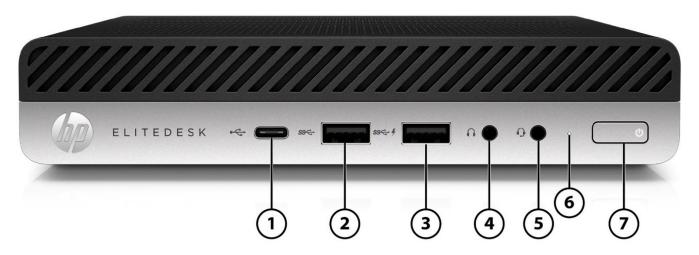
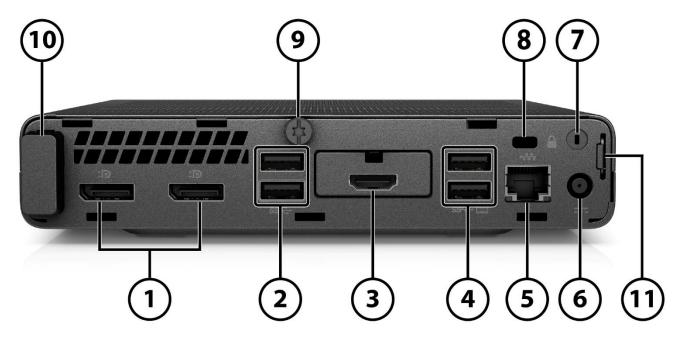
## HP EliteDesk 800 G4 Desktop Mini Business PC



- 1. USB Type-C<sup>™</sup> 3.1 Gen 2 Port (charge support up to 5V/3A) 5.
- 2. USB 3.1 Gen 2 Type A
- 3. USB 3.1 Gen 1 Type A (charge support up to 5V/1.5A)
- 4. Headphone connector

- . Universal Audio Jack with CTIA headset support
- 5. Hard Drive activity light
- 7. Dual-state power button

## HP EliteDesk 800 G4 Desktop Mini Business PC



- DisplayPort™ 1.2 1.
- 2. USB 3.1 Gen 2 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 Type A allows for wake from S4/S5 with keyboard/mouse when 11. Padlock Loop connected and enabled in BIOS
- 5. **RJ-45 Network Adapter**

- Power connector
- WLAN External Antenna Punchout
- Universal cable lock slot 8.
- 9. Cover Release Thumbscrew
- 10. WLAN Internal Antenna

#### **Not Shown**

Slots (1) Internal M.2 2230 connector for WLAN

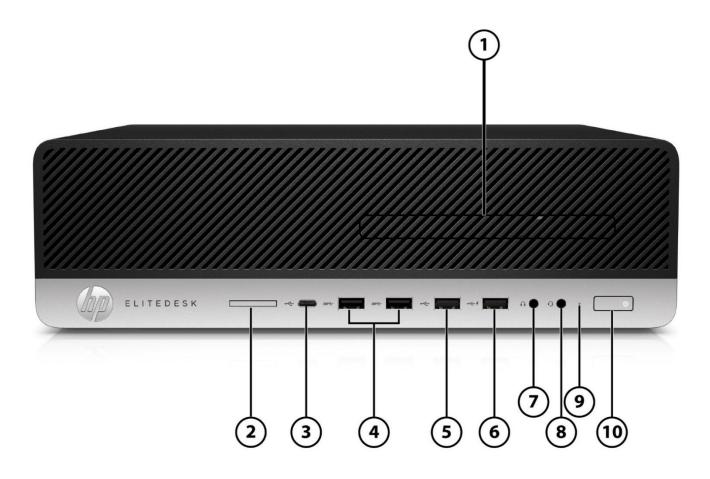
(2) Internal M.2 SSD storage (2230 or 2280 connector)

Bays (1) 2.5- inch SATA drive Bay

Mounting Support for

- VESA 100 mounting system on bottom of PC chassis
- VESA Sleeve
- Quick Release Bracket
- B300/B500 Mounting bracket

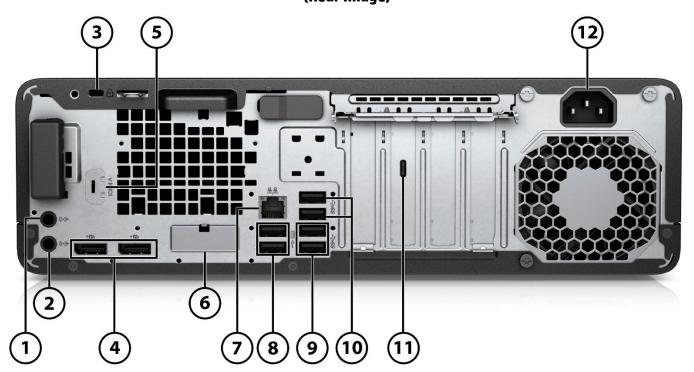
## **HP EliteDesk 800 G4 Small Form Factor Business PC**



- 1. Slim optical drive (optional)
- 2. SD 4 Card Reader (optional)
- 3. USB Type-C<sup>™</sup> port (charge support up to 5V/3A)
- 4. USB 3.1 Gen2 ports (2)
- 5. USB 2.0 port

- 6. USB 2.0 (charge support up to 5V/1.5A)
- 7. Headphone connector
- 8. Universal Audio Jack with CTIA headset support
- 9. Hard drive activity light
- 10. Dual-state power button

# 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. USB 3.1 Gen1 ports (2)
- 11. Optional Thunderbolt PCIe card shown here installed

#### Not shown

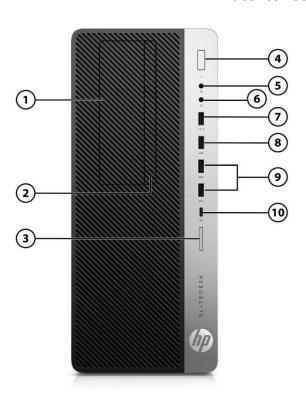
#### Slots

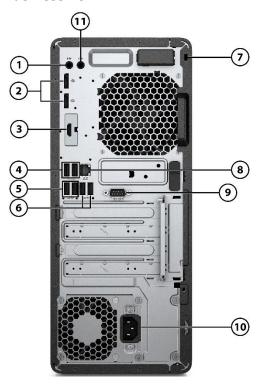
- (2) PCI Express x16 graphics connectors; one wired as an x4
- (2) PCI Express x1
- (2) internal M.2 SSD storage (2230 or 2280 connector)
- (1) internal M.2 WLAN (2230 connector)

#### Bays

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

#### **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 (charge support up to 5V/1.5A)
- 8. USB 2.0 port
- 9. USB 3.1 Gen2 ports (2)
- 10. USB Type-C<sup>™</sup> port (charge support up to 5V/3A)

- 1. Audio-out jack for powered audio devices
- 2. Dual-Mode DisplayPort™ 1.2 (DP++) (2)
- 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)
- 6. USB 3.1 Gen1 ports (2)
- 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**

#### Bay

- (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

#### **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)

## 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)



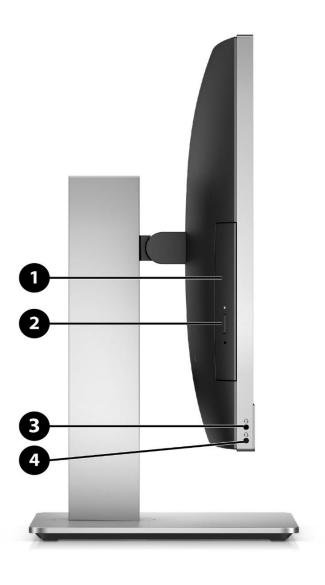
- 1. Camera light
- 2. IR camera light
- 3. Full High Definition (FHD) camera
- 4. IR camera
- 5. Rear camera adjustment wheel
- 6. Digital microphones
- 7. Camera light
- 8. FHD camera

## Full High Definition (FHD) camera (optional)



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

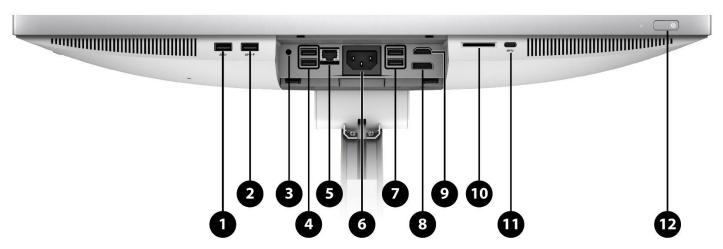
## HP EliteOne 800 G4 All-in-One Business PC (23.8" Touch and Non-Touch)



- 1. Optical disc drive (optional)
- 2. Optical disc drive eject button (optional)

- 3. Universal Audio Jack with CTIA headset support
- 4. Headphone connector

### 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
- 2. USB 3.1 Gen 2 Type-A (charge support up to 5V/1.5A)
- 3. Audio line-out connector
- 4 USB 3.1 Gen 2 Type-A ports (2)
- 5. RJ-45 (network) jack
- 6. Power connector
- 7. USB 3.1 Gen 1 Type-A ports (2) (keyboard/mouse wake capable)
- Dual-Mode DisplayPort™ 1.2 (DP++) for integrated graphics models or Dual-Mode DisplayPort™ 1.4 (DP++) for discrete graphics models
- 9. HDMI connector
- 10. SD card reader 4.0 (optional)
- 11. USB 3.1 Type-C<sup>™</sup> Gen 2 port (charge support up to 5V/3A)
- 12. 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

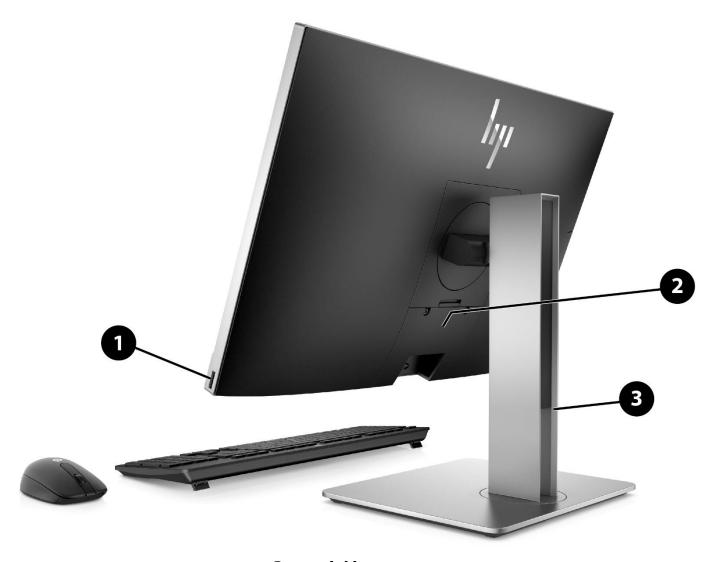
(1) 2.5" internal storage drive bay

#### **VESA**

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



## 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)

## QuickSpecs

#### **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)<sup>2</sup>
- 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 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 <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at <a href="http://www.hp.com/go/options">http://www.hp.com/go/options</a>.
- 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<sup>3</sup>
- 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
- Compliance with CE (Class B) / FCC (Class B) / UL (UL609501) / CSA (CSA C22.2 No.60950-1-07) / ICES-003 / CCC / VCCI (Class B) / KCC (Class B)
- 1. Multi core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance
- 2. 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

#### **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<sup>1</sup>

Windows® 10 Pro 64 (National Academic License)2

Windows® 10 Home 641

Windows® 10 Home Single Language 641

FreeDos 2.0

**Web-supported only** Windows® 10 Enterprise 64<sup>1</sup>

- 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 <a href="http://www.windows.com/">http://www.windows.com/</a>.
- 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**

	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
Intel® Q370 PCH-H− vPro™	<u>x</u>	<u>x</u>	<u>x</u>	<u>X</u>





## **PROCESSORS**

Intel® 8th Generation Core™ Processors	<u>DM</u>	<u>SFF</u>	TWR	<u>AiO</u>
Intel® Core™ i7 8700K Processor with Intel® UHD Graphics 630 (3.7GHz, up to 4.7 GHz with Intel® Turbo Boost,12MB cache, 6 cores) 95W¹ Supports Intel® vPro™Technology⁴	Х	х	х	
Intel® Core™ i7+ 8700K Processor with Intel® UHD Graphics 630 (3.7 GHz, up to 4.7GHz with Intel® Optane™ Memory, 12 MB cache, 6 cores) 95W <sup>1,2</sup> Supports Intel® vPro™Technology⁴	х	х	х	
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) 65W <sup>1,3</sup> Supports Intel® vPro™Technology⁴	х	х	х	х
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) 65W <sup>1,2,3</sup> Supports Intel® vPro™Technology <sup>4</sup>	х	х	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) <sup>1,3</sup> Supports Intel® vPro™Technology⁴	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) <sup>1,2</sup> Supports Intel® vPro™Technology⁴	X			
Intel® Core™ i5 8600K Processor with Intel® UHD Graphics 630 (up to 3.6GHz, 9MB cache, 6 cores) 95W¹ Supports Intel® vPro™Technology⁴	х	х	х	
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) <sup>1,2,3</sup> Supports Intel® vPro™Technology⁴	х	х	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) <sup>1,3</sup> Supports Intel® vPro™Technology⁴	х	х	х	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) <sup>1,2,3</sup> Supports Intel® vPro™Technology <sup>4</sup>	Х	х	х	х
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) <sup>1,3</sup> Supports Intel® vPro™Technology⁴	х	х	х	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) <sup>1,2,3</sup> Supports Intel® vPro™Technology⁴	Х	х	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) <sup>1,3</sup> Supports Intel® vPro™Technology⁴	х			
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) <sup>1,2</sup> Supports Intel® vPro™Technology⁴	Х			



## QuickSpecs

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) <sup>1,3</sup> Supports Intel® vPro™Technology <sup>4</sup>	х			
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) <sup>1,2</sup> Supports Intel® vPro™Technology <sup>4</sup>	х			
Intel® Core™ i3 8300 processor with Intel® UHD Graphics 630 (3.7 GHz, 8 MB cache, 4 cores)¹	X	X	Х	х
Intel® Core™ i3 8100 processor with Intel® UHD Graphics 630 (3.6 GHz, 6 MB cache, 4 cores)¹	х	X	Х	х
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	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
Intel® Pentium® Gold G5600 processor with Intel® UHD Graphics 630 (3.9 GHz, 4 MB cache, 2 cores)¹	Х	Х	Х	х
Intel® Pentium® Gold G5500 processor with Intel® UHD Graphics 630 (3.8 GHz, 4 MB cache, 2 cores)¹	Х	Х	Х	х
Intel® Pentium® Gold G5400 processor with Intel® UHD Graphics 610 (3.7 GHz, 4 MB cache, 2 cores)¹	Х	Х	Х	х
Intel® Pentium® Gold G5400T processor with Intel® UHD Graphics 610 (3.1 GHz, 4 MB cache, 2 cores)¹	Х			
Intel® Pentium® Gold G5500T processor with Intel® UHD Graphics 630 (3.2 GHz, 4 MB cache, 2 cores)¹	х			

Intel® 8th Generation Celeron™ Processors	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
Intel® Celeron® G4900 processor with Intel® UHD Graphics 610 (3.1 GHz, 2 MB cache, 2 cores)¹	X	Х	Х	х
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	х			

<sup>1:</sup> 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.



<sup>2.</sup> Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system.

<sup>3.</sup> 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.

<sup>4.</sup> Some functionality of vPro technology, such as Intel Active management technology and Intel Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel vPro technology is dependent on 3rd party software providers. Compatibility of this generation of Intel vPro technology-based hardware with with future "virtual appliances" is yet to be determined."

