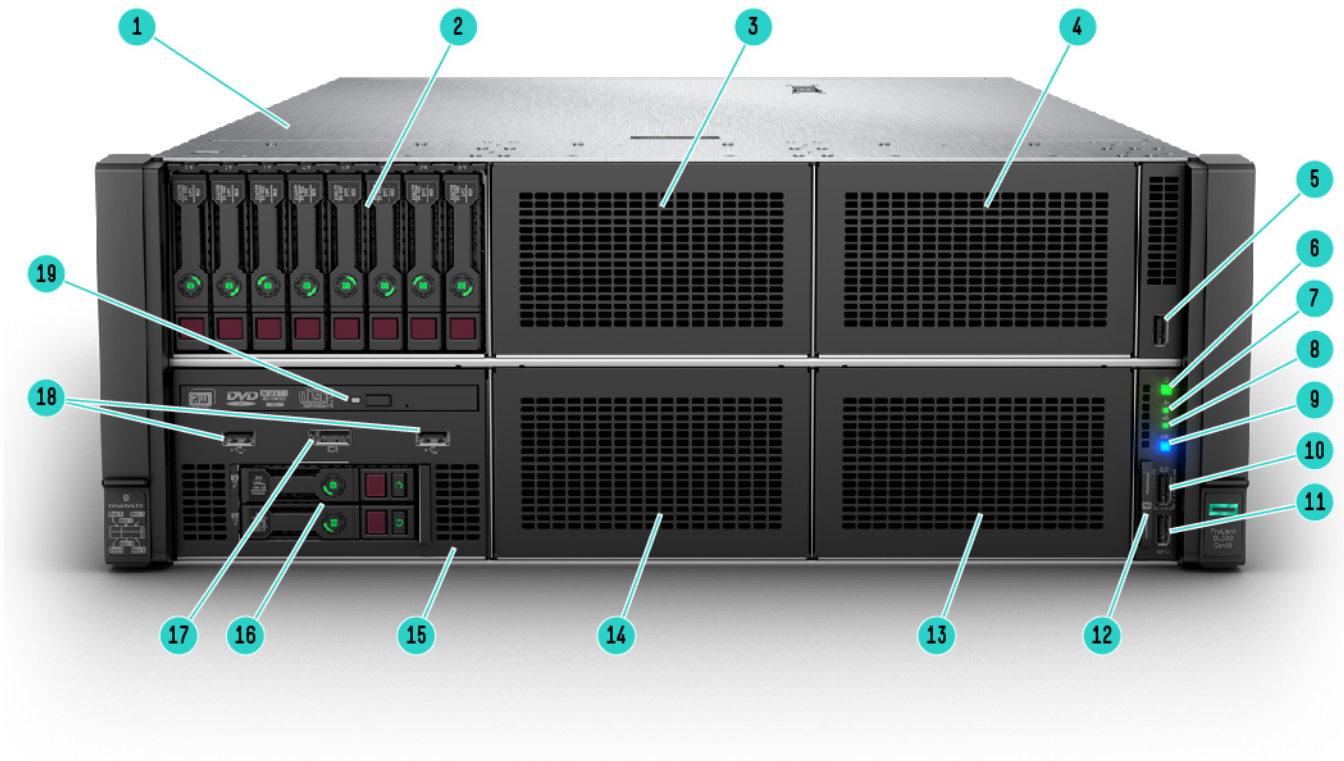
Overview

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 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.

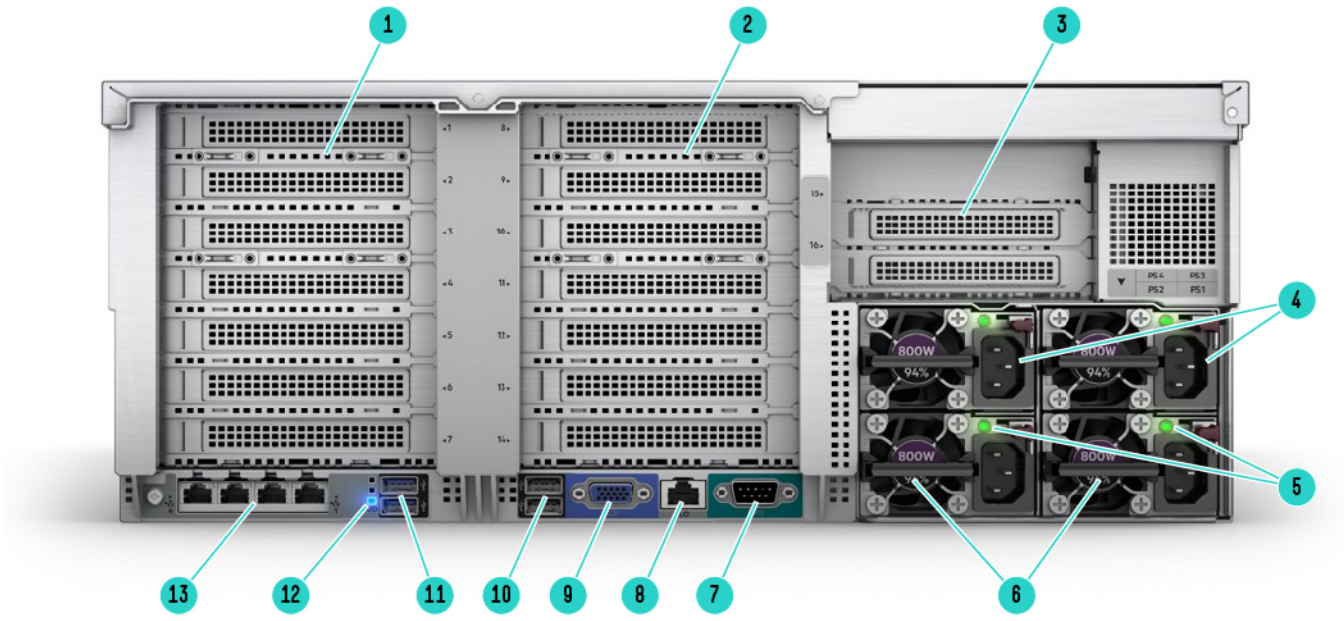


Front View – DL580 Gen10

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

Overview

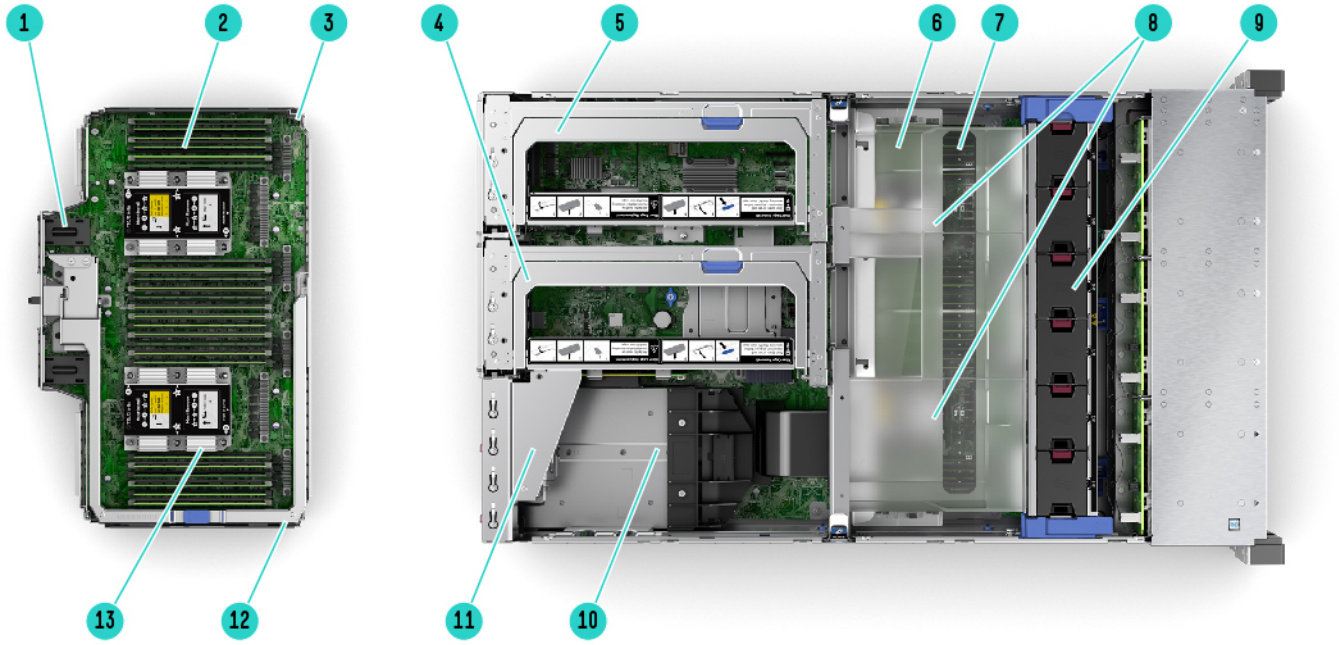
17. Optional front display port (via Universal Media Bay)
18. Optional USB 2.0 (via Universal Media Bay)
19. Optical Drive (Optional)



