x 30mm 120W: 138 x 68.5 x 25.4mm 150W: 148 x 75.5 x 25.4mm

The power supply shall comply with harmonic input current requirements as detailed in EN61000-3-2 and JEIDA MITI standards. The harmonic input current requirements must be met under the following operating conditions:
Load Requirements: 50% and 100%
Input Voltage: 230Vac/50Hz.
For active power factor correction the power factor at 50% &100% loads shall be greater than 0.9 over the entire nominal input voltage range (100-127VAC and 200-240VAC).

Condition	Standard Efficiency	82/85/82%	85/88/85%	87/90/87%	90/92/89%	Input Voltage
10% of Rated Load	-	75%	81%	84%	86%	115Vac/60HZ
20% of Rated Load	-	82%	85%	87%	90%	115Vac/60HZ
50% of Rated Load	-	85%	88%	90%	92%	115Vac/60HZ
	PF>0.9	PF>0.9	PF>0.9	PF>0.9	PF>0.95	
100% of Rated Load	70%	82%	85%	87%	89%	115Vac/60HZ
	PF>0.9	PF>0.9	PF>0.9	PF>0.9	PF>0.9	230Vac/50HZ

WEIGHTS & DIMENSIONS[1]

	DM	SFF	MT
Chassis (W x D x H)	6.97 x 6.89 x 1.35 in 177 x 175 x 34.2 mm	10.6 in x 11.9 in x 3.7 in 270 mm x 303 mm x 95 mm	6.1 x 13.27 x 11.93 in 155x 337 x 303 mm
System Volume	64 cu in 1.05 L	474 cu in 7.8 L	965 cu in 15.83 L
System Weight [2]	2.74 lbs 1.25 kg	8.6 lbs 3.9 kg	11.01 lbs 5 kg
Max Supported Weight (desktop orientation)	N/A	77 lb 35 kg	77 lb 35 kg
Packaging Dimension (W x D x H)	19.57 x 5.04 x 8.78 in (497 x 128 x 223 mm)	15.52 x 8.07 x 19.65 in (394 x 205 x 499 mm)	15.75 x 11.30 x 19.65 in (400 x 287 x 499 mm)
	MPP: 19.61 x 9.25 x 5.20 in (498 x 235 x 132 mm)	**MPP**: 15.52 x 8.07 x 19.65 in (394 x 205 x 499 mm)	**MPP**: 15.75 x 11.30 x 19.65 in (400 x 287 x 499 mm)
Shipping Weight	6.52 lbs (2.97 kg)	15.37 lbs (6.97 kg)	16.85 lbs (7.65 kg)
	MPP: 7.50 lbs (3.40 kg)	**MPP**: 15.86 lbs (7.2 kg)	**MPP**: 17.55 lbs (7.97 kg)
Palletization Profile (Fabricated EPE)	18-units per layer 5 or 6 layers max depending on details of air freight 90 or 108 units per pallet depending on details of air freight 45.354 x 39.13 x 57.80 in, 1152 x 994 x 1468 mm (include pallet)	6-units per layer 11 layer max 66 per pallet 47.24 x 39.37 x 93.90 in, 1200 x 1000 x 2380 mm (including pallet)	6-units per layer 8 layer max 48 per pallet 47.24 x 39.37 x 95.12 in, 1200 x 1000 x 2416 mm (including pallet)
Palletization Profile (Molded Pulp)	10-units per layer 10 to 19 layers max depending on details of freight 100 or 190 units per pallet depending on details of freight 46.26 x 39.21 x 103.74 in, 1175 x 996 x 2635 mm (including pallet)	6-units per layer 11 layer max 66 per pallet 47.24 x 39.37 x 93.90 in, 1200 x 1000 x 2380 mm (including pallet)	6-units per layer 8 layer max 48 per pallet 47.24 x 39.37 x 95.12 in, 1200 x 1000 x 2416 mm (including pallet)

1. Packaging material used will vary by country
2. Configured with 1 HDD & 1 ODD; DM configured with 1 HDD only

Technical Specifications – Weights and Dimensions

All-in-One Dimensions[1]

