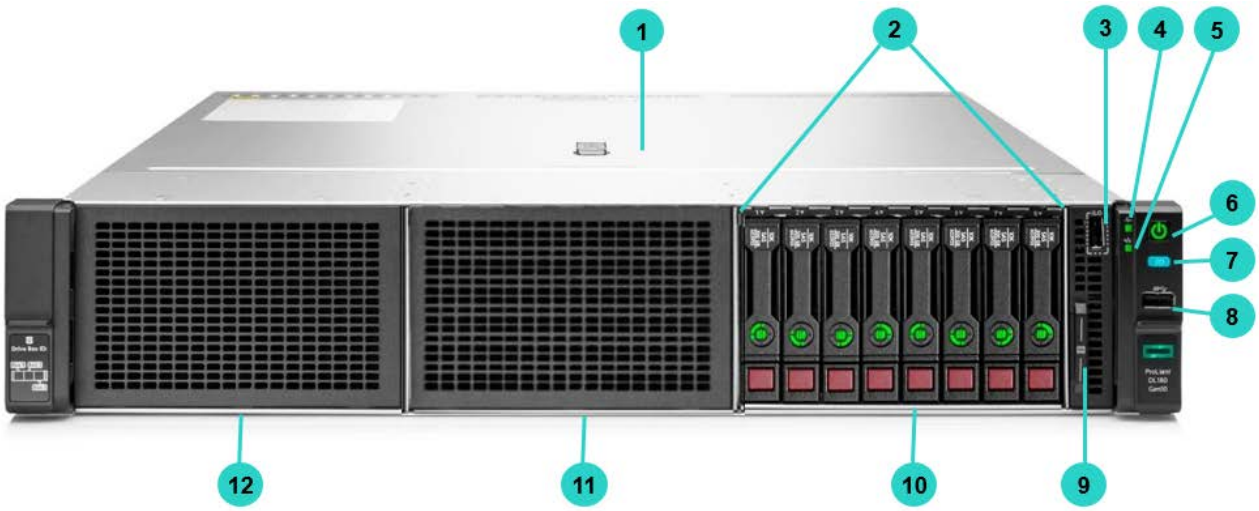
Overview

HPE ProLiant DL180 Gen10 Server

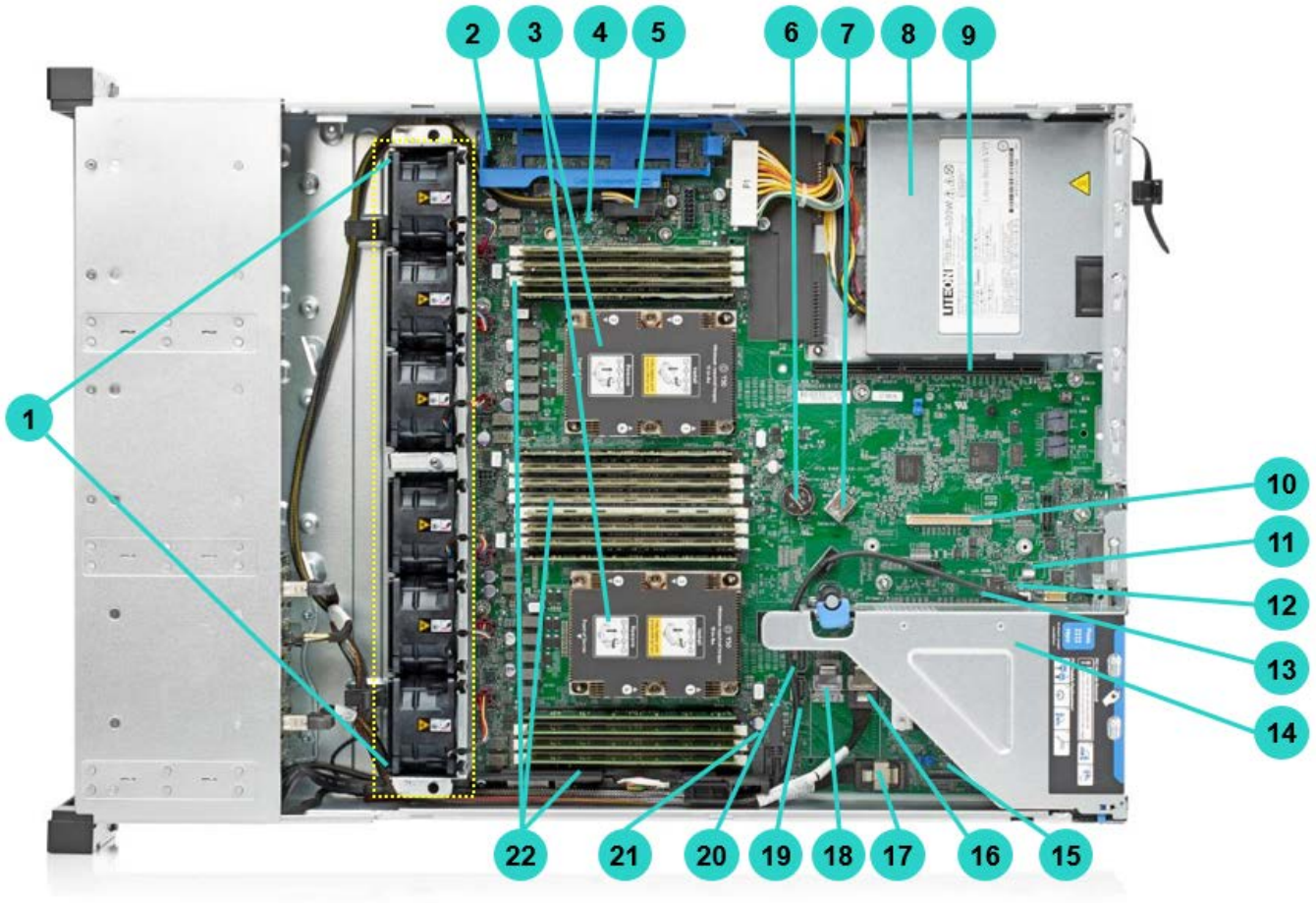
Adaptable for diverse workloads and environments, the secure 2P 2U HPE ProLiant DL180 Gen10 delivers world-class compelling performance with the right balance of expandability and scalability. Designed for supreme versatility and resiliency with the right balance of reliability, manageability and performance, while being backed by a comprehensive warranty make it ideal for multiple environments from Containers to Cloud to Big Data. Standardize on the industry's most trusted compute platform. SMBs and enterprises running application.



8SFF Chassis - Front View

1.	Quick removal access panel	7.	UID button
2.	8 SFF Drive Cage	8.	USB 3.0
3.	iLO Front Service Port	9.	Serial label pull tag
4.	Health LED	10	Box 3
5.	NIC status	11.	Box 2 (Optional 8 SFF, blank shown)
6.	Power On/Standby button and system power LED button	12	Box 1 (Optional 8 SFF or Optical Drive, blank shown)

Overview

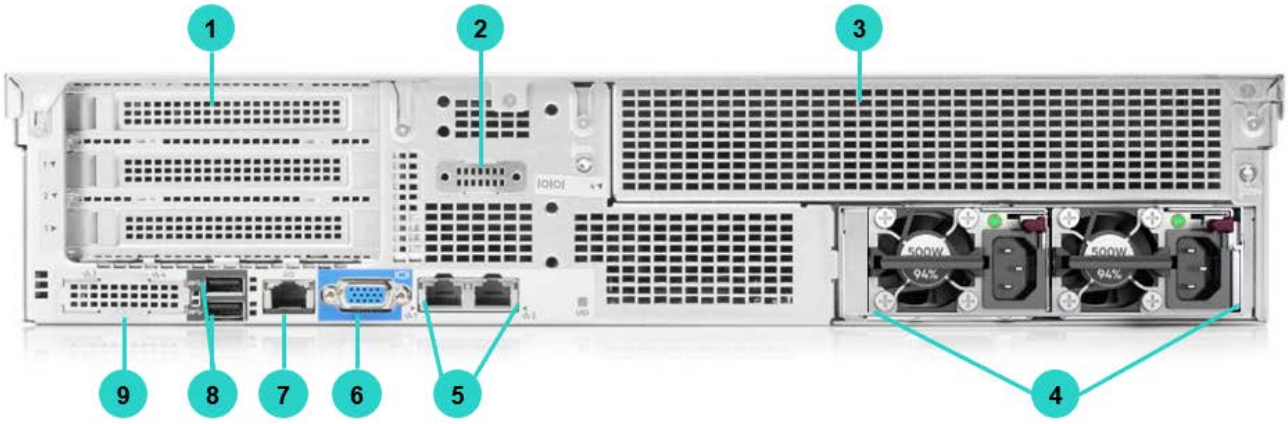


8SFF Chassis – with optional 2nd CPU - Internal View

1. Standard single rotor hot swap fans
   1 CPU – 3 standard fans
   2 CPUs – 5 standard fans (1 redundant fan shown)*
2. Smart Storage Battery (No battery shown) *
3. Up to 2 processors (shown with standard heat sinks)
4. Chassis Intrusion Detection connector *
5. Hard Drive backplane power connector
6. System Battery
7. Internal USB 3.0 connector
8. Power supply (non-redundant power supply shown)
9. Secondary (CPU2) PCIe 3.0 riser
10. Flexible Smart Array Controller Connector
11. TPM 2.0*
12. MicroSD card slot
13. iLO Service Port Connector
14. Primary PCIe Riser: 8x8x8
15. Media Module Connector
16. Mini-SAS port 1
17. Mini-SAS port 2
18. Mini-SAS port 3
19. SATA port 4
20. SATA port 5
21. Front Power USB 3.0 connector
22. DDR4 DIMM slots
    (Fully populated 16 DIMMs shown)

Notes: *Optional

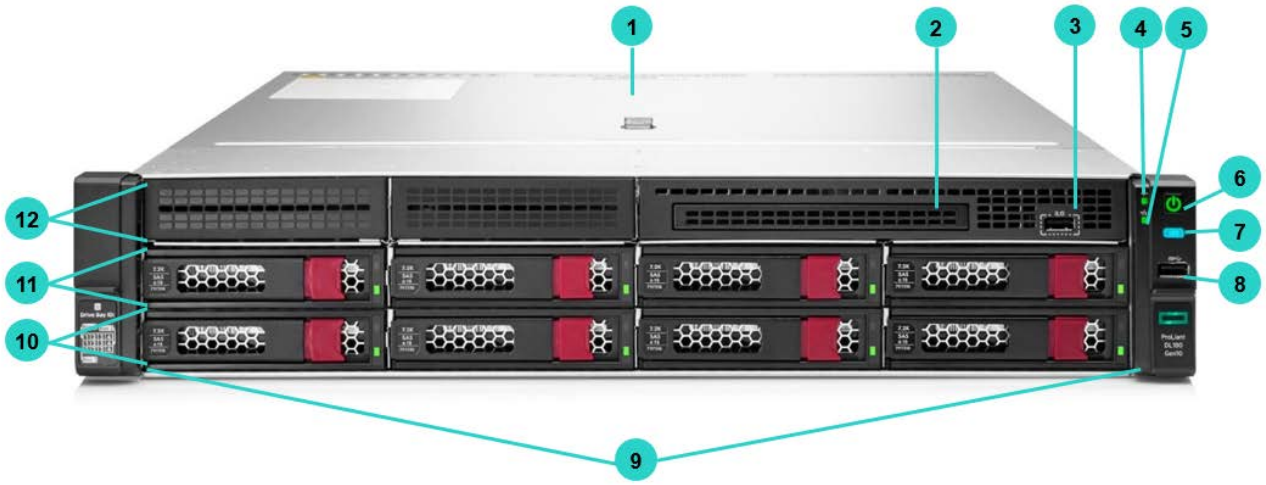
Overview



Rear View

1. Primary Riser. PCI Slots (Slots 1-3 top to bottom)
2. Serial Port *
3. Secondary Riser. PCI Slots (Slots 4-6 top to bottom, requires second riser card and second processor).
4. Power Supply (Redundant Hot plug shown)
5. Embedded 2 x 1GbE Network Adapter
6. VGA Port
7. Dedicated iLO management port
8. USB connectors 3.0 (2)
9. Media Module*