Rear View – DL580 Gen10

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

Overview



Internal View: DL580 Gen10 with upper CPU mezzanine tray

1. Left connector used for DL580 4-port NVMe Mezzanine card (Daughter card)
2. DDR4 DIMM slots. Shown fully populated in 24 slots (12 per processor)
3. Upper CPU Mezzanine Board Kit
4. Optional secondary PCIe riser (includes tertiary riser)
5. Primary PCIe riser
6. Air baffle
7. DDR4 DIMM slots on CPU board kit. Shown fully populated in 24 slots (12 per processor) under the air baffle
8. 2 Processors (under the air baffle)
9. Fan cage shown with 12 standard Hot-plug fans
10. (Under) Max. 4 Hot Plug redundant HPE Flexible Slot Power supplies
11. Optional Tertiary riser (included with secondary riser)
12. Handle for removing upper CPU Mezzanine Board Kit
13. 2 Processors, heatsink showing on upper CPU mezzanine board kit

What's New

- 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
- New 375GB NVMe WI drive
- New 750GB PCIE accelerator

Platform Information

Platform Information

Form Factor	4U Rack Form Factor Entry, Base and Performance pre-configured models ship with Gen10 Rail Kits and Cable Management Assembly
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.
System Fans	12 Hot Plug Fans (with N+1 redundancy) **NOTE:** 12 hot plug fans are shipped as standard.

Standard Features

Processors

One, two, three or four of the following depending on model.

NOTE: For more information regarding Intel Xeon processors, please see thefollowing **http://www.intel.com/xeon.**

Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR4 MT/s	Memory per socket
Platinum Processors							
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 8176M Processor	2.1 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2666 MT/s	1.5 TB
Platinum 8176 Processor	2.1 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768 GB
Platinum 8170M Processor	2.1 GHz	26	35.75 MB	165W	3 @ 10.4 GT/s	2666 MT/s	1.5 TB
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							
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 6142M Processor	2.6 GHz	16	22.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	1.5 TB
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

Standard Features

Gold 5115 Processor	2.4 GHz	10	13.75 MB	85W	2 @ 10.4 GT/s	2400 MT/s	768 GB

NOTE: Platinum 8165 processor and Gold 6143 processors support core boosting technology
NOTE: Platinum - 2 and 4 socket capable, 2S - 2UPI, 4S - 3UPI, 8S - 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 - 2 and 4 socket capable, 2S - 2UPI, 4S - 3UPI @ 10.4 GT/s, 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 8156, 6128, 5122 as noted below. All other will processors will ship with the Standard heat sink.
NOTE: 61xx and 81xx 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. 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
Maximum capacity (LRDIMM)	6 TB	48 x 128 GB LRDIMM @ 2666 MT/s
Maximum capacity (RDIMM)	1.5 TB	48 x 32 GB RDIMM @ 2666 MT/s
Maximum capacity (NVDIMM)	384 GB	24 x 16 GB NVDIMM @ 2666 MT/s

NOTE: Mixing of RDIMM and LRDIMM memory is not supported.
NOTE: Memory speed depends on the processor selected.
NOTE: Intel memory processors (with suffix M) are needed for supporting 1.5TB memory per processor.
NOTE: Maximum of 6 NVDIMMs are supported per processor.

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

Standard Features

	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

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

Standard Features

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

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) and requires three or four processor configuration.
NOTE: Each NVMe port (slot) supports 2 NVMe drives.
NOTE: A maximum of 1 primary, 1 secondary and 1 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 10 Gb 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).

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

Standard Features

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

Recommended NVMe drive configurations

The 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 Drive and PCIe slot counts.

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		

Standard Features

NOTE: 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		
NOTE: Partial configuration. Drive bays 7-8 are not functional. Add Processor 4 to enable all 8 drive bays.					
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

Standard Features

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		
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 combimnation 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 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 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 oxy 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	96 TB	48 x 2 TB
Hot Plug SFF SATA SSD	184 TB	48 x 3.84 TB
Hot Plug SFF SAS SSD	734 TB	48 x 15.3 TB
SFF NVMe SSD	80 TB	20 x 4 TB

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.

Standard Features

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**

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)

NOTE: 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).

Operating Systems and Virtualization Software Support for ProLiant Servers

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

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**.

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

Standard Features

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

Graphics

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

HPE Server UEFI/Legacy ROM

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

NOTE: The UEFI System Utilities tool is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit **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.

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**.
UEFI	Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at **http://www.hpe.com/servers/uefi**.
Intelligent Provisioning	Hassle free server and OS provisioning for one or more servers with Intelligent Provisioning. Learn more at **http://www.hpe.com/servers/intelligentprovisioning**.
iLO RESTful API	iLO RESTful API is Redfish API conformance and offers simplified server management automation such as configuration and maintenance tasks based on modern industry standards. Learn more at **http://www.hpe.com/info/restfulapi**.

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**.
Active Health System Viewer	Use the Active Health System Viewer, a web-based portal, to easily read AHS logs and speed problem resolution with HPE self-repair recommendations, to learn more visit: **http://www.hpe.com/servers/ahsv**.
Smart Update	Keep your servers up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP). Learn more at **http://www.hpe.com/info/smartupdate**.
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**.
HPE iLO Mobile Application	Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: **http://www.hpe.com/info/ilo/mobileapp**.
RESTful Interface Tool	RESTful Interface tool (iLOREST) is a single scripting tool to provision using iLO RESTful API to discover and deploy servers at scale. Learn more at **http://www.hpe.com/info/resttool**.
Scripting Tools	Provision one to many servers using your own scripts to discover and deploy with Scripting Tool (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at **http://www.hpe.com/servers/stk** or **http://www.hpe.com/servers/powershell**.
HPE OneView Standard	HPE OneView Standard can be used for inventory, health monitoring, alerting, and reporting without additional fees. It can monitor multiple HPE server generations. The user interface is similar to the HPE OneView Advanced version, but the software-defined functionality is not available. Learn more at **http://www.hpe.com/info/oneview**.
HPE Systems Insight Manager (HPE SIM)	Ideal for environments already using HPE SIM, it allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers. Also provides you with basic support for non-HPE servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless firmware updates. Learn more at **http://www.hpe.com/info/hpesim**.

Security

UEFI Secure Boot and Secure Start support
Immutable Silicon Root of Trust
FIPS 140-2 validation (iLO 5 certification in progress)
Common Criteria certification (iLO 5 certification in progress)
Configurable for PCI DSS compliance
Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
Support for Commercial National Security Algorithms (CNSA)
iLO Security Modes including a New iLO Advance Premium Security Edition License

Standard Features

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.

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.

HPE Silicon Root of Trust

HPE's Silcon 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 HP 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, HPE 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. HPE provides this function through a new HPE license called, HPE iLO Advanced Premium Security Edition.

Standard Features

Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of HPE Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Pointnext operational services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.
Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at: **http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/**.

Optional Features

Server Management

HPE iLO Advanced	HPE iLO Advanced licenses offer smart remote functionality without compromise, for all HPE ProLiant servers. The license includes the full integrated remote console, virtual keyboard, video, and mouse (KVM), multi-user collaboration, console record and replay, and GUI-based and scripted virtual media and virtual folders. You can also activate the enhanced security and power management functionality. Learn more about HPE iLO Advanced at **http://www.hpe.com/servers/iloadvanced**.
HPE iLO Advanced Premium Security Edition	HPE iLO Advanced Premium Security Edition for iLO 5 includes iLO Advanced License plus high-end security modes, unique security capabilities, like Automatic FW recovery; Runtime FW verification, and Secure erase. Learn more about HPE iLO Advanced Premium Security Edition at: **http://www.hpe.com/servers/ilopremium**.
HPE OneView Advanced	HPE OneView brings a new level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It provides full-featured licenses which can be purchased for managing Gen8, Gen9 and Gen10 servers. To learn more visit **http://www.hpe.com/info/oneview**.
HPE Insight Cluster Management Utility (CMU)	HPE Insight Cluster Management Utility is a HyperScale management framework that includes software for the centralized provisioning, management and monitoring of nodes and infrastructure. Learn more at **http://www.hpe.com/info/cmu**.