# QuickSpecs

**Features** 

## **GRAPHICS**

Integrated Intel® Graphics	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
Intel® UHD Graphics 630 (integrated on 8th gen Core i7/i5/i3, Pentium® Gold G5600, G5500)	Х	Х	Х	Х
Intel® UHD Graphics 610 (integrated on 8th gen Pentium® Gold G5400, Celeron® G4900)	х	х	х	х
Optional Discrete Graphics Solutions	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
AMD® Radeon™ RX550 4GB 2DP 1HDMI Graphics Card			Х	
AMD® Radeon™ RX560 4GB GDDR5	Х			X
AMD® Radeon™ RX580 4GB FH PCIe x16*			Х	
AMD® Radeon™ RX580 8GB FH GDDR5*			X	
AMD® Radeon™ R7 430 2GB VGA+DP Graphics Card			X	
AMD® Radeon™ R7 430 2GB GDDR5 64bit DP+VGA		X		
AMD® Radeon™ R7 430 2GB GDDR5 64bit 2DP		Х	Х	
AMD® Radeon™ R7 430 2GB 2DP Graphics Card		Х	Х	
NVIDIA® GeForce® GT730 2GB DP DVI PCIe x8 GFX		Х	Х	
NVIDIA® GeForce® GTX 1060 3GB Graphics Card*			Х	
NVIDIA® GeForce® RTX 2080 8GB GDDR6*			Х	
NVIDIA® Quadro P620 2GB Graphics Card	_		Х	
NVIDIA® Quadro P400 2GB Graphics Card		Х	Х	

<sup>\*</sup>Requires 500W chassis

Adapters and Cables	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
HP DisplayPort™ Cable	Х	Х	Х	X
HP DisplayPort™ to DVI-D Adapter	Х	Х	Х	X
HP DisplayPort™ to HDMI 4K Adapter	Х	Х	Х	X
HP DisplayPort™ to VGA Adapter	Х	Х	Х	X
HP USB-C™ to USB 3.0	Х	Х	Х	X
HP USB to Serial Port Adapter	Х	Х	Х	X

## **STORAGE**

3.5 i	nch SATA Hard Disk Drives (HDD)	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
	500GB 7200RPM 3.5in SATA HDD		X	X	
	1TB 7200RPM 3.5in SATA HDD		X	Х	
	2TB 7200RPM 3.5in SATA HDD		X	Х	

2.5 inch SATA Hard Disk Drives (HDD)	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
500GB 7200RPM 2.5in SATA HDD	X	Х	X	X
1TB 7200RPM 2.5in SATA HDD	Х	Х	Х	X
2TB 5400RPM 2.5in SATA HDD	X	Х	Х	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	Х	X	X	Х

inch SATA Solid State Hybrid Drives (SSHD)	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
500GB 5400RPM 2.5in SATA SSHD	X	Х	Х	Х
1TB 5400RPM 2.5in SATA SSHD	X	Х	Х	Х
2TB 5400RPM 2.5in SATA SSHD	X	Х	X	X
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	Х	Х	Х	х
512GB 2.5in SATA Three Layer Cell SSD	Х	Х	Х	Х
256GB 2.5in SATA Self Encrypted OPAL2 Three Layer Cell SSD	Х	Х	Х	Х
512GB 2.5in SATA Self Encrypted OPAL2 Three Layer Cell SSD	Х	Х	Х	Х
256GB 2.5in SATA Self Encrypted Federal Information Processing Standard SSD	Х	Х	Х	Х
512GB 2.5in SATA Self Encrypted Federal Information Processing Standard SSD	Х	Х	Х	Х
2 PCIe NVMe Solid State Drives (SSD)	<u>DM</u>	SFF X	TWR	AiO
128GB M.2 2280 PCIe NVMe SSD	X	1	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  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
312db M.2 2280 FCIe NVMe Seti Encrypted OFAL2 Tillee Layer Cett 33b	Λ	<u> </u>	<u> </u>	
tical Disc Drives	DM	SFF	TWR	AiO
HP 9.5mm Slim DVD-ROM Drive		Х	Х	Х
HP 9.5mm Slim DVD Writer Drive		Х	Х	Х
HP 9.5mm Slim Blu-Ray Writer Drive		Х	Х	Х
dia Card Reader	<u>DM</u>	<u>SFF</u>	TWR	<u>AiO</u>
aia taia Neadei				

**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.





#### **MEMORY**

Memory Type	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>	
DDR4-2666 (Transfer rates up to 2666 MT/s), 32 GB, 2 SODIMM	Х			Х	
DDR4-2666 (Transfer rates up to 2666 MT/s), 64 GB, 4 DIMM		Х	Х		1

Memory Configuration	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
4 GB (1 x 4 GB)	X	Х	X	Х
8 GB (2 x 4 GB)	Х	X	Х	X
8 GB (1 x 8 GB)	Х	X	Х	X
16 GB (2 x 8 GB)	Х	Х	Х	Х
16 GB (1 x 16 GB)	Х	Х	Х	Х
32 GB (2 x 16 GB)	Х	X	Х	Х
32 GB (4 x 8 GB)		X	Х	
64 GB (4 x 16 GB)		Х	Х	

**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	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
Intel® I219-LM Gigabit Network Connection LOM (standard)	Х	X	X	X
Intel® Ethernet I210-T1 PCIe x1 Gb Network Interface Card (optional)		х	X	

Wireless <sup>1</sup>	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
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™	Х	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	Х		
Intel® 7265 802.11AC 2x2 M.2 Combo Card non-vPro™ with external antenna (Brazil)	X	Х		

<sup>1.</sup> 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





## **KEYBOARDS AND POINTING DEVICES**

boards	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
HP USB Conferencing Keyboard	Х	Х	Х	Х
HP Wireless Collaboration Keyboard	Х	Х	Х	Х
HP USB and PS/2 Washable Keyboard <sup>1</sup>	Х	Х	Х	Х
HP USB Smart Card (CCID) Keyboard	Х	Х	Х	Х
HP USB Business Slim Keyboard	X	X	Х	Х
HP USB Keyboard	Х	Х	Х	Х
HP PS/2 Business Slim Keyboard <sup>1</sup>		Х	Х	
HP PS/2 Keyboard <sup>1</sup>		Х	Х	
HP Wireless Business Slim Keyboard and Mouse	Х	Х	Х	Х

ouse	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
HP PS/2 Mouse <sup>1</sup>		X	Х	
HP USB Optical Mouse	X	Х	Х	X
HP USB Premium Mouse	X	X	Х	X
HP USB 1000dpi Laser Mouse	X	Х	Х	X
HP USB and PS/2 Washable Mouse <sup>1</sup>		Х	Х	X
Antimicrobial USB Mouse <sup>2</sup>	X	Х	Х	X
HP USB Hardened Mouse <sup>2</sup>	X	Х	Х	X

<sup>1.</sup> PS/2 port not available on EliteOne 800 G4 AiOs

<sup>2.</sup> Not available in all regions



## **SECURITY**

	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
Trusted Platform Module (TPM) 2.0 (Infineon SLB9670). Common Criteria EAL4+ Certified. FIPS 140-2 Level 2 Certified	Х	X	Х	Х
Solenoid Lock & Intrusion Sensor		Х	X	
Intrusion Sensor for DM/AiO (integrated in the PCA, can be enabled/disabled through BIOS)	Х			Х
Support for chassis cable lock devices	Х	Х	X	X
Support for chassis padlocks devices	Х	Х	X	
HP Fingerprint Reader (standard on 800 G4 AiO touch models and optional on non-touch models)				Х
SATA port disablement (via BIOS)	Х	X	X	X
Serial, USB enable/disable (via BIOS)	X	X	X	X
Intel® Identify Protection Technology (IPT) <sup>1</sup>	Х	Х	Х	X
Serial, parallel, USB enable/disable (via BIOS)	Х	X	X	X
Optional USB Port Disable at factory (user configurable via BIOS)	Х	Х	X	X
Removable media write/boot control	X	X	X	X
Power-on password (via BIOS)	Х	Х	X	X
Setup password (via BIOS)	Х	Х	X	X

<sup>1.</sup> 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.



# QuickSpecs

**Features** 

## **PORTS**

Ports – Standard	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
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 (15 W)	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 Headphone (front), 1 Universal Audio Jack with CTIA headset support (front));	1 Line out (rear 1 CTIA UAJ (side 1Audio out (side
	(irone)	1 Audio-out (rear), 1 Audio-in (rear)	1 Audio-out (rear), 1 Audio-in (rear)	
Network Interface	RJ45			RJ45
Network Interface		1 Audio-in (rear)	1 Audio-in (rear)	RJ45
Network Interface  I/O Ports – Optional		1 Audio-in (rear)	1 Audio-in (rear)	RJ45

., or or co operation	<u> </u>	<u></u>	<u></u>	
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



I/O P	orts – Internal Ports	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
In	ternal SATA storage connector(s)	N/A	3	4	2
	ternal SATA storage connector (Data and ower)	1	N/A	N/A	N/A

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

Slots	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
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	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>
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.





#### SOFTWARE COMPONENTS AND APPLICATIONS WITH WINDOWS

#### BIOS

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

#### Software

HP Native Miracast Support <sup>15</sup>
HP Hotkey Support - CMIT
HP Recovery Manager
HP JumpStart
HP Support Assistant <sup>21</sup>
HP Noise Cancellation Software
Buy Office (sold separately)
Intel® Unite (optional for AiOs)

#### **Manageability Features**

HP Driver Packs <sup>22</sup>
HP System Software Manager (SSM)
HP BIOS Config Utility (BCU)
HP Client Catalog
HP Manageability Integration Kit Gen2 <sup>23</sup>
Ivanti Management Suite <sup>24</sup>

#### **Client Security Software**

HP Client Security Suite Gen4 <sup>25</sup> including: HP Security Manager <sup>26</sup> (including Credential Manager, HP Password Manager, HP Spare Key) HP Fingerprint Sensor <sup>31</sup> HP Device Access Manager HP Power On Authentication Windows Defender <sup>27</sup>



## QuickSpecs

#### **Features**

#### **Security Management**

HP Secure Erase<sup>18</sup>

TPM 2.0 Embedded Security Chip shipped with Windows 10 (Common Criteria EAL4+ Certified) 32

SATA 0.1 port disablement (viaBIOS)

RAID configurations<sup>33</sup>

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<sup>38</sup>

HP Sure Start Gen430

HP Sure Run<sup>35</sup>

HP Sure Recover<sup>36</sup>

- 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.

- 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. Windows Defender Opt in Windows 10 and internet connection required for updates.
- 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. . RAID 1 is pre-installed and functionality will 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.
- 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.





#### **ENVIRONMENTAL & INDUSTRY**

#### **ENERGY STAR® certified models available**

EPEAT® registered where applicable/supported. See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at <a href="http://www.hp.com/go/options">http://www.hp.com/go/options</a>. Low halogen (chassis, all internal components and modules)<sup>1</sup>

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)<sup>1</sup>

Non-operating: -22° to 140° F (-30° to 60° C)

Relative Humidity Operating: 10% to 90% (non-condensing at ambient)

Non-operating: 5% to 95% (non-condensing at ambient)

Maximum Altitude Operating: 5000m

(unpressurized) 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.





ЦD	<b>EliteDesk</b>	900	Dockton	Mini C/	corioc
HP	Elitebesk	800	vesktob	Mini 64	series

Eco-Label Certifications	This product has received or is in th	ne process of being	certified to the fo	llowing approvals and mav		
& declarations	be labeled with one or more of the					
	IT ECO declaration     US ENERGY STAR®					
	• EPEAT® Gold registered in the Uni	ited States. See htt	p://www.epeat.ne	t for registration status in		
	your country. Search keyword gene					
	accessories at http://www.hp.com		, ,	3		
System Configuration	The configuration used for the Ene		nd Declared Noise	Emissions data for the		
	Desktop model is based on a "Typic			Zimosions data for the		
Energy Consumption	·	<u> </u>				
(in accordance with US						
ENERGY STAR® test						
method)	115VAC, 60Hz	230VAC,	50Hz	100VAC, 50Hz		
Normal Operation (Short	13.599	13.51		13.099		
dle)						
Normal Operation (Long	12.211	11.76	55	12.367		
dle)						
Sleep	1.318	1.31	2	1.322		
Off	0.616	0.61	8	0.618		
-	NOTE: Energy efficiency data listed					
	model family. HP computers marke					
	applicable U.S. Environmental Prot					
	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,		100VAC, 50Hz		
Normal Operation	46.3726	46.08		44.6676		
(Short idle)	40.5720	70.00		44.0070		
Normal Operation	41.6395	40.11	07	42.1715		
(Long idle)	41.0333	40.11	67	42.1713		
Sleep	4.4944	4.473	20	4.508		
Off	2.1006	2.107				
<u> </u>	NOTE: Heat dissipation is calculate					
	attained for one hour.	u baseu on the me	asureu watts, asst	inning the service level is		
Declared Noise	Sound Power			und Pressure		
Emissions	(L <sub>WAd</sub> , bels)		(L	<sub>DAm</sub> , decibels)		
(in accordance with						
ISO 7779 and ISO 9296)						
Typically Configured –	3.1			20		
dle						
Fixed Disk – Random	4.4			33		
	<del></del>	This product can be upgraded, possibly extending its useful life by several years. Upgradeable				
				ral years. Upgradeable		
	This product can be upgraded, post features and/or components conta			ral years. Upgradeable		
	features and/or components conta	ined in the product	: may include:			
	features and/or components conta Spare parts are available througho	ined in the product	: may include:			
ongevity and Upgrading	features and/or components conta Spare parts are available througho production.	ined in the product ut the warranty pe	may include:			
ongevity and Upgrading	features and/or components conta Spare parts are available througho	ined in the product ut the warranty pe	may include:			
Longevity and Upgrading	features and/or components conta Spare parts are available througho production. This battery(s) in this product comp	nined in the product out the warranty pe ply with EU Directiv	may include:			
Longevity and Upgrading	features and/or components conta Spare parts are available througho production. This battery(s) in this product comp Batteries used in the product do no	nined in the product out the warranty pe ply with EU Directive ot contain:	may include:			
Longevity and Upgrading	features and/or components conta Spare parts are available througho production. This battery(s) in this product comp	nined in the product out the warranty pe ply with EU Directive ot contain:	may include:			
Longevity and Upgrading	features and/or components conta Spare parts are available througho production. This battery(s) in this product comp Batteries used in the product do no	nined in the product out the warranty pe ply with EU Directive ot contain:	may include:			
writes Longevity and Upgrading Batteries	features and/or components conta Spare parts are available througho production.  This battery(s) in this product components  Batteries used in the product do not mercury greater the1ppm by weight	nined in the product out the warranty pe ply with EU Directive ot contain:	may include:			





	Battery type: Lithium				
Additional Information	<ul> <li>This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC.</li> <li>This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC.</li> <li>This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).</li> <li>This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U.S.</gold></li> <li>See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at <a href="http://www.hp.com/go/options">http://www.hp.com/go/options</a></li> <li>Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.</li> <li>This product contains 0% post-consumer recycled plastic (by wt.)</li> <li>This product is 95.1% recycle-able when properly disposed of at end of life.</li> </ul>				
Packaging Materials	External:	PAPER/Corrugated			
	Internal:	PLASTIC/EPE (Expanded Polyethylene)			
		PLASTIC/Polyethylene low density			
Material Usage	to the HP Ger http://www.l  Asbestos  Certain Azo  Certain Bro  Cadmium  Chlorinated  Formaldehy  Halogenate  Lead carbor  Lead and Le  Mercuric Ox  Nickel – finicarried by the  Ozone Depl  Polybromin  Polybromin  Polybromin  Polychlorin  Polychlorin  Polyvinyl Cl  voluntarily re  Radioactive	minated Flame Retardants — may not be used as flame referenced Hydrocarbons I Paraffins I	tardants in plastics to be frequently handled or		



### **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





## **HP EliteDesk 800 Small Form Factor G4 series**

Eco-Label Certifications	This product has received or is in t	he process of heina	certified to the fo	Illowing approvals and may				
& declarations	be labeled with one or more of the		certified to the re	ntowing approvats and may				
	• IT ECO declaration • US ENERGY STAR®							
	• EPEAT® Gold registered in the Ur	nited States. See htt	p://www.epeat.n	et for registration status in				
	your country. Search keyword ger							
	accessories at http://www.hp.con		,, op					
System Configuration	The configuration used for the En	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	12.0	8	12.501				
Normal Operation (Long idle)	11.68	11.90	08	11.766				
Sleep	1.101	1.164	44	1.1769				
Off	0.6302	0.625	58	0.9127				
	NOTE: Energy efficiency data liste	d is for an ENERGY S	STAR® compliant i	product if offered within the				
	model family. HP computers mark	ed with the ENERG\	/ STAR® Logo are	compliant with the				
	applicable U.S. Environmental Pro	tection Agency (EPA	A) ENERGY STAR®	specifications for				
	computers. If a model family does	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 Wir	ndows® operating sy	ystem.					
Heat Dissipation*	115VAC, 60Hz	230VAC,	50Hz	100VAC, 50Hz				
Normal Operation (Short idle)	41.1076	41.19	28	42.6284				
Normal Operation (Long idle)	39.8288	40.60	63	40.1221				
Sleep	3.7544	3.970	06	4.0132				
Off	2.149	2.13	-	2.1585				
_	NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is							
	attained for one hour.		,	•				
Declared Noise	Sound Power		Sc	ound Pressure				
Emissions	(L <sub>WAd</sub> , bels)		(L	<sub>-pAm</sub> , decibels)				
(in accordance with								
ISO 7779 and ISO 9296)								
Typically Configured — Idle	3.3			25				
Fixed Disk – Random writes	3.3 25							
Longevity and Upgrading	This product can be upgraded, por features and/or components cont			eral years. Upgradeable				
	Spare parts are available through production.	out the warranty pe	riod and or for up	to "5" years after the end of				
Batteries	This battery(s) in this product com	nply with EU Directiv	re 2006/66/EC					
	Batteries used in the product do n	ot contain:						
	Mercury greater the1ppm by weig							
	Cadmium greater than 20ppm by							
	Caumum greater than 20ppm by	weigiit						
	Battery size: CR2032 (coin cell)							





