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CATALOGO

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Boa tarde segue catálogo referente a licitação 004/2024 pela empresa RR COMERCIO DE EQUIPAMENTOS E INFORMATICA LTDA.

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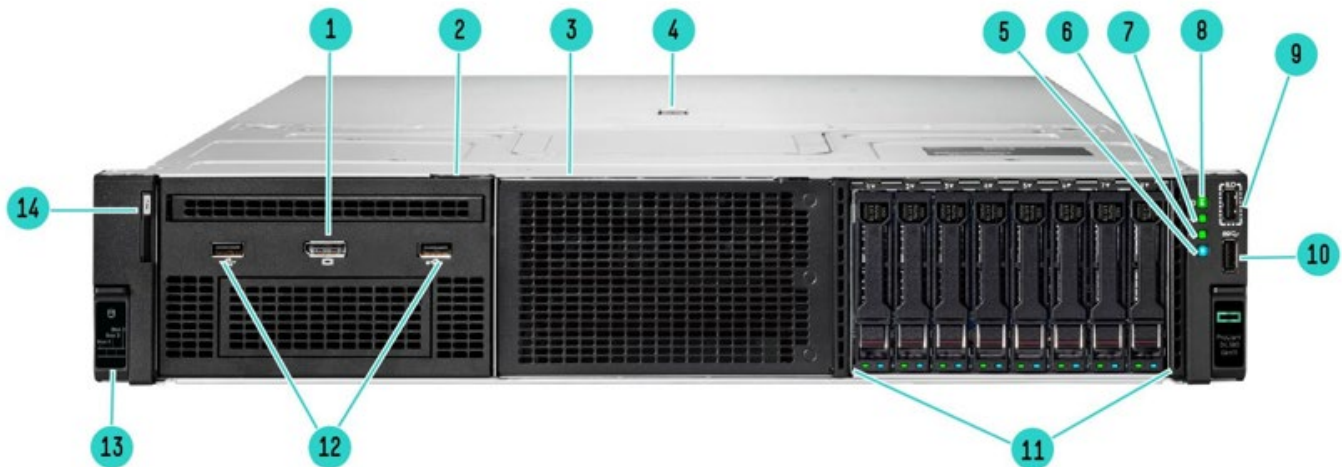


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Overview

HPE ProLiant DL380 Gen11

Adaptable for diverse workloads and environments, the secure 2P 2U HPE ProLiant DL380 Gen11 Servers delivers world-class performance with the right balance of expandability and scalability. Designed for supreme versatility and resiliency 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.



Front View – 8SFF chassis with optional Universal Media Bay shown

- | | |
|--|---|
| 1. Optional Front Display Port (via Universal Media Bay) | 8. Power On / Standby button / LED |
| 2. Box 1 (shown with optional Universal Media Bay installed) | 9. iLO Service Port |
| 3. Box 2 (Empty) | 10. USB 3.2 Gen1 |
| 4. Quick removal access panel | 11. Box 3 (shown with 8SFF drives populated) |
| 5. Unit Identification button/LED | 12. Optional USB 2.0 port (via Universal Media Bay) |
| 6. NIC Status ¹ | 13. Drive Support Label |
| 7. Health LED | 14. Serial Number Label Pull Tab |

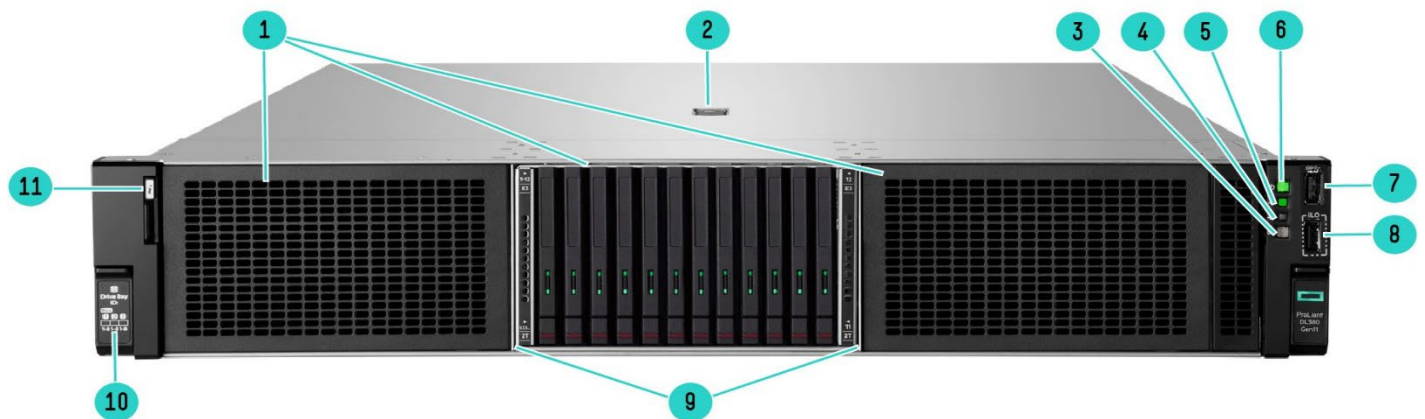
Notes: ¹Front NIC LED display doesn't support NIC LED ACT/LINK indication from ALOM/PCIE/FLOM NIC's

Overview



Front View – 12LFF chassis shown

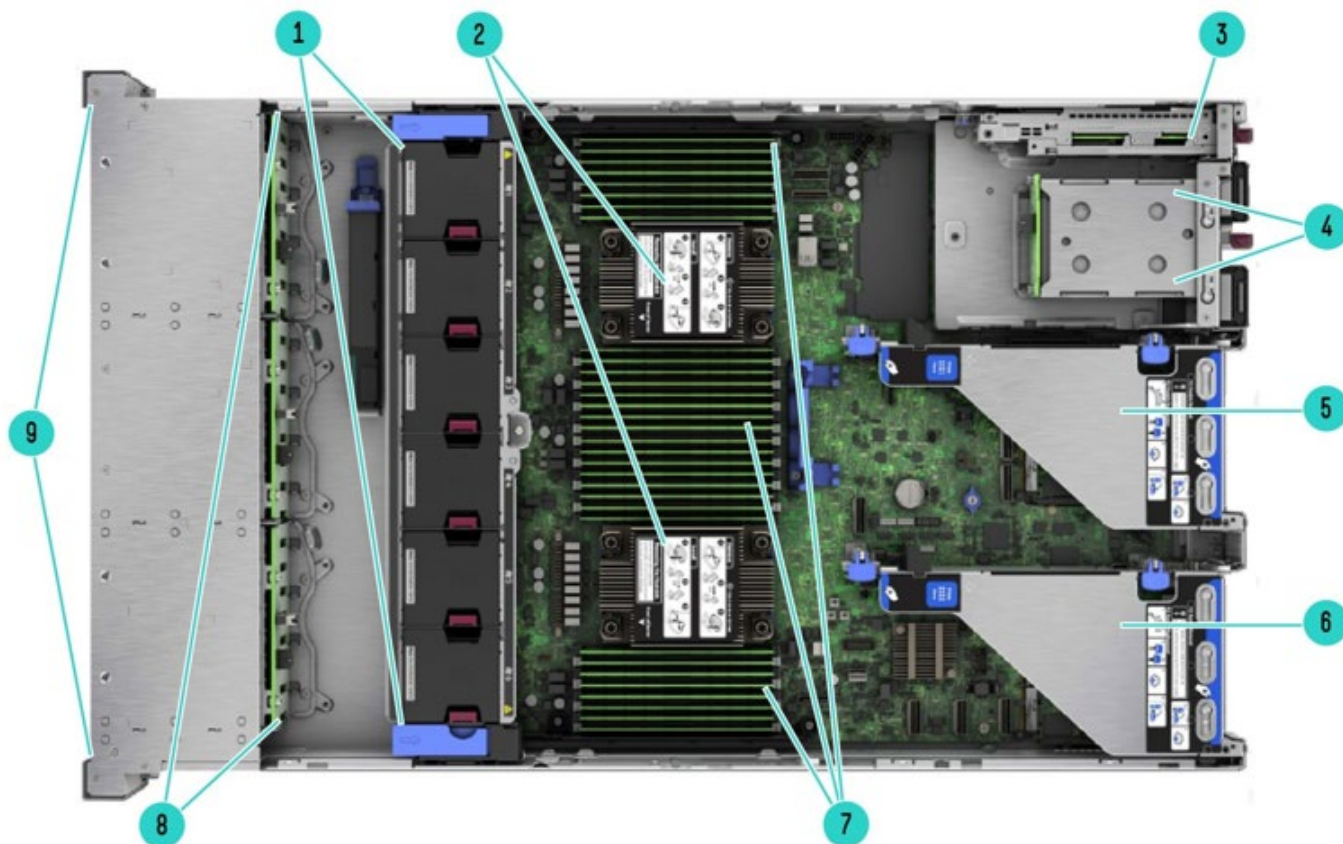
- | | |
|-------------------------------------|----------------------------------|
| 1. Quick removal access panel | 6. iLO Service Port |
| 2. Unit Identification Button / LED | 7. USB 3.2 Gen1 Port |
| 3. NIC Status | 8. 12 x LFF Media |
| 4. Health LED | 9. Drive support label |
| 5. Power On / Standby button / LED | 10. Serial Number Label Pull Tab |