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 P100 PCIe 16GB Computational Accelerator

Rack and Power Infrastructure

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

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

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

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

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

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

Optional Features

One Config Simple (SCE)

SCE is a guided self-service tool to help sales and non-technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help, or use in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in SCE, please contact Hewlett Packard Enterprise Customer Business Center or an Authorized Partner for assistance.
https://h22174.www2.hpe.com/SimplifiedConfig/Welcome#

Service and Support

HPE Pointnext - Service and Support

Protect your business beyond warranty with HPE 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. HPE is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make the complex simple.

Connect your devices:

Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Achieve up to 77%1 reduction in down time, near 100%2 diagnostic accuracy and a single consolidated view of your environment. By connecting, you will receive 24x7monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to HPE support.

1- IDC 2 – HP CSC reports 2014 – 2015

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

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 - HPE's 24x7, six hour hardware call-to-repair. HPE 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

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

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 an HPE 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.

Service and Support

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.

Parts and Materials

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

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product 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 HPE due to malfunction.

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

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).

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**

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.

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.

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.

Service and Support

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 MSAxxxx3PAR suite, XP, rackable tape libraries and configurable network switches.

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.

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

HPE Support Center

The HPE Support Center is a personalized online support portal with access to information, tools and experts to support HPE business products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers.

Learn more **http://www.hpe.com/support/hpesc.**

HPE's Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.
HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE warranty, HPE Support Service or HPE contractual support agreement.

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

For more information: **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.

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**.

Pre-configured Models

	Entry Model	Base Model	Performance Model
SKU Number	869848-B21	869847-B21	869845-B21
Model Name	HPE ProLiant DL580 Gen10 5120 2.2GHz 14-core 2P 64GB-R P408i-p 8SFF 4x800W PS Entry Server	HPE ProLiant DL580 Gen10 6148 2.4GHz 20-core 4P 128GB-R P408i-p 8SFF 4x1600W PS Base Server	HPE ProLiant DL580 Gen10 8164 2.0GHz 26-core 4P 256GB-R P408i-p 8SFF 4x1600W PS Perf Server
Processor	Intel® Xeon® 5120	Intel® Xeon® 6148	Intel® Xeon® 8164
Number of Processors	2	4	4
Memory	64 GB (4x 16GB Registered DIMMs, 2666 MT/s) **NOTE:** 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).	128 GB (8x 16GB Registered DIMMs, 2666 MT/s)	256 GB (8x 32GB Registered DIMMs, 2666 MT/s)
Network Controller	1 Gb 4-port 331FLR Adapter	10GbE FlexFabric 2-port 535FLR-T Adapter	10/25GbE FlexFabric 2-port 640FLR-T Adapter
Storage Controller	HPE Smart Array P408i-p controller **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).		
Power Supply	4x 800W	4x 1600W **NOTE:** 1600W Power supplies only support high line voltage (200VAC to 240VAC).	4x 1600W
PCI-Express Slots	3 PCIe 3.0 slots available **NOTE:** 16 PCIe 3.0 slots available with the secondary riser and 4 processors installed.	16 PCIe 3.0 slots available	16 PCIe 3.0 slots available
Hard Drive	None ship standard		
Internal Storage	8 SFF Drive Bays **NOTE:** Can be expanded up to a max. of 48 SFF drives, with optional HPE DL580 Gen10 8SFF HDD Bay Kit (878366-B21). **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. **NOTE:** Alternatively, optional HPE DL560 Gen10 Universal Media Bay Kit (872267-B21) can be added in Box 4.		
Optical Drive	Optional via Universal Media Bay		
Fans	12 hot plug fans, n+1 redundant		
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (require licenses)	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced, HPE iLO Advanced Premium Security Edition (requires license) and HPE OneView Advanced	
Form Factor	Rack (4U), HPE DL580 Gen10 4U Rail Kit with CMA		

Pre-configured Models

Warranty	3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response

Country Code Key	xx1 = B21	Worldwide
	NOTE: The -B21 WW SKU is to be ordered in all countries other than Japan or PRC.	
	xx1 = 291	Japan
	xx1 = AA1	PRC

Configuration Information - Factory Integrated Models

Recommended Options
Offering the best combination of performance, value and availability, Recommended Options have been selected by HPE experts to provide the right technology for a range of workloads and market segments. Fully integrated into the HPE management and security experience, Recommended Options provide the best fit with timely availability.

Extended Options
Extended Options provide an extended catalog of products tailored for customers in specific markets or with specific workloads, requiring the utmost in performance or value. Fully integrated into the HPE management and security experience, Extended Options represent great value and performance but typically have a longer lead-time.

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)

Server description	HPE ProLiant DL580 Gen10 8SFF Configure-to-order Server
SKU Number	869854-B21
TAA SKU	878213-B21
Chipset	Intel® C621 Chipset
Processor	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)
DIMM Slots	24 DIMM slots for RDIMM, LRDIMM DDR4 Memory; 48 DIMM configuration would require optional HPEProLiant HPE DL5x0 Gen10 CPU Mezzanine Board Kit (872222-B21) and 4 processors
Network Controller	None. FlexibleLOM slot (various options can be chosen for networking; NIC cards also available via expansion slots)
Storage Controller	HPE Smart Array S100i **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).
PCIe	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)
Drive Cage - included	8 SFF in Box 1, no drives
Fans	12 hot plug fans, (n+1) redundant
Management	HPE iLO Standard with Intelligent Provisioning and (Standard); HPE OneView Standard (requires download) and HPE iLO Advanced (require additional licenses), HPE iLO Advanced Premium Security Edition (require additional licenses), HPE OneView Advanced (require additional licenses)
microSD Slots	1 microSD card slot (internal)
TPM Connector	1 Trusted Platform Module (TPM) connector
UEFI	BIOS Legacy mode (field configurable) or Unified Extensible Firmware Interface (UEFI) mode (default)
USB	7 USB ports (2 USB 2.0 and 5 USB 3.0), Optional 2 front available via universal media kit upgrade
Video Ports	2 video ports (1 front optional via the Universal Media Kit upgrade option, 1 rear)
Rails	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

Configuration Information - Factory Integrated Models

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

Step 2a: Choose Processor Options

Processor Option Kits	Required Processor
HPE DL580 Gen10 Intel® Xeon-Platinum 8176M (2.1GHz/28-core/165W) FIO Processor Kit	878157-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Platinum 8170M (2.1GHz/26-core/165W) FIO Processor Kit	878155-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6142M (2.6GHz/16-core/150W) FIO Processor Kit	878140-L21
NOTE: Ships with Performance Heatsink.	
Processor Option Kits - Recommended	
HPE DL580 Gen10 Intel® Xeon-Platinum 8180 (2.5GHz/28-core/205W) FIO Processor Kit (Recommended)	878158-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Platinum 8170 (2.1GHz/26-core/165W) FIO Processor Kit (Recommended)	878154-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Platinum 8160 (2.1GHz/24-core/145W) FIO Processor Kit (Recommended)	878150-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Platinum 8158 (3.0GHz/12-core/105W) FIO Processor Kit (Recommended)	878149-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Platinum 8156 (3.6GHz/4-core/105W) FIO Processor Kit (Recommended)	878148-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6154 (3.0GHz/18-core/200W) FIO Processor Kit (Recommended)	878146-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6152 (2.1GHz/22-core/135W) FIO Processor Kit (Recommended)	878145-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6150 (2.7GHz/18-core/165W) FIO Processor Kit (Recommended)	878144-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6148 (2.4GHz/20-core/145W) FIO Processor Kit (Recommended)	878143-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6146 (3.2GHz/12-core/165W) FIO Processor Kit (Recommended)	878142-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6144 (3.5GHz/8-core/150W) FIO Processor Kit (Recommended)	878141-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6142 (2.6GHz/16-core/145W) FIO Processor Kit (Recommended)	878139-L21
NOTE: Ships with Performance Heatsink.	

