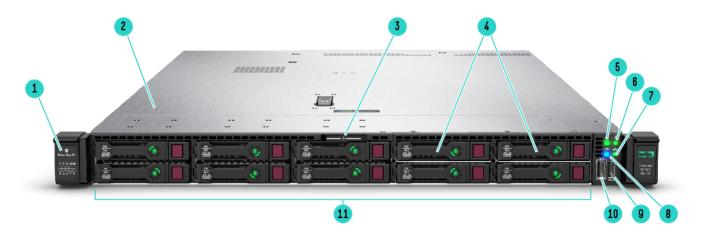
# QuickSpecs

#### **Overview**

#### HPE ProLiant DL360 Gen10 Server

Does your data center need a secure, performance driven dense server that you can confidently deploy for virtualization, database, or high-performance computing? The powerful 2P HPE ProLiant DL360 Gen10 is redefining dense compute by delivering security, agility and unmatched expandability businesses want all packed in a dense 1U rack design.

The HPE ProLiant DL360 Gen10 Server supports the Intel® Xeon® Processor Scalable Family with up to 28 cores, plus 2666 MT/s HPE DDR4 SmartMemory supporting up to 3.0 TB max. With the added performance that 12 NVDIMMs and 10 NVMe brings, the HPE ProLiant DL360 Gen10 means business. Deploy this dense platform for diverse workloads in space constrained environments and maintain it with ease by automating the most essential server lifecycle management tasks with HPE OneView and HPE iLO 5.



#### 8 SFF Front View - 8 SFF + 2 SFF Universal Media Bay option shown

- 1. Drive support label
- 2. Quick removal access panel
- 3. Serial no. label pull tab
- 4. Universal Media Bay Options:

Option shown: +2 SFF SAS/SATA (total 10SFF)

Option: +2 SFF NVMe drives

Option: DVD-RW or DVD-ROM + Display port & USB 2.0 port Kit

Option: +2 Dual uFF (4x M.2 cartridges)
Option: Display port + USB 2.0 port Kit + Blank

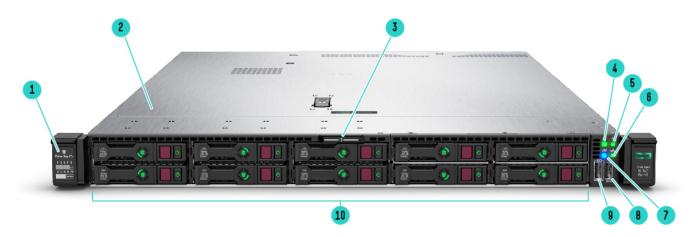
**NOTE:** Other options not shown.

NOTE: New! Rear drive option allows for an additional + 1 SFF or +1 Dual uFF (2x M.2 cartridges).

**NOTE:** System Insight Display (SID) module will include #5-9 above (will not include #10 - iLO Service Port).

- 5. Power On/Standby button and system power LED
- 6. Health LED
- 7. NIC status LED
- 8. UID button/LED
- 9. USB 3.0 port
- 10. iLO Service Port
- 11. Standard 8 SAS/SATA/SSD drive bays

#### **Overview**



#### **Premium 10SFF NVMe Front View**

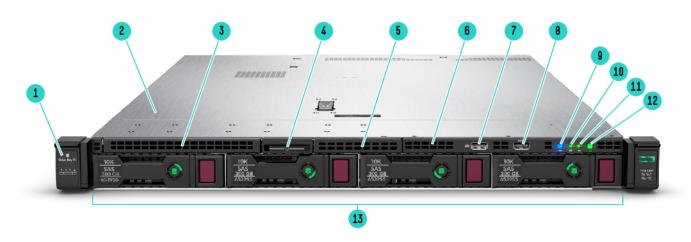
- 1. Drive support label
- 2. Quick removal access panel
- 3. Serial no. label pull tab
- 4. Power On/Standby button and system power LED
- 5. Health LED

- 6. NIC status LED
- 7. UID button/LED
- 8. USB 3.0 port
- 9. iLO Service Port
- 10. Max up to 10 NVMe drives (PCle direct attached) or 8 SAS/SATA + 2 NVMe

**NOTE:** Other options not shown.

NOTE: New! Rear drive option allows for an additional + 1 SFF or +1 Dual uFF (2x M.2 cartridges).

NOTE: System Insight Display (SID) module will include #4-8 above (will not include #9 - iLO Service Port).



#### 4 LFF Front View - Standard 4 LFF shown

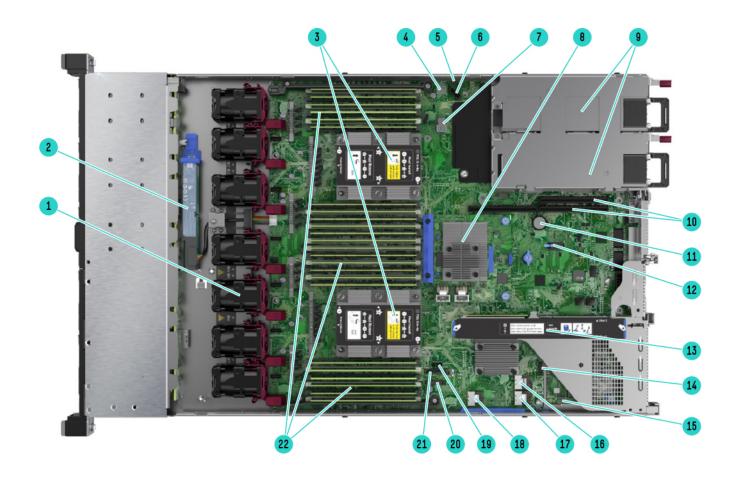
- 1. Drive support label
- 2. Quick removal access panel
- 3. Option: DVD-RW or DVD-ROM (blank shown)
- 4. Serial no. label pull tab
- 5. Option: Display port & USB 2.0 port Kit (blank shown)
- 6. Option: System insight Display (SID)\* standard shown

**NOTE:** \*This option will lose #7 iLO Service Port.

- 7. iLO Service Port
- 8. USB 3.0 Port
- 9. UID button/LED
- 10. Power On/Standby button and system power LED
- 11. Health LED
- 12. NIC status LED
- 13. SAS/SATA/SSD drive bays

**NOTE:** New! Rear drive option allows for additional + 1 SFF or +1 Dual uFF (2x M.2 cartridges), will lose one FH PCle slot.

#### **Overview**



#### Internal View - Standard for all DL360 Gen10

- 1. For 8 SFF or 4 LFF Standard single rotor hot plug fans
  - 1 CPU 5 standard fans
  - 2 CPUs 7 standard fans

\*Option: High Performance fans

**NOTE:** \*For 10 NVMe chassis - 7 High Performance Fans will be shipped for 1 or 2 processors.

- 2. Option: Smart Storage Battery
- 3. Up to 2 processors (shown with standard heat sinks)
- 4. MicroSD card slot (Dual Micro-SD option available)
- 5. Option: Chassis Intrusion Detection
- 6. Hard Drive backplane power connector
- 7. Dual internal USB 3.0 connector
- 8. Smart Array Controller (Type -a shown)
- 9. Up to 2 Power Supplies for redundant power
- 10. Secondary (CPU2) PCle 3.0 riser

Option: Low Profile x16 or

\*Option: Full Height x16

(Lose slot 2 on Primary riser)

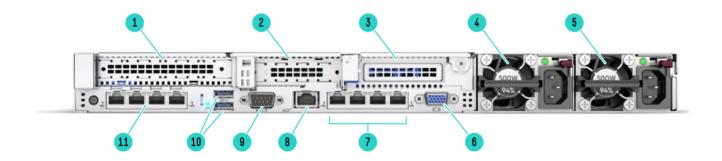
**NOTE:** \*For 10 NVMe chassis – Secondary Riser is not available due to 10 x4 NVMe riser for PCIe direct attached.

- 11. System Battery
- 12. Optional: TPM 2.0
- 13. Primary (CPU1) PCIe 3.0 riser Standard: GPU power connector + 1x 16 and 1x 8 Optional: 2 SATA M.2 + 2x 16 \*Optional: 2x 4 NVMe + 1x 16 and 1x 8

NOTE: \*Only available on 8 SFF.

- 14. Optional: Front Display port / USB 2.0
- 15. FlexibleLOM (supports various NICs up to 25GbE)
- 16. x4 SATA port 1
- 17. x4 SATA port 2
- 18. x2 SATA port 3
- 19. x1 SATA port 4
- 20. Optical / SATA port 5
- 21. Front Power USB 3.0 connector
- DDR4 DIMM slots
   (Fully populated 24 DIMMs shown)

#### **Overview**



#### Rear View - Standard for all DL360 Gen10

- 1. Slot 1 PCle 3.0
  - Option: Rear Drive +1 SFF or 1 uFF SSD (2x M.2 cartridges)

    NOTE: Will lose one FH x16 PCle slot1 with this option.
- 2. Slot 2 PCle 3.0
- 3. Option: Slot 3 PCle 3.0 (Requires 2<sup>nd</sup> processor)
- 4. Power Supply 2
- 5. Power Supply 1

- 6. VGA port
- 7. Embedded 4x 1GbE Adapter
- 8. iLO Management Port
- 9. Option: Serial Port
- 10. USB 3.0 Ports
- 11. Option: FlexibleLOM (Shown: 4x 1GbE)

  NOTE: Supports Various NICs up to 25GbE.

#### What's New

- New! Entry level WW Model-1 sku
- NVDIMMs available to ship
- High capacity 12TB LFF drives
- Large capacity 15.3TB SSDs
- HPE Sepcific IST Processor offering Gold 6143 and Platinum 8165 bins

#### **Platform Information**

**Platform Information** 

Form Factor 1U rack

**Chassis Types** 8 SFF with options supporting: +2 SFF or 2 NVMe or 2 Dual uFF (4x M.2 cartridges)

10 SFF NVMe Premium

4 LFF

NOTE: New Rear drive option available on all DL360 Gen10 chassis types for additional

boot/storage: +1SFF or 1 Dual uFF (2x M.2 cartridges).

**System Fans** Single rotor hot plug fans will be included

For 4 LFF and 8 SFF chassis: 1 CPU – Includes 5 standard fans 2 CPUs – Includes 7 standard fans

NOTE: Optional High Performance Fan Kit available (includes 7 fans).

**NOTE:** The DL360 Gen10 will support up to 7 fans with fan redundancy built in. One fan rotor failure will place server in degraded mode but fully functional. Two fan rotor failures could provide warning and imminent server shutdown.

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For 10 NVMe Premium chassis: 1 or 2 CPUs – Includes 7 high performance fans as standard

#### **Standard Features**

Processors – Up to 2 of the following depending on model.

**NOTE:** For more information regarding Intel Xeon processors, please see the following <a href="http://www.intel.com/xeon">http://www.intel.com/xeon</a>.

**NOTE:** This table covers the public Intel offering only.

Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR4	Memory per socket
Platinum 8180M Processor	2.5 GHz	28	38.50 MB	205W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Platinum 8180 Processor	2.5 GHz	28	38.50 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8176M Processor	2.1 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Platinum 8176 Processor	2.1 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8170M Processor	2.1 GHz	26	35.75 MB	165W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Platinum 8170 Processor	2.1 GHz	26	35.75 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8168 Processor	2.7 GHz	24	33.00 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8165 Processor	2.3 GHz	24	33.00 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8164 Processor	2.0 GHz	26	35.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8160M Processor	2.1 GHz	24	33.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Platinum 8160 Processor	2.1 GHz	24	33.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8158 Processor	3.0 GHz	12	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8156 Processor	3.6 GHz	4	16.50 MB	105W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8153 Processor	2.0 GHz	16	22.00 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB

#### **NOTE:** Platinum Processors:

- 2 and 4 socket capable, 2S 2UPI, 4S 3UPI, 8S 3UPI @ 10.4 GT/s.
- 6-Channel DDR4 @ 2666 MT/s.
- 768 GB max memory capacity (1.5 TB on select skus).
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA).
- 48 lanes PCIe 3.0, advanced RAS.