Front View – 12EDSFF chassis shown

- | | |
|--------------------------------------|----------------------------------|
| 1. 12EDSFF drive bays optical drive | 7. iLO Service Port |
| 2. Quick removal access panel | 8. USB 3.2 Gne1 |
| 3. UID Button / LED | 9. 12x EDSFF Media |
| 4. NIC Status | 10. Drive support label |
| 5. Health LED | 11. Serial Number Label Pull Tab |
| 6. Power On / Standby button and LED | |

Overview



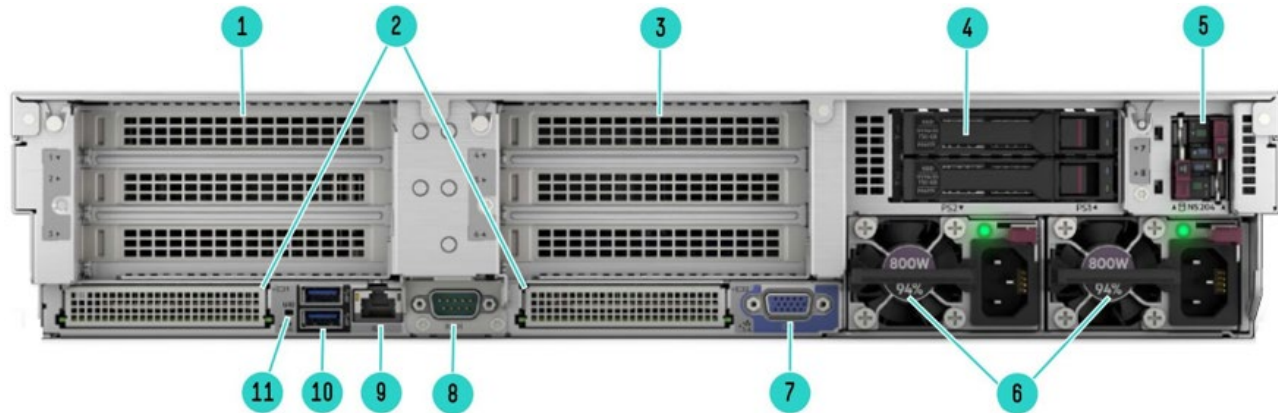
Internal View 8SFF chassis

- | | |
|---|---|
| 1. Hot Plug Fans ¹ | 6. Primary Riser |
| 2. Processors, heatsinks showing | 7. DIMM slots, shown fully populated in 32 slots ² |
| 3. Optional NS204i-u Boot Device | 8. Drive Backplanes |
| 4. Hot Plug redundant HPE Flexible Slot Power Supplies | 9. Drive Cages |
| 5. Secondary Riser (Optional) (Requires second processor) | |

Notes:

- ¹High performance temperature fans optional
- ²Shown fully populated in 32 slots (16 per processor)

Overview



Rear View – Standard for all DL380 Gen11

- | | |
|---|----------------------------------|
| 1. Primary Riser. PCIe 5.0 Slots (Slots 1-3) | 6. Power Supply |
| 2. OCP NIC 3.0 Slots, shown covered | 7. VGA Connector |
| 3. Secondary Riser. PCIe 5.0 Slots (Slots 4-6) | 8. Serial Port Optional |
| 4. Tertiary Riser (Slots 7-8) shown with optional 2SFF drive cage installed | 9. Dedicated iLO Management Port |
| 5. Optional NS204i-u Boot Device | 10. USB 3.2 Gen1 Connectors (2) |
| | 11. UID Indicator LED |

Notes: ¹ Supports various NICs, and Storage controllers.

Platform Information

Form Factor

- 2U rack

Chassis Types

- 8SFF (SAS/SATA/NVMe) with optional 6SFF Universal Media Bay (P50728-B21), and/or up to 6SFF rear drive bay options.
- 24SFF bay (SAS/SATA/NVMe) with up to 6SFF rear drive bay options for a total 30 SFF drives.
- 8LFF supporting 2SFF front, and up to 4LFF rear or 2SFF rear drive bay options.
- 12LFF with optional 4LFF rear for a total of 16LFF drives.
- 12EDSFF (NVMe) supporting up to 36 EDSFF in front and up to 2SFF rear drive bay option

Notes:

- The 8SFF chassis is upgraded to support up to 24SFF (front) with a variety of 8SFF Drive Cages to select from, including 8SFF U.3 x4/x2 Trimode, 8SFF U.3 (x1 Trimode), and 8SFF SAS/SATA. See “Drive Cages” section within this document for options.
- The 8SFF chassis comes with an 8SFF U.3 x1 Trimode drive bay by default in bay 3.
- The Universal Media Bay (P50728-B21) is only available as an option for the 8SFF chassis and can only be populated in Box 1.
- The 2LFF primary and 2LFF secondary rear cages will consume all PCIe slots for the primary and secondary riser, respectively
- The 8LFF chassis cannot be upgraded to 12LFF front in the field.
- The 2LFF primary and 2LFF secondary rear cages supported in LFF chassis only.

Overview

System Fans

- High Performance Fan Kit – required for all CPUs over 205W TDP.

Notes:

- On 8SFF CTO server models ship with 4 standard fans.
 - The 12LFF and 8LFF CTO server models ship with 4 standard fans.
 - The 24SFF CTO server model ships with 6 high performance fans.
 - The High-Performance fan kit (P48820-B21) is available to meet ambient temperature requirements.
 - In general, the Maximum Performance fan kit is required when rear drives, or >205W Processors SKUs, or High Performance NVMe drives, three drive cages, mid-tray, GPU card, or certain backplanes are populated. See notes under each option category or each individual option for specifics.
-



Standard Features

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

- The 2nd digit of the processor model number “x4xx” is used to denote the processor generation (i.e. 4=4th generation Intel Scalable Series Processors)
- The required firmware for the 5th Generation Intel Xeon Processors is not compatible with the DL380 Gen11 system board shipped with the 4th Generation Intel Xeon Processors. A new server order (latest firmware system board) is required for the activation of the 5th Generation Intel Xeon Processors. Field upgrade from the 4th Generation Intel Xeon Processors to the 5th Generation is not supported.

For more information regarding Intel Xeon processors, please see the following <https://www.intel.com/xeon>.

This table covers the public Intel offering only.

Processor Suffix	Description	Offering
H	Database and Analytics	Highest core counts. Database and Analytics usages benefit from Intel Data Streaming Accelerator (DSA) and Intel In-Memory Accelerator Analytics (IAA)
M	Media Transcode	Optimized for Intel Advanced Vector Extensions (AVX) frequencies to deliver better performance/watt for Media, AI, and HPC workloads.
N	Network/5G/Edge (High Throughput / Low Latency)	Designed for Network Function Virtualization and networking workloads, such as: L3 forwarding, 5G User Plane Function, Open vSwitch Data Plane Development Kit, Vector Packet Processing FIB router, VPP IPsec, web server/NGINX, vEPC, vBNG, and vCMTS.
S	Storage and HCI	Optimized for Storage UMA use cases with increased UPI Bandwidth for vs Mainline SKUs.
P	Cloud - IAAS	Designed for cloud IaaS environments to deliver higher frequencies at constrained TDPs.
Q	Liquid Cooling	Liquid cooled processors with higher frequency and performance at same TDP.
U	Single Socket Optimized	Optimized for targeted platforms adequately served by the cores, memory bandwidth and IO capacity available from a single processor
V	Cloud - SAAS	Optimized for orchestration efficiency that delivers higher core counts and VMs per rack.
Y	Intel SST-PP (Speed Select Technology - Performance Profile)	Intel® SST-PP increases base frequency when fewer cores are enabled. Allows greater flexibility, deployment options and platform longevity.

