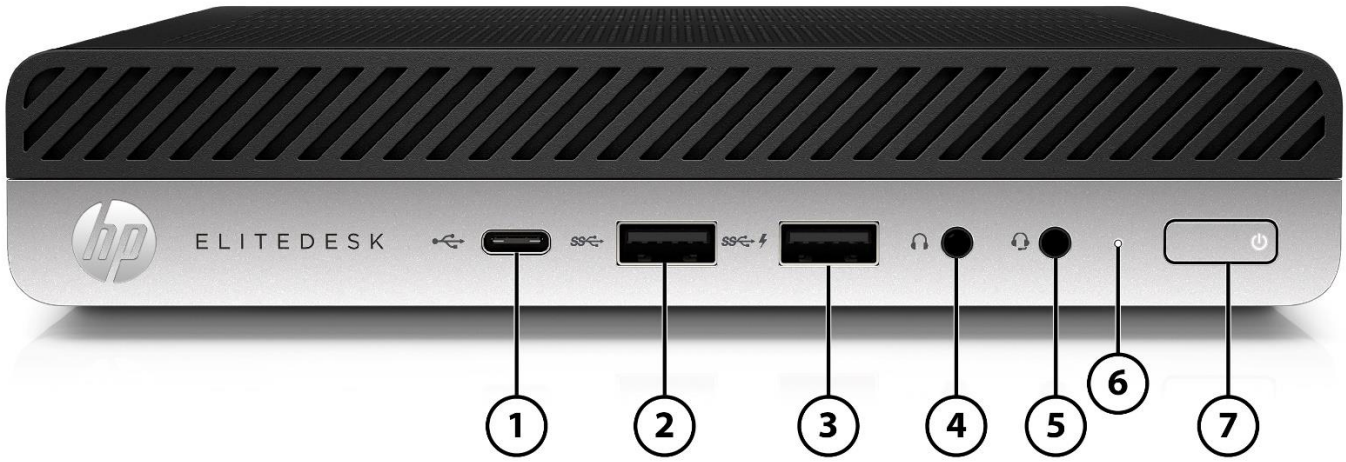
Overview

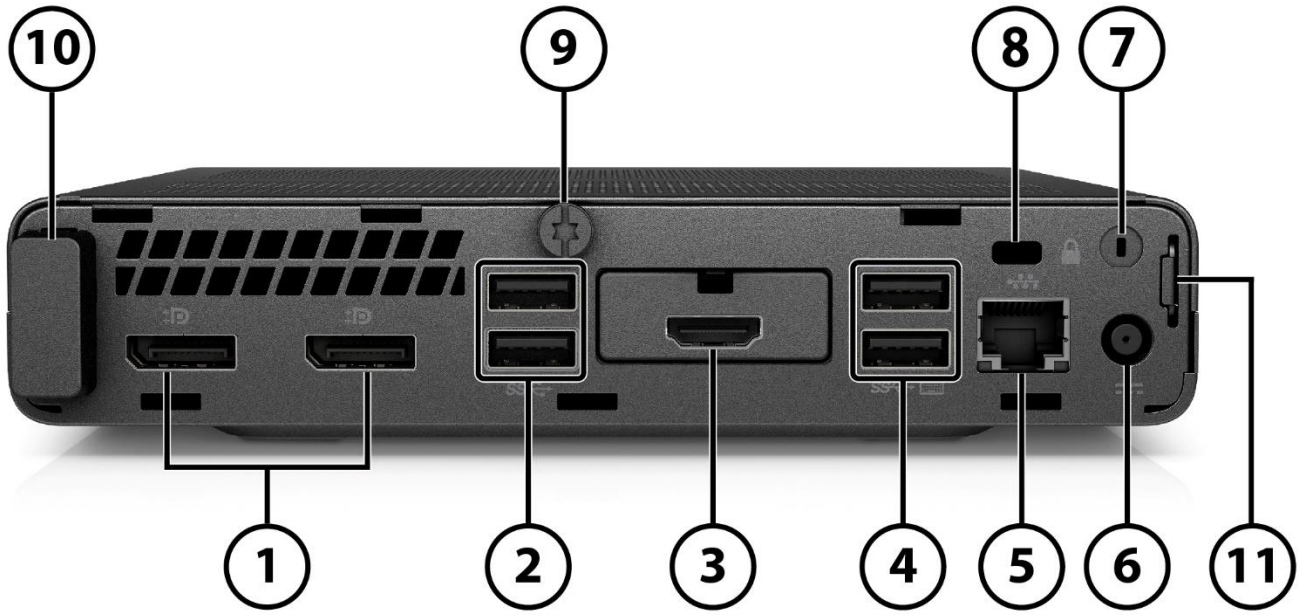
HP EliteDesk 800 G4 Desktop Mini Business PC



1. USB Type-C™ 3.1 Gen 2 Port (with Fast Charging)
2. USB 3.1 Gen 2 Type A (10GBits/s data speed)
3. USB 3.1 Gen 1 Type A (charging port)
4. Headphone connector
5. Universal Audio Jack with CTIA headset support
6. Hard Drive activity light
7. Dual-state power button

Overview

HP EliteDesk 800 G4 Desktop Mini Business PC



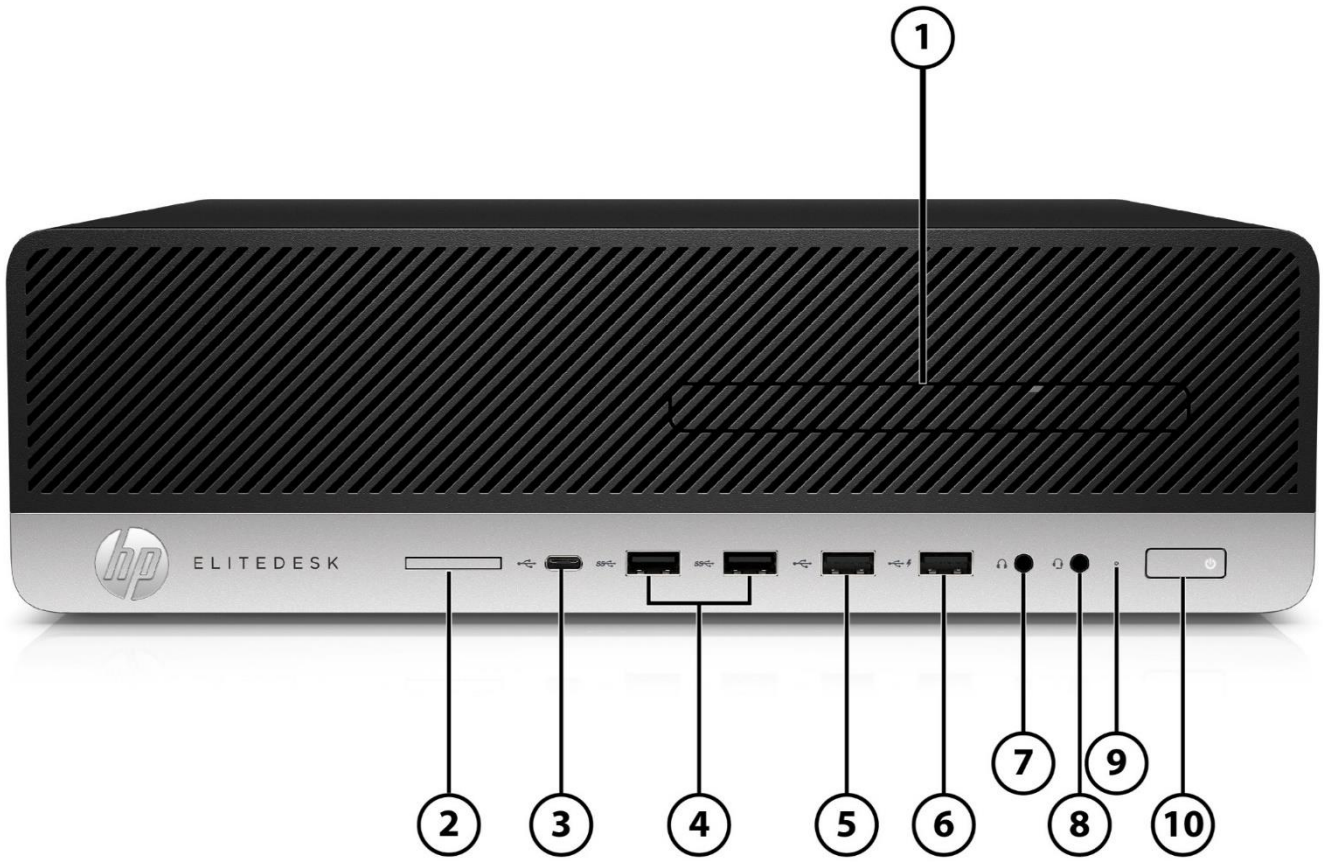
1. DisplayPort™ 1.2
2. USB 3.1 Gen 2 (10GBits/s data speed) Type A
3. Configurable Option card slot (Choice of DisplayPort™ 1.2, HDMI™ 2.0, VGA, USB Type-C™ with alt mode display, USB Type-C™ with Power Delivery, Discrete Graphics Option Card with DisplayPort™ 1.4, Thunderbolt 3.0, Serial Port, Fiber NIC)
4. USB 3.1 Gen 1 (5GBits/s data speed) Type A allows for wake from S4/S5 with keyboard/mouse when connected and enabled in BIOS
5. RJ-45 Network Adapter
6. Power connector
7. WLAN External Antenna Punchout
8. Universal cable lock slot
9. Cover Release Thumbscrew
10. WLAN Internal Antenna
11. Padlock Loop

Not Shown

Slots	(1) Internal M.2 2230 connector for WLAN (2) Internal M.2 SSD storage (2230 or 2280 connector)
Bays	(1) 2.5- inch SATA drive Bay
Mounting	Support for - VESA Sleeve - Quick Release Bracket - B300/B500 Mounting bracket

Overview

HP EliteDesk 800 G4 Small Form Factor Business PC

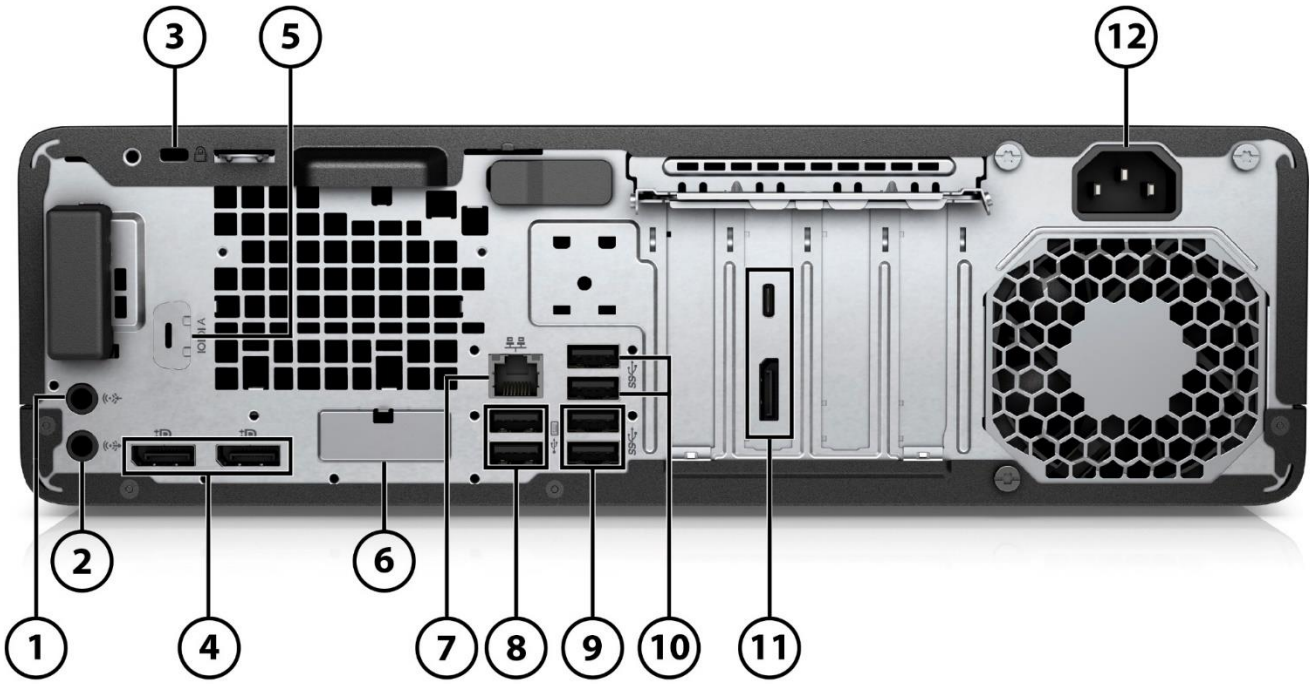


1. Slim optical drive (optional)
2. SD 4 Card Reader (optional)
3. USB Type-C™ port (10 Gbit/s data speed)
4. USB 3.1 Gen2 ports (2) (10 Gbit/s data speed)
5. USB 2.0 port
6. USB 2.0 (fast charging port)
7. Headphone connector
8. Universal Audio Jack with CTIA headset support
9. Hard drive activity light
10. Dual-state power button

Overview

HP EliteDesk 800 G4 Small Form Factor Business PC

(Rear Image)



1. Audio-in connector
2. Audio-out connector for powered audio devices
3. Cable lock slot
4. Dual-Mode DisplayPort™ 1.2 (2)
5. Optional serial port - shown here not installed
6. Optional port (DisplayPort™ 1.2, HDMI, VGA or USB-C™) (USB-C™ option has alt mode DisplayPort™ 1.2 or 15W output) - shown here not installed
7. RJ-45 (network) jack
8. USB 2.0 ports with wake from S4/S5 (2)
9. USB 3.1 Gen2 ports (2) (10 Gbit/s data speed)
10. USB 3.1 Gen1 ports (2) (5 Gbit/s data speed)
11. Optional Thunderbolt PCIe card - shown here installed

Not shown

Slots

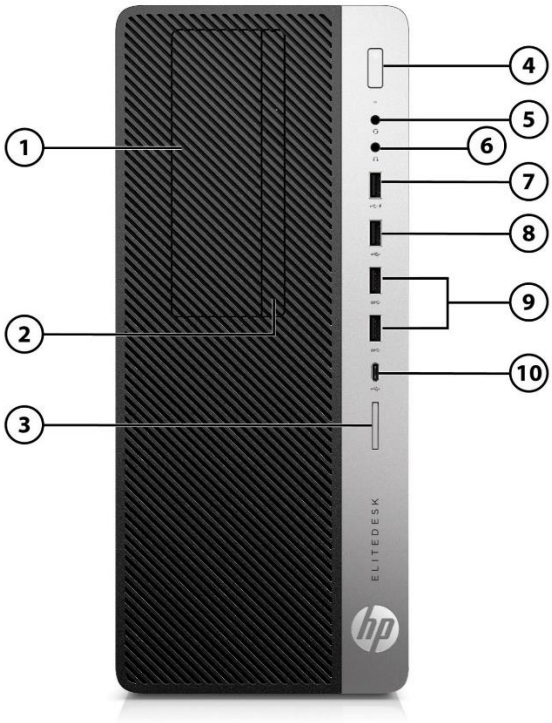
(2) PCI Express x16 graphics connectors; one wired as an x4
(2) PCI Express x1
(2) internal M.2 SSD storage (2230 or 2280 connector)
(1) internal M.2 WLAN (2230 connector)