Gold 6154 Processor	3.0 GHz	18	24.75 MB	200W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6152 Processor	2.1 GHz	22	30.25 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6150 Processor	2.7 GHz	18	24.75 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6148 Processor	2.4 GHz	20	27.50 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6146 Processor	3.2 GHz	12	24.75 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6144 Processor	3.5 GHz	8	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6143 Processor	2.8 GHz	16	22.00 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6142M Processor	2.6 GHz	16	22.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Gold 6142 Processor	2.6 GHz	16	22.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6140M Processor	2.3 GHz	18	24.75 MB	140W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Gold 6140 Processor	2.3 GHz	18	24.75 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6138 Processor	2.0 GHz	20	27.50 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6136 Processor	3.0 GHz	12	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6134M Processor	3.2 GHz	8	24.75 MB	130W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Gold 6134 Processor	3.2 GHz	8	24.75 MB	130W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6132 Processor	2.6 GHz	14	19.25 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6130 Processor	2.1 GHz	16	22.00 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6128 Processor	3.4 GHz	6	19.25 MB	115W	3 @ 10.4 GT/s	2666 MT/s	768GB

Gold 6126 Processor	2.6 GHz	12	19.25 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 5122 Processor	3.6 GHz	4	16.50 MB	105W	2 @ 10.4 GT/s	2666 MT/s	768GB
Gold 5120 Processor	2.2 GHz	14	19.25 MB	105W	2 @ 10.4 GT/s	2400 MT/s	768GB
Gold 5118 Processor	2.3 GHz	12	16.50 MB	105W	2 @ 10.4 GT/s	2400 MT/s	768GB
Gold 5115 Processor	2.4 GHz	10	13.75 MB	85W	2 @ 10.4 GT/s	2400 MT/s	768GB

#### **NOTE:** Gold Processors:

- 2 and 4 socket capable, 2S 2UPI, 4S 3UPI @ 10.4 GT/s.
- 6-Channel DDR4 @ 2400 MT/s (SKU 5122 supports 2666 MT/s).
- 768 GB max memory capacity (1.5 TB on select skus).
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (1x 512-bit FMA) (SKU 5122 supports 2x 512 bit FMA).
- 48 lanes PCIe 3.0, advanced RAS.

Silver 4116 Processor	2.1 GHz	12	16.50 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4114 Processor	2.2 GHz	10	13.75 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4112 Processor	2.6 GHz	4	8.25 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4110 Processor	2.1 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4108 Processor	1.8 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB

#### **NOTE:** Silver Processors:

- 2 socket capable, 2S 2UPI @ 9.6 GT/s.
- 6-Channel DDR4 @ 2400 MT/s, 768 GB max memory capacity.
- Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (1x 512-bit FMA).
- 48 lanes PCIe 3.0, standard RAS.

Bronze 3106 Processor	1.7 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2133 MT/s	768GB
Bronze 3104 Processor	1.7 GHz	6	8.25 MB	85W	2 @ 9.6 GT/s	2133 MT/s	768GB

#### **NOTE:** Bronze Processors:

- 2 socket capable, 2S 2UPI @ 9.6 GT/s.
- 6-Channel DDR4 @ 2133 MT/s, 768 GB max memory capacity.
- Intel AVX-512 (1x 512-bit FMA).
- 48 lanes PCIe 3.0, standard RAS.

#### Chipset

Intel C621 Chipset

**NOTE:** For more information regarding Intel® chipsets, please see the following URL:

http://www.intel.com/products/server/chipsets/

#### **On System Management Chipset**

HPE iLO 5 ASIC

NOTE: Read and learn more in the iLO QuickSpecs.

#### Memory

Type		HPE DDR4 SmartMemory Registered (RDIMM), Load Reduced (LRDIMM)
DIMM Slots Available	24	12 DIMM slots per processor, 6 channels per processor, 2 DIMMs per channel
Maximum capacity (LRDIMM)	3.0 TB	24 x 128 GB LRDIMM @ 2666 MT/s
Maximum capacity (RDIMM)	768 GB	24 x 32 GB RDIMM @ 2666 MT/s
Maximum capacity (NVDIMM)	192 GB	12 x 16 GB NVDIMM @ 2666 MT/s

NOTE: NVDIMMs can be mixed with RDIMMs only.

**NOTE:** Maximum memory per socket is dependent on processor selection. Processors supporting 1.5 TB per CPU is

indicated by the "M" in the processor model names (i.e. 8160M).

NOTE: Mixing of RDIMM and LRDIMM memory is not supported.

NOTE: For General Server Memory and NVDIMM Population Rules and Guidelines for Gen10 see details here:

#### http://www.hpe.com/docs/memory-population-rules

#### **Memory Protection**

Advanced ECC Advanced ECC uses single device data correction to detect and correct single and all multibit error

that occurs within a single DRAM chip.

Online Spare Memory online spare mode detects a rank that is degrading and switches operation to the spare

rank

NOTE: For more information see our Memory RAS feature technical whitepaper.

<b>Expansion Slots</b>						
Primary GPU Riser	Expansion Slots #	Technology	Bus Width	Connector Width	Processor	Slot Form Factor
	1	PCle 3.0	x16	x16	CPU1	Full-height, 3/4 length (up to 9.5in)
	2	PCIe 3.0	x8	x8	CPU1	Low Profile
Primary SATA M.2 Riser	Expansion Slots #	Technology	Bus Width	Connector Width	Processor	Slot Form Factor
	1	PCle 3.0	x16	x16	CPU 1	Full-height; 3/4 length (up to 9.5in)
	2	PCle 3.0	x16	x16	CPU 1	Low Profile
Primary NVMe Riser	Expansion Slots #	Technology	Bus Width	Connector Width	Processor	Slot Form Factor
	1	PCle 3.0	x16	x16	CPU 1	Full-height; 3/4 length (up to 9.5")
	2	PCle 3.0	x8	x8	CPU 1	Low Profile
Secondary Riser*	Expansion Slots #	Technology	Bus Width	Connector Width	Processor	Slot Form Factor
	3	PCle 3.0	x16	x16	CPU 2	Low Profile <b>or</b> Full-height; 3/4 length (up to 9.5")

**NOTE:** If secondary full height kit is installed, then primary PCle Slot #2 cannot be used. Only 2 full height slots are supported.

#### **Storage Controllers**

#### Software RAID

HPE Smart Array S100i SR Gen10 SW RAID

**NOTE:** HPE Smart Array S100i SR Gen10 SW RAID will operate in UEFI mode only. For legacy support an additional controller will be needed, and for CTO orders please also select the Legacy mode settings part, 758959-B22.

NOTE: HPE Smart Array S100i SR Gen10 SW RAID is off by default and must be enabled.

**NOTE:** The S100i is a 14-port SATA controller, but only 12 ports are accessible as 2 are leveraged to support the 2 M.2 options on the Primary Riser.

**NOTE:** The S100i supports windows only.

**NOTE:** For Linux users, HPE offers a solution that uses in-distro open-source software to create a two-disk RAID 1 boot volume. For more information visit:

#### **Essential RAID Controllers**

HPE Smart Array E208i-a SR Gen10 Controller

HPE Smart Array E208i-a SR G10 LH Controller

HPE Smart Array E208i-p SR Gen10 Controller

HPE Smart Array E208e-p SR Gen10 Controller

#### **Performance RAID Controllers**

HPE Smart Array P408i-a SR Gen10 Controller

HPE Smart Array P408i-a SR G10 LH Controller

HPE Smart Array P408i-p SR Gen10 Controller

HPE Smart Array P408e-p SR Gen10 Controller

HPE Smart Array P816i-a SR Gen10 Controller

HPE Smart Array P816i-a SR G10 LH Controller

**NOTE:** If GPGPU is needed then please order the LH controller (low profile heatsink) to allow GPU to fit in the chassis.

NOTE: For additional details, please see HPE Smart Array Gen10 Controllers Data Sheet.

#### **Internal Storage Devices**

Optical Drive Available on 8 SFF and 4 LFF CTO Servers as an option (DVD-ROM or DVD-RW)

Hard Drives None ship standard

#### **Maximum Storage**

STORAGE	CAPACITY	CONFIGURATION
Hot Plug SFF SAS	22 TB	$8+2+1 \times 2 \text{ TB}$ (with optional UMB + rear drive option)
Hot Plug SFF SATA HDD	22 TB	$8+2+1 \times 2 \text{ TB}$ (with optional UMB + rear drive option)
Hot Plug SFF SATA SSD	42.24 TB	$8+2+1 \times 3.84$ TB (with optional UMB + rear drive option)
Hot Plug SFF SAS SSD	153 TB	$8+2+1 \times 1.5.3$ TB (with optional UMB + rear drive option)
Hot Plug SFF NVMe PCle SSD	23.84 TB	$10 \times 2 \text{ TB NVMe} + 1 \text{ SFF} \times 3.84 \text{ TB}$ (with rear drive option)
Hot Plug LFF SAS	48 TB	4 x 12 TB
Hot Plug LFF SATA	48 TB	4 x 12 TB
Hot Plug LFF SATA SSD	6.4 TB	4 x 1.6 TB

#### **Power Supply**

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit

NOTE: Available in 94% efficiency.

HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit

NOTE: Available in 94% and 96% efficiency.

NOTE: Also available in -48VDC and 227VAC/380VDC power inputs.

HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit

**NOTE:** Available in 94% efficiency.

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE ProLiant Gen10 Performance Servers. Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

All pre-configured servers ship with a standard 6-foot IEC C-13/C-14 jumper cord (A0K02A). This jumper cord is also included with each standard AC power supply option kit. If a different power cord is required, please check the **ProLiant Power Cables** web page.

To review the power requirements for your selected system, please use the **HPE Power Advisor Tool**.

For information on power specifications and technical content visit **HPE Server power supplies**.

Interfaces

Serial 1 port - Optional

Video 1 Front - Display port (optional 8 SFF and 4 LFF only)

1 Rear - VGA port (standard on all chassis types)

**NOTE:** Both ports are not active simultaneously.

Network Ports 4x 1GbE embedded NIC (standard on all chassis types)

1 FlexibleLOM slot available on all chassis types (supporting various NICs adapters)

iLO Remote Mgmt PortMicroSD Slot1 Gb Dedicated1 MicroSD slot

NOTE: The MicroSD slot is not hot-pluggable, please power down server before removal.

USB 3.0 Up to 5 total: 1 front, 2 rear, 2 internal (standard on all chassis types)

+1 optional USB 2.0 front (on 8 SFF and 4 LFF only)

SID (Systems Insight Display) Optional for all chassis types

**NOTE:** Will lose iLO Service Port if selecting this option.

#### **Operating Systems and Virtualization Software**

Windows Server 2012 R2 (Most Recent Version)

Windows Server 2016 (Most Recent Version)

VMware ESXi 6.0 U3

VMware ESXi 6.5 and U1 upon release

Red Hat Enterprise Linux (RHEL) 6.9 and 7.3

SUSE Linux Enterprise Server (SLES) 11 SP4 and 12 SP2

#### **ClearOS**

**NOTE:** ClearOS allows you to build a fully functional server that is just right for you at no upfront cost. For more information on ClearOS, please visit <a href="http://www.hpe.com/servers/clearos">http://www.hpe.com/servers/clearos</a>.

#### **CentOS**

**NOTE:** For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server.

http://www.hpe.com/info/ossupport

#### **Industry Standard Compliance**

- ACPI 6.1 Compliant
- PCle 3.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- USB 3.0 Compliant
- USB 2.0 Compliant (only on optional Universal Media Bay)
- SMBIOS 3.1
- UEFI 2.6 (Unified Extensible Firmware Interface Forum)
- Redfish API
- IPMI 2.0
- Secure Digital 4.0
- TPM 1.2 and 2.0 support
- Advanced Encryption Standard (AES)

- Triple Data Encryption Standard (3DES)
- SNMP v3
- TLS 1.2
- DMTF Systems Management Architecture for Server Hardware Command Line (SMASH CLP)
- Active Directory v1.0
- ASHRAE A3/A4
- Energy Star

NOTE: For additional technical thermal details regarding ambient temperatures, humidity and features support please visit:

#### http://www.hpe.com/servers/ashrae

#### **Graphics**

Integrated video standard

- Video modes up to 1920 x 1200 @ 60 Hz (32 bpp)
- 16 MB Video Memory

HPE iLO 5 on system management memory

- 32 MB Flash
- 4 Gbit DDR3 with ECC protection

#### HPE Server UEFI/Legacy ROM

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration than the legacy ROM while interacting with your server at boot time. HPE ProLiant Gen10 servers have a UEFI Class 2 implementation and support both UEFI Mode (default) and Legacy BIOS Mode.