5 th Generation Intel® Xeon® Scalable Processor Family (Platinum)								
Intel® Xeon® Models	Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size	Die
Platinum 8593Q Processor	2.2 GHz	64	320 MB	385W	4	5600 MT/s	512 GB	XCC
Platinum 8592+ Processor	1.9 GHz	64	320 MB	350W	4	5600 MT/s	512 GB	XCC
Platinum 8592V Processor	2.0 GHz	64	320 MB	330W	3	4800 MT/s	512 MB	XCC
Platinum 8581V ¹ Processor	2.0 GHz	60	300 MB	270W	0	4800 MT/s	512 GB	XCC
Platinum 8580 Processor	2.0 GHz	60	300 MB	350W	4	5600 MT/s	512 GB	XCC
Platinum 8570 Processor	2.1 GHz	56	300 MB	350W	4	5600 MT/s	512 GB	XCC
Platinum 8568Y Processor	2.3 GHz	48	300 MB	350W	4	5600 MT/s	512 GB	XCC
Platinum 8562Y+ Processor	2.8 GHz	32	60.0 MB	300W	3	5600 MT/s	512 GB	MCC
Platinum 8558P Processor	2.7 GHz	48	260 MB	350W	3	5600 MT/s	512 GB	XCC
Platinum 8558 Processor	2.1 GHz	48	260 MB	330W	4	5200 MT/s	512 GB	XCC
Platinum 8558U1 Processor	2.0 GHz	48	260 MB	300W	0	4800 MT/s	512 GB	XCC

Standard Features

Notes:

- In 300Watt processor one socket configuration, the air cooling with Performance Heatsinks & Performance Fan Kits can be supported. Field upgrade to two socket is not supported with air cooling solution.
- ¹Single socket only, no dual socket support
- Intel® Speed Select enabled processors: Platinum 8593Q, 8592V, 8581V, 8568Y+, 8562Y+, 8558P, 8558 and 8558U

5th Generation Intel® Xeon® Scalable Processor Family (Gold 6)

Intel® Xeon® Models	Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size	Die
Gold 6558Q Processor	3.2 GHz	32	60.0 MB	350W	3	5200 MT/s	128 GB	MCC
Gold 6554S Processor	2.2 GHz	36	180 MB	270W	4	5200 MT/s	128 GB	XCC
Gold 6548N Processor	2.8 GHz	32	60.0 MB	300W	3	5200 MT/s	128 GB	MCC
Gold 6548Y+ Processor	2.5 GHz	32	60.0 MB	250W	3	5200 MT/s	128 GB	MCC
Gold 6544Y Processor	3.6 GHz	16	45.0 MB	270W	3	5200 MT/s	128 GB	MCC
Gold 6542Y Processor	2.9 GHz	24	60.0 MB	250W	3	5200 MT/s	128 GB	MCC
Gold 6538N Processor	2.1 GHz	32	60.0 MB	205W	3	5200 MT/s	128 GB	MCC
Gold 6538Y+ Processor	2.2 GHz	32	60.0 MB	225W	3	5200 MT/s	128 GB	MCC
Gold 6534 Processor	3.9 GHz	8	22.5 MB	195W	3	4800 MT/s	128 GB	MCC
Gold 6530 Processor	2.1 GHz	32	160 MB	270W	3	4800 MT/s	128 GB	XCC
Gold 6526Y Processor	2.8 GHz	16	37.5 MB	195W	3	5200 MT/s	128 GB	MCC

Notes:

- One or two processor(s)
- Intel® Speed Select enabled processors: Gold 6558Q, 6554S, 6548N, 6548Y+, 6544Y, 6542Y, 6538N, 6538Y+ and 6526Y

5th Generation Intel® Xeon® Scalable Processor Family (Gold 5)

Intel® Xeon® Models	Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size	Die
Gold 5520+ Processor	2.2 GHz	28	52.5 MB	205W	3	4800 MT/s	128 GB	MCC
Gold 5515+Processor	3.2 GHz	8	22.5 MB	165W	3	4800 MT/s	128 GB	MCC

Notes:

- One or two processor(s)
- Intel® Speed Select enabled processors: N.A.

5th Generation Intel® Xeon® Scalable Processor Family (Silver)

Intel® Xeon® Models	Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size	Die
Silver 4516+ Processor	2.2 GHz	24	45.0 MB	185W	2	4400 MT/s	64 GB	MCC
Silver 4514Y Processor	2.0 GHz	16	30.0 MB	150W	2	4400 MT/s	64 GB	MCC
Silver 4510 Processor	2.4 GHz	12	30.0 MB	150W	2	4400 MT/s	64 GB	EE LCC
Silver 4509Y Processor	2.6 GHz	8	22.5 MB	125W	2	4400 MT/s	64 GB	EE LCC

Notes:

- One or two processor(s)
- Intel® Speed Select enabled processors: 4516Y+, 4514Y and 4509Y

5th Generation Intel® Xeon® Scalable Processor Family (Bronze)

Intel® Xeon® Models	Frequency	Cores	L3 Cache	Power	UPI	DDR5	SGX Enclave size	Die
Bronze 3508U Processor ¹	2.1 GHz	8	22.5 MB	125W	N/A	4400 MT/s	64 GB	EE LCC

Notes:

- ¹Single socket capable, no dual socket support
- Intel® Speed Select enabled processors: N.A.
- If 3508U is selected, then 96GB 5600MT/s Memory cannot be selected
- PCIe4.0 only

Standard Features

4th Generation Intel® Xeon® Scalable Processor Family (Platinum)

Intel Xeon Model	CPU Frequency	Cores	L3 Cache (MB)	Power	UPI Links	DDR5	SGX Enclave size (GB)
Platinum 9462 Processor ²	2.7GHz	32	75	350W	3	4800 MT/s	128
Platinum 8490H Processor	1.9GHz	60	112.5	350W	4	4800 MT/s	512
Platinum 8480+ Processor	2.0GHz	56	105	350W	4	4800 MT/s	512
Platinum 8470 Processor	2.0GHz	52	105	350W	4	4800 MT/s	512
Platinum 8470N Processor	1.7GHz	52	97.5	300W	4	4800 MT/s	128
Platinum 8470Q Processor ¹	2.1GHz	52	105	350W	4	4800 MT/s	512
Platinum 8468 Processor	2.1GHz	48	105	350W	4	4800 MT/s	512
Platinum 8468V Processor	2.4GHz	48	97.5	330W	3	4800 MT/s	128
Platinum 8462Y+ Processor	2.8GHz	32	60	300W	3	4800 MT/s	128
Platinum 8460Y+ Processor	2.0GHz	40	105	300W	4	4800 MT/s	128
Platinum 8458P Processor	2.7GHz	44	82.5	350W	3	4800 MT/s	512
Platinum 8452Y Processor	2.0GHz	36	67.5	300W	3	4800 MT/s	128
Platinum 8444H Processor	2.9GHz	16	45	270W	4	4800 MT/s	512

Notes:

- Processors do not ship with heatsinks or fan kits, these must be ordered separately.
- Processors with TDP equal to or greater than 150W through 350W require High Performance Heatsink (P48818-B21)
- Processors with TDP greater than 205W through 350W and mid-tray drive cage require HPE DL3xx/560 Gen11 High Performance Heatsink (P48905-B21)
- “Q” processors require Max Performance Heatsink (P48817-B21)
- Processors with TDP equal to or less than 150W require Standard Heatsink (P49145-B21)
- ¹Liquid cooled CPUs require Maximum Performance Heat Sink (P48817-B21). One heatsink covers both CPUs.
- ²This is Intel High Bandwidth Memory (HBM) CPU.

4th Generation Intel® Xeon® Scalable Processor Family (Gold)

Intel Xeon Models	CPU Frequency	Cores	L3 Cache (MB)	Power	UPI Links	DDR5	SGX Enclave size (GB)
Gold 6454S Processor	2.2GHz	32	60	270W	4	4800 MT/s	128
Gold 6448H Processor	2.4GHz	32	60	250W	3	4800 MT/s	512
Gold 6430 Processor	2.1GHz	32	60	270W	3	4800 MT/s	128
Gold 6414U Processor ¹	2.0GHz	32	60	250W	0	4800 MT/s	128
Gold 6458Q Processor	3.1GHz	32	60	350W	3	4800 MT/s	128
Gold 6448Y Processor	2.1GHz	32	60	225W	3	4800 MT/s	128
Gold 6444Y Processor	3.6GHz	16	45	270W	3	4800 MT/s	128
Gold 6442Y Processor	2.6GHz	24	60	225W	3	4800 MT/s	128
Gold 6438N Processor	2.0GHz	32	60	205	3	4800 MT/s	128
Gold 6438Y+ Processor	2.0GHz	32	60	205W	3	4800 MT/s	128
Gold 6434 Processor	3.7GHz	8	22.5	195W	3	4800 MT/s	128
Gold 6426Y Processor	2.5GHz	16	37.5	185W	3	4800 MT/s	128
Gold 6421N Processor	1.8GHz	32	60	185	0	4400 MT/s	128
Gold 6418H	2.1GHz	24	60	185W	3	4800 MT/s	512
Gold 6416H	2.2GHz	18	45	165W	3	4800 MT/s	512
Gold 5415+ Processor	2.9GHz	8	22.5	150W	3	4400 MT/s	128
Gold 5416S Processor	2.0GHz	16	30	150W	3	4400 MT/s	128
Gold 5418N Processor	1.8GHz	24	45	165W	3	4000 MT/s	128
Gold 5418Y Processor	2.0GHz	24	45	185W	3	4400 MT/s	128
Gold 5420+ Processor	2.0GHz	28	52.5	205W	3	4400 MT/s	128
Gold 5411N Processor	1.9GHz	24	45	165W	0	4400 MT/s	128

Standard Features

Notes:

- Processors do not ship with heatsinks or fan kits, these must be ordered separately.
- Processors with TDP greater than 150W through 350W require High Performance Heatsink (P48818-B21)
- Processors with TDP greater than 205W through 350W and mid-tray drive cage require HPE DL3xx/560 Gen11 High Performance Heatsink (P48905-B21)
- “Q” processors require Max Performance Heatsink (P48817-B21)
- Processors with TDP equal to or less than 150W require Standard Heatsink (P49145-B21)
- 8-Channel DDR5 @ 4800 MT/s
- ¹Single socket processor. No dual socket support.