HP ProOne 600 G6 22 All-in-One PC

		Without Stand		Cantilever Stand (Fixed Height Tilt Stand)		Adjustable Height Stand	
		cm/kg	inch/lbs	cm/kg	inch/lbs	cm/kg	inch/lbs
Product	Width	48.87 cm	19.24 in	48.87 cm	19.24 in	48.87 cm	19.24 in
	Length/Depth	5.08 cm	2.0 in	15.65 cm	6.16 in	20.15 cm	7.93 in
	Height	32.45 cm	12.78 in	37.46 cm	14.75 in	35.4 ~ 48.28 cm	13.94 ~ 19.01 in
	Weight	5.178 kg	11.42 lbs	5.888 kg	12.98 lbs	6.758 kg	14.90 lbs
Package	Width	59.5 cm	23.43 in	59.5 cm	23.43 in	59.5 cm	23.43 in
	Length/Depth	24.5 cm	9.65 in	24.5 cm	9.65 in	24.5 cm	9.65 in
	Height	41.4 cm	16.30 in	41.4 cm	16.30 in	41.4 cm	16.30 in
	Weight	8.2 kg	18.08 lbs	8.91 kg	19.64 lbs	9.78 kg	21.56 lbs
Palletization for Sea/Rail	Width	120 cm	47.24 in	120 cm	47.24 in	120 cm	47.24 in
	Length/Depth	100 cm	39.37 in	100 cm	39.37 in	100 cm	39.37 in
	Height	221 cm	87.07 in	221 cm	87.07 in	221 cm	87.07 in
	Weight	346.8 kg	764.85 lbs	375.2 kg	827.25 lbs	410 kg	904.05 lbs
	Qty / Layer	8		8		8	
	Layers	5		5		5	
Qty / Pallet via Sea/Rail		40		40		40	
Qty / Pallet via Air		24		24		24	

1. Packaging material used will vary by country
2. Configured with 1 HDD & 1 ODD

MISCELLANEOUS FEATURES

Management Features

- Advanced Configuration and Power Management Interface (ACPI). Allows the system to wake from a low power mode. Controls system power consumption, making it possible to place individual cards and peripherals in a low-power or powered-off state without affecting other elements of the system.
- Intel® Wired for Management support; industry wide initiative to make Intel® architecture based PCs, servers and mobile computers more inherently manageable out-of-the-box and over the network
- Dual State Power Button; acts as both an on/off button and a suspend-to-sleep button

Serviceability Features

- Dual colored power LED on front of computer to indicate either normal or fault condition
- Diagnostic LED Explanation Table:
  - Power LED will blink red 2 to 5 times, then blink white 2 or more times, then repeat (with beep tones for each blink initially):
    - 2 red + 2 white User must provide file for BIOS recovery (USB storage typically)
    - 2 red + 3 white User must enter a key sequence to proceed with recovery by policy
    - 2 red + 4 white BIOS recovery is in progress
    - 3 red + 2 white Memory could not be initialized
    - 3 red + 3 white Graphics adaptor could not be found
    - 3 red + 4 white Power supply failure / not connected
    - 3 red + 5 white Processor not installed
    - 3 red + 6 white Current processor does not support an enabled feature
    - 4 red + 2 white Processor has exceeded its temperature threshold / system thermal shutdown
    - 4 red + 3 white System internal temperature has exceeded its threshold
    - 5 red + 2 white System controller firmware is not valid
    - 5 red + 3 white System controller detected BIOS is not executing
    - 5 red + 4 white BIOS could not complete initialization / mainboard failure
    - 5 red + 5 white System controller rebooted the system after a health or recovery timer triggered
- HP PC Hardware Diagnostics UEFI:
  - This utility enables hardware level testing outside the operating system on many components. The diagnostics can be invoked by pressing F2 at POST, and is available as a download from HP Support
- System/Emergency ROM
- Flash ROM
- CMOS Battery Holder for easy replacement
- Flash Recovery with Video Configuration Record Software
- 5 Aux Power LED on System PCA
- Processor ZIF Socket for easy Upgrade
- Over-Temp Warning on Screen (Requires IM Agents)
- DIMM Connectors for easy Upgrade
- Clear CMOS Button
- NIC LEDs (integrated) (Green & Amber)
- Dual Color Power and HD LED - To Indicate Normal Operations and Fault Conditions
- Color coordinated cables and connectors
- Tool-less Hood Removal
- Front power switch
- System memory can be upgraded without removing the system board or any internal components
- Tool-less Hard Drive, memory & optical drive removal (For MT, SFF, and DM only)
- Green Pull Tabs, and Quick Release Latches for easy Identification