**NOTE:** The UEFI System Utilities tool is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit <a href="http://www.hpe.com/servers/uefi">http://www.hpe.com/servers/uefi</a>.

UEFI enables numerous new capabilities specific to HPE ProLiant servers such as:

- Secure Boot and Secure Start enable for enhanced security
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.0 Stack
- Embedded UEFI Shell
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- PXE boot support for IPv6 networks
- Workload Profiles for simple performance optimization

**UEFI** Boot Mode only:

- TPM 2.0 Support
- NVMe Boot Support
- Platform Trust Technology (PTT) can be enabled.
- iSCSI Software Initiator Support.
- HTTP/HTTPs Boot support as a PXE alternative.
- Boot support for option cards that only support a UEFI option ROM

**NOTE:** For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI. **NOTE:** UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen10 Server.

#### **Embedded Management**

HPE Integrated Lights-Out (HPE iLO)

Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at <a href="http://www.hpe.com/info/ilo">http://www.hpe.com/info/ilo</a>.

**UEFI**Configure and boot your servers securely with industry standard Unified Extensible Firmware

Interface (UEFI). Learn more at <a href="http://www.hpe.com/servers/uefi">http://www.hpe.com/servers/uefi</a>.

**Intelligent Provisioning** Hassle free server and OS provisioning for one or more servers with Intelligent Provisioning.

Learn more at http://www.hpe.com/servers/intelligentprovisioning.

**iLO RESTful API** iLO RESTful API is Redfish API conformance and offers simplified server management

automation such as configuration and maintenance tasks based on modern industry

standards. Learn more at <a href="http://www.hpe.com/info/restfulapi">http://www.hpe.com/info/restfulapi</a>.

**Server Utilities** 

Active Health System The HPE Active Health System (AHS) is an essential component of the iLO management

portfolio that provides continuous, proactive health monitoring of HPE servers. Learn more

at http://www.hpe.com/servers/ahs.

**Active Health System** 

Viewer

Use the Active Health System Viewer, a web-based portal, to easily read AHS logs and speed

problem resolution with HPE self-repair recommendations, to learn more visit:

http://www.hpe.com/servers/ahsv.

Smart Update Keep your servers up to date with the HPE Smart Update solution by using Smart Update

Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant

(SPP). Learn more at <a href="http://www.hpe.com/info/smartupdate">http://www.hpe.com/info/smartupdate</a>.

**iLO Amplifier Pack**Designed for large enterprise and service provider environments with hundreds of HPE

servers, the iLO Amplifier Pack is a free, downloadable open virtual application (OVA) that delivers the power to discover, inventory and update Gen8, Gen9 and Gen10 HPE servers at unmatched speed and scale. Use with an iLO Advanced License to unlock full capabilities.

Learn more at <a href="http://www.hpe.com/servers/iLOamplifierpack">http://www.hpe.com/servers/iLOamplifierpack</a>.

**HPE iLO Mobile Application** Enables the ability to access, deploy, and manage your server anytime from anywhere from

select smartphones and mobile devices. For additional information please visit:

http://www.hpe.com/info/ilo/mobileapp.

**RESTful Interface Tool**RESTful Interface tool (iLOREST) is a single scripting tool to provision using iLO RESTful API

to discover and deploy servers at scale. Learn more at <a href="http://www.hpe.com/info/resttool">http://www.hpe.com/info/resttool</a>.

Scripting Tools Provision one to many servers using your own scripts to discover and deploy with Scripting

Tool (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at

http://www.hpe.com/servers/stk or http://www.hpe.com/servers/powershell.

**HPE OneView Standard** HPE OneView Standard can be used for inventory, health monitoring, alerting, and reporting

without additional fees. It can monitor multiple HPE server generations. The user interface is similar to the HPE OneView Advanced version, but the software-defined functionality is not

available. Learn more at http://www.hpe.com/info/oneview.

HPE Systems Insight Manager (HPE SIM)

Ideal for environments already using HPE SIM, it allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers. Also provides you with basic support for non-HPE servers. HPE SIM also integrates with Smart Update Manager to provide guick and

seamless firmware updates. Learn more at <a href="http://www.hpe.com/info/hpesim">http://www.hpe.com/info/hpesim</a>.

#### Security

- UEFI Secure Boot and Secure Start support
- Immutable Silicon Root of Trust
- FIPS 140-2 validation (iLO 5 certification in progress)
- Common Criteria certification (iLO 5 certification in progress)
- Configurable for PCI DSS compliance
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
- Support for Commercial National Security Algorithms (CNSA)
- iLO Security Modes including a New iLO Advanced Premium Security License
- Granular control over iLO interfaces
- Smart card (PIV/CAC) and Kerberos based 2-factor Authentication
- Tamper-free updates components digitally signed and verified
- Secure Recovery recover critical firmware to known good state on detection of compromised FW
- Ability to rollback firmware
- Secure erase of NAND
- TPM (Trusted Platform Module) 1.2 option
- TPM (Trusted Platform Module) 2.0 option
- Bezel Locking Kit
- Chassis Intrusion detection option

#### Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of HPE Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Pointnext operational services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

**NOTE:** Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at:

http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/.

#### **Optional Features**

#### Server Management

**HPE iLO Advanced** 

HPE iLO Advanced licenses offer smart remote functionality without compromise, for all HPE ProLiant servers. The license includes the full integrated remote console, virtual keyboard, video, and mouse (KVM), multi-user collaboration, console record and replay, and GUI-based and scripted virtual media and virtual folders. You can also activate the enhanced security and power management functionality. Learn more about HPE iLO Advanced at

http://www.hpe.com/servers/iloadvanced.

HPE iLO Advanced Premium Security Edition HPE iLO Advanced Premium Security Edition for iLO 5 includes iLO Advanced License plus high-end security modes, unique security capabilities, like Automatic FW recovery; Runtime FW verification, and Secure erase. Learn more about HPE iLO Advanced Premium Security Edition at: <a href="http://www.hpe.com/servers/ilopremium">http://www.hpe.com/servers/ilopremium</a>.

**HPE OneView Advanced** 

HPE OneView brings a new level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It provides full-featured licenses which can be purchased for managing Gen8, Gen9 and Gen10 servers. To learn more visit

http://www.hpe.com/info/oneview

HPE Insight Cluster
Management Utility (CMU)

HPE Insight Cluster Management Utility is a HyperScale management framework that includes software for the centralized provisioning, management and monitoring of nodes and infrastructure. Learn more at <a href="http://www.hpe.com/info/cmu">http://www.hpe.com/info/cmu</a>.

#### Accelerator and GPGPU Information

Hewlett Packard Enterprise supports various accelerators on select HPE Proliant servers to support different workloads. The accelerators enable seamless integration of GPU computing with HPE ProLiant servers for high-performance computing, large data center graphics, deep learning and virtual desktop deployments. These accelerators deliver all of the standard benefits of GPU computing while enabling maximum reliability and tight integration with system monitoring and management tools such as HPE Insight Cluster Management Utility.

#### Rack and Power Infrastructure

The story may end with servers, but it starts with the foundation that makes compute go – and business grow. We've reinvented our entire portfolio of rack and power products to make IT infrastructure more secure, more practical, and more efficient. In other words, we've created a stronger, smarter, and simpler infrastructure to help you get the most out of your IT equipment. As an industry leader, Hewlett Packard Enterprise is uniquely positioned to address the key concerns of power, cooling, cable management and system access.

HPE G2 Advanced and Enterprise Racks are perfect for the server room or today's modern data center with enhanced airflow and thermal management, flexible cable management, and a 10 year Warranty to support higher density computing.

HPE G2 PDUs offer reliable power in flexible form factors that operate at temperatures up to 60°, include color-coded outlets and load segments and a low-profile design for optimal access to the rack and support for dense rack environments.

HPE Uninterruptible Power Systems are cost-effective power protection for any type workload. Some UPSs include options for remote management and extended runtime modules so you're critical dense data center is covered in power outages.

HPE KVM Solutions include a console and switches designed to work with your server and IT equipment reliably. We've got a cost-effective KVM switch for your first rack and multiple connection IP switches with remote management and security capabilities to keep your data center rack up and running.

Learn more about HPE Racks, KVM, PDUs and UPSs at HPE Rack and Power Infrastructure.

# **Optional Features**

#### **One Config Simple (SCE)**

SCE is a guided self-service tool to help sales and non-technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help, or use in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in SCE, please contact Hewlett Packard Enterprise Customer Business Center or an Authorized Partner for assistance.

https://h22174.www2.hpe.com/SimplifiedConfig/Welcome#

#### Service and Support

#### **HPE Pointnext - Service and Support**

#### Protect your business beyond warranty with HPE Support Services

HPE Pointnext provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation. From the onset of your transformation journey, Advisory and Transformational Services focus on designing the transformation and creating a solution roadmap. Professional Services specializes in creative configurations with flawless and on-time implementation, and on-budget execution. Finally, operational services provides innovative new approaches like Flexible Capacity and Datacenter Care, to keep your business at peak performance. HPE is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make the complex simple.

#### **Connect your devices:**

Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Reduce down time and improve diagnostic accuracy with a single consolidated view of your environment. By connecting, you will receive 24x7monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to HPE support.

Learn more about getting connected at <a href="http://www.hpe.com/services/getconnected">http://www.hpe.com/services/getconnected</a>.

#### Other related Services

#### **HPE Server Hardware Installation**

Provides for the basic hardware installation of HPE 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

#### **Parts and Materials**

HPE 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 HPE due to malfunction.

#### **HPE Support Center**

The HPE Support Center is a personalized online support portal with access to information, tools and experts to support HPE business products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers. Learn more <a href="http://www.hpe.com/support/hpesc">http://www.hpe.com/support/hpesc</a>.

HPE's Support Center Mobile App\* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE warranty, HPE Support Service or HPE contractual support agreement.

\*HPE Support Center Mobile App is subject to local availability.

For more information: <a href="http://www.hpe.com/services">http://www.hpe.com/services</a>.

# **Pre-configured Models**

- 1. Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.
- 2. Hewlett Packard Enterprise does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.
- 3. If you desire a custom configuration please see "Configuration Information Factory Integrated Models" section of this QuickSpecs.

	Low Model	Entry Model	Base Model					
SKU Number	P01880-B21	867961-B21	867962-B21					
Model Name	HPE ProLiant DL360 Gen10 3104 85W 1P 8G-2R S100i 4LFF 1x500W Server	HPE ProLiant DL360 Gen10 3106 85W 1P 16G-2R S100i 8SFF 1x500W Entry Server	HPE ProLiant DL360 Gen10 4114 85W 1P 16G-2R P408i-a 8SFF 1x500W Base Server					
Chassis	4LFF	8SFF	8SFF					
Processor	3104 (6-Core, 1.7 GHz, 85W)	3106 (8-Core, 1.7 GHz, 85W)	4114 (10-Core, 2.2 GHz, 85W)					
Number of Processors	One processor With standard heatsink	One processor With standard heatsink	One processor With standard heatsink					
Memory	8 GB RDIMM 2R 2666 MT/s (1x 8 GB)  NOTE: Runs at 2133 MT/s due to processor limitation.	16 GB RDIMM 2R 2666 MT/s (1x 16 GB) NOTE: Runs at 2133 MT/s due to processor limitation.	16 GB RDIMM 2R 2666 MT/s (1x 16 GB) NOTE: Runs at 2400 MT/s due to processor limitation.					
Network Controller	Embedded 4-port 1GbE	Embedded 4-port 1GbE	Embedded 4-port 1GbE					
Storage Controller	Embedded 14-port S100i NOTE: SATA only.	Embedded 14-port S100i NOTE: SATA only.	P408i-a/2GB					
Hard Drive	None included	None included	None included					
Optical Drive	None included	None included	None included					
PCIe Slots	2 PCle: 1 x16 FH / 1 x8 LP	2 PCle: 1 x16 FH / 1 x8 LP	2 PCle: 1 x16 FH / 1 x8 LP					
Power Supply	1x 500W	1x 500W	1x 500W					
Fans	5 - Standard	5 - Standard	5 - Standard					
Management	HPE iLO 5	HPE iLO 5	HPE iLO 5					
Rail Kit		SFF Easy Install w/o CMA						
Energy Star		Energy Star 2.1						
Form Factor	1U Rack							
Warranty	3-year parts, 3-year la	bor, 3-year onsite support with next b	ousiness day response.					
	NOTE: UEFI is the star	ndard default for all Pre-configured m	odels.					