	Battery type: Lithium				
Additional Information	<ul> <li>This product is in compliance with the Restrictions of Hazardous Substances (RoHS) dire 2011/65/EC.</li> <li>This HP product is designed to comply with the Waste Electrical and Electronic Equipmen Directive – 2002/96/EC.</li> <li>This product is in compliance with California Proposition 65 (State of California; Safe Driw Water and Toxic Enforcement Act of 1986).</li> <li>This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status by country. Search keyword generator oparty option store for solar generator accessories at <a href="http://www.hp.com/go/options">http://www.hp.com/go/options</a></gold></li> <li>Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and</li> </ul>				
	This product	t contains 0% post-consumer recycled plastic (by wt.)			
Packaging Materials	• This produce <b>External:</b>	t is 95.1% recycle-able when properly disposed of at end on PAPER/Corrugated	of life.		
rackayiliy materiats		-			
	Internal:	PLASTIC/EPE (Expanded Polyethylene)			
AA		PLASTIC/Polyethylene low density			
Material Usage		does not contain any of the following substances in excessiveral Specification for the Environment at	s of regulatory limits (refer		
		p.com/hpinfo/globalcitizenship/environment/pdf/gse.pd	f):		
	<ul> <li>Asbestos</li> </ul>	.p	.,		
	Certain Azo Colorants				
	Certain Brominated Flame Retardants – may not be used as flame retardants in plastics				
	• Cadmium				
	Chlorinated Hydrocarbons     Chlorinated Paraffins				
	Chlorinated Paraffins     Formaldehyde				
		rd Diphenyl Methanes			
		nates and sulfates			
		ead compounds			
	Mercuric 0x	· · · · · · · · · · · · · · · · · · ·			
		ishes must not be used on the external surface designed to	b be frequently handled or		
	carried by the				
		eting Substances			
		ated Biphenyls (PBBs) ated Biphenyl Ethers (PBBEs)			
		lated Biphenyl Oxides (PBBOs)			
		•			
	<ul> <li>Polychlorinated Biphenyl (PCB)</li> <li>Polychlorinated Terphenyls (PCT)</li> </ul>				
	Polyvinyl Chloride (PVC) — except for wires and cables, and certain retail packaging has been				
		emoved from most applications.			
	<ul> <li>Radioactive</li> </ul>				
		(TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)			
Packaging Usage		nese guidelines to decrease the environmental impact of p			
	• Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.				
	Eliminate th	ne use of ozone-depleting substances (ODS) in packaging 1	materials.		
	<ul> <li>Design pack</li> </ul>	kaging materials for ease of disassembly.			
	Maximize th	ne use of post-consumer recycled content materials in pac	kaging materials.		
		recyclable packaging materials such as paper and corruga			
		and weight of packages to improve transportation fuel et			
	Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.				

## QuickSpecs

#### **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 EliteDesk 800 Tower G4 series

Eco-Label Certifications							
	This product has received or is in t		certified to the fo	ollowing approvals and may			
& declarations	be labeled with one or more of these marks: • IT ECO declaration						
	US ENERGY STAR®						
	• EPEAT® Gold registered in the Ur	nited States. See http	://www.epeat.n	et for registration status in			
	your country. Search keyword gen	erator on HP's 3rd pa	arty option store	for solar generator			
	accessories at http://www.hp.com		, ,	3			
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the						
		Desktop model is based on a Typically Configured Desktop.					
Energy Consumption	Jesnesp moderns suscu on a Type	.a.,ga. ca 2 cs.					
(in accordance with US							
ENERGY STAR® test							
method)	115VAC, 60Hz	230VAC, 5	50Hz	100VAC, 60Hz			
Normal Operation	17.22 W	15.78		17.40 W			
(Short idle)	17.22 W	15.70	VV	17.40 W			
	16.51 W	15.22 \	A.I	16.42 W			
Normal Operation	10.51 W	15.22	VV	10.42 W			
(Long idle)	4.001//	4.001		4.50.11			
Sleep	1.38 W	1.36 V		1.39 W			
Off	0.77 W	0.79 V		0.78 W			
	<b>NOTE:</b> Energy efficiency data liste						
	model family. HP computers mark						
	applicable U.S. Environmental Pro	tection Agency (EPA)	ENERGY STAR®	specifications for			
	computers. If a model family does	not offer ENERGY ST	ΓAR® compliant o	onfigurations, then energy			
	efficiency data listed is for a typica						
	power supply, and a Microsoft Wir						
Heat Dissipation*	115VAC, 60Hz	230VAC, 5		100VAC, 60Hz			
Normal Operation (Short	60 BTU/hr	54 BTU		59 BTU/hr			
	00 01 0/111	יסום דכ	/ 111	33 01 0/111			
idla)							
Normal Operation (Long	E6 PTII/br	E2 PTII	/hr	ES PTII/br			
Normal Operation (Long	56 BTU/hr	52 BTU/	/hr	56 BTU/hr			
Normal Operation (Long idle)							
Normal Operation (Long idle) Sleep	5 BTU/hr	5 BTU/l	hr	5 BTU/hr			
Normal Operation (Long idle)	5 BTU/hr 3 BTU/hr	5 BTU/l 3 BTU/l	hr hr	5 BTU/hr 3 BTU/hr			
Normal Operation (Long idle) Sleep	5 BTU/hr 3 BTU/hr <b>NOTE:</b> Heat dissipation is calculate	5 BTU/l 3 BTU/l	hr hr	5 BTU/hr 3 BTU/hr			
Normal Operation (Long idle) Sleep Off	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.	5 BTU/l 3 BTU/l	hr hr sured watts, ass	5 BTU/hr 3 BTU/hr uming the service level is			
Normal Operation (Long idle) Sleep	5 BTU/hr 3 BTU/hr <b>NOTE:</b> Heat dissipation is calculate	5 BTU/l 3 BTU/l	hr hr sured watts, ass	5 BTU/hr 3 BTU/hr			
Normal Operation (Long idle) Sleep Off	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.	5 BTU/l 3 BTU/l	hr hr sured watts, ass	5 BTU/hr 3 BTU/hr uming the service level is			
Normal Operation (Long idle) Sleep Off  Declared Noise	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour. Sound Power	5 BTU/l 3 BTU/l	hr hr sured watts, ass	5 BTU/hr 3 BTU/hr uming the service level is			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour. Sound Power	5 BTU/l 3 BTU/l	hr hr sured watts, ass	5 BTU/hr 3 BTU/hr uming the service level is			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour. Sound Power	5 BTU/l 3 BTU/l	hr hr sured watts, ass	5 BTU/hr 3 BTU/hr uming the service level is			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)	5 BTU/l 3 BTU/l	hr hr sured watts, ass	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure .pAm, decibels)			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured — Idle	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3	5 BTU/l 3 BTU/l	hr hr sured watts, ass	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure pam, decibels)			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)	5 BTU/l 3 BTU/l	hr hr sured watts, ass	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure .pAm, decibels)			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random writes	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  3.3	5 BTU/l 3 BTU/l ed based on the mea	hr hr sured watts, ass (L	5 BTU/hr 3 BTU/hr uming the service level is  ound Pressure  -pAm, decibels)  24 23			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  3.3  This product can be upgraded, pos	5 BTU/l 3 BTU/l ed based on the mea	hr hr sured watts, ass (L	5 BTU/hr 3 BTU/hr uming the service level is  ound Pressure  -pAm, decibels)  24 23			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random writes	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  3.3	5 BTU/l 3 BTU/l ed based on the mea	hr hr sured watts, ass (L	5 BTU/hr 3 BTU/hr uming the service level is  ound Pressure  -pAm, decibels)  24 23			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random writes	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  This product can be upgraded, posfeatures and/or components conte	5 BTU/l 3 BTU/l ed based on the mea sibly extending its u ained in the product	hr hr sured watts, ass (L seful life by seve	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure pam, decibels)  24  23 eral years. Upgradeable			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random writes	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  This product can be upgraded, posfeatures and/or components controls.	5 BTU/l 3 BTU/l ed based on the mea sibly extending its u ained in the product	hr hr sured watts, ass (L seful life by seve	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure pam, decibels)  24  23 eral years. Upgradeable			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random writes Longevity and Upgrading	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  This product can be upgraded, post features and/or components controls.  Spare parts are available through production.	5 BTU/l 3 BTU/l ed based on the mea ssibly extending its u ained in the product	seful life by seve may include:	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure pam, decibels)  24  23 eral years. Upgradeable			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random writes	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  This product can be upgraded, posfeatures and/or components controls.	5 BTU/l 3 BTU/l ed based on the mea ssibly extending its u ained in the product	seful life by seve may include:	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure pam, decibels)  24  23 eral years. Upgradeable			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random writes Longevity and Upgrading	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  This product can be upgraded, posfeatures and/or components contesting spare parts are available through production.  This battery(s) in this product components contesting spare parts are available through production.	5 BTU/l 3 BTU/l ed based on the mea ssibly extending its u ained in the product out the warranty per	seful life by seve may include:	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure pam, decibels)  24  23 eral years. Upgradeable			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random writes Longevity and Upgrading	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  This product can be upgraded, posteatures and/or components continues and some production.  This battery(s) in this product do not be attained.	5 BTU/l 3 BTU/l 3 BTU/l ed based on the mea ssibly extending its u ained in the product out the warranty per	seful life by seve may include:	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure pam, decibels)  24  23 eral years. Upgradeable			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random writes Longevity and Upgrading	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  This product can be upgraded, posteatures and/or components continues and components continues.  Spare parts are available through production.  This battery(s) in this product components used in the product do not make the sused in th	5 BTU/l 3 BTU/l 3 BTU/l ed based on the mea ssibly extending its u ained in the product out the warranty periodic contain: ht	seful life by seve may include:	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure pam, decibels)  24  23 eral years. Upgradeable			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random writes Longevity and Upgrading	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  This product can be upgraded, posteatures and/or components continues and some production.  This battery(s) in this product do not be attained.	5 BTU/l 3 BTU/l 3 BTU/l ed based on the mea ssibly extending its u ained in the product out the warranty periodic contain: ht	seful life by seve may include:	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure pam, decibels)  24  23 eral years. Upgradeable			
Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured – Idle Fixed Disk – Random writes Longevity and Upgrading	5 BTU/hr 3 BTU/hr NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)  3.3  This product can be upgraded, posteatures and/or components continues and components continues.  Spare parts are available through production.  This battery(s) in this product components used in the product do not make the sused in th	5 BTU/l 3 BTU/l 3 BTU/l ed based on the mea ssibly extending its u ained in the product out the warranty periodic contain: ht	seful life by seve may include:	5 BTU/hr 3 BTU/hr uming the service level is ound Pressure pam, decibels)  24  23 eral years. Upgradeable			





	Battery type: Lithium				
Additional Information	<ul> <li>This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC.</li> <li>This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC.</li> <li>This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).</li> <li>This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U.S. See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at <a href="http://www.hp.com/go/options">http://www.hp.com/go/options</a></gold></li> <li>Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.</li> <li>This product contains 0% post-consumer recycled plastic (by wt.)</li> <li>This product is 95.1% recycle-able when properly disposed of at end of life.</li> </ul>				
Packaging Materials	External:	PAPER/Corrugated	145 g		
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	288 g		
		PLASTIC/Polyethylene low density does not contain any of the following substances in exces	30 g		
	http://www.l  Asbestos  Certain Azo  Certain Bro  Cadmium  Chlorinated  Formaldeh  Halogenate  Lead carbo  Lead and Le  Mercuric Ox  Nickel – finicarried by the  Ozone Depl  Polybromir  Polybromir  Polychlorin  Polychlorin  Polychlorin  Polychlorin  Radioactive	minated Flame Retardants — may not be used as flame ret I Hydrocarbons I Paraffins yde ed Diphenyl Methanes nates and sulfates ead compounds kide Batteries ishes must not be used on the external surface designed to e user. leting Substances lated Biphenyls (PBBs) lated Biphenyl Ethers (PBBEs) lated Biphenyl Oxides (PBBOs) lated Biphenyl (PCB) ated Terphenyls (PCT) hloride (PVC) — except for wires and cables, and certain ret emoved from most applications.	tardants in plastics o be frequently handled or		



Packaging Usage	IID fellows the considering to the constant of
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	HP Inc. offers end-of-life HP product return and recycling programs in many geographic areas. To
and Recycling	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	This product has received or is in the process of being certified to the following approvals and may					
& declarations	be labeled with one or more of these marks:					
	• IT ECO declaration					
	• US ENERGY STAR®					
	• EPEAT® Gold registered in the Ur	nited States. See http://www.epeat	.net for registration status in			
	your country. Search keyword gen	erator on HP's 3rd party option sto	ore for solar generator			
	accessories at http://www.hp.com	n/go/options.				
System Configuration	The configuration used for the Eng	ergy Consumption and Declared No	ise Emissions data for the			
	Desktop model is based on a Typic	ally Configured Desktop.				
Energy Consumption						
(in accordance with US						
ENERGY STAR® test						
method)	115VAC, 60Hz 230VAC, 50Hz 100VAC					
Normal Operation	21 004	22.242	31 606			
(Short idle)	21.984	22.242	21.696			
Normal Operation	11 251	11.604	11 222			
(Long idle)	11.351	11.004	11.222			
Sleep	4.108	4.119	3.988			
Off	0.734	0.747	0.693			
	NOTE: Energy efficiency data liste	d is for an ENERGY STAR® compliar	nt product if offered within the			
	model family HP computers mark	ed with the ENERGY STAR® Logo ar	re compliant with the			



	applicable U.	S. Environmental Pro	otection Agency (EP	A) ENERGY STAR®	specifications for	
					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*	115	VAC, 60Hz	230VAC, 50Hz		100VAC, 50Hz	
Normal Operation (Short idle)	7	4.9654	75.84	52	73.9834	
Normal Operation (Long idle)	3	88.7069	39.56	96	38.267	
Sleep	1	4.0083	14.04	58	13.5991	
Off		2.5029	2.54	73	2.3631	
			ed based on the me	asured watts, ass	uming the service level is	
	attained for					
Declared Noise		Sound Power		S	ound Pressure	
Emissions		(Lwad, bels)		(I	<sub>-pAm</sub> , decibels)	
(in accordance with						
ISO 7779 and ISO 9296)						
Typically Configured –		3.9			28	
Idle						
Fixed Disk – Random writes		4.4			33	
Longevity and Upgrading		can be upgraded, po /or components con			eral years. Upgradeable	
	Spare parts are available throughout the warranty period and or for up to "5" years a production.				to "5" years after the end of	
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC					
	Dettavias was die the avaduat de wat santain.					
	Batteries used in the product do not contain:					
	Mercury greater the1ppm by weight					
	Cadmium greater than 20ppm by weight					
	Battery size: CR2032 (coin cell)					
	-					
Additional Information	Battery type: Lithium     This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive -					
Additional milormation	2011/65/EC.	it is in compliance wi	tii tiie kesti ittioiis o	ii nazaruous subs	italices (Rons) directive -	
	• This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE)					
	• 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.</gold>					
	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 (Exp	anded Polyethylene	)		
		PLASTIC/Polyethy	lene low density			
Material Usage	This product			bstances in exces	s of regulatory limits (refer	
-		neral Specification fo				
		np.com/hpinfo/globa			f):	
	<ul> <li>Asbestos</li> </ul>	· -	·			
	• Certain Azo	Colorants				



# QuickSpecs

	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     Ozone Depleting Substances
	Polybrominated Biphenyls (PBBs)
	Polybrominated Biphenyl Ethers (PBBEs)     Polybrominated Biphenyl Ethers (PBBEs)
	Polybrominated Biphenyl Oxides (PBBOs)
	Polychlorinated Biphenyl (PCB)  Polychlorinated Toucheryle (PCT)
	Polychlorinated Terphenyls (PCT)  Polychiad Chlorida (PNC)  Polychiad Chlorida (PNC)  Polychiad Chlorida (PNC)
	• Polyvinyl Chloride (PVC) — except for wires and cables, and certain retail packaging has been
	voluntarily removed from most applications.  • Radioactive Substances
Dackaging Heage	• 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	HP Inc. offers end-of-life HP product return and recycling programs in many geographic areas. To
and Recycling	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 FILMIEFE 1: 42: 4/2002/05/FC) as it was a feet as a
	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
<u> </u>	The second territorial and the second



