Overview

HPE ProLiant MicroServer Gen10

HPE ProLiant MicroServer Gen10 is a compact and uniquely designed server that is ideal for small and home offices looking to build their first IT server environment with a form factor that is easy to use.

HPE MicroServer Gen10 helps businesses to provide better and easy access to data, more efficiency in operations, while driving down their operating expenses.
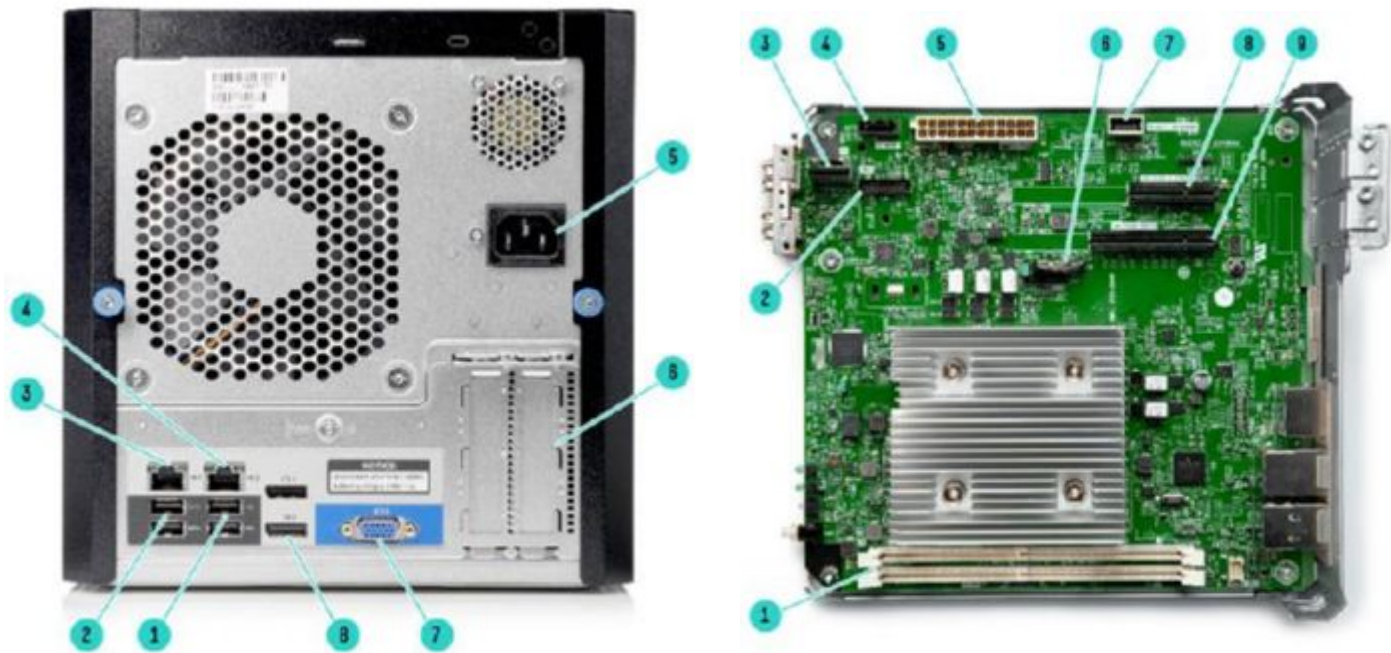
HPE ProLiant MicroServer Gen10

Front View (External):

1.   (2) USB 3.0 ports
2.   Media bay (Optional (1) DVD-RW or (1) SATA SSD)
3.   Front bezel lock/unlock indicators
4.   Power on/Standby button and system power LED
5.   Health LED
6.   NIC status LED
7.   Drive activity LED

Front View (Internal):

1.   Hard drive screws
2.   Hard drive bays

Overview

HPE ProLiant MicroServer Gen10

Rear View:

1. (2) USB 2.0 ports
2. (2) USB 3.0 ports
3. NIC 1 port
4. NIC 2 port
5. Power jack
6. PCIe Gen3 slots
7. VGA port
8. (2) Display Ports 1.2

Internal View:

1. DIMM slots
2. TPM connector
3. LFF/SFF SATA connector
4. SATA connector
5. System board power connector
6. System battery
7. Internal USB 2.0 port
8. Expansion slot 2, PCIe3 x4 (1)
9. Expansion slot 1, PCIe3 x8 (8, 4, 1)