# **Pre-configured Models**

	Performance Model	High Perform	nance Models
SKU Number	867963-B21	867964-B21	879991-B21
Model Name	HPE ProLiant DL360 Gen10 5118 105W 2P 32G-2R P408i- a 8SFF 2x800W Performance Server	HPE ProLiant DL360 Gen10 6130 125W 2P 64G-2R P408i-a Premium 10NVMe 2x800W High Perf Svr	HPE ProLiant DL360 Gen10 6130 125W 2P 64G-2R P408i-a Premium 10NVMe 2x800W High Perf Svr
Chassis	8SFF	Premium 10 SFF NVMe	Premium 10 SFF NVMe
Processor	5118 (12-Core, 2.3 GHz, 105W)	6130 (16-Core, 2.1 GHz, 125W)	6130 (16-Core, 2.1 GHz, 125W)
Number of Processors	Two processors With standard heatsink	Two processors With High Performance heatsink	Two processors With High Performance heatsink
Memory	32 GB RDIMM 2R 2666 MT/s (2x 16 GB) NOTE: Runs at 2400 MT/s due to processor limitation.	64 GB RDIMM 2R 2666 MT/s (2x 32 GB)	64 GB RDIMM 2R 2666 MT/s (2x 32 GB)
Network Controller	Embedded 4-port 1GbE + 10/25 GbE 2P 640FLR-SFP28	Embedded 4-port 1GbE + 10/25 GbE 2P 640FLR-SFP28	Embedded 4-port 1GbE + 10/25 GbE 2P 631FLR-SFP28
Storage Controller	P408i-a/2GB	P408i-a/2 GB	P408i-a/2 GB
Hard Drive	None included	None included	None included
Optical Drive	None included	None included	None included
PCIe Slots	3 PCle: 1 x16 FH / 1 x8 LP + 1 x16 FH	2 PCle: 1 x16 FH / 1 x8 LP	2 PCle: 1 x16 FH / 1 x8 LP
Power Supply	2x 800W	2x 800W	2x 800W
Fans	7 - Standard	7 – High Performance	7 - High Performance
Management	HPE iLO Advanced	HPE iLO Advanced	HPE iLO Advanced
Rail Kit		SFF Easy Install w/o CMA	
Energy Star		Energy Star 2.1	
Form Factor		1U Rack	
Warranty	3-year parts, 3-ye	ar labor, 3-year onsite support with next	business day response.
	NOTE: UEFI is the	standard default for all Pre-configured	models.

# **Country Code Key**

xx1 = B21 Worldwide xx1 = 291 Japan xx1 = AA1 PRC

**NOTE:** The -B21 WW SKU is to be ordered in all countries other than Japan or PRC.

This section lists some of the steps required to configure a Factory Integrated Model.

To ensure valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

- 1. Factory Integrated Models must start with a CTO Server.
- 2. FIO indicates that this option is only available as a factory installable option.
- 3. All Factory Integrated Models will be populated with sufficient hard drive blanks based on number of drives ordered with server.
- 4. Some options may not be integrated at the factory. Contact your local sales representative for additional information

# Step 1: Base Configuration (choose one of the following configurable models)

CTO Comus	/   [[	0.000	Danasiona 10 NV/Ma					
CTO Server	4 LFF	8 SFF	Premium 10 NVMe					
SKU Number	867958-B21	867959-B21	867960-B21					
TAA SKU*	875965-B21	875966-B21	875967-B21					
Processor		Not included as standard						
DIMM Slots	24-1	DIMM slots (12 can be used for NVDIN	1Ms)					
Storage Controller		Embedded SW RAID (S100i) with 14 SATA ports Optional: Choice of HPE modular Smart Array and PCIe plug-in controller						
PCle	2 PCle slots (1 x16 FH / 1 x8 LP) Optional: 1 x16 FH or LP	2 PCle slots (1 x16 FH / 1 x8 LP) Optional: 1 x16 FH or LP	2 PCIe slots (1 x16 FH / 1 x8 LP)					
Drive Cage - included	4 LFF - SAS/SATA	8 SFF - SAS/SATA Optional: up to 2 NVMe or 2 Dual uFF (4x M.2 cartridges)	10 NVMe - SAS/SATA/NVME Optional: 1 Dual uFF (2x M.2 cartridges)					
Network Controller	HPE 1Gb Ethernet 4-Por	t 331i Adapter plus optional HPE Flex	ibleLOM or stand up card					
Fans	1 CPU – 5 Standard Fans 2 CPU – 7 Standard Fans Optional: High Performance Fans	2 CPU – 7 Standard Fans 2 CPU – 7 Standard Fans						
Management	HPE iLO with Intelligent Provisioning (standard) Optional: iLO Advance and OneView							
USB	Front: 1 USB 3.0 Rear: 2 Internal: 1 Optional: 1 USB 2.0	Front: 1 USB 3.0 + iLO service port Rear: 2 USB 3.0 Internal: 2 USB 3.0						

**NOTE:** HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country. **NOTE:** \*TAA chassis are only orderable in North America and Canada.

# **Step 2a: Choose Processor Options**

Please select one -L21 processor required below.

For second processor, please select the same processor model with -B21 from Core Options - HPE Processors section.

For example: first processor, select 876099-L21 then for second processor, select 876099-B21.

**NOTE:** For first processor, -L21 will include 5 fans, For second processor, -B21 will add 2 additional fans (for 4 LFF and 8 SFF CTO Server). 10 NVMe CTO Server will always get 7 High Performane fans regardless of 1 or 2 processors. **NOTE:** Maximum memory capacity per processor is dependent on processor models. All processors support up to 768 GB max memory per processor except "M" model processors will support up to 1.5 TB max memory per processor. **NOTE:** Mixing of 2 different processor models are NOT allowed.

**NOTE:** DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

**NOTE:** Processors with 130W or higher will ship with the High Performance heat sink plus SKUs 8156, 6128, 5122 as noted below. All other will processors will ship with the Standard heat sink.

Processor Option Kits	Required Processor
HPE DL360 Gen10 Intel® Xeon-Platinum 8180M (2.5GHz/28-core/205W) FIO Processor Kit	876099-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8180 (2.5GHz/28-core/205W) FIO Processor Kit	867988-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8176M (2.1GHz/28-core/165W) FIO Processor Kit	876097-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8176 (2.1GHz/28-core/165W) FIO Processor Kit	870982-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8170M (2.1GHz/26-core/165W) FIO Processor Kit	876095-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8170 (2.1GHz/26-core/165W) FIO Processor Kit	870980-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8168 (2.7GHz/24-core/205W) FIO Processor Kit	870978-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8165 (2.3GHz/24-core/205W) Processor Kit	879121-L21
NOTE: Ships with Performance Heatsink.	
NOTE: Supports "Core boosting" Learn more <a href="http://www.hpe.com/info/ist">http://www.hpe.com/info/ist</a> .	
NOTE: To enable this feature an iLO Advanced, or iLO Advanced PRemioum Security edition License	
are required.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8164 (2.0GHz/26-core/150W) FIO Processor Kit	870976-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8160M (2.1GHz/24-core/150W) FIO Processor Kit	876093-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8160 (2.1GHz/24-core/150W) FIO Processor Kit	870974-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8158 (3.0GHz/12-core/150W) FIO Processor Kit	874455-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8156 (3.6GHz/4-core/105W) FIO Processor Kit	874452-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8153 (2.0GHz/16-core/125W) FIO Processor Kit	870972-L21
HPE DL360 Gen10 Intel® Xeon-Gold 6154 (3.0GHz/18-core/200W) FIO Processor Kit	870970-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6152 (2.1GHz/22-core/140W) FIO Processor Kit	860677-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6150 (2.7GHz/18-core/165W) FIO Processor Kit	860675-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6148 (2.4GHz/20-core/150W) FIO Processor Kit	860673-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6146 (3.2GHz/12-core/165W) FIO Processor Kit	860671-L21
NOTE: Ships with High Performance Heatsink.	

HPE DL360 Gen10 Intel® Xeon-Gold 6144 (3.5GHz/8-core/150W) FIO Processor Kit	870966-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6143 (2.8GHz/16-core/205W) FIO Processor Kit	879118-L21
NOTE: Ships with Performance Heatsink.	
NOTE: Supports "Core boosting" Learn more <a href="http://www.hpe.com/info/ist">http://www.hpe.com/info/ist</a> .	
<b>NOTE:</b> To enable this feature an iLO Advanced, or iLO Advanced PRemioum Security edition License are required.	
HPE DL360 Gen10 Intel® Xeon-Gold 6142M (2.6GHz/16-core/150W) FIO Processor Kit	876091-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6142 (2.6GHz/16-core/150W) FIO Processor Kit	860669-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6140M (2.3GHz/18-core/140W) FIO Processor Kit	876089-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6140 (2.3GHz/18-core/140W) FIO Processor Kit	860667-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6138 (2.0GHz/20-core/125W) FIO Processor Kit	870968-L21
HPE DL360 Gen10 Intel Xeon-Gold 6136 (3.0GHz/12-core/150W) FIO Processor Kit	860691-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6134M (3.2GHz/8-core/130W) FIO Processor Kit	876087-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel Xeon-Gold 6134 (3.2GHz/8-core/130W) FIO Processor Kit	860689-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6132 (2.6GHz/14-core/140W) Processor Kit	860681-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel Xeon-Gold 6130 (2.1GHz/16-core/125W) FIO Processor Kit	860687-L21
HPE DL360 Gen10 Intel Xeon-Gold 6128 (3.4GHz/6-core/115W) FIO Processor Kit	860685-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel Xeon-Gold 6126 (2.6GHz/12-core/125W) FIO Processor Kit	860683-L21
HPE DL360 Gen10 Intel® Xeon-Gold 5122 (3.6GHz/4-core/105W) FIO Processor Kit	860679-L21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 5120 (2.2GHz/14-core/105W) FIO Processor Kit	860665-L21
HPE DL360 Gen10 Intel® Xeon-Gold 5118 (2.3GHz/12-core/105W) FIO Processor Kit	860663-L21
HPE DL360 Gen10 Intel® Xeon-Gold 5115 (2.4GHz/10-core/85W) FIO Processor Kit	860661-L21
HPE DL360 Gen10 Intel® Xeon-Silver 4116 (2.1GHz/12-core/85W) FIO Processor Kit	874449-L21
HPE DL360 Gen10 Intel® Xeon-Silver 4114 (2.2GHz/10-core/85W) FIO Processor Kit	860657-L21
HPE DL360 Gen10 Intel® Xeon-Silver 4112 (2.6GHz/4-core/85W) FIO Processor Kit	860659-L21
HPE DL360 Gen10 Intel® Xeon-Silver 4110 (2.1GHz/8-core/85W) FIO Processor Kit	860653-L21
HPE DL360 Gen10 Intel® Xeon-Silver 4108 (1.8GHz/8-core/85W) FIO Processor Kit	860655-L21
HPE DL360 Gen10 Intel® Xeon-Bronze 3106 (1.7GHz/8-core/85W) FIO Processor Kit	860651-L21
HPE DL360 Gen10 Intel® Xeon-Bronze 3104 (1.7GHz/6-core/85W) FIO Processor Kit	860649-L21

# **Step 2b: Choose Memory Options**

Please select one or more memory from below.