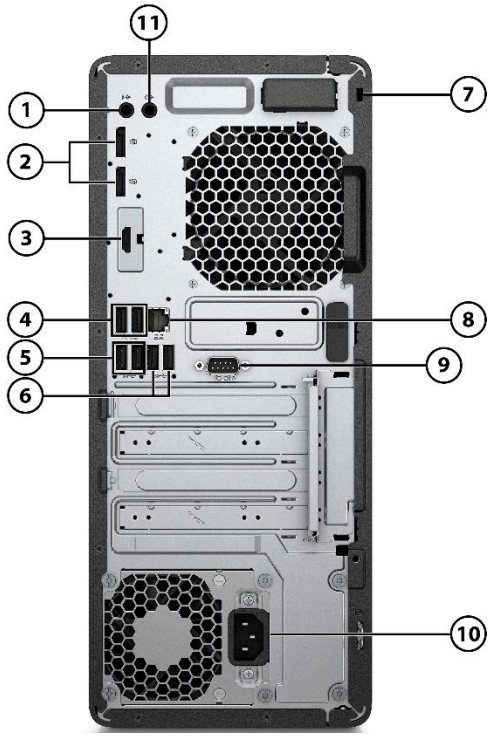
Bays

(1) 2.5" internal storage drive bay
(2) 3.5” internal storage drive bay (convertible to 2.5”)
(1) 9.5mm slim optical drive bay

Overview

HP EliteDesk 800 G4 Tower Business PC





1. 5.25-inch Half-Height Drive Bay (behind bezel)
2. Slim optical drive (optional)
3. SD 4 Card Reader (optional)
4. Dual-state power button
5. Universal Audio Jack with CTIA headset support
6. Headphone connector
7. USB 2.0 port (fast charging port)
8. USB 2.0 port
9. USB 3.1 Gen2 ports (2) (10 Gbit/s data speed)
10. USB Type-C™ port (10 Gbit/s data speed)

1. Audio-out jack for powered audio devices
2. Dual-Mode DisplayPort™ 1.2 (DP++) (2)
3. Optional port (DisplayPort™ 1.2, HDMI, VGA or USB-C™) (USB-C™ option has alt mode DisplayPort™ 1.2 or 15W output) – Shown here HDMI installed
4. USB 2.0 ports with wake from S4/S5 (2)
5. USB 3.1 Gen2 ports (2) (10 Gbit/s data speed)
6. USB 3.1 Gen1 ports (2) (5 Gbit/s data speed)
7. Cable lock slot
8. RJ-45 (network) jack
9. Optional serial port – shown here installed
10. Power cord connector
11. Audio-in jack

Not shown

Slots

(2) PCI Express x16 graphics connectors; one wired as an x4
(2) PCI Express x1
(2) internal M.2 SSD storage (2230 or 2280 connector)
(1) internal M.2 WLAN (2230 connector)

Bays

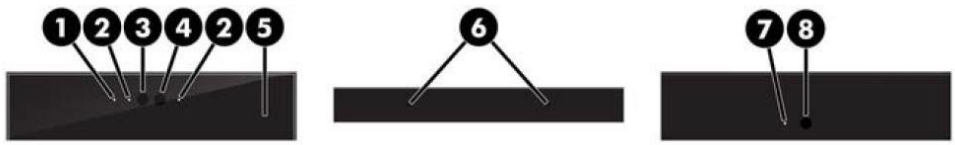
(1) 2.5" internal storage drive bay
(2) 3.5” internal storage drive bay (convertible to 2.5”)
(1) 5.25” half-height drive bay
(1) 9.5mm slim optical drive bay

Overview

HP EliteOne 800 G4 All-in-One Business PC (23.8" Touch and Non-Touch)

1. Camera (optional)
2. Speakers (optional)

Infrared (IR) and dual facing camera (optional)



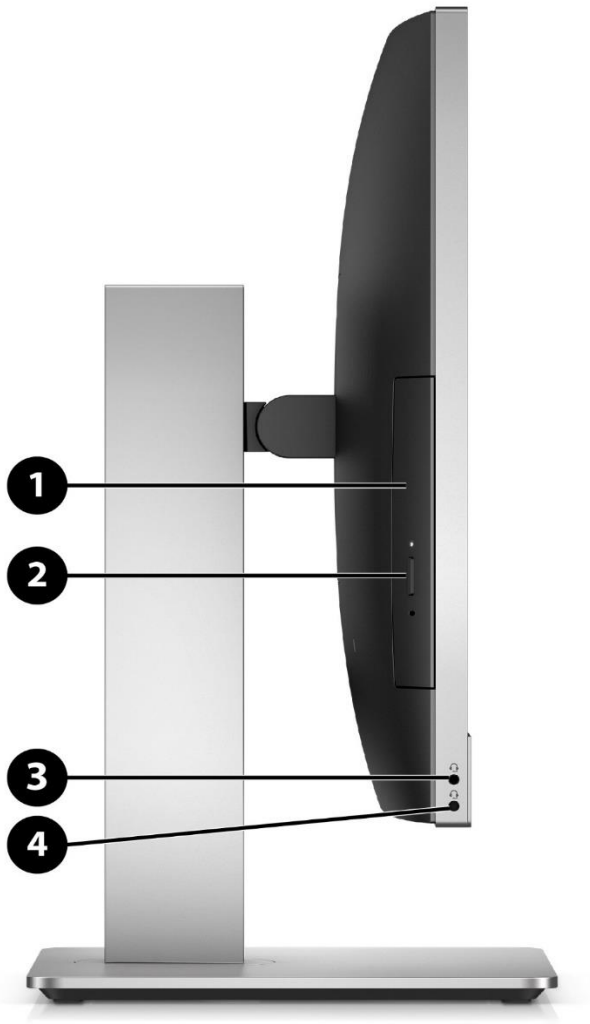
1. Camera light
2. IR camera light
3. Full High Definition (FHD) camera
4. IR camera
5. Rear camera adjustment wheel
6. Digital microphones
7. Camera light
8. FHD camera

Full High Definition (FHD) camera (optional)

1. Camera light
2. FHD camera
3. Digital microphones

Overview

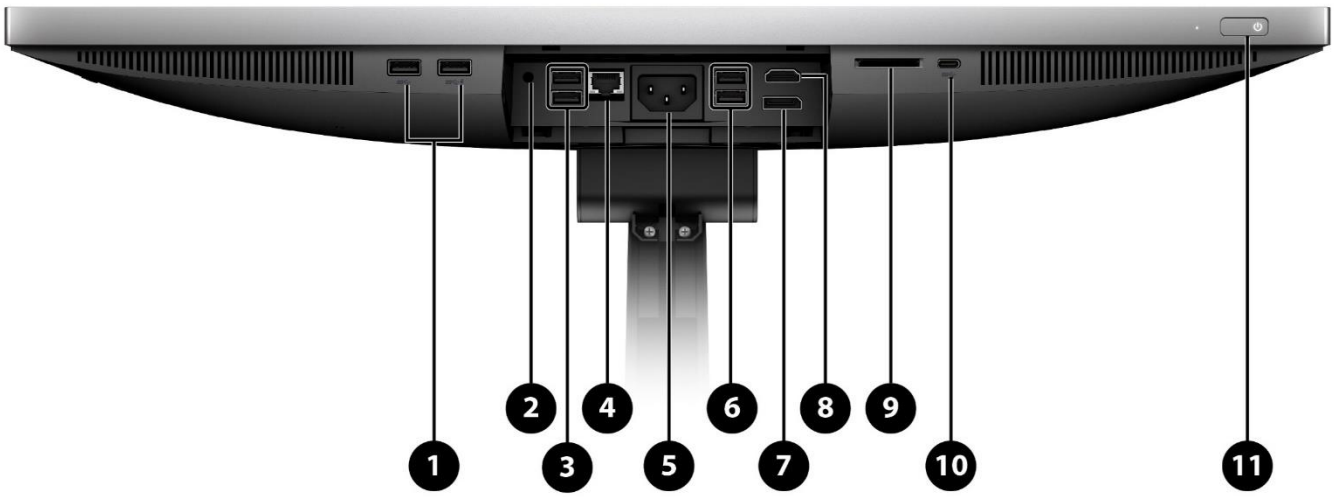
HP EliteOne 800 G4 All-in-One Business PC (23.8" Touch and Non-Touch)



1. Optical disc drive (optional)
2. Optical disc drive eject button (optional)
3. Universal Audio Jack with CTIA headset support
4. Headphone connector

Overview

HP EliteOne 800 G4 All-in-One Business PC (23.8" Touch and Non-Touch)



Bottom components and rear ports (behind security cover)

1. USB 3.1 Gen 2 Type-A ports (2) (one charging) (10 Gbit/s data speed)
2. Audio line-out connector
3. USB 3.1 Gen 2 Type-A ports (2) (10 Gbit/s data speed)
4. RJ-45 (network) jack
5. Power connector
6. USB 3.1 Gen 1 Type-A ports (2) (keyboard/mouse wake capable) (5 Gbit/s data speed)
7. Dual-Mode DisplayPort™ 1.2 (DP++) for integrated graphics models or Dual-Mode DisplayPort™ 1.4 (DP++) for discrete graphics models
8. HDMI connector
9. SD card reader 4.0 (optional)
10. USB 3.1 Type-C™ Gen 2 port (10 Gbit/s data speed)
11. Dual-state power button

Not shown

Slots

(1) internal M.2 PCIe x1 connector for optional wireless NIC

(2) internal M.2 PCIe x4 connector for optional m.2 SSD

Bays

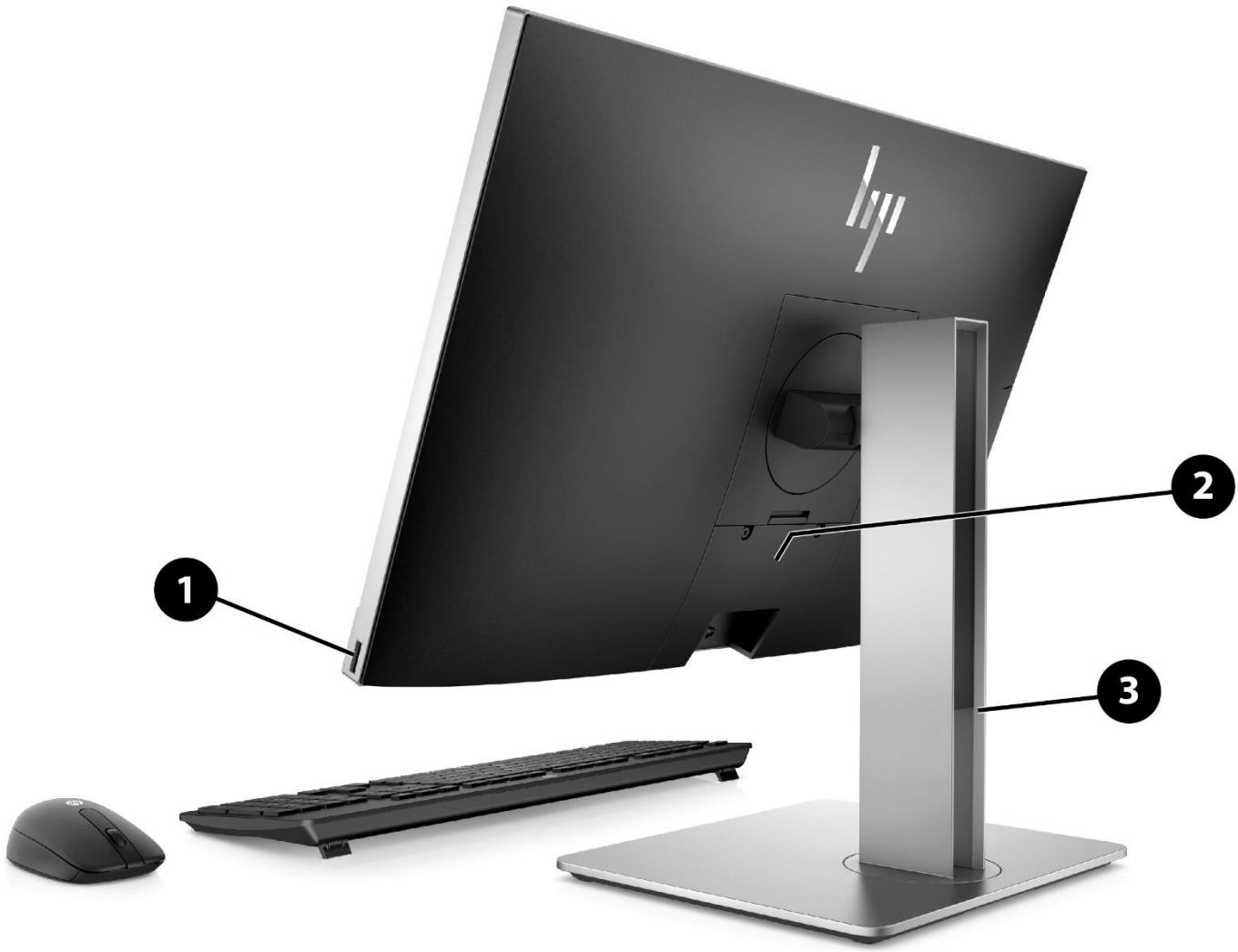
(1) 2.5" internal storage drive bay

VESA

Support for VESA 100 mounting system on back of PC chassis (mounting hardware sold separately)

Features

HP EliteOne 800 G4 All-in-One Business PC (23.8" Touch and Non-Touch)



Rear and side components

1. Fingerprint reader (optional)
2. Rear port cover
3. Adjustable height stand (optional)

Features

AT A GLANCE

- Choice of four form factors: Tower, Small Form Factor, Desktop Mini and All-In-One (touch/non-touch)
- Intel® Q370 chipset supporting Intel® 8th generation Core™ processors, featuring integrated Intel® UHD Graphics and Intel® vPro™ Technology (available with Core i5 and Core i7 processors) [1,4]
- Processors up to 95W on TWR, SFF and DM
- Intel® UHD graphics as well as optional discrete graphics
- Intel® Ethernet Connection I219LM GbE LOM integrated network connection
- DDR4 Synchronous Dynamic Random Access Memory (SDRAM) (Transfer rates up to 2666 MT/s)
- Support for up to three monitors via two standard DisplayPort™ 1.2 connectors and an optional third video port connector which provides the following choices: HDMI, VGA, DisplayPort™ 1.2, or USB Type-C™ with DisplayPort™ 1.2 for all platforms; USB Type-C™ with DisplayPort™ 1.2 and Power Delivery (PD) from Display for 800 G4 DM 35W (see Ports section for port availability by platform). AiO supports up to two additional monitors via DisplayPort™ or HDMI connectors.[2]
- Configurable 3rd rear I/O with video port (HDMI, DisplayPort™ 1.2, VGA, Type-C™ with DisplayPort™ 1.2) or Thunderbolt 3.0 (port on DM, PCIe card on TWR, SFF)
- Selection of discrete graphic cards to configure systems to up to 7 displays (TWR, SFF and DM 35W)[2]
- VR ready cards on the 800 G4 TWR
- Models can be configured with multiple data drives in a RAID array
- Skype for Business certified (AiO)
- Audio by Bang & Olufsen (AiO)
- Intel® Unite™ available (AiO)
- EN 60601-1-2: 2015 compliant (AiO)
- Enhanced Security With:
  HP Sure Click
  HP Sure Start Gen4
  HP Sure Run
  HP Sure Recover
  HP Manageability Integration Kit
  HP WorkWise
  HP BIOSphere Gen4
  HP Client Security Manager Gen4
  Notification with HP Image Assistant Gen3
  Multifactor Authentication features include fingerprint reader (optional) and IR webcam (optional) both Windows Hello certified (AiO)
- High efficiency energy saving power supply options
- ENERGY STAR® certified. EPEAT® Gold registered where applicable/supported. Registration may vary by country. See http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.
- CCC, CECP and SEPA Certified (TWR/SFF/DM)
- CECP Certified (AiO)
- TCO Edge for AiO (AiO)
- PC chassis and all internal components and modules are manufactured with low halogen content [3]
- Dust filter available for all platforms (except 65W and 95W Desktop Mini)
- Protected by HP Services, including limited warranties up to 3-3-3 (terms and conditions vary by country; certain restrictions and exclusions apply); Care Packs available with up to 5 years Next Business Day Onsite Hardware Support

1. Multi core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance
2. DisplayPort™ multi-stream monitors 'daisy-chained' together.
3. External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.
4. 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 with future "virtual appliances" is yet to be determined."