### HP EliteOne 800 G4 Touch All-in-One Business PC

Eco-Label Certifications	ICh All-in-One Business PC  This product has received or is in t	the process of being	certified to the fo	llowing approvals and mav		
& 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 Ur	nited States. See ht	tp://www.epeat.ne	et for registration status in		
	your country. Search keyword ger	nerator on HP's 3rd	party option store	for solar generator		
	accessories at http://www.hp.con					
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the					
	Desktop model is based on a Typi	cally Configured De	sktop.			
Energy Consumption						
(in accordance with US						
ENERGY STAR® test						
method)	115VAC, 60Hz	230VAC,		100VAC, 60Hz		
Normal Operation (Short idle)	21.98 W	22.2		21.69 W		
Normal Operation (Long idle)	11.35 W	11.6		11.22W		
Sleep	4.10 W	4.11		3.98 W		
Off	0.73 W <b>NOTE:</b> Energy efficiency data liste	0.74		0.69 W		
	model family. HP computers mark applicable U.S. Environmental Pro computers. If a model family does efficiency data listed is for a typic power supply, and a Microsoft Wir	tection Agency (EPasson of the State of the	A) ENERGY STAR® s STAR® compliant c eaturing a hard dis	specifications for onfigurations, then energy		
Heat Dissipation*	115VAC, 60Hz	230VAC		100VAC, 60Hz		
Normal Operation	75 BTU/hr	76 BT		74 BTU/hr		
(Short idle)	75 610/111	70 010	0/111	74 610/111		
Normal Operation	39 BTU/hr	40 BT	II/hr	38 BTU/hr		
(Long idle)	33 51 67111	70 01	0/111	30 21 0/111		
Sleep	14 BTU/hr	14 BT	U/hr	13 BTU/hr		
Off	2 BTU/hr	2 BTL				
-	<b>NOTE:</b> Heat dissipation is calculat attained for one hour.			<del>-</del>		
Declared Noise	Sound Power		So	ound Pressure		
Emissions	(L <sub>WAd</sub> , bels)		(L	<sub>pAm</sub> , decibels)		
(in accordance with						
ISO 7779 and ISO 9296)						
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 through production.	out the warranty pe	eriod and or for up	to "5" years after the end of		
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC					
	Batteries used in the product do n	ot contain:				
	Mercury greater the1ppm by weig	ht				
	Cadmium greater than 20ppm by	weight				
	Battery size: CR2032 (coin cell)					





	Battery type: Lithium				
Additional Information	<ul> <li>This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive 2011/65/EC.</li> <li>This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WE Directive – 2002/96/EC.</li> <li>This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).</li> <li>This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status by country. Search keyword generator on HP's party option store for solar generator accessories at <a href="http://www.hp.com/go/options">http://www.hp.com/go/options</a></gold></li> <li>Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1</li> <li>This product contains 0% post-consumer recycled plastic (by wt.)</li> <li>This product is 95.1% recycle-able when properly disposed of at end of life.</li> </ul>				
Packaging Materials	External:	PAPER/Corrugated	1419 g		
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	694 g		
		PLASTIC/Polyethylene low density	94 g		
Material Usage	to the HP Ger http://www.f	Hydrocarbons Paraffins  de d Diphenyl Methanes nates and sulfates ead compounds ide Batteries shes must not be used on the external surface designed to user. eting Substances ated Biphenyls (PBBs) ated Biphenyl Ethers (PBBEs) ated Biphenyl Oxides (PBBOs) ated Biphenyl (PCB) ated Terphenyls (PCT) nloride (PVC) — except for wires and cables, and certain referenced from most applications.	tardants in plastics to be frequently handled or		
	<ul> <li>Eliminate the materials.</li> <li>Eliminate the Design packers of Maximize the Use readily</li> <li>Reduce size</li> </ul>	ne use of heavy metals such as lead, chromium, mercury a ne use of ozone-depleting substances (ODS) in packaging kaging materials for ease of disassembly. The use of post-consumer recycled content materials in packaging materials in packaging materials such as paper and corrugate and weight of packages to improve transportation fuel exaging materials are marked according to ISO 11469 and Exaging materials are marked according to ISO 11469 and Exaging materials are marked according to ISO 11469.	and cadmium in packaging materials.  ckaging materials. ated materials.  fficiency.		

#### **Features**

<b>End-of-life Management</b>
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	This product has received or is in the		following approvals and may			
& declarations	be labeled with one or more of these marks:  • IT ECO declaration					
	• US ENERGY STAR®					
	• EPEAT® Gold registered in the Unit	ted States. See http://www.epeat	net for registration status in			
	your country. Search keyword gene					
	accessories at http://www.hp.com/	go/options.	_			
System Configuration	The configuration used for the Ener Notebook model is based on a Typio		ise Emissions data for the			
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	11.35 W	11.60 W	11.22W			
(Long idle)						
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® compliar	nt product if offered within the			
	model family. HP computers marke	d with the ENERGY STAR® Logo a	re compliant with the			
	applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for					
	computers. If a model family does r					
	efficiency data listed is for a typical		disk drive, a high efficiency			
	power supply, and a Microsoft Wind					
Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz			
Normal Operation (Short idle)	75 BTU/hr	76 BTU/hr	74 BTU/hr			
Normal Operation	39 BTU/hr	40 BTU/hr	38 BTU/hr			
(Long idle)						
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, a	ssuming the service level is			
	attained for one hour.		-			



Declared Noise		Sound Power	So	und Pressure
Emissions		(L <sub>wAd</sub> , bels)		DAM, decibels)
(in accordance with		(-WAU) Colo,	,-,	only decision,
ISO 7779 and ISO 9296)				
Typically Configured – Idle		3.2 20		
Fixed Disk – Random		3.5		28
writes				
Longevity and Upgrading		luct can be upgraded, possibly extending its useful life by several years. Upgradeable and/or components contained in the product may include:		
	production.	are available throughout the warranty p		o "5" years after the end of
Batteries	This battery(	(s) in this product comply with EU Direct	ive 2006/66/EC	
	Batteries use	ed in the product do not contain:		
		ater the1ppm by weight		
	Cadmium gre	eater than 20ppm by weight		
	D-44	CD2022 (:		
	Battery size:	CR2032 (coin cell)		
Additional Information		ct is in compliance with the Restrictions	of Hazardous Subst	ances (RoHS) directive -
	2011/65/EC.			
	• This HP pro	duct is designed to comply with the Wa	ste Electrical and El	ectronic Equipment (WEEE)
	Directive – 2			
	• This product is in compliance with California Proposition 65 (State of California; Safe 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.</gold>			
	See http://www.epeat.net for registration status by country. Search keyword general			
	party option store for solar generator accessories at <a href="http://www.hp.com/go/options">http://www.hp.com/go/options</a> • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and IS			
		ct contains 0% post-consumer recycled		per 150 1 1 105 and 150 10 15.
		ct is 95.1% recycle-able when properly		f life.
Packaging Materials	External:	PAPER/Corrugated	•	1419 g
	Internal:	PLASTIC/EPE (Expanded Polyethylen	e)	694 g
	meeriide.	PLASTIC/Polyethylene low density	ic,	94 q
Material Usage	This product	does not contain any of the following s	ubstances in evenes	
riaterial osage		neral Specification for the Environment		or regulatory tillings (refer
		hp.com/hpinfo/globalcitizenship/enviro		):
	• Asbestos	,	, , , , , , , , , , , , , , , , , , ,	•
	Certain Azo Colorants			
	Certain Brominated Flame Retardants – may not be used as flame retardants in plastics			
	• Cadmium			
	Chlorinated Hydrocarbons			
	Chlorinated Paraffins     Formaldehyde			
	Formaldehyde     Halogenated Diphenyl Methanes			
	Halogenated Diphenyl Methanes     Lead carbonates and sulfates			
	Lead and Lead compounds			
		kide Batteries		
	<ul> <li>Nickel – finishes must not be used on the external surface designed to be frequently handle carried by the user.</li> </ul>			be frequently handled or
		e user.		
	carried by th • Ozone Depl	leting Substances		
	carried by th • Ozone Depl • Polybromir			





	<ul> <li>Polybrominated Biphenyl Oxides (PBBOs)</li> <li>Polychlorinated Biphenyl (PCB)</li> <li>Polychlorinated Terphenyls (PCT)</li> <li>Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.</li> <li>Radioactive Substances</li> </ul>
	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.
	<ul> <li>Design packaging materials for ease of disassembly.</li> <li>Maximize the use of post-consumer recycled content materials in packaging materials.</li> <li>Use readily recyclable packaging materials such as paper and corrugated materials.</li> <li>Reduce size and weight of packages to improve transportation fuel efficiency.</li> <li>Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.</li> </ul>
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_14KCertificate.pdf and
	http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf



# HP EliteOne 800 G4 Non-Touch All-in-One Business PC

Eco-Label Certifications	This product has received or is in the process of being certified to the following approvals and may				
& declarations	be labeled with one or more of these marks: • IT ECO declaration				
	• US ENERGY STAR®		_		
	• EPEAT® Gold registered in the Unit				
	your country. Search keyword generator on HP's 3rd party option store for so				
	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	Notebook model is based on a Typic	ally configured Notebook.			
(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	11.35 W	11.60 W	11.22W		
(Long idle)					
Sleep	4.10 W	4.11 W	3.98 W		
Off	0.73 W	0.74 W	0.69 W  mpliant product if offered within the		
	U.S. Environmental Protection Ager	ncy (EPA) ENERGY STAR® spe ® compliant configurations, ng a hard disk drive, a high	ogo are compliant with the applicable ecifications for computers. If a model then energy efficiency data listed is efficiency power supply, and a		
Uant Dissipation*	115VAC, 60Hz		10000 600-		
Heat Dissipation* Normal Operation	75 BTU/hr	<b>230VAC, 50Hz</b> 76 BTU/hr	<b>100VAC, 60Hz</b> 74 BTU/hr		
(Short idle)	/5 610/111	70010/111	74 610/111		
Normal Operation	39 BTU/hr	39 BTU/hr 40 BTU/hr 3			
(Long idle)	33 51 6/111	40 D1 0/111	38 BTU/hr		
Sleep	14 BTU/hr	14 BTU/hr	13 BTU/hr		
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr		
	<b>NOTE:</b> Heat dissipation is calculated		-		
	attained for one hour.		<b>3</b>		
Declared Noise	Sound Power		Sound Pressure		
Emissions	(L <sub>WAd</sub> , bels)		(L <sub>pAm</sub> , decibels)		
(in accordance with					
ISO 7779 and ISO 9296)					
Typically Configured – Idle	3.2		20		
Fixed Disk – Random writes	3.5		28		
Longevity and Upgrading	This product can be upgraded, poss	ibly extending its useful life	by several years. Upgradeable		
	features and/or components contained in the product may include:				
		ıt the warranty period and o	or for up to "5" years after the end of		
<u> </u>	production.	'-  =  =  -  -  -  -  -  -  -  -	e le c		
Batteries	This battery(s) in this product comp	ly with EU Directive 2006/6	6/EC		
	Pattorios usad in the product de pat	t contain:			
	Batteries used in the product do not				
	Mercury greater the1ppm by weight				
	Cadmium greater than 20nnm hu w	eiaht			
	Cadmium greater than 20ppm by w	eight			





	Battery type:	Lithium		
Additional Information	<ul> <li>This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive 2011/65/EC.</li> <li>This HP product is designed to comply with the Waste Electrical and Electronic Equipment (W Directive – 2002/96/EC.</li> </ul>			
		t is in compliance with California Proposition 65 (	State of California; Safe Drinking	
		oxic Enforcement Act of 1986).		
		t is in compliance with the IEEE 1680 (EPEAT) sta		
		ww.epeat.net for registration status by country. S store for solar generator accessories at http://wy		
		ts weighing over 25 grams used in the product ar		
		t contains 0% post-consumer recycled plastic (by		
Bullion to Many Calls		t is 95.1% recycle-able when properly disposed o		
Packaging Materials	External:	PAPER/Corrugated	1419 g	
	Internal:	PLASTIC/EPE (Expanded Polyethylene)	694 g	
	<b></b>	PLASTIC/Polyethylene low density	94 g	
Material Usage		does not contain any of the following substances al Specification for the Environment at	in excess of regulatory limits (refer to	
		at Specification for the Environment at pp.com/hpinfo/globalcitizenship/environment/pc	lf/ase.ndf):	
	• Asbestos	ipicon, ripinio, grobatcicizensino, environmente, pe	.,, 55c.pai,,	
	• Certain Azo	Colorants		
	Certain Brominated Flame Retardants – may not be used as flame retardants in plastics			
	• Cadmium			
		Chlorinated Hydrocarbons     Chlorinated Paraffine		
	Chlorinated Paraffins     Formaldohydo			
	<ul><li>Formaldehyde</li><li>Halogenated Diphenyl Methanes</li></ul>			
		Lead carbonates and sulfates		
	• Lead and Le	ead compounds		
	Mercuric Oxide Batteries			
	Nickel – finishes must not be used on the external surface designed to be frequently handle carried by the user.		esigned to be frequently handled or	
		Ozone Depleting Substances     Delubraminated Riphonula (RRRs)		
	<ul> <li>Polybrominated Biphenyls (PBBs)</li> <li>Polybrominated Biphenyl Ethers (PBBEs)</li> </ul>			
		ated Biphenyl Oxides (PBBOs)		
		ated Biphenyl (PCB)		
	Polychlorinated Terphenyls (PCT)			
		nloride (PVC) – except for wires and cables, and co	ertain retail packaging has been	
	Radioactive	emoved from most applications.		
		: Substances (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TB	το)	
Packaging Usage		nese guidelines to decrease the environmental im		
		_		
	• Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.			
	• Eliminate th	ne use of ozone-depleting substances (ODS) in pa	ckaging materials.	
		kaging materials for ease of disassembly.		
	1 .	ne use of post-consumer recycled content materi	als in packaging materials.	
		recyclable packaging materials such as paper and		
	_		_	
	<ul> <li>Reduce size and weight of packages to improve transportation fuel efficiency.</li> <li>Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.</li> </ul>			



#### **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

<b>Eco-Label Certifications</b>	This product has received or is in the process of being certified to the following approvals and may be				
& declarations	labeled with one or more of these marks:				
	• IT ECO declaration				
	US ENERGY STAR®				
	• EPEAT® Gold registered in the U	nited States. See http://www.epea	t.net for registration status in		
		nerator on HP's 3rd party option st	ore for solar generator		
	accessories at http://www.hp.com				
System Configuration		nergy Consumption and Declared N	oise Emissions data for the		
	Notebook model is based on a Ty	pically Configured Notebook.			
Energy Consumption					
(in accordance with US					
ENERGY STAR® test					
method)	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz		
Normal Operation	21.98 W	22.24W	21.69 W		
(Short idle)					
Normal Operation	11.35 W	11.60 W	11.22W		
(Long idle)					
Sleep	4.10 W	4.11 W	3.98 W		
Off	0.73 W	0.74 W	0.69 W		
		ed is for an ENERGY STAR® complia			
	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				
		uring a hard disk drive, a high effici	ency power supply, and a		
	Microsoft Windows® operating sy				
Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz		
Normal Operation	75 BTU/hr	76 BTU/hr	74 BTU/hr		
(Short idle)					
Normal Operation	39 BTU/hr	40 BTU/hr	38 BTU/hr		
(Long idle)					
Sleep	14 BTU/hr	14 BTU/hr	13 BTU/hr		
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr		
	I .	ted based on the measured watts,	assuming the service level is		
	attained for one hour.				