For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go to:

https://www.hpe.com/docs/memory-population-rules

For memory Reliability, Accessibility, Serviceability (RAS) features whitepaper like Gen10 Fast Fault Tolerance and legacy mirrored memory feature etc. please go to: <a href="http://www.hpe.com/docs/memory-ras-feature">http://www.hpe.com/docs/memory-ras-feature</a>.

NOTE: Maximum memory capacity per processor is dependent on processor model selection or limitation.

NOTE: Maximum memory speed is dependent on processor model selection or limitation.

**NOTE:** A maximum of 12 NVDIMMs can be supported.

HPE 128GB (1x128GB) Octal Rank x4 DDR4-2666 CAS-22-19-19 3DS Load Reduced Memory Kit	815102-B21
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit	815101-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19 Registered Smart Memory Kit	815100-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815098-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
HPE 8GB (1x8GB) Dual Rank x8 DDR4-2666 CAS-19-19 Registered Smart Memory Kit	876181-B21
HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815097-B21

#### **HPE Persistent Memory (NVDIMM)**

HPE 16GB (1x16) NVDIMM Single Rank x4 DDR4-2666 Memory Kit

845264-B21

**NOTE:** A maximum of 12 NVDIMMs supported.

**NOTE:** Can only be mixed with RDIMMs.

NOTE: For General Server Memory and NVDIMM Population Rules and Guidelines for Gen10 see

details here: http://www.hpe.com/docs/memory-population-rules

#### **Step 2c: Choose Power Supplies**

Please select one or two power supplies from below.

NOTE: Mixing of 2 different power supplies are NOT allowed.

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21

# Step 3: Choose Additional (FIO) Factory Integratable Options

Each of the following may be selected if desired at time of factory integration

HPE Trusted Platform Module 2.0 Gen10 Option

864279-B21

**NOTE:** HPE Trusted Platform Module 2.0 option works with Gen10 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants. **NOTE:** HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

HPE Gen10 TPM 1.2 FIO Setting 872108-B21

NOTE: TPM 2.0 is set as default, for 1.2 TPM setting instead, please select this option.

HPE Legacy FIO Mode Setting 758959-B22

NOTE: UEFI is the default, this FIO part can be used for CTO to enable Legacy mode.

# Step 4: Choose Additional Options for Factory Integration from Core and Additional Option sections below

HPE OneView for ProLiant DL Server including 3yr 24x7 Support FIO Bundle Physical 1-server LTU	E5Y43A
HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	P8B31A

**NOTE:** Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional information.

#### **HPE Unique Options**

#### **Risers**

HPE DL360 Gen10 Low Profile Riser Kit

HPE DL360 Gen10 2P Full Height Riser and GPU Enablement Kit

867982-B21

867980-B21

**NOTE:** This kit is not available on the 10 NVMe model.

HPE DL360 Gen10 LFF System Insight Display Power Module Kit

HPE DL360 Gen10 SATA M.2 2280 Riser Kit 867978-B21

Riser Information								
Dantanakan	Description	Riser position		Bus width (Gen3 lanes)			NVMe Direct Connect	
Part number Description	Primary	Secondary	Top slot	Middle Slot	Bottom slot	Ports	Drive count	
n/a	This is the default GPU enabled riser in the chassis	D	N	x16	x8	0		
867978-B21	HPE DL360 Gen10 x16/x16 SATA M.2 2280 Riser Kit	0	N	x16	x16	0		
867980-B21	HPE DL360 Gen10 x16 FH GPU Riser Kit	Ν	0	0	0	x16		
867982-B21	HPE DL360 Gen10 x16 LP Riser Kit	Ν	0	0	0	x16		
871242-B21	HPE DL360 Gen10 x16/x8 1-port 2SFF NVMe Riser	0	N	x16	x8	0	1	2
n/a	HPE DL360 Gen10 5-port 10SFF NVMe Riser Kit	Ν	D	0	0	0	5	10
867972-B21	HPE DL360 Gen10 1SFF SAS/SATA Rear Backplane Kit	0			x8			

. circimance coming opinions	
HPE DL360 Gen10 High Performance Heat Sink Kit	871246-B21
HPE DL360 Gen10 High Performance Fan Kit	871244-B21
Universal Media Bay Options	
HPE DL360 Gen10 2SFF SAS/SATA Backplane Kit	867966-B21
HPE DL360 Gen10 2SFF NVMe Backplane Kit	871242-B21
HPE DL360 Gen10 2SFF SATA UFF Backplane Kit	867970-B21
HPE DL360 Gen10 8SFF Display Port/USB/Optical Drive Blank Kit	868000-B21
NOTE: This kit is required for Optical Drive option (8SFF model only).	
HPE DL360 Gen10 LFF Display Port and USB Kit	868004-B21
Optical Drive Options	
HPE Mobile USB Non Leaded System DVD RW Drive	701498-B21
NOTE: This kit is only supported on USB 3.0 ports only.	
HPE 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive	726536-B21
HPE 9.5mm SATA DVD-RW JackBlack G9 Optical Drive	726537-B21
HPE DL360 Gen9 LFF Optical Cable	766203-B21
NOTE: This kit is required for Optical Drive option (4LFF model only).	
System Insight Display Options	

867994-B21

Core Options			
HPE DL360 Gen10 SFF System Insight Display Power Module Kit	867996-B21		
Rear Drive Option Kit			
HPE DL360 Gen10 1SFF Rear SAS/SATA/UFF Backplane Kit	867972-B21		
10 NVMe chassis Upgrade Kit			
HPE DL360 Gen10 10SFF Premium Backplane Kit	867974-B21		
NOTE: This kit is supported on the 8SFF model only.			
Security			
HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21		

	The Produced Flatform Module 2.0 Contro Option	00+210 B21
	HPE DL360 Gen10 Chassis Intrusion Detection Kit	867984-B21
	HPE 1U Gen10 Bezel Kit	867998-B21
	HPE Bezel Lock Kit	875519-B21
C	able Kits	
	HPE DL360 Gen10 SFF Internal Cable Kit	867990-B21
	LIDE DI 7/0 Candol FE Internal Cable Vit	0770/0 021

HPE DL360 Gen10 LFF Internal Cable Kit873869-B21HPE DL3XX Gen10 Rear Serial Cable and Enablement Kit873770-B21

#### **HPE Processors**

Please select one -L21 processor required above.

**NOTE:** Ships with Performance Heatsink.

For second processor, please select the same processor model with -B21 from Core Options - HPE Processors section below.

For example: first processor, select 876099-L21 then for second processor, select 876099-B21.

**NOTE:** For first processor, -L21 will include 5 fans, for second processor, -B21 will add 2 additional fans (for 4 LFF and 8 SFF chassis). 10 NVMe chassis will always get 7 High Performane fans regardless of 1 or 2 processors.

**NOTE:** Maximum memory capacity per processor is dependent on processor models. All processors support up to 768 GB max memory per processor except "M" model processors will support up to 1.5 TB max memory per processor.

**NOTE:** Mixing of 2 different processor models are NOT allowed.

**NOTE:** DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

**NOTE:** Processors with 130W or higher will ship with the High Performance heat sink plus SKUs 8156, 6128, 5122 as noted below. All other will processors will ship with the Standard heat sink.

below. All other will processors will strip with the Stand	Jaru near Sink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8180M (2.5G	Hz/28-core/205W) Processor Kit	876099-B21
<b>NOTE:</b> Ships with Performance Heatsink.		
HPE DL360 Gen10 Intel® Xeon-Platinum 8180 (2.5GH:	z/28-core/205W) Processor Kit	867988-B21
<b>NOTE:</b> Ships with Performance Heatsink.		
HPE DL360 Gen10 Intel® Xeon-Platinum 8176M (2.1G	Hz/28-core/165W) Processor Kit	876097-B21
<b>NOTE:</b> Ships with Performance Heatsink.		
HPE DL360 Gen10 Intel® Xeon-Platinum 8176 (2.1GH:	z/28-core/165W) Processor Kit	870982-B21
<b>NOTE:</b> Ships with Performance Heatsink.		
HPE DL360 Gen10 Intel® Xeon-Platinum 8170M (2.1G	Hz/26-core/165W) Processor Kit	876095-B21
<b>NOTE:</b> Ships with Performance Heatsink.		
HPE DL360 Gen10 Intel® Xeon-Platinum 8170 (2.1GH:	z/26-core/165W) Processor Kit	870980-B21
<b>NOTE:</b> Ships with Performance Heatsink.		
HPE DL360 Gen10 Intel® Xeon-Platinum 8168 (2.7GH:	z/24-core/205W) Processor Kit	870978-B21
<b>NOTE:</b> Ships with Performance Heatsink.		
HPE DL380 Gen10 Intel® Xeon-Platinum 8165 (2.3GH:	z/24-core/205W) Processor Kit	879121-B21

NOTE: Supports "Core boosting" Learn more http://www.hpe.com/info/ist	
<b>NOTE:</b> To enable this feature an iLO Advanced, or iLO Advanced PRemioum Security edition License are required.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8164 (2.0GHz/26-core/150W) Processor Kit	870976-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8160M (2.1GHz/24-core/150W) Processor Kit	876093-B21
NOTE: Ships with Performance Heatsink.	0,00,00
HPE DL360 Gen10 Intel® Xeon-Platinum 8160 (2.1GHz/24-core/150W) Processor Kit	870974-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8158 (3.0GHz/12-core/150W) Processor Kit	874455-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8156 (3.6GHz/4-core/105W) Processor Kit	874452-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Platinum 8153 (2.0GHz/16-core/125W) Processor Kit	870972-B21
HPE DL360 Gen10 Intel® Xeon-Gold 6154 (3.0GHz/18-core/200W) Processor Kit	870970-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6152 (2.1GHz/22-core/140W) Processor Kit	860677-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6150 (2.7GHz/18-core/165W) Processor Kit	860675-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6148 (2.4GHz/20-core/150W) Processor Kit	860673-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6146 (3.2GHz/12-core/165W) Processor Kit	860671-B21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6144 (3.5GHz/8-core/150W) Processor Kit	870966-B21
NOTE: Ships with High Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6143 (2.8GHz/16-core/205W) Processor Kit	879118-B21
NOTE: Ships with Performance Heatsink.	
NOTE: Supports "Core boosting" Learn more <a href="http://www.hpe.com/info/ist">http://www.hpe.com/info/ist</a> .	
NOTE: To enable this feature an iLO Advanced, or iLO Advanced PRemioum Security edition License are	
required.	
HPE DL360 Gen10 Intel® Xeon-Gold 6142M (2.6GHz/16-core/150W) Processor Kit	876091-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6142 (2.6GHz/16-core/150W) Processor Kit	860669-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6140M (2.3GHz/18-core/140W) Processor Kit	876089-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6140 (2.3GHz/18-core/140W) Processor Kit	860667-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6138 (2.0GHz/20-core/125W) Processor Kit	870968-B21
HPE DL360 Gen10 Intel® Xeon-Gold 6136 (3.0GHz/12-core/150W) Processor Kit	860691-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6134M (3.2GHz/8-core/130W) Processor Kit	876087-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6134 (3.2GHz/8-core/130W) Processor Kit	860689-B21
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NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6132 (2.6GHz/14-core/140W) Processor Kit	860681-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6130 (2.1GHz/16-core/125W) Processor Kit	860687-B21
HPE DL360 Gen10 Intel® Xeon-Gold 6128 (3.4GHz/6-core/115W) Processor Kit	860685-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 6126 (2.6GHz/12-core/125W) Processor Kit	860683-B21
HPE DL360 Gen10 Intel® Xeon-Gold 5122 (3.6GHz/4-core/105W) Processor Kit	860679-B21
NOTE: Ships with Performance Heatsink.	
HPE DL360 Gen10 Intel® Xeon-Gold 5120 (2.2GHz/14-core/105W) Processor Kit	860665-B21
HPE DL360 Gen10 Intel® Xeon-Gold 5118 (2.3GHz/12-core/105W) Processor Kit	860663-B21
HPE DL360 Gen10 Intel® Xeon-Gold 5115 (2.4GHz/10-core/85W) Processor Kit	860661-B21
HPE DL360 Gen10 Intel® Xeon-Silver 4116 (2.1GHz/12-core/85W) Processor Kit	874449-B21
HPE DL360 Gen10 Intel® Xeon-Silver 4114 (2.2GHz/10-core/85W) Processor Kit	860657-B21
HPE DL360 Gen10 Intel® Xeon-Silver 4112 (2.6GHz/4-core/85W) Processor Kit	860659-B21
HPE DL360 Gen10 Intel® Xeon-Silver 4110 (2.1GHz/8-core/85W) Processor Kit	860653-B21
HPE DL360 Gen10 Intel® Xeon-Silver 4108 (1.8GHz/8-core/85W) Processor Kit	860655-B21
HPE DL360 Gen10 Intel® Xeon-Bronze 3106 (1.7GHz/8-core/85W) Processor Kit	860651-B21
HPE DL360 Gen10 Intel® Xeon-Bronze 3104 (1.7GHz/6-core/85W) Processor Kit	860649-B21

