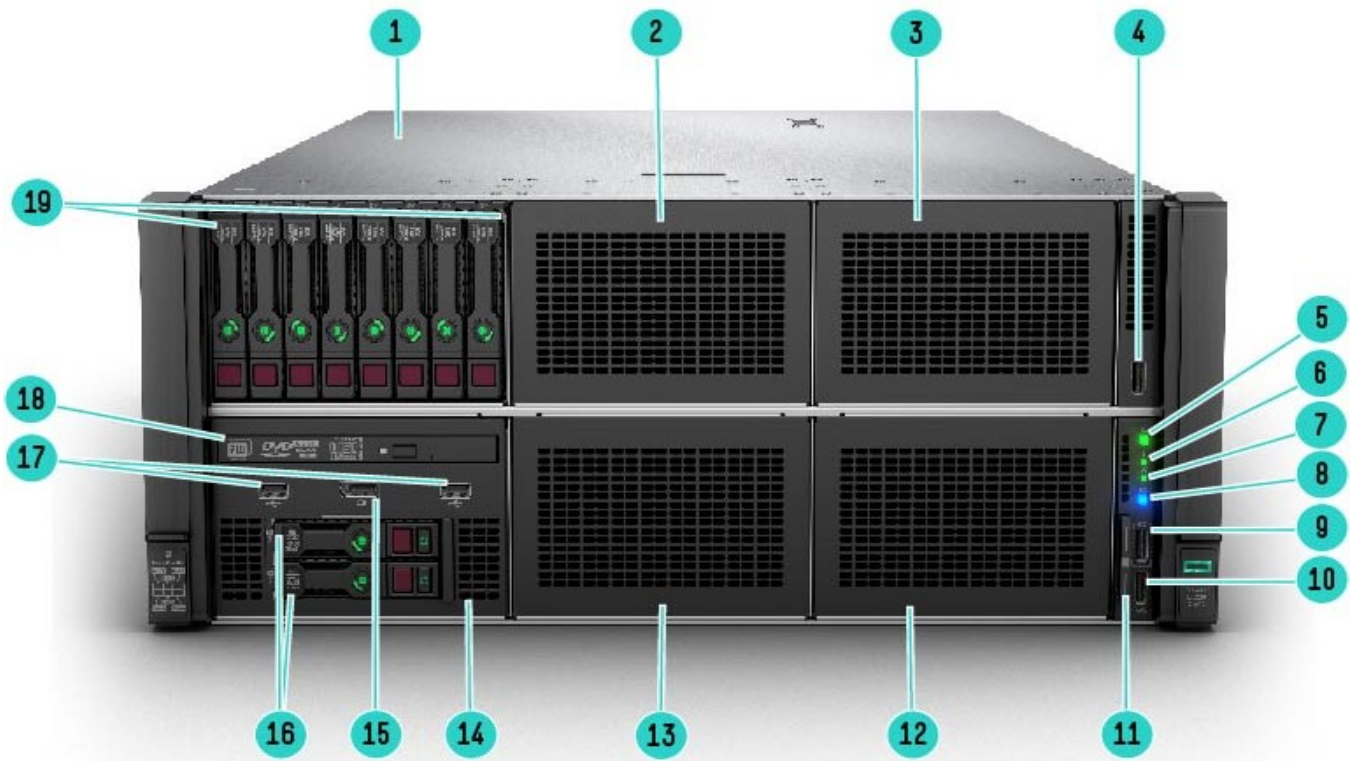


### Overview

#### HPE ProLiant DL580 Gen10 Server

The HPE ProLiant DL580 Gen10 Server is a high-density, four-socket server with high performance, scalability and reliability, all in a 4U chassis. Supporting the latest 2<sup>nd</sup> generation of Intel® Xeon® Scalable processors, the HPE ProLiant DL580 Gen10 Server offers greater processing power, up to 6 TB of faster memory, IO of up to sixteen PCIe 3.0 slots, plus the intelligence and simplicity of automated management with HPE OneView and HPE iLO 5.

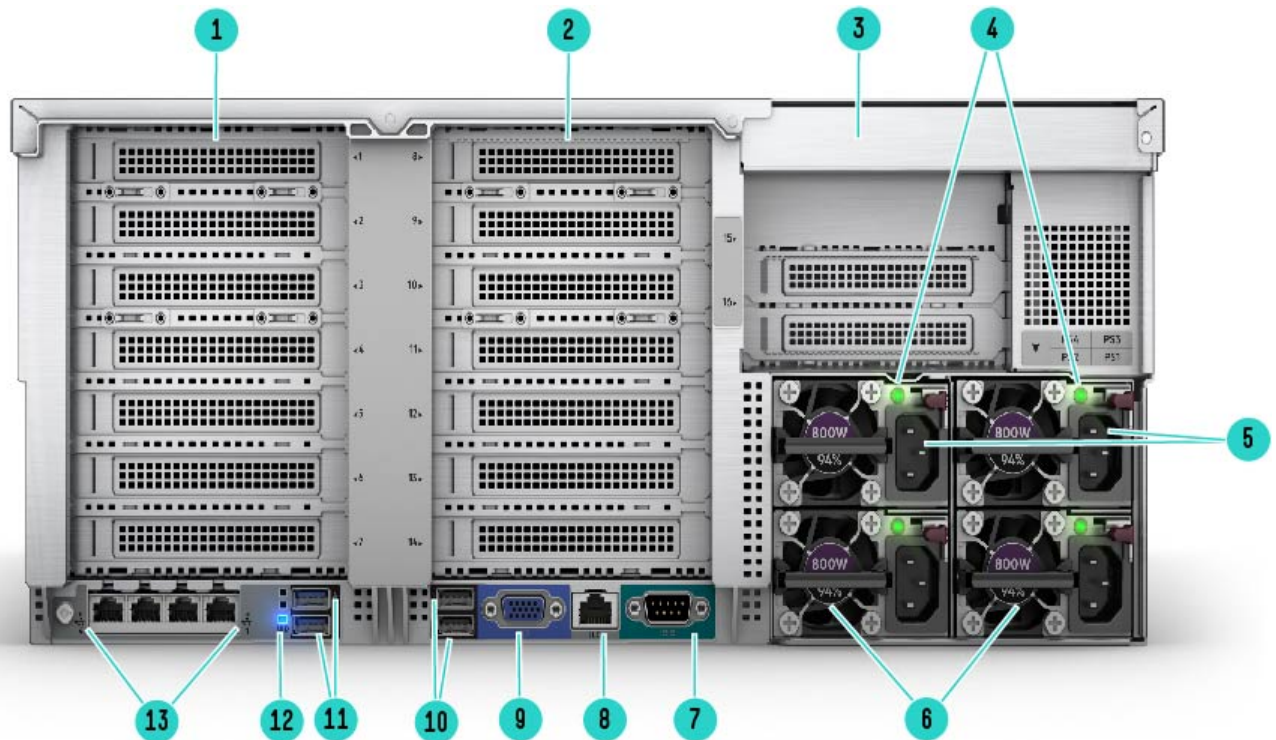
The HPE ProLiant DL580 Gen10 Server is the ideal server for business critical workloads, virtualization, server consolidation, database, business processing, graphics intensive and general 4P data-intensive applications where the right performance is paramount.



**HPE ProLiant DL580 Gen10 Server Front View**

- |  |  |
|--|--|
| 1. Quick removal access panel                              | 11. Serial label pull tag  |
| 2. Box 2 (8 SFF, 6 SFF+2 NVMe or 8 NVMe SSD optional)      | 12. Box 6 (8 SFF)  |
| 3. Box 3 (8 SFF, 6 SFF+2 NVMe or 8 NVMe PCIe SSD optional) | 13. Box 5 (8 SFF)  |
| 4. Front USB 3.0 port                                      | 14. Box 4 (8 SFF or Universal Media bay)   |
| 5. Power On/Standby button and system power LED button     | 15. Optional front display port (via Universal Media Bay)                            |
| 6. Health LED  | 16. Optional 2 SFF HDD, requires optional Universal Media bay                        |
| 7. NIC status  | 17. Optional USB 2.0 (via Universal Media Bay)                                       |
| 8. UID button  | 18. Optical Drive (Optional)   |
| 9. iLO Front Service Port (not available with SID)         | 19. Box 1 (8 SFF, 6 SFF+2 NVMe or 8 NVMe (supports only 4 NVMe drives) SSD optional) |
| 10. Front USB 3.0 port                                     |  |

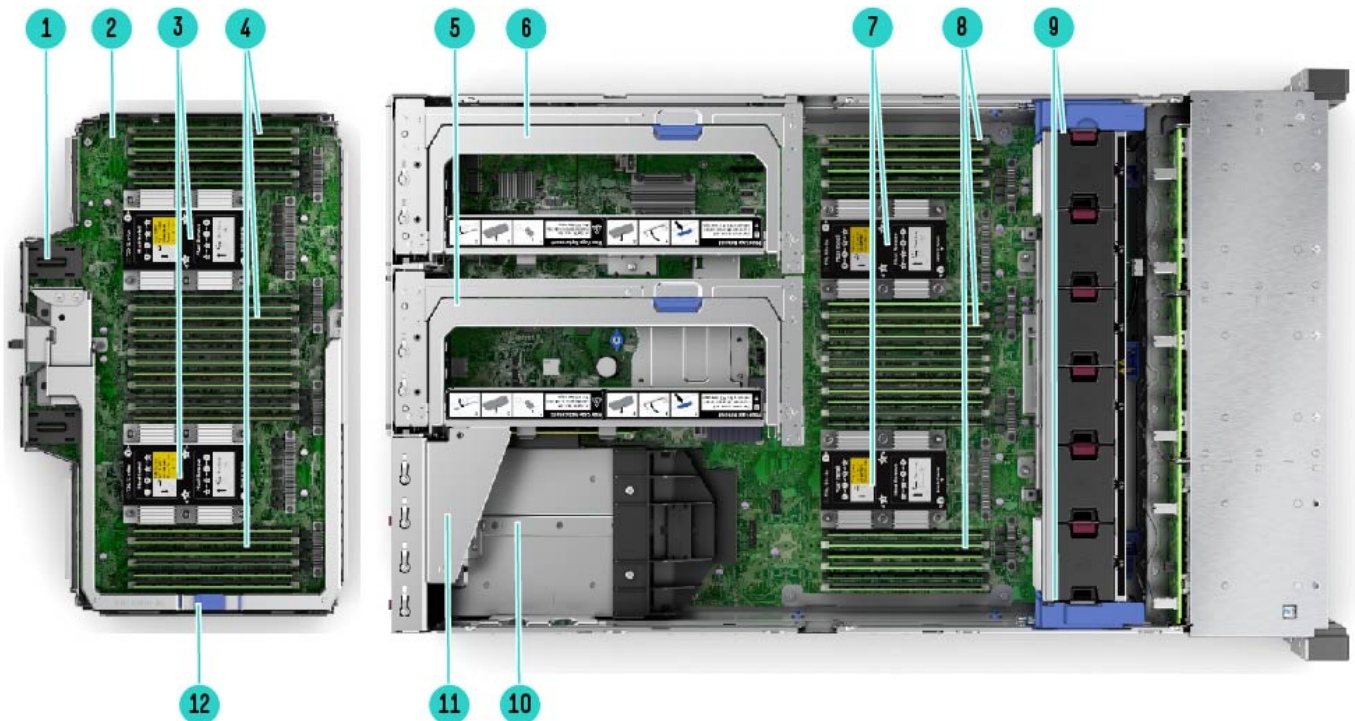
## Overview



## HPE ProLiant DL580 Gen10 Server Rear View

- |  |  |
|--|--|
| 1. PCIe Slots (Slots 1-7 top to bottom), requires primary riser                                    | 8. Dedicated iLO network connector           |
| 2. PCIe Slots (Slots 8-14 top to bottom), requires secondary riser (includes tertiary riser)       | 9. VGA (video) connector                     |
| 3. PCIe Slots (Slots 15-16 top to bottom), requires tertiary riser (included with secondary riser) | 10. USB connectors 2.0 (2)                   |
| 4. Power supply Power LED (max. 4)   | 11. USB connectors 3.0 (2)                   |
| 5. Power supply Power connection (max. 4)  | 12. Unit ID LED                              |
| 6. HPE Flexible Slot Power Supply, 800W PS shown (max. 4)  | 13. FlexibleLOM ports (Port 1 on right side) |
| 7. Serial connector  |  |

## Overview



**HPE ProLiant DL580 Gen10 Server Internal View with upper CPU mezzanine tray**

- |   |  |
|---|--|
| 1. Left connector used for DL580 4-port NVMe Mezzanine card (Daughter card) | 7. 2 Processors  |
| 2. Upper CPU Mezzanine Board Kit  | 8. DDR4 DIMM slots on CPU board kit. Shown fully populated in 24 slots (12 per processor) under the air baffle |
| 3. 2 Processors, heatsink showing on upper CPU mezzanine board kit          | 9. Fan cage shown with 12 standard Hot-plug fans   |
| 4. DDR4 DIMM slots. Shown fully populated in 24 slots (12 per processor)    | 10. (Under) Max. 4 Hot Plug redundant HPE Flexible Slot Power supplies   |
| 5. Optional secondary PCIe riser (includes tertiary riser)                  | 11. Optional Tertiary riser (included with secondary riser)  |
| 6. Primary PCIe riser   | 12. Handle for removing upper CPU Mezzanine Board Kit  |

### What's New

- Supports the 2<sup>nd</sup> generation Intel® Xeon® Scalable processors which provides memory speeds up to 2933 MT/s and supports up to 1TB (no suffix), 2TB (suffix M) and 4.5TB (suffix L) memory per socket
- Segment optimized processor SKUs that support : (1) Intel® Speed Select Technology-Performance Profile (suffix Y) (2) Optimization for NFV workloads (suffix N)
- New HPE DL5x0 Gen10 CPU Version 2 Mezzanine Board Kit to support 2<sup>nd</sup> generation Intel® Xeon® Scalable processors
- Enhanced iLO 5 security features such as server configuration lock, iLO security dashboard and workload performance advisor

## Platform Information

### Platform Information

**Form Factor** (4U Rack Form Factor)

Entry, Base and Performance pre-configured models and Configure-to-order server ship with Gen10 Rail Kits and Cable Management Assembly

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### Chassis Types

48 SFF with optional Universal Media Bay

**NOTE:** The Universal Media Bay (872267-B21) is not available with the 48 SFF front end, and can only be populated in Box 4.

**NOTE:** All pre-configured models come with embedded software RAID support for 10 SATA drives. Optional HPE Smart Array Controllers can be added.