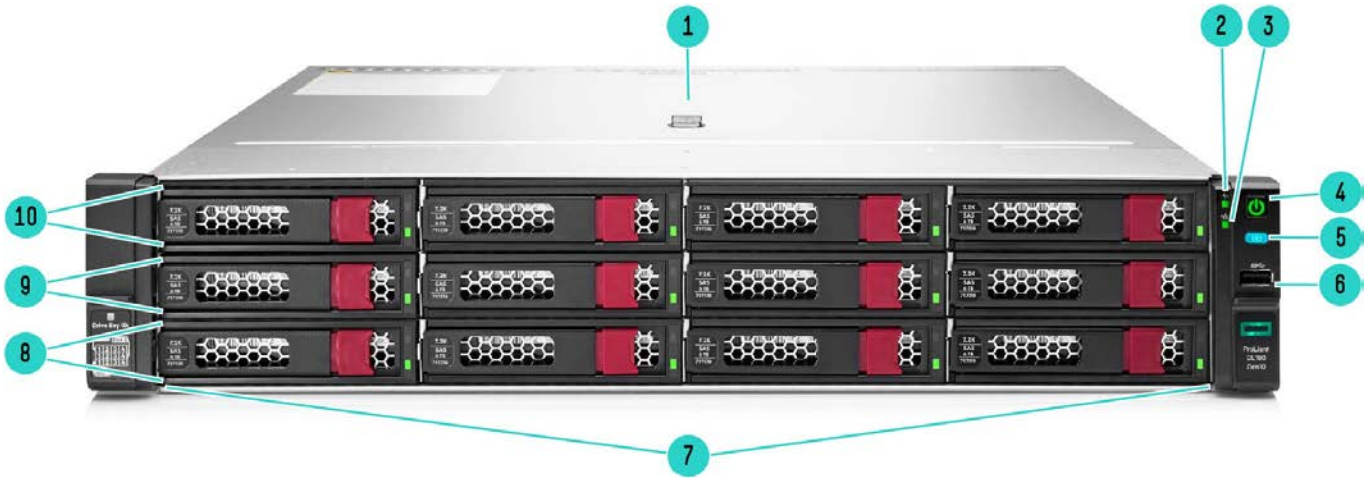
Notes: *Optional



8LFF Chassis - Front View

1. Quick removal access panel
2. Optional: Optical drive (Blank Shown)
3. iLO Front Service Port
4. Health LED
5. NIC Status
6. Power On/Standby button and system power LED button
7. UID button
8. USB 3.0
9. LFF Drive cage
10. Box 3
11. Box 2
12. Box 1

Overview



12LFF Chassis - Front View

1.	Quick removal access panel	6.	USB 3.0
2.	Health LED	7.	LFF Drive cage
3.	NIC Status	8.	Box 3
4.	Power On/Standby button and system power LED button	9.	Box 2
5.	UID button	10	Box 1

What's New

- 800GB, 1.6/3.2/6.4TB Mixed Use SAS SFF PM6 SSDs
- 960GB, 1.92/3.84/7.68TB Read Intensive SAS SFF PM6 SSDs
- 400/800GB, 1.6TB Write Intensive SAS SFF PM6 SSDs
- Support for P816i-a storage controller including new cable/enablement kits
- Pre-configured server including P816i-a storage controller

Platform Information

Form Factor

- 2U rack

Chassis Types

- 8 SFF (upgradeable to 24SFF)
- 8 LFF
- 12 LFF

Notes: All models come with the S100i Smart Array Controller with embedded software RAID support for 14 drives. However this needs to be enabled using Enable SW RAID option (784308-B21) while configuring.

System Fans

- Standard – fan types (without rear drives)

Model	Non-Redundant	Redundant
1P Model	3 fans	4 fans
2P Model	5 fans	6 fans

Standard Features

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

Notes:

- The 2nd digit of the processor model number "x1xx" and "x2xx" is used to denote the processor generation (i.e. 1=1st generation and 2=2nd generation)
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- "U" processors (i.e. 6209U) only supported in single socket configurations
- This table covers the public Intel offering only.
- For more information regarding Intel Xeon processors, please see the following **http://www.intel.com/xeon**.

2nd Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Platinum 8256 Processor	3.8 GHz	4	16.50 MB	105W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8253 Processor	2.2 GHz	16	22.00 MB	125W	3 @ 10.4 GT/s	2933 MT/s	1TB

Notes:

- 6-Channel DDR4 @ 2933 MT/s with 1TB memory capacity per socket
- 2 and 4 socket capable, 2S - 2UPI, 2S - 3UPI, 4S - 3UPI @ 10.4 GT/s.
- Support for: Vector Neural Network Instructions (VNNI) for inference acceleration, Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA), advanced RAS
- 48 lanes PCIe 3.0

2nd Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Gold 6252 Processor	2.1 GHz	24	35.75 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6248 Processor	2.5 GHz	20	27.5 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6244 Processor	3.6 GHz	8	24.75 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6242 Processor	2.8 GHz	16	22 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6240 Processor	2.6 GHz	18	24.75 MB	150W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6238 Processor	2.1 GHz	22	30.25 MB	140W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6234 Processor	3.3 GHz	8	24.75 MB	130W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6230R Processor	2.1 GHz	26	35.75 MB	150W	2 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6230 Processor	2.1 GHz	20	27.5 MB	125W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6226R Processor	2.9 GHz	16	22 MB	150W	2 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6226 Processor	2.7 GHz	12	19.25 MB	125W	3 @ 10.4 GT/s	2933 MT/s	1TB
Gold 6210U Processor	2.5 GHz	20	27.50 MB	150W	N/A	2933 MT/s	1TB
Gold 6209U Processor	2.1 GHz	20	27.50 MB	125W	N/A	2933 MT/s	1TB
Gold 6208U Processor	2.9 GHz	16	22 MB	150W	N/A	2933 MT/s	1TB
Gold 5222 Processor	3.8 GHz	4	16.5 MB	105W	2 @ 10.4 GT/s	2933 MT/s	1TB
Gold 5220R Processor	2.2 GHz	24	35.75 MB	150W	2 @ 10.4 GT/s	2933 MT/s	1TB
Gold 5220 Processor	2.2 GHz	18	24.75 MB	125W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5218R Processor	2.1 GHz	20	27.50 MB	125W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5218 Processor	2.3 GHz	16	22 MB	125W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5217 Processor	3.0 GHz	8	11 MB	115W	2 @ 10.4 GT/s	2666 MT/s	1TB
Gold 5215 Processor	2.5 GHz	10	13.75 MB	85W	2 @ 10.4 GT/s	2666 MT/s	1TB

Notes:

- 6-Channel DDR4 @ 2933 MT/s (Gold 6200 & 5222 skus only), 2666 MT/s on all Gold 5200 skus (except 5222 @ 2933 MT/s) with 1TB memory capacity per socket
- 2 and 4 socket capable, 2S - 2UPI, 2S - 3UPI, 4S-2UPI, 4S - 3UPI @ 10.4 GT/s.

Standard Features

- Support for: Vector Neural Network Instructions (VNNI) for inference acceleration, Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (1x 512-bit FMA) (Gold 6200 and SKU 5222 - supports 2x 512 bit FMA), advanced RAS
- 48 lanes PCIe 3.0

1st Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Gold 6152 Processor	2.1 GHz	22	30.25 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6148 Processor	2.4 GHz	20	27.50 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6144 Processor	3.5 GHz	8	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6142 Processor	2.6 GHz	16	22.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6140 Processor	2.3 GHz	18	24.75 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6138 Processor	2.0 GHz	20	27.50 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6136 Processor	3.0 GHz	12	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6134 Processor	3.2 GHz	8	24.75 MB	130W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6132 Processor	2.6 GHz	14	19.25 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6130 Processor	2.1 GHz	16	22.00 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6128 Processor	3.4 GHz	6	19.25 MB	115W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6126 Processor	2.6 GHz	12	19.25 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 5122 Processor	3.6 GHz	4	16.50 MB	105W	2 @ 10.4 GT/s	2666 MT/s	768GB
Gold 5120 Processor	2.2 GHz	14	19.25 MB	105W	2 @ 10.4 GT/s	2400 MT/s	768GB
Gold 5118 Processor	2.3 GHz	12	16.50 MB	105W	2 @ 10.4 GT/s	2400 MT/s	768GB
Gold 5115 Processor	2.4 GHz	10	13.75 MB	85W	2 @ 10.4 GT/s	2400 MT/s	768GB

Notes:

- 6-Channel 1DPC DDR4 @ 2666 MT/s (Gold 6100 skus), 2400 MT/s on all Gold 5100 skus (SKU 5122 - supports 2666 MT/s), with 768GB memory capacity per socket
- 2 and 4 socket capable, 2S - 2UPI, 2S-3UPI, 4S - 3UPI @ 10.4 GT/s.
- Support for: Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (1x 512-bit FMA) (Gold 6100 and SKU 5122 - supports 2x 512 bit FMA), advanced RAS
- 48 lanes PCIe 3.0

2nd Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Silver 4216 Processor	2.1 GHz	16	22 MB	100W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4215R Processor	3.2 GHz	8	11 MB	130W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4215 Processor	2.5 GHz	8	11 MB	85W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4214R Processor	2.4 GHz	12	16.5 MB	100W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4214 Processor	2.2 GHz	12	16.5 MB	85W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4210R Processor	2.4 GHz	10	13.75 MB	100W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4210 Processor	2.2 GHz	10	13.75 MB	85W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4208 Processor	2.1 GHz	8	11 MB	85W	2 @ 9.6 GT/s	2400 MT/s	1TB

Notes:

- 6-Channel DDR4 @ 2400 MT/s with 1TB memory capacity per socket
- 2 socket supports 2UPI @ 9.6 GT/s.
- Support for: Intel® Vector Neural Network Instructions (VNNI) for inference acceleration, Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512 (1x 512-bit FMA), standard RAS
- 48 lanes PCIe 3.0