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

Features

PRODUCT NAME

HP EliteDesk 800 G4 Tower Business PC
HP EliteDesk 800 G4 Small Form Factor Business PC
HP EliteDesk 800 G4 Desktop Mini Business PC
HP EliteOne 800 G4 23.8-inch Touch and Non-Touch All-in-One Business PC

OPERATING SYSTEM

Preinstalled	Windows® 10 Pro 64[1] Windows® 10 Pro 64 (National Academic License)[2] Windows® 10 Home 64[1] Windows® 10 Home Single Language 64[1] FreeDos 2.0
Web-supported only	Windows® 10 Enterprise 64[1]

1. Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com/.

2. Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see https://aka.ms/ProEducation for Windows 10 Pro Education feature information.

NOTE: Your product does not support Windows 8 or Windows 7

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

CHIPSET

	DM	SFF	TWR	AiO
Intel® Q370 PCH-H– vPro™	X	X	X	X

Features

PROCESSORS

Intel® 8th Generation Core™ Processors	DM	SFF	TWR	AiO
Intel® Core™ i7 8700K Processor with Intel® UHD Graphics 630 (up to 3.7GHz ,12MB cache, 6 cores) 95W[1] Supports Intel® vPro™Technology[4]	X	X	X	
Intel® Core™ i7+ 8700K Processor with Intel® UHD Graphics 630 (2.4 GHz, up to 3.7GHz with Intel® Optane™ Memory, 12 MB cache, 6 cores)[1,2] Supports Intel® vPro™Technology[4]	X	X	X	
Intel® Core™ i7 8700 processor with Intel® UHD Graphics 630 (3.2 GHz, up to 4.6 GHz with Intel® Turbo Boost, 12 MB cache, 6 cores)[1,3] Supports Intel® vPro™Technology[4]	X	X	X	X
Intel® Core™ i7+ 8700 processor (Core i7 and 16GB Intel® Optane™ memory) with Intel® UHD Graphics 630 (3.2 GHz, up to 4.6 GHz with Intel® Turbo Boost, 12 MB cache, 6 cores)[1,2,3] Supports Intel® vPro™Technology[4]	X	X	X	X
Intel® Core™ i7 8700T processor with Intel® UHD Graphics 630 (2.4 GHz, up to 4 GHz with Intel® Turbo Boost, 12 MB cache, 6 cores)[1,3] Supports Intel® vPro™Technology[4]	X			
Intel® Core™ i7+ 8700T Processor with Intel® UHD Graphics 630 (2.4 GHz, up to 4.0 GHz with Intel® Optane™ Memory, 12 MB cache, 6 cores)[1,2] Supports Intel® vPro™Technology[4]	X			
Intel® Core™ i5 8600K Processor with Intel® UHD Graphics 630 (up to 3.6GHz, 9MB cache, 6 cores) 95W[1] Supports Intel® vPro™Technology[4]	X	X	X	
Intel® Core™ i5+ 8600K processor (Core i5 and 16GB Intel® Optane™ memory) with Intel® HD Graphics 630 (3.1 GHz, up to 4.3 GHz with Intel® Turbo Boost, 9 MB cache, 6 cores)[1,2,3] Supports Intel® vPro™Technology[4]	X	X	X	
Intel® Core™ i5 8600 processor with Intel® UHD Graphics 630 (3.1 GHz, up to 4.3 GHz with Intel® Turbo Boost, 9 MB cache, 6 cores)[1,3] Supports Intel® vPro™Technology[4]	X	X	X	X
Intel® Core™ i5+ 8600 processor (Core i5 and 16GB Intel® Optane™ memory) with Intel® UHD Graphics 630 (3.1 GHz, up to 4.3 GHz with Intel® Turbo Boost, 9 MB cache, 6 cores)[1,2,3] Supports Intel® vPro™Technology[4]	X	X	X	X
Intel® Core™ i5 8500 processor with Intel® UHD Graphics 630 (3.0 GHz, up to 4.1 GHz with Intel® Turbo Boost, 9 MB cache, 6 cores)[1,3] Supports Intel® vPro™Technology[4]	X	X	X	X
Intel® Core™ i5+ 8500 processor (Core i5 and 16GB Intel® Optane™ memory) with Intel® UHD Graphics 630 (3.0 GHz, up to 4.1 GHz with Intel® Turbo Boost, 9 MB cache, 6 cores)[1,2,3] Supports Intel® vPro™Technology[4]	X	X	X	X
Intel® Core™ i5 8500T processor with Intel® UHD Graphics 630 (2.1 GHz, up to 3.5 GHz with Intel® Turbo Boost, 9 MB cache, 6 cores)[1,3] Supports Intel® vPro™Technology[4]	X			
Intel® Core™ i5+ 8500T Processor with Intel® UHD Graphics 630 (2.1 GHz, up to 3.5 GHz with 16GB Intel® Optane™ Memory, 9 MB cache, 6 cores)[1,2] Supports Intel® vPro™Technology[4]	X			

Features

Intel® Core™ i5 8600T processor with Intel® UHD Graphics 630 (2.3 GHz, up to 3.7 GHz with Intel® Turbo Boost, 9 MB cache, 6 cores)[1,3] Supports Intel® vPro™Technology[4]	X			
Intel® Core™ i5+ 8600T Processor with Intel® UHD Graphics 630 (2.3 GHz, up to 3.7 GHz with 16GB Intel® Optane™ Memory, 9 MB cache, 6 cores)[1,2] Supports Intel® vPro™Technology[4]	X			
Intel® Core™ i3 8300 processor with Intel® UHD Graphics 630 (3.7 GHz, 8 MB cache, 4 cores)[1]	X	X	X	X
Intel® Core™ i3 8100 processor with Intel® UHD Graphics 630 (3.6 GHz, 6 MB cache, 4 cores)[1]	X	X	X	X
Intel® Core™ i3 8100T processor with Intel® UHD Graphics 630 (3.1 GHz, 6 MB cache, 4 cores)[1]	X			
Intel® Core™ i3 8300T processor with Intel® UHD Graphics 630 (3.2 GHz, 8 MB cache, 4 cores)[1]	X			

Intel® 8th Generation Pentium® Processors	**DM**	**SFF**	**TWR**	**AiO**
Intel® Pentium® Gold G5600 processor with Intel® UHD Graphics 630 (3.9 GHz, 4 MB cache, 2 cores)[1]	X	X	X	X
Intel® Pentium® Gold G5500 processor with Intel® UHD Graphics 630 (3.8 GHz, 4 MB cache, 2 cores)[1]	X	X	X	X
Intel® Pentium® Gold G5400 processor with Intel® UHD Graphics 610 (3.7 GHz, 4 MB cache, 2 cores)[1]	X	X	X	X
Intel® Pentium® Gold G5400T processor with Intel® UHD Graphics 610 (3.1 GHz, 4 MB cache, 2 cores)[1]	X			
Intel® Pentium® Gold G5500T processor with Intel® UHD Graphics 630 (3.2 GHz, 4 MB cache, 2 cores)[1]	X			

Intel® 8th Generation Celeron™ Processors	**DM**	**SFF**	**TWR**	**AiO**
Intel® Celeron® G4900 processor with Intel® UHD Graphics 610 (3.1 GHz, 2 MB cache, 2 cores)[1]	X	X	X	X
Intel® Celeron® G4900T processor with Intel® UHD Graphics 610 (2.9 GHz, 2 MB cache, 2 cores)[1]	X			
Intel® Celeron® G4920 processor with Intel® UHD Graphics 610 (3.2 GHz, 2 MB cache, 2 cores)[1]	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 measurement of higher performance.
2. Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system.
3. Intel® Turbo Boost technology requires a PC with a processor with Intel Turbo Boost capability. Intel Turbo Boost performance varies depending on hardware, software and overall system configuration. See http://www.intel.com/technology/turboboost for more information.
4. 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 with future "virtual appliances" is yet to be determined."

Features

GRAPHICS

Integrated Intel® Graphics	DM	SFF	TWR	AiO
Intel® UHD Graphics 630 (integrated on 8th gen Core i7/i5/i3, Pentium® Gold G5600, G5500)	X	X	X	X
Intel® UHD Graphics 610 (integrated on 8th gen Pentium® Gold G5400, Celeron® G4900)	X	X	X	X

Optional Discrete Graphics Solutions	DM	SFF	TWR	AiO
AMD® Radeon™ RX550 4GB 2DP 1HDMI Graphics Card			X	
AMD® Radeon™ RX560 4GB GDDR5	X			X
AMD® Radeon™ RX580 4GB FH PCIe x16			X	
AMD® Radeon™ R7 430 2GB VGA+DP Graphics Card			X	
AMD® Radeon™ R7 430 2GB 2DP Graphics Card		X	X	
NVIDIA® GeForce® GTX 1060 3GB Graphics Card			X	
NVIDIA® Quadro P400 2GB Graphics Card		X	X	

Adapters and Cables	DM	SFF	TWR	AiO
HP DisplayPort™ Cable	X	X	X	X
HP DisplayPort™ to DVI-D Adapter	X	X	X	X
HP DisplayPort™ to HDMI 4K Adapter	X	X	X	X
HP DisplayPort™ to VGA Adapter	X	X	X	X
HP USB-C™ to USB 3.0	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	TWR	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	TWR	AiO
500GB 7200RPM 2.5in SATA HDD	X	X	X	X
1TB 7200RPM 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

2.5 inch SATA Solid State Hybrid Drives (SSHD)	DM	SFF	TWR	AiO
500GB 5400RPM 2.5in SATA SSHD	X	X	X	X
1TB 5400RPM 2.5in SATA SSHD	X	X	X	X
2TB 5400RPM 2.5in SATA SSHD	X			X

Features

2.5 inch Solid State Drives (SSD)	DM	SFF	TWR	AiO
128GB 2.5in SATA Three Layer Cell SSD	X	X	X	X
256GB 2.5in SATA Three Layer Cell SSD	X	X	X	X
512GB 2.5in SATA Three Layer Cell SSD	X	X	X	X
256GB 2.5in SATA Self Encrypted OPAL2 Three Layer Cell SSD	X	X	X	X
512GB 2.5in SATA Self Encrypted OPAL2 Three Layer Cell SSD	X	X	X	X
256GB 2.5in SATA Self Encrypted Federal Information Processing Standard SSD	X	X	X	X
512GB 2.5in SATA Self Encrypted Federal Information Processing Standard SSD	X	X	X	X

M.2 PCIe NMVe Solid State Drives (SSD)	DM	SFF	TWR	AiO
128GB M.2 2280 PCIe NVMe SSD	X	X	X	X
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
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

Optical Disc Drives	DM	SFF	TWR	AiO
HP 9.5mm Slim DVD-ROM Drive		X	X	X
HP 9.5mm Slim DVD Writer Drive		X	X	X
HP 9.5mm Slim Blu-Ray Writer Drive		X	X	X

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

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.

Features

MEMORY

Memory Type	DM	SFF	TWR	AiO
DDR4-2666 (Transfer rates up to 2666 MT/s), 32 GB, 2 SODIMM	X			X
DDR4-2666 (Transfer rates up to 2666 MT/s), 64 GB, 4 DIMM		X	X	

Memory Configuration	DM	SFF	TWR	AiO
4 GB (1 x 4 GB)	X	X	X	X
8 GB (2 x 4 GB)	X	X	X	X
8 GB (1 x 8 GB)	X	X	X	X
16 GB (2 x 8 GB)	X	X	X	X
16 GB (1 x 16 GB)	X	X	X	X
32 GB (2 x 16 GB)	X	X	X	X
32 GB (4 x 8 GB)		X	X	
64 GB (4 x 16 GB)		X	X	

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

NETWORKING/COMMUNICATIONS

Ethernet (RJ-45) Integrated	DM	SFF	TWR	AiO
Intel® I219-LM Gigabit Network Connection LOM (standard)	X	X	X	X
Intel® Ethernet I210-T1 PCIe x1 Gb Network Interface Card (optional)		x	X	

Wireless[1]	DM	SFF	TWR	AiO
Intel® 9560 802.11AC 2x2 with Bluetooth® M.2 Combo Card vPro™	X	X	X	X
Intel® 9560 802.11AC 2x2 with Bluetooth® M.2 Combo Card non-vPro™	X	X	X	X
Realtek RTL8822BE 802.11ac 2x2 with Bluetooth® M.2 Combo Card		X	X	X
Realtek RTL8821CE 802.11ac 1x1 with Bluetooth® M.2 Combo Card		X	X	X
Intel® 7265 802.11AC 2x2 with Bluetooth® M.2 Combo Card non-vPro™ (Brazil)	X	X		
Intel® 7265 802.11AC 2x2 M.2 Combo Card non-vPro™ with external antenna (Brazil)	X	X		

1. Wireless access point and Internet service required and not included. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices

Features

KEYBOARDS AND POINTING DEVICES

Keyboards	DM	SFF	TWR	AiO
HP USB Conferencing Keyboard	X	X	X	X
HP Wireless Collaboration Keyboard	X	X	X	X
HP USB and PS/2 Washable Keyboard[1]	X	X	X	X
HP USB Smart Card (CCID) Keyboard	X	X	X	X
HP USB Business Slim Keyboard	X	X	X	X
HP USB Keyboard	X	X	X	X
HP PS/2 Business Slim Keyboard[1]		X	X	
HP PS/2 Keyboard[1]		X	X	
HP Wireless Business Slim Keyboard and Mouse	X	X	X	X

Mouse	DM	SFF	TWR	AiO
HP PS/2 Mouse[1]		X	X	
HP USB Optical Mouse	X	X	X	X
HP USB Premium Mouse	X	X	X	X
HP USB 1000dpi Laser Mouse	X	X	X	X
HP USB and PS/2 Washable Mouse[1]		X	X	X
Antimicrobial USB Mouse[2]	X	X	X	X
HP USB Hardened Mouse[2]	X	X	X	X

1. PS/2 port not available on EliteOne 800 G4 AiOs
2. Not available in all regions

Features

SECURITY

	DM	SFF	TWR	AiO
Trusted Platform Module (TPM) 2.0 (Infineon SLB9670). Common Criteria EAL4+ Certified. FIPS 140-2 Level 2 Certified	X	X	X	X
Solenoid Lock & Intrusion Sensor		X	X	
Intrusion Sensor for DM/AiO (integrated in the PCA, can be enabled/disabled through BIOS)	X			X
Support for chassis cable lock devices	X	X	X	X
Support for chassis padlocks devices	X	X	X	
HP Fingerprint Reader (standard on 800 G4 AiO touch models and optional on non-touch models)				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
Serial, parallel, USB enable/disable (via BIOS)	X	X	X	X
Optional USB Port Disable at factory (user configurable via BIOS)	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 user name and password. IPT is initialized through an HP Client Security module.