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### System Fans

12 Hot Plug Fans (with N+1 redundancy)

**NOTE:** 12 hot plug fans are shipped as standard.

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## Standard Features

<b>Processors</b>							
One, two, three or four of the following depending on model.							
<b>NOTE:</b> For more information regarding Intel Xeon processors, please see the following <a href="http://www.intel.com/xeon">http://www.intel.com/xeon</a> .							
Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR4 MT/s	Memory per socket
<b>Platinum Processors – 2<sup>nd</sup> Generation</b>							
Platinum 8280L Processor	2.7 GHz	28	38.50 MB	205W	3 @ 10.4 GT/s	2933 MT/s	4.5 TB
Platinum 8280M Processor	2.7 GHz	28	38.50 MB	205W	3 @ 10.4 GT/s	2933 MT/s	2.0 TB
Platinum 8280 Processor	2.7 GHz	28	38.50 MB	205W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Platinum 8276L Processor	2.2 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2933 MT/s	4.5 TB
Platinum 8276M Processor	2.2 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2933 MT/s	2.0 TB
Platinum 8276 Processor	2.2 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Platinum 8270 Processor	2.7 GHz	26	35.75 MB	205W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Platinum 8268 Processor	2.9 GHz	24	35.75 MB	205W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Platinum 8260L Processor	2.4 GHz	24	35.75 MB	165W	3 @ 10.4 GT/s	2933 MT/s	4.5 TB
Platinum 8260M Processor	2.4 GHz	24	35.75 MB	165W	3 @ 10.4 GT/s	2933 MT/s	2.0 TB
Platinum 8260 Processor	2.4 GHz	24	35.75 MB	165W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Platinum 8260Y Processor	2.4 GHz	24/20/16	33.00 MB	165W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Platinum 8256 Processor	3.8 GHz	4	16.50 MB	105W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Platinum 8253 Processor	2.2 GHz	16	22.00 MB	125W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
<b>Gold Processors - 2<sup>nd</sup> Generation</b>							
Gold 6254 Processor	3.1 GHz	18	24.75 MB	200W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Gold 6252 Processor	2.1 GHz	24	35.75 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Gold 6248 Processor	2.5 GHz	20	27.50 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Gold 6244 Processor	3.6 GHz	8	24.75 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Gold 6242 Processor	2.8 GHz	16	22.00 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Gold 6240 Processor	2.6 GHz	18	24.75 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Gold 6240Y Processor	2.6 GHz	18/14/8	24.75 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Gold 6230 Processor	2.1 GHz	20	27.50 MB	125W	3 @ 10.4 GT/s	2933 MT/s	1.0 TB
Gold 5222 Processor	3.8 GHz	4	16.50 MB	105W	2 @ 10.4 GT/s	2933 MT/s	1.0 TB
Gold 5220 Processor	2.2 GHz	18	24.75 MB	125W	2 @ 10.4 GT/s	2666 MT/s	1.0 TB
Gold 5218 Processor	2.3 GHz	16	22.00 MB	125W	2 @ 10.4 GT/s	2666 MT/s	1.0 TB
Gold 5218B Processor	2.3 GHz	16	22.00 MB	125W	2 @ 10.4 GT/s	2666 MT/s	1.0 TB
Gold 5218N Processor	2.3 GHz	16	22.00 MB	105W	2 @ 10.4 GT/s	2666 MT/s	1.0 TB
Gold 5217 Processor	3.0 GHz	8	11.00 MB	115W	2 @ 10.4 GT/s	2666 MT/s	1.0 TB
Gold 5215L Processor	2.5 GHz	10	13.75 MB	85W	2 @ 10.4 GT/s	2666 MT/s	4.5 TB
Gold 5215M Processor	2.5 GHz	10	13.75 MB	85W	2 @ 10.4 GT/s	2666 MT/s	2.0 TB
Gold 5215 Processor	2.5 GHz	10	13.75 MB	85W	2 @ 10.4 GT/s	2666 MT/s	1.0 TB

## Standard Features

**NOTE:** Platinum – 82xx series - 2 and 4 socket capable, 3UPI @ 10.4 GT/s, 6-Channel DDR4 @ 2933 MT/s 1DPC, 1 TB memory capacity (up to 2 TB on 'M' SKUs and up to 4.5 TB on 'L' SKUs), Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (2x 512-bit FMA), 48 lanes PCIe 3.0, advanced RAS.

**NOTE:** Gold – 62xx and 52xx series - 2 and 4 socket capable, 3UPI @ 10.4 GT/s on 62xx processors, 2UPI @ 10.4 GT/s on 52xx processors, 6 Channel DDR4 @ 2933 MT/s 1DPC on 62xx and 5222 processors , 6-Channel DDR4 @ 2666 MT/s on 52xx processors, 1 TB memory capacity (up to 2 TB on 'M' SKUs and up to 4.5 TB on 'L' SKUs), Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512(1x 512-bit FMA) (SKU 5222 supports 2x 512 bit FMA), 48 lanes PCIe 3.0, advanced RAS.

**NOTE:** With the current maximum memory offering (128GB LRDIMMs), the 'L' SKUs and 'M' SKUs can support up to 1.5TB per socket.

**NOTE:** Platinum 8260Y and Gold 6240Y processors support Intel® Speed Select Technology –Performance Profile

**NOTE :** Gold 5218B processor and Gold 5218 processor have the same specifications and cannot be mixed within a server.

**NOTE:** Gold 5218N processor is optimized for NFV (Network Function Virtualization) workloads and supports Intel® Speed Select Technology –Base Frequency

**NOTE:** 82xx, 62xx and 52xx processors offer VNNI (vector neural network instruction) instruction set.

### Platinum Processors – 1<sup>st</sup> Generation

Platinum 8180M Processor	2.5 GHz	28	38.50 MB	205W	3 @ 10.4 GT/s	2666 MT/s	1.5 TB
Platinum 8180 Processor	2.5 GHz	28	38.50 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Platinum 8176 Processor	2.1 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Platinum 8170 Processor	2.1 GHz	26	35.75 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Platinum 8168 Processor	2.7 GHz	24	33.00 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Platinum 8165 Processor	2.3 GHz	24	33.00 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Platinum 8164 Processor	2.0 GHz	26	35.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Platinum 8160M Processor	2.1 GHz	24	33.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	1.5 TB
Platinum 8160 Processor	2.1 GHz	24	33.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Platinum 8158 Processor	3.0 GHz	12	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Platinum 8156 Processor	3.6 GHz	4	16.50 MB	105W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Platinum 8153 Processor	2.0 GHz	16	22.00 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768 GB

### Gold Processors – 1<sup>st</sup> Generation

Gold 6154 Processor	3.0 GHz	18	24.75 MB	200W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6152 Processor	2.1 GHz	22	30.25 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6150 Processor	2.7 GHz	18	24.75 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6148 Processor	2.4 GHz	20	27.50 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6146 Processor	3.2 GHz	12	27.45 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6144 Processor	3.5 GHz	8	27.45 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6143 Processor	2.8 GHz	16	22.00 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6142 Processor	2.6 GHz	16	22.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6140M Processor	2.3 GHz	18	24.75 MB	140W	3 @ 10.4 GT/s	2666 MT/s	1.5 TB
Gold 6140 Processor	2.3 GHz	18	24.75 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6138 Processor	2.0 GHz	20	27.50 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6136 Processor	3.0 GHz	12	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6134M Processor	3.2 GHz	8	24.75 MB	130W	3 @ 10.4 GT/s	2666 MT/s	1.5 TB
Gold 6134 Processor	3.2 GHz	8	24.75 MB	130W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6132 Processor	2.6 GHz	14	19.25 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6130 Processor	2.1 GHz	16	22.00 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6128 Processor	3.4 GHz	6	19.25 MB	115W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 6126 Processor	2.6 GHz	12	19.25 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 5122 Processor	3.6 GHz	4	16.50 MB	105W	2 @ 10.4 GT/s	2666 MT/s	768 GB
Gold 5120 Processor	2.2 GHz	14	19.25 MB	105W	2 @ 10.4 GT/s	2400 MT/s	768 GB
Gold 5118 Processor	2.3 GHz	12	16.50 MB	105W	2 @ 10.4 GT/s	2400 MT/s	768 GB
Gold 5115 Processor	2.4 GHz	10	13.75 MB	85W	2 @ 10.4 GT/s	2400 MT/s	768 GB

## Standard Features

**NOTE:** Platinum 8165 processor and Gold 6143 processors support core boosting technology

**NOTE:** Platinum 81xx series - 2 and 4 socket capable, 3UPI @ 10.4 GT/s, 6-Channel DDR4 @ 2666 MT/s, 768 GB memory capacity (1.5 TB on select skus with the M suffix), Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (2x 512-bit FMA), 48 lanes PCIe 3.0, advanced RAS.

**NOTE:** Gold 61xx and 51xx series - 2 and 4 socket capable, 3UPI @ 10.4 GT/s on 61xx processors, 2UPI @ 10.4 GT/s on 51xx processors, 6-Channel DDR4 @ 2400 MHz (SKU 5122=supports 2666), 768 GB memory capacity (1.5 TB on select skus with the M suffix), 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.

**NOTE:** Processors with 130W or higher will ship with the High Performance heat sink plus SKUs 8256, 8156, 8158, 6128, 5222, 5122 as noted below. All other will processors will ship with the Standard heat sink.

**NOTE:** 82xx, 81xx, 62xx and 61xx processors support 3 UPI links and all processors are connected in a cross bar configuration with each processor connected to another directly in a four processor system. 52xx and 51xx processors support 2 UPI links only and all processors are connected in a ring configuration with processors 1, 3 and 2, 4 not connected directly in a four processor system.

**NOTE:** 3 processor configurations are not supported for 51xx Gold processors.

### 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

One of the following depending on model

**Type:** SmartMemory Registered (RDIMM), Load Reduced (LRDIMM)  
**DIMM Slots Available** 48 12 DIMM slots per processor, 6 channels per processor, 2 DIMMs per channel

#### With 2<sup>nd</sup> generation processors

<b>Maximum capacity (LRDIMM)</b>	3 TB	24 x 128 GB LRDIMM @2933 MT/s 1DPC	6 TB	48 x 128 LRDIMM @ 2666 MT/s 2 DPC
<b>Maximum capacity (RDIMM)</b>	1.5 TB	24 x 64 GB RDIMM @ 2933 MT/s 1 DPC	3 TB	48 x 64 GB RDIMM @ 2666 MT/s 2 DPC
<b>Maximum capacity (NVDIMM)</b>				<b>Not supported</b>

#### With 1<sup>st</sup> generation processors

<b>Maximum capacity (LRDIMM)</b>	6 TB	48 x 128 GB LRDIMM @ 2666 MT/s
<b>Maximum capacity (RDIMM)</b>	1.5 TB	48 x 32 GB RDIMM @ 2666 MT/s
<b>Maximum capacity (NVDIMM)</b>	384 GB	24 x 16 GB NVDIMM @ 2666 MT/s

**NOTE:** Only 2666 MT/s memory SKUs are supported with 1<sup>st</sup> generation processors (81xx,61xx and 51xx )

**NOTE:** Only 2933 MT/s memory SKUs are supported with 2<sup>nd</sup> generation processors (82xx,62xx and 52xx)

**NOTE:** The 2933 MT/s memory SKUs offer a transfer rate of 2933 MT/s at 1 DIMM per channel **and** 2666 MT/s at 2 DIMMs per channel

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

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

## Standard Features

**NOTE:** Intel memory processors (with suffix M) are needed for supporting 1.5TB memory per socket on 1<sup>st</sup> generation processors

**NOTE:** Intel memory processors (with suffix M or suffix L) are needed for supporting more than 1 TB memory per socket on 2<sup>nd</sup> generation processors

**NOTE:** Maximum of 6 NVDIMMs are supported per processor on the 1<sup>st</sup> generation processors

**NOTE:** NVDIMM is not supported on the 2<sup>nd</sup> generation processors

### Memory Protection

For details on the HPE Server Memory Options RAS feature, visit: <http://www.hpe.com/docs/memory-ras-feature>.

### Expansion Slots

#### Primary 6-slot Riser (Optional) 872336-B21

Expansion Slots #	Technology	Bus/Connector Width	Form Factor/Connector	Notes
2	PCIe 3.0	x16	Full length/full height	Proc 3
3	PCIe 3.0	x8	Full length/full height	Proc 3
4	PCIe 3.0	x16	Full length/full height	Proc 3
5	PCIe 3.0	x8	¾ length/full height	Proc 1
6	PCIe 3.0	x8	¾ length/full height	Proc 1
7	PCIe 3.0	x8	¾ length/full height	Proc 1
None (J4)	NVMe	x8	Slimline	Proc 1
None (J3)	NVMe	x8	Slimline	Proc 3

#### Primary 7-slot Riser (Optional) 878214-B21

Expansion Slots (Primary/ Secondary) #	Technology	Bus/Connector Width	Form Factor/Connector	Notes
1	PCIe 3.0	x8	Full length/full height	Proc 3
2	PCIe 3.0	x16	Full length/full height	Proc 3
3	PCIe 3.0	x8	Full length/full height	Proc 3
4	PCIe 3.0	x16	Full length/full height	Proc 3
5	PCIe 3.0	x8	¾ length/full height	Proc 1
6	PCIe 3.0	x16	¾ length/full height	Proc 1
7	PCIe 3.0	x8	¾ length/full height	Proc 1



## Standard Features

### Secondary and Tertiary 8-slot Riser (Optional) 872338-B21

Expansion Slots #	Technology	Bus/Connector Width	Form Factor/Connector	Notes
9	PCIe 3.0	x16	Full length/full height	Proc 4
10	PCIe 3.0	x8	Full length/full height	Proc 4
11	PCIe 3.0	x16	Full length/full height	Proc 4
12	PCIe 3.0	x8	¾ length/full height	Proc 2
13	PCIe 3.0	x8	¾ length/full height	Proc 2
14	PCIe 3.0	x8	¾ length/full height	Proc 2
15	PCIe 3.0	x8	¾ length/full height	Proc 2
16	PCIe 3.0	x8	¾ length/full height	Proc 2
None (J4)	NVMe	x8	Slimline	Proc 2
None (J3)	NVMe	x8	Slimline	Proc 4

### Secondary and Tertiary 9-slot Riser (Optional) 872340-B21

Expansion Slots (Primary/ Secondary) #	Technology	Bus/Connector Width	Form Factor/Connector	Notes
8	PCIe 3.0	x8	Full length/full height	Proc 4
9	PCIe 3.0	x16	Full length/full height	Proc 4
10	PCIe 3.0	x8	Full length/full height	Proc 4
11	PCIe 3.0	x16	Full length/full height	Proc 4
12	PCIe 3.0	x8	¾ length/full height	Proc 2
13	PCIe 3.0	x16	¾ length/full height	Proc 2
14	PCIe 3.0	x8	¾ length/full height	Proc 2
15	PCIe 3.0	x8	¾ length/full height	Proc 2
16	PCIe 3.0	x8	¾ length/full height	Proc 2

### Primary NVMe Slimline Riser (Optional) 878360-B21 (includes the 4-port NVMe Mezzanine card)

Expansion Slots (Primary) #	Technology	Bus/Connector Width	Form Factor/Connector	Notes
None (J4)	NVMe	x8	Slimline	Proc 1
None (J5)	NVMe	x8	Slimline	Proc 1
None (J6)	NVMe	x8	Slimline	Proc 1
None (J8)	NVMe	x8	Slimline	Proc 1

## Standard Features

### 4-port NVMe Mezzanine card (included with 878360-B21)

Expansion Slots #	Technology	Bus/Connector Width	Form Factor/Connector	Notes
None	NVMe	x8	Slimline	Proc 3
None	NVMe	x8	Slimline	Proc 3
None	NVMe	x8	Slimline	Proc 3
None	NVMe	x8	Slimline	Proc 3

**NOTE:** A minimum of 1 primary riser needs to be ordered.

**NOTE:** The secondary riser is shipped with the tertiary riser and can be installed only after the primary riser has been installed. The tertiary riser cannot be ordered separately.

**NOTE:** Slot availability is dependent on the processor installed. Please refer the above table carefully to make decisions on adding PCIe cards.

**NOTE:** The expansion slots at the back are numbered in ascending order from top to bottom and from left to right.

**NOTE:** The optional Slimline NVMe riser (878360-B21) supports a maximum of 16 NVMe drives and includes a primary 4-port riser and a 4-port NVMe mezzanine card. The 4-port NVMe mezzanine card installs on top of the HPE DL5x0 Gen10 CPU Mezzanine Board Kit (872222-B21) or HPE DL5x0 Gen10 CPU Version 2 Mezzanine Board Kit (P07991-B21) and requires three or four processor configuration.

**NOTE:** Each NVMe port (slot) supports 2 NVMe drives.

**NOTE:** A maximum of 1 primary, 1 secondary (includes tertiary) riser can be installed in one server.

**NOTE:** Internal storage controllers and SAS expanders are supported only in the primary and tertiary risers. Not supported in the secondary riser.

### Network Controller

The HPE ProLiant DL580 Gen10 servers offer a flexible network technology - FlexibleLOMs, which offers customers a choice of 1 Gb, 10 Gb, 25 Gb or 100Gb base-T Ethernet or converged networking in their embedded adapter. A range of NIC cards are also available to enhance networking capabilities.