4th Generation Intel® Xeon® Scalable Processor Family (Silver)

Intel Xeon Models	CPU Frequency	Cores	L3 Cache (MB)	Power	UPI Links	DDR5	SGX Enclave size (GB)
Silver 4410Y Processor	2.0GHz	12	30	150W	2	4000 MT/s	64
Silver 4416+ Processor	2.0GHz	20	37.5	165W	2	4000 MT/s	64

Notes:

- Processors do not ship with heatsinks or fan kits, these must be ordered separately.
- Processors with TDP greater than 150W through 350W require High Performance Heatsink (P48818-B21)
- Processors with TDP greater than 205W through 350W and mid-tray drive cage require HPE DL3xx/560 Gen11 High Performance Heatsink (P48905-B21)
- Processors with TDP equal to or less than 150W require Standard Heatsink (P49145-B21)

4th Generation Intel® Xeon® Scalable Processor Family (Bronze)

Intel Xeon Models	CPU Frequency	Cores	L3 Cache (MB)	Power	UPI Links	DDR5	SGX Enclave size (GB)
Bronze 3408U	1.8GHz	8	22.5	125W	0	4000 MT/s	64

Notes:

- Processors do not ship with heatsinks or fan kits, these must be ordered separately.
- Processors with TDP equal to or less than 150W require Standard Heatsink (P49145-B21)

Chipset

Intel C741 Chipset

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

<https://www.intel.com/content/www/us/en/products/chipsets/server-chipsets.html>

On System Management Chipset

HPE iLO 6 ASIC

Read and learn more in the [iLO QuickSpecs](#).

Memory

One of the following depending on model.

Type	HPE DDR5 Smart Memory, Registered (RDIMM)
DIMM Slots Available	32 16 DIMM slots per processor, 8channels per processor, 2 DIMMs per channel
Maximum capacity	8.0 TB 32 x 256 GB RDIMM @ 4800 MT/s (32 DIMMs only with 8SFF or 16SFF, 16 DIMMs maximum with 24SFF)

Notes: The maximum memory speed is limited by the processor selection.

Standard Features

Memory Protection

One of the following depending on model.

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.

Expansion Slots

Primary Riser

Notes:

- Bus width indicates the number of physical electrical lanes running to the connector.
- There are 2 types of risers supported on Primary Slot
- x16 cards installed on x8 slots could observe sub-optimal performance.

Primary Riser1

Slots #	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
1	PCIe 5.0	X8	X16	Full-height, full-length slot	Proc 1
2	PCIe 5.0	X16	X16	Full-height, full-length slot	Proc 1
3	PCIe 5.0	X8	X16	Full-height, half-length slot	Proc 1

Primary Riser2

Slots #	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
1**	NA	NA	NA	NA	NA
1	PCIe 5.0	X16	X16	Full-height, full-length slot	Proc 1
2	PCIe 5.0	X16	X16	Full-height, full-length slot	Proc 1
3	PCIe 5.0	X16	X16	Full-height, half-length slot	Proc 1

Notes: ** If Slot 1 of HPE DL380 Gen11 2U 3x16 Prim Riser Kit needs to be enabled then 3 x16 Primary Cable Kit (P56073-B21) must be selected.

Secondary Riser:

Notes:

- Bus Width Indicates the number of physical electrical lanes running to the connector.
- There are 2 types of risers support on Secondary Slot
- x16 cards installed on x8 slots could observe sub-optimal performance.

Secondary Riser1

Slots #	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
4	PCIe 5.0	X8	X16	Full-height, full-length slot	Proc 2
5	PCIe 5.0	X16	X16	Full-height, full-length slot	Proc 2
6	PCIe 5.0	X8	X16	Full-height, half-length slot	Proc 2

Secondary Riser2

Slots #	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
4*	NA	NA	NA	NA	NA
4	PCIe 5.0	X16	X16	Full-height, full-length slot	Proc 2
5	PCIe 5.0	X16	X16	Full-height, full-length slot	Proc 2
6	PCIe 5.0	X16	X16	Full-height, half-length slot	Proc 2

Standard Features

Notes: * If Slot 4 of HPE DL380 Gen11 2U 3x16 Sec Riser Kit needs to be enabled then 3 x16 Secondary Cable Kit (P56074-B21) must be selected.

Tertiary Riser

Notes:

- Bus Width Indicates the number of physical electrical lanes running to the connector.
- There is 1 type of riser supported on the Tertiary Slot
- x16 cards installed on x8 slots could observe sub-optimal performance.

Tertiary Riser1 (default)					
Slots #	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
7	PCIe 5.0	X16	X16	Full-height, full-length slot	Proc 2
8	PCIe 4.0	X16	X16	Full-height, full-length slot	Proc 2

Tertiary Riser1 (with Optional Tertiary Riser FIO x8 Enablement Kit P53632-B21)					
Slots #	Technology	Bus Width	Connector Width	Slot Form Factor	Notes
7	PCIe 5.0	X16	X16	Full-height, full-length slot	Proc 2
8	PCIe 5.0	X8	X16	Full-height, full-length slot	Proc 2

Graphics

Integrated Video Standard

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

Maximum Internal Storage

Drive	Capacity	Configuration
Hot Plug SFF SAS HDD	91.2 TB	24+8+6 x 2.4TB
Hot Plug SFF SAS SSD	583.3 TB	24 +8+6 15.35TB
Hot Plug SFF SATA HDD	76 TB	24+8+6 x 2 TB
Hot Plug SFF SATA SSD	291.84 TB	24 +8+ 6 x 7.68 TB
Hot Plug LFF SAS HDD	360 TB	12+4+4x 18 TB (with optional rear LFF drive cage)
Hot Plug LFF SATA HDD	360 TB	12+4+4 x 18 TB (with optional rear LFF drive cage)
Hot Plug SFF NVMe PCIe SSD	374.4 TB	24+ x 15.36TB + 6 x 960GB<10W (with optional rear Primary and Secondary 2SFF and rear 2SFF drive cages)
EDSFF NVMe	550.8 TB	36EDSFF Drives x 15.3 TB

Notes:

- If all seven Drive cages are selected, then maximum SAS Drive support will be 30 drives (16+8+6).
- Maximum SAS Drive support can be 36 Drives (24+8+4), if one 2SFF Primary / Secondary cage is not selected.

Internal Storage Devices

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

Standard Features

Power Supply

- HPE 1800W-2200W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit
Notes: 1 available in 96% efficiency.
- HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
Notes: 1 available in 94% efficiency.
- HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
- HPE 1000W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit
Notes: 1 available in 96% efficiency.
- HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
Notes: 1 available in 94% efficiency.

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE ProLiant Gen11 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.

A standard 6-foot IEC C-13/C-14 jumper cord (A0K02A) is included with each standard AC power supply option kit. If a different power cord is required, please check the [ProLiant Power Cables](#) web page. review the power requirements for your selected system, please use the [HPE Power Advisor Tool](#).

For information on power specifications and technical content visit [HPE Server power supplies](#).

Storage Controllers

The available Gen11 controllers are depicted below.

Software RAID Controller

- **Intel VROC SATA for HPE ProLiant Gen11**

Notes:

- All models feature an embedded storage controller, with embedded software SATA RAID support for up to 14 bays.
- Intel VROC for HPE ProLiant Gen11 is an enterprise, hybrid Software RAID solution specifically designed for SSDs.
- Intel VROC is a software-based solution utilizing Intel CPU to RAID or HBA direct connected drives.
- RAID Support- 0/1/5/10.
- Windows and Linux OS support.
- Host Tools- Windows GUI/CLI, Linux CLI.
- UEFI Support- HII Utility, OBSE.
- iLO Support- IML, Alert, SNMP, AHS.
- iLO Redfish- Redfish Read.
- Intel VROC SATA for HPE ProLiant Gen11 will operate in UEFI mode only. For legacy support an additional storage controller will be needed.
- Intel VROC SATA is off by default and must be enabled.
- VROC cannot support mix among SATA/sSATA/tSATA due to VROC limitation. Visit [Intel Virtual RAID on CPU for HPE Gen11 User Guide](#).
 - o 12LFF: Mix of raid is not allowed across boxes/drive bays. Each LFF drive cage (box1/2/3) has four bays and is separated with different drive group with Intel VROC SATA RAID configuration.
 - o 8SFF: Mix of raid is not allowed across boxes/drive bays. One box contains 8 bays and is separated into two drive groups (Bay1-4 and Bay5-8) with Intel VROC SATA RAID configuration.