Technical Specifications – Miscellaneous Features

Additional Features

Product Orientation	Microtower (MT) can be oriented in a tower (vertical) orientation. Small Form Factor (SFF) can be oriented as either a desktop (horizontal) or a tower (vertical) with optional vertical stand. Desktop Mini (DM) can be oriented as either a desktop (horizontal) or a tower (vertical) with optional vertical stand.
Drive Protection System	DPS Access through F10 Setup during Boot A diagnostic hard drive self- test. It scans critical physical components and every sector of the hard drive for physical faults and then reports any faults to the user Running independently of the operating system, it can be accessed through a Windows-based diagnostics utility or through the computer's setup procedure. It produces an evaluation on whether the hard drive is the source of the problem and needs to be replaced The system expands on the Self-Monitoring, Analysis, and Reporting Technology (SMART), a continuously running systems diagnostic that alerts the user to certain types of failures
SMART Technology (Self-Monitoring, Analysis and Reporting Technology)	Allows hard drives to monitor their own health and to raise flags if imminent failures were predicted
SMART I - Drive Failure Prediction	Predicts failures before they occur. Tracks fault prediction and failure indication parameters such as re-allocated sector count, spin retry count, calibration retry count
SMART II - Off-Line Data Collection	By avoiding actual hard drive failures, SMART hard drives act as "insurance" against unplanned user downtime and potential data loss from hard drive failure
SMART III - Off-Line Read Scanning with Defect Reallocation	IOEDC: I/O Error Detection Circuitry
SMART IV - End-to-End CRC for hard drives	Detects errors in Read/Write buffers on HDD cache RAM

AFTER MARKET OPTIONS

Graphics Solutions	DM	SFF	MT	AiO	Part Number
AMD Radeon RX 550X 4GB Display Card		X			5LH79AA
AMD Radeon R7 430 2GB 2DP Card		X	X		5JW82AA
AMD Radeon R7 430 2GB DP+VGA Card		X	X		5JW81AA
HP DisplayPort To HDMI True 4k Adapter	X	X	X	X	2JA63AA
HP DVI Cable Kit		X	X		DC198A
HP HDMI Standard Cable Kit	X	X	X	X	T6F94AA
HP DisplayPort Cable Kit	X	X	X	X	VN567AA
HP DisplayPort To VGA Adapter	X	X	X	X	AS615AA
HP DisplayPort To DVI-D Adapter	X	X	X	X	FH973AA

Desktop Mini Accessories	DM	SFF	MT	AiO	Part Number
HP Desktop Mini Port Cover v2	X				13L69AA
HP Desktop Mini 2.5" SATA Drive Bay kit v2	X				13L70AA
HP Desktop Mini LockBox V2	X				3EJ57AA
HP Desktop Mini DVD-Writer ODD Expansion Module	X (Either one)				K9Q83AA
HP Desktop Mini I/O Expansion Module					K9Q84AA
HP Desktop Mini Security/Dual VESA Sleeve v3	X				13L67AA
HP Desktop Mini Security/Dual VESA Sleeve v3 with Power Supply Holder	X				13L68AA
HP B300 PC Mounting Bracket with Power Supply Holder	X (Discrete GPU skus and 150W/180W adapter not supported)				7DB37AA
HP Desktop Mini Vertical Chassis Stand	X				G1K23AA
HP DM Power Supply Holder Kit v2	X (Discrete GPU skus and 150W/180W adapter not supported)				7DB38AA
HP 150W Elite Mini EPS Holder*	X				657R3AA

NOTE*: Compatible with HP B300 PC Mounting Bracket (2DW53AA) and HP Desktop Mini Security Dual/VESA Sleeve v3 (13L67AA).

Data Storage Drives	DM	SFF	MT	AiO	Part Number
HP PCIe NVME TLC 256GB SSD M.2 Drive	X	X	X	X	1CA51AA
HP PCIe NVME TLC 512GB SSD M.2 Drive	X	X	X	X	X8U75AA
HP 500GB 7200PRM SATA 6.0Gb/s 3.5" Hard Drive		X	X		QK554AA
HP 1TB 7200rpm SATA 6Gb/s 3.5" Hard Drive		X	X		QK555AA
HP SFF SATA DVD-Writer ODD		X			52D76AA
HP TWR SATA DVD-Writer ODD			X		52D77AA
HP ProDesk 400/600 MT 2nd 3.5" HDD cage			X		13L71AA