What's New

New SKU Offerings

- For North America, a new Performance SKU (P07203-001) is replacing the previous Performance SKU (P07203-S01)

Standard Features

Processor	• AMD Opteron™ X3216 Processor (1.6-3.0GHz/2 compute cores/4 graphic cores/1MB/12-15W) • AMD Opteron™ X3418 Processor (1.8-3.2GHz/4 compute cores/6 graphic cores/2MB/12-35W) • AMD Opteron™ X3421 Processor (2.1-3.4GHz/4 compute cores/8 graphic cores/2MB/12-35W)

Cache Memory	• 2MB (1 x 2MB) L2 Cache
	  Notes: For X3421 and X3418 processors.
	• 1MB (1 x 1MB) L2 Cache
	  Notes: For X3216 processor.

Memory Protection	ECC

Memory	Type	HPE Standard Memory DDR4 Unbuffered (UDIMM)
	DIMM Slots Available	2
	Standard	8GB (1 x 8GB) PC4-2400T DDR4 UDIMM
	Maximum	32GB (2 x 16GB) PC4-2400T DDR4 UDIMM

Notes:

– HPE memory from previous generation servers are not fully compatible with the HPE ProLiant MicroServer Gen10.

– SKUs with X3421 and X3418 processors support memory speed up to 2400 MT/s.

– SKUs with X3216 processor support memory speed up to 1600 MT/s.

Network Controller	Embedded Broadcom BCM5720 Dual Port Gbe LOM

Expansion Slots	Expansion Slot #	Technology	Bus Width	Connector Width	Form Factor	Notes
	1	PCIe 3.0	X8	X8	Low Profile	Open-end connector to support up to x16 PCIe card
	2	PCIe 3.0	X1	X4	Low Profile	Open-end connector to support up to x16 PCIe card

QuickSpecs

QuickSpecs

Standard Features

Storage Controller	The Gen10 controller naming framework has been updated to simplify identification as depicted below. For a more detailed breakout of the available Gen10 Smart Array controllers visit the

HPE Smart Array Gen10 Controllers Data Sheet.

Embedded Storage Controller	Marvell 88SE9230 PCIe to SATA 6Gb/s Controller

Notes: Supports RAID 0/1/10 only. No FBWC support.

Essential RAID Controller	HPE Smart Array E208i-p SR Gen10 Controller

Notes: Supports RAID 0/1/5/10. No FBWC support.

Internal Storage Devices	Optical Drive	Optional: SATA DVD-RW drive
		Optional: SATA SSD
	Hard Drives	None ship standard
	Solid State Drives	None ship standard

Maximum Internal Storage	Non-hot plug SATA	16TB (4 x 4TB) 3.5" SATA

Interfaces	Video	1 Rear VGA port
		2 Rear Display ports 1.2
	USB 2.0 Ports	3 total (2 rear, 1 internal)
	USB 3.0 Ports	4 total (2 rear, 2 front)
	Network RJ-45 (Ethernet)	2

Industry Standard Compliance	

- ACPI V5.0 Compliant
- PCIe 3.0 Compliant
- PXE Support
- WOL Support
- EMC Class B
- USB 2.0
- USB 3.0
- SATA 6Gb/s

Server Power Cords	All pre-configured models ship standard with one or more country-specific 6 ft/1.83m C-13 power cords depending on models. If a different power cord is required, please check the

HPE Power Cords and Cables web page.

Standard Features

Power Specifications	To review the power requirements for your selected system, please use the HPE Power Advisor Tool located at **http://www.hpe.com/info/hppoweradvisor** **Notes:** See Technical Specifications section at end of QuickSpecs for Power Specifications.
Power Supply	One (1) 200 Watts non-hot plug, non-redundant Power Supply
System Fans	One (1) non-redundant system fan shipped standard

Operating Systems and Virtualization Software Support for ProLiant Servers

Microsoft Windows Server 2012 R2

Microsoft Windows Server 2016

Red Hat Enterprise Linux (RHEL) 7.4

ClearOS

Notes:
– ClearOS, an easy to use OS with an application marketplace, allows you to build a fully functional server that is just right for you at no upfront cost. It is available via download.
– HPE ProLiant servers with ClearOS give you a simple, secure, and affordable operating system with an intuitive web based graphical user interface that provides a cloud-like experience on- premise, and an Application Marketplace with over 100 apps and growing. Whether you're starting out or scaling, you decide what applications you need and pay as you grow. To learn more on what you can do, please visit **http://www.hpe.com/servers/clearos**

– For more information on The Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at:

  https://www.hpe.com/us/en/servers/server-operating-systems.html#OperatingSystems and our driver download page: **http://www.hpe.com/downloads/microservergen10**

Form Factor	Ultra Micro Tower

Service and Support

HPE Pointnext for Industry Standard Servers

HPE Pointnext delivers confidence, reduces risk and helps customers realize agility and stability. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time.