Declared Noise		Sound Power		Sound Pressure
Emissions		(L <sub>WAd</sub> , bels)		(L <sub>pAm</sub> , decibels)
(in accordance with		·		
ISO 7779 and ISO 9296)				
Typically Configured – Idle		3.2		20
Fixed Disk – Random writes		3.5		28
Longevity and Upgrading		can be upgraded, possibly extending i /or components contained in the prod		veral years. Upgradeable
	Spare parts a production.	are available throughout the warranty	period and or for I	up to "5" years after the end of
Batteries	This battery	s) in this product comply with EU Direc	tive 2006/66/EC	
		ed in the product do not contain:		
	, ,	ater the1ppm by weight		
	Cadmium gre	eater than 20ppm by weight		
	Datte:	CD2022 (:!!)		
	Battery size: Battery type	CR2032 (coin cell)		
Additional Information		t is in compliance with the Restriction:	of Hazardous Su	hstances (RoHS) directive -
Additional milormation	2011/65/EC.		3 01 11a2a1 a0a3 3a	bstances (Norts) un ective
	1	duct is designed to comply with the W	aste Electrical and	l Electronic Equipment (WEEE)
	Directive – 2			4, 1, 2, 3, 4, 1, 2, 3, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
	This produce	ct is in compliance with California Prop	osition 65 (State o	of California; Safe Drinking Water
		forcement Act of 1986).		
	• This product is in compliance with the IEEE 1680 (EPEAT) standard at the <gold> level in the U.S. See</gold>			
	http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party			
	option store for solar generator accessories at <a href="http://www.hp.com/go/options">http://www.hp.com/go/options</a> • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.			
				red per ISO11469 and ISO1043.
		ct contains 0% post-consumer recycled ct is 95.1% recycle-able when properly		d of life
Packaging Materials	External:	PAPER/Corrugated	uisposeu oi at eii	1419 g
rackaging Plateriats	Internal:	PLASTIC/EPE (Expanded Polyethyler	اما	694 g
	miternat.		ie <i>)</i>	
	<b>T</b> I.	PLASTIC/Polyethylene low density		94 g
Material Usage		does not contain any of the following ral Specification for the Environment a		ess of regulatory limits (refer to
		hp.com/hpinfo/globalcitizenship/envir		ndf):
	• Asbestos	np.com, npimo, globalcitizensiip, chvii	omment, par, goe.	5017.
	Certain Azo	Colorants		
	• Certain Bro	minated Flame Retardants - may not l	oe used as flame r	etardants in plastics
	<ul> <li>Cadmium</li> </ul>			•
		l Hydrocarbons		
	<ul> <li>Chlorinated</li> </ul>			
	Formaldeh			
		ed Diphenyl Methanes nates and sulfates		
		nates and sultates ead compounds		
		kide Batteries		
		ishes must not be used on the external	surface designed	to he frequently handled or
	carried by th		. Jan race acsigned	. 10 00 equently number of
		leting Substances		
		nated Biphenyls (PBBs)		
		nated Biphenyl Ethers (PBBEs)		
	. Styllionin	acca siphenyt Ethers (i bbes)		





	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.      Reduce size and weight of packages to improve transportation fuel efficiency.      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	HP Inc. offers end-of-life HP product return and recycling programs in many geographic areas. To
Management and Recycling	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_C
	ertificate.pdf
	and
	http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

# HP EliteDesk 800 G4 65W Desktop Mini Business PC

<b>Eco-Label Certifications</b>	This product has received or is in the process of being certified to the following approvals and may be				
& declarations	labeled with one or more of these	labeled with one or more of these marks:			
	IT ECO declaration				
	US ENERGY STAR®				
	EPEAT <sup>©</sup> 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	3.59 W	3.64 W	3.46 W		
(Short idle)					
Normal Operation	3.11 W 3.14 W 3.04 W				
(Long idle)					



Sleep	0.63 W	0.67 W	0.63 W	
Off	0.60 W	0.64 W	0.59 W	
	family . HP computers marked with Environmental Protection Agency (E family does not offer ENERGY STAR	the ENERGY STAR® Lo :PA) ENERGY STAR® sp ® compliant configura ng a hard disk drive, a	pliant product if offered within the model go are compliant with the applicable U.S. pecifications for computers. If a model tions, then energy efficiency data listed is high efficiency power supply, and a	
Heat Dissipation*	115VAC, 60Hz	230VAC, 50H	iz 100VAC, 60Hz	
Normal Operation (Short idle)	12 BTU/hr	12 BTU/hr		
Normal Operation (Long idle)	11 BTU/hr	11 BTU/hr		
Sleep	2 BTU/hr	2 BTU/hr	2 BTU/hr	
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr	
Declared Noise Emissions	*NOTE: Heat dissipation is calculate attained for one hour.  Sound Power (LwAd, bels)	d based on the measu	Sound Pressure (L <sub>pAm</sub> , decibels)	
(in accordance with	- ', '		., .	
ISO 7779 and ISO 9296)				
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 comp	ly with EU Directive 20	006/66/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	- 20 • This (WE • This Drin • This www • Plas ISO	s product is in compliance with the Restrictions of Haze 11/65/EC.  3 HP product is designed to comply with the Waste Ele EE) Directive – 2002/96/EC.  5 product is in compliance with California Proposition 6 king Water and Toxic Enforcement Act of 1986).  6 product is in compliance with the IEEE 1680 (EPEAT we speat the product is the product is parts weighing over 25 grams used in the product 1043.  6 product contains 24.1% post-consumer recycled places product is 91.7% recycle-able when properly disposes	ctrical and Electronic Equipment 55 (State of California; Safe ) standard at the gold level, see t are marked per ISO11469 and stic (by wt.)
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 p	ackaging materials contains at least 25% recycled co	ntent.
	http://www.i	ral Specification for the Environment at hp.com/hpinfo/globalcitizenship/environment/pdf/gsestos eain Azo Colorants eain Brominated Flame Retardants — may not be used mium orinated Hydrocarbons orinated Paraffins maldehyde ogenated Diphenyl Methanes d carbonates and sulfates d and Lead compounds curic Oxide Batteries eal — finishes must not be used on the external surface dled or carried by the user. ne Depleting Substances ybrominated Biphenyl (PBBs) ybrominated Biphenyl Ethers (PBBEs) ybrominated Biphenyl Oxides (PBBOs) ychlorinated Terphenyls (PCT) yvinyl Chloride (PVC) — except for wires and cables, and untarily removed from most applications. ioactive Substances utyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (	as flame retardants in plastics e designed to be frequently d certain retail packaging has been

Packaging Usage	<ul> <li>HP follows these guidelines to decrease the environmental impact of product packaging:</li> <li>Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.</li> <li>Eliminate the use of ozone-depleting substances (ODS) in packaging materials.</li> <li>Design packaging materials for ease of disassembly.</li> <li>Maximize the use of post-consumer recycled content materials in packaging materials.</li> <li>Use readily recyclable packaging materials such as paper and corrugated materials.</li> <li>Reduce size and weight of packages to improve transportation fuel efficiency.</li> <li>Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.</li> </ul>
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: <a href="http://www.hp.com/go/reuse-recycle">http://www.hp.com/go/reuse-recycle</a> 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: <a href="http://www.hp.com/go/recyclers">http://www.hp.com/go/recyclers</a> . These instructions may be used by recyclers and other WEEE treatment facilities as well as HP 0EM 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_IS     0_14K_Certificate.pdf     and     http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf





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®				
		the United States. See http://ww	w eneat net for registration		
	status in your country.	the office states. See hetp.//ww	w.epeat.net for registration		
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	4457/46 6011-	220405 504-	100005 5000-		
<b>method)</b> Normal Operation	<b>115VAC, 60Hz</b> 3.59 W	230VAC, 50Hz	<b>100VAC, 60Hz</b> 3.46 W		
(Short idle)		3.64 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		
	family does not offer ENERGY STA for a typically configured PC feature	ring a hard disk drive, a high efficio	energy efficiency data listed is		
Heat Dissipation*	family does not offer ENERGY STA	R® compliant configurations, then ring a hard disk drive, a high efficions.	energy efficiency data listed is		
Normal Operation (Short idle)	family does not offer ENERGY STA for a typically configured PC featu Microsoft Windows® operating sys	R® compliant configurations, then ring a hard disk drive, a high efficionstem.	energy efficiency data listed is ency power supply, and a		
Heat Dissipation* Normal Operation (Short idle) Normal Operation (Long idle)	family does not offer ENERGY STA for a typically configured PC featur Microsoft Windows® operating sys	R® compliant configurations, then ring a hard disk drive, a high efficientem.  230VAC, 50Hz	energy efficiency data listed is ency power supply, and a		
Normal Operation (Short idle) Normal Operation (Long idle) Sleep	family does not offer ENERGY STA for a typically configured PC featur Microsoft Windows® operating sys 115VAC, 60Hz 12 BTU/hr	R® compliant configurations, then ring a hard disk drive, a high effici stem. 230VAC, 50Hz 12 BTU/hr	n energy efficiency data listed is ency power supply, and a  100VAC, 60Hz 12 BTU/hr 10 BTU/hr 2 BTU/hr		
Normal Operation (Short idle) Normal Operation (Long idle) Sleep	family does not offer ENERGY STA for a typically configured PC feature Microsoft Windows® operating sys 115VAC, 60Hz 12 BTU/hr 11 BTU/hr	R® compliant configurations, then ring a hard disk drive, a high efficientem.  230VAC, 50Hz 12 BTU/hr 11 BTU/hr	energy efficiency data listed is ency power supply, and a  100VAC, 60Hz  12 BTU/hr  10 BTU/hr		
Normal Operation (Short idle) Normal Operation (Long idle) Sleep Off	family does not offer ENERGY STA for a typically configured PC feature. Microsoft Windows® operating syssess.  115VAC, 60Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr *NOTE: Heat dissipation is calculat attained for one hour.	R® compliant configurations, then ring a hard disk drive, a high efficientem.  230VAC, 50Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr	100VAC, 60Hz 100VAC, 60Hz 12 BTU/hr 10 BTU/hr 2 BTU/hr 2 BTU/hr assuming the service level is		
Normal Operation (Short idle) Normal Operation (Long idle) Sleep Off	family does not offer ENERGY STA for a typically configured PC feature Microsoft Windows® operating sys  115VAC, 60Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr *NOTE: Heat dissipation is calculate attained for one hour.	R® compliant configurations, then ring a hard disk drive, a high efficientem.  230VAC, 50Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr	100VAC, 60Hz 100VAC, 60Hz 12 BTU/hr 10 BTU/hr 2 BTU/hr 2 BTU/hr assuming the service level is		
Normal Operation (Short idle) Normal Operation (Long idle) Sleep Off  Declared Noise Emissions	family does not offer ENERGY STA for a typically configured PC feature. Microsoft Windows® operating syssess.  115VAC, 60Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr *NOTE: Heat dissipation is calculat attained for one hour.	R® compliant configurations, then ring a hard disk drive, a high efficientem.  230VAC, 50Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr	100VAC, 60Hz 100VAC, 60Hz 12 BTU/hr 10 BTU/hr 2 BTU/hr 2 BTU/hr assuming the service level is		
Normal Operation (Short idle) Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with	family does not offer ENERGY STA for a typically configured PC feature Microsoft Windows® operating sys  115VAC, 60Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr *NOTE: Heat dissipation is calculate attained for one hour.	R® compliant configurations, then ring a hard disk drive, a high efficientem.  230VAC, 50Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr	100VAC, 60Hz 100VAC, 60Hz 12 BTU/hr 10 BTU/hr 2 BTU/hr 2 BTU/hr assuming the service level is		
Normal Operation (Short idle) Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	family does not offer ENERGY STA for a typically configured PC feature Microsoft Windows® operating sys  115VAC, 60Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr *NOTE: Heat dissipation is calculate attained for one hour.	R® compliant configurations, then ring a hard disk drive, a high efficientem.  230VAC, 50Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr	100VAC, 60Hz 100VAC, 60Hz 12 BTU/hr 10 BTU/hr 2 BTU/hr 2 BTU/hr assuming the service level is		
Normal Operation (Short idle) Normal Operation (Long idle) Sleep Off  Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) Typically Configured — dle	family does not offer ENERGY STA for a typically configured PC feature Microsoft Windows® operating sys  115VAC, 60Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr *NOTE: Heat dissipation is calculat attained for one hour.  Sound Power (LwAd, bels)	R® compliant configurations, then ring a hard disk drive, a high efficientem.  230VAC, 50Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr	100VAC, 60Hz 100VAC, 60Hz 12 BTU/hr 10 BTU/hr 2 BTU/hr 2 BTU/hr assuming the service level is  Sound Pressure (L <sub>pAm</sub> , decibels)		
Normal Operation (Short idle) Normal Operation	family does not offer ENERGY STA for a typically configured PC feature Microsoft Windows® operating sys  115VAC, 60Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr *NOTE: Heat dissipation is calculat attained for one hour.  Sound Power (LwAd, bels)	R® compliant configurations, then ring a hard disk drive, a high efficientem.  230VAC, 50Hz 12 BTU/hr 11 BTU/hr 2 BTU/hr 2 BTU/hr	100VAC, 60Hz 100VAC, 60Hz 12 BTU/hr 10 BTU/hr 2 BTU/hr 2 BTU/hr assuming the service level is  Sound Pressure (L <sub>pAm</sub> , decibels)		





Batteries	Optional expansion base docking station I 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.  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	<ul> <li>This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC.</li> <li>This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC.</li> <li>This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).</li> <li>This product is in compliance with the IEEE 1680 (EPEAT<sup>(1)</sup>) standard at the gold level, see www.epeat.net</li> <li>Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.</li> <li>This product contains 24.1% post-consumer recycled plastic (by wt.)</li> <li>This product is 91.7% recycle-able when properly disposed of at end of life.</li> </ul>		
Packaging Materials	External:	PAPER/Corrugated	322 g
	Internal:	PLASTIC/Polyethylene Expanded - EPE	32 g
		PLASTIC/Polyethylene High density - HDPE	5 g
		packaging material is made from 0% recycled content.	
Material Usage	This product the HP Gener	ackaging materials contains at least 25% recycled content does not contain any of the following substances in exces al Specification for the Environment at np.com/hpinfo/globalcitizenship/environment/pdf/gse.pd	s of regulatory limits (refer to
	<ul> <li>Asbestos</li> <li>Certain Azo Colorants</li> <li>Certain Brominated Flame Retardants – may not be used as flame retardants in plastics</li> <li>Cadmium</li> <li>Chlorinated Hydrocarbons</li> <li>Chlorinated Paraffins</li> <li>Formaldehyde</li> <li>Halogenated Diphenyl Methanes</li> <li>Lead carbonates and sulfates</li> <li>Lead and Lead compounds</li> <li>Mercuric Oxide Batteries</li> <li>Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user.</li> <li>Ozone Depleting Substances</li> <li>Polybrominated Biphenyls (PBBs)</li> <li>Polybrominated Biphenyl Ethers (PBBEs)</li> </ul>		



	<ul> <li>Polybrominated Biphenyl Oxides (PBBOs)</li> <li>Polychlorinated Biphenyl (PCB)</li> <li>Polychlorinated Terphenyls (PCT)</li> <li>Polyvinyl Chloride (PVC) — except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.</li> <li>Radioactive Substances</li> <li>Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)</li> </ul>
Packaging Usage	<ul> <li>HP follows these guidelines to decrease the environmental impact of product packaging:</li> <li>Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.</li> <li>Eliminate the use of ozone-depleting substances (ODS) in packaging materials.</li> <li>Design packaging materials for ease of disassembly.</li> <li>Maximize the use of post-consumer recycled content materials in packaging materials.</li> <li>Use readily recyclable packaging materials such as paper and corrugated materials.</li> <li>Reduce size and weight of packages to improve transportation fuel efficiency.</li> <li>Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.</li> </ul>
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: <a href="http://www.hp.com/go/reuse-recycle">http://www.hp.com/go/reuse-recycle</a> 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: <a href="http://www.hp.com/go/recyclers">http://www.hp.com/go/recyclers</a> . 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_IS     0_14K_Certificate.pdf     and     http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf





ЦD	ElitaDac	r one ca	OFW Dock	ton Mini R	usiness PC
HP	Eliteves	K 800 G4	· 95W Desk	TOD MINI B	usiness 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:				
	<ul> <li>IT ECO declaration</li> <li>US ENERGY STAR®</li> </ul>				
	<ul> <li>EPEAT<sup> </sup></li></ul>	the United States, See	e http://www.er	peat.net for registration	
	status in your country.	the office states. See		seatifier for registration	
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		•		100005 500-	
method)	115VAC, 60Hz	230VAC, 50	nz	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	
Heat Dissipation*	Microsoft Windows® operating sys	tem. 230VAC, 50	Hz	100VAC, 60Hz	
Normal Operation	12 BTU/hr	12 BTU/hi		12 BTU/hr	
(Short idle)	·				
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 calculate attained for one hour.	ed based on the meas	ured watts, assi	uming the service level is	
Declared Noise	Sound Power			ound Pressure	
Emissions	(L <sub>WAd</sub> , bels)		(L	<sub>-pAm</sub> , decibels)	
(in accordance with ISO 7779 and ISO 9296)					
Typically Configured – Idle	2.8		19		
Fixed Disk – Random writes	2.8			19	
Longevity and Upgrading	This product can be upgraded, pos	sihly extending its use	ful life by sever	al ugare . Un gradoable	