#### **HPE Memory**

For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go to:

#### https://www.hpe.com/docs/memory-population-rules

For Gen10 memory speed table, please go to: <a href="https://www.hpe.com/docs/memory-speed-table">https://www.hpe.com/docs/memory-speed-table</a>

For memory Reliability, Accessibility, Serviceability (RAS) features whitepaper like Gen10 Fast Fault Tolerance and legacy mirrored memory feature etc. please go to: <a href="http://www.hpe.com/docs/memory-ras-feature">http://www.hpe.com/docs/memory-ras-feature</a>

**NOTE:** Maximum memory capacity per processor is dependent on processor model selection or limitation.

NOTE: Maximum memory speed is dependent on processor model selection or limitation.

**NOTE:** A maximum of 12 NVDIMMs can be supported.

#### **HPE DDR4 Memory**

#### Registered DIMMs (RDIMMs)

HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815100-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19 Registered Smart Memory Kit	815098-B21
HPE 8GB (1x8GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	876181-B21
HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815097-B21
Load Reduced DIMMs (LRDIMMs)	
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2666 CAS-22-19-19 3DS Load Reduced Memory Kit	815102-B21
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit	815101-B21

#### **HPE Persistent Memory (NVDIMM)**

HPE 16GB (1x16) NVDIMM Single Rank x4 DDR4-2666 Memory Kit 845264-B21

NOTE: A maximum of 12 NVDIMMs supported.

NOTE: Can only be mixed with RDIMMs.

NOTE: For General Server Memory and NVDIMM Population Rules and Guidelines for Gen10 see details

# here: http://www.hpe.com/docs/memory-population-rules

HPE Drives	
Enterprise - 12G SAS - SFF Drives	
HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	881457-B21
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	872481-B21
HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872479-B21
HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872477-B21
HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872475-B21
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870759-B21
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	870765-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870757-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	870763-B21
HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870753-B21
Midline - 6G SATA - LFF Drives	
HPE 12TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	881785-B21
HPE 10TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857648-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	861594-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	819203-B21
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846510-B21
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861750-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861752-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872491-B21
HPE 3TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	861693-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872489-B21
HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861691-B21
Midline 6G SATA - SFF Drives	
HPE 2TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765455-B21
HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765453-B21
HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	655710-B21
Midline - 12G SAS - LFF Drives	
HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857644-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	819201-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	861590-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846514-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861754-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861756-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872487-B21
HPE 3TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846528-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872485-B21
HPE 1TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846524-B21
Midline - 12G SAS - SFF Drives	
HPE 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	765466-B21
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	832514-B21
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765464-B21

HPE ProLiant DL360 Gen10 Server

# **Core Options**

#### **SSD Selection**

To streamline the configuration process for HPE ProLiant Gen10 servers and to provide the best product availability, HPE recommends SSDs from the list located here: <a href="http://www.hpe.com/products/recommend">http://www.hpe.com/products/recommend</a>.

availability, HPE recommends SSDs from the list located here: <a href="http://www.hpe.com/products/recommend">http://www.hpe.com/products/recommend</a> .						
Read Intensive - 12G SAS - SFF - Solid State Drives						
HPE 15.3TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	870148-B21					
HPE 7.68TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	870144-B21					
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872394-B21					
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875330-B21					
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872392-B21					
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875326-B21					
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872390-B21					
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875313-B21					
HPE 480GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875311-B21					
Mixed Use - 12G SAS - SFF - Solid State Drives						
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872386-B21					
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873367-B21					
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872382-B21					
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873365-B21					
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872376-B21					
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873363-B21					
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872374-B21					
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873359-B21					
Write Intensive - 12G SAS - SFF - Solid State Drives						
HPE 1.6TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873357-B21					
HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873355-B21					
HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873351-B21					
Mixed Use - 12G SAS - LFF - Solid State Drives						
HPE 800GB SAS 12G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872378-B21					
Write Intensive - 6G SATA - SFF - Solid State Drives						
HPE 1.6TB 6G SATA Write Intensive-2 SFF (2.5-inch) SC SSD	872363-B21					
HPE 800GB 6G SATA Write Intensive-2 SFF (2.5-inch) SC SSD	872359-B21					
HPE 400GB 6G SATA Write Intensive-2 SFF (2.5-inch) SC SSD	872355-B21					
Write Intensive - 6G SATA - LFF - Solid State Drives						
HPE 1.6TB 6G SATA Write Intensive-2 LFF (3.5-inch) SCC SSD	872365-B21					
HPE 800GB 6G SATA Write Intensive-2 LFF (3.5-inch) SCC SSD	872361-B21					
HPE 400GB 6G SATA Write Intensive-2 LFF (3.5-inch) SCC SSD	872357-B21					
Read Intensive - PCIe/NVMe - SFF - Solid State Drives						
HPE 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875591-B21					
HPE 960GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875589-B21					
HPE 480GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875587-B21					
Read Intensive - SATA - SFF - Solid State Drives						
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868830-B21					
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877764-B21					
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868826-B21					

HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD

877758-B21

HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875513-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877752-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868822-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869384-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875511-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868818-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877746-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875509-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868814-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877740-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875503-B21
Read Intensive - SATA - LFF - Solid State Drives	
HPE 1.92TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877760-B21
HPE 960GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877754-B21
HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877748-B21
Mixed Use - PCle/NVMe - SFF - Solid State Drives	
HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875597-B21
HPE 800GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875595-B21
HPE 400GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875593-B21
Mixed Use - SATA - SFF - Solid State Drives	
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872352-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877788-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875478-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872348-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877782-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875474-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872344-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877776-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875470-B21
HPE 240GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	880295-B21
HPE 240GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875483-B21
Mixed Use - SATA - LFF - Solid State Drives	
HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877790-B21
HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	875480-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872350-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877784-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	875476-B21
HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872346-B21
HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	875472-B21
HPE 240GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	875485-B21
Internal Dual M.2 Kit	
HPE Universal SATA HHHL 3yr Wty M.2 Kit	878783-B21
<b>NOTE:</b> The Universal SATA M.2 Kit above will require a PCle slot and support up to two of the same M.2 cards below.	
HPE DL360 Gen10 SATA M.2 2280 Riser Kit	867978-B21

**NOTE:** The DL360 SATA M.2 Riser Kit above is part of the Primary Riser so it will not take up a PCle slot and will support up to two of the same M.2 cards below.

and will support up to two of the same M.2 cards below.	
Read Intensive - M.2 - Solid State Drives (2280 type)	
HPE 150GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875317-B21
HPE 480GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875498-B21
HPE 480GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875319-B21
HPE 960GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875500-B21
Mixed Use - M.2 - Solid State Drives (2280 type)	
HPE 240GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD	875488-B21
HPE 480GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD	875490-B21
HPE 960GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD	875492-B21
External Dual uFF M.2 Kit	
HPE Dual 150GB SATA Read Intensive M.2 - UFF to SFF SCM 3yr Wty Digitally Signed Firmware SSD	880875-B21
HPE Dual 480GB SATA Read Intensive M.2 - UFF to SFF SCM 3yr Wty Digitally Signed Firmware SSD	880877-B21
NOTE: The Dual uFF Kits above includes the SCM carrier plus 2x integrated M.2 cartridges	
Hard Drive Blank Kits	
HPE Large Form Factor Hard Drive Blank Kit	666986-B21
HPE Small Form Factor Hard Drive Blank Kit	666987-B21
HPE Networking	
25 Gigabit Ethernet adapters	
HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter	817753-B21
HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter	817718-B21
HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter	867328-B21
HPE Ethernet 4x25Gb 1-port 620QSFP28 Adapter	817762-B21
10 Gigabit Ethernet adapters	
HPE Ethernet 10Gb 2-port 562T Adapter	817738-B21
HPE Ethernet 10Gb 2-port 562SFP+ Adapter	727055-B21
HPE Ethernet 10Gb 2-port 535T Adapter	813661-B21
HPE Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
HPE Ethernet 10Gb 2-port 530T Adapter	656596-B21
HPE Ethernet 10Gb 2-port 521T Adapter	867707-B21
1 Gigabit Ethernet adapters	
HPE Ethernet 1Gb 4-port 366T Adapter	811546-B21
HPE Ethernet 1Gb 2-port 361T Adapter	652497-B21
HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
HPE Ethernet 1Gb 4-port 331T Adapter	647594-B21
FlexibleLOM Adapters	
HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter	817749-B21
HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter	817709-B21
HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter	867334-B21
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21
HPE Ethernet 10Gb 2-port 562FLR-T Adapter	817745-B21
HPE FlexFabric 10Gb 4-port 536FLR-T Adapter	764302-B21
HPE Ethernet 10Gb 2-port 535FLR-T Adapter	817721-B21

HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HPE FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
NOTE: Delayed availability.	
HPE Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HPE Ethernet 1Gb 4-port 331FLR Adapter	629135-B22
HPE InfiniBand	
HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21
HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter	872725-B21
HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	825110-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	825111-B21
HPE 100Gb 1-port OP101 QSFP28 x8 PCle Gen3 with Intel® Omni-Path Architecture Adapter	829334-B21
HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel® Omni-Path Architecture Adapter	829335-B21
NOTE: For additional InfiniBand information:	
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154440	

#### **HPE Power Supplies**

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE ProLiant Gen10 Performance Servers. Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

All pre-configured servers ship with a standard 6-foot IEC C-13/C-14 jumper cord (A0K02A). This jumper cord is also included with each standard AC power supply option kit. If a different power cord is required, please check the **ProLiant Power Cables** web page.

To review the power requirements for your selected system, please use the **HPE Power Advisor Tool**.

For information on power specifications and technical content visit HPE Server power supplies.

#### **HPE Flex Slot Platinum Hot-plug Power supplies**

HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21
HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21
HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21

GPGPU I	GPGPU Information								
					DL360 configuration				
Part number	Card	Qty supported	Processor supported	PCle speed	4LFF	8SFF	8+2SFF SAS/SATA/Dual M.2	8+2SFF NVMe <sup>1</sup>	10SFF SAS/SATA/NVMe <sup>2</sup>
Q0V77A	NVIDIA Quadro P2000 GPU Module	2	All	Gen3	35C	35C	35C	35C	35C
Q0V78A	NVIDIA Quadro P4000 GPU Module	2	All	Gen3	35C	35C	35C	35C	35C
Q0V79A	NVIDIA Tesla P4 8GB Module	2	All	Gen3	35C	35C	30C	30C	25C

NOTE: When NVMe drives are installed you will be limited to Slot1 only for an Accelerator module.

- <sup>1</sup> Requires high performance fans with 2SFF NVMe configuration.
- $^{2}$  Requires high performance fans (Note these shipped standard on 10SFF models).

NOTE: There is no Energy Star certification with Graphic cards supported.