Protect your business beyond warranty with HPE Packaged Support Services

HPE Packaged Support Services enable you to order the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement for the term you select.

Optimized Care

Supports maintaining servers at optimum performance availability

Foundation Care 24x7, three-year Packaged Support Service

HPE Foundation Care 24x7 connects you to HPE 24 hours a day, seven days a week for assistance on resolving issues. Hardware onsite response within four hours if needed. Simplify your support experience and make HPE your first call for hardware or software questions.

https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en

Standard Care

Supports maintaining high level of server availability

Foundation Care NBD, three-year Packaged Support Service

HPE Foundation Care Next Business Day connects you to HPE during business hours for assistance on resolving issues - features next business day hardware onsite response if needed and software call back within two hours. Simplify your support experience and make HPE your first call for hardware or software questions.

https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en

Related Services

HPE ProLiant Server Hardware Installation
Provides for the basic hardware installation of Hewlett Packard Enterprise branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.
https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf

Service and Support

Parts and Materials

Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

For more information

To learn more about HPE ProLiant servers, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner, or visit:
https://www.hpe.com/us/en/services/operational.html

Pre-configured Models

	WW Entry BTO Model
SKU Number	870208-xxx
Processor	(1) AMD Opteron^{TM} X3216 (1.6-3.0GHz/2-core/1MB/12-15W) Processor
Memory	8GB (1 x 8GB) PC4-2400T DDR4 UDIMM **Notes:** Total of 2 DIMM slots.With X3216 processor, memory speed supports up to 1600 MT/s.
Network Controller	Embedded Broadcom BCM5720 Dual Port 1Gbe LOM
Storage Controller	Embedded Marvell 88SE9230 SATA controller
Hard Drive	1TB (1 x 1TB) LFF NHP SATA HDD
Internal Storage	4 LFF NHP SATA HDD cage
Optical Drive Bay	None ship as standard
PCI-Express Slots	2 standard (Low Profile) PCIe 3.0
Power Supply	(1) 200W Non-Hot Plug, Non-Redundant Power Supply
Fans	(1) A non-redundant system fan ships standard
Operating System	ClearOS preloaded **Notes:** ClearOS, an easy to use OS with an application marketplace, allows you to build a fully functional server that is just right for you at no upfront cost. To learn more on what you can do, please visit: **http://www.hpe.com/servers/clearos**
Form Factor	Ultra Micro Tower
Warranty	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response

Country Code Key

xxx = AA1 China

	Entry Models	Performance Models
SKU Number	873830-xxx	P07203-xxx
Processor	(1) AMD Opteron^{TM} X3216 (1.6-3.0GHz/2-core/1MB/12-15W) Processor	(1) AMD Opteron^{TM} X3418 (1.8-3.2GHz/4-core/2MB/12-35W) Processor
Memory	8GB (1 x 8GB) PC4-2400T DDR4 UDIMM **Notes:** Total of 2 DIMM slots. With X3216 processor, memory speed supports up to 1600 MT/s.	8GB (1 x 8GB) PC4-2400T DDR4 UDIMM **Notes:** Total of 2 DIMM slots. With X3418 processor, memory speed supports up to 2400 MT/s.
Network Controller	Embedded Broadcom BCM5720 Dual Port 1Gbe LOM	Embedded Broadcom BCM5720 Dual Port 1Gbe LOM
Storage Controller	Embedded Marvell 88SE9230 SATA controller	Embedded Marvell 88SE9230 SATA controller
Hard Drive	None ship as standard	None ship as standard
Internal Storage	4 LFF NHP SATA HDD cage	4 LFF NHP SATA HDD cage
Optical Drive Bay	None ship as standard	None ship as standard
PCI-Express Slots	2 standard (Low Profile) PCIe 3.0	2 standard (Low Profile) PCIe 3.0
Power Supply	(1) 200W Non-Hot Plug, Non-Redundant Power Supply	(1) 200W Non-Hot Plug, Non-Redundant Power Supply
Fans	(1) A non-redundant system fan ships standard	(1) A non-redundant system fan ships standard