Standard Features

1st Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Silver 4116 Processor	2.1 GHz	12	16.50 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4114 Processor	2.2 GHz	10	13.75 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4112 Processor	2.6 GHz	4	8.25 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4110 Processor	2.1 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4108 Processor	1.8 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB

Notes:

- 6-Channel DDR4 @ 2400 MT/s providing with 768GB memory capcity per socket
- 2 Socket supports 2UPI @ 9.6 GT/s
- Support for: Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512(1x 512-bit FMA), standard RAS
- 48 lanes PCIe 3.0

2nd Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Bronze 3206R	1.9 GHz	8	11 MB	85W	2 @ 9.6 GT/s	2133 MT/s	1 TB
Bronze 3204 Processor	1.9 GHz	6	8.25 MB	85W	2 @ 9.6 GT/s	2133 MT/s	1 TB

Notes:

- 6-Channel DDR4 @ 2133 MT/s with 1TB memory capacity per socket
- 2 Socket supports 2UPI @ 9.6 GT/s
- Support for: Intel® Vector Neural Network Instructions (VNNI) for inference acceleration., Intel AVX-512 (1x 512-bit FMA), standard RAS
- 48 lanes PCIe 3.0

1st Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Bronze 3106 Processor	1.7 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2133 MT/s	768GB
Bronze 3104 Processor	1.7 GHz	6	8.25 MB	85W	2 @ 9.6 GT/s	2133 MT/s	768GB

Notes:

- 6-Channel DDR4 @ 2133 MT/s with 768GB memory capacity per socket
- 2 Socket supports 2UPI @ 9.6 GT/s
- Support for: Intel AVX-512(1x 512-bit FMA), standard RAS
- 48 lanes PCIe 3.0

Chipset

Intel C622 Chipset

Notes: 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

Notes: Read and learn more in the **iLO QuickSpecs**.

Standard Features

Memory

Type	HPE DDR4 SmartMemory Registered (RDIMM), Load Reduced (LRDIMM)
DIMM Slots Available	16 8 DIMM slots per processor, 6 channels per processor, 2 channels @ 2 DIMMs per channel, 4 channels @ 1 DIMM per channel
Maximum capacity (LRDIMM)	1.0 TB 16 x 64 GB LRDIMM @ 2933 MT/s
Maximum capacity (RDIMM)	1.0 TB 16 x 64 GB RDIMM @ 2933 MT/s

Notes:

- Mixing of RDIMM and LRDIMM memory is not supported.
- For General Server Memory Population Rules and Guidelines for Gen10 see details here: **http://www.hpe.com/docs/memory-population-rules**

Memory Protection

Advanced ECC

Advanced ECC uses single device data correction to detect and correct single and all multibit error that occurs within a single DRAM chip.

Online Spare

Memory online spare mode detects a rank that is degrading and switches operation to the spare rank.
Notes: For more information see our **Memory RAS feature technical whitepaper**

Expansion Slots

CPU1 x8x8x8 riser					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1	PCIe 3.0	X8	X8	Full-height, full-length slot	Proc 1
2	PCIe 3.0	X8	X8	Full-height, half-length slot	Proc 1
3	PCIe 3.0	X8	X8	Full-height, half-length slot	Proc 1

Notes: Bus Width Indicates the number of physical electrical lanes running to the connector.

FlexibleLOM					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1	PCIe 3.0	X8	X8	Full-height, full-length slot	Proc 1
2	PCIe 3.0	X8	X8	Full-height, half-length slot	Proc 1
3	PCIe 3.0	X8	X8	FlexibleLOM	Proc 1

Notes:

- Bus Width Indicates the number of physical electrical lanes running to the connector.
- This riser is necessary to install FlexibleLOM adapters

CPU1 x16x8 riser					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1	PCIe 3.0	X16	X16	Full-height, full-length slot	Proc 1
2	PCIe 3.0	X8	X8	Full-height, half-length slot	Proc 1

Notes: Bus Width Indicates the number of physical electrical lanes running to the connector.

Standard Features

CPU2 x8x8x8 riser					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1	PCIe 3.0	X8	X8	Full-height,full-length slot	Proc 2
2	PCIe 3.0	X8	X8	Full-height,half-length slot	Proc 2
3	PCIe 3.0	X8	X8	Low profile	Proc 2

Notes:

- Bus Width Indicates the number of physical electrical lanes running to the connector.
- When populating the second optional riser slot, the second processor must be installed.

CPU2 x16x8 riser					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1	PCIe 3.0	X16	X16	Full-height, full-length slot	Proc 2
2	PCIe 3.0	X8	X8	Low profile	Proc 2

Notes:

- Bus Width Indicates the number of physical electrical lanes running to the connector.
- When populating the second optional riser slot, the second processor must be installed.
- Includes GPU cable kit

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**. One of the following depending on model

Software RAID

HPE Smart Array S100i SR Gen10 SW RAID

Notes:

- HPE Smart Array S100i SR Gen10 SW RAID will operate in UEFI mode only. For legacy support an additional controller will be needed.
- HPE Smart Array S100i SR Gen10 SW RAID is off by default and must be enabled.
- HPE Smart Array S100i SR Gen10 SW RAID only supports Windows and does not support Linux. For Linux users, HPE offers a solution that uses in-distro open-source software to create a two-disk RAID 1 boot volume. For more information visit: **https://downloads.linux.hpe.com/SDR/project/lsrrb/**

Essential RAID Controller

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

Performance RAID Controller

- HPE Smart Array P816i-a SR Gen10 Controller
- HPE Smart Array P408i-a SR Gen10 LH Controller
- HPE Smart Array P408i-p SR Gen10 Controller
- HPE Smart Array P408e-p SR Gen10 Controller

Notes:

- Performance RAID Controllers require the HPE Smart Storage Battery (P01366-B21) which is sold separately.
- For additional details, please see **HPE Smart Array Gen10 Controllers Data Sheet**

Standard Features

Internal Storage Devices

- **Optical Drive**
  Optional: DVD-ROM or DVD-RW
- **Hard Drives**
  None ship standard

Maximum Internal Storage

Drive	Capacity	Configuration
Hot Plug SFF SAS HDD	62.4 TB	24 + 2 X 2.4 TB (with dual SFF rear drive option)
Hot Plug LFF SAS HDD	144 TB	12 X 12 TB
Hot Plug SFF SATA HDD	52 TB	24 + 2 X 2 TB (with dual SFF rear drive option)
Hot Plug LFF SATA HDD	144 TB	12 X 12 TB
Hot Plug SFF SAS SSD	200 TB	24 + 2 X 7.68 TB (with dual SFF rear drive option)
Hot Plug LFF SAS SSD	19.2 TB	12 X 1.6 TB
Hot Plug SFF SATA SSD	200 TB	24 + 2 X 7.68 TB (with dual SFF rear drive option)
Hot Plug LFF SATA SSD	92 TB	12 X 7.68 TB

Interfaces

Video	1 rear – VGA Port (standard)
Network Ports	2 x 1 GbE ports embedded on board with optional Media Module, FlexibleLOM or stand up card
Management Network Port	1 Gb Dedicated
Front iLO Service Port	1 standard
Micro SD Slot	1 Micro SD **Notes:** The Micro SD slot is not a hot-pluggable device. Customers should not attempt to plug an SD card into the SD slot while the server is powered.
USB 3.0	Up to 4 total: 1 front, 2 rear, 1 internal (secure),

Operating Systems and Virtualization Software Support for ProLiant Servers

2nd Generation Intel® Xeon® Scalable Processor Family

- **Windows Server 2016***, 2019
- **VMware ESXi 6.5 U3***, 6.7 U3, 7.0
- **Red Hat Enterprise Linux (RHEL)** 7.6 with Kbase*, 8.0
- **SUSE Linux Enterprise Server (SLES)** 12 SP4*

1st Generation Intel® Xeon® Scalable Processor Family

- Windows Server 2012R2*, 2016, 2019
- **VMware ESXi 6.0 U3*, 6.5 U3**, 6.7 U3, 7.0
- **Red Hat Enterprise Linux (RHEL)** 6.9*, 7.3, 7.6 (with Kbase), 8.0
- **SUSE Linux Enterprise Server (SLES)** 12 SP2*, 12 SP3-SP4

CentOS- Limited HPE support. Please review **https://techlibrary.hpe.com/us/en/enterprise/servers/supportmatrix/cent_os.aspx**

Notes:

- *Minimum required OS
- 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**

Standard Features

Industry Standard Compliance

- ACPI 6.1 Compliant
- PCIe 3.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- USB 3.0 Compliant (internal)
- SMBIOS 3.1
- UEFI 2.6
- Redfish API
- IPMI 2.0
- Secure Digital 2.0
- Advanced Encryption Standard (AES)
- Triple Data Encrytion Standard (3DES)
- SNMP v3
- TLS 1.2
- DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP)
- Active Directory v1.0
- ASHRAE A3/A4
  Notes: For additional technical thermal details regarding ambient temperatures, humidity and features support please visit: **http://www.hpe.com/servers/ashrae**.
- UEFI (Unified Extensible Firmware Interface Forum)
  Notes: UEFI is the default for the HPE ProLiant DL160 Gen10. Legacy mode can be selected in the field.

European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 servers are compliant with Lot9 requirements. For more information regarding HPE Lot 9 conformance, please visit:
https://www.hpe.com/us/en/about/environment/msds-specs-more.html

Power Supply

- HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  Notes: Available in 94% efficiency.
- HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  Notes:
  - Available in 94% and 96% efficiency.
  - Also available in -48VDC power input.

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

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

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

Standard Features

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.

Notes: 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:
- NVMe Boot Support
- iSCSI Software Initiator Support.
- HTTP/HTTPs Boot support as a PXE alternative.
- Boot support for option cards that only support a UEFI option ROM

Notes: For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.

Security

- UEFI Secure Boot and Secure Start support
- Immutable Silicon Root of Trust
- FIPS 140-2 validation
- Common Criteria certification
- 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
- Granular control over iLO interfaces
- 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) 2.0 option
- Bezel Locking Kit
- Chassis Intrusion detection option

Standard Features

Embedded Management

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 1 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**.

Server Utilities

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 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**.

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**.

Service Pack for ProLiant (SPP)
The Service Pack for ProLiant (SPP) is a comprehensive collection of server firmware, drivers, and system software tested as a single solution stack, which is delivered as a single ISO image. Learn more at **http://www.hpe.com/servers/spp**

Standard Features

Warranty

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

Notes: 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 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 InfoSight for Servers

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

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**.

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**.

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

Get the most from your HPE Products. Get the expertise you need at every step of your IT journey with **HPE Pointnext Services**. We help you lower your risks and overall costs using automation and methodologies that have been tested and refined by HPE experts through thousands of deployments globally. HPE Pointnext **Advisory Services**, focus on your business outcomes and goals, partnering with you to design your transformation and build a roadmap tuned to your unique challenges. Our **Professional** and **Operational Services** can be leveraged to speed up time-to-production, boost performance and accelerate your business. HPE Pointnext specializes in flawless and on-time implementation, on-budget execution, and creative configurations that get the most out of software and hardware alike

Consume IT on your terms

HPE GreenLake brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake accelerates digital transformation in a distributed, edge-to-cloud world.