	0-4:1	i b dlii			
	Optional expansion base docking station     Townstand Program Port				
	• 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 use	d in the product do not contain:			
		greater the1ppm by weight			
	Cadmium	n greater than 20ppm by weight			
		CR2032 (coin cell)			
	Battery type:	Lithium			
Additional Information	• This	product is in compliance with the Restrictions of Hazardo	us Substances (RoHS) directive		
Additional mile mation		11/65/EC.	us substances (Norts) un ective		
		HP product is designed to comply with the Waste Electric	al and Electronic Equipment		
		EE) Directive – 2002/96/EC.	a. aa <b>-  </b> a. p		
		product is in compliance with California Proposition 65 (S	tate of California; Safe		
		king Water and Toxic Enforcement Act of 1986).			
	• This	product is in compliance with the IEEE 1680 (EPEAT <sup>[]</sup> ) star	ndard at the gold level, see		
	www	v.epeat.net	-		
	• Plas	tics parts weighing over 25 grams used in the product are	marked per ISO11469 and		
	IS01	ISO1043.			
	<ul> <li>This product contains 24.1% post-consumer recycled plastic (by wt.)</li> </ul>				
	• This	product is 91.7% recycle-able when properly disposed of	at end of life.		
Packaging Materials	External:	PAPER/Corrugated	322 g		
rackaging Platerials					
	Internal:	PLASTIC/Polyethylene Expanded - EPE	32 g		
		PLASTIC/Polyethylene High density - HDPE	5 g		
		packaging material is made from 0% recycled content.			
		ackaging materials contains at least 25% recycled conten			
Material Usage		does not contain any of the following substances in exces	s of regulatory limits (refer to		
	the HP General Specification for the Environment at				
	http://www.h	np.com/hpinfo/globalcitizenship/environment/pdf/gse.pc	17):		
	a Ash	netos			
	<ul> <li>Asbestos</li> <li>Certain Azo Colorants</li> <li>Certain Brominated Flame Retardants – may not be used as flame retardants in plastics</li> </ul>				
	▲ ( ort		amo rotardante in plactice		
		•	ame retardants in plastics		
	• Cadı	mium	ame retardants in plastics		
	• Cadı • Chlo	mium rinated Hydrocarbons	ame retardants in plastics		
	• Cadı • Chlo • Chlo	mium rinated Hydrocarbons rinated Paraffins	ame retardants in plastics		
	<ul><li>Cadı</li><li>Chlo</li><li>Chlo</li><li>Forn</li></ul>	mium rinated Hydrocarbons rinated Paraffins naldehyde	ame retardants in plastics		
	<ul><li>Cadı</li><li>Chlo</li><li>Chlo</li><li>Forn</li><li>Halo</li></ul>	mium rinated Hydrocarbons rinated Paraffins	ame retardants in plastics		
	<ul><li>Cadı</li><li>Chlo</li><li>Chlo</li><li>Forn</li><li>Halo</li><li>Leac</li></ul>	mium rinated Hydrocarbons rinated Paraffins naldehyde ogenated Diphenyl Methanes	ame retardants in plastics		
	<ul><li>Cadı</li><li>Chlo</li><li>Chlo</li><li>Forn</li><li>Halo</li><li>Leac</li><li>Leac</li></ul>	mium rinated Hydrocarbons rinated Paraffins naldehyde ogenated Diphenyl Methanes d carbonates and sulfates	ame retardants in plastics		
	<ul> <li>Cadr</li> <li>Chlo</li> <li>Chlo</li> <li>Forn</li> <li>Halo</li> <li>Lead</li> <li>Lead</li> <li>Mero</li> </ul>	mium rinated Hydrocarbons rinated Paraffins naldehyde genated Diphenyl Methanes d carbonates and sulfates d and Lead compounds			
	<ul> <li>Cadr</li> <li>Chlo</li> <li>Chlo</li> <li>Forn</li> <li>Halo</li> <li>Lead</li> <li>Lead</li> <li>Mero</li> <li>Nick</li> </ul>	mium rinated Hydrocarbons rinated Paraffins naldehyde genated Diphenyl Methanes d carbonates and sulfates d and Lead compounds curic Oxide Batteries			
	<ul> <li>Cadr</li> <li>Chlo</li> <li>Chlo</li> <li>Forn</li> <li>Halo</li> <li>Lead</li> <li>Lead</li> <li>Mero</li> <li>Nick</li> <li>hano</li> <li>Ozor</li> </ul>	mium rinated Hydrocarbons rinated Paraffins naldehyde genated Diphenyl Methanes d carbonates and sulfates d and Lead compounds curic Oxide Batteries el – finishes must not be used on the external surface des dled or carried by the user. ne Depleting Substances			
	<ul> <li>Cadr</li> <li>Chlo</li> <li>Chlo</li> <li>Forn</li> <li>Halo</li> <li>Lead</li> <li>Lead</li> <li>Mero</li> <li>Nick</li> <li>hano</li> <li>Ozoo</li> <li>Poly</li> </ul>	mium rinated Hydrocarbons rinated Paraffins naldehyde genated Diphenyl Methanes d carbonates and sulfates d and Lead compounds curic Oxide Batteries el – finishes must not be used on the external surface des dled or carried by the user. ne Depleting Substances rbrominated Biphenyls (PBBs)			
	<ul> <li>Cadr</li> <li>Chlo</li> <li>Chlo</li> <li>Forn</li> <li>Halo</li> <li>Lead</li> <li>Lead</li> <li>Mero</li> <li>Nick</li> <li>hano</li> <li>Ozoo</li> <li>Poly</li> </ul>	mium rinated Hydrocarbons rinated Paraffins naldehyde genated Diphenyl Methanes d carbonates and sulfates d and Lead compounds curic Oxide Batteries el – finishes must not be used on the external surface des dled or carried by the user. ne Depleting Substances			



	<ul> <li>Polybrominated Biphenyl Oxides (PBBOs)</li> <li>Polychlorinated Biphenyl (PCB)</li> <li>Polychlorinated Terphenyls (PCT)</li> <li>Polyvinyl Chloride (PVC) — except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.</li> <li>Radioactive Substances</li> <li>Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)</li> </ul>
Packaging Usage	<ul> <li>HP follows these guidelines to decrease the environmental impact of product packaging:</li> <li>Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.</li> <li>Eliminate the use of ozone-depleting substances (ODS) in packaging materials.</li> <li>Design packaging materials for ease of disassembly.</li> <li>Maximize the use of post-consumer recycled content materials in packaging materials.</li> <li>Use readily recyclable packaging materials such as paper and corrugated materials.</li> <li>Reduce size and weight of packages to improve transportation fuel efficiency.</li> <li>Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.</li> </ul>
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: <a href="http://www.hp.com/go/reuse-recycle">http://www.hp.com/go/reuse-recycle</a> 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: <a href="http://www.hp.com/go/recyclers">http://www.hp.com/go/recyclers</a> . 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_IS     0_14K_Certificate.pdf     and     http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf





#### **SERVICE AND SUPPORT**

#### **HP EliteDesk 800 G4 Tower Business PC**

x 7 support may not be available in some countries.

On-site Warranty<sup>15</sup>: Three-year (3-3-3) limited warranty delivers three years of on-site, next business day<sup>16</sup> service for parts and labor and includes free support 24 x 7<sup>17</sup>. Three-year onsite and labor are not available in all countries. Service offers terms up to 5 years by choosing an optional HP Care Pack. To choose the right level of service for your HP product, visit HP Care Pack Central: http://www.hp.com/go/cpc.<sup>18</sup>

- 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
- 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<sup>15</sup>: Three-year (3-3-3) limited warranty delivers three years of on-site, next business day<sup>16</sup> service for parts and labor and includes free support 24 x 7<sup>17</sup>. Three-year onsite and labor are not available in all countries. Service offers terms up to 5 years by choosing an optional HP Care Pack. To choose the right level of service for your HP product, visit HP Care Pack Central: http://www.hp.com/go/cpc.<sup>18</sup>

- 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 Desktop Mini Business PC**

On-site Warranty<sup>15</sup>: Three-year (3-3-3) limited warranty delivers three years of on-site, next business day<sup>16</sup> service for parts and labor and includes free support 24 x 7<sup>17</sup>. Three-year onsite and labor are not available in all countries. Service offers terms up to 5 years by choosing an optional HP Care Pack. To choose the right level of service for your HP product, visit HP Care Pack Central: http://www.hp.com/go/cpc.<sup>18</sup>

- 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 EliteOne 800 G4 All-in-One Business PC

On-site Warranty<sup>15</sup>: Three-year (3-3-3) limited warranty delivers three years of on-site, next business day<sup>16</sup> service for parts and labor and includes free support 24 x 7<sup>17</sup>. Three-year onsite and labor are not available in all countries. Service offers terms up to 5 years by choosing an optional HP Care Pack. To choose the right level of service for your HP product, visit HP Care Pack Central: http://www.hp.com/go/cpc.<sup>18</sup>

- 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





## **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

**Refresh Rate** 60 Hz @ 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) 178 ° x 178 °

Backlight lamp life (to half brightness) 30,000 hours minimum

**Color support** Up to 16.7 million colors with the use of FRC technology

Color gamut (typical) NTSC 72% Anti-glare Yes\*

**Response Time** 14ms (Typical) **Default color temperature** Warm (6500K)

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	

# **Technical Specifications**

#### **GRAPHICS**

## HP EliteDesk 800 G4 Desktop Mini Business PC

Intel® HD Graphics (integrated)

**VGA Controller** Integrated

Multimode capable; supports HDCP, Display Port Audio (2 streams), HBR2 link rates and Multi-DisplayPort™ 1.2 Stream Technology for a maximum of 3 displays connected to any output controlled by Intel®

Graphics

Supports HDMI 2.0a features

**HDMI** (optional) 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

The actual amount of maximum graphics memory can be >4GB. System memory is allocated Memory

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

**HEVC 10b Enc/Dec HW** 

VP9 10b Dec HW

**Graphics/Video API Support** HDR

Rec. 2020

DX12

Max. Resolution (VGA) 2048 x 1536@60Hz Max. Resolution (HDMI) 4096 x 2160@60Hz Max. Resolution (DP) 4096 x 2160@60Hz

## AMD® Radeon™ RX 560

**Architecture** Discrete GPU

AMD® GPU drives the integrated panel and all of the graphics output ports

Multimode capable; supports HDCP, HDR, Display Port Audio (6 streams max), DisplayPort HBR3 **DisplayPort** 

link rates and Multi-Stream Technology for a maximum of 5 displays (including the integrated

panel and all attached displays)

Supports HDMI 2.0b features **HDMI** 

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)

Rear I/O connector 1 DP

Max. Resolution (VGA) 2048 x 1536@60Hz Max. Resolution (HDMI) 4096 x 2160@60Hz Max. Resolution (DP) 5120 x 2880@60Hz



# **Technical Specifications**

## **HP EliteDesk 800 G4 Tower Business PC**

Intel® UHD Graphics (integrated)

**VGA Controller** Integrated

Multimode capable; supports HDCP, Display Port Audio (2 streams), HBR2 link rates and Multi-DisplayPort™ 1.2 Stream Technology for a maximum of 3 displays connected to any output controlled by Intel®

Supports HDMI 2.0a features

**HDMI** (optional) 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

The actual amount of maximum graphics memory can be >4GB. System memory is allocated for Memory

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

**HEVC 10b Enc/Dec HW** 

VP9 10b Dec HW

**Graphics/Video API Support HDR** 

Rec. 2020 DX12

640x480 60 Hz640x480 67Hz

640x480 72Hz 640x480 75Hz 720x400 70Hz 800x600 60Hz 800x600 75Hz 1024x768 60Hz

34" UHD Supported 1024x768 75Hz **Resolutions and Refresh** 1280x960 60Hz **Rates. Other resolutions** 1280x720 60Hz may also work.

1280x1024 60Hz 1280x1024 75Hz 1440x900 60Hz 1440x900 75Hz 1680x1050 60Hz 1920x1080 60Hz

3440x1440 60Hz (Native Resolution)

3440x1440 30Hz

Max. Resolution (VGA) 2048 x 1536@60Hz Max. Resolution (HDMI) 4096 x 2160@60Hz Max. Resolution (DP) 4096 x 2160@60Hz





#### NVIDIA® GeForce® GT730 2GB DP DVI PCIe x8 GFX

Engine Clock 902 MHz

Memory Clock 1250 MHz

Memory Size(width) 2 GB (64-bit)

Memory Type 256Mx32 GDDR5

 Max. Resolution(DVI)
 2560 x 1600 x 30 bpp @ 60Hz (Dual Link)

 Max. Resolution(DP)
 4096 x 2160 x 24 bpp @ 60 Hz (DP1.2)

Multi Display Support Up to 2 displays

**HDCP Compliance** Yes

Rear I/O connectors(bracket) DL DVI-I + DP

**Cooling(active/passive)** Active fan-sink (Active cooling with dynamic speed)

Total power consumption(W) 35 W

PCB form-factor with bracket 2-pin fan connector for fan sink power/speed control

## 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

## AMD® Radeon™ RX580 8GB GDDR5 Graphics Card

 Engine Clock
 1266 MHz

 Memory Clock
 4000 MHz

 Memory Size(width)
 8 GB (256-bit)

 Memory Type
 256M x 32 GDDR5

 Max. Resolution(HDMI)
 4096x2160@60Hz

 Max. Resolution(DP)
 5120x3200@60Hz

Multi Display Support 4 displays

**HDCP Compliance** Yes

Rear I/O connectors(bracket) HDMI + DPx3

**Cooling(active/passive)** Active fan-sink (Active cooling with dynamic speed)

Total power consumption(W) <150W

PCB form-factor with bracket ATX (Full height) PCB with ATX dual slot bracket

## NVIDIA® GeForce® RTX 2080 8GB GDDR6

 Engine Clock
 1710 MHz

 Memory Clock
 7000 MHz

 Memory Size(width)
 8GB (256-bit)

 Memory Type
 256M x 32 GDDR6

 Max. Resolution(Virtual Link)
 3840 x 2160@60Hz

 Max. Resolution(HDMI)
 4096 x 2160@60Hz

 Max. Resolution(DP)
 7680 x 4320@60Hz

Multi Display Support 4 displays

**HDCP Compliance** Yes

Rear I/O connectors(bracket) DPx3 + HDMI + Virtual Link

**Cooling(active/passive)** Active fan-sink (Active cooling with dynamic speed)

Total power consumption(W) <250W

PCB form-factor with bracket ATX (Full height) PCB with ATX dual slot bracket





## NVIDIA® Quadro P620 2GB Graphics Card

Engine Clock1354 MHzMemory Clock2500 MHzMemory Size(width)2GB (128-bit)Memory Type128M x 32 GDDR5Max. Resolution(DP)5120x2880@60Hz

Multi Display Support4 displaysHDCP ComplianceYesRear I/O connectors(bracket)mDPx4

**Cooling(active/passive)** Active fan-sink (Active cooling with dynamic speed)

Total power consumption(W) <40W

PCB form-factor with bracket LP PCB with LP bracket

## NVIDIA® Quadro P400 2GB Graphics Card

Engine Clock1252 MHzMemory Clock2000 MHzMemory Size(width)2GB (64-bit)Memory Type256M x 32 GDDR5Max. Resolution(DP)5120x2880@60Hz

Multi Display Support3 displaysHDCP ComplianceYesRear 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 Clock780 MHzMemory Clock1100 MHzMemory Size(width)2 GB(128-bit)Memory Type128M x 32 GDDR5Max. Resolution(HDMI)2048x1536

Max. Resolution(DP) 4096x2160@60Hz

Multi Display Support2 displaysHDCP ComplianceYesRear I/O connectors(bracket)VGA+DP

**Cooling(active/passive)** Active fan-sink (Active cooling with dynamic speed)

Total power consumption(W) <50W

PCB form-factor with bracket LP PCB with FH/LP bracket





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

Engine Clock 780 MHz

Memory Clock 1100 MHz

Memory Size(width) 2 GB(64-bit)

Memory Type 256M x 32 GDDR5

Max. Resolution(DP) 4096x2160@60Hz

Multi Display Support2 displaysHDCP ComplianceyesRear I/O connectors(bracket)DPx2

**Cooling(active/passive)** Active fan-sink (Active cooling with dynamic speed)

Total power consumption(W) <50W

**PCB form-factor with bracket** LP PCB with FH/LP bracket

## AMD® Radeon™ R7 430 2GB 2DP Graphics Card

Engine Clock780 MHzMemory Clock1100 MHzMemory Size(width)2 GB(128-bit)Memory Type128M x 32 GDDR5Max. 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 EliteDesk 800 G4 Small Form Factor Business PC**