Configuration Information - Factory Integrated Models

HPE DL580 Gen10 Intel® Xeon-Gold 6136 (3.0GHz/12-core/150W) FIO Processor Kit (Recommended)	878135-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6134 (3.3GHz/8-core/130W) FIO Processor Kit (Recommended)	878133-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6132 (2.6GHz/14-core/140W) FIO Processor Kit (Recommended)	878132-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6130 (2.1GHz/16-core/120W125W) FIO Processor Kit (Recommended)	878131-L21
HPE DL580 Gen10 Intel® Xeon-Gold 6128 (3.4GHz/6-core/115W) FIO Processor Kit (Recommended)	878130-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6126 (2.6GHz/12-core/120W125W) FIO Processor Kit (Recommended)	878129-L21
HPE DL580 Gen10 Intel® Xeon-Gold 5122 (3.6GHz/4-core/105W) FIO Processor Kit (Recommended)	878128-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 5120 (2.2GHz/14-core/105W) FIO Processor Kit (Recommended)	878127-L21
HPE DL580 Gen10 Intel® Xeon-Gold 5118 (2.3GHz/12-core/105W) FIO Processor Kit (Recommended)	878126-L21
HPE DL580 Gen10 Intel® Xeon-Gold 5115 (2.4GHz/10-core/85W) FIO Processor Kit (Recommended)	878125-L21
Processor Option Kits - Extended	
HPE DL580 Gen10 Intel® Xeon-Platinum 8176 (2.1GHz/28-core/165W) FIO Processor Kit (Extended)	878156-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Platinum 8168 (2.7GHz/24-core/205W) FIO Processor Kit (Recommended)	878153-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Platinum 8180M (2.5GHz/28-core/205W) FIO Processor Kit (Extended)	878159-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Platinum 8165 (2.3GHz/24-core/205W) FIO Processor Kit (Extended)	P00881-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Platinum 8164 (2.0GHz/26-core/145W) FIO Processor Kit (Extended)	878152-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Platinum 8160M (2.1GHz/24-core/145W) FIO Processor Kit (Extended)	878151-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Platinum 8153 (2.0GHz/16-core/125W) FIO Processor Kit (Extended)	878147-L21
HPE DL580 Gen10 Intel® Xeon-Gold 6143 (2.8GHz/16-core/205W) FIO Processor Kit (Extended)	P00880-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6140M (2.3GHz/18-core/140W) FIO Processor Kit (Extended)	878138-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6140 (2.3GHz/18-core/14035W) FIO Processor Kit (Recommended)	878137-L21
NOTE: Ships with Performance Heatsink.	
HPE DL580 Gen10 Intel® Xeon-Gold 6138 (2.0GHz/20-core/120W125W) FIO Processor Kit (Extended)	878136-L21
HPE DL580 Gen10 Intel® Xeon-Gold 6134M (3.2GHz/8-core/130W) FIO Processor Kit (Extended)	878134-L21
NOTE: Ships with Performance Heatsink.	

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.

Configuration Information - Factory Integrated Models

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 - Recommended

HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)	815098-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)	835955-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)	815100-B21
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit (Recommended)	815101-B21

Memory Options - Extended

HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)	815097-B21
HPE 8GB (1x8GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Extended)	876181-B21
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2666 CAS-22-19-19 3DS Load Reduced Memory Kit (Extended)	815102-B21

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

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 - Recommended

HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit (Recommended)	865414-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit (Recommended)	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.

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

Only one of the following from each list unless otherwise noted

Network adapters - Recommended

HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter (Recommended)	817709-B21
HPE FlexFabric 10Gb 4-port 536FLR-T Adapter (Recommended)	764302-B21
HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter (Recommended)	700751-B21
HPE Ethernet 10Gb 2-port 535FLR-T Adapter (Recommended)	817721-B21
HPE Ethernet 1Gb 4-port 331FLR Adapter (Recommended)	629135-B22
HPE FlexFabric 10Gb 2-port 533FLR-T Adapter (Recommended)	700759-B21
HPE Ethernet 1Gb 4-port 366FLR Adapter (Recommended)	665240-B21
HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter (Recommended)	817749-B21

Network adapters - Extended

HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter (Extended)	727054-B21
HPE Ethernet 10Gb 2-port 562FLR-T Adapter (Extended)	817745-B21
HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter (Extended)	867334-B21

Step 3: Choose Additional Factory Integratable Options

Configuration Information - Factory Integrated Models

Only one of the following from each list unless otherwise noted

HPE Gen10 TPM 1.2 FIO Setting 872108-B21

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

HPE 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

NOTE: Selecting this option will change the UEFI BIOS setting into Legacy BIOS Setting.

Controller State

HP FIO Enable Smart Array B140i Setting 784308-B21

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

Recommended Options

Offering the best combination of performance, value and availability, Recommended Options have been selected by HPE experts to provide the right technology for a range of workloads and market segments. Fully integrated into the HPE management and security experience, Recommended Options provide the best fit with timely availability.

Extended Options

Extended Options provide an extended catalog of products tailored for customers in specific markets or with specific workloads, requiring the utmost in performance or value. Fully integrated into the HPE management and security experience, Extended Options represent great value and performance but typically have a longer lead-time.

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 (Recommended)	881101-B21
HPE DL560 Gen10 Universal Media Bay Kit (Recommended)	872267-B21
HPE DL580 NVMe 8 SSD Express Bay Enablement Kit (Recommended)	878362-B21
HPE DL580 Gen10 Premium 6SFF and 2 NVMe or 8SFF Bay Kit (Recommended)	878364-B21
HPE DL580 Gen10 8SFF HDD Bay Kit (Recommended)	878366-B21
HPE DL580 Gen10 2SFF Premium HDD Front NVMe/SAS/SATA Kit (Recommended)	880121-B21
HPE DL5x0 Gen10 System Insight Display Kit (Recommended)	872261-B21
HPE DL5x0 Gen10 CPU Mezzanine Board Kit (Recommended)	872222-B21
NOTE: HPE DL5x0 Gen10 CPU Mezzanine Board Kit (Recommended) (872222-B21) is needed for three or four processor configurations.	
HPE DL5x0 Gen10 CPU Mezzanine UPI Performance Kit (Recommended)	875608-B21
HPE DL580 Gen10 4U Rail Kit with Cable Management Arm (Recommended)	872151-B21
HPE DL580 Gen10 6-slot 4 x8/2 x16 2-port 4 NVMe Slimline Primary Riser Kit (Recommended)	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 (Recommended)	872338-B21
NOTE: This kit supports 8 PCIe slots and 2 NVMe ports which can support up to 4 NVMe drives.	
HPE DL580 Gen10 9-slot 6 x8/3 x16 Secondary Riser Kit (Extended)	872340-B21
HPE DL580 Gen10 7-slot 4 x8/3 x16 Primary Riser Kit (Recommended)	878214-B21
HPE DL580 Gen10 2x 4-port 16 NVMe Slimline Riser Kit (Recommended)	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 (Recommended)	871828-B21
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 (Recommended)	871829-B21
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.

Core Options

HPE Unique Options - Recommended

HPE DL580 Gen10 GPU Bracket Kit (Extended) P00268-B21

NOTE: HPE DL580 Gen10 GPU Bracket Kit (Extended) (P00268-B21) kit is needed to install GPUs in slots 4 and 11 and must be 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.

HPE Unique Options - Extended

HPE DL38X/560/580/ML350 Gen10 P824i-p Cable Kit (Recommended) P00614-B21

NOTE: HPE DL560 Gen10 Universal Media Bay Kit (Recommended) (872267-B21).

HPE Processors

HPE DL580 Gen10 Intel Xeon-Platinum 8176M (2.1GHz/28-core/165W) Processor Kit 878157-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Platinum 8170M (2.1GHz/26-core/165W) Processor Kit 878155-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6142M (2.6GHz/16-core/150W) Processor Kit 878140-B21

NOTE: Ships with Performance Heatsink.