#### **HPE Computation and Graphics Accelerators**

HPE NVIDIA Tesla P4 8GB Computational Accelerator

HPE NVIDIA Quadro P4000 Graphics Accelerator

Q0V78A

HPE NVIDIA Quadro P2000 Graphics Accelerator

Q0V77A

HPE DL360 Gen10 GPU CPU1 Cable Kit

871248-B21

# **Additional Options**

**NOTE:** Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for additional information.

#### **Embedded Management**

#### **HPE iLO Advanced**

HPE iLO Advanced including 1yr 24x7 Technical Support and Updates 1-server LTU	512485-B21
HPE iLO Advanced including 1yr 24x7 Technical Support and Updates Flexible Quantity LTU	512486-B21
HPE iLO Advanced including 1yr 24x7 Technical Support and Updates Tracking LTU	512487-B21
HPE iLO Advanced including 3yr 24x7 Tech Support and Updates 1-server LTU	BD505A
HPE iLO Advanced including 3yr 24x7 Tech Support and Updates Flexible Quantity LTU	BD506A
HPE iLO Advanced including 3yr 24x7 Tech Support and Updates Tracking LTU	BD507A
HPE iLO Advanced including 1yr 24x7 Technical Support and Updates E-LTU	E6U59ABE
HPE iLO Advanced including 3yr 24x7 Technical Support and Updates E-LTU	E6U64ABE
HPE iLO Advanced Premium Security Edition License with 1yr Support on Licensed Features	Q7E31A
HPE iLO Advanced Premium Security Flex Qty License with 1yr Support on Licensed Features	Q7E32A
HPE iLO Advanced Premium Security Edition Electronic License with 1yr Support on Licensed Features	Q7E32AAE
HPE iLO Advanced Premium Security Edition License with 3yr Support on Licensed Features	Q7E33A
HPE iLO Advanced Premium Security Flex Qty License with 3yr Support on Licensed Features	Q7E34A
HPE iLO Advanced Premium Security Edition Electronic License with 3yr Support on Licensed Features	Q7E34AAE
HPE iLO Advanced Premium Security AKA Tracking License with 1yr Support on Licensed Features	Q7E35A
HPE iLO Advanced Premium Security AKA Tracking License with 1yr Support on Licensed Features	Q7E36A
HPE iLO Scale-Out	
HPE iLO Scale-Out 3yr 24x7 Tech Support and Updates Flexible Quantity LTU	BD776A

#### **HPE Converged Infrastructure Management Software**

#### HPE OneView Advanced (with HPE iLO Advanced)

HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A
HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE

#### HPE OneView Advanced (without HPE iLO Advanced)

HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU	P8B24A
HPE OneView w/o iLO including 3yr 24x7 Support Track 1-server LTU	P8B25A
HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU	P8B26AAE
HPE OneView Physical Media Kit LTU	E5Y37A

**NOTE:** Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be

downloaded at: https://www.hpe.com/us/en/integrated-systems/software.html.

**NOTE:** Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.

NOTE: Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be

downloaded at: https://www.hpe.com/us/en/integrated-systems/software.html.

#### **HPE PCIe Workload Accelerator Options**

HPE 800GB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803195-B21
HPE 1.6TB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803197-B21
HPE 800GB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803200-B21
HPE 1.6TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803202-B21

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HPE 4.0TB NVMe Read Intensive HH PCIe Workload Accelerator	877831-B21
HPE 6.4TB NVMe Mixed Use HH PCIe Workload Accelerator	877829-B21
HPE 3.2TB NVMe Mixed Use HH PCIe Workload Accelerator	877827-B21
HPE 1.6TB NVMe Mixed Use HH PCle Workload Accelerator	877825-B21
HPE 2.0TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803204-B21

NOTE: Please see the HPE PCIe Workload Accelerators for ProLiant Servers QuickSpecs for Technical Specifications and additional information.

#### **HPE Security**

HPE 1U Gen10 Bezel Kit	867998-B21
HPE Bezel Lock Kit	875519-B21
HPE DL360 Gen10 Chassis Intrusion Detection Kit	867984-B21

NOTE: This provides a physical connection from the chassis board and hood and detects any physical intrusion into the chassis, providing security during the entire supply chain process of shipping, receiving, distribution, and operation.

HPE Trusted Platform Module 2.0 Gen10 Option 864279-B21

NOTE: HPE Trusted Platform Module 2.0 option works with Gen10 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants.

NOTE: HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

HPE Gen10 TPM 1.2 FIO Setting 872108-B21

NOTE: This is a FIO setting to allows the TPM 2.0 module to operate in a TPM 1.2 mode

#### **HPE Storage Controllers**

NOTE: For additional details, please see HPE Smart Array Gen10 Controllers Data Sheet at:

https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00017196ENW

HPE 96W Smart Storage Battery (up to 20 Devices/145mm Cable) Kit

#### **HPE Flexible Smart Array Controllers**

079-B21
081-B21
083-B21
326-B21
331-B21
338-B21

804405-B21
830824-B21
804398-B21
804394-B21

# **HPE Cable Options**

HPE DL360 Gen10 SFF Internal Cable Kit	867990-B21
HPE DL360 Gen10 LFF Internal Cable Kit	873869-B21
HPE DL3XX Gen10 Rear Serial Cable and Enablement Kit	873770-B21

NOTE: For additional details and cabling matrix, please see: http://www.hpe.com/info/CablingMatrixGen10

P01366-B21

### **Additional Options**

#### **HPE Storage Options**

#### **Emulex Fibre Channel HBAs**

Emdex Fibre chamier FibAs	
HPE StoreFabric SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	Q0L13A
HPE StoreFabric SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	Q0L14A
HPE StoreFabric SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	Q0L11A
HPE StoreFabric SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	Q0L12A
QLogic Fibre Channel HBAs	
HPE StoreFabric SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter	P9D93A
HPE StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	P9M75A
HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	P9M76A
Converged Network Adapter	
HPE StoreFabric CN1100R Dual Port Converged Network Adapter	QW990A
HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter	N3U52A
HPE StoreFabric CN1200E 10Gb Converged Network Adapter	E7Y06A
HPE StoreFabric CN1200E 10GBASE-T Dual Port Converged Network Adapter	N3U51A

#### **HPE Rack Options**

HPE 1U Gen10 SFF Easy Install Rail Kit

#### **Rail Kits**

HP 1U LFF Gen9 Easy Install Rail Kit	789388-B21
HPE 1U Cable Management Arm for Easy Install Rail Kit	734811-B21
NOTE: Supports both the Easy Install and Ball Bearing Rail Kits.	
HPE 1U Gen10 SFF Ball Bearing Rail Kit	872252-B21
HPE 1U Gen10 LFF Ball Bearing Rail Kit	879003-B21

**NOTE:** HPE rail kits contain telescoping rails which allow for in-rack serviceability.

**NOTE:** Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

#### **HPE Racks**

**NOTE:** Please see the **HPE Advanced Series Racks QuickSpecs** for information on additional racks options and rack specifications.

**NOTE:** Please see the <u>HPE Enterprise Series Racks QuickSpecs</u> for information on additional racks options and rack specifications.

**NOTE:** Please see the **HPE Standard Series Racks QuickSpecs** for information on additional racks options and rack specifications.

#### **HPE Power Distribution Units (PDUs)**

**NOTE:** Please see the <u>HPE Basic Power Distribution Units (PDU) QuickSpecs</u> for information on these products and their specifications.

**NOTE:** Please see the **HPE Metered Power Distribution Units (PDU) QuickSpecs** for information on these products and their specifications.

**NOTE:** Please see the <u>HPE Intelligent Power Distribution Unit (PDU) QuickSpecs</u> for information on these products and their specifications.

**NOTE:** Please see the <u>HPE Metered and Switched Power Distribution Units (PDU) QuickSpecs</u> for information on these products and their specifications.

874543-B21

# **Additional Options**

#### **HPE Uninterruptible Power Systems (UPS)**

NOTE: To learn more, please visit the HPE Uninterruptible Power Systems (UPS) web page.

**NOTE:** Please see the <u>HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs</u> for information on these products and their specifications.

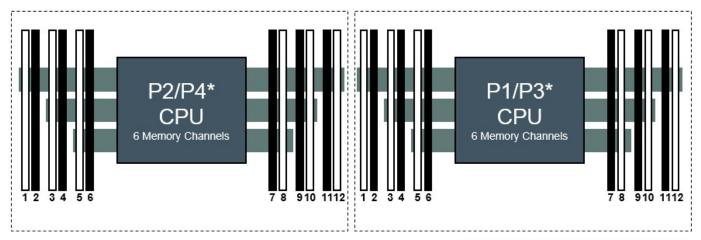
**NOTE:** Please see the <u>HPE Line Interactive Single Phase UPS QuickSpecs</u> for information on these products and their specifications.

products and men specimentons.	
HPE USB and SD Options	
HPE Enterprise Mainstream Flash Media Kits for Memory Cards	
HPE 32GB microSD Mainstream Flash Media Kit	700139-B21
HPE 8GB microSD Enterprise Mainstream Flash Media Kit	726116-B21
HPE 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	737953-B21
HPE Dual 8GB microSD Enterprise Midline USB Kit	741279-B21
HPE Support Services	
Installation & Start-up Services	
HPE Install ProLiant DL36x(p) Service	U4506E
HPE Installation and Startup DL36x(p) Service	U4507E
Proactive Care	
HPE 3Y PC 24x7 DL360 Gen10 SVC	H8QF3E
HPE 3Y PC 24x7 wDMR DL360 Gen10 SVC	H8QF4E
HPE 3Y PC 24x7 wCDMR DL360 Gen10 SVC	H8QF5E
HPE 3Y PC CTR DL360 Gen10 SVC	H8QG2E
HPE 3Y PC CTR wDMR DL360 Gen10 SVC	H8QG3E
HPE 3Y PC CTR wCDMR DL360 Gen10 SVC	H8QG4E

#### **Memory Population guidelines**

# HPE Gen10 DL360 / DL380 / DL560\* Servers

2 Slots per Channel



\* DL560 is a 4 socket server (uses P3, P4)

# Front of Server

HPE ProLiant Gen10 12 slot per CPU DIMM population order												
1 DIMM								8				
2 DIMMs								8		10		
3 DIMMs								8		10		12
4 DIMMs			3		5			8		10		1
5 DIMMs			3		5			8		10		12
6 DIMMs	1		3		5			8		10		12
7 DIMMs	1		3		5		7	8		10		12
8 DIMMs			3	4	5	6	7	8	9	10		
9 DIMMs	1		3		5		7	8	9	10	11	12
10 DIMMs	1		3	4	5	6	7	8	9	10		12
11 DIMMs	1		3	4	5	6	7	8	9	10	11	12
12 DIMMs	1	2	3	4	5	6	7	8	9	10	11	12

### **General Memory Population Rules and Guidelines**:

- . Install DIMMs only if the corresponding processor is installed.
- . If only one processor is installed in a two-processor system, only half of the DIMM slots are available.
- . To maximize performance, it is recommended to balance the total memory capacity between all installed processors.
- . When two processors are installed, balance the DIMMs across the two processors.

- . White DIMM slots denote the first slot to be populated in a channel.
- . Mixing of DIMM types (UDIMM, RDIMM, and LRDIMM) is not supported.
- . The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- . The maximum memory capacity is a function of the number of DIMM slots on the platform, the largest DIMM capacity qualified on the platform, the number and model of installed processors qualified on the platform.
- . For details on the HPE Server Memory Options Population Rules, visit:

#### http://www.hpe.com/docs/memory-population-rules

. To realize the performance memory capabilities listed in this document, HPE DDR4 SmartMemory is required. For additional information, please see the **HPE DDR4 SmartMemory QuickSpecs**.