Features

PORTS

I/O Ports – Standard	DM	SFF	TWR	AiO
USB 2.0	N/A	2 including 1 fast charging (front); 2 including wake from S4/S5 (rear)	2 including 1 fast charging (front); 2 including wake from S4/S5 (rear)	N/A
USB 3.1 Gen 1	1 front, 2 rear	2 rear	2 rear	2 rear
USB 3.1 Gen 2	1 front, 2 rear	2 front; 2 rear	2 front; 2 rear	4 rear
USB Type-C™ 3.1 Gen 2	1 front; 1 rear (option)	1 front; 1 rear (option)	1 front; 1 rear (option)	1 rear
Video	2 DisplayPort™ 1.2 (rear) 1 Configurable video port (rear) (Choice of DisplayPort™ 1.2, HDMI™ 2.0, VGA, or USB Type-C™ with alt mode display port and power delivery) For models with discrete graphics: 1 DisplayPort™ 1.4 (rear)	2 DisplayPort™ 1.2 (rear) 1 Configurable video port (rear) (Choice of DisplayPort™ 1.2, HDMI™ 2.0, VGA, or USB Type-C™ with alt mode display or 15W output)	2 DisplayPort™ 1.2 (rear) 1 Configurable video port (rear) (Choice of DisplayPort™ 1.2, HDMI™ 2.0, VGA, or USB Type-C™ with alt mode display port or 15W output)	For models with integrated graphics: 1 DisplayPort™ 1.2 (rear) 1 HDMI™ 2.0 (rear) For models with discrete graphics: 1 DisplayPort™ 1.4 (rear) 1 HDMI™ 2.0 (rear)
Audio	1 Headphone (front), 1 Universal Audio Jack with CTIA headset support (front))	1 Headphone (front), 1 Universal Audio Jack with CTIA headset support (front)); 1 Audio-out (rear), 1 Audio-in (rear)	1 Headphone (front), 1 Universal Audio Jack with CTIA headset support (front)); 1 Audio-out (rear), 1 Audio-in (rear)	1 Line out (rear) 1 CTIA UAJ (side) 1Audio out (side)
Network Interface	RJ45	RJ45	RJ45	RJ45

I/O Ports – Optional	DM	SFF	MT	
Serial (RS-232)	1 (rear)(option)	1 (rear) (option)	1 (rear) (option)	N/A
Serial (RS-232) and PS/2 combination	N/A	1 (rear) (option)	1 (rear) (option)	N/A

Features

I/O Ports – Internal Ports	DM	SFF	TWR	AiO
Internal SATA storage connector(s)	N/A	3	4	2
Internal SATA storage connector (Data and Power)	1	N/A	N/A	N/A

Slots	DM	SFF	TWR	AiO
M.2 PCIe	(1) M.2 PCIe x1 2230 (for WLAN) (2) M.2 PCIe x4 2280/2230 Combo (for storage)	(1) M.2 PCIe x1 2230 (for WLAN) (2) M.2 PCIe x4 2280/2230 Combo (for storage)	(1) M.2 PCIe x1 2230 (for WLAN) (2) M.2 PCIe x4 2280/2230 Combo (for storage)	(1) M.2 PCIe x1 2230 (for WLAN) (2) M.2 PCIe x4 2280/2230 Combo (for storage)
PCI Express v3.0 x1	N/A	2	2	N/A
PCI Express v3.0 x16 (wired as x4)	N/A	1	1	N/A
PCI Express v3.0 x16	N/A	1	1	N/A

Bays	DM	SFF	TWR	AiO
5.25" Half Height	N/A	N/A	1	N/A
9mm Slim Optical Disc Drive (ODD)	N/A	1	1	1
SD Card Reader	N/A	1	1	1
2.5" Internal Storage Drive	1	1	1	1
3.5" Internal Storage Drive	N/A	2	2	N/A

NOTE: The TWR can support a single graphics card up to 75W. When configured with dual graphics cards support is limited to 35W for each.

Features

SOFTWARE COMPONENTS AND APPLICATIONS WITH WINDOWS

BIOS
HP BIOSphere Gen4 [17]
HP DriveLock & Automatic DriveLock
BIOS Update via Network
Master Boot Record Security
Power On Authentication
HP Secure Erase [18]
Absolute Persistence Module [19]
Pre-boot Authentication
HP Wireless Wakeup

Software
HP Native Miracast Support [15]
HP Velocity
HP ePrint Driver + JetAdvantage [20]
HP Hotkey Support - CMIT
HP Recovery Manager
HP Jumpstart
HP Support Assistant [21]
HP Noise Cancellation Software
HP WorkWise [37]
HP PhoneWise [29]
Buy Office (sold separately)
Intel® Unite (optional for AiOs)

Manageability Features
HP Driver Packs [22]
HP System Software Manager (SSM)
HP BIOS Config Utility (BCU)
HP Client Catalog
HP Manageability Integration Kit Gen2 [23]
Ivanti Management Suite [24]

Client Security Software
HP Client Security Suite Gen4 [25] including:
HP Security Manager [26] (including Credential Manager, HP Password Manager, HP Spare Key)
HP Fingerprint Sensor [31]
HP Device Access Manager
HP Power On Authentication
Microsoft Defender [27]

Features

Security Management
HP Secure Erase[18]
TPM 2.0 Embedded Security Chip shipped with Windows 10 (Common Criteria EAL4+ Certified) [32]
SATA 0,1 port disablement (viaBIOS)
RAID configurations[33]
Serial, USB enable/disable (viaBIOS)
Power-on password (viaBIOS)
Setup password (viaBIOS)
Support for chassis padlocks and cable lock devices
Integrated hood sensor
HP Sure Click[38]
HP Sure Start Gen4[30]
HP Sure Run[35]
HP Sure Recover[36]

15. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming
17. HP BIOSphere Gen4 requires Intel® or AMD® 8th Gen processors. Features may vary depending on the platform and configurations.
18. For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method.
19. 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.
20. HP ePrint Driver requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see www.hp.com/go/eprintcenter). Print times and connection speeds may vary.
21. HP Support Assistant requires Windows and Internet access.
22. HP Driver Packs not preinstalled, however available for download at http://www.hp.com/go/clientmanagement.
23. HP Manageability Integration Kit can be downloaded from http://www.hp.com/go/clientmanagement.
24. Ivanti Management Suite subscription required.
25. HP Client Security Suite Gen4 requires Windows and Intel® or AMD® 8th generation processors.
26. HP Password Manager requires Internet Explorer or Chrome or FireFox. Some websites and applications may not be supported. User may need to enable or allow the add-on / extension in the internet browser.
27. Microsoft Defender Opt in and internet connection required for updates.
29. HP PhoneWise Client is only available on select platforms. For supported platforms and HP PhoneWise system requirements see http://www.hp.com/go/HPPhoneWise.
30. HP Sure Start Gen4 is available on HP EliteBook products equipped with Intel® 8th generation processors
31. HP Fingerprint Sensor available on 800 G4 AiO touch models and optional on 800 G4 AiO non-touch models
32. Firmware TPM is version 2.0. Hardware TPM is v1.2, which is a subset of the TPM 2.0 specification version v0.89 as implemented by Intel Platform Trust Technology (PTT).
33. RAID configuration is optional and does require a second hard drive.
35. HP Sure Run is available on HP Elite products equipped with 8th generation Intel® or AMD® processors.
36. HP Sure Recover is available on HP Elite PCs with 8th generation Intel® or AMD® processors and requires an open, wired network connection. Not available on platforms with multiple internal storage drives, Intel® Optane™. You must back up important files, data, photos, videos, etc. before use to avoid loss of data.
37. HP WorkWise smartphone app is available as a free download on Google Play.
38. HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer, Google Chrome, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode. Check http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW for all compatible platforms as they become available.

Features

ENVIRONMENTAL & INDUSTRY

ENERGY STAR® certified models available

EPEAT® registered where applicable/supported. See http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.
Low halogen (chassis, all internal components and modules)[1]
TAA compliant models available

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

UNIT ENVIRONMENT AND OPERATING CONDITIONS

General Unit Operating Guidelines

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

Temperature Range	Operating: 50° to 95° F (10° to 35° C)[1] Non-operating: -22° to 140° F (-30° to 60° C)
Relative Humidity	Operating: 10% to 90% (non-condensing at ambient) Non-operating: 5% to 95% (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.

Features

HP EliteDesk 800 Desktop Mini G4 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® • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.		
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Desktop model is based on a "Typically Configured Desktop.		
Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	13.599	13.514	13.099
Normal Operation (Long idle)	12.211	11.765	12.367
Sleep	1.318	1.312	1.322
Off	0.616	0.618	0.618
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	46.3726	46.0827	44.6676
Normal Operation (Long idle)	41.6395	40.1187	42.1715
Sleep	4.4944	4.4739	4.508
Off	2.1006	2.1074	2.1074
	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	3.1	20	
Fixed Disk – Random writes	4.4	33	
Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include: Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell)		

Features

	Battery type: Lithium		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U.S. See http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 0% post-consumer recycled plastic (by wt.) • This product is 95.1% recycle-able when properly disposed of at end of life.		
Packaging Materials	**External:**	PAPER/Corrugated	
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	
		PLASTIC/Polyethylene low density	
Material Usage	This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf): • Asbestos • Certain Azo Colorants • Certain Brominated Flame Retardants – may not be used as flame retardants in plastics • Cadmium • Chlorinated Hydrocarbons • Chlorinated Paraffins • Formaldehyde • Halogenated Diphenyl Methanes • Lead carbonates and sulfates • Lead and Lead compounds • Mercuric Oxide Batteries • Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user. • Ozone Depleting Substances • Polybrominated Biphenyls (PBBs) • Polybrominated Biphenyl Ethers (PBBEs) • Polybrominated Biphenyl Oxides (PBBOs) • Polychlorinated Biphenyl (PCB) • Polychlorinated Terphenyls (PCT) • Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications. • Radioactive Substances • Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)		

Features

Packaging Usage	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)
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

Features

HP EliteDesk 800 Small Form Factor G4 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® • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.		
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)	12.055	12.08	12.501
Normal Operation (Long idle)	11.68	11.908	11.766
Sleep	1.101	1.1644	1.1769
Off	0.6302	0.6258	0.9127
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	41.1076	41.1928	42.6284
Normal Operation (Long idle)	39.8288	40.6063	40.1221
Sleep	3.7544	3.9706	4.0132
Off	2.149	2.134	2.1585
	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	3.9	28	
Fixed Disk – Random writes	4.4	33	
Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include: Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell)		

Features

	Battery type: Lithium		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U.S. See http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 0% post-consumer recycled plastic (by wt.) • This product is 95.1% recycle-able when properly disposed of at end of life.		
Packaging Materials	**External:**	PAPER/Corrugated	
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	
		PLASTIC/Polyethylene low density	
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.		

Features

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

Features

HP EliteDesk 800 Tower G4 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® • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.		
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)	17.22 W	15.78 W	17.40 W
Normal Operation (Long idle)	16.51 W	15.22 W	16.42 W
Sleep	1.38 W	1.36 W	1.39 W
Off	0.77 W	0.79 W	0.78 W
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	60 BTU/hr	54 BTU/hr	59 BTU/hr
Normal Operation (Long idle)	56 BTU/hr	52 BTU/hr	56 BTU/hr
Sleep	5 BTU/hr	5 BTU/hr	5 BTU/hr
Off	3 BTU/hr	3 BTU/hr	3 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	3.3	24	
Fixed Disk – Random writes	3.3	23	
Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include: Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell)		

Features

	Battery type: Lithium		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U.S. See http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 0% post-consumer recycled plastic (by wt.) • This product is 95.1% recycle-able when properly disposed of at end of life.		
Packaging Materials	**External:**	PAPER/Corrugated	145 g
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	288 g
		PLASTIC/Polyethylene low density	30 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)		

Features

Packaging Usage	HP follows these guidelines to decrease the environmental impact of product packaging: • Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials. • Eliminate the use of ozone-depleting substances (ODS) in packaging materials. • Design packaging materials for ease of disassembly. • Maximize the use of post-consumer recycled content materials in packaging materials. • Use readily recyclable packaging materials such as paper and corrugated materials. • Reduce size and weight of packages to improve transportation fuel efficiency. • Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.
End-of-life Management and Recycling	HP Inc. offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment. 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 EliteOne 800 G4 All-in-One Business 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® • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.		
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)	21.984	22.242	21.696
Normal Operation (Long idle)	11.351	11.604	11.222
Sleep	4.108	4.119	3.988
Off	0.734	0.747	0.693
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the		

Features

	applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation (Short idle)	74.9654	75.8452	73.9834
Normal Operation (Long idle)	38.7069	39.5696	38.267
Sleep	14.0083	14.0458	13.5991
Off	2.5029	2.5473	2.3631
	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	3.9	28
Fixed Disk – Random writes	4.4	33

Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include: Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell) Battery type: Lithium		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U.S. See http://www.epeat.net for registration status by country. Search keyword generator on HP’s 3rd party option store for solar generator accessories at http://www.hp.com/go/options • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 0% post-consumer recycled plastic (by wt.) • This product is 95.1% recycle-able when properly disposed of at end of life.		
Packaging Materials	**External:**	PAPER/Corrugated	
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	
		PLASTIC/Polyethylene low density	
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		

Features

	• 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

Features

HP EliteOne 800 G4 Touch All-in-One Business 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® • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.		
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)	21.98 W	22.24W	21.69 W
Normal Operation (Long idle)	11.35 W	11.60 W	11.22W
Sleep	4.10 W	4.11 W	3.98 W
Off	0.73 W	0.74 W	0.69 W
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	75 BTU/hr	76 BTU/hr	74 BTU/hr
Normal Operation (Long idle)	39 BTU/hr	40 BTU/hr	38 BTU/hr
Sleep	14 BTU/hr	14 BTU/hr	13 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 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	20	
Fixed Disk – Random writes	3.5	28	
Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include: Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell)		

Features

	Battery type: Lithium		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U.S. See http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 0% post-consumer recycled plastic (by wt.) • This product is 95.1% recycle-able when properly disposed of at end of life.		
Packaging Materials	**External:**	PAPER/Corrugated	1419 g
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	694 g
		PLASTIC/Polyethylene low density	94 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.		

Features

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 EliteOne 800 G4 GPU Touch All-in-One Business 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® • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.		
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a Typically Configured Notebook.		
Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	21.98 W	22.24W	21.69 W
Normal Operation (Long idle)	11.35 W	11.60 W	11.22W
Sleep	4.10 W	4.11 W	3.98 W
Off	0.73 W	0.74 W	0.69 W
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	75 BTU/hr	76 BTU/hr	74 BTU/hr
Normal Operation (Long idle)	39 BTU/hr	40 BTU/hr	38 BTU/hr
Sleep	14 BTU/hr	14 BTU/hr	13 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr
	NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.		

Features

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	20
Fixed Disk – Random writes	3.5	28

Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include: Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell) Battery type: Lithium		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U.S. See http://www.epeat.net for registration status by country. Search keyword generator on HP’s 3rd party option store for solar generator accessories at http://www.hp.com/go/options • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 0% post-consumer recycled plastic (by wt.) • This product is 95.1% recycle-able when properly disposed of at end of life.		
Packaging Materials	**External:**	PAPER/Corrugated	1419 g
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	694 g
		PLASTIC/Polyethylene low density	94 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)		

Features

	• 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

Features

HP EliteOne 800 G4 Non-Touch All-in-One Business 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® • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.		
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Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
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Sleep	4.10 W	4.11 W	3.98 W
Off	0.73 W	0.74 W	0.69 W
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	75 BTU/hr	76 BTU/hr	74 BTU/hr
Normal Operation (Long idle)	39 BTU/hr	40 BTU/hr	38 BTU/hr
Sleep	14 BTU/hr	14 BTU/hr	13 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 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	20	
Fixed Disk – Random writes	3.5	28	
Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include: Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell)		

Features

	Battery type: Lithium		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U.S. See http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 0% post-consumer recycled plastic (by wt.) • This product is 95.1% recycle-able when properly disposed of at end of life.		
Packaging Materials	**External:**	PAPER/Corrugated	1419 g
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	694 g
		PLASTIC/Polyethylene low density	94 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.		