- Get Faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

Recommended Services

HPE Pointnext Tech Care

HPE Pointnext Tech Care is the new operational service experience for HPE products. Tech Care goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Pointext Tech Care has been reimagined from the ground up to support a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Pointnext Tech Care is available in three response levels. Basic, which provides 9x5 business hour availability and a 2 hour response time. Essential which provides a 15 minute response time 24x7 for most enterprise level customers, and Critical which includes a 6 hour repair commitment where available and outage management response for severity 1 incidents.
https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00108652enw

HPE Datacenter Care

HPE Datacenter Care helps customers address the pressing needs of IT today and smoothly transform to a more agile cloud-like IT operations model. We help run and monitor your IT by offloading the day to day routine tasks, helping customers be more predictive and proactive, and saving time with one place to call with for all of their IT.

Partner with an assigned account team backed by local and global experts, access HPE enhanced call experience with priority access, use specialized support for complex, technologies, choose hardware and software support for your devices, implement proactive monitoring to stay ahead of issues , and access HPE IT best practices and IP. HPE Datacenter Care advantage options are available to add to your agreement to give you specialized expertise for performance, security, back up analysis, and much more. Datacenter Care is available as both tailored statement of work and as a packaged service for 3, 4, and 5 year terms.
https://www.hpe.com/us/en/services/datacenter-hybrid-services.html

Service and Support

Other related Services

HPE Server Hardware Installation

Provides for the basic hardware installation of HPE branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.
https://h20195.www2.hpe.com/v2/Getdocument.aspx?docname=5981-9356enw

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).

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.

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**

Service and Support

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**.

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

Notes: *HPE Support Center Mobile App is subject to local availability.
For more information: **http://www.hpe.com/services**.
Notes: HPE ProLiant DL385 Gen10 Plus 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**.

Parts and Materials

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

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

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

Pre-Configured Models

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

European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 servers are compliant with Lot9 requirements. For more information regarding HPE Lot 9 conformance, please visit:
https://www.hpe.com/us/en/about/environment/msds-specs-more.html

Powered by 2nd Generation Intel Xeon Processors			
SKU Number- WW	P35519-B21	P35520-B21	P37151-B21
SKU Number- Japan	P35519-291	P35520-291	P37151-291
Model Name	HPE ProLiant DL180 Gen10 4210R 2.4GHz 10-core 1P 16GB-R S100i 8SFF 500W PS Server	HPE ProLiant DL180 Gen10 5218 2.3GHz 16-core 1P 16GB-R S100i 8SFF 500W PS Server	HPE ProLiant DL180 Gen10 4208 2.1GHz 8-core 1P 16GB-R P816i-a 12LFF 500W PS Server
Chassis	8SFF	8SFF	12LFF
Processor	4210R (2.4GHz/10-core/100W)	5218 (2.3GHz/16-core/125W)	4208 (2.1GHz/8-core/85W)
Number of Processors	One processor with Standard heatsink	One processor with Standard heatsink	One processor with Standard heatsink
Memory	HPE 16GB 1Rx4 PC4-2933Y-R Smart Kit	HPE 16GB 1Rx4 PC4-2933Y-R Smart Kit	HPE 16GB 1Rx4 PC4-2933Y-R Smart Kit
Network Controller	Embedded 2-Port 1GbE	Embedded 2-Port 1GbE	Embedded 2-Port 1GbE
Storage Controller	Embedded 14Port S100i **Notes:** SATA only	Embedded 14Port S100i **Notes:** SATA only	P816i-a and Smart Storage Battery
Cables	1x Box3 MB/-p cable (879752-B21) to connect 8 drive bays in box3 to S100i (can also be used to connect to –p controller).	1x Box3 MB/-p cable (879752-B21) to connect 8 drive bays in box3 to S100i (can also be used to connect to –p controller).	HPE DL180 Gen10 LFF P816i-a Cable Kit (P36415-B21)
Hard Drive	None included	None included	None included
Optical Drive	None included	None included	None included
PCIe Slots	3 PCIe: 1x8 FHFL, 1x8 FHHL, 1x8 FHHL		
Power Supply	1x 500W Hot Plug; RPS ready	1x 500W Hot Plug; RPS ready	1x 500W Hot Plug; RPS ready
Fans	3 Fans	3 Fans	3 Fans
Management	HPE iLO5, Infosight		
Rail Kit	SFF Easy Install	SFF Easy Install	LFF Easy Install
Form Factor	2U Rack		
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response		

Country Code Key

- B21 = Worldwide except Japan & PRC
- 291 = Japan

Pre-Configured Models

Powered by 2nd Generation Intel Xeon Processors			
SKU Number- WW	P19562-B21	P19564-B21	P19563-B21
SKU Number- Japan	P19562-291	P19564-291	P19563-291
Model Name	HPE ProLiant DL180 Gen10 3204 1.9GHz 6-core 1P 16GB-R S100i 8LFF 500W PS Server	HPE ProLiant DL180 Gen10 4208 2.1GHz 8-core 1P 16GB-R S100i 8SFF 500W PS Server	HPE ProLiant DL180 Gen10 4208 2.1GHz 8-core 1P 16GB-R P408i-a 12LFF 500W PS Server
Chassis	8LFF	8SFF	12LFF
Processor	3204 (1.9GHz/6-core/85W)	4208 (2.1GHz/8-core/85W)	4208 (2.1GHz/8-core/85W)
Number of Processors	One processor with Standard heatsink	One processor with Standard heatsink	One processor with Standard heatsink
Memory	HPE 16GB 1Rx4 PC4-2933Y-R Smart Kit	HPE 16GB 1Rx4 PC4-2933Y-R Smart Kit	HPE 16GB 1Rx4 PC4-2933Y-R Smart Kit
Network Controller	Embedded 2-Port 1GbE	Embedded 2-Port 1GbE	Embedded 2-Port 1GbE
Storage Controller	Embedded 14Port S100i **Notes:** SATA only	Embedded 14Port S100i **Notes:** SATA only	P408i-a with Smart Storage Battery included **Notes:** P408i-p must be added to support all 12 drive bays with SAS drives (Cable included in base BTO. See below)
Cables	2x LFF MB/-p cables (875170-B21) to connect 8 drive bays to S100i (can also be used to connect to –p controller).	1x Box3 MB/-p cable (879752-B21) to connect 8 drive bays in box3 to S100i (can also be used to connect to –p controller).	2x LFF/–a cables (875172-B21) to connect 8 drive bays to included P408i-a and 1x LFF MB/-p cable (875170-B21) to connect 4 drive bays to S100i (can also be used to connect to –p controller).
Hard Drive	None included	None included	None included
Optical Drive	None included	None included	None included
PCIe Slots	3 PCIe: 1x8 FHFL, 1x8 FHHL, 1x8 FHHL		
Power Supply	1x 500W Hot Plug; RPS ready	1x 500W Hot Plug; RPS ready	1x 500W Hot Plug; RPS ready
Fans	3 Fans	3 Fans	3 Fans
Management	HPE iLO5, Infosight		
Rail Kit	LFF Easy Install	SFF Easy Install	LFF Easy Install
Form Factor	2U Rack		
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response		

Notes: UEFI is the standard default for all pre-configured models

Configuration Information

Factory Integrated Models

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.

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

European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 servers are compliant with Lot9 requirements. For more information regarding HPE Lot 9 conformance, please visit:
https://www.hpe.com/us/en/about/environment/msds-specs-more.html

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

CTO Server	HPE DL180 Gen10 8SFF CTO Server	HPE DL180 Gen10 8LFF CTO Server	HPE DL180 Gen10 12LFF CTO Server
SKU Number	879517-B21	879515-B21	879516-B21
Processor	Not included as standard		
DIMM Slots	16-DIMM Slots		
Storage Controller	Embedded SW RAID with 14 SATA ports, choice of HPE modular Smart Array and PCIe plug-in controller		
PCIe	None standard. Primary riser must be added.		
Drive Cage – included	8SFF	8LFF	12LFF
Network Controller	Embedded 2x1GbE with optional, Media Module, HPE FlexibleLOM on riser and optional Standup card		
Fans	1 CPU- 3 Standard Fans 2 CPU- 5 Standard Fans		
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advanced and OneView (optional)		
USB	Front: 1 USB 3.0 + iLO service port Rear: 2 USB 3.0 Internal: 1 USB 3.0		
Included Drive Cage	8 SFF	8LFF	12 LFF
Additional drive cages	8-16 SFF SAS/SATA 16-24 SFF SAS/SATA	8—12 LFF SAS/SATA	-
ODD - 2SFF Rear	Optional	Optional	2SFF rear- Optional

Step 2: Choose Required Options (only one of the following unless otherwise noted)

Please select one –L21 processor required below.
For second processor, please select the same processor model with –B21 from Core Options – HPE Processors section.
For example: first processor, select P12007-L21 then for second processor, select P12007-B21.

Notes:

- Mixing of 2 different processor models is not supported.
- For first processor, -L21 will include 3 fans, For second processor, -B21 will add 2 additional fans
- When 2nd Generation Intel Xeon Scalable Processor is slected, then only DDR4-2933 Memory Kit can be selected; When 1st Generation Intel Xeon Scalable Processor is selected, then only DDR4-2666 Memory Kit can be selected

Configuration Information

Step 2a: Choose Processors

Processor Option Kits (Required Processor)

2nd Generation Intel Xeon- Platinum

Intel Xeon-Platinum 8256 (3.8GHz/4-core/105W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P12007-L21
Intel Xeon-Platinum 8253 (2.2GHz/16-core/125W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P12006-L21

2nd Generation Intel Xeon-Gold

Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11161-L21
Intel Xeon-Gold 6248 (2.5GHz/20-core/150W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11160-L21
Intel Xeon-Gold 6244 (3.6GHz/8-core/150W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11159-L21
Intel Xeon-Gold 6242 (2.8GHz/16-core/150W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11158-L21
Intel Xeon-Gold 6240 (2.6GHz/18-core/150W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11157-L21
Intel Xeon-Gold 6238 (2.1GHz/22-core/140W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11167-L21
Intel Xeon-Gold 6234 (3.3GHz/8-core/130W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11166-L21
Intel Xeon-Gold 6230R (2.1GHz/26-core/150W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P24214-L21
Intel Xeon-Gold 6230 (2.1GHz/20-core/125W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11156-L21
Intel Xeon-Gold 6226R (2.9GHz/16-core/150W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P21201-L21
Intel Xeon-Gold 6226 (2.7GHz/12-core/125W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11165-L21
Intel Xeon-Gold 6210U (2.5GHz/20-core/150W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11163-L21
Notes: Only supported in single socket configurations	
Intel Xeon-Gold 6209U (2.1GHz/20-core/125W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11162-L21
Notes: Only supported in single socket configurations	
Intel Xeon-Gold 6208U (2.9GHz/16-core/150W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P21197-L21
Notes: Only supported in single socket configurations	
Intel Xeon-Gold 5222 (3.8GHz/4-core/105W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11164-L21
Intel Xeon-Gold 5220R (2.2GHz/24-core/150W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P21202-L21
Intel Xeon-Gold 5220 (2.2GHz/18-core/125W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11155-L21
Intel Xeon-Gold 5218R (2.1GHz/20-core/125W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P24213-L21
Intel Xeon-Gold 5218 (2.3GHz/16-core/125W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11154-L21
Intel Xeon-Gold 5217 (3.0GHz/8-core/115W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11153-L21
Intel Xeon-Gold 5215 (2.5GHz/10-core/85W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11152-L21