Standard Features

- **Intel VROC NVMe for HPE ProLiant Gen11**

Notes:

- All models feature 4 x8 PCIe 5.0 connectors per socket for NVMe connectivity, provides support for up to 8 direct attach x4 NVMe bays.
- Only supported on SFF models.
- Intel VROC for HPE ProLiant Gen11 is an enterprise, hybrid Software RAID solution specifically designed for NVMe SSDs connected directly to the CPU. Intel VROC is a software-based solution utilizing Intel CPU to RAID or HBA direct connected drives.
- Intel Virtual RAID on CPU Standard for RAID 0/1/10 (S3Q19A/S3Q39AAE) or Premium SKU for RAID 0/1/5/10 (R7J57A/R7J59AAE) must be ordered to enable RAID support.
- Windows, Linux, VMware OS support.
- Host Tools- Windows GUI/CLI, Linux CLI.
- UEFI Support- HII Utility, OBSE.
- Active health monitoring of NVMe M.2 drives requires use of SMART tools.
- Intel VROC NVMe for HPE ProLiant Gen11 will operate in UEFI mode only. For legacy support an additional Tri-Mode controller will be needed.
- For NVMe SSDs only, no PCIe card support.

Essential RAID Controller

- HPE Smart Array E208e-p SR Gen10 Controller

Tri-Mode Controller

- HPE MR416i-p Gen11 Controller
- HPE MR416i-o Gen11 Controller
- HPE MR216i-p Gen11 Controller
- HPE MR216i-o Gen11 Controller
- HPE MR408i-o Gen11 Controller
- HPE SR932i-p Gen11 Controller^{1,2}

Notes:

- PE80xx NVMe drives are not supported.
- ¹Requires x16 physical and electrical riser slot
- ²If second controller is required, must select secondary riser
- Controllers with cache require either P02377-B21 HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit or P01366-B21 HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit.

Standard Features

Interfaces

Serial	Optional Rear
Display Port	1 optional front display port via Universal Media Bay
VGA Port	1 standard, rear for all chassis. 1 Optional front display port (Via Universal Media Bay) Notes: Both ports are not active simultaneously.
Network Ports	None standard. Choice of OCP networking card or stand-up networking card required. BTO models will come pre-selected with a primary networking card.
HPE iLO Remote Management Network Port	1 Gb Dedicated, rear
Front iLO Service Port	1 standard (Not available when System Insight Display Kit is ordered)
USB 3.2 Port Gen1	Up to 4 total: 1 front (3.2 Gen1), 2 rear (3.0), 2 internal (secure – 1 – 3.2 Gen1, 1 – 2.0), 1 optional USB 2.0 front via Universal Media Bay
System Insight Display (SID)	Optional Notes: Not shipping as standard. Available as a CTO option or as a field upgrade (P48819-B21).

Operating Systems and Virtualization Software Support for HPE Servers

HPE servers are designed for seamless integration with partner Operating Systems and Virtualization Software. By collaborating closely with our partners, we ensure that their products are optimized, certified, and fully supported within your HPE server environment.

Access the certified and supported servers for each of the OS and Virtualization software: **[HPE Servers Support & Certification Matrices](#)**

HPE Server UEFI

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 Gen11 servers have a UEFI Class 3 implementation to support UEFI 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 <https://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
- Embedded UEFI Shell
- Operating system specific functionality
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- Support for > 2.2 TB (using GPT) boot drives
- PXE boot support for IPv6 networks
- USB 3.0 Stack
- Workload Profiles for simple performance optimization

Standard Features

UEFI Boot Mode only

- TPM 2.0 Support
Notes: Enabling TPM 2.0 no longer requires TPM module option kit for Gen11. It is an embedded feature.
- iSCSI Software Initiator Support.
- NVMe Boot Support
- HTTP/HTTPs Boot support as a PXE alternative.
- Platform Trust Technology (PTT) can be enabled.
- 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.

Industry Standard Compliance

- ACPI 6.4 Compliant
- PCIe 5.0 Compliant
- Wake on LAN (WoL) Support
- Microsoft® Logo certifications
- PXE Support
- VGA
- Display Port

Notes: This support is on the optional Universal Media Bay.

- USB 3.2 Gen1 Compliant
- USB 2.0 Compliant (via Universal Media Bay)

Notes: This support is on the optional Universal Media Bay.

- Energy Star
- SMBIOS 3.4
- Redfish API
- IPMI 2.0
- Secure Digital 4.0
- 2.0 Support

Notes: Enabling TPM 2.0 no longer requires TPM module option kit for Gen11. It is an embedded feature.

- Advanced Encryption Standard (AES)
- Triple Data Encryption 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 temperature, humidity, and feature support, please visit [DL380 Gen11 Extended Ambient Temperature Guidelines](#)

- European Union Erp Lot 9 Regulation

Notes:

- Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, or Switzerland must include more efficient AC power supplies: 94% for multi-output and 96% for single-output. HPE Flexible Slot power supplies are single-output, and part numbers 865438-B21, P03178-B21, and P44712-B21 are 96% efficient, thus meeting requirements.
- HPE is on target to fulfil compliant systems ahead of time and will begin enforcing these requirements in advance to satisfy requests with the current power supplies by the set deadline.
- Please visit: <https://www.hpe.com/us/en/about/environment/msds-specs-more.html> for more information regarding HPE Lot 9 conformance.
- UEFI (Unified Extensible Firmware Interface Forum) 2.8

Standard Features

Embedded Management

HPE Integrated Lights-Out (HPE iLO)

Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO.

Learn more at <https://www.hpe.com/info/iLO>.

UEFI

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

Intelligent Provisioning

Hassle free server and OS provisioning for 1 or more servers with Intelligent Provisioning.

Learn more at https://support.hpe.com/hpesc/public/docDisplay?docId=c04465280&docLocale=en_US

iLO RESTful API

iLO RESTful API is DMTF Redfish API implementation and offers simplified server management automation such as configuration and maintenance tasks based on modern industry standards. Learn more at <https://www.hpe.com/info/restfulapi>.

OpenBMC Support

OpenBMC Capable through iLO6 Transfer of Ownership Process.

Learn more at [OpenBMC Support](#)

Active Health System

The HPE Active Health System (AHS) is an essential component of the iLO management portfolio that provides continuous, proactive health monitoring of HPE servers. Learn more at <https://www.hpe.com/servers/ahs>.

Smart Update

Keep your servers up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP).

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. Use with an iLO Advanced License to unlock full capabilities.

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

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 <https://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 <https://www.hpe.com/servers/powershell>.

HPE OneView Standard

HPE OneView is an on premise, multi-generational server monitoring and management solution. HPE OneView Standard can be used for inventory, health monitoring, alerting, and reporting without additional fees. Customers can upgrade their management experience with an HPE OneView Advanced license all provided by the same tool. Learn more at

<https://www.hpe.com/info/oneview>.

Standard Features

HPE Compute Ops Management

HPE is intelligently transforming compute management with an intuitive cloud operating experience through HPE GreenLake cloud platform to streamline and secure operations from edge-to-cloud. Automated key lifecycle tasks, for onboarding, updating, managing, and monitoring HPE servers, brings agility and greater efficiencies to wherever compute devices reside via a unified single browser-based interface. Manage single locations or multiple, distributed sites. Keep tens to thousands of servers secure with batch policy controls and automated updates.

Compute Ops Management is cloud-native software that is continually updated with new services, features, patches, and fixes. The management application resides in the HPE GreenLake cloud platform (access via <https://console.greenlake.hpe.com>) and leverages the HPE GreenLake architecture, security, and unified operations.

A 3-year subscription to Compute Ops Management is added by default when ordering an HPE ProLiant Gen11 rack, tower, or micro server.

For more information, visit the Compute Ops Management QuickSpecs: <https://www.hpe.com/psnow/doc/a50004263enw>

Security

- UEFI Secure Boot and Secure Start support
 - Tamper-free updates – components digitally signed and verified
 - Immutable Silicon Root of Trust
 - Ability to rollback firmware
 - FIPS 140-2 validation
 - Secure erase of NAND/User data
 - Configurable for PCI DSS compliance
 - TPM (Trusted Platform Module) 2.0 option
- Notes:** Enabling TPM 2.0 no longer requires TPM module option kit for Gen11. It is an embedded feature.
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
 - Bezel Locking Kit option
 - Support for Commercial National Security Algorithms (CNSA)
 - Chassis Intrusion detection option
 - Secure Recovery – recover critical firmware to known good state on detection of compromised firmware
-

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 Services 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.

<https://www.hpe.com/support/ProLiantServers-Warranties>

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.