After Market Options

Input Devices	DM	SFF	MT	AiO	Part Number
HP Wired Desktop 320K Keyboard	X	X	X	X	9SR37AA
HP USB Antimicrobial Business Slim Keyboard and Mouse	X	X	X	X	Z9H50AA
HP USB Business Slim CCID SmartCard Keyboard	X	X	X	X	Z9H48AA
HP USB Keyboard	X	X	X	X	QY776AA
HP USB Premium Keyboard	X	X	X	X	Z9N40AA
HP Wired Desktop 320MK Mouse and Keyboard	X	X	X	X	9SR36AA
HP USB PS/2 Washable Keyboard & Mouse	X	X	X	X	BU207AA
HP Wireless Business Slim Keyboard and Mouse	X	X	X	X	N3R88AA
HP Wireless Premium Keyboard	X	X	X	X	Z9N41AA
HP PS/2 Business Slim Keyboard		X	X		N3R86AA
HP Wired Desktop 320M Mouse	X	X	X	X	9VA80AA
HP Wireless Premium Mouse	X	X	X	X	1JR31AA
HP USB Grey v2 Mouse	X	X	X	X	Z9H74AA
HP USB Premium Mouse	X	X	X	X	1JR32AA
HP PS/2 Mouse		X	X		QY775AA
HP USB 1000dpi Laser Mouse	X	X	X	X	QY778AA
HP USB Optical Mouse	X	X	X	X	QY777AA
HP USB Fingerprint Mouse	X	X	X	X	4TS44AA

Communication Devices	DM	SFF	MT	AiO	Part Number
Intel Ethernet I210-T1 GbE NIC		X	X		E0X95AA

System Memory	DM	SFF	MT	AiO	Part Number
HP 32GB DDR4-2666 UDIMM		X	X		1C918AA
HP 4GB DDR4-3200 UDIMM		X	X		13L78AA
HP 8GB DDR4-3200 UDIMM		X	X		13L76AA
HP 16GB DDR4-3200 UDIMM		X	X		13L74AA
HP 32GB DDR4-3200 UDIMM		X	X		13L72AA
HP 4GB DDR4-3200 SODIMM	X			X	13L79AA
HP 8GB DDR4-3200 SODIMM	X			X	13L77AA
HP 16GB DDR4-3200 SODIMM	X			X	13L75AA
HP 32GB DDR4-3200 SODIMM	X			X	13L73AA

Multimedia Devices	DM	SFF	MT	AiO	Part Number
HP Business Headset v2	X	X	X	X	T4E61AA
HP S101 Speaker Bar	X	X	X		5UU40AA
HP UC Speaker Phone v2	X	X	X		4VW02AA

After Market Options

Security Devices	DM	SFF	MT	AiO	Part Number
HP Business PC Security Lock v3 Kit		X	X	X	3XJ17AA
HP Dual Head Keyed Cable Lock	X	X	X	X	T1A64AA
HP Keyed Cable Lock 10mm	X	X	X	X	T1A62AA
HP Master Keyed Cable Lock 10mm	X	X	X	X	T1A63AA

Stands and Mounting Accessories	DM	SFF	MT	AiO	Part Number
HP B250 PC Mounting Bracket	X				8RA46AA
HP B300 PC Mounting Bracket	X				2DW53AA
HP B500 PC Mounting Bracket	X				2DW52AA
HP Quick Release Bracket 2	X			X*	6KD15AA
HP Single Monitor Arm				X*	BT861AA
HP ProOne G6 VESA Plate with Power Supply Holder				X	13L66AA
HP ProOne G6 AiO Adjustable Height Stand				X	13L65AA

***NOTE:** To use any VESA mounting accessories, need to purchase VESA plate(13L66AA) separately.

I/O Devices	DM	SFF	MT	AiO	Part Number
HP DisplayPort Port Flex IO v2	X	X	X		13L54AA
HP HDMI Port Flex IO v2	X	X	X		13L55AA
HP Type-C USB 3.1 Gen2 Port Flex IO v2		X	X		13L59AA
HP Type-C USB 3.1 Gen2 Port with 100W PD Flex IO v2	X				13L60AA
HP VGA Port Flex IO v2	X	X	X		13L53AA
HP Serial Port Flex IO v2	X	X	X		13L56AA
HP Serial Port Flex IO 2nd v2	X				13L57AA
HP Internal Serial Port (405/600/805/800)		X	X		3TK82AA
HP PCIe x1 Parallel Port Card		X	X		N1M40AA
HP 800/600/400 G3 Serial/ PS/2 Adapter		X	X		1VD82AA