2nd Generation Intel Xeon- Silver

Intel Xeon-Silver 4216 (2.1GHz/16-core/100W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11151-L21
Intel Xeon-Silver 4215R (3.2GHz/8-core/130W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P24215-L21
Intel Xeon-Silver 4215 (2.5GHz/8-core/85W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11150-L21
Intel Xeon-Silver 4214R (2.4GHz/12-core/100W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P21199-L21
Intel Xeon-Silver 4214 (2.2GHz/12-core/85W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11149-L21
Intel Xeon-Silver 4210R (2.4GHz/10-core/100W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P21198-L21
Intel Xeon-Silver 4210 (2.2GHz/10-core/85W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11148-L21
Intel Xeon-Silver 4208 (2.1GHz/8-core/85W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11147-L21

2nd Generation Intel Xeon- Bronze

Intel Xeon-Bronze 3206R (1.9GHz/8-core/85W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P21196-L21
Intel Xeon-Bronze 3204 (1.9GHz/6-core/85W) FIO Processor Kit for HPE ProLiant DL180 Gen10	P11146-L21

Configuration Information

Step 2b: Choose Memory Options

Please select one or more memory from below.
For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go to: **https://www.hpe.com/docs/memory-population-rules**
For Gen10 memory speed table, please go to: **https://www.hpe.com/docs/memory-speed-table**
For memory Reliability, Accessibility, Serviceability (RAS) features whitepaper like Gen10 Fast Fault Tolerance and legacy mirrored memory feature etc. please go to: **http://www.hpe.com/docs/memory-ras-feature**

Notes:

- Maximum memory capacity and speed per processor is dependent on processor model selection or limitation.
- DDR4-2933 Memory Kits are only supported with 2nd Generation Intel Xeon Scalable Series Processors and DDR4-2666 Memory Kits are only supported with 1st Generation Intel Xeon Scalable Series Processors.

Registered DIMMs (RDIMMs) for 2nd Generation Intel Xeon Scalable Series

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

Registered DIMMs (RDIMMs) for 1st Generation Intel Xeon Scalable Series

HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815100-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815098-B21
HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815097-B21

Load Reduced DIMMs (LRDIMMs) for 2nd Generation Intel Xeon Scalable Series

HPE 64GB (1x64GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart Memory Kit	P00926-B21

Load Reduced DIMMs (LRDIMMs) for 1st Generation Intel Xeon Scalable Series

HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit	815101-B21

Step 2c: Choose Power Supplies

Please select one or two power supplies from below.

Notes:

- Mixing of 2 different power supplies is NOT supported.
- HPE DL160/180 Gen10 Redundant Power Supply Enablement Kit (866442-B21) required with selection of power supply.

HPE Flex Slot Power Supplies

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21
HPE DL160/180 Gen10 Redundant Power Supply Enablement Kit	866442-B21

Notes: This enablement kit is required with the selection of a Flex Slot power supply

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Step 3: Choose Additional Factory Integratable Options

One of the following from each list may be selected if desired at time of factory integration

HPE Legacy FIO Mode Setting	758959-B22
HPE FIO Enable Smart Array SW RAID	784308-B21
HPE Gen10 TPM 1.2 FIO Setting	872108-B21

Configuration Information

Cable Kits (factory integrated only)

HPE DL180 Gen10 8 to 16SFF Smart Array S100i/E208i-p/P408i-p FIO Cable Kit	875154-B21
Notes: This will be used to connect Box2 to Smart Array S100i/E208i-p/P408i-p	
HPE DL180 Gen10 8 to 16SFF Smart Array E208i-a/P408i-a SAS FIO Cable Kit	875156-B21
Notes: This will be used to connect Box2 to Smart Array E208i-a/P408i-a	
HPE DL180 Gen10 16 to 24SFF Smart Array S100i/E208i-p/P408i-p FIO Cable Kit	875160-B21
Notes: This will be used to connect Box1 to Smart Array S100i/E208i-p/P408i-p	
HPE DL180 Gen10 16 to 24SFF Smart Array E208i-a/P408i-a SAS FIO Cable Kit	875162-B21
Notes: This will be used to connect Box1 to Smart Array E208i-a/P408i-a	
HPE DL180 Gen10 LFF Smart Array S100i/E208i-p/P408i-p FIO Cable Kit	875170-B21
Notes: This will be used to connect to Smart Array S100i/E208i-p/P408i-p	
HPE DL180 Gen10 LFF Smart Array E208i-a/P408i-a SAS FIO Cable Kit	875172-B21
Notes: This will be used to connect to Smart Array E208i-a/P408i-a	
HPE DL180 Gen10 Rear 2SFF to Smart Array S100i/E208i-p/P408i-p FIO Cable Kit	879410-B21
Notes: This will be used to connect the rear 2SFF to Smart Array E208i-p/P408i-p	
HPE DL180 Gen10 Rear 2SFF to Smart Array E208i-a/P408i-a SAS FIO Cable Kit	875181-B21
Notes: This will be used to connect the rear 2SFF to Smart Array E208i-a/P408i-a	
HPE DL180 Gen10 Rear 2SFF to Smart Array S100i SATA FIO Cable Kit	875183-B21
Notes: This will be used to connect the rear 2SFF to Smart Array S100i	
HPE DL180 Gen10 Rear 2SFF to SAS Expander FIO Cable Kit	875179-B21
Notes: Connects SAS Expander to the rear 2SFF drive cage	
HPE DL180 Gen10 SFF Box3 to Smart Array S100i/E208i-p/P408i-p FIO Cable Kit	879752-B21
Notes: This will be used to connect the default Box3 in 8SFF Chassis to Smart Array S100i/E208i-p/P408i-p	
HPE DL180 Gen10 SFF Box3 to Smart Array E208i-a/P408i-a SAS FIO Cable Kit	879754-B21
Notes: This will be used to connect the default Box3 in 8SFF Chassis to Smart Array E208i-a/P408i-a	

HPE Unique Options (factory integrated only)

HPE DL180 Gen10 8 to 16SFF FIO Upgrade Kit	875151-B21
HPE DL180 Gen10 16 to 24SFF FIO Upgrade Kit	875158-B21
HPE DL180 Gen10 Rear 2SFF FIO Enablement Kit	875176-B21

Notes: Cannot be used to attach rear drives to P816i-a storage controller (for connection to P816i-a, see P37790-B21). Does not include cables.

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

Core Options

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

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

Risers

Notes: This server does not have a default primary riser. A primary riser must be selected from CPU1 riser options below.

HPE DL180 Gen10 CPU1 x8x8x8 PCIe Riser Kit	878484-B21
HPE DL180 Gen10 CPU1 FlexibleLOM Riser Kit	866941-B21
Notes: This riser is required to use FlexibleLOM adapters	
HPE DL180 Gen10 CPU1 x16/x8 PCIe Riser Kit	866939-B21
HPE DL180 Gen10 CPU2 x8/x8/x8 PCIe Riser Kit	866945-B21
HPE DL180 Gen10 CPU2 x16/x8 PCIe Riser and GPU Enablement Kit	866943-B21
Notes: Includes GPU cable kit	

Cable/Enablement Kits

HPE DL360 Gen9 Rear Serial Port and Enablement Kit	764646-B21
HPE DL180 Gen10 LFF Smart Array P816i-a Cable Kit	P36415-B21
Notes: Contains cables to connect 8-12 front LFF SAS/SATA drives to the P816i-a storage controller. Required with selection of P816i-a controller and LFF chassis.	
HPE DL180 Gen10 SFF Smart Array P816i-a Cable Kit	P37221-B21
Notes: Contains cables to connect 8-16 front SFF SAS/SATA drives to the P816i-a storage controller. Required with selection of P816i-a controller and SFF chassis.	
HPE DL180 Gen10 Rear 2SFF to P816i-a Enablement Kit	P37790-B21
Notes: Includes rear drive cage and cables to connect 2 rear SFF SAS/SATA drives to the P816i-a storage controller.	

Cooling Options

HPE DL180 Gen10 Redundant Fan Kit	866947-B21
Notes: This kit contains one additional fan.	

Optical Drive Options

HPE 9.5mm SATA DVD-ROM Optical Drive	726536-B21
Notes: The ODD Enablement kit (866951-B21) is required for this option on a SFF model.	
HPE 9.5mm SATA DVD-RW Optical Drive	726537-B21
Notes: The ODD Enablement kit (866951-B21) is required for this option on a SFF model.	
HPE DL180 Gen10 SFF Optical Drive Enablement Kit	866951-B21
Notes: Cannot be seleced with 24SFF configuration	
HPE Mobile USB DVD-RW Optical Drive	701498-B21
Notes: This option is only supported on USB 3.0 ports.	

Security

HPE Gen10 Chassis Intrusion Detection Kit	867824-B21
HPE Bezel Lock Kit	875519-B21
HPE Gen10 2U Bezel Kit	867809-B21
HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21

Core Options

Field Upgrade Kits

HPE DL180 Gen10 8 to 16SFF Upgrade Kit	866957-B21
Notes: Includes cables needed to connect to S100i or Smart Array controller	
HPE DL180 Gen10 16 to 24SFF Upgrade Kit	875144-B21
Notes: Includes cables needed to connect to S100i or Smart Array controller	
HPE DL180 Gen10 8 to 12LFF Upgrade Kit	866963-B21
Notes: Includes cables needed to connect to S100i or Smart Array controller	
HPE DL180 Gen10 Rear 2SFF Enablement Kit	866961-B21
Notes: Includes rear drive cage and cables needed to connect to S100i, Smart Array controller, or expander. Cannot be used to attach rear drives to P816i-a storage controller (for connection to P816i-a, see P37790-B21).	
HPE DL180 Gen10 SFF Optical Drive Enablement Kit	866951-B21

Cable Field Upgrade Kits

HPE DL180 Gen10 SFF Box3 to Smart Array E208i-a/P408i-a Cable Kit	882011-B21
Notes: Includes cables to connect 8 SFF drive bays to Flexible Smart Array controller (P408i-a/E208i-a)	
HPE DL180 Gen10 LFF to Smart Array E208i-a/P408i-a Cable Kit	882015-B21
Notes: Includes cables to connect 8 LFF drive bays to Flexible Smart Array controller (P408i-a/E208i-a)	

HPE Processors

Please select one –L21 processor required above.
For second processor, please select the same processor model with –B21 from Core Options – HPE Processors section below.
For example: first processor, select P11161-L21 then for second processor, select P11161-B21.