HPE OneView Advanced

HPE OneView Advanced offers a sophisticated level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It builds upon the base features of HPE OpenView Standard, provides full-featured licenses which can be purchased for managing multiple HPE server generations.

To learn more visit <https://www.hpe.com/info/oneview>.

HPE Insight Cluster Management Utility (CMU)

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

One Config Simple (OCS/SCE)

OCS/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#>

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°C, 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](#).



Service and Support

HPE Services

No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.

<https://www.hpe.com/services>

Consulting Services

No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.

<https://www.hpe.com/services/consulting>

HPE Managed Services

HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

[HPE Managed Services | HPE](#)

Operational services

Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.

<https://www.hpe.com/services/operational>

HPE Complete Care Service

HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:

- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

<https://www.hpe.com/services/completecure>

HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service 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 Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service 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/services/techcare>



Service and Support

HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Notes: To review the list of Lifecycle Services available for your product go to:

<https://www.hpe.com/services/lifecycle>

For a list of the most frequently purchased services using service credits, see the [HPE Service Credits Menu](#)

Other Related Services from HPE Services:

HPE Education Services

Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.

<https://www.hpe.com/services/training>

Defective Media Retention

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

Parts and Materials

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

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

How to Purchase Services

Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at <https://ssc.hpe.com/portal/site/ssc/>

Service and Support

AI Powered and Digitally Enabled Support Experience

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.

<https://support.hpe.com/hpesc/public/home/signin>

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform 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 edge-to-cloud platform 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

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE"

<https://www.hpe.com/us/en/contact-hpe.html>

For more information

<https://www.hpe.com/services>

Pre-Configured Models

Pre-Configured models ship with the configurations below.

- 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 not be shipped inside the server.
- Network Choice models do not include embedded LOM.

SKU Number	P52560-B21 P52560-291 P52560-421	P52561-B21 P52561-291 P52561-421	P52562-B21 P52562-291 P52562-421
Model Name	P52560-B21 & P52560-291: HPE ProLiant DL380 Gen11 4410Y 2.0GHz 12-core 1P 32GB-R MR408i-o NC 8SFF 800W PS Server	P52561-B21 & P52561-291: HPE ProLiant DL380 Gen11 5416S 2.0GHz 16-core 1P 32GB-R MR408i-o NC 8SFF 800W PS Server	P52562-B21 & P52562-291: HPE ProLiant DL380 Gen11 4410Y 2.0GHz 12-core 1P 32GB-R NC 12LFF 800W PS Server
	P52560-421: HPE ProLiant DL380 Gen11 4410Y 2.0GHz 12-core 1P 32GB-R MR408i-o NC 8SFF 1000W PS Server	P52561-421: HPE ProLiant DL380 Gen11 5416S 2.0GHz 16-core 1P 32GB-R MR408i-o NC 8SFF 1000W PS Server	P52562-421: HPE ProLiant DL380 Gen11 4410Y 2.0GHz 12-core 1P 32GB-R NC 12LFF 1000W PS Server
Chassis	HPE ProLiant DL380 Gen11 8SFF NC Configure-to-order Server	HPE ProLiant DL380 Gen11 8SFF NC Configure-to-order Server	HPE ProLiant DL380 Gen11 12LFF NC Configure-to-order Server
Processor	4410Y (12 core, 2.0 GHz, 150W)	5416S (16 core, 2.0 GHz, 150W)	4410Y (12 core, 2.0 GHz, 150W)
Number of Processors	One		
Memory	32 GB (1x32 GB, 4800 MT/s) Notes: Runs at 4000 MT/s due to processor limitation.	32 GB (1x32 GB, 4800 MT/s) Notes: Runs at 4400 MT/s due to processor limitation.	32 GB (1x32 GB, 4800 MT/s) Notes: Runs at 4000 MT/s due to processor limitation.
Network Controller	Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE Notes: No embedded networking	Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE Notes: No embedded networking	Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE Notes: No embedded networking
Storage Controller	HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller	HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller	Embedded SATA controller (AHCI or Intel SATA software RAID controller)
Included Hard Drives	None ship standard, 8 SFF supported	None ship standard, 8 SFF supported	None ship standard, 12 LFF supported
Optical Drive	Optional DVD-ROM Optional via Universal Media Bay External support only	Optional DVD-ROM Optional via Universal Media Bay External support only	Not supported
Expansion Slots	3-slots (x8, x16, x8) as standard; upgradeable to 8-slots in a 2 processor configuration		
Power Supply	P52560-B21 & P52560-291: 1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P52561-B21 & P52561-291: 1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P52562-B21 & P52562-291: 1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit

Pre-Configured Models

	P52560-421: 1x HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit	P52561-421: 1x HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit	P52562-421: 1x HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit
Fans	4x Standard Fans		
Management	HPE iLO 6		
Rail Kit	HPE ProLiant DL3XX Gen11 Easy Install Rail 3 Kit		
Security	TPM (Trusted Platform Module)		
Form Factor	2U Rack		
Warranty	Server warranty includes 3-year parts, 3-year labor, 3-year onsite support with next business day response.		



Pre-Configured Models

SKU Number	P52564-B21 P52564-291 P52564-421	P58417-B21 P58417-291	P60636-B21 P60636-291 P60636-421
Model Name	P52564-B21 & P52564-291: HPE ProLiant DL380 Gen11 5415+ 2.9GHz 8-core 1P 32GB-R MR408i-o NC 8SFF 800W PS Server	P58417-B21: HPE ProLiant DL380 Gen11 6430 2.1GHz 32-core 1P 64GB-R NC 8SFF 1000W PS Server	P60636-B21 & P60636-291: HPE ProLiant DL380 Gen11 4416+ 2.0GHz 20-core 1P 32GB-R MR408i-o NC 8SFF 800W PS Server
	P52564-421: HPE ProLiant DL380 Gen11 5415+ 2.9GHz 8-core 1P 32GB-R MR408i-o NC 8SFF 1000W PS Server	P58417-291 & P58417-421: HPE ProLiant DL380 Gen11 6430 2.1GHz 32-core 1P 32GB-R NC 8SFF 1000W PS Server	P60636-421: HPE ProLiant DL380 Gen11 4416+ 2.0GHz 20-core 1P 32GB-R MR408i-o NC 8SFF 1000W PS Server
Chassis	HPE ProLiant DL380 Gen11 8SFF NC Configure-to-order Server		
Processor	5415+ (8 core, 2.9 GHz, 150W)	6430 (32 core, 2.1 GHz, 270W)	4416+ (20 core, 2.0 GHz, 165W)
Number of Processors	One	One with high performance heatsink	One with high performance heatsink
Memory	32 GB (1x32 GB, 4800 MT/s) Notes: Runs at 4400 MT/s due to processor limitation.	P58417-B21: 64 GB (2x32 GB, 4800 MT/s) Notes: Runs at 4400 MT/s due to processor limitation.	32 GB (1x32 GB, 4800 MT/s) Notes: Runs at 4000 MT/s due to processor limitation.
		P58417-291 & P58417-421: 32 GB (2x32 GB, 4800 MT/s) Notes: Runs at 4400 MT/s due to processor limitation.	
Network Controller	Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE Notes: No embedded networking	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE Notes: No embedded networking	Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE Notes: No embedded networking
Storage Controller	HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller	Embedded SATA controller (AHCI or Intel SATA software RAID controller)	HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller
Included Hard Drives	None ship standard, 8 SFF supported		
Optical Drive	Optional DVD-ROM Optional via Universal Media Bay External support only		
Expansion Slots	3-slots (x8, x16, x8) as standard; upgradeable to 8-slots in a 2 processor configuration		
Power Supply	P52564-B21 & P52564-291: 1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	1x HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit	P60636-B21 & P60636-291: 1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
	P52564-421: 1x HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit		P60636-421: 1x HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit

Pre-Configured Models

Fans	4x Standard Fans	6x High Performance Fan	4x Standard Fans
Management	HPE iLO 6		
Rail Kit	HPE ProLiant DL3XX Gen11 Easy Install Rail 3 Kit		
Security	TPM (Trusted Platform Module)		
Form Factor	2U Rack		
Warranty	Server warranty includes 3-year parts, 3-year labor, 3-year onsite support with next business day response.		