Features

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 EliteOne 800 G4 GPU Non-Touch All-in-One Business 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® • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.	
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a Typically Configured Notebook.	The configuration used for th

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Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	21.98 W	22.24W	21.69 W
Normal Operation (Long idle)	11.35 W	11.60 W	11.22W
Sleep	4.10 W	4.11 W	3.98 W
Off	0.73 W	0.74 W	0.69 W
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	75 BTU/hr	76 BTU/hr	74 BTU/hr
Normal Operation (Long idle)	39 BTU/hr	40 BTU/hr	38 BTU/hr
Sleep	14 BTU/hr	14 BTU/hr	13 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 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	20	
Fixed Disk – Random writes	3.5	28	
Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include: Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC		

Features

	Batteries used in the product do not contain: Mercury greater the1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell) Battery type: Lithium		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U.S. See http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 0% post-consumer recycled plastic (by wt.) • This product is 95.1% recycle-able when properly disposed of at end of life.		
Packaging Materials	**External:**	PAPER/Corrugated	1419 g
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	694 g
		PLASTIC/Polyethylene low density	94 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)		

Features

Packaging Usage	HP follows these guidelines to decrease the environmental impact of product packaging: • Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials. • Eliminate the use of ozone-depleting substances (ODS) in packaging materials. • Design packaging materials for ease of disassembly. • Maximize the use of post-consumer recycled content materials in packaging materials. • Use readily recyclable packaging materials such as paper and corrugated materials. • Reduce size and weight of packages to improve transportation fuel efficiency. • Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.
End-of-life Management and Recycling	HP Inc. offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment. 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 EliteDesk 800 G4 65W Desktop Mini Business 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® • EPEAT Gold registered in the United States. See http://www.epeat.net for registration status in your country.		
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook.		
Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	3.59 W	3.64 W	3.46 W
Normal Operation (Long idle)	3.11 W	3.14 W	3.04 W
Sleep	0.63 W	0.67 W	0.63 W
Off	0.60 W	0.64 W	0.59 W
	Note: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family . HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model		

Features

	family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	12 BTU/hr	12 BTU/hr	12 BTU/hr
Normal Operation (Long idle)	11 BTU/hr	11 BTU/hr	10 BTU/hr
Sleep	2 BTU/hr	2 BTU/hr	2 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 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	3.1	19	
Fixed Disk – Random writes	3.1	19	
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: • 3 USB ports • 1 PC card slot (type I/II) • 1 ExpressCard/54 slot • 1 IEEE 1394 Port • 2 SODIMM memory slots • Optional expansion base docking station • 1 multi-bay II storage port • Interchangeable HDD Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell) Battery type: Lithium		

Features

Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the gold level, see www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 24.1% post-consumer recycled plastic (by wt.) • This product is 91.7% recycle-able when properly disposed of at end of life.		
Packaging Materials	**External:**	PAPER/Corrugated	322 g
	Internal:	PLASTIC/Polyethylene Expanded - EPE	32 g
		PLASTIC/Polyethylene High density - HDPE	5 g
	The Plastic packaging material is made from 0% recycled content.		
	The paper packaging materials contains at least 25% recycled content.		
Material Usage	This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf): • Asbestos • Certain Azo Colorants • Certain Brominated Flame Retardants – may not be used as flame retardants in plastics • Cadmium • Chlorinated Hydrocarbons • Chlorinated Paraffins • Formaldehyde • Halogenated Diphenyl Methanes • Lead carbonates and sulfates • Lead and Lead compounds • Mercuric Oxide Batteries • Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user. • Ozone Depleting Substances • Polybrominated Biphenyls (PBBs) • Polybrominated Biphenyl Ethers (PBBEs) • Polybrominated Biphenyl Oxides (PBBOs) • Polychlorinated Biphenyl (PCB) • Polychlorinated Terphenyls (PCT) • Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications. • Radioactive Substances • Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)		

Features

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

Features

HP EliteDesk 800 G4 35W Desktop Mini Business 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® • EPEAT Gold registered in the United States. See http://www.epeat.net for registration status in your country.		
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a "Typically Configured Notebook.		
Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	3.59 W	3.64 W	3.46 W
Normal Operation (Long idle)	3.11 W	3.14 W	3.04 W
Sleep	0.63 W	0.67 W	0.63 W
Off	0.60 W	0.64 W	0.59 W
	Note: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family . HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	12 BTU/hr	12 BTU/hr	12 BTU/hr
Normal Operation (Long idle)	11 BTU/hr	11 BTU/hr	10 BTU/hr
Sleep	2 BTU/hr	2 BTU/hr	2 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 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	2.9	19	
Fixed Disk – Random writes	2.9	19	
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: • 3 USB ports • 1 PC card slot (type I/II) • 1 ExpressCard/54 slot • 1 IEEE 1394 Port • 2 SODIMM memory slots • Optional expansion base docking station		

Features

	• 1 multi-bay II storage port • Interchangeable HDD Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell) Battery type: Lithium		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the gold level, see www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 24.1% post-consumer recycled plastic (by wt.) • This product is 91.7% recycle-able when properly disposed of at end of life.		
Packaging Materials	**External:**	PAPER/Corrugated	322 g
	Internal:	PLASTIC/Polyethylene Expanded - EPE	32 g
		PLASTIC/Polyethylene High density - HDPE	5 g
	The Plastic packaging material is made from 0% recycled content.		
	The paper packaging materials contains at least 25% recycled content.		
Material Usage	This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf): • Asbestos • Certain Azo Colorants • Certain Brominated Flame Retardants – may not be used as flame retardants in plastics • Cadmium • Chlorinated Hydrocarbons • Chlorinated Paraffins • Formaldehyde • Halogenated Diphenyl Methanes • Lead carbonates and sulfates • Lead and Lead compounds • Mercuric Oxide Batteries • Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user. • Ozone Depleting Substances • Polybrominated Biphenyls (PBBs) • Polybrominated Biphenyl Ethers (PBBEs) • Polybrominated Biphenyl Oxides (PBBOs)		

Features

	• 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	Hewlett-Packard 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

Features

HP EliteDesk 800 G4 95W Desktop Mini Business 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® • EPEAT Gold registered in the United States. See http://www.epeat.net for registration status in your country.		
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a "Typically Configured Notebook.		
Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	3.59 W	3.64 W	3.46 W
Normal Operation (Long idle)	3.11 W	3.14 W	3.04 W
Sleep	0.63 W	0.67 W	0.63 W
Off	0.60 W	0.64 W	0.59 W
	Note: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family . HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation (Short idle)	12 BTU/hr	12 BTU/hr	12 BTU/hr
Normal Operation (Long idle)	11 BTU/hr	11 BTU/hr	10 BTU/hr
Sleep	2 BTU/hr	2 BTU/hr	2 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 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	19	
Fixed Disk – Random writes	2.8	19	
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: • 3 USB ports • 1 PC card slot (type I/II) • 1 ExpressCard/54 slot • 1 IEEE 1394 Port • 2 SODIMM memory slots • Optional expansion base docking station		

Features

	• 1 multi-bay II storage port • Interchangeable HDD Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC Batteries used in the product do not contain: Mercury greater the1ppm by weight Cadmium greater than 20ppm by weight Battery size: CR2032 (coin cell) Battery type: Lithium		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the gold level, see www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product contains 24.1% post-consumer recycled plastic (by wt.) • This product is 91.7% recycle-able when properly disposed of at end of life.		
Packaging Materials	**External:**	PAPER/Corrugated	322 g
	Internal:	PLASTIC/Polyethylene Expanded - EPE	32 g
		PLASTIC/Polyethylene High density - HDPE	5 g
	The Plastic packaging material is made from 0% recycled content.		
	The paper packaging materials contains at least 25% recycled content.		
Material Usage	This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf): • Asbestos • Certain Azo Colorants • Certain Brominated Flame Retardants – may not be used as flame retardants in plastics • Cadmium • Chlorinated Hydrocarbons • Chlorinated Paraffins • Formaldehyde • Halogenated Diphenyl Methanes • Lead carbonates and sulfates • Lead and Lead compounds • Mercuric Oxide Batteries • Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user. • Ozone Depleting Substances • Polybrominated Biphenyls (PBBs) • Polybrominated Biphenyl Ethers (PBBEs) • Polybrominated Biphenyl Oxides (PBBOs)		

Features

	• 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	Hewlett-Packard 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

SERVICE AND SUPPORT

HP EliteDesk 800 G4 Tower Business PC

On-site Warranty[15]: Three-year (3-3-3) limited warranty delivers three years of on-site, next business day[16] service for parts and labor and includes free support 24 x 7[17]. 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.[18]

15. Terms and conditions may vary by country. Certain restrictions and exclusions apply. Other warranty variations may be offered in your region.
16. 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.
17. 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.
18. 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.

HP EliteDesk 800 G4 Small Form Factor Business PC

On-site Warranty[15]: Three-year (3-3-3) limited warranty delivers three years of on-site, next business day[16] service for parts and labor and includes free support 24 x 7[17]. 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.[18]

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17. 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.
18. 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.

Features

HP EliteDesk 800 G4 Desktop Mini Business PC

On-site Warranty[15]: Three-year (3-3-3) limited warranty delivers three years of on-site, next business day[16] service for parts and labor and includes free support 24 x 7[17]. 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.[18]

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17. 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.
18. 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.

HP EliteOne 800 G4 All-in-One Business PC

On-site Warranty[15]: Three-year (3-3-3) limited warranty delivers three years of on-site, next business day[16] service for parts and labor and includes free support 24 x 7[17]. 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.[18]

15. Terms and conditions may vary by country. Certain restrictions and exclusions apply. Other warranty variations may be offered in your region.
16. 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.
17. 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.
18. 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.

CERTIFICATION AND COMPLIANCE

Energy Efficiency Compliance

ENERGY STAR® certified; EPEAT® Gold [19]

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

PROCESSORS

Intel® 8th Generation Core™ Processors

All HP EliteDesk 800 G4 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 EliteDesk and EliteOne 800 G4 Business PC.

Intel® Advanced Management Technology (AMT) v12 – 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 new capabilities
- No reset after provisioning
- Support changes to BIOS table 130
- Support for Microsoft Windows Server 2012 R2
- Support for New Microsoft SQL Server Versions including Standard and Enterprise editions
- Support for Intel SSD Prop 2500 Series
- Support for Intel Enterprise Digital Fence
- The Platform Discovery Utility can now discover these additional Intel products:
- Intel SSD Pro 2500 Series; Enterprise Digital Fence
- Intel Identity Protection Technology with One Time Password; Public Key Infrastructure; Multi Factor Authentication
- Intel Identity Protection Technology with Intel WiGig
- New Profile Editor and Profile Editor Plugin Interface
- New Required Permissions for Solutions Framework

Technical Specifications

DISPLAY PANEL SPECIFICATIONS

23.8" 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

Type	IPS WLED Backlit LCD
Active area (mm)	527.04 x 296.46
Native Resolution (HxV)	1920 x 1080
Aspect ratio	16:09
Pixel pitch (HxV)(mm)	0.2745 x 0.2745
Contrast ratio (typical)	1000:01:00
Brightness (typical)	250nits
Viewing angle (typical) (HxV)	250nits (cd/m²) (FHD)
Backlight lamp life (to half brightness)	178 ° x 178 °
Color support	30,000 hours minimum
Color gamut (typical)	Over 16 million colors (FHD)
Anti-glare	72%
Default color temperature	Yes*
Default color temperature	Warm (6500K)

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

Intel® HD Graphics (integrated)

Adjustable Height Stand:	Height - Vertical/Landscape Adjustment	101mm (±2 mm)
	Portrait Adjustment	54mm (±2 mm)
	Tilt Angle	-5° to +20° (±3°) in landscape and portrait
	Rotation (Swivel)	90° (±1°)
	Pivot	Clockwise 90°
Recline Stand:	Height - Vertical Adjustment	178 mm (±2 mm)
	Tilt Angle	-5° to +65° (+/-3°)
	Rotation (swivel)	360° swivel

GRAPHICS

HP EliteDesk 800 G4 Desktop Mini Business PC

Intel® HD Graphics (integrated)	
VGA Controller	Integrated
DisplayPort™ 1.2	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 (optional)	Supports HDMI 2.0a features Supports HDCP 2.2 Supports audio over HDMI
VGA (optional)	VGA output

Technical Specifications

USB-C™ DP Alt Mode (optional)	DisplayPort over the optional 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

Technical Specifications

HP EliteDesk 800 G4 Tower Business PC

Intel® UHD Graphics (integrated)	
VGA Controller	Integrated
DisplayPort™ 1.2	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 (optional)	Supports HDMI 2.0a features Supports HDCP 2.2 Supports BT2020 and HDR playback (7th Gen processors only)
VGA (optional)	VGA ouput
USB-C™ DP Alt Mode (optional)	DisplayPort over the optional 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
34" UHD Supported Resolutions and Refresh Rates. Other resolutions may also work.	640x480 60 Hz640x480 67Hz 640x480 72Hz 640x480 75Hz 720x400 70Hz 800x600 60Hz 800x600 75Hz 1024x768 60Hz 1024x768 75Hz 1280x960 60Hz 1280x720 60Hz 1280x1024 60Hz 1280x1024 75Hz 1440x900 60Hz 1440x900 75Hz 1680x1050 60Hz 1920x1080 60Hz 3440x1440 60Hz (Native Resolution) 3440x1440 30Hz

Technical Specifications

NVIDIA® GeForce® GTX 1060 3 GB Graphics Card

Engine Clock	1506 MHz
Memory Clock	4004 MHz
Memory Size(width)	3 GB(192-bit)
Memory Type	128M x 32 GDDR5
Max. Resolution(DVI)	2560x1600@60Hz
Max. Resolution(HDMI)	4096x2160@60Hz
Max. Resolution(DP)	5120x3200@60Hz
Multi Display Support	4 displays
HDCP Compliance	Yes
Rear I/O connectors(bracket)	DVI-D+HDMI+DPx3
Cooling(active/passive)	Active fan-sink (Active cooling with dynamic speed)
Total power consumption(W)	<120W
PCB form-factor with bracket	ATX (Full height) PCB with ATX dual slot bracket

AMD® Radeon™ RX550 4 GB FH PCIe x16

Engine Clock	1183MHz
Memory Clock	7 Gbps
Memory Size(width)	4 GB(128-bit)
Memory Type	GDDR5
Max. Resolution(HDMI)	4096x2160 @ 60Hz
Max. Resolution(DP)	5120x2880 @ 60Hz
Multi Display Support	3 displays
HDCP Compliance	Yes
Rear I/O connectors(bracket)	HDMI, DPx2
Cooling(active/passive)	Active fan-sink (Active cooling with dynamic speed)
Total power consumption(W)	<62W
PCB form-factor with bracket	ATX (Full height) PCB with ATX single slot bracket