Notes:

- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- Mixing of 2 different processor models is not supported.
- For first processor, -L21 will include 3 fans, For second processor, -B21 will add 2 additional fans
- When 2nd Generation Intel Xeon Scalable Processor is slected, then only DDR4-2933 Memory Kit can be selected; When 1st Generation Intel Xeon Scalable Processor is selected, then only DDR4-2666 Memory Kit can be selected.

2nd Generation Intel Xeon- Platinum

Intel Xeon-Platinum 8256 (3.8GHz/4-core/105W) Processor Kit for HPE ProLiant DL180 Gen10.	P12007-B21
Intel Xeon-Platinum 8253 (2.2GHz/16-core/125W) Processor Kit for HPE ProLiant DL180 Gen10.	P12006-B21

2nd Generation Intel Xeon-Gold

Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) Processor Kit for HPE ProLiant DL180 Gen10.	P11161-B21
Intel Xeon-Gold 6248 (2.5GHz/20-core/150W) Processor Kit for HPE ProLiant DL180 Gen10.	P11160-B21
Intel Xeon-Gold 6244 (3.6GHz/8-core/150W) Processor Kit for HPE ProLiant DL180 Gen10	P11159-B21
Intel Xeon-Gold 6242 (2.8GHz/16-core/150W) Processor Kit for HPE ProLiant DL180 Gen10	P11158-B21
Intel Xeon-Gold 6240 (2.6GHz/18-core/150W) Processor Kit for HPE ProLiant DL180 Gen10.	P11157-B21
Intel Xeon-Gold 6238 (2.1GHz/22-core/140W) Processor Kit for HPE ProLiant DL180 Gen10	P11167-B21
Intel Xeon-Gold 6234 (3.3GHz/8-core/130W) Processor Kit for HPE ProLiant DL180 Gen10.	P11166-B21
Intel Xeon-Gold 6230R (2.1GHz/26-core/150W) Processor Kit for HPE ProLiant DL180 Gen10	P24214-B21
Intel Xeon-Gold 6230 (2.1GHz/20-core/125W) Processor Kit for HPE ProLiant DL180 Gen10	P11156-B21
Intel Xeon-Gold 6226R (2.9GHz/16-core/150W) Processor Kit for HPE ProLiant DL180 Gen10	P21201-B21
Intel Xeon-Gold 6226 (2.7GHz/12-core/125W) Processor Kit for HPE ProLiant DL180 Gen10.	P11165-B21
Intel Xeon-Gold 5222 (3.8GHz/4-core/105W) Processor Kit for HPE ProLiant DL180 Gen10.	P11164-B21
Intel Xeon-Gold 5220R (2.2GHz/24-core/150W) Processor Kit for HPE ProLiant DL180 Gen10	P21202-B21
Intel Xeon-Gold 5220 (2.2GHz/18-core/125W) Processor Kit for HPE ProLiant DL180 Gen10.	P11155-B21

Core Options

Intel Xeon-Gold 5218R (2.1GHz/20-core/125W) Processor Kit for HPE ProLiant DL180 Gen10	P24213-B21
Intel Xeon-Gold 5218 (2.3GHz/16-core/125W) Processor Kit for HPE ProLiant DL180 Gen10.	P11154-B21
Intel Xeon-Gold 5217 (3.0GHz/8-core/115W) Processor Kit for HPE ProLiant DL180 Gen10.	P11153-B21
Intel Xeon-Gold 5215 (2.5GHz/10-core/85W) Processor Kit for HPE ProLiant DL180 Gen10.	P11152-B21
2nd Generation Intel Xeon- Silver	
Intel Xeon-Silver 4216 (2.1GHz/16-core/100W) Processor Kit for HPE ProLiant DL180 Gen10.	P11151-B21
Intel Xeon-Silver 4215R (3.2GHz/8-core/130W) Processor Kit for HPE ProLiant DL180 Gen10	P24215-B21
Intel Xeon-Silver 4215 (2.5GHz/8-core/85W) Processor Kit for HPE ProLiant DL180 Gen10	P11150-B21
Intel Xeon-Silver 4214R (2.4GHz/12-core/100W) Processor Kit for HPE ProLiant DL180 Gen10	P21199-B21
Intel Xeon-Silver 4214 (2.2GHz/12-core/85W) Processor Kit for HPE ProLiant DL180 Gen10.	P11149-B21
Intel Xeon-Silver 4210R (2.4GHz/10-core/100W) Processor Kit for HPE ProLiant DL180 Gen10	P21198-B21
Intel Xeon-Silver 4210 (2.2GHz/10-core/85W) Processor Kit for HPE ProLiant DL180 Gen10.	P11148-B21
Intel Xeon-Silver 4208 (2.1GHz/8-core/85W) Processor Kit for HPE ProLiant DL180 Gen10	P11147-B21
2nd Generation Intel Xeon- Bronze	
Intel Xeon-Bronze 3206R (1.9GHz/8-core/85W) Processor Kit for HPE ProLiant DL180 Gen10	P21196-B21
Intel Xeon-Bronze 3204 (1.9GHz/6-core/85W) Processor Kit for HPE ProLiant DL180 Gen10.	P11146-B21

HPE Memory

For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go to: **https://www.hpe.com/docs/memory-population-rules**

For Gen10 memory speed table, please go to: **https://www.hpe.com/docs/memory-speed-table**

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

Notes:

- Maximum memory capacity and speed per processor is dependent on processor model selection or limitation.
- DDR4-2933 Memory Kits are only supported with 2nd Generation Intel Xeon Scalable Series Processors and DDR4-2666 Memory Kits are only supported with 1st Generation Intel Xeon Scalable Series Processors.

HPE DDR4 Memory

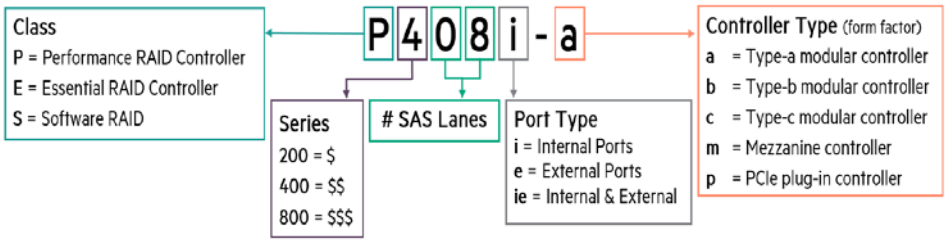
Registered DIMMs (RDIMMs) for 2nd Generation Intel Xeon Scalable Series	
HPE 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00930-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00924-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00922-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00920-B21
HPE 8GB (1x8GB) Single Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00918-B21
Registered DIMMs (RDIMMs) for 1st Generation Intel Xeon Scalable Series	
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815100-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815098-B21
HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815097-B21
Load Reduced DIMMs (LRDIMMs) for 2nd Generation Intel Xeon Scalable Series	
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart Memory Kit	P00926-B21
Load Reduced DIMMs (LRDIMMs) for 1st Generation Intel Xeon Scalable Series	
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit	815101-B21

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

Core Options

HPE Smart Array Controllers

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



Essential RAID Controllers

Notes: E208i-p and E208e-p PCIe plug-in controllers use a PCIe slot.

HPE Smart Array E208i-p SR Gen10 (8 Internal Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804394-B21
HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804398-B21
HPE Smart Array E208i-a SR Gen10 (8 Internal Lanes/No Cache) 12G SAS Modular Controller	804326-B21

Notes: SFF Box3 to Smart Array E208i-a/P408i-a Cable Kit' (882011-B21) is required for the installation of the controllers E208i-a or P408i-a

Performance RAID Controller

HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller	804338-B21

Notes: Requires either LFF for SFF P816i-a cable kit (P36415-B21, P37221-B21)

HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller	804331-B21
HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller	804405-B21
HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller	830824-B21

Notes: 'SFF Box3 to Smart Array E208i-a/P408i-a Cable Kit' (882011-B21) is required for the installation of the controllers E208i-a or P408i-a

SAS Expander

HPE DL180 Gen10 12Gb SFF SAS Expander Card FIO Kit with Cables	875132-B21

Notes:

- Connects more than 8 drives to a single controller
- This option comes with the necessary cables to connect to the corresponding controller and to the drive backplane
- This option can only be used in Slot 1 on 8SFF CTO model (879517-B21)

HPE Cable Options

HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit	P02377-B21

Notes: Supports up to 3 P-class Smart Array controllers

HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21

Notes: Supports up to 6 P-class Smart Array controllers

HPE DL180 Gen10 SFF Box3 to Smart Array E208i-a/P408i-a Cable Kit	882011-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
HPE Smart Array SR SmartCache (Single Key/Multiple Servers) E-LTU	D7S27AAE

Notes: Smart Cache is offered on HPE Smart Array performance RAID controllers

Core Options

HPE Drives

Mission Critical (Enterprise) - 12G SAS - SFF Drives

HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	881457-B21
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	872481-B21
HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872479-B21
HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872477-B21
HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872475-B21
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870759-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870757-B21
HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870753-B21

Mission Critical (Enterprise) - 12G SAS - LFF Drives

HPE 600GB SAS 12G Mission Critical 15K LFF LPC 3-year Warranty HDD	P40431-B21

Business Critical (Midline) - 12G SAS- SFF Drives

HPE 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	765466-B21
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	832514-B21

Business Critical (Midline) - 12G SAS - LFF Drives

HPE 12TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD	881781-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware HDD	834031-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	861746-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	833928-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	833926-B21

Business Critical (Midline) - 6G SATA- SFF Drives

HPE 2TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765455-B21
HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	655710-B21

Business Critical (Midline) - 6G SATA - LFF Drives

HPE 12TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD	881787-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware HDD	834028-B21
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	861742-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861683-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861681-B21
HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861686-B21

SSD Selection

For SSD selection guidance, please visit **https://ssd.hpe.com/**

Read Intensive - 12G SAS - SFF - Solid State Drives

HPE 15.3TB SAS 24G Read Intensive SFF SC PM6 SSD	P26314-B21
HPE 7.68TB SAS 24G Read Intensive SFF SC PM6 SSD	P26310-B21
HPE 7.68TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P37003-B21
HPE 3.84TB SAS 24G Read Intensive SFF SC PM6 SSD	P26306-B21
HPE 3.84TB SAS 12G Read Intensive SFF SC SS540 SSD	P21143-B21
HPE 3.84TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P37001-B21
HPE 1.92TB SAS 12G Read Intensive SFF SC SS540 SSD	P21141-B21
HPE 1.92TB SAS 12G Read Intensive SFF SC PM1643a SSD	P19905-B21
HPE 1.92TB SAS 24G Read Intensive SFF SC PM6 SSD	P26302-B21
HPE 1.92TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P36999-B21
HPE 960GB SAS 12G Read Intensive SFF SC SS540 SSD	P21139-B21
HPE 960GB SAS 12G Read Intensive SFF SC PM1643a SSD	P19903-B21