**NOTE:** For additional details see the [Networking Section of this document](#).

Model	Adapter
Entry Model	HPE Ethernet 1Gb 4-port 331FLR Adapter
Base Model	HPE FlexFabric 10Gb 2-port 535FLR-T Adapter
Performance Model	HPE FlexFabric 10/25 Gb 2-port 640FLR-SFP28 Adapter

### Storage Controllers

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

- 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. For enabling, please select HPE FIO Enable Smart Array SW RAID (784308-B21).

## Standard Features

### Essential RAID

HPE Smart Array E208i-p SR Gen10 Controller  
HPE Smart Array E208e-p SR Gen10 Controller

### Performance RAID

HPE Smart Array P408i-p SR Gen10 Controller  
HPE Smart Array P408e-p SR Gen10 Controller  
HPE Smart Array P824i-p MR Gen10 Controller

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### Internal Storage Devices

One of the following depending on model

**Optical Drive** Optional: DVD-ROM, DVD-RW

**Hard Drives** None ship standard

**Hard Drive Bays** 8 hot plug SFF SAS/SATA HDD Bay in Entry, Base and Performance Models. Optional 8 NVMe SSD Express Bay Enablement Kit  
Optional Premium 6SFF and 2 NVMe or 8SFF Bay Kit

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### Recommended NVMe drive configurations

The HPE ProLiant DL580Gen10 offers a high degree of flexibility when configuring server solutions utilizing NVMe high performance SSD drives. This flexibility can make configuring the server a challenge and could result in non-optimal and partially connected NVMe configurations where not all NVMe drive bays are functional.

HPE strongly encourages customers to choose an NVMe configuration based on processor quantity and desired maximum NVMe drive needs. Configuring the server based on the recommendations presented in the table below will help guide customers to solutions optimized for NVMe drives and PCIe slot counts.

## Standard Features

Maximum NVMe Drives supported	Proc Qty	Riser Configuration	Drive Kit NVMe 8 SSD Express Bay (878362-B21)	Drive Kit Premium 6SFF and 2 NVMe (878364-B21)	Drive Kit UMB 2SFF Premium HDD (880121-B21)
2	1	Primary 6-slot Riser (872336-B21)			1
2	1	Primary 6-slot Riser (872336-B21)		1	
2	2	Primary 6-slot Riser (872336-B21)		1	
2	2	Primary 6-slot Riser (872336-B21)			1
2	2	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 9-slot Riser (872340-B21)			1
2	2	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 9-slot Riser (872340-B21)		1	
2	2	Primary 7-slot Riser (878214-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)			1
2	2	Primary 7-slot Riser (878214-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)		1	
4	2	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)		1	1
4	2	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)		2	
2	3	Primary 6-slot Riser (872336-B21)			1
2	3	Primary 7-slot Riser (878214-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)			1
2	3	Primary 7-slot Riser (878214-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)		1	
4	3	Primary 6-slot Riser (872336-B21)		2	
4	3	Primary 6-slot Riser (872336-B21)		1	1
4	3	Primary 6-slot Riser (872336-B21)	1		
<b>NOTE:</b> Partial configuration. Drive bays 5-8 are not functional. Add 4th processor and Secondary / Tertiary 8-slot Riser (872338-B21) to enable all 8 drive bays or change primary riser to NVMe Slimline Riser (878360-B21; includes the 4-port NVMe Mezzanine card) + Secondary and Tertiary 9-slot Riser (872340-B21) to enable 16 drive configuration.					
4	3	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 9-slot Riser (872340-B21)		2	
4	3	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 9-slot Riser (872340-B21)		1	1
6	3	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)	1		
<b>NOTE:</b> Partial configuration. Drive bays 7-8 are not functional. Add Processor 4 to enable all 8 drive bays.					

## Standard Features

Maximum NVMe Drives supported	Proc Qty	Riser Configuration	Drive Kit NVMe 8 SSD Express Bay (878362-B21)	Drive Kit Premium 6SFF and 2 NVMe (878364-B21)	Drive Kit UMB 2SFF Premium HDD (880121-B21)
6	3	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)		3	
6	3	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)		2	1
16	3	Primary NVMe Slimline Riser (878360-B21; includes the 4-port NVMe Mezzanine card) + Secondary and Tertiary 8-slot Riser (872338-B21)	2		
16	3	Primary NVMe Slimline Riser (878360-B21; includes the 4-port NVMe Mezzanine card) + Secondary and Tertiary 9-slot Riser (872340-B21)	2		
18	3	Primary NVMe Slimline Riser (878360-B21; includes the 4-port NVMe Mezzanine card) + Secondary and Tertiary 8-slot Riser (872338-B21)	2		1
2	4	Primary 6-slot Riser (872336-B21)			1
2	4	Primary 7-slot Riser (878214-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)		1	
2	4	Primary 7-slot Riser (878214-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)			1
4	4	Primary 6-slot Riser (872336-B21)		2	
4	4	Primary 6-slot Riser (872336-B21)		1	1
4	4	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 9-slot Riser (872340-B21)		2	
4	4	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 9-slot Riser (872340-B21)		1	1
4	4	Primary 7-slot Riser (878214-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)		2	
4	4	Primary 7-slot Riser (878214-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)		1	1
6	4	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)		3	
8	4	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)	1		
8	4	Primary 6-slot Riser (872336-B21) + Secondary and Tertiary 8-slot Riser (872338-B21)		3	1
16	4	Primary NVMe Slimline Riser (878360-B21; includes the 4-port NVMe Mezzanine card) + Secondary and Tertiary 9-slot Riser (872340-B21)	2		
18	4	Primary NVMe Slimline Riser (878360-B21; includes the 4-port NVMe Mezzanine card) + Secondary and Tertiary 8-slot Riser (872338-B21)	2		1
20	4	Primary NVMe Slimline Riser (878360-B21; includes the 4-port NVMe Mezzanine card) + Secondary and Tertiary 8-slot Riser (872338-B21)	3		

## Standard Features

**NOTE:** Partial configuration. Maximum number of NVMe drives supported. 8 Drive SFF NVMe in Box 1 will only support drives 1-4. Drive bays 5-8 are not functional.

**NOTE:** Maximum number of NVMe drives supported depends on a combination of processor, box, drive bay and riser. Please refer the above table carefully before creating configurations.

**NOTE:** The table is a list of recommended configurations.

**NOTE:** The maximum drive count listed for each configuration cannot be exceeded.

**NOTE:** Box 1 is populated by 8 SFF SAS/SATA bay (878366-B21) and shipped as default without any drives.

**NOTE:** The 8 NVMe drive option (878362-B21) can only be placed in Box 1, 2 and 3. When the 8 NVMe drive option is placed in Box 1, only the first 4 NVMe (left to right) drives can be populated.

**NOTE:** The 6 SFF plus 2 NVMe drive option (878364-B21) can only be placed in Box 1, 2 and 3.

**NOTE:** The Universal Media Bay (872267-B21) is not available with the 48 SFF front end, and can only be populated in Box 4. The media bay can support 2 NVMe via the optional 2 SFF premium kit (880121-B21).

**NOTE:** Not all configurations supporting the UMB 2SFF are shown. Primary 6-slot Riser (872336-B21) and/or Secondary and Tertiary 8-slot Riser (872338-B21) must be selected to support this option.

**NOTE:** The 8 SFF can be upgraded with a multiple drive bay options with field upgrades. Please refer front diagram detail for available options. For optimal upgrade please upgrade Box 1, Box 2, Box 3, Box 4, Box 5 and Box 6 when using the 8 SFF HDD bay for a 48 SFF configuration.

**NOTE:** A maximum of 20 NVMe drives can be supported with 4 NVMe drives in Box 1, 8 NVMe drives in Box 2 and 8 NVMe drives in Box 3 or with 2 NVMe drives in Box 1, 8 NVMe drives in Box 2, 8 NVMe drives in Box 3 and 2 NVMe drives in Box 4 using the Universal Media Bay (872267-B21).

**NOTE:** All pre-configured models come with embedded software RAID support for 10 SATA drives and also include P408i-p Smart Array controller. Optional HPE Smart Array Controllers can be added.

**NOTE:** The 2x 4-port NVMe Slimline riser (878360-B21) comes with 2 separate 4-port NVMe risers, one which installs on the upper processor mezzanine tray. NVMe Slimline Riser option (878360-B21) cannot be used in a 2 processor configuration.

### Maximum Internal Storage

	Capacity	Configuration
Hot Plug SFF SATA HDD	96 TB	48 x 2 TB
Hot Plug SFF SAS HDD	115.2TB	48 x 2.4 TB
Hot Plug SFF SATA SSD	368.6 TB	48 x 7.68 TB
Hot Plug SFF SAS SSD	734 TB	48 x 15.3 TB
SFF NVMe SSD	307.2 TB	20 x 15.36 TB

## Standard Features

### Power Supply

One of the following depending on model

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

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

**NOTE:** Must order 4x 800W Flex Slot PSU.

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

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

**NOTE:** 1600W Power supplies only support high line voltage (200VAC to 240VAC).

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 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 (416151-B21). 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](#)

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### Interfaces

Serial	1 rear
Video	1 front display port (optional with Universal Media Bay), 1 rear VGA
HPE iLO Remote Management Network Port	1
HPE iLO Front Service Port	1 (Not available if SID is installed)
Micro SD Slot	1 (Internal), 2 (optional, internal)
<b>NOTE:</b> Requires the optional HPE Dual Micro SD 8GB USB kit.	
USB 2.0 Ports	4 total: 2 front (optional); 2 rear
USB 3.0 Ports	5 total: 2 front; 2 rear, 1 internal

**NOTE:** 2 front (optional) USB 2.0 ports need the HPE DL560 Gen10 Universal Media Bay Kit (872267-B21).

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### Operating Systems and Virtualization Software Support for ProLiant Servers

#### **With 1<sup>st</sup> generation processors**

**Windows Server 2012 R2**

**Windows Server 2016**

**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**

**CentOS 6.9 and 7.3**

**Citrix XenServer 7.1, 7.3, 7.4**

**Oracle Linux 7**

**NOTE:** Not directly supported / Community Supported (Based on RHEL so RHEL testing and enablement applicable to Cent OS)  
CentOS 6.9 / CentOS 7.3.

## Standard Features

**With 2<sup>nd</sup> generation processors**

**Windows Server 2012 R2**

**Windows Server 2016**

**Windows Server 2019**

**VMware ESXi 6.0 U3**

**VMware ESXi 6.5 U2**

**VMware ESXi 6.7 U1**

**Red Hat Enterprise Linux (RHEL) 7.6 and 8.0**

**SUSE Linux Enterprise Server (SLES) 12 SP4 ,12 SP3 and 15 SP1**

**CentOS 7.6**

**NOTE:** Not directly supported / Community Supported (Based on RHEL so RHEL testing and enablement applicable to Cent OS) CentOS 6.9 / CentOS 7.3.**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>**

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### Industry Standard Compliance

- ACPI 6.1 Compliant
- PCIe 3.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- USB 3.0 Compliant (internal); USB 2.0 Compliant
- SMBIOS 3.1
- UEFI 2.6
- Redfish API

**NOTE:** For additional technical thermal details regarding ambient temperatures, humidity and features support please visit: **<http://www.hpe.com/servers/ashrae>**

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### Graphics

- Integrated Video Standard
  - Video modes up to 1920 x 1200@60Hz (32 bpp)
  - 16MB Video Memory
  - HPE iLO 5 on system management memory
  - 32 MB Flash
  - 4 Gbit DDR 3 with ECC protection
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## Standard Features

### 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 <http://www.hpe.com/servers/uefi>.

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.

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## 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 <http://www.hpe.com/info/ilo>.

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## UEFI

Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI).

Learn more at <http://www.hpe.com/servers/uefi>.

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## 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>.

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## 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 <http://www.hpe.com/info/restfulapi>.

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## Standard Features

### 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>.

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#### 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>.

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#### 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 <http://www.hpe.com/info/smartupdate>.

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#### 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 <http://www.hpe.com/servers/iLOamplifierpack>.

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#### 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>.

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#### 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 <http://www.hpe.com/info/resttool>.

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#### 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>.

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#### 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>.

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#### 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 quick and seamless firmware updates. Learn more at <http://www.hpe.com/info/hpesim>.

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## Standard Features

### 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)
- 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 firmware
- Ability to rollback firmware
- Secure erase of NAND/User data
- TPM (Trusted Platform Module) 1.2 option
- TPM (Trusted Platform Module) 2.0 option
- Bezel Locking Kit
- Chassis Intrusion detection option

**NOTE:** HPE Trusted Platform Module 2.0 Option (864279-B21) works with Gen10 servers with UEFI Mode and not Legacy Mode. The Trusted Platform Module 2.0 Option can be configured to the 1.2 version through the UEFI BIOS to support TPM 1.2 functionality.

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

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### About Trusted Platform Module

Trusted Platform Module (TPM) is a separate processor that monitors the system state. TPM is a passive component needing to be updated and not able to lock down any component in the system except access to its own memory. It also provides some cryptographic operations - among them: creating RSA key pairs, and working with them.

The first verification of signatures happens by code on the CPU, which can be intercepted and replaced. Emulating a "properly" booted system is possible by sending the right values to the TPM.

HPE supports two version of TPM, the 1.2 device and the 2.0 device. The TPM 2.0 device works with Gen10 servers that are using a Linux operating system or Microsoft Windows Server 2016. Both TPM 1.2 and 2.0 are compatible with HPE ProLiant Gen9 and Gen10 servers. These TPM modules are not compatible with server generations prior to Gen9. Once the TPM module is installed, it locks into place and cannot be removed, nor can it be replaced with a different TPM device.

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## Standard Features

### HPE Silicon Root of Trust

The HPE Silicon Root of Trust provides protection because as soon as the server is powered on and the iLO firmware comes alive, it looks into the silicon for the immutable fingerprint that verifies all the firmware code is valid and uncompromised. Over a million lines of firmware code run, before the operating system starts, making it essential to confirm that all server essential firmware is free from malware or compromised code.

Silicon Root of Trust is included with iLO5 Standard with all platforms that contain the iLO5 chip. That includes ML, DL, Apollo, C-Class Blades, and Synergy Compute Modules. HPE Cloudline and the HPE Microserver do not have silicon root of trust, since they do not contain an iLO5 silicon chip. This technology is NOT available on any previous version of HPE ProLiant like the Gen9, Gen8, or Gen 7 servers, nor can those previous generations be retrofitted to accommodate the silicon root of trust.

The silicon validates the iLO 5 firmware code before it is fetched and executed. If any malware or compromised code has been inserted in the iLO 5 firmware, the silicon will detect that, because any infected firmware code will not match-up with the hash burned into the silicon. From there, the iLO 5 firmware validates the rest of the server firmware, namely the UEFI, CPLD, IE, and ME. The UEFI then validates the connection to the operating system, thus completing a complete root, or chain, that is anchored into the silicon.

During operation of the server, Hewlett Packard Enterprise has a new technology that conducts run-time firmware validation that checks the firmware stored in the server. At any point, if compromised code or malware is inserted in any of the critical firmware, an iLO audit log alert is created to notify the customer that a compromised has occurred.

In the unlikely event of a breach into the HPE server firmware, after detection has been completed, the customer may then securely recover the firmware automatically to a previous known good state. Hewlett Packard Enterprise provides this function through HPE iLO Advanced license.

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### Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise 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.

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/>.

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## 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>.

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#### 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>.

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#### HPE InfoSight for Servers

HPE InfoSight for Servers combines the cloud-based machine learning of InfoSight with the health and performance monitoring of Active Health System (AHS) and iLO to optimize performance and predict and prevent problems. The end result is an intelligent environment that modernizes IT operations and enhances the support experience by predicting and preventing the infrastructure issues that lead to application disruptions, wasted IT staff time and missed business opportunities.

Learn more at <https://www.hpe.com/servers/infosight>

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#### 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 <http://www.hpe.com/info/cmu>.