Pre-configured Models

Operating System	None ship as standard	None ship as standard
Form Factor	Ultra Micro Tower	Ultra Micro Tower
Warranty	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response

	Solution Models
SKU Number	P04923-xxx
Processor	(1) AMD Opteron™ X3421 (2.1-3.4GHz/4-core/2MB/12-35W) Processor
Memory	8GB (1 x 8GB) PC4-2400T DDR4 UDIMM **Notes:** Total of 2 DIMM slots. With X3421 processor, memory speed supports up to 2400 MT/s.
Network Controller	Embedded Broadcom BCM5720 Dual Port 1Gbe LOM
Storage Controller	Embedded Marvell 88SE9230 SATA controller **Notes:** User Guide for Marvell 88SE9230 **https://support.hpe.com/hpesc/public/docDisplay?docId=a00104933en_us**
Hard Drive	None ship as standard
Internal Storage	4 LFF NHP SATA HDD cage
Optical Drive Bay	None ship as standard
PCI-Express Slots	2 standard (Low Profile) PCIe 3.0
Power Supply	(1) 200W Non-Hot Plug, Non-Redundant Power Supply
Fans	(1) A non-redundant system fan ships standard
Operating System	None ship as standard
Form Factor	Ultra Micro Tower
Warranty	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response
Others	Inclusive of an internal 8GB USB Drive which preloads ClearOS and ClearVM

Country Code Key

xxx = S01, 001   Americas
xxx = 291   Japan
xxx = 375   AP
xx = 421   EMEA

Pre-configured Models

HPE Unique Options

HPE MicroServer Gen10 SFF NHP SATA Converter Kit   870213-B21

Notes: This kit works to accommodate your SFF NHP HDD into the LFF NHP drive cage.

HPE Optical Drives

HPE 9.5mm SATA DVD-ROM Optical Drive   726536-B21

HPE 9.5mm SATA DVD-RW Optical Drive   726537-B21

HPE Hard Drives

Notes:

– The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

– Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

6G SATA Non-Hot Plug LFF (3.5-inch) Standard (MDL) Drives

HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD   801882-B21

HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD   801888-B21

6G SATA Non-Hot Plug LFF (3.5-inch) ETY HDD

HPE 1TB SATA 6G Entry 7.2K LFF (3.5in) RW 1yr Wty HDD   843266-B21

Notes: Please see the **HPE Hard Drives QuickSpecs** for Technical Specifications and additional information.

HPE Solid State Drives

HPE 240GB SATA 6G Read Intensive SFF RW PM883 SSD   P09685-B21

Notes: HPE MicroServer Gen10 Slim SFF SATA Enablement Kit (870212-B21) to accommodate this SFF SSD into the media bay.

HPE Networking

HPE Ethernet 1Gb 4-port BASE-T BCM5719 Adapter   647594-B21

HPE Ethernet 1Gb 2-port BASE-T BCM5720 Adapter   615732-B21

HPE Ethernet 10Gb 2-port BASE-T QL41401-A2G Adapter   867707-B21

Notes: The HPE PCIe adapters listed here can only support Server OSes.

Additional Options

HPE Security

HPE Trusted Platform Module 2.0 Kit   745823-B21
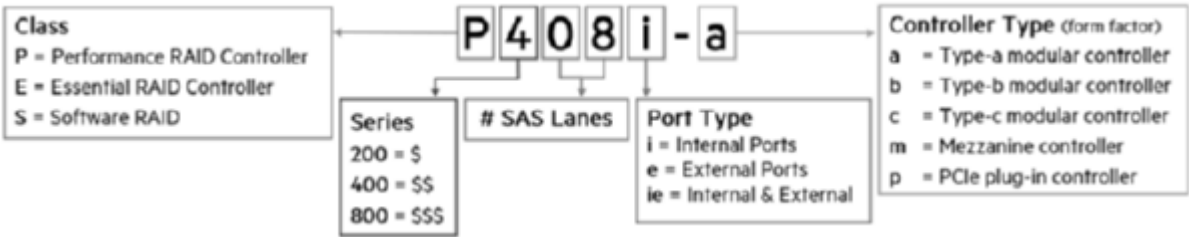
Notes:

− The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys.

− The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.