DIMM Type	Register DIMM (RDIMM)					
HPE SKU P/N	815097-B21	815098-B21	835955-B21	815100-B21		
SKU Description	HPE 8GB 1Rx8 PC4-2666V-R Kit	HPE 16GB 1Rx4 PC4-2666V-R Kit	HPE 16GB 2Rx8 PC4-2666V-R Kit	HPE 32GB 2Rx4 PC4-2666V-R Kit		
DIMM Rank ->	Single Rank (1R)	Single Rank (1R)	Dual Rank (2R)	Dual Rank (2R)		
DIMM Capacity ->	8GB	16GB	16GB	32GB		
Voltage	1.2V	1.2V	1.2V	1.2V		
DRAM depth [bit]	1G	2G	1G	2G		
DRAM Width [bit]	x8	х4	x8	х4		
DRAM Density	8Gb	8Gb	8Gb	8Gb		
CAS Latency	19-19-19	19-19-19	19-19-19	19-19-19		
DIMM Native Speed (MT/s)	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s		
Intel Xeon®Platinum/Gold 83	1xx/61xx Processors Of	ficially Supported Memor	ry Speed (MT/s)			
1 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s		
2 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s		
Intel Xeon®Gold/Silver 51xx	/41xx Processors Officia	ally Supported Memory S	peed (MT/s)			
1 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s		
2 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s		
Intel Xeon®Bronze 31xx Pro	cessors Officially Suppor	rted Memory Speed (MT/	/s)			
1 DIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s		
2 DIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s		
HPE Server Memory Speed (	(MT/s): Intel Xeon®Platin	num/Gold 81xx/61xx Pro	cessors *			
1 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s		
2 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s		
HPE Server Memory Speed (	(MT/s): Intel Xeon®Gold/	Silver 51xx/41xx Proces	sors *	1		
1 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s		
2 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s		
HPE Server Memory Speed (	(MT/s): Intel Xeon®Bronz	ze 31xx Processors *		•		
1 DIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s		
2 DIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s		

**NOTE:** The maximum memory speed is a function of the memory type, memory configuration, and processor model.

For details on the HPE Server Memory speed, visit: <a href="https://www.hpe.com/docs/memory-speed-table">https://www.hpe.com/docs/memory-speed-table</a>

DIMM Type	Load Reduced (LRDIMM)		
HPE SKU P/N	815101-B21	815102-B21	
SKU Description	HPE 64GB 4Rx4 PC4-2666V-L Kit	HPE 128GB 8Rx4 PC4-2666V-L Kit	
DIMM Rank ->	Quad Rank (4R)	Octal Rank (8R)	
DIMM Capacity ->	64GB	128GB	
Voltage	1.2V	1.2V	
DRAM depth [bit]	2G	2G	
DRAM Width [bit]	x4	x4	
DRAM Density	8Gb	8Gb	
CAS Latency	19-19-19	22-19-19	
DIMM Native Speed (MT/s)	2666 MT/s	2666 MT/s	
Intel Xeon® Platinum/Gold 81xx/61	xx Processors Officially Supported Memory Sp	eed (MT/s)	
1 DIMM Per Channel	2666 MT/s	2666 MT/s	
2 DIMM Per Channel	2666 MT/s	2666 MT/s	
Intel Xeon® Gold/Silver 51xx/41xx	Processors Officially Supported Memory Speed	(MT/s)	
1 DIMM Per Channel	2400 MT/s	2400 MT/s	
2 DIMM Per Channel	2400 MT/s	2400 MT/s	
Intel Xeon® Bronze 31xx Processors	Officially Supported Memory Speed (MT/s)	•	
1 DIMM Per Channel	2133 MT/s	2133 MT/s	
2 DIMM Per Channel	2133 MT/s	2133 MT/s	
HPE Server Memory Speed (MT/s):	Intel Xeon® Platinum/Gold 81xx/61xx Process	ors*	
1 DIMM Per Channel	2666 MT/s	2666 MT/s	
2 DIMM Per Channel	2666 MT/s	2666 MT/s	
HPE Server Memory Speed (MT/s):	Intel Xeon® Gold/Silver51xx/41xx Processors *	•	
1 DIMM Per Channel	2400 MT/s	2400 MT/s	
2 DIMM Per Channel	2400 MT/s	2400 MT/s	
HPE Server Memory Speed (MT/s):	Intel Xeon® Bronze 31xx Processors *	•	
1 DIMM Per Channel	2133 MT/s	2133 MT/s	
2 DIMM Per Channel	2133 MT/s	2133 MT/s	

**NOTE:** The maximum memory speed is a function of the memory type, memory configuration, and processor model.

For details on the HPE Server Memory speed, visit: <a href="https://www.hpe.com/docs/memory-speed-table">https://www.hpe.com/docs/memory-speed-table</a>

#### Standard and Maximum Memory Capacity (Pre-configured Models)

Pre Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
3106	16 GB (1x16 GB RDIMM DR)	384 GB (24x 16 GB)	3072 GB (24x 128 GB)
4114	32 GB (2x16 GB RDIMM DR)	384 GB (24x 16 GB)	3072 GB (24x 128 GB)
5118	64 GB (2x32 GB RDIMM DR)	768 GB (24x 32 GB)	3072 GB (24x 128 GB)
6130	64 GB (2x32 GB RDIMM DR)	768 GB (24x 32 GB)	3072 GB (24x 128 GB)

**NOTE:** 128 GB coming 2H 2017.

#### DDR4 memory options part number decoder

NOTE: Capacity references are rounded to the common gigabyte (GB) values.

- 8GB = 8,192 MB
- 16GB = 16,384 MB
- 32GB = 32,768 MB
- 64GB = 65,536 MB

For more information on memory, please see the Memory Quickspecs: **HPE DDR4 SmartMemory** 

#### **Storage**

#### 4 LFF device bay numbering



#### 8 SFF + ODD device bay numbering



#### 8 SFF + 2 SFF device bay numbering



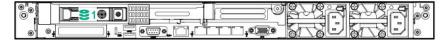
Item	Description	
1	Bays 1-8	
2 Bays 1 and 2		

#### 10 SFF NVMe/SAS backplane option device bay numbering



**NOTE:** When the 10SFF NVMe/SAS backplane option is installed, bays 9 and 10 ONLY support NVMe Drives. The other bays support a mix of NVMe and SAS drives.

#### Optional rear device bay numbering



**NOTE:** The optional rear device bay supports either 1 SFF drive or 1 Dual uFF (2x M.2 drives) in an HPE SmartCarrier M.2 (SCM). When the Dual uFF is installed, the M.2 drives are recognized as 101 and 102.

**System Unit** 

**Power Supply Output** 

# **Technical Specifications**

<b>Dimensions</b> (Height x Width x Depth)	4.29 x 43.46 x 70.7 cm SFF Drives 1.69 x 17.11 x 27.83 in	
	4.29 x 43.46 x 74.98 cm LFF Drives 1.69 x 17.11 x 29.5 in	

Weight (approximate)	13.04 kg 28.74 lb	SFF minimum: One drive, one processor, one power supply, two heatsinks, one Smart Array controller, and five fans.
	16.27 kg 35.86 lb	SFF maximum: 10 drives, two processors, two power supplies, two heatsinks, one Smart Array controller and seven fans.
	13.77 kg 30.36 lb	LFF minimum: one drive, one processor, one power supply, two heatsinks, one Smart Array controller and five fans.
	16.78 kg 37 lb	LFF maximum: Four drives, two processors, two power supplies, two heatsinks, one Smart Array controller and seven fans.

Input Requirements	Rated Line Voltage	100 to 120 VAC
(per power supply)		200 to 240 VAC

Rated Steady-State

BTU Rating	Maximum	For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VDC) for China Only
		For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr

(at 200 VAC), 1965 BTU/hr (at 240 VDC) for China Only

For 1600W Power Supply: 1600W (at 240 VAC), 1600W (at 240

(per power supply)	Power	VDC) for China only
		For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
		For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VDC) input for China only
	Maximum Peak Power	For 1600W Power Supply: 1600W (at 200 to 240 1VAC), 1600W (a

Maximum Peak Power For 1600W Power Supply: 1600W (at 200 to 240 1VAC), 1600W (at 240 VDC) input for China only

Standard Operating
Support

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.

System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).

For approved hardware configurations, the supported system inlet range is extended to be:  $5^{\circ}$  to  $10^{\circ}$ C ( $41^{\circ}$  to  $50^{\circ}$ F) and  $35^{\circ}$  to  $40^{\circ}$ C ( $95^{\circ}$  to  $104^{\circ}$ F) at sea level with an altitude derating of  $1.0^{\circ}$ C per every 175 m ( $1.8^{\circ}$ F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL:

http://www.hpe.com/servers/ashrae

## **Technical Specifications**

	Extended Ambient Operating Support	For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: <a href="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a> System performance may be reduced if operating in the extended ambient operating range or with a fan fault.
Relative Humidity (non-condensing)	Operating	8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.
	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).

#### **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). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. Please have your HPE representative provide information from the HPE EMESC website for further technical details regarding the configurations listed below.

Configuration SKU	Entry	Base	Performance
Idle			
LWAd	5.1 B	5.1 B	5.2 B
LpAm	35 dBA	35 dBA	36 dBA
Operating			
LWAd	5.3 B	5.2 B	5.9 B
LpAm	36 dBA	38 dBA	45 dBA

**NOTE:** Acoustics levels presented here are generated by the test configuration only. Acoustics levels will vary depending on system configuration. Values are subject to change without notification and are for reference only.

#### **Emissions Classification (EMC)**

To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center:

http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts

For information on the HPE Smart Array E208i-a SR Gen10 Controller please refer to their **QuickSpecs**. For information on the HPE Smart Array E208i-a SR G10 LH Controller please refer to their **QuickSpecs**. For information on the HPE Smart Array E208i-p SR Gen10 Controller please refer to their **QuickSpecs**. For information on the HPE Smart Array E208e-p SR Gen10 Controller please refer to their **QuickSpecs**.

#### **Technical Specifications**

For information on the HPE Smart Array P408i-a SR Gen10 Controller please refer to their QuickSpecs. For information on the HPE Smart Array P408i-a SR G10 LH Controller please refer to their QuickSpecs. For information on the HPE Smart Array P408i-p SR Gen10 Controller please refer to their QuickSpecs. For information on the HPE Smart Array P408e-p SR Gen10 Controller please refer to their QuickSpecs. For information on the HPE Smart Array P816i-a SR Gen10 Controller please refer to their **QuickSpecs**. For information on the HPE Smart Array P816i-a SR G10 LH Controller please refer to their QuickSpecs.

and Approach - End-of-life **Management and Recycling** 

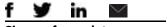
Environment-friendly Products Hewlett Packard Enterprise offers end-of-life product return, trade-in, and recycling programs, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.

> 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
18-Dec-2017	From Version 7 to 8	Changed	Network controller under Configuration Information – Factory Integrated Models section was revised.
04-Dec-2017	From Version 6 to 7	Added	Added new Entry level WW Model-1 sku.
			HPE Sepcific IST Processor offering Gold 6143 and Platinum 8165 bins were added.
			Added new High capacity 12TB LFF drives and Large capacity 15.3TB SSDs.
		Changed	Standard Features, Pre-configured Models, Core Options, Additional Options, Memory, and Acoustic Noise were revised.
23-Oct-2017	From Version 5 to 6	Changed	Memory speed table was updated to display the 61XX processors running at 2666MT/s.
16-Oct-2017	From Version 4 to 5	Added	128GB Memory was added. Riser table was added under Core Options.
		Changed	Platform Information, Processors table under Standard Features, FlexibleLOM Adapters, GPU table under Core Options, HPE Storage Controllers, and Rail Kits were revised.
25-Sep-2017	From Version 3 to 4	Added	New Gold Processors were added. Added new Hard Drive and SSD offering. GPU information table was added.
		Changed	Platform Information, Core Options, Additional Options, and Storage section were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
14-Aug-2017	From Version 2 to 3	Changed	Smart Buy Models section was revised (NA version only).
7-Aug-2017	From Version 1 to 2	Added	Added new Solid State Drives offering to the HPE Drives section. Added Support Services under Additional Options.
		Changed	Platform Information, Optional Features, Core Options, Additional Options, Memory, and Storage section were revised.
11-Jul-2017	Version 1	New	New QuickSpecs.

# **Summary of Changes**



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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less

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