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#### GPGPU Information

HPE NVIDIA Tesla P40 24GB Computational Accelerator

HPE NVIDIA Quadro P6000 Graphics Accelerator

HPE NVIDIA Tesla V100 PCIe 16GB Computational Accelerator

HPE NVIDIA Tesla V100 PCIe 32GB Computational Accelerator

HPE NVIDIA Tesla P100 PCIe 16GB Computational Accelerator

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#### 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 your 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](#).

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## 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#>**

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## Service and Support

### HPE Pointnext - Service and Support

#### Protect your business beyond warranty with HPE Pointnext Operational Service

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. Hewlett Packard Enterprise is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make the complex simple.

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#### Connect your devices:

Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Achieve up to 77%<sup>1</sup> reduction in down time, near 100%<sup>2</sup> diagnostic accuracy and a single consolidated view of your environment. By connecting, you will receive 24x7 monitoring, 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.

<sup>1</sup>- IDC

<sup>2</sup>- HPE CSC reports 2014 – 2015

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

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### Recommended Services

#### HPE Proactive Care\* with 6 hour call-to-repair commitment, three year Support Service

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This Service combines three years' proactive reporting and advice with our highest level of hardware support –the HPE 24x7, six hour hardware call-to-repair. Hewlett Packard Enterprise is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable servers. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers.

<https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

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#### HPE Proactive Care\* with 24x7 coverage, three year Support Service

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This Service combines three years proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers. <https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

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#### HPE Proactive Care\* - Next Business Day service, three year Support Service

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This service combines three years of Hardware Support where a Hewlett Packard Enterprise authorized representative will arrive at the Customer's site during the onsite coverage window to begin hardware maintenance service the next coverage day after the service request has been logged. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers. <https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

\*HPE Proactive Care and HPE Proactive Care Advanced require that the customer connect their devices to make the most of these services and receive all the deliverables.

## Service and Support

### 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>

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#### HPE Installation and Startup Service

Provides for the installation of your HPE hardware according to product specifications including options. The HPE service delivery technician will connect the product to a LAN as appropriate and enable remote support to allow for automatic case creation for hardware failures. Installation and start up services also includes the installation of one supported operating system type (Windows® or Linux).

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#### HPE Datacenter Care service

HPE Datacenter Care helps improve IT stability and security, increase the value of IT, and enable agility and innovation. It is a structured framework of repeatable, tested, and globally available services “building blocks.” You can deploy, operate, and evolve your datacenter wherever you are on your IT journey. With HPE Datacenter Care, you benefit from a personalized relationship with HPE via a single point of accountability for HPE and others’ products. For more information, visit

<http://www.hpe.com/services/datacentercare>

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#### HPE GreenLake Flex Capacity

With HPE GreenLake Flex Capacity, you get the speed, scalability, and economics of the public cloud in the privacy of your data center. Gain the advantages of the public cloud—consumption-based payment, rapid scalability without worrying about capacity constraints. Reduce the “heavy lifting” needed to operate a data center. And retain the advantages that IT provides the business (i.e., control, security). Deliver the right user experience, choose the right technology for the business, manage privacy and compliance, and manage the cost of IT. And, you have the option to use the public cloud when needed.

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#### DC for Hyperscale

Datacenter Care for Hyperscale is available for Service Providers and HPC customers who use a scale out approach to computing with a high volume homogenous infrastructure and resilient architecture can take advantage of this environment support tailored to their operating model.

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#### HPE Factory Express for Servers and storage

HPE Factory Express offers configuration, customization, integration and deployment services for HPE servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HPE products supported through Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE Apollo, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAXXX3PAR suite, XP, rackable tape libraries and configurable network switches.

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#### HPE Service Credits

HPE Service Credits offers flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

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## Service and Support

### HPE Education Services

Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment.

<http://www.hpe.com/ww/learn>

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### 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 Hewlett Packard Enterprise experts, access support resources or collaborate with peers.

Learn more <http://www.hpe.com/support/hpesc>.

The HPE 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: <http://www.hpe.com/services>.

**NOTE:** HPE ProLiant DL580 Gen10 Server is covered under the HPE Service Contract applied to the HPE ProLiant Server. No separate HPE support services need to be purchased.

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### Warranty

Warranty and Support Services will extend to include HPE options configured with your server or storage device. The price of support service is not impacted by configuration details. HPE sourced options that are compatible with your product will be covered under your server support at the same level of coverage allowing you to upgrade freely. Installation for HPE options is available as needed. To keep support costs low for everyone, some high value options will require additional support. Additional support is only required on select high value workload accelerators, fibre switches, InfiniBand and UPS batteries over 12KVA. See the specific high value options that require additional support [Here](#).

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### Parts and Materials

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

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

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

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## Pre-configured Models

	Entry Models	
<b>SKU Number</b>	P05673-xxx	869848-xxx
<b>Model Name</b>	HPE ProLiant DL580 Gen10 5220 2.2GHz 18-core 2P 128GB-R P408i-p 8SFF 4x800W RPS Server	HPE ProLiant DL580 Gen10 5120 2.2GHz 14-core 2P 64GB-R P408i-p 8SFF 4x800W PS Entry Server
<b>Processor</b>	Intel® Xeon® 5220 (18-Core, 2.2GHz, 125W )	Intel® Xeon® 5120 (14-Core, 2.2GHz, 105W )
<b>Number of Processors</b>	2	2
<b>Memory</b>	128 GB (4x 32GB Registered DIMMs, 2933 MT/s) <b>NOTE:</b> 24 DIMM slots available with Entry Model; 2 more processor slots and 24 more DIMMs available via optional HPE DL5x0 Gen10 CPU Version 2 Mezzanine Board Kit (P07991-B21).	64 GB (4x 16GB Registered DIMMs, 2666 MT/s) <b>NOTE:</b> 24 DIMM slots available with Entry Model; 2 more processor slots and 24 more DIMMs available via optional HPE DL5x0 Gen10 CPU Mezzanine Board Kit (872222-B21).
<b>Network Controller</b>	1 Gb 4-port 331FLR Adapter	1 Gb 4-port 331FLR Adapter
<b>Storage Controller</b>	HPE Smart Array P408i-p controller <b>NOTE:</b> Additional Storage controllers are available as options, to enable both SAS capability as well as provide data retention with flash-backed write cache (FBWC).	
<b>Power Supply</b>	4x 800W	4x 800W
<b>PCI-Express Slots</b>	3 PCIe 3.0 slots available <b>NOTE:</b> 16 PCIe 3.0 slots available with the secondary riser and 4 processors installed.	
<b>Hard Drive</b>	None ship standard	
<b>Internal Storage</b>	8 SFF Drive Bays <b>NOTE:</b> Can be expanded up to a max. of 48 SFF drives, with optional HPE DL580 Gen10 8SFF HDD Bay Kit (878366-B21). <b>NOTE:</b> Optionally NVMe SSD drives can be added with HPE DL580 Gen10 Premium 6SFF and 2 NVMe or 8SFF Bay Kit (878364-B21) which can be added to Box1, 2 or 3 or HPE DL580 NVMe 8 SSD Express Bay Enablement Kit (878362-B21) which can be added to Box 1 (only 4 NVMe drives), Box 2 and Box 3. <b>NOTE:</b> Alternatively, optional HPE DL560 Gen10 Universal Media Bay Kit (872267-B21) can be added in Box 4.	
<b>Optical Drive</b>	Optional via Universal Media Bay	
<b>Fans</b>	12 hot plug fans, n+1 redundant	
<b>Management</b>	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced and HPE OneView Advanced (require licenses)	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced and HPE OneView Advanced
<b>Form Factor</b>	Rack (4U), HPE DL580 Gen10 4U Rail Kit with CMA	
<b>Warranty</b>	3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response	

## Pre-configured Models

	Base Models	
<b>SKU Number</b>	P05672-xxx	869847-xxx
<b>Model Name</b>	HPE ProLiant DL580 Gen10 6230 2.1GHz 20-core 4P 256GB-R P408i-p 8SFF 4x1600W RPS Server	HPE ProLiant DL580 Gen10 6148 2.4GHz 20-core 4P 128GB-R P408i-p 8SFF 4x1600W PS Base Server
<b>Processor</b>	Intel® Xeon® 6230 (20-Core, 2.1GHz, 125W)	Intel® Xeon® 6148 (20-Core, 2.4GHz, 150W)
<b>Number of Processors</b>	4	4
<b>Memory</b>	256 GB (8x 32GB Registered DIMMs, 2933 MT/s)	128 GB (8x 16GB Registered DIMMs, 2666 MT/s)
<b>Network Controller</b>	10GbE FlexFabric 2-port 535FLR-T Adapter	10GbE FlexFabric 2-port 535FLR-T Adapter
<b>Storage Controller</b>	HPE Smart Array P408i-p controller <b>NOTE:</b> Additional Storage controllers are available as options, to enable both SAS capability as well as provide data retention with flash-backed write cache (FBWC).	
<b>Power Supply</b>	4x 1600W	4x 1600W
	<b>NOTE:</b> 1600W Power supplies only support high line voltage (200VAC to 240VAC).	
<b>PCI-Express Slots</b>	16 PCIe 3.0 slots available	16 PCIe 3.0 slots available
<b>Hard Drive</b>	None ship standard	
<b>Internal Storage</b>	8 SFF Drive Bays <b>NOTE:</b> Can be expanded up to a max. of 48 SFF drives, with optional HPE DL580 Gen10 8SFF HDD Bay Kit (878366-B21). <b>NOTE:</b> Optionally NVMe SSD drives can be added with HPE DL580 Gen10 Premium 6SFF and 2 NVMe or 8SFF Bay Kit (878364-B21) which can be added to Box1, 2 or 3 or HPE DL580 NVMe 8 SSD Express Bay Enablement Kit (878362-B21) which can be added to Box 1 (only 4 NVMe drives), Box 2 and Box 3. <b>NOTE:</b> Alternatively, optional HPE DL560 Gen10 Universal Media Bay Kit (872267-B21) can be added in Box 4.	
<b>Optical Drive</b>	Optional via Universal Media Bay	
<b>Fans</b>	12 hot plug fans, n+1 redundant	
<b>Management</b>	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced and HPE OneView Advanced (require licenses)	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced and HPE OneView Advanced
<b>Form Factor</b>	Rack (4U), HPE DL580 Gen10 4U Rail Kit with CMA	
<b>Warranty</b>	3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response	

## Pre-configured Models

	Performance Models	
<b>SKU Number</b>	P05671-B21	869845-xxx
<b>Model Name</b>	HPE ProLiant DL580 Gen10 8260 2.4GHz 24-core 4P 512GB-R P408i-p 8SFF 4x1600W RPS Server	HPE ProLiant DL580 Gen10 8164 2.0GHz 26-core 4P 256GB-R P408i-p 8SFF 4x1600W PS Perf Server
<b>Processor</b>	Intel® Xeon® 8260 (24-Core, 2.4GHz, 165W)	Intel® Xeon® 8164 (26-Core, 2.0GHz, 150W)
<b>Number of Processors</b>	4	4
<b>Memory</b>	512 GB (16x 32GB Registered DIMMs, 2933 MT/s)	256 GB (8x 32GB Registered DIMMs, 2666 MT/s)
<b>Network Controller</b>	10/25GbE FlexFabric 2-port 640FLR-SFP28 Adapter	10/25GbE FlexFabric 2-port 640FLR-SFP28 Adapter
<b>Storage Controller</b>	HPE Smart Array P408i-p controller <b>NOTE: Additional Storage controllers are available as options, to enable both SAS capability as well as provide data retention with flash-backed write cache (FBWC).</b>	
<b>Power Supply</b>	4x 1600W	4x 1600W
	<b>NOTE: 1600W Power supplies only support high line voltage (200VAC to 240VAC).</b>	
<b>PCI-Express Slots</b>	16 PCIe 3.0 slots available	16 PCIe 3.0 slots available
<b>Hard Drive</b>	None ship standard	
<b>Internal Storage</b>	8 SFF Drive Bays <b>NOTE: Can be expanded up to a max. of 48 SFF drives, with optional HPE DL580 Gen10 8SFF HDD Bay Kit (878366-B21).</b> <b>NOTE: Optionally NVMe SSD drives can be added with HPE DL580 Gen10 Premium 6SFF and 2 NVMe or 8SFF Bay Kit (878364-B21) which can be added to Box1, 2 or 3 or HPE DL580 NVMe 8 SSD Express Bay Enablement Kit (878362-B21) which can be added to Box 1 (only 4 NVMe drives), Box 2 and Box 3.</b> <b>NOTE: Alternatively, optional HPE DL560 Gen10 Universal Media Bay Kit (872267-B21) can be added in Box 4.</b>	
<b>Optical Drive</b>	Optional via Universal Media Bay	
<b>Fans</b>	12 hot plug fans, n+1 redundant	
<b>Management</b>	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced and HPE OneView Advanced (require licenses)	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced and HPE OneView Advanced
<b>Form Factor</b>	Rack (4U), HPE DL580 Gen10 4U Rail Kit with CMA	
<b>Warranty</b>	3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response	
<b>Country Code Key</b>	xx1 = B21	Worldwide
	<b>NOTE: The -B21 WW SKU is to be ordered in all countries other than Japan or PRC.</b>	
	xx1 = 291	Japan
	xx1 = AA1	PRC

## Configuration Information

This section lists some of the steps required to configure a Factory Integrated Model. To ensure only 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 the number of initial hard drives ordered with the 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)

<b>Server description</b>	HPE ProLiant DL580 Gen10 8SFF Configure-to-order Server
<b>SKU Number</b>	869854-B21
<b>TAA SKU</b>	878213-B21
<b>Chipset</b>	Intel® C621 Chipset
<b>Processor</b>	4U Server Chassis with 2 processor slots available; 4 processor configuration would require optional HPE ProLiant HPE DL5x0 Gen10 CPU Mezzanine Board Kit (872222-B21) <b>NOTE:</b> If 2 <sup>nd</sup> generation Intel® Xeon® Scalable processors are being used (82xx, 62xx or 52xx series) the 4 processor configuration would require optional HPE DL5x0 Gen10 CPU Version 2 Mezzanine Board Kit (P07991-B21)
<b>DIMM Slots</b>	24 DIMM slots for RDIMM, LRDIMM DDR4 Memory; 48 DIMM configuration would require optional HPE ProLiant HPE DL5x0 Gen10 CPU Mezzanine Board Kit (872222-B21) and 4 processors <b>NOTE:</b> If 2 <sup>nd</sup> generation Intel® Xeon® Scalable processors are being used (82xx, 62xx or 52xx series) the 48 DIMM configuration would require optional HPE DL5x0 Gen10 CPU Version 2 Mezzanine Board Kit (P07991-B21)
<b>Network Controller</b>	None. FlexibleLOM slot (various options can be chosen for networking; NIC cards also available via expansion slots)
<b>Storage Controller</b>	HPE Smart Array S100i <b>NOTE:</b> HPE Smart Array S100i SR Gen10 SW RAID is off by default and must be enabled. For enabling, please select HPE FIO Enable Smart Array SW RAID (784308-B21).
<b>PCIe</b>	None. Must order a primary riser (16 PCIe 3.0 slots are available if all processors are chosen and the primary, secondary and tertiary Riser Kits have been installed)
<b>Drive Cage - included</b>	8 SFF in Box 1, no drives
<b>Fans</b>	12 hot plug fans, (n+1) redundant
<b>Management</b>	HPE iLO Standard with Intelligent Provisioning and (Standard); HPE OneView Standard (requires download) and HPE iLO Advanced (require additional licenses), HPE OneView Advanced (require additional licenses)
<b>microSD Slots</b>	1 microSD card slot (internal)
<b>TPM Connector</b>	1 Trusted Platform Module (TPM) connector
<b>UEFI</b>	BIOS Legacy mode (field configurable) or Unified Extensible Firmware Interface (UEFI) mode (default)
<b>USB</b>	7 USB ports (2 USB 2.0 and 5 USB 3.0), Optional 2 front available via universal media kit upgrade
<b>Video Ports</b>	2 video ports (1 front optional via the Universal Media Kit upgrade option, 1 rear)
<b>Rails</b>	HPE DL580 Gen10 4U Rail Kit with CMA

**NOTE:** Trade Agreement Act (TAA) and means that these SKUs are manufactured in countries that are part of the global trade act. This provides greater security assurance that these servers come from countries that signed the agreement act. This is particularly important to HPE customers in our federal sector and other verticals that have concerns about the country of origin for our solutions.