Intel® HD Graphics (integrated)

**VGA Controller** Integrated

Multimode capable; supports HDCP, Display Port Audio (2 streams), HBR2 link rates and Multi-DisplayPort™ 1.2

Stream Technology for a maximum of 3 displays connected to any output controlled by Intel®

Supports HDMI 2.0a features

Supports HDCP 2.2 **HDMI** (optional)

Supports audio over HDMI

VGA (optional) **VGA Output** 

USB-C™ DP Alt Mode

(optional)

DisplayPort over the optional USB-C™ module

The actual amount of maximum graphics memory can be >4GB. System memory is allocated for Memory

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

**HEVC 10b Enc/Dec HW** 

VP9 10b Dec HW

**Graphics/Video API Support HDR** 

Rec. 2020

DX12

Max. Resolution (VGA) 2048 x 1536@60Hz Max. Resolution (HDMI) 4096 x 2160@60Hz Max. Resolution (DP) 4096 x 2160@60Hz

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

**Engine Clock** 780 MHz **Memory Clock** 1100 MHz 2 GB(128-bit) Memory Size(width) 128M x 32 GDDR5 **Memory Type** 

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

LP PCB with FH/LP bracket PCB form-factor with bracket

# AMD® Radeon™ R7 430 2GB GDDR5 DP+VGA Graphics Card

**Engine Clock** 780 MHz **Memory Clock** 1100 MHz Memory Size(width) 2 GB(64-bit) **Memory Type** 256M x 32 GDDR5 Max. Resolution(VGA) 2048x1536

Max. Resolution(DP) 4096x2160@60Hz

**Multi Display Support** 2 displays **HDCP Compliance** ves DP+VGA Rear I/O connectors(bracket)





**Cooling(active/passive)** Active fan-sink (Active cooling with dynamic speed)

Total power consumption(W) <50W

PCB form-factor with bracket LP PCB with FH/LP bracket

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

Engine Clock780 MHzMemory Clock1100 MHzMemory Size(width)2 GB(64-bit)Memory Type256M x 32 GDDR5Max. Resolution(DP)4096x2160@60Hz

Multi Display Support 2 displays

**HDCP Compliance** yes **Rear I/O connectors(bracket)** DPx2

**Cooling(active/passive)** Active fan-sink (Active cooling with dynamic speed)

Total power consumption(W) <50W

PCB form-factor with bracket LP PCB with FH/LP bracket

## AMD® Radeon™ R7 430 2 GB 2DP Graphics Card

Engine Clock780 MHzMemory Clock1100 MHzMemory Size(width)2GB(128-bit)Memory Type128M x 32 GDDR5Max. 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

## NVIDIA® GeForce® GT730 2GB DP DVI PCIe x8 GFX

Engine Clock902 MHzMemory Clock1250 MHzMemory Size(width)2 GB (64-bit)Memory Type256Mx32 GDDR5

 Max. Resolution(DVI)
 2560 x 1600 x 30 bpp @ 60Hz (Dual Link)

 Max. Resolution(DP)
 4096 x 2160 x 24 bpp @ 60 Hz (DP1.2)

Multi Display Support Up to 2 displays

**HDCP Compliance** Yes

Rear I/O connectors(bracket) DL DVI-I + DP

**Cooling(active/passive)** Active fan-sink (Active cooling with dynamic speed)

Total power consumption(W) 35 W

**PCB form-factor with bracket** 2-pin fan connector for fan sink power/speed control





## HP EliteOne 800 G4 All-in-One Business PC

Intel® UHD Graphics (integrated)

**VGA Controller** Integrated

Multimode capable; supports HDCP, Display Port Audio (2 streams), HBR2 link rates and Multi-DisplayPort™ 1.2

Stream Technology for a maximum of 3 displays (including the integrated panel and all

attached displays)

Supports HDMI 2.0a features

**HDMI** Supports HDCP 2.2

Supports audio over HDMI

The actual amount of maximum graphics memory can be >4GB. System memory is allocated for Memory

graphics as needed using Intel's Dynamic Video Memory Technology (DVMT), to provide an

optimal balance between graphics and system memory use.

up to 10 bits/color **Maximum Color Depth** 

**HEVC 10b Enc/Dec HW** 

VP9 10b Dec HW

**Graphics/Video API Support HDR** 

> Rec. 2020 DX12

Max. Resolution (VGA) 2048 x 1536@60Hz Max. Resolution (HDMI) 4096 x 2160@60Hz Max. Resolution (DP) 4096 x 2160@60Hz

AMD® Radeon™ RX 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

4GByte, 128bit wide GDDR5 Memory

**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)

Rear I/O connector

Max. Resolution (VGA) 2048 x 1536@60Hz Max. Resolution (HDMI) 4096 x 2160@60Hz Max. Resolution (DP) 5120 x 2880@60Hz





#### **STORAGE**

## 500 GB 7200RPM 3.5in SATA HDD

Capacity500 GBRotational Speed7,200 rpmInterfaceSATA 6.0 Gb/s

Buffer Size 16 MB

 Logical Blocks
 976,773,168

 Seek Time
 11 ms (Average)

 Height
 1 in/2.54 cm

Media diameter: 3.5 in/8.89 cm

Width 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

Capacity1 TBRotational Speed7,200 rpmInterfaceSATA 6 Gb/s

Buffer Size 32 MB

 Logical Blocks
 1,953,525,168

 Seek Time
 11 ms (Average)

 Height
 1 in/2.54 cm

Media diameter: 3.5 in/8.89 cm

Width (nominal) 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)





#### 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)

Height0.267 in/6.8 mm (nominal)Width (nominal)2.75 in/70 mm (nominal)Operating Temperature41° 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

Capacity1 TBRotational Speed7,200 rpmInterfaceSATA 6 Gb/sBuffer Size32 MB

**Logical Blocks** 1,953,525,168 **Seek Time** 12 ms (Average)

Height0.374 in/9.5 mm (nominal)Width (nominal)2.75 in/70 mm (nominal)Operating Temperature41° 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)

Height0.374 in/9.5 mm (nominal)Width (nominal)2.75 in/70 mm (nominal)Operating Temperature41° to 131° F (5° to 55° C)





## 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 rpr

**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)

Height0.267 in/6.8 mm (nominal)Width2.75 in/70 mm (nominal)Operating Temperature41° to 131° F (5° to 55° C)





#### 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

InterfaceSATA 6 Gb/sBuffer Size128 MBNAND Flash8 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)





## 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 ReadUp to 530MB/sMaximum Sequential WriteUp to 380MB/sLogical Blocks250,069,680

**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</td>Capacity256 GBHeight7mmLength100.45mmWidth69.85mmInterfaceSATA 3.0 (6Gb/s)

Performance Up to Random Read/Write = 55K/68K IOPS

Maximum Sequential ReadUp to 530MB/sMaximum Sequential WriteUp to 450MB/sLogical Blocks500,118,192

**Operating Temperature** 0° to 70°C (32° to 158°F) [ambient temp]

Features DIPM; TRIM





## 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 ReadUp to 530MB/sMaximum Sequential WriteUp to 500MB/sLogical Blocks1,000,215,216

**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 ReadUp to 530MB/sMaximum Sequential WriteUp to 500MB/sLogical Blocks500,118,192

**Operating Temperature** 0° to 70°C (32° to 158°F) [ambient temp] **Features** DIPM; TRIM; TCG-OPAL2.0 security





#### 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 ReadUp to 530MB/sMaximum Sequential WriteUp to 500MB/sLogical Blocks1,000,215,216

**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</td>Capacity256 GBHeight7mmLength100.45mmWidth69.85mmInterfaceSATA 3.0 (6Gb/s)

**Performance** Up to Random Read/Write = 55K/83K IOPS

Maximum Sequential ReadUp to 530MB/sMaximum Sequential WriteUp to 500MB/sLogical Blocks500,118,192

**Operating Temperature** 0° to 70°C (32° to 158°F) [ambient temp]

**Features** DIPM; TRIM; FIPS 140-2 security





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

 Drive Weight
 <45g</td>

 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 ReadUp to 530MB/sMaximum Sequential WriteUp to 500MB/sLogical Blocks1,000,215,216

**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 ReadUp to 1400MB/sMaximum Sequential WriteUp to 395MB/sLogical Blocks250,069,680

**Operating Temperature** 0° to 70°C (32° to 158°F) [ambient temp]

Features APST; ASPM L1.2; NVME spec 1.2





#### 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 ReadUp to 1600MB/sMaximum Sequential WriteUp to 780MB/sLogical Blocks500,118,192

**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 ReadUp to 1600MB/sMaximum Sequential WriteUp to 860MB/sLogical Blocks1,000,215,216

**Operating Temperature** 0° to 70°C (32° to 158°F) [ambient temp]

Features APST; ASPM L1.2; NVME spec 1.2





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

Drive Weight< 10g</th>Capacity128 GBHeight2.38mmLength80mmWidth22mmInterfacePCIE Gen3x4

**Performance** Up to Random Read/Write = 140K/40K IOPS

Maximum Sequential ReadUp to 2800MB/sMaximum Sequential WriteUp to 600MB/sLogical Blocks250,069,680

**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 ReadUp to 2700MB/sMaximum Sequential WriteUp to 1000MB/sLogical Blocks500,118,192

**Operating Temperature** 0° to 70°C (32° to 158°F) [ambient temp]

Features APST; ASPM L1.2; NVME spec 1.2





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

Drive Weight< 10g</th>Capacity512 GBHeight2.38mmLength80mmWidth22mmInterfacePCIE Gen3x4

Performance Up to Random Read/Write = 270K/235K IOPS

Maximum Sequential ReadUp to 2900MB/sMaximum Sequential WriteUp to 1100MB/sLogical Blocks1,000,215,216

**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 ReadUp to 2900MB/sMaximum Sequential WriteUp to 2100MB/sLogical Blocks2,000,409,264

**Operating Temperature** 0° to 70°C (32° to 158°F) [ambient temp]

Features APST; ASPM L1.2; NVME spec 1.2





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

Drive Weight< 10g</th>Capacity256 GBHeight2.38mmLength80mmWidth22mmInterfacePCIE Gen3x4

Performance Up to Random Read/Write = 150K/180K IOPS

Maximum Sequential ReadUp to 2700MB/sMaximum Sequential WriteUp to 1000MB/sLogical Blocks500,118,192

**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 ReadUp to 2900MB/sMaximum Sequential WriteUp to 1100MB/sLogical Blocks1.000.215.216

**Operating Temperature** 0° to 70°C (32° to 158°F) [ambient temp]

Features APST; ASPM L1.2; NVME spec 1.2; TCG-OPAL2 security



#### Technical Specifications

#### **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) Power Random: DVD-ROM: 170 ms (typical), CD-ROM: 170 ms (typical) Full stroke: DVD-ROM: 320 ms (typical), CD-ROM: 320 ms (typical)

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 Full Stroke DVD-ROM: 320 ms (typical), CD-ROM: 320 ms (typical)

settling)

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)

Random DVD-ROM: 170 ms (typical), CD-ROM: 170 ms (typical)

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)

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+RW Up to 8X
DVD-RW Up to 5X

Write Speeds 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+R Up to 8X
DVD+R 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

Random BD-ROM: 205 ms (typical), DVD-ROM: 185 ms (typical),

(typical reads, including CD-ROM: 165 ms (typical)

settling) 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 I	ntegrated 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
riunagement	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



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

Intel® i210 10/100/1000 Add-on NIC Connector		
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	



Security & Manageability	Intel® vPro™ support with appropriate Intel® chipset components
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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	
requency bank	• 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 <sup>1</sup>	• 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	Ad-hoc (Peer to Peer)	
Models	Infrastructure (Access Point Required)	
Roaming	IEEE 802.11 compliant roaming between access points	
Output Power <sup>2</sup>	• 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 <sup>3</sup>	802.11b, 1Mbps : -93.5dBm maximum	
	802.11b, 11Mbps : -84dBm maximum	



	802.11a/g, 6Mbps	s : -86dBm maximum	
	802.11a/g, 54Mbr	ps : -72dBm maximum	
	802.11n, MCS07 :	802.11n, MCS07 : -67dBm maximum	
	802.11n, MCS15:	-64dBm maximum	
	802.11ac, MCS0:	-84dBm maximum	
	802.11ac, MCS9:	-59dBm maximum	
Antenna type	High efficiency an	tenna with spatial diversity, mounted in the display enclosure	
	Two embedded di	ual band 2.4/5 GHz antennas are provided to the card to support WLAN	
	MIMO communica	tions and Bluetooth communications	
Form Factor	PCI-Express M.2 N	1iniCard	
Dimensions	Type 2230: 2.3 x 2	22.0 x 30.0 mm	
Weight	Type 2230: 2.8g		
Operating Voltage	3.3v +/- 9%		
Temperature	Operating	14° to 158° F (–10° to 70° C)	
	Non-operating	-40° to 176° F (-40° to 80° C)	
Humidity	Operating	10% to 90% (non-condensing)	
	Non-operating	5% to 95% (non-condensing)	
Altitude	Operating	0 to 10,000 ft (3,048 m)	
	Non-operating	0 to 50,000 ft (15,240 m)	
LED Activity	LED Amber – Radi	o 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).

IP 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)
Security & Manageability	Advanced Audio Distribution Profile (A2DP) 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 <sup>1</sup>	• 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	Ad-hoc (Peer to Peer)	
Models	Infrastructure (Access Point Required)	
Roaming	IEEE 802.11 compliant roaming between access points	
Output Power <sup>2</sup>	• 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 <sup>3</sup>	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 14° to 158° F (–10° to 70° C)	
	Non-operating -40° to 176° F (-40° to 80° C)	
Humidity	Operating 10% to 90% (non-condensing)	
	Non-operating 5% to 95% (non-condensing)	
Altitude	Operating 0 to 10,000 ft (3,048 m)	
	Non-operating 0 to 50,000 ft (15,240 m)	
LED Activity	LED Amber – Radio OFF; LED White – Radio ON	
1 Check latest software	e/driver release for undates on supported security features	

- 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)

Wireless LAN Standards	IEEE 802.11a		
5.655 5.61.641.45	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 <sup>1</sup>	• 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	Ad-hoc (Peer to Peer)		
Models	Infrastructure (Access Point Required)		
Roaming	IEEE 802.11 compliant roaming between access points		



Output Power <sup>2</sup>	• 802.11b: +14dBm minimum		
омериот отте	• 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 <sup>3</sup>	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 14° to 158° F (–10° to 70° C)		
•	Non-operating		
Humidity	Operating 10% to 90% (non-condensing)		
• •	Non-operating 5% to 95% (non-condensing)		
Altitude	Operating 0 to 10,000 ft (3,048 m)		
	Non-operating 0 to 50,000 ft (15,240 m)		
LED Activity	LED Amber – Radio OFF; LED White – Radio ON		
	e/driver release for undates on supported security features.		

- 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)	





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 1	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			





Security <sup>1</sup>	• 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		
	<ul> <li>Cisco Certified Extensions, all versions through CCX4 and CCX Lite</li> </ul>		
	• WAPI		
Network Architecture	Ad-hoc (Peer to Peer)		
Models	Infrastructure (Access Point Required)		
Roaming	IEEE 802.11 compliant roaming between access points		
Output Power <sup>2</sup>	• 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 <sup>3</sup>	802.11b, 1Mbps : -93.5dBm maximum		
	802.11b, 11Mbps : -84dBm maximum		
	802.11a/g, 6Mbps : -86dBm maximum		
	802.11a/g, 54Mbps : -72dBm maximum		
	802.11n, MCS07 : -67dBm maximum		
	802.11n, MCS15 : -64dBm maximum		
	802.11ac, MCS0 : -84dBm maximum		
_	802.11ac, MCS9 : -59dBm maximum		
Antenna type	High efficiency antenna.		
	One embedded dual band 2.4/5 GHz antenna is provided to the card to support WLAN		
	communications and Bluetooth communications		
Form Factor	PCI-Express M.2 MiniCard		
Dimensions	Type 2230: 2.3 x 22.0 x 30.0 mm		
Weight	Type 2230 : 2.8g		
Operating Voltage	3.3v +/- 9%		
Temperature	Operating 14° to 158° F (–10° to 70° C)		
	Non-operating -40° to 176° F (-40° to 80° C)		
Humidity	Operating 10% to 90% (non-condensing)		
	Non-operating 5% to 95% (non-condensing)		
Altitude	Operating 0 to 10,000 ft (3,048 m)		
Non-operating 0 to 50,000 ft (15,240 m)			
LED Activity	LED Amber – Radio OFF; LED White – Radio ON		
1 Check latest software	e/driver release for undates on supported security features.		