HPE Smart Array Controllers

The Gen10 controller naming framework has been updated to simplify identification as depicted below. For a more detailed breakout of the available Gen10 Smart Array controllers visit the **HPE Smart Array Gen10 Controllers Data Sheet**.

Essential RAID Controllers

HPE Smart Array E208i-p SR Gen10 (8 Internal Lanes/No Cache) 12G SAS PCIe Plug-in Controller   804394-B21

HPE Disk Backup

Notes:

− For the complete range of RDX drives and media see:

   https://www.hpe.com/us/en/product-catalog/storage/disk-based-backup-systems.html.

− For hardware and software compatibility of HPE disk backup products see:
   http://www.hpe.com/storage/spock.

− Please see the **HPE RDX Removable Disk Backup System QuickSpecs** for additional part numbers, technical specifications, and additional information.

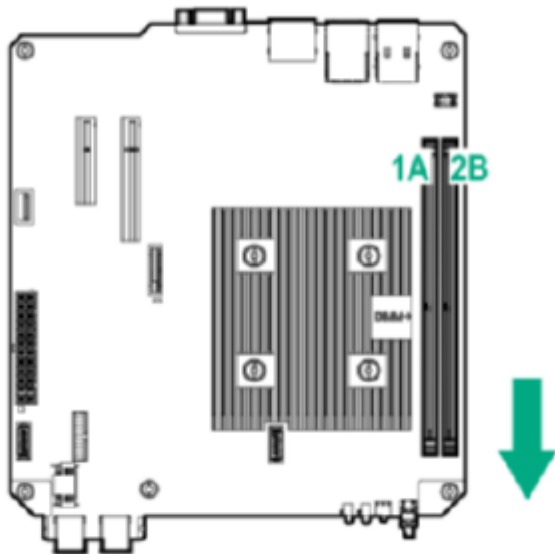|	
HPE RDX 500GB Removable Disk Cartridge	Q2042A
HPE RDX 1TB Removable Disk Cartridge	Q2044A
HPE RDX 2TB Removable Disk Cartridge	Q2046A
HPE RDX 3TB Removable Disk Cartridge	Q2047A
HPE RDX 4TB Removable Disk Cartridge	Q2048A
HPE RDX 1TB External Disk Backup System	B7B69B
HPE RDX 2TB External Disk Backup System	E7X53B

Additional Options

HPE RDX 4TB External Disk Backup System	Q2R33A
HPE RDX External Docking Station	C8S07B

HPE USB Keyboard and Mouse

HPE USB US Keyboard/Mouse Kit	631341-B21
HPE USB JP Keyboard/Mouse Kit	631360-B21
HPE USB AP/INTL Keyboard/Mouse Kit	672097-373

Memory

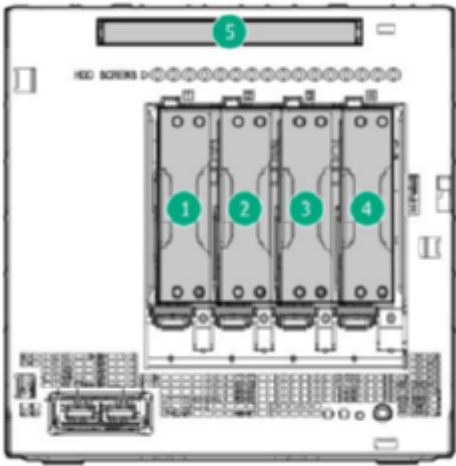## HPE ProLiant MicroServer Generation 10

Maximum Memory

32GB of maximum memory is available with the installation of 2 x 16 GB UDIMM Memory kits.

Memory		Slot	
		1A	2B
Standard	8 GB	8 GB	Empty
	16 GB	16 GB	Empty
Optional	16 GB	8 GB	8 GB
	32 GB	16 GB	16 GB
Maximum	32 GB	16 GB	16 GB

Storage

1-4   Four (4) non-hot plug drive bays   5   Media bay for optional (1) optical drive or (1) SATA SSD for boot-drive

Drive Support

Removable Media	Quantity Supported	Position Supported	Controller
DVD-RW Drive	1	5	Integrated SATA
SATA SSD	1	5	Integrated SATA

Maximum Storage Capacity

Internal

- SATA

   16.0TB (4 x 4TB)