**NOTE:** TAA chassis are only orderable in North America and Canada.

**NOTE:** PCIe slot availability is dependent on the number of processors and riser kits installed. Please refer to the "Expansion slots" section for more details.

## Configuration Information

**NOTE:** For the DL580 Gen10, the number of processors can be one, two, three or four installed. For three or four processors, the HPE DL5x0 Gen10 CPU Mezzanine Board Kit (872222-B21) is required if 1<sup>st</sup> generation Intel® Xeon® Scalable processors are being used.

**NOTE:** For four processors, the HPE DL5x0 Gen10 CPU Version 2 Mezzanine Board Kit (P07991-B21) is required if 2<sup>nd</sup> generation Intel® Xeon® Scalable processors are being used.

**NOTE:** This applies to CTO configurations, field upgrades may differ depending on field configuration.

### Step 2a: Choose Processor Options

#### Processor Option Kits

	<b>Required Processor</b>
HPE DL580 Gen10 Intel Xeon-Platinum 8280L (2.7GHz/28-core/205W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05713-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8280M (2.7GHz/28-core/205W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05717-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8280 (2.7GHz/28-core/205W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05716-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8276L (2.2GHz/28-core/165W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05722-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8276M (2.2GHz/28-core/165W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05715-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8276 (2.2GHz/28-core/165W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05714-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8270 (2.7GHz/26-core/205W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05712-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8268 (2.9GHz/24-core/205W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05711-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8260L (2.4GHz/24-core/165W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05707-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8260M (2.4GHz/24-core/165W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05709-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8260 (2.4GHz/24-core/165W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05708-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8260Y (2.4GHz/24-20-16-core/165W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05691-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8256 (3.8GHz/4-core/105W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	P05706-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8253 (2.2GHz/16-core/125W) FIO Processor Kit	P05705-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8180M (2.5GHz/28-core/205W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	878159-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8180 (2.5GHz/28-core/205W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	878158-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8176 (2.1GHz/28-core/165W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	878156-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8170 (2.1GHz/26-core/165W) FIO Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	878154-L21

## Configuration Information

HPE DL580 Gen10 Intel Xeon-Platinum 8168 (2.7GHz/24-core/205W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878153-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8165 (2.8GHz/24-core/205W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	P00881-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8164 (2.0GHz/26-core/150W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878152-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8160M (2.1GHz/24-core/145W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878151-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8160 (2.1GHz/24-core/145W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878150-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8158 (3.0GHz/12-core/150W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878149-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8156 (3.6GHz/4-core/105W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878148-L21
HPE DL580 Gen10 Intel Xeon-Platinum 8153 (2.0GHz/16-core/125W) FIO Processor Kit	878147-L21
HPE DL580 Gen10 Intel Xeon-Gold 6254 (3.1GHz/18-core/200W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	P05704-L21
HPE DL580 Gen10 Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	P05703-L21
HPE DL580 Gen10 Intel Xeon-Gold 6248 (2.5GHz/20-core/150W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	P05701-L21
HPE DL580 Gen10 Intel Xeon-Gold 6244 (3.6GHz/8-core/150W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	P05699-L21
HPE DL580 Gen10 Intel Xeon-Gold 6242 (2.8GHz/16-core/150W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	P05696-L21
HPE DL580 Gen10 Intel Xeon-Gold 6240 (2.6GHz/18-core/150W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	P05694-L21
HPE DL580 Gen10 Intel Xeon-Gold 6240Y (2.6GHz/18-14-8-core/150W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	P05690-L21
HPE DL580 Gen10 Intel Xeon-Gold 6230 (2.1GHz/20-core/125W) FIO Processor Kit	P05688-L21
HPE DL580 Gen10 Intel Xeon-Gold 6154 (3.0GHz/18-core/200W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878146-L21
HPE DL580 Gen10 Intel Xeon-Gold 6152 (2.1GHz/22-core/135W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878145-L21
HPE DL580 Gen10 Intel Xeon-Gold 6150 (2.7GHz/18-core/165W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878144-L21
HPE DL580 Gen10 Intel Xeon-Gold 6148 (2.4GHz/20-core/145W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878143-L21
HPE DL580 Gen10 Intel Xeon-Gold 6146 (3.2GHz/12-core/165W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878142-L21
HPE DL580 Gen10 Intel Xeon-Gold 6144 (3.5GHz/8-core/150W) FIO Processor Kit <b>NOTE: Ships with Performance Heatsink.</b>	878141-L21

## Configuration Information

HPE DL580 Gen10 Intel Xeon-Gold 6143 (2.8GHz/16-core/205W) FIO Processor Kit	P00880-L21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6142 (2.6GHz/16-core/145W) FIO Processor Kit	878139-L21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6140M (2.3GHz/18-core/140W) FIO Processor Kit	878138-L21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6140 (2.3GHz/18-core/140W) FIO Processor Kit	878137-L21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6138 (2.0GHz/20-core/125W) FIO Processor Kit	878136-L21
HPE DL580 Gen10 Intel Xeon-Gold 6136 (3.0GHz/12-core/150W) FIO Processor Kit	878135-L21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6134M (3.2GHz/8-core/130W) FIO Processor Kit	878134-L21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6134 (3.3GHz/8-core/130W) FIO Processor Kit	878133-L21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6132 (2.6GHz/14-core/140W) FIO Processor Kit	878132-L21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6130 (2.1GHz/16-core/125W) FIO Processor Kit	878131-L21
HPE DL580 Gen10 Intel Xeon-Gold 6128 (3.4GHz/6-core/115W) FIO Processor Kit	878130-L21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6126 (2.6GHz/12-core/125W) FIO Processor Kit	878129-L21
HPE DL580 Gen10 Intel Xeon-Gold 5222 (3.8GHz/4-core/105W) FIO Processor Kit	P05692-L21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 5220 (2.2GHz/18-core/125W) FIO Processor Kit	P05684-L21
HPE DL580 Gen10 Intel Xeon-Gold 5218 (2.3GHz/16-core/125W) FIO Processor Kit	P05683-L21
HPE DL580 Gen10 Intel Xeon-Gold 5218B (2.3GHz/16-core/125W) FIO Processor Kit	P12534-L21
HPE DL580 Gen10 Intel Xeon-Gold 5218N (2.3GHz/16-core/105W) FIO Processor Kit	P05698-L21
HPE DL580 Gen10 Intel Xeon-Gold 5217 (3.0GHz/8-core/115W) FIO Processor Kit	P05719-L21
HPE DL580 Gen10 Intel Xeon-Gold 5215L (2.5GHz/10-core/85W) FIO Processor Kit	P05687-L21
HPE DL580 Gen10 Intel Xeon-Gold 5215M (2.5GHz/10-core/85W) FIO Processor Kit	P05685-L21
HPE DL580 Gen10 Intel Xeon-Gold 5215 (2.5GHz/10-core/85W) FIO Processor Kit	P05682-L21
HPE DL580 Gen10 Intel Xeon-Gold 5122 (3.6GHz/4-core/105W) FIO Processor Kit	878128-L21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 5120 (2.2GHz/14-core/105W) FIO Processor Kit	878127-L21
HPE DL580 Gen10 Intel Xeon-Gold 5118 (2.3GHz/12-core/105W) FIO Processor Kit	878126-L21
HPE DL580 Gen10 Intel Xeon-Gold 5115 (2.4GHz/10-core/85W) FIO Processor Kit	878125-L21
<b>NOTE: If more than one processor is desired select one xxxxxx-L21 and one, two or three corresponding xxxxxx-B21 processors. Mixing different processor models is not supported.</b>	
<b>NOTE: Mixing of 1<sup>st</sup> and 2<sup>nd</sup> generation Intel® Xeon® Scalable processors – (8/6/5)1xx and (8/6/5)2xx models - is not supported.</b>	



## Configuration Information

### Step 2b: Choose Memory Options (at least one Memory Kit is required)

Only one of the following from each list unless otherwise noted

#### Memory Options

##### Registered DIMMs (RDIMMs)

HPE 8GB (1x8GB) Single Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00918-B21
HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815097-B21
HPE 8GB (1x8GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	876181-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00920-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 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00922-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00924-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815100-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00930-B21

##### Load Reduced DIMMs (LRDIMMs)

HPE 64GB (1x64GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart Memory Kit	P00926-B21
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit	815101-B21
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2933 CAS-24-21-21 3DS Load Reduced Memory Kit	P00928-B21
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2666 CAS-22-19-19 3DS Load Reduced Memory Kit	815102-B21

**NOTE:** LRDIMM and RDIMM are distinct memory technologies and cannot be mixed within a server.

**NOTE:** The 2666 MT/s memory DIMMs are supported with the 2nd generation Intel® Xeon® Scalable processors (81xx,61xx and 51xx)

**NOTE:** The 2933MT/s memory DIMMs are supported with the 1st generation Intel® Xeon® Scalable processors (82xx,62xx and 52xx).

### Step 2c: Choose Power Supplies (at least one Power Supply Kit is required)

Only one or more of the following from each list unless otherwise noted

#### Power Supplies

HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21

**NOTE:** Select one or more power supplies. For 800W, 4 power supplies need to be selected.

**NOTE:** 1600W Power supplies only support high line voltage (200VAC to 240VAC).

**NOTE:** Prior to making a power supply selection it is highly recommended that the HPE Power Advisor is run to determine the right size power supply for your server configuration. The HPE Power Advisor is located at:

<http://www.hpe.com/info/hppoweradvisor>.

**NOTE:** All power supplies in a server should match. Mixing Power Supplies is not supported.

**NOTE:** HPE ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). Visit [HPE power cords](#) for a full list of optional power cords.

## Configuration Information

### Step 2d: Choose network adapters (at least one adapter is required)

Only one of the following from each list unless otherwise noted

#### Network adapters

HPE Ethernet 1Gb 4-port 331FLR Adapter	629135-B22
HPE Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HPE FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HPE Ethernet 10Gb 2-port 535FLR-T Adapter	817721-B21
HPE FlexFabric 10Gb 4-port 536FLR-T Adapter	764302-B21
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21
HPE Ethernet 10Gb 2-port 562FLR-T Adapter	817745-B21
HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter	867334-B21
HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter	817709-B21
HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter	817749-B21

### Step 3: Choose Additional Factory Integratable Options

Only one of the following from each list unless otherwise noted

HPE Gen10 TPM 1.2 FIO Setting	872108-B21
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**NOTE:** TPM 2.0 is set as default, for 1.2 TPM setting instead, please select this option.

#### HPE OneView

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

#### BIOS Mode

HPE Legacy FIO Mode Setting	758959-B22
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**NOTE:** Selecting this option will change the UEFI BIOS setting into Legacy BIOS Setting.

#### Controller State

HPE FIO Enable Smart Array SW RAID	784308-B21
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**NOTE:** If not selecting an HPE Storage Controller, this option may be selected to support RAID and Hot-plug capabilities for SATA hard drives. The S100i does not support SAS hard drives.

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

## Core 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 Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional information.

### HPE Unique Options

HPE DL580 Gen10 12Gb 24-port SAS Expander Card Kit with Cables	881101-B21
HPE DL560 Gen10 Universal Media Bay Kit	872267-B21
HPE DL580 NVMe 8 SSD Express Bay Enablement Kit	878362-B21
HPE DL580 Gen10 Premium 6SFF and 2 NVMe or 8SFF Bay Kit	878364-B21
HPE DL580 Gen10 8SFF HDD Bay Kit	878366-B21
HPE DL580 Gen10 2SFF Premium HDD Front NVMe/SAS/SATA Kit	880121-B21
HPE DL5x0 Gen10 System Insight Display Kit	872261-B21
HPE DL5x0 Gen10 CPU Mezzanine Board Kit	872222-B21
HPE DL5x0 Gen10 CPU Version 2 Mezzanine Board Kit	P07991-B21

**NOTE:** HPE DL5x0 Gen10 CPU Mezzanine Board Kit (872222-B21) is needed for three or four processor configurations using 1<sup>st</sup> generation Intel® Xeon® Scalable processors (81xx, 61xx or 51xx series).

**NOTE:** The HPE DL5x0 Gen10 CPU Version 2 Mezzanine Board Kit (P07991-B21) is needed for four processor configurations using 2<sup>nd</sup> generation Intel® Xeon® Scalable processors (82xx, 62xx or 52xx series)

HPE DL5x0 Gen10 CPU Mezzanine UPI Performance Kit	875608-B21
HPE DL580 Gen10 4U Rail Kit with Cable Management Arm	872151-B21
HPE DL580 Gen10 6-slot 4 x8/2 x16 2-port 4 NVMe Slimline Primary Riser Kit	872336-B21

**NOTE:** This kit supports 6 PCIe slots and 2 NVMe ports which can support up to 4 NVMe drives.

HPE DL580 Gen10 8-slot 6 x8/2 x16 2-port 4 NVMe Slimline Secondary Riser Kit	872338-B21
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**NOTE:** This kit supports 8 PCIe slots and 2 NVMe ports which can support up to 4 NVMe drives.

HPE DL580 Gen10 7-slot 4 x8/3 x16 Primary Riser Kit	878214-B21
HPE DL580 Gen10 2x 4-port 16 NVMe Slimline Riser Kit	878360-B21

**NOTE:** This kit occupies the primary riser slot, supports 16 NVMe drives and must be ordered when supporting greater than 8 NVMe drives.

HPE DL38x Gen10 8-pin Cable Kit	871828-B21
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**NOTE:** Must be ordered if P6000 is selected. If more than 3 GPUs are selected ,then 2 Quantity of cable kit is required.

HPE DL38x Gen10 8-pin Keyed Cable Kit	871829-B21
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**NOTE:** Must be ordered if P40/ V100/ P100 is selected. If more than 3 GPUs are selected ,then 2 Quantity of cable kit is required.

**NOTE:** The HPE DL580 Gen10 8SFF HDD Bay Kit (878366-B21) is shipped default with the server.

**NOTE:** A minimum of 1 primary riser must be ordered.

HPE DL38X/560/580/ML350 Gen10 P824i-p Cable Kit	P00614-B21
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**NOTE:** Needs to be ordered with the SmartArray P824i-p MR Gen10 controller.

HPE DL580 Gen10 9-slot 6 x8/3 x16 Secondary Riser Kit	872340-B21
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HPE DL580 Gen10 GPU Bracket Kit	P00268-B21
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**NOTE:** HPE DL580 Gen10 GPU Bracket Kit (P00268-B21) kit is needed to install GPUs in slots 4 and 11 and must be ordered along with the GPU cable kits 871828-B21 (for P6000) or 871829-B21 (for P40). Refer Expansion Slots sections for additional details on risers.

## Core Options

### HPE Processors

HPE DL580 Gen10 Intel Xeon-Platinum 8280L (2.7GHz/28-core/205W) Processor Kit	P05713-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8280M (2.7GHz/28-core/205W) Processor Kit	P05717-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8280 (2.7GHz/28-core/205W) Processor Kit	P05716-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8276L (2.2GHz/28-core/165W) Processor Kit	P05722-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8276M (2.2GHz/28-core/165W) Processor Kit	P05715-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8276 (2.2GHz/28-core/165W) Processor Kit	P05714-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8270 (2.7GHz/26-core/205W) Processor Kit	P05712-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8268 (2.9GHz/24-core/205W) Processor Kit	P05711-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8260L (2.4GHz/24-core/165W) Processor Kit	P05707-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8260M (2.4GHz/24-core/165W) Processor Kit	P05709-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8260 (2.4GHz/24-core/165W) Processor Kit	P05708-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8260Y (2.4GHz/24-20-16-core/165W) Processor Kit	P05691-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8256 (3.8GHz/4-core/105W) Processor Kit	P05706-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8253 (2.2GHz/16-core/125W) Processor Kit	P05705-B21
HPE DL580 Gen10 Intel Xeon-Platinum 8180M (2.5GHz/28-core/205W) Processor Kit	878159-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8180 (2.5GHz/28-core/205W) Processor Kit	878158-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8176 (2.1GHz/28-core/165W) Processor Kit	878156-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8170 (2.1GHz/26-core/165W) Processor Kit	878154-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8168 (2.7GHz/24-core/205W) Processor Kit	878153-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8165 (2.3GHz/24-core/205W) Processor Kit	P00881-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
<b>NOTE:</b> 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 License is required.	