HPE Processors - Recommended

HPE DL580 Gen10 Intel Xeon-Platinum 8180 (2.5GHz/28-core/205W) Processor Kit (Recommended) 878158-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Platinum 8170 (2.1GHz/26-core/165W) Processor Kit (Recommended) 878154-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Platinum 8168 (2.7GHz/24-core/205W) Processor Kit (Recommended) 878153-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Platinum 8160 (2.1GHz/24-core/145W) Processor Kit (Recommended) 878150-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Platinum 8158 (3.0GHz/12-core/105W) Processor Kit (Recommended) 878149-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Platinum 8156 (3.6GHz/4-core/105W) Processor Kit (Recommended) 878148-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6154 (3.0GHz/18-core/200W) Processor Kit (Recommended) 878146-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6152 (2.1GHz/22-core/135W) Processor Kit (Recommended) 878145-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6150 (2.7GHz/18-core/165W) Processor Kit (Recommended) 878144-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6148 (2.4GHz/20-core/145W) Processor Kit (Recommended) 878143-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6146 (3.2GHz/12-core/165W) Processor Kit (Recommended) 878142-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6144 (3.5GHz/8-core/150W) Processor Kit (Recommended) 878141-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6142 (2.6GHz/16-core/145W) Processor Kit (Recommended) 878139-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6140 (2.3GHz/18-core/140W) Processor Kit (Recommended) 878137-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6136 (3.0GHz/12-core/150W) Processor Kit (Recommended) 878135-B21

Core Options

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6134 (3.3GHz/8-core/130W) Processor Kit (Recommended) 878133-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6132 (2.6GHz/14-core/140W) Processor Kit (Recommended) 878132-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6130 (2.1GHz/16-core/125W) Processor Kit (Recommended) 878131-B21

HPE DL580 Gen10 Intel Xeon-Gold 6128 (3.4GHz/6-core/115W) Processor Kit (Recommended) 878130-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6126 (2.6GHz/12-core/125W) Processor Kit (Recommended) 878129-B21

HPE DL580 Gen10 Intel Xeon-Gold 5122 (3.6GHz/4-core/105W) Processor Kit (Recommended) 878128-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 5120 (2.2GHz/14-core/105W) Processor Kit (Recommended) 878127-B21

HPE DL580 Gen10 Intel Xeon-Gold 5118 (2.3GHz/12-core/105W) Processor Kit (Recommended) 878126-B21

HPE DL580 Gen10 Intel Xeon-Gold 5115 (2.4GHz/10-core/85W) Processor Kit (Recommended) 878125-B21

HPE Processors - Extended

HPE DL580 Gen10 Intel Xeon-Platinum 8180M (2.5GHz/28-core/205W) Processor Kit (Extended) 878159-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Platinum 8176 (2.1GHz/28-core/165W) Processor Kit (Extended) 878156-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Platinum 8165 (2.3GHz/24-core/205W) Processor Kit (Extended) P00881-B21

NOTE: Ships with Performance Heatsink.

NOTE: Supports “Core boosting” Learn more **http://www.hpe.com/info/ist**.

NOTE: To enable this feature an iLO Advanced, or iLO Advanced Premium Security edition License are required**.**

HPE DL580 Gen10 Intel Xeon-Platinum 8164 (2.0GHz/26-core/150W) Processor Kit (Extended) 878152-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon -Platinum 8160M (2.1GHz/24-core/145W) Processor Kit (Extended) 878151-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Platinum 8153 (2.0GHz/16-core/125W) Processor Kit (Extended) 878147-B21

HPE DL580 Gen10 Intel Xeon-Gold 6143 (2.8GHz/16-core/205W) Processor Kit (Extended) P00880-B21

NOTE: Ships with Performance Heatsink.

NOTE: Supports “Core boosting” Learn more **http://www.hpe.com/info/ist**.

NOTE: To enable this feature an iLO Advanced, or iLO Advanced Premium Security edition License are required**.**

HPE DL580 Gen10 Intel Xeon-Gold 6140M (2.3GHz/18-core/140W) Processor Kit (Extended) 878138-B21

NOTE: Ships with Performance Heatsink.

HPE DL580 Gen10 Intel Xeon-Gold 6138 (2.0GHz/20-core/125W) Processor Kit (Extended) 878136-B21

HPE DL580 Gen10 Intel Xeon-Gold 6134M (3.2GHz/8-core/130W) Processor Kit (Extended) 878134-B21

NOTE: Ships with Performance Heatsink.

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.

Memory Selection

To streamline the configuration process for HPE ProLiant Gen10 servers and to provide the best product availability, HPE 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.

Core Options

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.

HPE Memory - Recommended

HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)	815098-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)	835955-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)	815100-B21
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit (Recommended)	815101-B21

HPE Memory - Extended

HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)	815097-B21
HPE 8GB (1x8GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Extended)	876181-B21
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2666 CAS-22-19-19 3DS Load Reduced Memory Kit (Extended)	815102-B21

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

HPE Persistent Memory

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

NOTE: A maximum of 6 NVDIMMs are supported per processor and the DL560 can support a maximum of 24 NVDIMMs.
NOTE: Please refer to **http://www.hpe.com/info/persistentmemory** for NVDIMM population rules and guidelines.

HPE Optical Drives - Recommended

HPE 9.5mm SATA DVD-ROM Optical Drive (Recommended)	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 (Recommended)	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 (Recommended)	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

Enterprise – 12G SAS – SFF Drives - Recommended

HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD (Recommended)	870753-B21
HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD (Recommended)	872475-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD (Recommended)	870757-B21

Core Options

HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD (Recommended)	872477-B21
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD (Recommended)	870759-B21
HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD (Recommended)	872479-B21
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD (Recommended)	872481-B21
HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD (Recommended)	881457-B21
Enterprise – 12G SAS – SFF Drives - Extended	
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD (Extended)	870765-B21
Midline - 12G SAS - SFF Drives	
Midline – 12G SAS – SFF Drives - Recommended	
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD (Recommended)	832514-B21
HPE 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD (Recommended)	765466-B21
Midline – 12G SAS – SFF Drives - Extended	
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD (Recommended)	765464-B21
SSD Selection	
To streamline the configuration process for HPE ProLiant Gen10 servers and to provide the best product availability, HPE recommends SSDs from the list located here: **http://www.hpe.com/products/recommend**.	
Write Intensive - SAS - SFF - Solid State Drives - Recommended	
HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	873351-B21
HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	873355-B21
HPE 1.6TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	873357-B21
Read Intensive - SAS - SFF - Solid State Drives	
Read Intensive – SAS – SFF – Solid State Drives - Recommended	
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	872390-B21
HPE 480GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	875311-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	875313-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	872392-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	875326-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	872394-B21
Read Intensive – SAS – SFF – Solid State Drives - Extended	
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	875330-B21
HPE 7.68TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	870144-B21
HPE 15.3TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	870148-B21
Read Intensive - SATA - SFF - Solid State Drives	
Read Intensive – SATA – SFF – Solid State Drives - Recommended	
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	877740-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	875503-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	877746-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	875509-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	877752-B21
HPE 960GB SATA 6G RI SFF SC DS SSD (Extended)	868822-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	875511-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	877758-B21

Core Options

HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	875513-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	877764-B21
HPE 3.8TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	868830-B21
Read Intensive – SATA – SFF – Solid State Drives - Extended	
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	P04556-B21
HPE 240GB SATA 6G RI SFF SC DS SSD (Extended)	868814-B21
HPE 480GB SATA 6G RI SFF SC DS SSD (Extended)	868818-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	P04560-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	P04564-B21
HPE 1.92TB SATA 6G RI SFF SC DS SSD (Extended)	868826-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	P04566-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	P04570-B21
Read Intensive - NVMe - SFF - Solid State Drives - Extended	
HPE 480GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD (Extended)	875587-B21
HPE 960GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD (Extended)	875589-B21
HPE 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD (Extended)	875591-B21
HPE 4TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD (Extended)	877988-B21
Write Intensive - NVMe - SFF - Solid State Drives - Extended	
HPE 375GB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD (Recommended)	878014-B21

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	
Read Intensive – M.2 – Solid State Drives - Recommended	
HPE 480GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD (Recommended)	875498-B21
Read Intensive – M.2 – Solid State Drives - Extended	
HPE 960GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD (Extended)	875500-B21
Mixed Use - SAS - SFF - Solid State Drives	
Mixed Use – SAS – SFF – Solid State Drives - Recommended	
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	872374-B21
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	873359-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	872376-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	873363-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	872382-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	873365-B21
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	873367-B21
Mixed Use – SAS – SFF – Solid State Drives - Extended	
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	872386-B21
Mixed Use - SATA - SFF - Solid State Drives	
Mixed Use – SATA – SFF – Solid State Drives - Recommended	
HPE 240GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	880295-B21
HPE 240GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	875483-B21

Core Options

HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	875470-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	877776-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	877782-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	875474-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Extended)	877788-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	875478-B21
Mixed Use – SATA – SFF – Solid State Drives - Extended	
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	872344-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	872348-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	872352-B21
HPE 3.84TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (Recommended)	P00896-B21
Mixed Use - NVMe - SFF - Solid State Drives	
Mixed Use – NVMe – SFF – Solid State Drives - Recommended	
HPE 400GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD (Recommended)	875593-B21
HPE 800GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD (Recommended)	875595-B21
Mixed Use – NVMe – SFF – Solid State Drives - Extended	
HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD (Extended)	875597-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	
Mixed Use – SATA – M.2 – Solid State Drives - Recommended	
HPE 240GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD (Recommended)	875488-B21
Mixed Use – SATA – M.2 – Solid State Drives - Extended	
HPE 480GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD (Extended)	875490-B21
HPE 960GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD (Extended)	875492-B21
NOTE: M.2 drives go in the Primary Riser and use S100i SATA controller only.	
NOTE: M.2 supports Software RAID only.	
Hard Drive Blank Kits	
HPE Small Form Factor Hard Drive Blank Kit (Recommended)	666987-B21
Hard Drive Kits - Recommended	
HPE Universal SATA HHHL 3yr Wty M.2 Kit (Recommended)	878783-B21