- 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





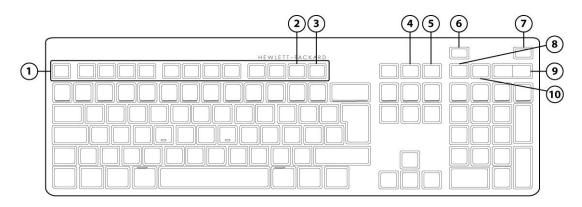
Frequency Band	2402 to 2480 MHz		
Number of Available Channels	Legacy : 0~79 (1 MHz/CH)		
	BLE: 0~39 (2 MHz/CH)		
Data Rates and Throughput	Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps		
	BLE : 1 Mbps data rate; throughput up to 0.2 Mbps		
	Legacy: Synchronous Connection Oriented links up to 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)		
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)
	Operating voltage	5 VDC, +/-5%
	Power consumption	35mA (All LED on)
Electrical	System interface	USB Type A plug connector
Electrical	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
	Keycaps	Low-profile design
	Switch actuation	60±10g nominal peak force with tactile feedback
	Switch life	10 million keystrokes (Life tester)
Mechanical	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



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)
	Operating voltage	4.4-5.25VDC
	Power consumption	50-mA maximum (with 5 VDC power supplied and three LEDs ON)
Electrical	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
	Keycaps	Low-profile design
	Switch actuation	60±10g nominal peak force with tactile feedback
	Switch life	10 million keystrokes (Life tester)
Mechanical	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
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 Mous	se	
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
	Туре	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

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



#### **AUDIO/MULTIMEDIA**

#### **HP EliteDesk 800 G4 Tower Business PC**

Type Integrated

HD Stereo Codec Conexant CX20632

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

Audio I/O Ports 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

Playback multi-streaming can be enabled in the audio control panel to allow independent audio

Multi-streaming Capable streams to be sent to/from the front and rear jacks or integrated speaker.

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

Sampling

Audio I/O Ports

Sampling

Multi-streaming Capable

# 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

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

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.

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 Desktop Mini Business PC

Type Integrated

HD Stereo Codec Conexant CX20632

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

Audio I/O Ports 1 - Headphone port

Internal Speaker Amplifier 2W class D mono amplifier for the internal speaker only. External speakers must be powered

Playback multi-streaming can be enabled in the audio control panel to allow independent audio

Multi-streaming Capable streams to be sent to/from the front and rear jacks or integrated speaker.

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**

Sampling

Type Integrated

HD Stereo Codec Conexant CX5001

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

Audio I/O Ports All ports are 3.5mm and support stereo

Internal Speaker Amplifier 2W per channel class D stereo amplifier for the internal speakers only

Playback multi-streaming can be enabled in the audio control panel to allow independent audio

Multi-streaming Capable streams to be sent to/from the front and rear jacks or integrated speakers.

Independent sampling rates for DAC's and ADC's; supports resolutions from 16 to 24-bit; 44.1 kHz

Sampling 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**

Operating: 5°C ~45°C

Temperature Range Non-Operating: -40°C ~66°C

Operating 5% to 90% relative humidity at max inlet temperature

Relative Humidity Non-Operating 5% to 90% relative humidity at max inlet temperature

Maximum Altitude Operating: 5000m

(unpressurized) Non-operating: 50,000 ft. (15240 m)

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

#### **Unit Environment and Operating Conditions**

Operating: 5°C ~35°C

Temperature Range Non-Operating: -40°C ~66°C

Operating 5% to 90% relative humidity at max inlet temperature

Relative Humidity Non-Operating 5% to 90% relative humidity at max inlet temperature

Maximum Altitude Operating: 5000m

(unpressurized) Non-operating: 50,000 ft. (15240 m)

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

#### **Unit Environment and Operating Conditions**

Operating: 5°C ~35°C

Temperature Range Non-Operating: -40°C ~66°C

Operating 5% to 90% relative humidity at max inlet temperature

Relative Humidity Non-Operating 5% to 90% relative humidity at max inlet temperature

Maximum Altitude Operating: 5000m

(unpressurized) Non-operating: 50,000 ft. (15240 m)

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

#### **Unit Environment and Operating Conditions**

Operating: 5°C ~35°C

Temperature Range Non-Operating: -40°C ~66°C

Operating 5% to 90% relative humidity at max inlet temperature

Relative Humidity Non-Operating 5% to 90% relative humidity at max inlet temperature

Maximum Altitude Operating: 5000m

(unpressurized) Non-operating: 50,000 ft. (15240 m)





#### HP EliteOne 800 G4 All-in-One Business PC

#### **Unit Environment and Operating Conditions**

Operating: 5°C ~45°C

Temperature Range Non-Operating: -40°C ~66°C

Operating 5% to 90% relative humidity at max inlet temperature

Relative Humidity Non-Operating 5% to 90% relative humidity at max inlet temperature

Maximum Altitude Operating: 5000m

(unpressurized) Non-operating: 50,000 ft. (15240 m)

	DM	SFF	TWR	AiO
External Power Supplies	65W EPS, 89% average efficiency at 115V & 230Vac 90W EPS, 89% average efficiency at 115V & 230Vac 150W EPS, 89% average efficiency at 115V & 230Vac	N/A	N/A	N/A
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	N/A	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



	DM	SFF	TWR	AiO
Current Leakage (NFPA	Less than 500	Less than 500	Less than 500	Less than 500
99: 2102)	microamps of leakage	microamps of leakage	microamps of leakage	microamps of leakage
	current at 120 Vac with	current at 120 Vac with	current at 120 Vac with	current at 120 Vac with
	the ground wire	the ground wire	the ground wire	the ground wire
	disconnected, as	disconnected, as	disconnected, as	disconnected, as
			required for Non-patient	•
	Electrical Appliances	Electrical Appliances	Electrical Appliances	patient Electrical
			and Equipment used in a	
	patient care facility or	patient care facility or	patient care facility or	Equipment used in a
	that contact patients in		that contact patients in	patient care facility or
	normal use. Per section	normal use. Per section	normal use. Per section	that contact patients in
	10.3.5.1.	10.3.5.1.	10.3.5.1.	normal use. Per section
	Less than 100		Less than 100	10.3.5.1.
	microamps of leakage	microamps of leakage		Less than 100
	current at 120 Vac with	current at 120 Vac with	current at 120 Vac with	microamps of leakage
	the ground wire intact	the ground wire intact	the ground wire intact	current at 120 Vac with
	with normal polarity, as	with normal polarity, as	with normal polarity, as	the ground wire intact
			required for Non-patient	
	Electrical Appliances	Electrical Appliances	Electrical Appliances and Equipment used in a	required for Non-
	patient care facility or	patient care facility or	patient care facility or	Appliances and
	that contact patients in		that contact patients in	Equipment used in a
	normal use. Per section		normal use. Per section	patient care facility or
	10.3.5.1.	10.3.5.1.	10.3.5.1.	that contact patients in
	10.5.5.1.	10.5.5.1.	10.5.5.1.	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	165mm x 95mm x	165mm x 95mm x	135mm x 100mm x
	x 30mm	73mm	73mm	19.52mm
	90W: 132mm x 57mm x			
	30mm			
	150W: 160mm x 80mm			
	x 40mm			
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.
<b>Stand Dimensions</b>	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 57.80 in, 1152 x 994 x 1468 mm (include 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	Without Stand	Adjustable Height	Recline Stand
Dimensions	21.2 x 2.12 x 13.46 in	Stand 0 degrees	0 degrees
	539.6 x 53.8 x 341.79	21.2 x 7.1 x 18.4 in	21.2 x 10.3 x 10.63 in
	mm	539.6 x 180.28 x 467.7	539.6 x 261.8 x
		mm	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



Technical Specifications – Miscellaneous Features

#### 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



Technical Specifications – After Market Options

#### **AFTER MARKET OPTIONS**

Graphics Solutions	<u>DM</u>	<u>SFF</u>	<u>TWR</u>	<u>AiO</u>	Part Number
AMD® Radeon™ RX 550 4GB 2DP Card			Х		3TK71AA
AMD® Radeon™ R7 430 2GB 2DP Card		Х	Х		3MQ82AA
HP DisplayPort To HDMI True 4k Adapter	Х	Х	Х	Х	2JA63AA
HP DVI Cable Kit	Х	Х	Х	Х	DC198A
HP HDMI Standard Cable Kit	Х	Х	Х	Х	T6F94AA
HP DisplayPort Cable Kit	Х	Х	Х	Х	VN567AA
HP DisplayPort To VGA Adapter	Х	Х	Х	Х	AS615AA
HP DisplayPort To DVI-D Adapter	Х	Х	Х	Х	FH973AA

Desktop Mini Accessories	<u>DM</u>	<u>Part Number</u>
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	<u>DM</u>	<u>SFF</u>	TWR	<u>AiO</u>	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)	х	x	х	P1N68AA
HP PCIe NVME TLC 256GB SSD M.2 Drive	X	X	Х	Х	1CA51AA
HP PCIe NVME TLC 512GB SSD M.2 Drive	X	X	Х	Х	X8U75AA
HP PCIe NVME TLC 512GB SSD PCIe Drive		X	Х		Z4L70AA
HP 500GB 7200PRM SATA 6.0Gb/s 3.5" Hard Drive		х	х		QK554AA
HP 1TB 7200rpm SATA 6Gb/s 3.5" Hard Drive		х	х		QK555AA
HP SATA SuperMulti JB Drive			Х		QS208AA
HP 9.5mm Slim Removable SATA 500GB		X	Х	Х	T7G14AA
HP 9.5mm G4 8/6/4 SFF G4 400 SFF/MT DVD Writer		х			1CA53AA



Technical Specifications – After Market Options

Input Devices	<u>DM</u>	<u>SFF</u>	TWR	<u>AiO</u>	<u>Part</u> <u>Number</u>
HP USB (Grey) SmartCard CCID Keyboard		X	Х		J7H70AA
HP USB Antimicrobial Business Slim Keyboard and Mouse (China Only)		х	Х	Х	Z9H50AA
HP USB Business Slim CCID SmartCard Keyboard	Х	X	Х	Х	Z9H48AA
HP USB Business Slim (Grey) Keyboard (EMEA Only)	Х	X	Х	Х	Z9H49AA
HP USB Business Slim Keyboard	X	X	X	Х	N3R87AA
HP USB Business Slim Keyboard and Mouse and Mousepad		Х	Х	Х	T4E63AA
HP USB Collaboration Keyboard	Х	Х	Х		Z9N38AA
HP USB Conferencing Keyboard				Х	K8P74AA
HP USB Keyboard	Х	Х	Х	Х	QY776AA
HP USB Keyboard and Mouse Healthcare Edition	Х	X	Х	Х	1VD81AA
HP USB Premium Keyboard	Х	Х	Х	Х	Z9N40AA
HP USB PS/2 Washable Keyboard & Mouse	Х	X	Х	Х	BU207AA
HP Wireless Business Slim Keyboard and Mouse	Х	Х	Х	Х	N3R88AA
HP Wireless Collaboration Keyboard	Х	X	Х		Z9N39AA
HP Wireless Premium Keyboard		X	Х	Х	Z9N41AA
HP PS/2 Business Slim Keyboard		X	Х		N3R86AA
HP USB Grey v2 Mouse (EMEA only)	X	X	X	Х	Z9H74AA
HP USB Premium Mouse	Х	Х	Х	Х	1JR32AA
HP PS/2 Mouse		X	Х		QY775AA
HP USB 1000dpi Laser Mouse	Х	Х	Х	Х	QY778AA
HP USB Hardened Mouse	Х	X	Х	X	P1N77AA
HP USB Mouse	Х	Х	Х	Х	QY777AA



Technical Specifications – After Market Options

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

Multimedia Devices	<u>DM</u>	<u>SFF</u>	TWR	<u>AiO</u>	<u>Part</u> <u>Number</u>
HP Business Headset v2	X	Х	X	X	T4E61AA
HP USB Business Speakers v2	Х	Х	X		N3R89AA

Security Devices	<u>DM</u>	<u>SFF</u>	TWR	<u>AiO</u>	Part Number
HP Solenoid Lock & Hood Sensor (SFF)		Х			1CA50AA
HP Solenoid Lock & Hood Sensor (MT)			X		J6L42AA
HP Business PC Security Lock v3 Kit		Х	X		3XJ17AA
HP Dual Head Keyed Cable Lock		Х	X		T1A64AA
HP Keyed Cable Lock 10mm	Х	Х	X	X	T1A62AA
HP Master Keyed Cable Lock 10mm		Х	X	X	T1A63AA

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

Technical Specifications – After Market Options

I/O Devices	<u>DM</u>	<u>SFF</u>	TWR	<u>AiO</u>	<u>Part</u> <u>Number</u>
HP DisplayPort Port Flex IO	x (discrete GPU skus not supported)	X	х		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	х		3TK74AA
HP Thunderbolt 3.0 Port Flex IO	x (95W and discrete GPU skus not supported)				3TK77AA
HP Thunderbolt 3.0 PCIe Card		X	Х		4CX35AA
HP Type-C™ USB 3.1 Gen2 Port Flex IO	x (discrete GPU skus not supported)	Х	х		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)	Х	х		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	Х		N1M40AA
HP 800/600/400 G4 Serial/ PS/2 Adapter		X X			1VD82AA

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

Intel® Optane Memory	<u>DM</u>	<u>SFF</u>	TWR	<u>AiO</u>	<u>Part</u> <u>Number</u>
Intel® Optane Memory 16GB (Cache)	Х	Х	X	Х	1WV97AA

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## 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	
July 19, 2018	From v7 to v8	Update	Note for SATA Drive Bracket added to Internal Ports section Refresh Rate added to Panel specs	
August 2, 2018	From v8 to v9	Update	Palletization profile corrected for DM SFF Call out image changed USB sentence reduced in the call outs specs and rest of QS 2.5 SSHD corrected to include SFF and TWR	
August 21, 2018	From v9 to v10	Update	Windows Home removed	
August 24, 2018	From v10 to v11	Update	Intel® Core™ i7-8700 Processors corrected Windows Home returned back	
August 30, 2018	From v11 to v12	Update	Environmental table for AiO GPU fixed	
September 19, 2018	From v12 to v13	Update	NVIDIA GeForce GT730 2GB DP DVI PCIe x8 GFX added to Graphics section for MT and SFF.	
September 27, 2018	From v13 to v14	Update	Rear I/O connector added to AMD Radeon RX 560 graphic card Last bullet added to "At a Glance" section	
October 11, 2018	From v14 to v15	Update	Footnote 33 updated to Raid 1 configuration	
November 2, 2018	From v15 to v16	Update	Note added to Optional Discrete Graphics Solutions	
November 14, 2018	From v16 to v17	Update	Max. Resolution added to Intel® UHD Graphics and AMD Radeon™ 560	
December 10, 2018	From v17 to v18	Update	NVIDIA® Quadro P620 2GB Graphics Card added to Tower business Graphics sections	
December 17, 2018	From v18 to v19	Update	AMD Radeon™ R7 430 Graphics 2GB GDDR5 64bit 2DP, AMD Radeon™ R7 430 Graphics 2GB GDDR5 64bit DP+VGA, AMD Radeon™ RX 580 Graphics 8GB GDDR5 and NVIDIA® GeForce® RTX 2080 8GB GDDR6_Added to graphics	
January 3, 2019	From v19 to v20	Update	Response Time specs added to DISPLAY PANEL SPECIFICATIONS	
February 1, 2019	From v20 to v21	Update	HP PhoneWise, HP ePrinter + Jet advantage, HP Velocity, and HP WorkWise removed.	
February 11, 2019	From v21 to v22	Update	Support for "VESA 100 mounting system on bottom of PC chassis" added to mounting in call outs section for DM	
February 13, 2019	From v22 to v23	Update	I210 NIC switched to "Add-on" instead of "integrated"	
February 27, 2019	From v23 to v24	Update	Typo corrected in the title: M.2 PCIe NVMe Solid State Drives (SSD)	
March 6, 2019	From v24 to v25	Update	Type C port USB port (2.0 or 3.0) and PORTS information charging capability statement update and PORTS information USB type C port, (15W) added.	
March 12, 2019	From v25 to v26	Update	Declared Noise Emissions values for EliteDesk 800 Small Form Factor G4 series updated	
March 26, 2019	From v26 to v27	Update	HP Solenoid Lock & Hood Sensor (SFF) part number corrected in AMO section	