## Core Options

HPE DL580 Gen10 Intel Xeon-Platinum 8164 (2.0GHz/26-core/150W) Processor Kit	878152-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon -Platinum 8160M (2.1GHz/24-core/145W) Processor Kit	878151-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8160 (2.1GHz/24-core/145W) Processor Kit	878150-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8158 (3.0GHz/12-core/150W) Processor Kit	878149-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8156 (3.6GHz/4-core/105W) Processor Kit	878148-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Platinum 8153 (2.0GHz/16-core/125W) Processor Kit	878147-B21
HPE DL580 Gen10 Intel Xeon-Gold 6254 (3.1GHz/18-core/200W) Processor Kit	P05704-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) Processor Kit	P05703-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6248 (2.5GHz/20-core/150W) Processor Kit	P05701-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6244 (3.6GHz/8-core/150W) Processor Kit	P05699-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6242 (2.8GHz/16-core/150W) Processor Kit	P05696-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6240 (2.6GHz/18-core/150W) Processor Kit	P05694-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6240Y (2.6GHz/18-14-8-core/150W) Processor Kit	P05690-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6230 (2.1GHz/20-core/125W) Processor Kit	P05688-B21
HPE DL580 Gen10 Intel Xeon-Gold 6154 (3.0GHz/18-core/200W) Processor Kit	878146-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6152 (2.1GHz/22-core/135W) Processor Kit	878145-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6150 (2.7GHz/18-core/165W) Processor Kit	878144-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6148 (2.4GHz/20-core/145W) Processor Kit	878143-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6146 (3.2GHz/12-core/165W) Processor Kit	878142-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6144 (3.5GHz/8-core/150W) Processor Kit	878141-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel Xeon-Gold 6143 (2.8GHz/16-core/205W) Processor Kit	P00880-B21
<b>NOTE:</b> Ships with Performance Heatsink.	
<b>NOTE:</b> 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 License is required.	

## Core Options

HPE DL580 Gen10 Intel Xeon-Gold 6142 (2.6GHz/16-core/145W) Processor Kit	878139-B21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6140M (2.3GHz/18-core/140W) Processor Kit	878138-B21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6140 (2.3GHz/18-core/140W) Processor Kit	878137-B21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6138 (2.0GHz/20-core/125W) Processor Kit	878136-B21
HPE DL580 Gen10 Intel Xeon-Gold 6136 (3.0GHz/12-core/150W) Processor Kit	878135-B21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6134M (3.2GHz/8-core/130W) Processor Kit	878134-B21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6134 (3.3GHz/8-core/130W) Processor Kit	878133-B21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6132 (2.6GHz/14-core/140W) Processor Kit	878132-B21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6130 (2.1GHz/16-core/125W) Processor Kit	878131-B21
HPE DL580 Gen10 Intel Xeon-Gold 6128 (3.4GHz/6-core/115W) Processor Kit	878130-B21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 6126 (2.6GHz/12-core/125W) Processor Kit	878129-B21
HPE DL580 Gen10 Intel Xeon-Gold 5222 (3.8GHz/4-core/105W) Processor Kit	P05692-B21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 5220 (2.2GHz/18-core/125W) Processor Kit	P05684-B21
HPE DL580 Gen10 Intel Xeon-Gold 5218 (2.3GHz/16-core/125W) Processor Kit	P05683-B21
HPE DL580 Gen10 Intel Xeon-Gold 5218B (2.3GHz/16-core/125W) Processor Kit	P12534-B21
HPE DL580 Gen10 Intel Xeon-Gold 5218N (2.3GHz/16-core/105W) Processor Kit	P05698-B21
HPE DL580 Gen10 Intel Xeon-Gold 5217 (3.0GHz/8-core/115W) Processor Kit	P05719-B21
HPE DL580 Gen10 Intel Xeon-Gold 5215L (2.5GHz/10-core/85W) Processor Kit	P05687-B21
HPE DL580 Gen10 Intel Xeon-Gold 5215M (2.5GHz/10-core/85W) Processor Kit	P05685-B21
HPE DL580 Gen10 Intel Xeon-Gold 5215 (2.5GHz/10-core/85W) Processor Kit	P05682-B21
HPE DL580 Gen10 Intel Xeon-Gold 5122 (3.6GHz/4-core/105W) Processor Kit	878128-B21
<b>NOTE: Ships with Performance Heatsink.</b>	
HPE DL580 Gen10 Intel Xeon-Gold 5120 (2.2GHz/14-core/105W) Processor Kit	878127-B21
HPE DL580 Gen10 Intel Xeon-Gold 5118 (2.3GHz/12-core/105W) Processor Kit	878126-B21
HPE DL580 Gen10 Intel Xeon-Gold 5115 (2.4GHz/10-core/85W) Processor Kit	878125-B21
<b>NOTE: If more than one processor is desired select one xxxxxx-L21 and one, two or three corresponding xxxxxx-B21 processors. Mixing different processor models is not supported.</b>	
<b>NOTE: Mixing of 1<sup>st</sup> and 2<sup>nd</sup> generation Intel® Xeon® Scalable processors – (8/6/5)1xx and (8/6/5)2xx models -is not supported</b>	

## Core Options

### Memory Selection

To streamline the configuration process for HPE ProLiant Gen10 servers and to provide the best product availability, Hewlett Packard Enterprise recommends memory from the list located here: <http://www.hpe.com/products/recommend>. Best product availability is limited to US, Canada, and Latin America at this time.

### HPE Memory

**NOTE:** Hewlett Packard Enterprise memory from previous generation servers is not qualified or warranted with this HPE ProLiant Server. HPE SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen10. For additional information, please see the [HPE SmartMemory QuickSpecs](#).

**NOTE:** LRDIMM and RDIMM are all distinct memory technologies and cannot be mixed within a server.

### Registered DIMMs (RDIMMs)

HPE 8GB (1x8GB) Single Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00918-B21
HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815097-B21
HPE 8GB (1x8GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	876181-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00920-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 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00922-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00924-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815100-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00930-B21

### Load Reduced DIMMs (LRDIMMs)

HPE 64GB (1x64GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart Memory Kit	P00926-B21
PE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit	815101-B21
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2933 CAS-24-21-21 3DS Load Reduced Memory Kit	P00928-B21
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2666 CAS-22-19-19 3DS Load Reduced Memory Kit	815102-B21

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

**NOTE:** LRDIMM and RDIMM are distinct memory technologies and cannot be mixed within a server.

**NOTE:** The 2666 MT/s memory DIMMs are supported with the 1<sup>st</sup> generation Intel® Xeon® Scalable processors (81xx,61xx and 51xx).

**NOTE:** The 2933MT/s memory DIMMs are supported with the 2nd generation Intel® Xeon® Scalable processors (82xx,62xx and 52xx).

## Core Options

### HPE Persistent Memory

HPE 16GB NVDIMM Single Rank x4 DDR4-2666 Module Kit 845264-B21

**NOTE:** A maximum of 6 NVDIMMs are supported per processor and the DL560 can support a maximum of 24 NVDIMMs.

**NOTE:** NVDIMMs are only supported on 1<sup>st</sup> generation processors

**NOTE:** Please refer to <http://www.hpe.com/info/persistentmemory> for NVDIMM population rules and guidelines.

### HPE Optical Drives

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

**NOTE:** The optional Universal Media Bay Kits are required for this option. (HPE ProLiant DL560 Gen10 Universal Media Bay kit 872267-B21).

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

**NOTE:** The optional Universal Media Bay Kits are required for this option. (HPE ProLiant DL560 Gen10 Universal Media Bay kit 872267-B21).

HPE Mobile USB DVD-RW Optical Drive 701498-B21

**NOTE:** External

### HPE Drives

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

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

#### Enterprise – 12G SAS – SFF Drives

HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD 870753-B21

HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD 872475-B21

HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD 870757-B21

HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD 872477-B21

HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD 870759-B21

HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD 872479-B21

HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD 872481-B21

HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD 881457-B21

#### Midline – 12G SAS – SFF Drives

HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD 832514-B21

HPE 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD 765466-B21

#### SSD Selection

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

#### Write Intensive - SAS - SFF - Solid State Drives

HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD P04541-B21

P04543-B21

HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD

HPE 1.6TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD P04545-B21

HPE 3.2TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD P04547-B21

HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD P09098-B21

HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD P09100-B21

HPE 1.6TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD P09102-B21



## Core Options

### Read Intensive – SAS – SFF – Solid State Drives

HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P10440-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06584-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04517-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872390-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P10442-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04519-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06586-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872392-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P10444-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04521-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06588-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872394-B21
HPE 7.68TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P10446-B21
HPE 7.68TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04523-B21
HPE 7.68TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06590-B21
HPE 15.3TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06592-B21

### Read Intensive – SATA – SFF – Solid State Drives

HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P05924-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04556-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875503-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P05928-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04560-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06194-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04474-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P05932-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06196-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04564-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04476-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P05938-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06198-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04566-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04478-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P05946-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06200-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04570-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04480-B21
HPE 7.68TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04482-B21

## Core Options

### Read Intensive - NVMe - SFF - Solid State Drives

HPE 960GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10208-B21
HPE 960GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P07190-B21
HPE 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10210-B21
HPE 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P07192-B21
HPE 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10214-B21
HPE 3.84TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10212-B21
HPE 3.84TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P07194-B21
HPE 3.84TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10216-B21
HPE 7.68TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P07196-B21
HPE 7.68TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10218-B21
HPE 15.36TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P07198-B21

### Write Intensive - NVMe - SFF - Solid State Drives

HPE 375GB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	878014-B21
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**NOTE:** A NVME (878366-B21) or Premium (878364-B21) drive cage are required to support these drives in conjunction with an NVMe riser. Consult Pages 11-13 for recommended NVMe server configurations.

**NOTE:** NVMe drives are not supported by HPE Smart Array controllers.

### Read Intensive – M.2 – Solid State Drives

HPE 480GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875498-B21
HPE 960GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875500-B21

### Mixed Use – SAS – SFF – Solid State Drives

HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04525-B21
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09088-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04527-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09090-B21
HPE 960GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P10448-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04533-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09092-B21
HPE 1.92TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P10454-B21
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04537-B21
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09094-B21
HPE 3.84TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P10460-B21
HPE 6.4TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04539-B21
HPE 6.4TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09096-B21

### Mixed Use – SATA – SFF – Solid State Drives

HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P05976-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P07922-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09712-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P05980-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P07926-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09716-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P05986-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09722-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P07930-B21
HPE 3.84TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P05994-B21

## Core Options

HPE 3.84TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD P00896-B21

### Mixed Use – NVMe – SFF – Solid State Drives

HPE 800GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD P07179-B21

HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD P07181-B21

HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD P10222-B21

HPE 3.2TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD P07183-B21

HPE 3.2TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD P10224-B21

HPE 6.4TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD P07185-B21

HPE 6.4TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD P10226-B21

**NOTE:** A NVMe (878366-B21) or Premium (878364-B21) drive cage are required to support these drives in conjunction with an NVMe riser Option. Consult pages 11-13 for recommended NVMe server configurations.

**NOTE:** NVMe drives are not supported by HPE Smart Array controllers.

### Mixed Use – SATA – M.2 – Solid State Drives

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

**NOTE:** M.2 drives go in the Primary Riser and use S100i SATA controller only.

**NOTE:** M.2 supports Software RAID only.

### Dual SATA M.2 – UFF to SFF SCM SSD

HPE Dual 480GB SATA 6G Read Intensive M.2 - UFF to SFF SCM 3yr Wty Digitally Signed Firmware SSD P06609-B21

HPE Dual 240GB SATA 6G Mixed Use M.2 - UFF to SFF SCM 3yr Wty Digitally Signed Firmware SSD P06607-B21

### Hard Drive Blank Kits

HPE Small Form Factor Hard Drive Blank Kit 666987-B21

### Hard Drive Kits

HPE Universal SATA HHHL 3yr Wty M.2 Kit 878783-B21

## HPE Networking

### 100 Gigabit Ethernet adapters

HPE Ethernet 100Gb 1-port 842QSFP28 Adapter 874253-B21

### 25 Gigabit Ethernet adapters

HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter 867328-B21

HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter 817718-B21

HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter 817753-B21

### 10 Gigabit Ethernet adapters

HPE Ethernet 10Gb 2-port 521T Adapter 867707-B21

HPE Ethernet 10Gb 2-port 530SFP Adapter 652503-B21

HPE Ethernet 10Gb 2-port 530T Adapter 656596-B21

HPE Ethernet 10Gb 2-port 535T Adapter 813661-B21

HPE Ethernet 10Gb 2-port 562T Adapter 817738-B21

HPE Ethernet 10Gb 2-port 562SFP+ Adapter 727055-B21

**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.

**NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information:

<https://www.hpe.com/us/en/product-catalog/servers/server-adapters.hits-12.html>

## Core Options

### 1 Gigabit Ethernet adapters

HPE Ethernet 1Gb 4-port 331T Adapter	647594-B21
HPE Ethernet 1Gb 4-port 366T Adapter	811546-B21
HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
HPE Ethernet 1Gb 2-port 361T Adapter	652497-B21

### FlexibleLOM Adapters

HPE Ethernet 1Gb 4-port 331FLR Adapter	629135-B22
HPE Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HPE FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HPE Ethernet 10Gb 2-port 535FLR-T Adapter	817721-B21
HPE FlexFabric 10Gb 4-port 536FLR-T Adapter	764302-B21
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21
HPE Ethernet 10Gb 2-port 562FLR-T Adapter	817745-B21
HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter	867334-B21
HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter	817749-B21
HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter	817709-B21

**NOTE:** Please see the NIC QuickSpecs for Technical Specifications and additional information:

<https://www.hpe.com/us/en/product-catalog/servers/server-adapters.hits-12.html>

### HPE InfiniBand

HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21
HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	879482-B21
HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	825110-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	825111-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	872726-B21

**NOTE:** Not supported on DL580 Gen10 configurations with more than 24SFF bays when system inlet temperature is higher than 25°C.

HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel Omni-Path Architecture Adapter	829335-B21
HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter	872725-B21

**NOTE:** For additional InfiniBand information: <https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154440>

### HPE I/O Expansion Options

HPE DL580 Gen10 2x 4-port 16 NVMe Slimline Riser Kit	878360-B21
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**NOTE:** HPE DL5x0 Gen10 CPU Mezzanine Board Kit (872222-B21) and requires a 3 or 4 processor configuration to support all 16 NVMe drives.

**NOTE:** Must be selected if more than 8 NVMe drives are selected. It supports upto 16 NVMe drives.

**NOTE:** Does not contain any additional PCIe slots.

HPE DL580 Gen10 6-slot 4 x8/2 x16 2-port 4 NVMe Slimline Primary Riser Kit	872336-B21
HPE DL580 Gen10 7-slot 4 x8/3 x16 Primary Riser Kit	878214-B21
HPE DL580 Gen10 8-slot 6 x8/2 x16 2-port 4 NVMe Slimline Secondary Riser Kit	872338-B21

**NOTE:** Secondary riser kit includes the tertiary riser kit.

## Core Options

HPE DL580 Gen10 9-slot 6 x8/3 x16 Secondary Riser Kit

872340-B21

**NOTE:** Includes the tertiary riser kit.

**NOTE:** A maximum of 2 risers can be selected, 1 primary riser and another secondary riser (which includes tertiary riser kit).

**NOTE:** Risers are optional kits which can be utilized depending on riser and processor selection. Refer to “Expansion Slots” section for additional details on risers.