Pre-Configured Models

SKU Number	P60637-B21 P60637-291 P60637-421	P60638-B21 P60638-291 P60638-421	P60740-AA1
Model Name	P60637-B21 & P60637-291: HPE ProLiant DL380 Gen11 6426Y 2.5GHz 16-core 1P 32GB-R MR408i-o NC 8SFF 800W PS Server P60637-421: HPE ProLiant DL380 Gen11 6426Y 2.5GHz 16-core 1P 32GB-R MR408i-o NC 8SFF 1000W PS Server	P60638-B21 & P60638-291: HPE ProLiant DL380 Gen11 5418Y 2.0GHz 24-core 1P 64GB-R MR408i-o NC 8SFF 800W PS Server P60638-421: HPE ProLiant DL380 Gen11 5418Y 2.0GHz 24-core 1P 64GB-R MR408i-o NC 8SFF 1000W PS Server	HPE ProLiant DL380 Gen11 4416+ 2.1GHz 20-core 1P 32GB-R MR408i-o NC 8SFF 800W PS Server
Chassis	HPE ProLiant DL380 Gen11 8SFF NC Configure-to-order Server		
Processor	6426Y (16 core, 2.5 GHz, 185W)	5418Y (24 core, 2.0 GHz, 185W)	4416+ (20 core, 2.0 GHz, 165W)
Number of Processors	One with high performance heatsink		
Memory	32 GB (1x32 GB, 4800 MT/s)	64 GB (2x32 GB, 4800 MT/s) Notes: Runs at 4400 MT/s due to processor limitation.	32 GB (1x32 GB, 4800 MT/s) Notes: Runs at 4000 MT/s due to processor limitation.
Network Controller	Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE Notes: No embedded networking	Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE Notes: No embedded networking	Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE Notes: No embedded networking
Storage Controller	HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller		
Included Hard Drives	None ship standard, 8 SFF supported		
Optical Drive	Optional DVD-ROM Optional via Universal Media Bay External support only		
Expansion Slots	3-slots (x8, x16, x8) as standard; upgradeable to 8-slots in a 2 processor configuration		
Power Supply	P60637-B21 & P60637-291: 1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit P60637-421: 1x HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit	P60638-B21 & P60638-291: 1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit P60638-421: 1x HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit	1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
Fans	4x Standard Fans		
Management	HPE iLO 6		
Rail Kit	HPE ProLiant DL3XX Gen11 Easy Install Rail 3 Kit		
Security	TPM (Trusted Platform Module)	TPM (Trusted Platform Module)	TPM (Trusted Platform Module)

Pre-Configured Models

Form Factor	2U Rack
Warranty	Server warranty includes 3-year parts, 3-year labor, 3-year onsite support with next business day response.



Pre-Configured Models

SKU Number	P70456-291 P70456-421	P70457-291 P70457-421	P70458-421
Model Name	P70456-291: HPE ProLiant DL380 Gen11 4509Y 2.6GHz 8-core 1P 32GB-R MR408i-o NC 8SFF 1000W PS JP Server	P70457-291: HPE ProLiant DL380 Gen11 4514Y 2.0GHz 16-core 1P 32GB-R MR408i-o NC 8SFF 1000W PS JP Server	HPE ProLiant DL380 Gen11 4514Y 2.0GHz 16-core 1P 32GB-R MR416i-p NC 12LFF 1000W PS EMEA Server
Chassis	HPE ProLiant DL380 Gen11 8SFF NC Configure-to-order Server	HPE ProLiant DL380 Gen11 8SFF NC Configure-to-order Server	HPE ProLiant DL380 Gen11 12LFF NC Configure-to-order Server
Processor	4509Y (8 core, 2.6 GHz, 125W)	4514Y (16 core, 2.0 GHz, 150W)	4514Y (16 core, 2.0 GHz, 150W)
Number of Processors	One		
Memory	32 GB (1x32 GB, 5600 MT/s) Notes: Runs at 4400 MT/s due to processor limitation.		
Network Controller	Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE Notes: No embedded networking	Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE Notes: No embedded networking	Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE Notes: No embedded networking
Storage Controller	HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller	HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller	HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller
Included Hard Drives	None ship standard, 8 SFF supported	None ship standard, 8 SFF supported	None ship standard, 12 LFF supported
Optical Drive	Optional DVD-ROM Optional via Universal Media Bay External support only		
Expansion Slots	3-slots (x8, x16, x8) as standard; upgradeable to 8-slots in a 2 processor configuration		
Power Supply	1x HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit		
Fans	4x Standard Fans		
Management	HPE iLO 6		
Rail Kit	HPE ProLiant DL3XX Gen11 Easy Install Rail 3 Kit		
Security	TPM (Trusted Platform Module)		
Form Factor	2U Rack		
Warranty	Server warranty includes 3-year parts, 3-year labor, 3-year onsite support with next business day response.		

Pre-Configured Models

SKU Number	P70579-D61	P70580-D61
Model Name	HPE ProLiant DL380 Gen11 6430 2.1GHz 32-core 1P 32GB-R NC 8SFF 800W PS Server	HPE ProLiant DL380 Gen11 6442Y 2.6GHz 24-core 1P 32GB-R NC 8SFF 800W PS Server
Chassis	HPE ProLiant DL380 Gen11 8SFF NC Configure-to-order Server	
Processor	6430 (32 core, 2.1 GHz, 270W)	6442Y (24 core, 2.6 GHz, 225W)
Number of Processors	One with high performance heatsink	
Memory	32 GB (1x32 GB, 4800 MT/s) Notes: Runs at 4400 MT/s due to processor limitation.	32 GB (1x32 GB, 4800 MT/s)
Network Controller	Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE Notes: No embedded networking	
Storage Controller	Embedded SATA controller (AHCI or Intel SATA software RAID controller)	
Included Hard Drives	None ship standard, 8 SFF supported	
Optical Drive	Optional DVD-ROM Optional via Universal Media Bay External support only	
Expansion Slots	3-slots (x8, x16, x8) as standard; upgradeable to 8-slots in a 2 processor configuration	
Power Supply	2x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	
Fans	6x High Performance Fan	
Management	HPE iLO 6	
Rail Kit	HPE ProLiant DL3XX Gen11 Easy Install Rail 3 Kit	
Security	TPM (Trusted Platform Module)	
Form Factor	2U Rack	
Warranty	Server warranty includes 3-year parts, 3-year labor, 3-year onsite support with next business day response.	

Pre-Configured Models

Country Code Key

- -B21 = Worldwide
- -291 = Japan
- -421 = Europe, the Middle East and Africa
- -AA1 = China
- -D61 = India

HPE Smart Choice purchase program

The HPE Smart Choice purchase program features popular fully configured products that can be quoted in minutes and shipped quickly through HPE Authorized Partners. Products are configured and tested in an HPE factory and stocked at HPE Authorized Distributors and Partners. The products arrive in a single box, making onsite integration easier and more efficient for partners and customers. Additionally, there are aggressively priced HPE Tech Care Services available only through the HPE Smart Choice program when you purchase an HPE Smart Choice product.

For additional information on the HPE Smart Choice purchase program, please visit:

<https://www.hpe.com/psnow/doc/a50009219enw>

Configuration Information

Smart Templates from HPE

HPE is releasing new Smart Template technology in the One Config Advanced (OCA) configurator. These Templates represent the CTO equivalents of the top-selling BTO configurations. They are intended to provide simple starting points to assist you in easily creating and customizing your desired Server solutions. HPE Servers that have Platform Templates, developed by HPE Product Managers, will have a separate tab in the HPE OCA configurator.

Workload Solutions Templates from HPE

The Workload Solutions Templates build on the Smart Templates technology to easily develop working configurations of the most compelling Workload Solutions. The templates complement the Reference Builds developed by HPE. Workload Solutions templates preconfigure some of the key architecture decisions and make it easier for Sellers to get started and complete a differentiated server solution for your customer's specific workload.

Mainstream SKUs

HPE launched the Mainstream SKU initiative as a market-driven approach to Demand Steering. It is a simplified portfolio of our top selling options that meet the current and future market trends. HPE has committed to provide a more predictable and faster experience for these options. Mainstream SKUs enjoy higher safety stock levels and have higher fulfillment service levels than non-Mainstream SKUs. Mainstream orders are fulfilled +30% faster than non-Mainstream orders, have fewer shortages and better recovery dates. This platform has Mainstream SKUs in the options portfolio, and is eligible for the improved Mainstream experience. Mainstream SKUs are designated with a Mainstream symbol in our configurators.

Mainstream Configurations

HPE is using the new Smart Templates technology to present Mainstream configurations. All the options in a Mainstream configuration are pre-selected Mainstream SKUs to optimize the performance, predictability and fulfillment experience. Check the Template section in our configurators for eligible Mainstream configurations.

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.

Step 1: Base Configuration (choose one (1) of the following four (4) configurable server models from the tables below)

The below (4) CTO server models, denoted with "NC" in the SKU description, provide flexibility in the networking choice and require a network adapter from the "HPE Networking" section be selected.