Core Options

HPE 960GB SAS 24G Read Intensive SFF SC PM6 SSD	P26285-B21
HPE 960GB SAS 12G Read Intensive SFF SC PM5 SSD	P04517-B21
HPE 960GB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P36997-B21
Mixed Use - 12G SAS - SFF - Solid State Drives	
HPE 6.4TB SAS 24G Mixed Use SFF SC PM6 SSD	P26362-B21
HPE 3.84TB SAS 12G Mixed Use SFF SC Value SAS Multi Vendor SSD	P37017-B21
HPE 3.2TB SAS 24G Mixed Use SFF SC PM6 SSD	P26358-B21
HPE 3.2TB SAS 12G Mixed Use SFF SC SS540 SSD	P21135-B21
HPE 1.92TB SAS 12G Mixed Use SFF SC Value SAS Multi Vendor SSD	P37011-B21
HPE 1.6TB SAS 24G Mixed Use SFF SC PM6 SSD	P26354-B21
HPE 1.6TB SAS 12G Mixed Use SFF SC SS540 SSD	P21133-B21
HPE 1.6TB SAS 12G Mixed Use SFF SC PM1645a SSD	P19915-B21
HPE 960GB SAS 12G Mixed Use SFF SC Value SAS Multi Vendor SSD	P37005-B21
HPE 800GB SAS 12G Mixed Use SFF SC SS540 SSD	P21131-B21
HPE 800GB SAS 12G Mixed Use SFF SC PM1645a SSD	P19913-B21
HPE 800GB SAS 24G Mixed Use SFF SC PM6 SSD	P26290-B21
Write Intensive - 12G SAS - SFF - Solid State Drives	
HPE 1.6TB SAS 24G Write Intensive SFF SC PM6 SSD	P26376-B21
HPE 1.6TB SAS 12G Write Intensive SFF SC SS540 SSD	P21129-B21
HPE 800GB SAS 12G Write Intensive SFF SC SS540 SSD	P21127-B21
HPE 800GB SAS 24G Write Intensive SFF SC PM6 SSD	P26372-B21
HPE 800GB SAS 12G Write Intensive SFF SC PM5 SSD	P04543-B21
HPE 400GB SAS 12G Write Intensive SFF SC SS540 SSD	P21125-B21
HPE 400GB SAS 24G Write Intensive SFF SC PM6 SSD	P26295-B21
HPE 400GB SAS 12G Write Intensive SFF SC PM5 SSD	P04541-B21
Mixed Use - 12G SAS - LFF - Solid State Drives	
HPE 960GB SAS 12G Mixed Use LFF LPC Value SAS Multi Vendor SSD	P37009-B21
Read Intensive - SATA - SFF - Solid State Drives	
HPE 7.68TB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18430-B21
HPE 3.84TB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18428-B21
HPE 3.84TB SATA 6G Read Intensive SFF SC 5300P SSD	P19943-B21
HPE 3.84TB SATA 6G Read Intensive SFF SC S4510 SSD	P05946-B21
HPE 1.92TB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18426-B21
HPE 1.92TB SATA 6G Read Intensive SFF SC 5300P SSD	P19941-B21
HPE 1.92TB SATA 6G Read Intensive SFF SC S4510 SSD	P05938-B21
HPE 960GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18424-B21
HPE 960GB SATA 6G Read Intensive SFF SC 5300P SSD	P19939-B21
HPE 960GB SATA 6G Read Intensive SFF SC S4510 SSD	P05932-B21
HPE 480GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18422-B21
HPE 480GB SATA 6G Read Intensive SFF SC 5300P SSD	P19937-B21
HPE 480GB SATA 6G Read Intensive SFF SC S4510 SSD	P05928-B21
HPE 480GB SATA 6G Read Intensive SFF SC PM883 SSD	P04560-B21
HPE 240GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18420-B21
HPE 240GB SATA 6G Read Intensive SFF SC 5300P SSD	P19935-B21
HPE 240GB SATA 6G Read Intensive SFF SC S4510 SSD	P05924-B21
Very Read Optimized- SATA – SFF – Solid State Drives	
HPE 3.84TB SATA 6G Very Read Optimized SFF SC 5210 SSD	P23489-B21
HPE 1.92TB SATA 6G Very Read Optimized SFF SC 5210 SSD	P23487-B21

Core Options

Mixed Use - SATA - SFF - Solid State Drives

HPE 3.84TB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18438-B21
HPE 3.84TB SATA 6G Mixed Use SFF SC 5300M SSD	P19953-B21
HPE 1.92TB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18436-B21
HPE 1.92TB SATA 6G Mixed Use SFF SC 5300M SSD	P19951-B21
HPE 1.92TB SATA 6G Mixed Use SFF SC SM883 SSD	P09722-B21
HPE 1.92TB SATA 6G Mixed Use SFF SC S4610 SSD	P05986-B21
HPE 960GB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18434-B21
HPE 960GB SATA 6G Mixed Use SFF SC 5300M SSD	P19949-B21
HPE 960GB SATA 6G Mixed Use SFF SC SM883 SSD	P09716-B21
HPE 960GB SATA 6G Mixed Use SFF SC S4610 SSD	P05980-B21
HPE 480GB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18432-B21
HPE 480GB SATA 6G Mixed Use SFF SC 5300M SSD	P19947-B21
HPE 480GB SATA 6G Mixed Use SFF SC SM883 SSD	P09712-B21
HPE 480GB SATA 6G Mixed Use SFF SC S4610 SSD	P05976-B21

Read Intensive - SATA - LFF - Solid State Drives

HPE 960GB SATA 6G Read Intensive LFF LPC PM883 SSD	P09691-B21
HPE 480GB SATA 6G Read Intensive LFF LPC 5300P SSD	P19974-B21

Very Read Optimized- SATA – LFF – Solid State Drives

HPE 7.68TB SATA 6G Very Read Optimized LFF LPC 5210 SSD	P23495-B21
HPE 3.84TB SATA 6G Very Read Optimized LFF LPC 5210 SSD	P23491-B21

Mixed Use - SATA - LFF - Solid State Drives

HPE 960GB SATA 6G Mixed Use LFF LPC 5300M SSD	P19980-B21

Internal Dual M.2 Kit

HPE Universal SATA 6G AIC HHHL M.2 SSD Enablement Kit	878783-B21

Notes: The Universal SATA M.2 Kit above will require a PCIe slot and support up to two of the same M.2 cards below.

Read Intensive - M.2 - Solid State Drives (2280 type)

HPE 960GB SATA 6G Read Intensive M.2 2280 5300P SSD	P19892-B21
HPE 480GB SATA 6G Read Intensive M.2 2280 5300P SSD	P19890-B21
HPE 240GB SATA 6G Read Intensive M.2 2280 5300B SSD	P19888-B21

M.2 Cable Kit

HPE DL160 Gen10 SATA M.2 Cable Kit	866456-B21

Notes: Must be selected along with “HPE Universal SATA HHHL 3yr Wty M.2 Kit- 878783-B21”

Hard Drive Blank Kits

HPE Small Form Factor Hard Drive Blank Kit	666987-B21
HPE Gen9 LFF HDD Spade Blank Kit	807878-B21

HPE Networking

25 Gigabit Ethernet adapters

HPE Ethernet 10/25Gb 2-port SFP28 QL41401-A2G Adapter	867328-B21
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter	817718-B21
HPE Ethernet 10/25Gb 2-port SFP28 MCX4121A-ACUT Adapter	817753-B21

10 Gigabit Ethernet adapters

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

Notes: Max 1 per system

HPE Ethernet 10Gb 2-port BASE-T 57810S Adapter	656596-B21

Core Options

HPE Ethernet 10Gb 2-port SFP+ 57810S Adapter	652503-B21
HPE Ethernet 10Gb 2-port BASE-T BCM57416 Adapter	813661-B21
HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter	727055-B21
HPE Ethernet 10Gb 2-port BASE-T X550-AT2 Adapter	817738-B21

1 Gigabit Ethernet adapters

HPE Ethernet 1Gb 4-port BASE-T BCM5719 Adapter	647594-B21
HPE Ethernet 1Gb 4-port BASE-T I350-T4V2 Adapter	811546-B21

Notes: Max 1 per system. Can only be installed in Slot 1

HPE Ethernet 1Gb 2-port BASE-T I350-T2V2 Adapter	652497-B21
HPE Ethernet 1Gb 2-port BASE-T BCM5720 Adapter	615732-B21

FlexibleLOM adapters

HPE Ethernet 10/25Gb 2-port FLR-SFP28 MCX4121A-ACFT Adapter	817749-B21
HPE Ethernet 10/25Gb 2-port FLR-SFP28 BCM57414 Adapter	817709-B21
HPE Ethernet 10/25Gb 2-port FLR-SFP28 QL41401-A2G Converged Network Adapter	867334-B21
HPE Ethernet 10Gb 2-port FLR-SFP+ X710-DA2 Adapter	727054-B21
HPE Ethernet 10Gb 2-port FLR-T X550-AT2 Adapter	817745-B21
HPE FlexFabric 10Gb 4-port FLR-T 57840S Adapter	764302-B21
HPE Ethernet 10Gb 2-port FLR-T BCM57416 Adapter	817721-B21
HPE FlexFabric 10Gb 2-port FLR-SFP+ 57810S Adapter	700751-B21
HPE FlexFabric 10Gb 2-port FLR-T 57810S Adapter	700759-B21
HPE Ethernet 1Gb 4-port FLR-T BCM5719 Adapter	629135-B22
HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter	665240-B21

Notes:

- The DL180 Gen10 ships with 2x 1 Gb Embedded Network controller.
- Only one FlexibleLOM can be added to the server. These options are upgradeable and can be changed from the original configuration after the server is shipped.
- FlexibleLOM Enablement Kit (866941-B21) is required to install these adapters
- 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/adapters/pip.models.hpe-storefabric-converged-network-adapters.4118472.html**

Media Module adapters

HPE Ethernet 1Gb 2-port 368T Media Module Adapter	866464-B21
HPE Ethernet 10Gb 2-port 568SFP+ Media Module Adapter	866467-B21
HPE Ethernet 10Gb 2-port 568T Media Module Adapter	866470-B21

Notes:

- The DL180 Gen10 chassis ships with 2x 1 Gb embedded.
- Only one Media Module can be added to the server. These options are upgradeable and can be changed from the original configuration after the server is shipped
- These adapters should be installed in the Media Module connector slot on the system board only.
- Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately.