HPE Networking	
25 Gigabit Ethernet adapters	
25 Gigabit Ethernet adapters - Recommended	
HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter (Recommended)	817749-B21
HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter (Recommended)	817753-B21
HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter (Recommended)	817718-B21
25 Gigabit Ethernet adapters - Extended	
HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter (Extended)	867328-B21
10 Gigabit Ethernet adapters	
10 Gigabit Ethernet adapters - Recommended	
HPE Ethernet 10Gb 2-port 530SFP Adapter (Recommended)	652503-B21

Core Options

HPE Ethernet 10Gb 2-port 530T Adapter (Recommended)	656596-B21
HPE Ethernet 10Gb 2-port 535T Adapter (Recommended)	813661-B21
10 Gigabit Ethernet adatpers - Extended	
HPE Ethernet 10Gb 2-port 521T Adapter (Extended)	867707-B21
HPE Ethernet 10Gb 2-port 562T Adapter (Extended)	817738-B21
HPE Ethernet 10Gb 2-port 562SFP+ Adapter (Extended)	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

1 Gigabit Ethernet adapters

1 Gigabit Ethernet adapters - Recommended	
HPE Ethernet 1Gb 4-port 331T Adapter (Recommended)	647594-B21
HPE Ethernet 1Gb 4-port 366T Adapter (Recommended)	811546-B21
1 Gigabit Ethernet adapters - Extended	
HPE Ethernet 1Gb 2-port 332T Adapter (Extended)	615732-B21
HPE Ethernet 1Gb 2-port 361T Adapter (Extended)	652497-B21

FlexibleLOM Adapters

FlexibleLOM Adapters - Recommended	
HPE Ethernet 1Gb 4-port 331FLR Adapter (Recommended)	629135-B22
HPE Ethernet 1Gb 4-port 366FLR Adapter (Recommended)	665240-B21
HPE FlexFabric 10Gb 2-port 533FLR-T Adapter (Recommended)	700759-B21
HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter (Recommended)	700751-B21
HPE Ethernet 10Gb 2-port 535FLR-T Adapter (Recommended)	817721-B21
HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter (Recommended)	817709-B21
HPE FlexFabric 10Gb 4-port 536FLR-T Adapter (Recommended)	764302-B21
Flexible LOM Adapters - Extended	
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter (Extended)	727054-B21
HPE Ethernet 10Gb 2-port 562FLR-T Adapter (Extended)	817745-B21
HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter (Extended)	867334-B21
HPE Ethernet 100Gb 1-port 842QSFP28 Adapter (Extended)	874253-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+QSFP Adapter (Extended)	764284-B21
HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter (Recommended)	764285-B21
HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter (Recommended)	879482-B21
HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter (Extended)	825110-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter (Extended)	825111-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter (Recommended)	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 (Recommended)	829335-B21
HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter (Recommended)	872725-B21

Core Options

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

HPE I/O Expansion Options

HPE DL580 Gen10 7-slot 4 x8/3 x16 Primary Riser Kit (Recommended) 878214-B21

HPE DL580 Gen10 9-slot 6 x8/3 x16 Secondary Riser Kit (Extended) 872340-B21

NOTE: Includes the tertiary riser kit.

HPE DL580 Gen10 2x 4-port 16 NVMe Slimline Riser Kit (Recommended) 878360-B21

HPE DL5x0 Gen10 CPU Mezzanine Board Kit (Recommended) (872222-B21) and requires a 3 or 4 processor configuration to support all 16 NVMe drives.
NOTE:NOTE: Must be selected if more than 8 NVMe drives are selected. It supports upto 16 NVMe drives.
NOTE: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 (Recommended) 872336-B21

HPE DL580 Gen10 8-slot 6 x8/2 x16 2-port 4 NVMe Slimline Secondary Riser Kit (Recommended) 872338-B21

NOTE: Secondary riser kit 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 - Recommended

HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit (Recommended) 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 (Recommended) 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.

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

Core Options

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

GPGPU information								
Card	**P40**	**P6000**	**V100**	**P100**				
Part number	**Q0V80A**	**Q0V76A**	**Q2N68A**	**Q0E21A**				
Qty	**4**	**4**	**4**	**4**	**Recommended DL580 Drive bay configuration**			
Processors supported	**All**	**All**	**All**	**All**	**8 SFF**	**8 NVMe**	**6+2 Premium**	**UMB**
8SFF	35C	35C	35C	30C	Bay 1			
16SFF	35C	35C	35C	30C	Bay 1 and 4			
24SFF	35C	35C	35C	30C	Bay 1, 4 and 5			
32SFF	35C	35C	30C	25C	Bay 1, 4, 5 and 6			
40SFF	25C	35C	25C	Not supported	Bay 1, 2, 4, 5 and 6			
48SFF	Not supported	Not supported	Not supported	Not supported				
1 Premium (6+2)	35C	35C	35C	25C			Bay 2	
1 Premium (6+2) + 8SFF	35C	35C	35C	25C	Bay 1		Bay 2	
1 Premium (6+2) + 16SFF	35C	35C	35C	25C	Bay 1 and 4		Bay 2	
1 Premium (6+2) + 24SFF	25C	35C	25C	Not supported	Bay 1, 4 and 5		Bay 2	
1 Premium (6+2) + 32SFF	Not supported	30C	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				
2 Premium (6+2)	30C	35C	30C	25C			Bay 2 and 3	
2 Premium (6+2) + 8SFF	25C	35C	25C	Not supported	Bay 1		Bay 2 and 3	
2 Premium (6+2) + 16SFF	25C	35C	25C	Not supported	Bay 1 and 4		Bay 2 and 3	
2 Premium (6+2) + 24SFF	Not supported	30C	Not supported	Not supported	Bay 1, 4, and 6		Bay 2 and 3	

Core Options

2 Premium (6+2) + 32SFF	Not supported	Not supported	Not supported	Not supported				
3 Premium (6+2)	25C	35C	25C	Not supported			Bay 1, 2 and 3	
3 Premium (6+2) + 8SFF	25C	35C	25C	Not supported	Bay 4		Bay 1, 2 and 3	
3 Premium (6+2) + 16SFF	Not supported	30C	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				
8NVMe	35C	35C	35C	25C		Bay 2		
8NVMe + 8SFF	35C	35C	35C	25C	Bay 1	Bay 2		
8NVMe + 16SFF	35C	35C	35C	Not supported	Bay 1 and 4	Bay 2		
8NVMe + 24SFF	25C	35C	25C	Not supported	Bay 1, 4 and 5	Bay 2		
8NVMe + 32SFF	Not supported	25C	Not supported	Not supported	Bay 1, 4, 5 and 6	Bay 2		
8NVMe + 40SFF	Not supported	Not supported	Not supported	Not supported				
16NVMe	Not supported	Not supported	Not supported	Not supported				
16NVMe +8SFF	Not supported	Not supported	Not supported	Not supported				
16NVMe +16SFF	Not supported	Not supported	Not supported	Not supported				
16NVMe +24SFF	Not supported	Not supported	Not supported	Not supported				
16NVMe +32SFF	Not supported	Not supported	Not supported	Not supported				
20NVMe	Not supported	Not supported	Not supported	Not supported				
20NVMe+8SFF	Not supported	Not supported	Not supported	Not supported				
20NVMe+16SFF	Not supported	Not supported	Not supported	Not supported				
20NVMe+24SFF	Not supported	Not supported	Not supported	Not supported				
Media Bay	35C	35C	35C	30C				Bay 4
Media Bay + 8SFF	35C	35C	35C	30C	Bay 1			Bay 4
Media Bay + 16SFF	35C	35C	35C	30C	Bay 1 and 5			Bay 4

Core Options

Media Bay + 24SFF	35C	35C	30C	25C	Bay 1, 5 and 6			Bay 4
Media Bay + 32SFF	25C	35C	25C	Not supported	Bay 1, 2, 5 and 6			Bay 4
Media Bay + 40SFF	Not supported	Not supported	Not supported	Not supported				