AMD® Radeon™ RX580 4 GB FH PCIe x16

Engine Clock	1266 MHz
Memory Clock	8gbs
Memory Size(width)	4 GB (256-bit)
Memory Type	128M x 32 GDDR5
Max. Resolution(HDMI)	4096x2160@60Hz
Max. Resolution(DP)	5120x3200@60Hz
Multi Display Support	4 displays
HDCP Compliance	Yes
Rear I/O connectors(bracket)	DP*3 + HDMI
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

Technical Specifications

NVIDIA® Quadro P400 2GB Graphics Card

Engine Clock	1252 MHz
Memory Clock	2000 MHz
Memory Size(width)	2GB (64-bit)
Memory Type	256M x 32 GDDR5
Max. Resolution(DP)	5120x32880@60Hz
Multi Display Support	3 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

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

Engine Clock	780 MHz
Memory Clock	1100 MHz
Memory Size(width)	2 GB(128-bit)
Memory Type	128M 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 2DP Graphics Card

Engine Clock	780 MHz
Memory Clock	1100 MHz
Memory Size(width)	2 GB(128-bit)
Memory Type	128M x 32 GDDR5
Max. Resolution(DP)	4096x2160@60Hz
Multi Display Support	2 displays
HDCP Compliance	Yes
Rear I/O connectors(bracket)	2DP
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

Technical Specifications

HP EliteDesk 800 G4 Small Form Factor Business PC

Intel® HD Graphics (integrated)	
VGA Controller	Integrated
DisplayPort™ 1.2	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 (optional)	Supports HDMI 2.0a features Supports HDCP 2.2 Supports audio over HDMI
VGA (optional)	VGA Output
USB-C™ DP Alt Mode (optional)	DisplayPort over the optional 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

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

Engine Clock	780 MHz
Memory Clock	1100 MHz
Memory Size(width)	2 GB(128-bit)
Memory Type	128M x 32 GDDR5
Max. Resolution(VGA)	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 2 GB 2DP Graphics Card

Engine Clock	780 MHz
Memory Clock	1100 MHz
Memory Size(width)	2GB(128-bit)
Memory Type	128M x 32 GDDR5
Max. Resolution(DP)	4096x2160@60Hz
Multi Display Support	2 displays
HDCP Compliance	Yes
Rear I/O connectors(bracket)	2DP
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

HP EliteOne 800 G4 All-in-One Business PC

Intel® UHD Graphics (integrated)	
VGA Controller	Integrated
DisplayPort™ 1.2	Multimode capable; supports HDCP, Display Port Audio (2 streams), HBR2 link rates and Multi-Stream Technology for a maximum of 3 displays (including the integrated panel and all attached displays)
HDMI	Supports HDMI 2.0a features Supports HDCP 2.2 Supports audio over HDMI
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

AMD® Radeon™ RX 560

Architecture	Discrete GPU AMD® GPU drives the integrated panel and all of the graphics output ports
DisplayPort	Multimode capable; supports HDCP, HDR, Display Port Audio (6 streams max), DisplayPort HBR3 link rates and Multi-Stream Technology for a maximum of 5 displays (including the integrated panel and all attached displays)
HDMI	Supports HDMI 2.0b features Supports HDCP 2.2, HDR
Memory	4GByte, 128bit wide GDDR5
Maximum Color Depth	up to 12 bits/color
Graphics/Video API Support	DirectX 12 OpenCL 2.0 OpenGL 4.5 AMD® Unified Video Decoder (UVD)

STORAGE

500 GB 7200RPM 3.5in SATA HDD

Capacity	500 GB
Rotational Speed	7,200 rpm
Interface	SATA 6.0 Gb/s
Buffer Size	16 MB
Logical Blocks	976,773,168
Seek Time	11 ms (Average)
Height	1 in/2.54 cm
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.

1 TB 7200RPM 3.5in SATA HDD

Capacity	1 TB
Rotational Speed	7,200 rpm
Interface	SATA 6 Gb/s
Buffer Size	32 MB
Logical Blocks	1,953,525,168
Seek Time	11 ms (Average)
Height	1 in/2.54 cm
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.

2 TB 7200RPM 3.5in SATA HDD

Capacity	2 TB
Rotational Speed	7,200 rpm
Interface	SATA 6 Gb/s
Buffer Size	64 MB
Logical Blocks	1,953,525,168
Seek Time	11 ms (Average)
Height	1.028 in/26.11 mm
Width (nominal)	4.0 in/101.6 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.

500 GB 7200RPM 2.5in SATA HDD

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

1 TB 7200RPM 2.5in SATA HDD

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

2 TB 5400RPM 2.5in SATA HDD

Capacity	2 TB
Rotational Speed	5,400 rpm
Interface	SATA 6 Gb/s
Buffer Size	128 MB
Logical Blocks	3,907,050,336
Seek Time	12 ms (Average)
Height	0.374 in/9.5 mm (nominal)
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.

500 GB 7200RPM 2.5in Self Encrypted OPAL2 SATA HDD

Capacity	500 GB
Architecture	Self-Encrypting (SED) Solid State Drive with SATA interface
Interface	SATA 6 Gb/s
Buffer Size	32 MB
Logical Blocks	976,773,168
Seek Time	12 ms (Average)
Height	0.267 in/6.8 mm (nominal)
Width	2.75 in/70 mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

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

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

Capacity	500 GB
Architecture	Self-Encrypting (SED) Solid State Drive with SATA interface
Interface	SATA 6 Gb/s
Buffer Size	32 MB
Logical Blocks	976,773,168
Seek Time	12 ms (Average)
Height	0.267 in/6.8 mm (nominal)
Width	2.75 in/70 mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

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

500 GB 5400RPM 2.5in SATA SSHD

Capacity	500 GB
Rotational Speed	5,400 rpm
Drive Type	Solid State Hybrid Drive (SSHD) technology with NAND Flash
Interface	SATA 6 Gb/s
Buffer Size	64 MB
NAND Flash	8 GB
Seek Time	12 ms (Average)
Height	0.267 in/6.8 mm (nominal)
Width	2.75 in/70 mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

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

1 TB 5400RPM 2.5in SATA SSHD

Capacity	1 TB
Rotational Speed	5,400 rpm
Drive Type	Solid State Hybrid Drive (SSHD) technology with NAND Flash
Interface	SATA 6 Gb/s
Buffer Size	64 MB
NAND Flash	8 GB
Seek Time	12 ms (Average)
Height	0.374 in/9.5 mm (nominal)
Width	2.75 in/70 mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

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

2 TB 5400RPM 2.5in SATA SSHD

Capacity	2 TB
Rotational Speed	5,400 rpm
Drive Type	Solid State Hybrid Drive (SSHD) technology with NAND Flash
Interface	SATA 6 Gb/s
Buffer Size	128 MB
NAND Flash	8 GB
Seek Time	12 ms (Average)
Height	0.374 in/9.5 mm (nominal)
Width	2.75 in/70 mm (nominal)
Operating Temperature	41° to 131° F (5° to 55° C)

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

128 GB 2.5in SATA Three Layer Cell SSD

Drive Weight	<50g
Capacity	128 GB
Height	7mm
Length	100.45mm
Width	69.85mm
Interface	SATA 3.0 (6Gb/s)
Performance	Up to Random Read/Write = 70K/40K IOPS
Maximum Sequential Read	Up to 530MB/s
Maximum Sequential Write	Up to 380MB/s
Logical Blocks	250,069,680
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	DIPM; TRIM

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

256 GB 2.5in SATA Three Layer Cell SSD

Drive Weight	<62g
Capacity	256 GB
Height	7mm
Length	100.45mm
Width	69.85mm
Interface	SATA 3.0 (6Gb/s)
Performance	Up to Random Read/Write = 55K/68K IOPS
Maximum Sequential Read	Up to 530MB/s
Maximum Sequential Write	Up to 450MB/s
Logical Blocks	500,118,192
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	DIPM; TRIM

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

512 GB 2.5in SATA Three Layer Cell SSD

Drive Weight	<50g
Capacity	512 GB
Height	7mm
Length	100.45mm
Width	69.85mm
Interface	SATA 3.0 (6Gb/s)
Performance	Up to Random Read/Write = 92K/83K IOPS
Maximum Sequential Read	Up to 530MB/s
Maximum Sequential Write	Up to 500MB/s
Logical Blocks	1,000,215,216
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	DIPM; TRIM

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

256 GB 2.5in SATA Self Encrypted OPAL2 Three Layer Cell SSD

Drive Weight	<50g
Capacity	256 GB
Height	7mm
Length	100.45mm
Width	69.85mm
Interface	SATA 3.0 (6Gb/s)
Performance	Up to Random Read/Write = 55K/80K IOPS
Maximum Sequential Read	Up to 530MB/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	DIPM; TRIM; TCG-OPAL2.0 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.

512 GB 2.5in SATA Self Encrypted OPAL2 Three Layer Cell SSD

Drive Weight	<50g
Capacity	512 GB
Height	7mm
Length	100.45mm
Width	69.85mm
Interface	SATA 3.0 (6Gb/s)
Performance	Up to Random Read/Write = 92K/83K IOPS
Maximum Sequential Read	Up to 530MB/s
Maximum Sequential Write	Up to 500MB/s
Logical Blocks	1,000,215,216
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	DIPM; TRIM; TCG-OPAL2.0 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.

256 GB 2.5in SATA Self Encrypted Federal Information Processing Standard SSD

Drive Weight	<40g
Capacity	256 GB
Height	7mm
Length	100.45mm
Width	69.85mm
Interface	SATA 3.0 (6Gb/s)
Performance	Up to Random Read/Write = 55K/83K IOPS
Maximum Sequential Read	Up to 530MB/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	DIPM; TRIM; FIPS 140-2 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.

512 GB 2.5in SATA Self Encrypted Federal Information Processing Standard SSD

Drive Weight	<45g
Capacity	512 GB
Height	7mm
Length	100.45mm
Width	69.85mm
Interface	SATA 3.0 (6Gb/s)
Performance	Up to Random Read/Write = 92K/83K IOPS
Maximum Sequential Read	Up to 530MB/s
Maximum Sequential Write	Up to 500MB/s
Logical Blocks	1,000,215,216
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	DIPM; TRIM; FIPS 140-2 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.

128 GB M.2 2280 PCIe NVMe SSD

Drive Weight	< 10g
Capacity	128GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Performance	Up to Random Read/Write = 60K/50K IOPS
Maximum Sequential Read	Up to 1400MB/s
Maximum Sequential Write	Up to 395MB/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.

256 GB M.2 2280 PCIe NVMe SSD

Drive Weight	< 10g
Capacity	256 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Performance	Up to Random Read/Write = 120K/170K IOPS
Maximum Sequential Read	Up to 1600MB/s
Maximum Sequential Write	Up to 780MB/s
Logical Blocks	500,118,192
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	APST; ASPM L1.2; NVME spec 1.2

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

512 GB M.2 2280 PCIe NVMe SSD

Drive Weight	< 10g
Capacity	512 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3
Performance	Up to Random Read/Write = 200K/180K IOPS
Maximum Sequential Read	Up to 1600MB/s
Maximum Sequential Write	Up to 860MB/s
Logical Blocks	1,000,215,216
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	APST; ASPM L1.2; NVME spec 1.2

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

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

Drive Weight	< 10g
Capacity	128 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3x4
Performance	Up to Random Read/Write = 140K/40K IOPS
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.

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

Drive Weight	< 10g
Capacity	256GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3x4
Performance	Up to Random Read/Write = 150K/180K IOPS
Maximum Sequential Read	Up to 2700MB/s
Maximum Sequential Write	Up to 1000MB/s
Logical Blocks	500,118,192
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	APST; ASPM L1.2; NVME spec 1.2

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

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

Drive Weight	< 10g
Capacity	512 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3x4
Performance	Up to Random Read/Write = 270K/235K IOPS
Maximum Sequential Read	Up to 2900MB/s
Maximum Sequential Write	Up to 1100MB/s
Logical Blocks	1,000,215,216
Operating Temperature	0° to 70°C (32° to 158°F) [ambient temp]
Features	APST; ASPM L1.2; NVME spec 1.2

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

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

Drive Weight	< 10g
Capacity	1 TB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3x4
Performance	Up to Random Read/Write = 290K/240K IOPS
Maximum Sequential Read	Up to 2900MB/s
Maximum Sequential Write	Up to 2100MB/s
Logical Blocks	2,000,409,264
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.

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

Drive Weight	< 10g
Capacity	256 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3x4
Performance	Up to Random Read/Write = 150K/180K IOPS
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.

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

Drive Weight	< 10g
Capacity	512 GB
Height	2.38mm
Length	80mm
Width	22mm
Interface	PCIE Gen3x4
Performance	Up to Random Read/Write = 270K/235K IOPS
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.

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)
Read 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 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 Up to 4X BD-RE Up to 2X BD-R Up to 6X BD-RE Up to 2X DVD-R Up to 8X DVD-RW Up to 6X DVD+R Up to 8X DVD+RW Up to 8X DVD-RAM Up to 5X CD-R Up to 24X CD-RW Up to 10X
Read Speeds	BD-R Up to 6X BD-RE Up to 4X BD-ROM Up to 6X BD-R Up to 6X BD-RE Up to 6X DVD-ROM Up to 8X DVD-R Up to 8X DVD-RW Up to 8X DVD+R Up to 8X DVD+RW Up to 8X 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® i219LM 10/100/1000 Integrated NIC	
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
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) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30)) Comprehensive diagnostic and configuration software suite Virtual Cable Doctor for Ethernet cable status

Technical Specifications

Security & Manageability	Intel® vPro™ support with appropriate Intel® chipset components

Intel® i210 10/100/1000 Integrated NIC	
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
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) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30)) Comprehensive diagnostic and configuration software suite Virtual Cable Doctor for Ethernet cable status

Technical Specifications

Security & Manageability	Intel® vPro™ support with appropriate Intel® chipset components

Intel® 9560 802.11AC 2x2 with Bluetooth® M.2 Combo Card vPro™	
Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac
Interoperability	Wi-Fi certified
Frequency Band	802.11b/g/n • 2.402 – 2.482 GHz 802.11a/n • 4.9 – 4.95 GHz (Japan) • 5.15 – 5.25 GHz • 5.25 – 5.35 GHz • 5.47 – 5.725 GHz • 5.825 – 5.850 GHz
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)
Modulation	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
Security[1]	• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • IEEE 802.11i • Cisco Certified Extensions, all versions through CCX4 and CCX Lite • WAPI
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power[2]	• 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 mode2.0 W • Receive mode 1.6 W • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode 50 mW (WLAN unassociated) • Connected Standby 10mW • Radio disabled 8 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
Receiver Sensitivity[3]	802.11b, 1Mbps : -93.5dBm maximum 802.11b, 11Mbps : -84dBm maximum

	802.11a/g, 6Mbps : -86dBm maximum 802.11a/g, 54Mbps : -72dBm maximum 802.11n, MCS07 : -67dBm maximum 802.11n, MCS15 : -64dBm maximum 802.11ac, MCS0 : -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	
Dimensions	Type 2230: 2.3 x 22.0 x 30.0 mm	
Weight	Type 2230: 2.8g	
Operating Voltage	3.3v +/- 9%	
Temperature	Operating Non-operating	14° to 158° F (–10° to 70° C) –40° to 176° F (–40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED White – Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

HP Integrated Module with Bluetooth® 4.0/4.1/4.2/5.0 Wireless Technology	
Bluetooth® Specification	4.0/4.1/4.2/5.0 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
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
Range	Legacy Up to 33 ft (10 m) BLE Up to 99 ft (30 m)
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 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
Bluetooth Profiles Supported	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode LE Link Layer LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels

	Train Nudging & Interlaced Scan BT4.2 ESR08 Compliance LE Secure Connection- Basic/Full LE Privacy 1.2 –Link Layer Privacy LE Privacy 1.2 –Extended Scanner Filter Policies LE Data Packet Length Extension FAX Profile (FAX) Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP)
Security & Manageability	Intel® vPro™ support with appropriate Intel® chipset components

Intel® 9560 802.11AC 2x2 with Bluetooth® M.2 Combo Card non-vPro™	
Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac
Interoperability	Wi-Fi certified
Frequency Band	802.11b/g/n • 2.402 – 2.482 GHz 802.11a/n • 4.9 – 4.95 GHz (Japan) • 5.15 – 5.25 GHz • 5.25 – 5.35 GHz • 5.47 – 5.725 GHz • 5.825 – 5.850 GHz
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)
Modulation	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
Security[1]	• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • IEEE 802.11i • Cisco Certified Extensions, all versions through CCX4 and CCX Lite • WAPI
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power[2]	• 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

Technical Specifications

Power Consumption	• Transmit mode2.0 W • Receive mode 1.6 W • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode 50 mW (WLAN unassociated) • Connected Standby 10mW • Radio disabled 8 mW	
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[3]	802.11b, 1Mbps : -93.5dBm maximum 802.11b, 11Mbps : -84dBm maximum 802.11a/g, 6Mbps : -86dBm maximum 802.11a/g, 54Mbps : -72dBm maximum 802.11n, MCS07 : -67dBm maximum 802.11n, MCS15 : -64dBm maximum 802.11ac, MCS0 : -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	
Dimensions	Type 2230: 2.3 x 22.0 x 30.0 mm	
Weight	Type 2230: 2.8g	
Operating Voltage	3.3v +/- 9%	
Temperature	Operating Non-operating	14° to 158° F (–10° to 70° C) –40° to 176° F (–40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED White – Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

HP Integrated Module with Bluetooth® 4.0/4.1/4.2/5.0 Wireless Technology	
Bluetooth® Specification	4.0/4.1/4.2/5.0 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
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
Range	Legacy Up to 33 ft (10 m) BLE Up to 99 ft (30 m)
Bluetooth® Software Supported Link Topology	Microsoft Windows Bluetooth® Software
Power Management	Microsoft Windows ACPI, and USB Bus Support

Technical Specifications

Certifications	FCC (47 CFR) Part 15C, Section 15.247 & 15.249 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
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 RTL8822BE 802.11ac 2x2 with Bluetooth® M.2 Combo Card	
Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac
Interoperability	Wi-Fi certified
Frequency Band	802.11b/g/n • 2.402 – 2.482 GHz 802.11a/n • 4.9 – 4.95 GHz (Japan) • 5.15 – 5.25 GHz • 5.25 – 5.35 GHz • 5.47 – 5.725 GHz • 5.825 – 5.850 GHz
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)
Modulation	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
Security[1]	• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • IEEE 802.11i • Cisco Certified Extensions, all versions through CCX4 and CCX Lite • WAPI
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points

Technical Specifications

Output Power[2]	• 802.11b: +14dBm minimum • 802.11g: +12dBm minimum • 802.11a: +12dBm minimum • 802.11n HT20(2.4GHz): +12dBm minimum • 802.11n HT40(2.4GHz): +12dBm minimum • 802.11n HT20(5GHz): +10dBm minimum • 802.11n HT40(5GHz): +10dBm minimum • 802.11ac VHT80(5GHz): +10dBm minimum	
Power Consumption	• Transmit mode2.0 W • Receive mode 1.6 W • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode 50 mW (WLAN unassociated) • Connected Standby 10mW • Radio disabled 8 mW	
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[3]	802.11b, 1Mbps: -93.5dBm maximum 802.11b, 11Mbps: -84dBm maximum 802.11a/g, 6Mbps: -86dBm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11n, MCS07: -67dBm maximum 802.11n, MCS15: -64dBm maximum 802.11ac, MCS0: -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	
Dimensions	Type 2230 : 2.3 x 22.0 x 30.0 mm	
Weight	Type 2230 : 2.8g	
Operating Voltage	3.3v +/- 9%	
Temperature	Operating Non-operating	14° to 158° F (–10° to 70° C) –40° to 176° F (–40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED White – Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

HP Integrated Module with Bluetooth® 4.0/4.1/4.2 Wireless Technology	
Bluetooth® Specification	4.0/4.1/4.2 Compliant
Frequency Band	2402 to 2480 MHz
Number of Available Channels	Legacy : 0~79 (1 MHz/CH) BLE : 0~39 (2 MHz/CH)
Data Rates and Throughput	Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps
	BLE : 1 Mbps data rate; throughput up to 0.2 Mbps
	Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)

Technical Specifications

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 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
Bluetooth Profiles Supported	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode LE Link Layer LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels Train Nudging & Interlaced Scan BT4.2 ESR08 Compliance LE Secure Connection- Basic/Full LE Privacy 1.2 –Link Layer Privacy LE Privacy 1.2 –Extended Scanner Filter Policies LE Data Packet Length Extension FAX Profile (FAX) Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP)

Realtek RTL8821CE 802.11ac 1x1 with Bluetooth® M.2 Combo Card	
Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac
Interoperability	Wi-Fi certified
Frequency Band	802.11b/g/n • 2.402 – 2.482 GHz 802.11a/n • 4.9 – 4.95 GHz (Japan) • 5.15 – 5.25 GHz • 5.25 – 5.35 GHz • 5.47 – 5.725 GHz • 5.825 – 5.850 GHz
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

Technical Specifications

Security[1]	• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • IEEE 802.11i • Cisco Certified Extensions, all versions through CCX4 and CCX Lite • WAPI	
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)	
Roaming	IEEE 802.11 compliant roaming between access points	
Output Power[2]	• 802.11b : +14dBm minimum • 802.11g : +12dBm minimum • 802.11a : +12dBm minimum • 802.11n HT20(2.4GHz) : +12dBm minimum • 802.11n HT40(2.4GHz) : +12dBm minimum • 802.11n HT20(5GHz) : +10dBm minimum • 802.11n HT40(5GHz) : +10dBm minimum • 802.11ac VHT80(5GHz) : +10dBm minimum	
Power Consumption	• Transmit mode2.0 W • Receive mode 1.6 W • Idle mode (PSP) 180 mW (WLAN Associated) • Idle mode 50 mW (WLAN unassociated) • Connected Standby 10mW • Radio disabled 8 mW	
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[3]	802.11b, 1Mbps : -93.5dBm maximum 802.11b, 11Mbps : -84dBm maximum 802.11a/g, 6Mbps : -86dBm maximum 802.11a/g, 54Mbps : -72dBm maximum 802.11n, MCS07 : -67dBm maximum 802.11n, MCS15 : -64dBm maximum 802.11ac, MCS0 : -84dBm maximum 802.11ac, MCS9 : -59dBm maximum	
Antenna type	High efficiency antenna. One embedded dual band 2.4/5 GHz antenna is provided to the card to support WLAN communications and Bluetooth communications	
Form Factor	PCI-Express M.2 MiniCard	
Dimensions	Type 2230 : 2.3 x 22.0 x 30.0 mm	
Weight	Type 2230 : 2.8g	
Operating Voltage	3.3v +/- 9%	
Temperature	Operating Non-operating	14° to 158° F (–10° to 70° C) –40° to 176° F (–40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED White – Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

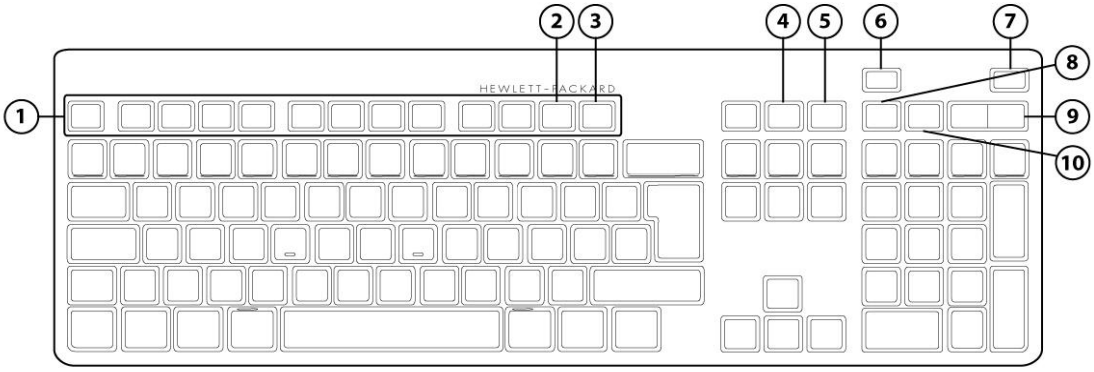
HP Integrated Module with Bluetooth® 4.0/4.1/4.2 Wireless Technology	
Bluetooth® Specification	4.0/4.1/4.2 Compliant

Technical Specifications

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	ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
Bluetooth Profiles Supported	BT4.1-ESR 5/6/7 Compliance LE Link Layer Ping LE Dual Mode LE Link Layer LE Low Duty Cycle Directed Advertising LE L2CAP Connection Oriented Channels Train Nudging & Interlaced Scan BT4.2 ESR08 Compliance LE Secure Connection- Basic/Full LE Privacy 1.2 –Link Layer Privacy LE Privacy 1.2 –Extended Scanner Filter Policies LE Data Packet Length Extension FAX Profile (FAX) Basic Imaging Profile (BIP)2 Headset Profile (HSP) Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP)

I/O DEVICES

HP Conferencing Keyboard



1. Function Keys
2. F11 Lync or Skype for Business Contact list[1]
3. F12 Lync or Skype for Business Calendar[2]
4. Share Screen
5. Stop Webcam
6. End/Decline a Call
7. Answer a Call
8. Microphone Mute
9. Volume Up/Down
10. Audio Mute

1. Microsoft Lync 2013, or Skype for Business, or Microsoft Outlook 2013 Contact list
2. Microsoft Lync 2013, or Skype for Business, or Microsoft Outlook 2013 Calendar

HP USB Premium 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
	Microsoft® PC 99 - 2001	Functionally compliant
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)
	Microsoft PC 99 - 2001	Mechanically compliant

Technical Specifications

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, C-Tick, KC	
Ergonomic compliance	TUVGS	
Kit contents	Keyboard, QSP	
Warranty Card	Product Notice	

Skylab USB 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
	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±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)

Technical Specifications

	Microsoft PC 99 - 2001	Mechanically compliant
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, C-Tick, KC	
Ergonomic compliance	ANSI HFS 100, ISO 9241-4, and TUVGS	
Kit contents	Keyboard, Installation Guide, Warranty card, Safety and Comfort Guide	

HP USB Premium 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	12mA
Mechanical	Connector	USB 2.0
	Type	3D mouse (3 keys and wheel)
	Resolution	800, 1200, 1600 DPI
	Sensor	Pixart PAN3606DL
Tracking speed	Tracking acceleration	8G(max), 1G=9.8m/s2
	Cable length	6 ft. (1.8 m)
	Color	Jack Black
Regulatory approvals	Compliant	UL, FCC, CE Mark, TUV GS, VCCI, BSMI, C-Tick, KC

HP USB Mouse		
Dimensions (H x L x W)	37mm*115mm*62.9mm	
Weight	90 +10g/- 5 g	
Color	Black	
Connector	USB	
Mechanical	Resolution	800 DPI sensitivity
	Buttons	Two primary buttons and clickable scroll wheel

Technical Specifications

AUDIO/MULTIMEDIA

HP EliteDesk 800 G4 Tower Business PC

Type	Integrated
HD Stereo Codec	Conexant CX20632
Audio I/O Ports	Front: 1 - Headset connector supports a CTIA style headset and is re-taskable as a Line-in, Line-out, Microphone-in or Headphone-out port 1 - Headphone port Rear: Line-out Line-in which is retaskable as a Microphone Input All ports are 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 EliteDesk 800 G4 Small Form Factor Business PC

Type	Integrated
HD Stereo Codec	Conexant CX20632
Audio I/O Ports	Front: 1 - Headset connector supports a CTIA style headset and is re-taskable as a Line-in, Line-out, Microphone-in or Headphone-out port 1 - Headphone port Rear: Line-out Line-in which is retaskable as a Microphone Input All ports are 3.5mm and support stereo All ports are 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

Technical Specifications

HP EliteDesk 800 G4 Desktop Mini Business PC

Type	Integrated
HD Stereo Codec	Conexant CX20632
Audio I/O Ports	Front: 1 - Headset connector supports a CTIA style headset and is re-taskable as a Line-in, Line-out, Microphone-in or Headphone-out port 1 - Headphone 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 EliteOne 800 G4 All-in-One Business PC

Bang & Olufsen Audio

Type	Integrated
HD Stereo Codec	Conexant CX5001
Audio I/O Ports	Side headset connector supports a CTIA style headset and is re-taskable as a Line-in, Line-out, Microphone-in or Headphone-out port Side headphone connector supports a headphone connections Rear line out connector All ports are 3.5mm and support stereo
Internal Speaker Amplifier	2W per channel class D stereo amplifier for the internal speakers only
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 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

Integrated Webcam and Microphone
Optional integrated 2 MP Full HD RGB webcam & microphone; maximum resolution of 1920 x 1080
Optional integrated 2 MP Full HD RGB dual-facing webcam with IR sensor (user-facing) & microphone; maximum resolution of 1920 x 1080

NOTE: All HP devices which carry the Bang & Olufsen brand are custom-tuned with Bang & Olufsen's acoustical engineers for precise sound experience in business use.