### HPE Power Supplies

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

830272-B21

**NOTE:** Flex Slot Platinum Plus power supplies support power efficiency of up to 94% and include a C-14 power inlet connector that can support HPE Power Discovery Services (blue connector).

**NOTE:** 1600W Power supplies only support high line voltage (200VAC to 240VAC).

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

865414-B21

**NOTE:** 4x 800W power supplies must be selected.

**NOTE:** Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard C-14 power inlet connector.

**NOTE:** Prior to making a power supply selection it is highly recommended that the HPE Power Advisor is run to determine the right size power supply for your server configuration. The HPE Power Advisor is located at:

<http://www.hpe.com/info/hppoweradvisor>

**NOTE:** All power supplies in a server should match. Mixing Power Supplies is not supported.

**NOTE:** Option kits contain the specified power supply and a PDU IEC cable.

**NOTE:** HPE ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). Visit [HPE power cords](#) for a full list of optional HPE power cords.

### HPE Computational Accelerators

Part number	Card	Qty support	Processor support	PCIe speed
Q0V76A	NVIDIA Quadro P6000 GPU Module	4	All	Gen3
Q0V80A	NVIDIA Tesla P40 24GB Module	4	All	Gen3
Q2N68A	NVIDIA Tesla V100 PCIe 16GB Module	4	All	Gen3
Q0E21A	NVIDIA Tesla P100 PCIe 16GB Module	4	All	Gen3
Q9U36A	NVIDIA Tesla V100 PCIe 32GB Module	4	All	Gen3

**NOTE:** Check the power usage via the HPE Power Advisor Tool located at <http://www.hpe.com/info/hppoweradvisor>.

**NOTE:** A maximum of four GPU cards can be supported, two in primary riser expansion slots (2 and 4) and another two in secondary riser expansion slots (9 and 11). A GPU bracket (P00268-B21) kit is needed to install GPUs in slots 4 and 11 and must be ordered along with the GPU cable kits 871828-B21 (for P6000) or 871829-B21 (for P40, P100, V100). Refer Expansion Slots sections for additional details on risers.

**NOTE:** Primary riser expansion slots 2 and 4 are connected to Processor 3. Secondary riser expansion slots 9 and 11 are connected to Processor 4. This mandates a minimum of 3 processors for a 2 GPU configuration and 4 processors for a 4 GPU configuration. Refer to Expansion slots to review processor and slots availability.

**NOTE:** 1 cable kit supports three GPUs and two cable kits must be ordered when supporting four GPUs.

## Core Options

### GPGPU Thermal considerations

Server configurations employing GPGPU Accelerators may require additional thermal considerations due to their operating power and the thermal cooling solution employed (on-card active fan or passive heat sink). Support of GPGPU server configurations with multiple storage devices guaranteeing full GPGPU performance requires the server configured as outlined in the following table restricting inlet air temperatures as follows:

GPGPU information										
Card	P40	P6000	16GB V100	32GB V100	P100	Recommended DL580 Drive bay configuration				
Part number	Q0V80A	Q0V76A	Q2N68A	Q9U36A	Q0E21A					
Qty	4	4	4	4	4					
Processors supported	All	All	All	All	All	8 SFF	8 NVMe	6+2 Premium	UMB	
8SFF	35C	35C	35C	35C	30C	Bay 1				
16SFF	35C	35C	35C	30C	30C	Bay 1 and 4				
24SFF	35C	35C	35C	30C	30C	Bay 1, 4 and 5				
32SFF	35C	35C	30C	30C	25C	Bay 1, 4, 5 and 6				
40SFF	25C	35C	25C	25C	Not supported	Bay 1, 2, 4, 5 and 6				
48SFF	Not supported	Not supported	Not supported	Not supported	Not supported					
1 Premium (6+2)	35C	35C	35C	25C	25C			Bay 2		
1 Premium (6+2) + 8SFF	35C	35C	35C	25C	25C	Bay 1		Bay 2		
1 Premium (6+2) + 16SFF	35C	35C	35C	25C	25C	Bay 1 and 4		Bay 2		
1 Premium (6+2) + 24SFF	25C	35C	25C	25C	Not supported	Bay 1, 4 and 5		Bay 2		
1 Premium (6+2) + 32SFF	Not supported	30C	Not supported	Not supported	Not supported	Bay 1, 4, 5 and 6		Bay 2		
1 Premium (6+2) + 40SFF	Not supported	Not supported	Not supported	Not supported	Not supported					

## Core Options

Card	P40	P6000	16GB V100	32GB V100	P100	Recommended DL580 Drive bay configuration			
2 Premium (6+2)	30C	35C	30C	25C	25C			Bay 2 and 3	
2 Premium (6+2) + 8SFF	25C	35C	25C	25C	Not supported	Bay 1		Bay 2 and 3	
2 Premium (6+2) + 16SFF	25C	35C	25C	25C	Not supported	Bay 1 and 4		Bay 2 and 3	
2 Premium (6+2) + 24SFF	Not supported	30C	Not supported	Not supported	Not supported	Bay 1, 4, and 6		Bay 2 and 3	
<b>GPGPU information</b>									
Card	P40	P6000	16GB V100	32GB V100	P100	Recommended DL580 Drive bay configuration			
2 Premium (6+2) + 32SFF	Not supported	Not supported	Not supported	Not supported	Not supported				
3 Premium (6+2)	25C	35C	25C	25C	Not supported			Bay 1, 2 and 3	
3 Premium (6+2) + 8SFF	25C	35C	25C	25C	Not supported	Bay 4		Bay 1, 2 and 3	
3 Premium (6+2) + 16SFF	Not supported	30C	Not supported	Not supported	Not supported	Bay 4 and 6		Bay 1, 2 and 3	
3 Premium (6+2) + 24SFF	Not supported	Not supported	Not supported	Not supported	Not supported				
8NVMe	35C	35C	35C	25C	25C		Bay 2		
8NVMe + 8SFF	35C	35C	35C	25C	25C	Bay 1	Bay 2		
8NVMe + 16SFF	35C	35C	35C	25C	Not supported	Bay 1 and 4	Bay 2		
8NVMe + 24SFF	25C	35C	25C	25C	Not supported	Bay 1, 4 and 5	Bay 2		
8NVMe + 32SFF	Not supported	25C	Not supported	Not supported	Not supported	Bay 1, 4, 5 and 6	Bay 2		
8NVMe + 40SFF	Not supported	Not supported	Not supported	Not supported	Not supported				
16NVMe	Not supported	Not supported	Not supported	Not supported	Not supported				
16NVMe +8SFF	Not supported	Not supported	Not supported	Not supported	Not supported				
16NVMe +16SFF	Not supported	Not supported	Not supported	Not supported	Not supported				
16NVMe +24SFF	Not supported	Not supported	Not supported	Not supported	Not supported				
16NVMe +32SFF	Not supported	Not supported	Not supported	Not supported	Not supported				

## Core Options

<b>20NVMe</b>	Not supported	Not supported	Not supported	Not supported	Not supported				
<b>20NVMe+8SFF</b>	Not supported	Not supported	Not supported	Not supported	Not supported				
<b>20NVMe+16SFF</b>	Not supported	Not supported	Not supported	Not supported	Not supported				
<b>20NVMe+24SFF</b>	Not supported	Not supported	Not supported	Not supported	Not supported				
<b>GPGPU information</b>									
<b>Card</b>	<b>P40</b>	<b>P6000</b>	<b>16GB V100</b>	<b>32GB V100</b>	<b>P100</b>	<b>Recommended DL580 Drive bay configuration</b>			
<b>Media Bay</b>	35C	35C	35C	35C	30C				Bay 4
<b>Media Bay + 8SFF</b>	35C	35C	35C	35C	30C	Bay 1			Bay 4
<b>Media Bay + 16SFF</b>	35C	35C	35C	30C	30C	Bay 1 and 5			Bay 4
<b>Media Bay + 24SFF</b>	35C	35C	30C	30C	25C	Bay 1, 5 and 6			Bay 4
<b>Media Bay + 32SFF</b>	25C	35C	25C	25C	Not supported	Bay 1, 2, 5 and 6			Bay 4
<b>Media Bay + 40SFF</b>	Not supported	Not supported	Not supported	Not supported	Not supported				



## Core Options

GPGPU information									
Card	P40	P6000	16GB V100	32GB V100	P100	Recommended DL580 Drive bay configuration			
Part number	Q0V80A	Q0V76A	Q2N68A	Q9U36A	Q0E21A				
Qty	2	2	2	2	2				
Processor supported	All	All	All	All	All	8 SFF	8 NVMe	6+2 Premium	UMB
8SFF	35C	35C	35C	35C	30C	Bay 1			
16SFF	35C	35C	35C	30C	30C	Bay 1 and 4			
24SFF	35C	35C	35C	30C	30C	Bay 1, 4 and 5			
32SFF	35C	35C	30C	30C	25C	Bay 1, 4, 5 and 6			
40SFF	25C	35C	25C	25C	Not supported	Bay 1, 2, 4, 5 and 6			
48SFF	Not supported	Not supported	Not supported	Not supported	Not supported				
1 Premium (6+2)	35C	35C	35C	25C	25C			Bay 2	
1 Premium (6+2) + 8SFF	35C	35C	35C	25C	25C	Bay 1		Bay 2	
1 Premium (6+2) + 16SFF	35C	35C	35C	25C	25C	Bay 1 and 4		Bay 2	
1 Premium (6+2) + 24SFF	25C	35C	25C	25C	Not supported	Bay 1, 4 and 5		Bay 2	

## Core Options

GPGPU information									
Card	P40	P6000	16GB V100	32GB V100	P100	Recommended DL580 Drive bay configuration			
<b>1 Premium (6+2) + 32SFF</b>	Not supported	30C	Not supported	Not supported	Not supported	Bay 1, 4, 5 and 6		Bay 2	
<b>1 Premium (6+2) + 40SFF</b>	Not supported	Not supported	Not supported	Not supported	Not supported				
<b>2 Premium (6+2)</b>	30C	35C	30C	25C	25C			Bay 2 and 3	
<b>2 Premium (6+2) + 8SFF</b>	25C	35C	25C	25C	Not supported	Bay 1		Bay 2 and 3	
<b>2 Premium (6+2) + 16SFF</b>	25C	35C	25C	25C	Not supported	Bay 1 and 4		Bay 2 and 3	
<b>2 Premium (6+2) + 24SFF</b>	Not supported	30C	Not supported	Not supported	Not supported	Bay 1, 4, and 6		Bay 2 and 3	
<b>2 Premium (6+2) + 32SFF</b>	Not supported	Not supported	Not supported	Not supported	Not supported				
<b>3 Premium (6+2)</b>	25C	35C	25C	25C	Not supported			Bay 1, 2 and 3	
<b>3 Premium (6+2) + 8SFF</b>	25C	35C	25C	25C	Not supported	Bay 4		Bay 1, 2 and 3	
<b>3 Premium (6+2) + 16SFF</b>	Not supported	30C	Not supported	Not supported	Not supported	Bay 4 and 6		Bay 1, 2 and 3	
<b>3 Premium (6+2) + 24SFF</b>	Not supported	Not supported	Not supported	Not supported	Not supported				
<b>8NVMe</b>	35C	35C	35C	25C	25C		Bay 2		
<b>8NVMe + 8SFF</b>	35C	35C	35C	25C	25C	Bay 1	Bay 2		
<b>8NVMe + 16SFF</b>	35C	35C	35C	25C	Not supported	Bay 1 and 4	Bay 2		
<b>8NVMe + 24SFF</b>	25C	30C	25C	25C	Not supported	Bay 1, 4 and 5	Bay 2		
<b>8NVMe + 32SFF</b>	Not supported	25C	Not supported	Not supported	Not supported	Bay 1, 4, 5 and 6	Bay 2		
<b>8NVMe + 40SFF</b>	Not supported	Not supported	Not supported	Not supported	Not supported				
<b>16NVMe</b>	30C	35C	30C	Not supported	25C		Bay 2 and 3		
<b>16NVMe +8SFF</b>	25C	35C	25C	Not supported	Not supported	Bay 1	Bay 2 and 3		
<b>16NVMe +16SFF</b>	25C	25C	25C	Not supported	Not supported	Bay 1 and 4	Bay 2 and 3		

## Core Options

GPGPU information									
Card	P40	P6000	16GB V100	32GB V100	P100	Recommended DL580 Drive bay configuration			
<b>16NVMe +24SFF</b>	Not supported	25C	Not supported	Not supported	Not supported	Bay 1, 4 and 6	Bay 2 and 3		
<b>16NVMe +32SFF</b>	Not supported	Not supported	Not supported	Not supported	Not supported				
<b>20NVMe</b>	25C	30C	25C	Not supported	Not supported		Bay 1, 2 and 3		
<b>20NVMe+8SFF</b>	25C	30C	25C	Not supported	Not supported	Bay 4	Bay 1, 2 and 3		
<b>20NVMe+16SFF</b>	Not supported	25C	Not supported	Not supported	Not supported	Bay 4 and 6	Bay 1, 2 and 3		
<b>20NVMe+24SFF</b>	Not supported	Not supported	Not supported	Not supported	Not supported				
<b>Media Bay</b>	35C	35C	35C	35C	30C				Bay 4
<b>Media Bay + 8SFF</b>	35C	35C	35C	35C	30C	Bay 1			Bay 4
<b>Media Bay + 16SFF</b>	35C	35C	35C	30C	30C	Bay 1 and 5			Bay 4
<b>Media Bay + 24SFF</b>	35C	35C	30C	30C	25C	Bay 1, 5 and 6			Bay 4
<b>Media Bay + 32SFF</b>	25C	35C	25C	25C	Not supported	Bay 1, 2, 5 and 6			Bay 4
<b>Media Bay + 40SFF</b>	Not supported	Not supported	Not supported	Not supported	Not supported				

## 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.

### iLO Advanced

HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features	E6U59ABE
HPE iLO Advanced Electronic License with 3yr Support on iLO Licensed Features	E6U64ABE
HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A
HPE iLO Advanced Flexible Quantity License with 3yr Support on iLO Licensed Features	BD506A
HPE iLO Advanced AKA Tracking License with 3yr Support on iLO Licensed Features	BD507A
HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	512485-B21

### HPE Converged Infrastructure Management Software

HPE OneView Physical Media Kit LTU	E5Y37A
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#### 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 for ProLiant DL Server including 3yr 24x7 Support FIO Bundle Physical 1-server LTU	E5Y43A

#### 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

**NOTE:** Full licenses of HPE OneView Advanced also provide the right-to-use HPE Insight Control without additional charge.

**NOTE:** Server provisioning (via 'HPE Insight Control server provisioning') is licensed as part of HPE OneView Advanced and provides multi-server OS and driver provisioning.

**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:** Please see the [HPE OneView QuickSpecs](#) for technical specifications and additional information.

### HPE PCIe Workload Accelerator Options

#### HPE Mixed Use PCIe Workload Accelerator

HPE 1.6TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	P10264-B21
HPE 1.6TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	877825-B21
HPE 3.2TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	P10266-B21
HPE 3.2TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	877827-B21
HPE 6.4TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	P10268-B21
HPE 6.4TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	877829-B21

#### HPE Write Intensive PCIe Workload Accelerator

HPE 750GB PCIe x4 Lanes Write Intensive HHHL 3yr Wty Digitally Signed Firmware Card	878038-B21
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**NOTE:** Please see the [HPE PCIe Workload Accelerators for ProLiant Servers QuickSpecs](#) for Technical Specifications and additional information.