NOTE: For more detail on HP I/O Devices please refer to the HP FLEX IO Option Cards QuickSpecs. URL is:
http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c06042607

Intel® Optane™ Memory	DM	SFF	MT	AiO	Part Number
Intel® Optane™ Memory 16GB (Cache)	X	X	X	X	1WV97AA
512GB Intel® Optane™ Memory H10 with SSD	X	X	X	X	6VF55AA

Change Log

Date	Version History	Action	Description of Change
August 26, 2020	From v1 to v2	Addition	DVD-R DL - Up to 6X, DVD+R DL - Up to 6X, DVD-R SL/DL Up to 8X and DVD+R SL/DL Up to 8X on the read/write speed on the blue ray write drive specs on Storage section. Environmental section for AiO 22
September 3, 2002	From v2 to v3	Update	HP ProDesk 600/680 G6 PCI Microtower PC front view, Not shown call outs corrected
October 7, 2020	From v3 to v4	Addition	Environmental specs for SFF
October 21, 2020	From v4 to v5	Correction	External power supply section for DM
October 27, 2020	From v5 to v6	Correction	Processors footnotes section and Turbo boost specs corrected
November 18, 2020	From v6 to v7	Addition	Environmental data for HP ProDesk 600 G6 Microtower PC, HP ProDesk 600 PCI G6 Microtower PC and HP ProDesk 680 PCI G6 Microtower PC.
November 25, 2020	From v7 to v8	Addition	Environmental data for HP ProDesk 600 G6 Desktop Mini PC.
December 2, 2020	From v8 to v9	Update	HDMI versions to 2.0a in port flex sections
December 8, 2020	From v9 to v10	Update	Optional 4 Serial Port PCIe Card not shown call out in 680 G6, 600 G6 MTs and 600 G6 SFF rear images call outs sections
January 20, 2021	From v10 to v11	Update	Graphics Solutions in Amo section updated
February 24, 2021	From v11 to v12	Update	RAID sentence in At a glance section updated
April 16, 2021	From v12 to v12	Correction	Typo in Power Supply section
April 20, 2021	From v13 to v14	Update	Intel® I219-LM 1 table
May 4, 2021	From v14 to v15	Addition	HP Smart Support and footnote added to software section
June 9, 2021	From v15 to v16	Update	Call outs and audio/multimedia settings except for AIO updated
July 2, 2021	From v16 to v17	Addition	10 new processors
July 6, 2021	From v17 to v18	Correction	256GB Intel® PCIe® NVMe™ QLC + 16GB Intel® Optane from 32GB
August 6, 2021	From v18 to v19	Update	Memory system in AMO section updated
August 19, 2021	From v19 to v20	Update	Environmental, Weights and dimensions, Power, Miscellaneous features, display specifications and Storage updated / 1TB 5400RPM 2.5in SATA HDD. added
September 14, 2021	From v20 to v21	Correction	SFF M.2 PCIe x4 2280 (for storage) set to 2 in Call outs and Ports sections
November 4, 2021	From v21 to v22	Correction	Note added to Stands and Mounting Accessories in AMO section / 1CA52AA and 1CA53AA removed and replaced with 52D76AA and 52D77AA in Data Storage Drives at Amo section.
December 3, 2021	From v22 to v23	Update	Memory main table module updated Windows 11 upgrade added
February 11, 2022	From v23 to v24	Update	SFF M.2 PCIe ports corrected from 3 to 2 and 2 to 1 in CO and PORTS sections
June 16, 2022	From v24 to v25	Update	Environmental tables certifications updated
August 22, 2022	From v25 to v26	Update	Memory data table updated.
October 27, 2022	From v26 to v27	Update	HP 150W Elite Mini EPS Holder and note added to DM accessories table / description updated for 7DB38AA and 7DB37AA in AMO section.

Change Log

December 14, 2022	From v27 to v28	Correction	Operative system updated
March 9, 2023	From v28 to v29	Addition	“Wireless Card” Added to Wireless Card in the end of module description in Networking and communication section
August 25, 2025	From v29 to v30	Addition	NVIDIA® T400 2GB GDDR6 mDP Graphics card added to Graphics sections