POWER

HP EliteDesk 800 G4 Tower Business PC

Unit Environment and Operating Conditions

Temperature Range	Operating: 5°C ~45°C Non-Operating: -40°C ~66°C
Relative Humidity	Operating 5% to 90% relative humidity at max inlet temperature Non-Operating 5% to 90% relative humidity at max inlet temperature
Maximum Altitude (unpressurized)	Operating: 5000m Non-operating: 50,000 ft. (15240 m)

HP EliteDesk 800 G4 Desktop Mini Business PC (35W)

Unit Environment and Operating Conditions

Temperature Range	Operating: 5°C ~35°C Non-Operating: -40°C ~66°C
Relative Humidity	Operating 5% to 90% relative humidity at max inlet temperature Non-Operating 5% to 90% relative humidity at max inlet temperature
Maximum Altitude (unpressurized)	Operating: 5000m Non-operating: 50,000 ft. (15240 m)

HP EliteDesk 800 G4 Desktop Mini Business PC (65W)

Unit Environment and Operating Conditions

Temperature Range	Operating: 5°C ~35°C Non-Operating: -40°C ~66°C
Relative Humidity	Operating 5% to 90% relative humidity at max inlet temperature Non-Operating 5% to 90% relative humidity at max inlet temperature
Maximum Altitude (unpressurized)	Operating: 5000m Non-operating: 50,000 ft. (15240 m)

HP EliteDesk 800 G4 Desktop Mini Business PC (95W)

Unit Environment and Operating Conditions

Temperature Range	Operating: 5°C ~35°C Non-Operating: -40°C ~66°C
Relative Humidity	Operating 5% to 90% relative humidity at max inlet temperature Non-Operating 5% to 90% relative humidity at max inlet temperature
Maximum Altitude (unpressurized)	Operating: 5000m Non-operating: 50,000 ft. (15240 m)

Technical Specifications

HP EliteOne 800 G4 All-in-One Business PC

Unit Environment and Operating Conditions

Temperature Range	Operating: 5°C ~45°C Non-Operating: -40°C ~66°C
Relative Humidity	Operating 5% to 90% relative humidity at max inlet temperature Non-Operating 5% to 90% relative humidity at max inlet temperature
Maximum Altitude (unpressurized)	Operating: 5000m Non-operating: 50,000 ft. (15240 m)

	DM	SFF	TWR	AiO
80 PLUS Gold	N/A	N/A	500W active PFC / 80 PLUS Gold 87/90/87% efficient at 20/50/100% load (115V)	180W active PFC / 80 PLUS Gold* 87/90/87% efficient at 20/50/100% load (115V) *Available on models with integrated graphics
80 PLUS Platinum	65W EPS, 89% average efficiency at 115V & 230Vac 90W EPS, 89% average efficiency at 115V & 230Vac 150W EPS, 89% average efficiency at 115V & 230Vac	250W 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)	250W 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)	210W 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) *Available on models with discrete graphics
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	65W≦1.6A 90W≦1.2A 150W≧2.2A	250W≦3A	500W≦6A 250W≦3A	210W≦3A 180W≧2.5A
Rated Input Current with Energy Efficient* Power Supply	65W≦1.6A 90W≦1.2A 150W≧2.2A	250W≦3A	500W≦6A 250W≦3A	210W≦3A 180W≧2.5A
DC Output	+19.5VV	+12V	+12V	+12V

Technical Specifications

	DM	SFF	TWR	AiO
Current Leakage (NFPA 99: 2102)	Less than 500 microamps of leakage current at 120 Vac with the ground wire disconnected, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1. Less than 100 microamps of leakage current at 120 Vac with the ground wire intact with normal polarity, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1.	Less than 500 microamps of leakage current at 120 Vac with the ground wire disconnected, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1. Less than 100 microamps of leakage current at 120 Vac with the ground wire intact with normal polarity, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1.	Less than 500 microamps of leakage current at 120 Vac with the ground wire disconnected, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1. Less than 100 microamps of leakage current at 120 Vac with the ground wire intact with normal polarity, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1.	Less than 500 microamps of leakage current at 120 Vac with the ground wire disconnected, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1. Less than 100 microamps of leakage current at 120 Vac with the ground wire intact with normal polarity, as required for Non-patient Electrical Appliances and Equipment used in a patient care facility or that contact patients in normal use. Per section 10.3.5.1.
Power Supply Fan	N/A	70mm variable speed	70mm variable speed	N/A
Power cord length	6.0 ft. (1.83 m)	6.0 ft. (1.83 m)	6.0 ft. (1.83 m)	6.0 ft. (1.83 m)
External Power Adapter	External power supply	Internal power supply	Internal power supply	Internal power supply
Dimensions	65W: 113.5mm x 55mm x 30mm 90W: 132mm x 57mm x 30mm 150W: 160mm x 80mm x 40mm	165mm x 95mm x 73mm	165mm x 95mm x 73mm	135mm x 100mm x 19.52mm
Total Cord Length	6.0 ft. (1.83 m)	6.0 ft. (1.83 m)	6.0 ft. (1.83 m)	6.0 ft. (1.83 m)

Technical Specifications

WEIGHTS & DIMENSIONS

	DM	SFF	TWR	AiO
Chassis (W x D x H)	177x175x34mm	3.94 x 13.3 x 12.13 in 100 x 338 x 308 mm	6.1 x 14.6 x 14.4 in 154 x 370 x 365 mm	See table below.
System Volume	1.05L	10.4 L 634 cu in	20.8 L 1269 cu in	See table below.
System Weight	1.05 kg 2.31 lb	6.13 kg 13.5 lb	9.86 kg 21.74 lb	See table below.
Max Supported Weight (desktop orientation)	0	35 kg 77 lb	35 kg 77 lb	See table below.
Stand Dimensions	160x117x18.5mm	151.8x200x37.2mm	N/A	See table below.
Packaging (W x D x H)	497 x128 x223mm	15.71 x 19.65 x 9.06 in 399 x 499 x 230 mm	11.77 x 18.82 x 20.35 in 299 x 478 x 517 mm	See table below.
Shipping Weight	2.95 kg 6.49 lb	9 kg 19.82 lb	11.34 kg 24.98 lb	See table below.
Multipack Packaging (10 units)	20.28x16.54x25 in 515x420x636 mm			
Palletization Profile	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 75.551 in, 1152 x 994 x 1919 mm (include pallet)	6 units per layer 10 layers max 60 units per pallet 1200*1000*2438 mm (include the pallet)	8 units per layer 4 layers ax 32 units per pallet 1200*1000*2203 mm (include the pallet)	10-units per layer 4-layers max 40-units per pallet (sea) 1200 x 1000 x 2470 mm

ALL-IN-ONE WEIGHTS AND DIMENSIONS

Weight with Touch Panel

Product Weight Unboxed	Without Stand 13.29 lbs. 6.03kg	Adjustable Height Stand 19.24 lbs. 8.73kg	Recline Stand 21.12lbs 9.58kg
Shipping Weight Boxed	Without Stand 20.64-21.15lbs 9.4-9.45kg	Adjustable Height Stand 26.68 lbs. 12.1kg	Recline Stand 28.66-28.88 lbs. 13-13.1kg
Shipping Weight Pallet	Without Stand (10units) 233.73lbs 106kg	Adjustable Height Stand (10units) 293.21lbs 133 kg	Recline Stand (10units) 313.06lbs 142kg

Weight without Touch Panel

Product Weight Unboxed	Without Stand 13.51-13.62 lbs. 6.13-6.18kg	Adjustable Height Stand 19.46-19.68lbs 8.93 kg	Recline Stand 21.34-21.44 lbs. 9.68-9.73kg
Shipping Weight Boxed	Without Stand 20.86-21.06lbs 9.5-9.55kg	Adjustable Height Stand 26.89-27.12 lbs. 12.2-12.3 kg	Recline Stand 28.88lbs 13.1kg
Shipping Weight Pallet	Without Stand 21.2 x 2.12 x 13.46 in 539.6 x 53.8 x 341.79 mm	Adjustable Height Stand 0 degrees 21.2 x 7.1 x 18.4 in 539.6 x 180.28 x 467.7 mm	Recline Stand 0 degrees 21.2 x 10.3 x 10.63 in 539.6 x 261.8 x 269.98 mm

Dimensions (W x D x H)

Product Dimensions	Without Stand 21.2 x 2.12 x 13.46 in 539.6 x 53.8 x 341.79 mm	Adjustable Height Stand 0 degrees 21.2 x 7.1 x 18.4 in 539.6 x 180.28 x 467.7 mm	Recline Stand 0 degrees 21.2 x 10.3 x 10.63 in 539.6 x 261.8 x 269.98 mm

Shipping Dimensions

Shipping Dimensions Boxed	Without Stand 27.17 x 10.08 x 21.46(H) in 690 x 256 x 545(H) mm	Adjustable Height Stand 27.17 x 10.08 x 26.22(H) in 690 x 256 x 666(H) mm	Recline Stand 27.17 x 10.08 x 26.22(H) in 690 x 256 x 666(H) mm
Shipping Dimensions Pallet	Without Stand (10 units) 47.24 x 39.37 x 24.02(H) in 1200 x 1000 x 610(H) mm	Adjustable Height Stand (10 units) 47.24 x 39.37 x 28.94(H) in 1200 x 1000 x 735(H) mm	Recline Stand (10 units) 47.24 x 39.37 x 28.94(H) in 1200 x 1000 x 735(H) mm

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 / PCA 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 Software5 Aux Power LED on System PCA
- Processor ZIF Socket for easy Upgrade
- Over-Temp Warning on Screen (Requires IM Agents)
- Clear Password Jumper
- 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, CD & Diskette Removal (For MT, SFF, and DM only)
- Green Pull Tabs, and Quick Release Latches for easy Identification

Technical Specifications – Miscellaneous Features

Additional Features	Description
Tower Orientation	Product can be oriented as either a desktop (horizontal) or a tower (vertical) for MT, SFF, and DM only
Drive Lock	Implementation of the industry standard ATA Security feature set. When enabled, it prevents software access to user data on the drive until one or two user-defined passwords are provided.
Boot Sectors Protection	MBR and GPT sectors of the hard drive are critical to booting the operating system. By saving the MBR or GPT data (depending on the how the OS was installed), the BIOS will be able to monitor for changes and allow the user to override them with the backup copy at boot-up.
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	TWR	AiO	Part Number
AMD® Radeon™ RX 550 4GB 2DP Card			X		3TK71AA
AMD® Radeon™ R7 430 2GB 2DP Card		X	X		3MQ82AA
HP DisplayPort To HDMI True 4k Adapter	X	X	X	X	2JA63AA
HP DVI Cable Kit	X	X	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	Part Number
HP Desktop Mini G4 Port Cover Kit	X (95W and discrete GPU skus not supported)	1ZE52AA
HP G4 Mini 2.5-inch SATA Drive Bay Kit	X (95W and discrete GPU skus not supported, cannot use in conjunction with Thunderbolt 3 and Fiber NIC)	3TK91AA
HP Desktop Mini LockBox V2	X (95W and discrete GPU skus not supported)	3EJ57AA
HP Desktop Mini 500GB HDD/I/O Expansion Module	X (Either one)	K9Q82AA
HP Desktop Mini DVD-Writer ODD Expansion Module		K9Q83AA
HP Desktop Mini I/O Expansion Module		K9Q84AA
HP Desktop Mini Security/Dual VESA Sleeve v2	X (95W and discrete GPU skus not supported)	2JA32AA
HP Desktop Mini Vertical Chassis Stand	X	G1K23AA
HP DM VESA Power Supply Holder Kit	X (95W and discrete GPU skus not supported) *Must use with Dual VESA Sleeve V2	1RL87AA

Data Storage Drives	DM	SFF	TWR	AiO	Part Number
HP 256GB SATA TLC Non-SED Solid State Drive	X (95W and discrete GPU skus not supported, cannot use in conjunction with Thunderbolt 3 and Fiber NIC)	X	X	X	P1N68AA
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 PCIe NVME TLC 512GB SSD PCIe Drive		X	X		Z4L70AA
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 SATA SuperMulti JB Drive			X		QS208AA
HP 9.5mm Slim Removable SATA 500GB		X	X	X	T7G14AA
HP 9.5mm G4 8/6/4 SFF G4 400 SFF/MT DVD Writer		X			1CA53AA

Technical Specifications – After Market Options

Input Devices	DM	SFF	TWR	AiO	Part Number
HP USB (Grey) SmartCard CCID Keyboard		X	X		J7H70AA
HP USB Antimicrobial Business Slim Keyboard and Mouse (China Only)		X	X	X	Z9H50AA
HP USB Business Slim CCID SmartCard Keyboard	X	X	X	X	Z9H48AA
HP USB Business Slim (Grey) Keyboard (EMEA Only)	X	X	X	X	Z9H49AA
HP USB Business Slim Keyboard	X	X	X	X	N3R87AA
HP USB Business Slim Keyboard and Mouse and Mousepad		X	X	X	T4E63AA
HP USB Collaboration Keyboard	X	X	X		Z9N38AA
HP USB Conferencing Keyboard				X	K8P74AA
HP USB Keyboard	X	X	X	X	QY776AA
HP USB Keyboard and Mouse Healthcare Edition	X	X	X	X	1VD81AA
HP USB Premium Keyboard	X	X	X	X	Z9N40AA
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 Collaboration Keyboard	X	X	X		Z9N39AA
HP Wireless Premium Keyboard		X	X	X	Z9N41AA
HP PS/2 Business Slim Keyboard		X	X		N3R86AA
HP USB Grey v2 Mouse (EMEA only)	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 Hardened Mouse	X	X	X	X	P1N77AA
HP USB Mouse	X	X	X	X	QY777AA

Technical Specifications – After Market Options

System Memory	DM	SFF	TWR	AiO	Part Number
HP 4GB DDR4-2666 DIMM		X	X		3TK85AA
HP 8GB DDR4-2666 DIMM		X	X		3TK87AA
HP 16GB DDR4-2666 DIMM		X	X		3TK83AA
HP 4GB DDR4-2666 SODIMM	X			X	3TK86AA
HP 8GB DDR4-2666 SODIMM	X			X	3TK88AA
HP 16GB DDR4-2666 SODIMM	X			X	3TK84AA

Multimedia Devices	DM	SFF	TWR	AiO	Part Number
HP Business Headset v2	X	X	X	X	T4E61AA
HP USB Business Speakers v2	X	X	X		N3R89AA

Security Devices	DM	SFF	TWR	AiO	Part Number
HP Solenoid Lock & Hood Sensor (SFF)		X			J6L43AA
HP Solenoid Lock & Hood Sensor (MT)			X		J6L42AA
HP Business PC Security Lock v3 Kit		X	X		3XJ17AA
HP Dual Head Keyed Cable Lock		X	X		T1A64AA
HP Keyed Cable Lock 10mm	X	X	X	X	T1A62AA
HP Master Keyed Cable Lock 10mm		X	X	X	T1A63AA

Stands and Accessories	DM	SFF	TWR	AiO	Part Number
HP B300 PC Mounting Bracket	X				2DW53AA
HP B500 PC Mounting Bracket	X				2DW52AA
HP Single Monitor Arm	x (95W and discrete GPU skus not supported)			X	BT861AA
HP 800 G4/G4 AIO Adjustable Height Stand				X	Z9H66AA
HP 800 G4/G4 AIO Recline Stand				X	Z9H67AA

I/O Devices	DM	SFF	TWR	AiO	Part Number
HP DisplayPort Port Flex IO	x (discrete GPU skus not supported)	X	X		3TK72AA
HP Fiber NIC Port Flex IO	x (95W and discrete GPU skus not supported)				3TK73AA
HP HDMI Port Flex IO (400/600/800)	x (discrete GPU skus not supported)	X	X		3TK74AA
HP Thunderbolt 3.0 Port Flex IO	x (95W and discrete GPU skus not supported)				3TK77AA
HP Thunderbolt 3.0 PCIe Card		X	X		4CX35AA
HP Type-C™ USB 3.1 Gen2 Port Flex IO	x (discrete GPU skus not supported)	X	X		3TK78AA
HP Type-C™ USB 3.1 Gen2 Port with PD Flex IO	x (65W & 95W and discrete GPU skus not supported)				3TK79AA
HP VGA Port Flex IO	x (discrete GPU skus not supported)	X	X		3TK80AA
HP Serial Port Flex IO	x (discrete GPU skus not supported)				3TK76AA
HP Internal Serial Port (600/705/800)		X	X		3TK82AA
HP PCIe x1 Parallel Port Card		X	X		N1M40AA
HP 800/600/400 G4 Serial/ PS/2 Adapter		X	X		1VD82AA

Communication Devices	DM	SFF	TWR	AiO	Part Number
Intel® 9260 802.11ac non-vPro™ PCIe x1 Card		X	X		3TK89AA
Realtek 8822BE 802.11ac PCIe x1 Card		X	X		3TK90AA

Intel® Optane Memory	DM	SFF	TWR	AiO	Part Number
Intel® Optane Memory 16GB (Cache)	X	X	X	X	1WV97AA

Change Log

Date	Version History	Action	Description of Change
June 6, 2018	From v1 to v2	Add	Environmental section
June 15, 2018	From v2 to v3	Add	Adjustable Height and Recline Stand
June 19, 2018	From v3 to v4	Update	Environmental specs for micro tower buisiness
June 19, 2018	From v4 to v5	Update	Environmental Tab for Non-Touch All-in-One Business PC and Touch All-in-One Business PC
June 20, 2018	From v5 to v6	Update	Environmental tabs
June 20, 2018	From v6 to v7	Update	Weights & Dimensions