GPGPU information								
Card	**P40**	**P6000**	**V100**	**P100**				
Part number	**Q0V80A**	**Q0V76A**	**Q2N68A**	**Q0E21A**				
Qty	**2**	**2**	**2**	**2**	**Recommended DL580 Drive bay configuration**			
Processor supported	**All**	**All**	**All**	**All**	**8 SFF**	**8 NVMe**	**6+2 Premium**	**UMB**
8SFF	35C	35C	35C	30C	Bay 1			
16SFF	35C	35C	35C	30C	Bay 1 and 4			
24SFF	35C	35C	35C	30C	Bay 1, 4 and 5			
32SFF	35C	35C	30C	25C	Bay 1, 4, 5 and 6			
40SFF	25C	35C	25C	Not supported	Bay 1, 2, 4, 5 and 6			
48SFF	Not supported	Not supported	Not supported	Not supported				
1 Premium (6+2)	35C	35C	35C	25C			Bay 2	
1 Premium (6+2) + 8SFF	35C	35C	35C	25C	Bay 1		Bay 2	
1 Premium (6+2) + 16SFF	35C	35C	35C	25C	Bay 1 and 4		Bay 2	
1 Premium (6+2) + 24SFF	25C	35C	25C	Not supported	Bay 1, 4 and 5		Bay 2	
1 Premium (6+2) + 32SFF	Not supported	30C	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				
2 Premium (6+2)	30C	35C	30C	25C			Bay 2 and 3	
2 Premium (6+2) + 8SFF	25C	35C	25C	Not supported	Bay 1		Bay 2 and 3	
2 Premium (6+2) + 16SFF	25C	35C	25C	Not supported	Bay 1 and 4		Bay 2 and 3	
2 Premium (6+2) + 24SFF	Not supported	30C	Not supported	Not supported	Bay 1, 4, and 6		Bay 2 and 3	

Core Options

2 Premium (6+2) + 32SFF	Not supported	Not supported	Not supported	Not supported				
3 Premium (6+2)	25C	35C	25C	Not supported			Bay 1, 2 and 3	
3 Premium (6+2) + 8SFF	25C	35C	25C	Not supported	Bay 4		Bay 1, 2 and 3	
3 Premium (6+2) + 16SFF	Not supported	30C	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				
8NVMe	35C	35C	35C	25C		Bay 2		
8NVMe + 8SFF	35C	35C	35C	25C	Bay 1	Bay 2		
8NVMe + 16SFF	35C	35C	35C	Not supported	Bay 1 and 4	Bay 2		
8NVMe + 24SFF	25C	30C	25C	Not supported	Bay 1, 4 and 5	Bay 2		
8NVMe + 32SFF	Not supported	25C	Not supported	Not supported	Bay 1, 4, 5 and 6	Bay 2		
8NVMe + 40SFF	Not supported	Not supported	Not supported	Not supported				
16NVMe	30C	35C	30C	25C		Bay 2 and 3		
16NVMe +8SFF	25C	35C	25C	Not supported	Bay 1	Bay 2 and 3		
16NVMe +16SFF	25C	25C	25C	Not supported	Bay 1 and 4	Bay 2 and 3		
16NVMe +24SFF	Not supported	25C	Not supported	Not supported	Bay 1, 4 and 6	Bay 2 and 3		
16NVMe +32SFF	Not supported	Not supported	Not supported	Not supported				
20NVMe	25C	30C	25C	Not supported		Bay 1, 2 and 3		
20NVMe+8SFF	25C	30C	25C	Not supported	Bay 4	Bay 1, 2 and 3		
20NVMe+16SFF	Not supported	25C	Not supported	Not supported	Bay 4 and 6	Bay 1, 2 and 3		
20NVMe+24SFF	Not supported	Not supported	Not supported	Not supported				
Media Bay	35C	35C	35C	30C				Bay 4
Media Bay + 8SFF	35C	35C	35C	30C	Bay 1			Bay 4
Media Bay + 16SFF	35C	35C	35C	30C	Bay 1 and 5			Bay 4

Core Options

Media Bay + 24SFF	35C	35C	30C	25C	Bay 1, 5 and 6			Bay 4
Media Bay + 32SFF	25C	35C	25C	Not supported	Bay 1, 2, 5 and 6			Bay 4
Media Bay + 40SFF	Not supported	Not supported	Not supported	Not supported				

Additional Options

Recommended Options
Offering the best combination of performance, value and availability, Recommended Options have been selected by HPE experts to provide the right technology for a range of workloads and market segments. Fully integrated into the HPE management and security experience, Recommended Options provide the best fit with timely availability.

Extended Options
Extended Options provide an extended catalog of products tailored for customers in specific markets or with specific workloads, requiring the utmost in performance or value. Fully integrated into the HPE management and security experience, Extended Options represent great value and performance but typically have a longer lead-time.

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

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 - Extended

HPE 4TB PCIe x4 Lanes Read Intensive HHHL 3yr Wty Digitally Signed Firmware Card (Extended)	877831-B21
HPE 1.6TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card (Extended)	877825-B21
HPE 3.2TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card (Extended)	877827-B21
HPE 6.4TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card (Extended)	877829-B21
HPE 750GB PCIe x4 Lanes Write Intensive HHHL 3yr Wty Digitally Signed Firmware Card (Extended)	878038-B21

Additional Options

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

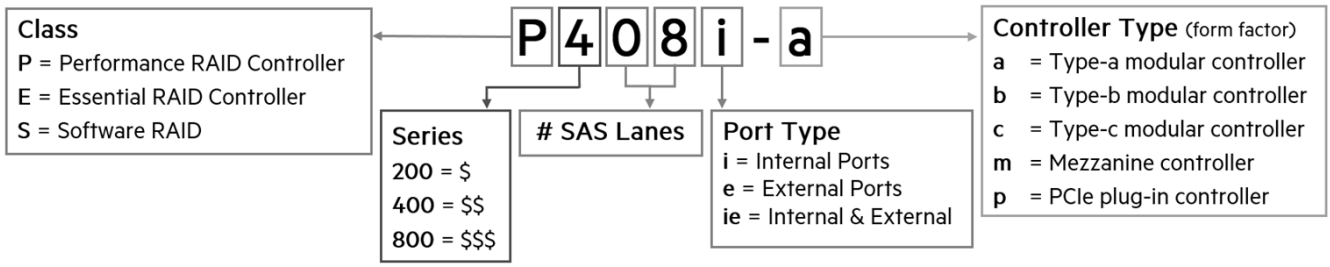
HPE Security

HPE Trusted Platform Module 2.0 Gen10 Option (Recommended)	864279-B21
HPE Gen10 4U Bezel Kit (Extended)	869872-B21
OEM Gen10 4U Bezel Kit	869873-B21
HPE Gen10 Chassis Intrusion Detection Kit (Recommended)	867824-B21
HPE Bezel Lock Kit (Recommended)	875519-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 (Recommended) (P01366-B21), which supports multiple devices and is sold separately.

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

Performance RAID Controllers - Recommended

HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller (Recommended)	830824-B21

Performance RAID Controllers - Extended

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

Essential RAID Controllers

Essential RAID Controllers - Recommended

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

Essential RAID Controllers - Extended

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

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

Additional Options

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 - Recommended

HPE 96W Smart Storage Battery (up to 20 Devices) with 145mm Cable Kit (Recommended)	P01366-B21

NOTE: Provides backup power for multiple HPE Smart Array controllers or other devices. Is required with performance RAID controllers.

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/BURAcompatibility**.

HPE Storage Options

Emulex Fibre Channel HBAs - Recommended

HPE StoreFabric SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter (Recommended)	Q0L13A
HPE StoreFabric SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter (Recommended)	Q0L14A
HPE StoreFabric SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter (Recommended)	Q0L11A
HPE StoreFabric SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter (Recommended)	Q0L12A

QLogic Fibre Channel HBAs - Recommended

HPE StoreFabric SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter (Recommended)	P9D93A
HPE StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter (Recommended)	P9D94A
HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter (Recommended)	P9M75A
HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter (Recommended)	P9M76A

Converged Network Adapter - Recommended

HPE StoreFabric CN1100R Dual Port Converged Network Adapter (Recommended)	QW990A
HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter (Recommended)	N3U52A
HPE StoreFabric CN1200E 10Gb Converged Network Adapter (Recommended)	E7Y06A
HPE StoreFabric CN1200E 10GBASE-T Dual Port Converged Network Adapter (Recommended)	N3U51A

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.

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.