Technical Specifications

System Unit

Dimensions (H x W x D) (with feet)	9.25 x 9.06 x 10.00 in (23.5 x 23.0 x 25.4 cm)	
Weight (approximate)	Maximum (Four drives, two DIMMs, optical drive or SSD and two expansion boards installed)	21.36 lb (9.70 kg)
	Minimum (one hard drive and one DIMM installed, no media drive or expansion board installed)	14.32 lb (6.50 kg)
Input Requirements (per power supply)	Rated Line Voltage	100 V AC to 240 V AC
	Rated Input Current	3.5 A (at 100 V AC)
	Rated Input Frequency	50 to 60 Hz
	Rated Input Power	200W Power Supply 244 W (at 115 V AC)
Power Specifications	To review typical system power ratings use the Power Advisor which is available via the online tool located at URL: **https://www.hpe.com/us/en/integrated-systems/rack-power-cooling.html**	
Power Supply Output (per power supply)	Rated Steady-State Power	200 W Power Supply 200 W (at 100 VAC), 200 W (at 200 VAC)
	Maximum Peak Power	200 W Power Supply 200 W (at 100 VAC), 200 W (at 200 VAC)
System Inlet Temperature	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed.	
	Notes: System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).	
Relative Humidity (non-condensing)	Operating	The unit shall be fully functional from 10% to 90% relative humidity, 28°C maximum web bulb temperature, (non-condensing) across the operating temperature range of 0°C to 40°C.
	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
Altitude	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Technical Specifications

Acoustic Noise Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).

Configuration	Lightly loaded	Heavily loaded
CPU type and quantity	AMD Opteron™ processor at 15W cTDP x1	AMD Opteron™ processor at 35W cTDP x1
DIMM type, capacity and quantity	8 GB UDIMM 2400MT/s x1	8 GB UDIMM 2400MT/s x1
HDD type and quantity	2.5" SFF NHP HDD 500 GB x1	3.5" LFF NHP HDD 500 GB x4
Idle Sound Power Level in Bels LWAd	3.8 Bels	4.0 Bels
Operating Sound Power Level in Bels LWAd	3.8 Bels	4.0 Bels
Idle Sound Pressure Level LpAm	26.0 dBA	30.4 dBA
Operating Sound Pressure Level LpAm	26. dBA	31.0 dBA

Notes:

– The listed sound levels apply to listed configurations. Additional options may result in increased sound levels. Please have your HPE Rep. refer to EMESC website for further technical details regarding the configurations listed above.

– Acoustics levels presented here accounts for test configuration only and acoustics level will vary depending on system configuration

– Values are subject to change without notification and are for reference only.

Emissions Classification (EMC)

FCC Rating	Class B
Normative Standards	CISPR32, EN55032, EN55024
	FCC CFR 47, Pt15; ICES-003; CNS13438; GB9254
	K32; K24; EN61000-3-2; EN61000-3-3;

Notes: Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

Environment-friendly Products and Approach

End-of-life Management and Recycling

Hewlett Packard Enterprise offers **end-of-life product return, trade-in, and recycling programs**, in many

Technical Specifications

geographic areas, for our products. Products returned to Hewlett Packard Enterprise 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 Enterprise web site. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

Date	Version History	Action	Description of Change
09-Nov-2020	Version 9	Changed	Pre-configured Models section was updated. Obsolete SKUs were removed
02-Dec-2019	Version 9	Changed	SKU was updated under Core Options Section. Obsolete SKU was removed
01-Jul-2019	Version 8	Changed	Overview and Core Options sections were updated. The U.S. version of QuickSpecs is no longer being updated, please reference the Worldwide QuickSpecs for latest information.
04-Feb-2019	Version 7	Changed	Added new HPE Disk Backup offerings Added new Solid State Drives and removed discontinued ones Updated BTO SKU information
01-Oct-2018	Version 6	Changed	Standard Features, Pre-configured Models, and Additional Options sections were updated. SKU descriptions were updated. Obsolete SKUs were removed.
06-Aug-2018	Version 5	Added	Added a new Performance SKU (P07203-xxx) which replaces the previous Performance SKU (P03698-xxx).
		Changed	Core Options and Additional Options were revised.
07-May-2018	Version 4	Added	Added a new Solution model (P04923-xxx) which bundles ClearOS and ClearVM on an internal USB drive.
05-Feb-2018	Version 3	Added	Added new Entry and Performance Models.
25-Sept-2017	Version 2	Added	Smart Buy models were added to the NA version. Added a new SSD offering. Added a new networking adaptor offering. Added a new graphics accelerator offering. Added a new smart array controller offering.
05-Jun-2017	Version 1	New	New QuickSpecs.

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