## Additional Options

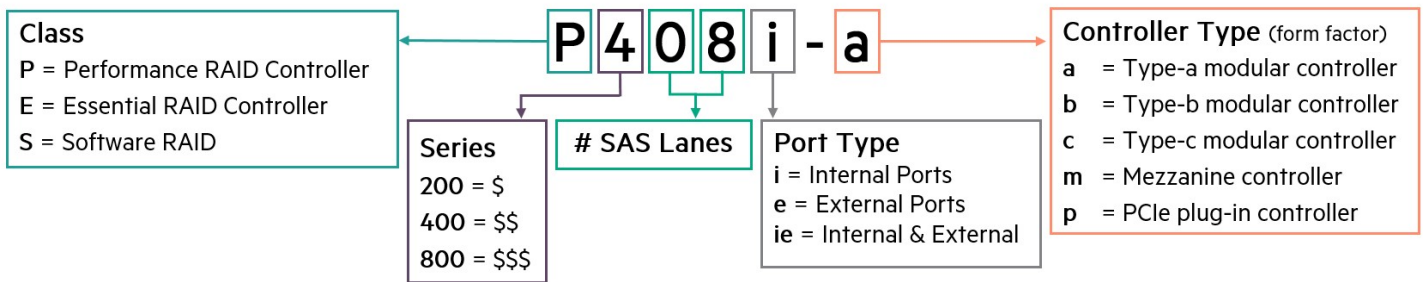
### HPE Security

HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21
HPE Gen10 Chassis Intrusion Detection Kit	867824-B21
HPE Bezel Lock Kit	875519-B21
OEM Gen10 4U Bezel Kit	869873-B21
HPE Gen10 4U Bezel Kit	869872-B21

**NOTE:** HPE Trusted Platform Module 2.0 Option (864279-B21) works with Gen10 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen9 servers or earlier generation variants. HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

### HPE Smart Array Controllers

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



### Performance RAID Controllers

**NOTE:** HPE 96W Smart Storage Battery (up to 20 Devices) with 145mm Cable Kit (P01366-B21), which supports multiple devices and is sold separately.

**NOTE:** Only standup controllers are supported and there is no support for AROC controllers.

HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller	830824-B21
HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller	804405-B21
HPE Smart Array P824i-p MR Gen10 (24 Internal Lanes/4GB Cache/CacheCade) 12G SAS PCIe Controller	870658-B21

### Essential RAID Controllers

HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804398-B21
HPE Smart Array E208i-p SR Gen10 (8 Internal Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804394-B21

## Additional Options

### Optional Software

HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU	Q2F26AAE
HPE Smart Array SR SmartCache (Single Key/Single Server) LTU	D7S26A
HPE Smart Array SR SmartCache (Single Key/Multiple Servers) LTU	D7S27A
HPE Smart Array SR SmartCache (Single Key/Multiple Servers) E-LTU	D7S27AAE

**NOTE:** SmartCache is offered on HPE Smart Array performance RAID controllers.

### Optional Upgrades

HPE 96W Smart Storage Battery (up to 20 Devices) with 145mm Cable Kit	P01366-B21
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**NOTE:** Provides backup power for multiple HPE Smart Array controllers or other devices. Is required with performance RAID controllers.

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### HPE Tape Backup

**NOTE:** For the complete range of tape drives, autoloaders, libraries and media see: <http://www.hpe.com/storage/storeever>. For hardware and software compatibility of Hewlett Packard Enterprise tape backup products <http://www.hpe.com/storage/BURAccompatibility>.

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### HPE Storage Options

#### Emulex Fibre Channel HBAs

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 StoreFabric CN1200R 10GBASE-T Converged Network Adapter	Q0F26A
HPE StoreFabric CN1300R 10/25Gb Dual Port Converged Network Adapter	Q0F09A

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### HPE Racks

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

**NOTE:** Please see the [HPE Enterprise Series Racks QuickSpecs](#) 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.

## Additional Options

### HPE Power Distribution Units (PDUs)

**NOTE:** Please see the [HPE Basic Power Distribution Units \(PDU\) QuickSpecs](#) 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 [HPE Intelligent Power Distribution Unit \(PDU\) QuickSpecs](#) for information on these products and their specifications.

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

### HPE Uninterruptible Power Systems (UPS)

**NOTE:** To learn more, please visit the [HPE Uninterruptible Power Systems \(UPS\) web page](#)

**NOTE:** Please see the [HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs](#) for information on these products and their specifications.

**NOTE:** Please see the [HPE Line Interactive Single Phase UPS QuickSpecs](#) for information on these products and their specifications.

### HPE Rack Options

**NOTE:** Please see the [HPE KVM Switches web page](#) for information on these products and their specifications.

#### Rail Kits

HPE DL580 Gen10 4U Rail Kit with Cable Management Arm	872151-B21
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### HPE USB and SD Options

#### HPE Enterprise Mainstream Flash Media Kits for Memory Cards

HPE 32GB microSD Flash Memory Card	700139-B21
HPE 8GB microSD Flash Memory Card	726116-B21
HPE 8GB microSD Flash USB Drive	737953-B21
HPE 8GB Dual microSD Flash USB Drive	741279-B21

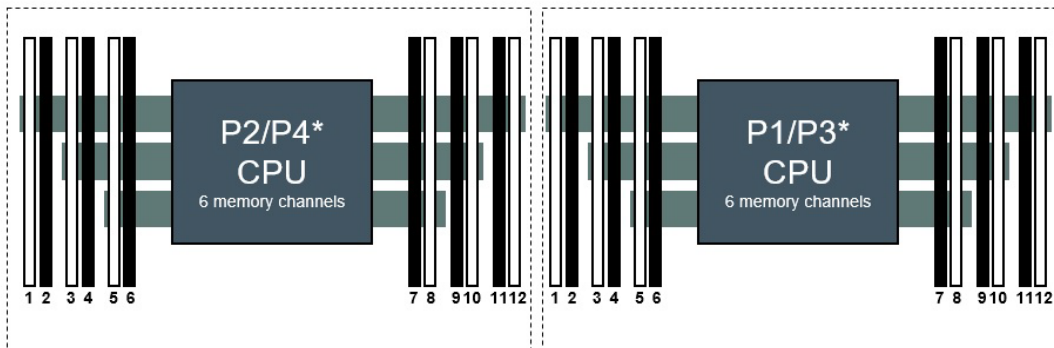
**NOTE:** Please see the [HPE Flash Media Kits QuickSpecs](#) for additional information.

### HPE Support Services

HPE 3 Year Proactive Care 24x7 DL580 Gen10 Service	H9FX1E
HPE 3 Year Proactive Care 24x7 with DMR DL580 Gen10 Service	H9FX2E
HPE 3 Year Proactive Care Call-To-Repair DL580 Gen10 Service	H9FY0E
HPE 3 Year Proactive Care Call-To-Repair 24x7 with DMR DL580 Gen10 Service	H9FY1E
HPE 3 Year Proactive Care 24x7 with CDMR DL580 Gen10 Service	H9FX3E
HPE 3 Year Proactive Care Call-To-Repair with CDMR DL580 Gen10 Service	H9FY2E

**NOTE:** For a full listing of support services available for this server, please visit <https://ssc.hpe.com/>

Memory



HPE DL360/DL380/DL560 Gen10 Servers (2 slots per channel)

1 DIMM							8				
2 DIMMs							8	10			
3 DIMMs							8	10	12		
4 DIMMs			3		5		8	10			
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		

HPE ProLiant Gen10 12 slot per CPU DIMM Population Order \*Unbalanced, not recommended

Memory Population guidelines

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](#).



## Memory

### HPE 16GB NVDIMM for Gen10 Servers - Population Rules and Guidelines:

Maximum of (12) 16GB NVDIMMs for 2 socket servers and (24) 16GB NVDIMMs for 4 socket servers.

If NVDIMM-N interleaving is disabled, then any number of NVDIMM-Ns may be used, and the NVDIMM-Ns should be populated in this order:

Choose a CPU with open slots (based on NUMA proximity), if any.

Pick a channel with two open slots, if any. This keeps the NVDIMM-N from sharing bandwidth with regular memory. Populate the white slot.

Pick a channel with an open slot that already has an NVDIMM-N rather than a regular DIMM, if any. This slot must be a black slot. Keep NVDIMM-N traffic away from regular DIMM traffic.

If NVDIMM-N interleaving is enabled, then the same interleaving balance restrictions that applied to regular DIMMs also apply to the NVDIMM-Ns using the remaining open slots. When assigning the NVDIMM-Ns to those open channels per the regular DIMM placement rules:

It's important to keep the same number of DIMMs on the same memory controller.

Choose the number of NVDIMM-Ns per CPU based on desired block device size and NUMA locality.

Pick a memory controller with a channel with two open slots, if any.

Pick a channel with two open slots, if any. This keeps the NVDIMM-N from sharing bandwidth with regular memory. Populate the white slot.

Please visit the [HPE Server Memory Options Population Rules](#) for detailed configuration rules and best practices.

### Memory Speed Table for HPE ProLiant DL580 Gen 10

For the HPE Server Memory speed table, please visit: <https://www.hpe.com/docs/memory-speed-table>

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

Pre Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
5120	64 GB (4 x16 GB)	384 GB (24 x16 GB)	6144GB (48 x128 GB)
6148	128 GB (8 x16 GB)	384 GB (48 x16 GB)	6144GB (48 x128 GB)
8164	256 GB (8 x32 GB)	1536 GB (48 x32 GB)	6144GB (48 x128 GB)
5220	128 GB (4 x32 GB)	768 GB (24 x32 GB)	6144GB (48 x128 GB)
6230	256 GB (8 x32 GB)	1536 GB (48 x32 GB)	6144GB (48 x128 GB)
8260	512 GB (16 x32 GB)	1536 GB (48 x32 GB)	6144GB (48 x128 GB)

### DDR4 memory options part number decoder

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

- 4 GB = 4,096 MB
- 8 GB = 8,192 MB
- 16 GB = 16,384 MB
- 32 GB = 32,768 MB
- 64 GB = 65,536 MB
- 128 GB = 131,072 MB

For more information on memory, please see the Memory QuickSpecs: [HPE DDR4 SmartMemory](#)

Storage



40 SFF hot-plug drive model and 2 NVMe SSDs with Universal Media Bay

## Technical Specifications

### System Unit

<b>Dimensions</b> (H x W x D) (with bezel)	17.48cm x 44.55cm x 75.18cm 6.88 x 17.54 x 29.60 in	
<b>Weight</b> (approximate)	51.71 kg 114 lb	Maximum: (all hard drives, power supplies, DIMMs and processors installed)
	28.12 kg 62 lb	Minimum: (one processor, one standard heatsink, one air baffle, one hard drive, two power supply, one DIMM, one NIC one rail kit with CMA and one primary riser installed)
<b>Input Requirements</b> (per power supply)	Rated Input Voltage	100 - 127 VAC, 200 - 240 VAC, 240VDC for China Only (800W Platinum PS only) 200 - 240 VAC, 240 VDC for China only (1600W PS only)
	Rated Input Current	9.4 A (100 VAC), 4.5 A (200 VAC), 3.8 A at 240VDC for China only (800W Platinum PS only) 8.7 A at 200 VAC, 7.2 A at 240 VAC - (1600W PS only)
	Rated Input Frequency	50 to 60 Hz (Not applicable for VDC ranges)
	Maximum Rated Input Power	940 W (100 VAC), 900 W (200VAC), 912 W at 240 VDC for China only - (800W Platinum PS only) 1734 W at 200 VAC 1720 W at 240 VAC - (1600W PS only)
<b>BTU Rating</b>	Maximum	3207 BTU/hr at 100 VAC, 3071 BTU/hr at 200 VAC, 3112 BTU/hr at 240 for China only - (800W Platinum PS only) 5918 BTU/hr at 200 VAC, 5884 BTU/hr at 240 VAC - (1600W PS only)
<b>Power Supply Output</b> (per power supply)	Rated Steady-State Power	800 W at 100 VAC to 127 VAC input, 800 W at 200 VAC to 240 VAC input, 800 W at 240 VDC input for China only - (800W Platinum PS only) 1600 W at 200 VAC to 240 VAC input, 1600 W at 240 VDC input - (1600W PS only)
	Maximum Peak Power	800 W at 100 VAC to 127 VAC input, 800 W at 200 VAC to 240 VAC input, 800 W at 240 VDC input for China only - (800W Platinum PS only) 2200 W for 1ms (turbo mode) at 200 VAC to 240 VAC input - (1600W PS only)

**NOTE:** To review typical system power ratings use the HPE Power Advisor which is available online located at url:

<http://www.hpe.com/info/hppoweradvisor>

## Technical Specifications

<b>System Inlet Temperature</b>	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).
	Extended Ambient Operating Support	For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°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: <a href="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a>  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.
<b>Relative Humidity</b>  (non-condensing)	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Operating	8% to 90% relative humidity (Rh), 28°C (82.4°F) 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.
<b>Altitude</b>	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).
<b>Acoustic Noise</b>	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.	

<b>Product Configuration</b>	<b>Entry</b>	<b>Base</b>	<b>Performance</b>
Idle - $L_{WAd}$	5.4 B	5.4 B	5.3 B
Idle - $L_{pAm}$	37 dBA	36 dBA	36 dBA
Operating - $L_{WAd}$	5.8 B	6.1 B	6.1 B
Operating - $L_{pAm}$	39 dBA	43 dBA	44 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.

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## Technical Specifications

### Regulatory Information

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>

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### HPE Smart Array

Please refer to the appropriate QuickSpecs listed below for technical specifications on controllers.

For latest information on **HPE Smart Array Gen10 Controllers for HPE ProLiant DL, ML and Apollo Servers** please refer to their QuickSpecs. (E208i-a,E208i-p,E208e-p,P408i-a,P408i-p,P408e-p,P816i-a)

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### Environment-friendly Products and Approach End-of-life Management and Recycling

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

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## Summary of Changes

Date	Version History	Action	Description of Change
02-Apr	Version 16	Changed	Overview, Standard Features,Optional Features, Configuration Information, Pre-configured Models,Core Options and Memory sections were updated.
04-Feb-2019	Version 15	Changed	Optional Features and Core Options sections were updated. Obsolete SKUs were removed.
17-Dec-2018	Version 14	Changed	Processor 8158 was listed in Standard Features Section
03-Dec-2018	Version 13	Changed	Core Options,Standard Features,Optional Features, Configuratio Information Additional Options were Updated. SKUs descriptions were updated, Obsolete SKUs were removed from the QuickSpecs.
15-Oct-2018	Version 12	Changed	Core Options, Additional Options were Updated. SKUs descriptions were updated, Obsolete SKUs were removed from the QuickSpecs.
01-Oct-2018	Version 11	Changed	Overview, Pre Configured models. Configuration Information, Core Options and Additional Options sections were updated. SKUs were added. SKUs descriptions were updated,
06-Aug-2018	Version 10	Changed	Updated the list of supported operating systems. Configuration Information – Factory Integrated Models, Core Options, and Additional Options were revised.
02-Jul-2018	Version 9	Added	Added drive population guideline table with GPUs.
04-Jun-2018	Version 8	Added	Added HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features. New HPE Smart Array P824i-p MR Gen10 (24 Internal Lanes/4GB Cache/CacheCade) 12G SAS PCIe Controller was added. New 375GB NVMe WI drive and 750GB PCIE accelerator were added.
		Changed	Configuration Information – Factory Integrated Models, Core Options, Additional Options, Service and Support, and Memory were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
02-Apr-2018	Version 7	Changed	Standard Features, Configuration Information – Factory Integrated Models and Core Options were revised. SKUs descriptions were updated.
05-Mar-2018	Version 6	Changed	Front view image, Expansion Slots, Internal Storage Devices, Standard Features, and Storage section were revised.
05-Feb-2018	Version 5	Added	Added new SSD offering.
		Changed	GPU slots and Maximum Internal Storage were revised. Core Options and Additional Options were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
18-Dec-2017	Version 4	Changed	Configuration Information – Factory Integrated Models and Core Options were revised.
04-Dec-2017	Version 3	Added	Added support for new core boosting Intel® Xeon® Processors 6143 and 8165. Added support for up to 24 16GB NVDIMM.
		Changed	Processors, Memory, and Acoustic Noise were revised.
16-Oct-2017	Version 2	Added	Added note – 1600W Power supplies only support high line voltage (200VAC to 240VAC) – to power supplies. Added HPE Support Services. Added acoustic noise to the Technical Specifications section.
25-Sep-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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