Additional Options

HPE Uninterruptible Power Systems (UPS)

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

NOTE: Please see the **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 (Recommended)	872151-B21

HPE USB and SD Options

HPE Enterprise Mainstream Flash Media Kits for Memory Cards - Recommended

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

NOTE: Please see the **HPE Flash Media Kits QuickSpecs** for additional information.

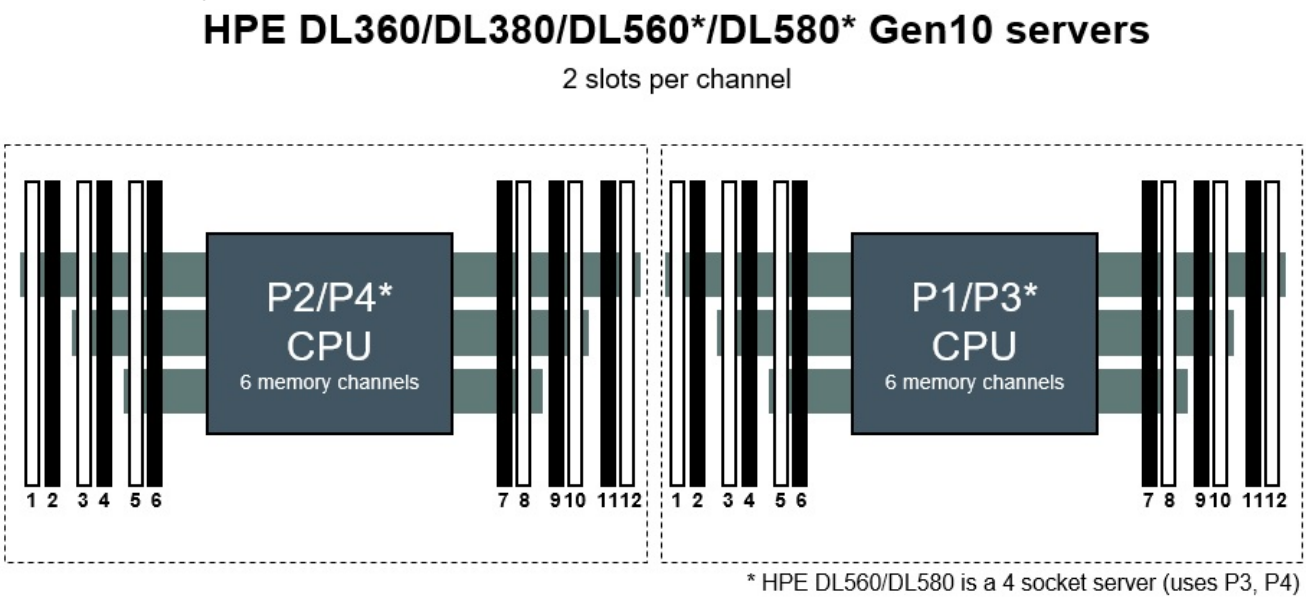
HPE Support Services

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

Memory Population guidelines



HPE ProLiant Gen10 12 slot per CPU DIMM Population Order												
1 DIMM								8				
2 DIMMs								8		10		
3 DIMMs								8		10		12
4 DIMMs			3		5			8		10		
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
* Unbalanced, not recommended												

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.

Memory

. 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**.

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 500 Series Platforms - DL580 Gen 10				
DIMM Type	**Register DIMM (RDIMM)**				
HPE SKU P/N	815097-B21	876181-B21	815098-B21	835955-B21	815100-B21
SKU Description	HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)	HPE 8GB (1x8GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Extended)	HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)	HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)	HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit (Recommended)
DIMM Rank ->	Single Rank (1R)	Dual Rank (2R)	Single Rank (1R)	Dual Rank (2R)	Dual Rank (2R)
DIMM Capacity ->	8 GB	8 GB	16 GB	16 GB	32 GB
Voltage	1.2V	1.2V	1.2V	1.2V	1.2V
DRAM depth [bit]	1G	512 MB	2G	1G	2G
DRAM Width [bit]	x8	x8	x4	x8	x4
DRAM Density	8 Gb	4 Gb	8 Gb	8 Gb	8 Gb
CAS Latency	19-19-19	19-19-19	19-19-19	19-19-19	19-19-19
DIMM Native Speed (MT/s)	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
Intel® Xeon® Platinum and Gold 81xx/61xx Processors Officially Supported Memory Speed (MT/s)					
1 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
2 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
Intel® Xeon® Gold 51xx Processors Officially Supported Memory Speed (MT/s)					

Memory

1 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s
2 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s

DIMM Type	**Load Reduced (LRDIMM)**	**Load Reduced (LRDIMM)**
HPE SKU P/N	815101-B21	815102-B21
SKU Description	HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit (Recommended)	HPE 128GB (1x128GB) Octal Rank x4 DDR4-2666 CAS-22-19-19 3DS Load Reduced Memory Kit (Extended)
DIMM Rank ->	Quad Rank (4R)	Octal Rank (8R)
DIMM Capacity ->	64 GB	128 GB
Voltage	1.2V	1.2 V
DRAM depth [bit]	2G	2G
DRAM Width [bit]	x4	x4
DRAM Density	8 Gb	8 Gb
CAS Latency	19-19-19	22-19-19
DIMM Native Speed (MT/s)	2666 MT/s	2666 MT/s
Intel® Xeon® Platinum and Gold 81xx/61xx Processors Officially Supported Memory Speed (MT/s)		
1 DIMM Per Channel	2666 MT/s	2666 MT/s
2 DIMM Per Channel	2666 MT/s	2666 MT/s
Intel® Xeon® Gold 51xx Processors Officially Supported Memory Speed (MT/s)		
1 DIMM Per Channel	2400 MT/s	2400 MT/s
2 DIMM Per Channel	2400 MT/s	2400 MT/s

For details on the HPE Server Memory speed, 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)

DDR4 memory options part number decoder

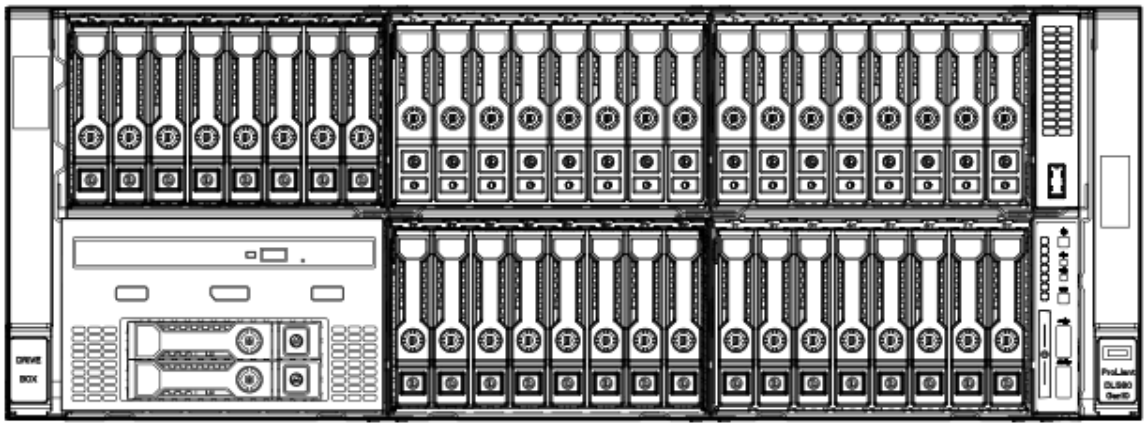
NOTE: Capacity references are rounded to the common gigabyte (GB) values.

- 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

24 SFF (+2 SFF) hot-plug drive model and 16 NVMe SSDs with Universal Media Bay



Technical Specifications

System Unit		
Dimensions (H x W x D) (with bezel)	17.48cm x 44.55cm x 75.18cm 6.88 x 17.54 x 29.60 in	
Weight (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)
Input Requirements (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)
BTU Rating	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)
Power Supply Output (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**.
System Inlet Temperature	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: **http://www.hpe.com/servers/ashrae**

Technical Specifications

		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: **http://www.hpe.com/servers/ashrae** System performance may be reduced if operating in the extended ambient operating range or with a fan fault.
	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
Relative Humidity	Operating	8% to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
(non-condensing)	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
Altitude	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Acoustic Noise

Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. Please have your HPE representative provide information from the HPE EMESC website for further technical details regarding the configurations listed below.

Product Configuration	Entry	Base	Performance
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.

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

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

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

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

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

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

Technical Specifications

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.

Summary of Changes

Date	Version History	Action	Description of Change
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.

Sign up for updates

Hewlett Packard Enterprise

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

a00021850enw - 16053 - Worldwide - V9 - 2-July-2018