HPE Power Supplies

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

Core Options

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

HPE Flex Slot Power Supplies

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21
HPE DL160/180 Gen10 Redundant Power Supply Enablement Kit	866442-B21

Notes: This enablement kit is required with the selection of a Flex Slot power supply

Additional Options

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

Embedded Management

HPE iLO Advanced

HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features	E6U59ABE
HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	512485-B21
HPE iLO Advanced Flexible Quantity License with 1yr Support on iLO Licensed Features	512486-B21
HPE iLO Advanced AKA Tracking License with 1yr Support on iLO Licensed Features	512487-B21
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 Common Password Setting

HPE iLO Common Password FIO Setting	P08040-B21

Notes:

- Replaces iLO default randomized password by an HPE defined common password. HPE highly recommends changing this password immediately after the initial onboarding process.
- Customers who want to choose their own custom iLO default password should use the HPE Factory Express Integration Services

HPE Converged Infrastructure Management Software

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

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

Notes:

- 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**
- Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.
- Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be downloaded at: **https://www.hpe.com/us/en/integrated-systems/software.html**

HPE Storage Options

Emulex Fibre Channel HBAs

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

Additional Options

QLogic Fibre Channel HBAs

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

HPE Rack Options

Rail Kits

HPE 2U Small Form Factor Easy Install Rail Kit	733660-B21
Notes: This (733660-B21) Rail kit can alos be used for LFF chassis.	
HPE 2U Cable Management Arm for Easy Install Rail Kit	733664-B21

HPE Racks

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

HPE Power Distribution Units (PDUs)

- Please see the **HPE Basic Power Distribution Units (PDU) QuickSpecs** for information on these products and their specifications.
- Please see the **HPE Metered Power Distribution Units (PDU) QuickSpecs** for information on these products and their specifications.
- Please see the **HPE Intelligent Power Distribution Unit (PDU) QuickSpecs** for information on these products and their specifications.
- Please see the **HPE Metered and Switched Power Distribution Units (PDU) QuickSpecs** for information on these products and their specifications.

HPE Uninterruptible Power Systems (UPS)

- To learn more, please visit the **HPE Uninterruptible Power Systems (UPS) web page**.
- Please see the **HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs** for information on these products and their specifications.
- Please see the **HPE Line Interactive Single Phase UPS QuickSpecs** for information on these products and their specifications.

HPE Rack Options

- Please see the **HPE IT Access and Control** for information on these products and their specifications.

HPE USB and SD Options

HPE Enterprise Mainstream Flash Media Kits for Memory Cards

HPE 32GB microSD Flash Memory Card	700139-B21
HPE 32GB microSD RAID 1 USB Boot Drive	P21868-B21

Additional Options

HPE Support Services

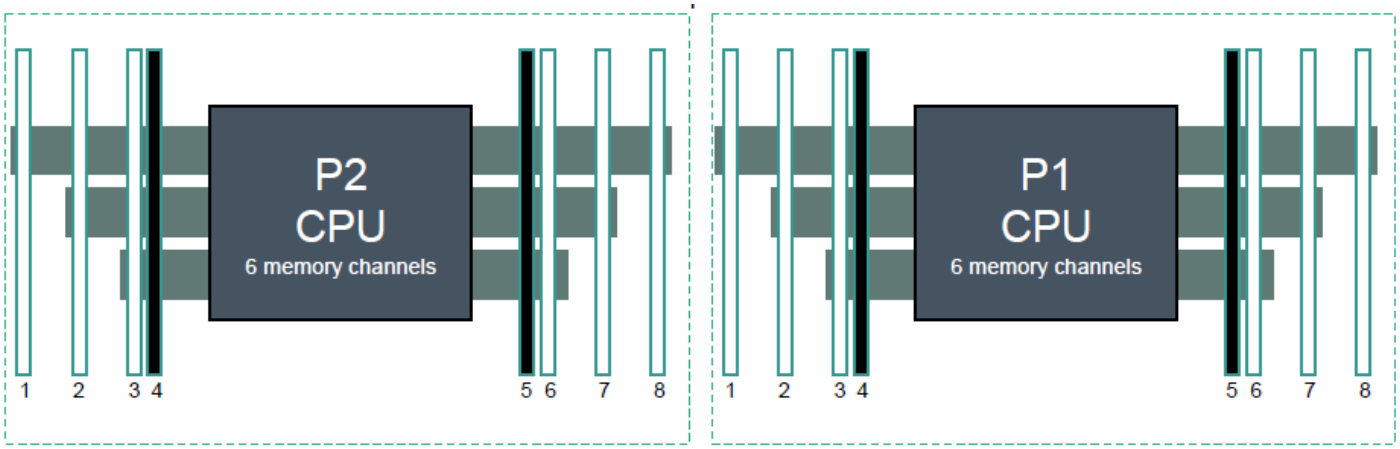
Tech Care

HPE 5 Year Tech Care Essential DL180 Gen10 Service	HV6V3E
HPE 5 Year Tech Care Essential wDMR DL180 Gen10 Service	HV6V6E
HPE 3 Year Tech Care Essential DL180 Gen10 Service	HV6V1E
HPE 3 Year Tech Care Essential wDMR DL180 Gen10 Service	HV6V4E

Notes: For a full listing of support services available for this server, please visit **http://www.hpe.com/services.**

Memory

Memory Population guidelines



HPE DL160/DL180 Gen 10 Servers Front Server
(2+1+1 slots per channel)

1 DIMM			**3**					
2 DIMM s		**2**	**3**					
3 DIMM s	**1**	**2**	**3**					
4 DIMM s		**2**	**3**			**6**	**7**	
5 DIMM s*	**1**	**2**	**3**			**6**	**7**	
6 DIMM s	**1**	**2**	**3**			**6**	**7**	**8**
7 DIMM s*	**1**	**2**	**3**	**4**		**6**	**7**	**8**
8 DIMM s*	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**

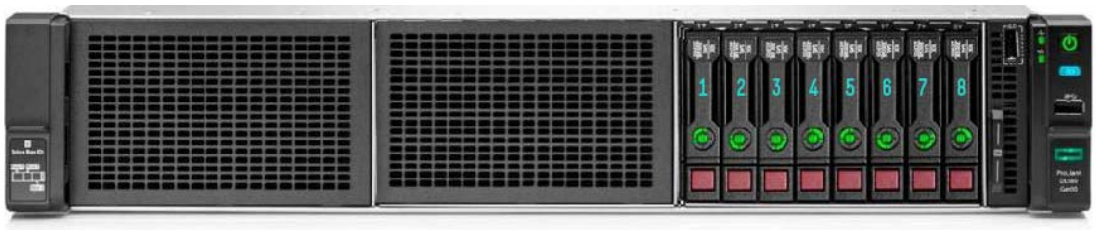
HPE ProLiant Gen10 8 slot per CPU DIMM population order
Notes:*Unbalanced, not recommended

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.
- 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.**

Notes: The maximum memory speed is a function of the memory type, memory configuration, and processor model
For details on the HPE Server Memory speed, visit: **https://www.hpe.com/docs/memory-speed-table**

Storage



8 SFF Drives

8LFF Drives

12LFF Drives

Technical Specifications

System Unit

Dimensions (Height X Width X Depth)

- 8.75 x 44.54 x 63.47 cm
  3.44 x 17.54 x 24.99 in (Dimensions for 12LFF)

Weight (approximate)

- **Minimum**
  8 SFF/LFF chassis with 1x SFF/LFF HDD and 7 HDD blanks, 2x Drive Bay blanks, 1x processor including standard heatsink, 1x power supply (plus blank), 1x Smart Array, 1x Riser installed, cables for the above)
  - 13.0 kg--26.0 kg
    28.0lb--58.0 lb

Input Requirements(per power supply)

Rated Line Voltage

- 100 to 120 VAC
- 200 to 240 VAC

BTU Rating

- **Maximum**
  For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VAC) for China Only

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Power Supply Output(per power supply)

- **Rated Steady-State Power**
  For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VAC) input for China only

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System Inlet Temperature

- **Standard Operating Temperature**
  10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed.

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

  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).

Technical Specifications

Relative Humidity

- **Operating**
  8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.
- **Non-operating** (Non-condensing)
  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 (L_{WAd}) and declared average bystander position A-Weighted sound pressure levels (L_{pAm}) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. Please have your HPE representative provide information from the HPE EMESC website for further technical details regarding the configurations listed below.

Configuration SKU	Entry(LFF)/ (SFF)	Base(LFF)/ SFF)	Performance(LFF)/ (SFF)
Idle			
L_{WAd}	4.2 B	4.3 B	4.7 B
L_{pAm}	26.6 dBA	27.0 dBA	28.5 dBA
Operating			
L_{WAd}	5.2 B	5.4 B	5.7 B
L_{pAm}	35.4 dBA	37.2 dBA	39.7 dBA

Notes:

- 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.
- Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.
- The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

Emissions Classification (EMC) – 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

HPE Smart Array

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.**

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
06-Apr-2021	Version 20	Changed	Service and Support and Additional Options sections were updated. Obsolete SKUs were removed.
01-Feb-2021	Version 19	Changed	Overview and Core Options sections were updated. Obsolete SKUs were removed.
07-Dec-2020	Version 18	Changed	Overview, Standard Features, Configuration Information, Core Options and Additional Options sections were updated. Obsolete SKUs were removed.
05-Oct-2020	Version 17	Changed	Pre- Configured Models, Configuration Information, Core Options and Additional Options sections were updated. Obsolete SKUs were removed.
08-Sep-2020	Version 16	Changed	Overview, Standard Features, Pre- Configured Models, Configuration Information, Core Options and Additional Options sections were updated. Obsolete SKUs were removed.
01-Jun-2020	Version 15	Changed	Overview, Configuration Information, Core Options and Additional Options sections were updated.
06-Apr-2020	Version 14	Changed	Core Options section was updated.
16-Mar-2020	Version 13	Changed	Service and Support, Pre- Configured Models, Core Options and Additional Options sections were updated.
03-Feb-2020	Version 12	Changed	Overview, Standard Features,Configuration Information, Pre- Configured Models, Core Options, Additional Options and Memory sections were updated.
02-Dec-2019	Version 11	Changed	Configuration Information, Core Options, and Additional Options were updated.
18-Nov-2019	Version 10	Changed	Overview, Standard Features, Configuration Information, Core Options, and Additional Options were updated.
04-Nov-2019	Version 9	Changed	Standard Features and Additional Options section were updated.
07-Oct-2019	Version 8	Changed	Overview, Standard Features, Pre-configured Models, Core Options, Additional Options, Memory and Technical Specifications sections were updated. Obsolete SKUs were removed.
12-Aug-2019	Version 7	Changed	Overview, Standard Features and Additional Options sections were updated.
30-Jul-2019	Version 6	Changed	Additional Options section was updated.
01-Jul-2019	Version 5	Changed	Overview, Standard Features, Service and Support, Configuration Information and Additional Options sections were updated.
03-Jun-2019	Version 4	Changed	Overview, Standard Features, Service and Support, Configuration Information, Additional Options, Memory, Storage and Technical Specifications sections were updated.
02-Apr-2019	Version 3	Changed	Standard Features and Additional Options sections were updated.
04-Mar-2019	Version 2	Changed	Internal View image has been updated
04-Feb-2019	Version 1	New	New QuickSpecs.

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