Networking Choice CTO Server Models	HPE ProLiant DL380 Gen11 8LFF NC CTO Server	HPE ProLiant DL380 Gen11 12LFF NC CTO Server	HPE ProLiant DL380 Gen11 8SFF NC CTO Server	HPE ProLiant DL380 Gen11 24SFF NC CTO Server
SKU Number	P52532-B21	P52533-B21	P52534-B21	P52535-B21
TAA SKU*	P52532-B21#GTA	P52533-B21#GTA	P52534-B21#GTA	P52535-B21#GTA
HPE Trusted Supply Chain	P36394-B21 – Optional			
Processor	Not included as standard	Not included as standard	Not included as standard	Not included as standard
DIMM Slots	32-DIMM slots	32-DIMM slots	32-DIMM slots	32-DIMM slots
Storage Controller	Embedded SW RAID with 14 SATA ports (12-ports accessible), optional choice of HPE modular MegaRAID controller.			
PCIe	Three standard in primary riser			
Drive Cage - available	8LFF	12LFF	8 SFF (8SFF U.3 x1)	24SFF (3x 8SFF U.3 x1)



Configuration Information

Network Controller	Choice of either OCP 3.0 or select stand-up network adapters for primary networking selection plus additional/optional stand-up network adapters. Notes: No embedded networking			
Fans	4-Standard	4-Standard	4-Standard	6-High Performance
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advanced and OneView (optional)			
USB	4x 3.0 standard plus iLO front service port	4x 3.0 standard plus iLO front service port	4x 3.0 standard plus iLO front service port	4x 3.0 standard plus iLO front service port
Networking Choice CTO Server Models	HPE ProLiant DL380 Gen11 12EDSFF NC Configure-to-order Server			
SKU Number	P52536-B21			
TAA SKU*	P52536-B21#GTA			
HPE Trusted Supply Chain	P36394-B21 – Optional			
Processor	Not included as standard			
DIMM Slots	32-DIMM slots			
Storage Controller	Embedded SW RAID with 14 SATA ports (12-ports accessible), and optional choice of HPE modular MegaRAID controller.			
PCIe	Three standard in primary riser			
Drive Cage - available	12 EDSFF			
Network Controller	Choice of either OCP 3.0 or select stand-up network adapters for primary networking selection plus additional/optional stand-up network adapters Notes: No embedded networking			
Fans	6 -Standard			
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advanced and OneView (optional)			
USB	4x 3.0 standard plus iLO front service port			

Notes:

- Network Choice (NC) server models require a networking selection of a network adapters in the “HPE Networking” section.
- HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries needing enhanced security and compliance needs. Applying this option to a DL380 Gen11 CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build, and additional safeguards are put in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL380 Gen11 is re-branded as a HPE ProLiant DL380T Gen11 to denote the HPE Trusted Supply Chain security enhancements. The DL380T is Trade Agreement Act (TAA) compliant. See “HPE Security” section within this document for more detail and learn more at <https://www.hpe.com/security>
- *HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country. TAA compliance is only provided when HPE options are included as part of factory integrated orders (CTO).
- All CTO servers are Energy Star 3.0 compliant.

Configuration Information

CTO Server	8 SFF CTO Chassis	24SFF CTO Chassis	8LFF CTO Chassis	12LFF CTO Chassis
Available Drive Cage	8SFF U.3 x1 Drive Cage	3x 8SFF U.3 x1 Drive Cage	8LFF (2x 4LFF Drive Cages)	12LFF (3x 4LFF Drive Cages)
Universal Media Bay	1 Optional	Not available	Not available	Not available
Optical Disk Drive	1 Optional with UMB	Not available	1 Optional with ODD Enable Kit	Not available
8 SFF NVMe/SAS/SATA Drive Cage (mid-tray)	1 Optional	1 Optional	1 Optional	1 Optional
2 SFF NVMe/SAS/SATA (Front)	1 Optional with UMB	Not available	1 Optional with Side-by-Side Drive Cage	Not available
2 SFF NVMe/SAS/SATA (Rear)	3 Optional	3 Optional	1 Optional	1 Optional
2LFF SAS/SATA (Rear riser)	Not available	Not available	2 Optional	2 Optional
CTO Server	EDSFF CTO Chassis			
Available Drive Cage	12 EDSFF Drive Cage			
Universal Media Bay	Not supported			
Optical Disk Drive	Not supported			
8 SFF NVMe/SAS/SATA Drive Cage	Up to 1 Optional			
2 SFF NVMe/SAS/SATA (Front)	Not supported			
2 SFF NVMe/SAS/SATA (Rear)	1 Optional			
2LFF SAS/SATA (Rear riser)	Not available			

Notes: This applies to CTO configurations; field upgrades may differ depending on field configuration.

Step 2: Choose Required Options

Please select up to two processors required below.

Notes:

- 8SFF, 8LFF, and 12LFF CTO models ship with 4 standard fans.
- 24SFF CTO Servers ship with 6 High performance fans included. Maximum Performance fan kit is available to meet ambient temperature environments and are required for rear drives or NVMe configurations.
- Maximum memory capacity per processor is dependent on processor models. All processors support up to 4TB max memory per processor.
- Mixing of 2 different processor models are NOT allowed.
- Processors with TDP greater than 150W require High Performance Heatsink (P48818-B21).
- Q series processors require Max Performance Heat Sink (P48817-B21)
- DDR5 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

Configuration Information

Step 2a: Choose Processors

Processor Option Kits (Required Processor)

5th Generation Intel Xeon-Platinum

All SKUs below ship with processors only. Adequate fans and heatsinks must be selected.
Supports “HPE DDR5 Smart Memory – Registered (RDIMM), 5600MT/s”.

Intel Xeon-Platinum 8593Q 2.2GHz 64-core 385W Processor for HPE

P68449-B21

Notes:

- XCC die
- Max 2
- Qty 2 of processor must be selected.
- Max Performance Heat Sink or DLC Module must be selected
- High Performance Fan Kit must be selected and defaulted
- Max Performance Heat Sink is defaulted however customer is allowed to deselect and select DLC Module.
- Without DLC Module, drives above 11W cannot be populated in Rear Drive cages
- If Full Length (FL) GPU is selected with this Processor then DLC Module must be selected for Processors.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Platinum 8592+ 1.9GHz 64-core 350W Processor for HPE

P67089-B21

Notes:

- XCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected and defaulted
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Platinum 8592V 2.0GHz 64-core 330W Processor for HPE

P67107-B21

Notes:

- XCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected and defaulted
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Platinum 8581V 2.0GHz 60-core 270W Processor for HPE

P67109-B21

Notes:

- XCC die
- Max 1
- High Performance Heat Sink must be selected.
- DLC Module cannot be selected.
- High Performance Fan Kit must be selected
- Cannot be selected with EDSFF CTO Server.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Platinum 8580 2.0GHz 60-core 350W Processor for HPE

P67088-B21

Notes:

- XCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected
- Supports only PC5-5600B/ PC5-5200B Memory.

Configuration Information

Intel Xeon-Platinum 8570 2.1GHz 56-core 350W Processor for HPE

P67087-B21

Notes:

- XCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Platinum 8568Y+ 2.3GHz 48-core 350W Processor for HPE

P67086-B21

Notes:

- XCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Platinum 8562Y+ 2.8GHz 32-core 300W Processor for HPE

P67085-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Platinum 8558P 2.7GHz 48-core 350W Processor for HPE

P67108-B21

Notes:

- XCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Platinum 8558 2.1GHz 48-core 330W Processor for HPE

P67097-B21

Notes:

- XCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Platinum 8558U 2.0GHz 48-core 300W Processor for HPE

P67102-B21

Notes:

- XCC die
- Max 1
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected
- Single socket processor and DLC Module cannot be selected together.
- Cannot be selected with EDSFF CTO Server.
- Supports only PC5-5600B/ PC5-5200B Memory.

Configuration Information

Intel Xeon-Gold 6558Q 3.2GHz 32-core 350W Processor for HPE

P67098-B21

Notes:

- MCC die
- Qty 2 of processor must be selected.
- Max Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected
- Supports only PC5-5600B/ PC5-5200B Memory.
- If Full Length (FL) GPU is selected with this Processor then DLC Module must be selected for Processors.

Intel Xeon-Gold 6554S 2.2GHz 36-core 270W Processor for HPE

P67110-B21

Notes:

- XCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Gold 6548N 2.8GHz 32-core 250W Processor for HPE

P67105-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Gold 6548Y+ 2.5GHz 32-core 250W Processor for HPE

P67082-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Gold 6544Y 3.6GHz 16-core 270W Processor for HPE

P67084-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Gold 6542Y 2.9GHz 24-core 250W Processor for HPE

P67081-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Configuration Information

Intel Xeon-Gold 6538N 2.1GHz 32-core 205W Processor for HPE

P67104-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Gold 6538Y+ 2.2GHz 32-core 225W Processor for HPE

P67096-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Gold 6534 3.9GHz 8-core 195W Processor for HPE

P67083-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Gold 6530 2.1GHz 32-core 270W Processor for HPE

P67095-B21

Notes:

- XCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Gold 6526Y 2.8GHz 16-core 195W Processor for HPE

P67080-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Gold 5520+ 2.2GHz 28-core 205W Processor for HPE

P67094-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Configuration Information

Intel Xeon-Gold 5515+ 3.2GHz 8-core 165W Processor for HPE

P67079-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Silver 4516Y+ 2.2GHz 24-core 185W Processor for HPE

P67093-B21

Notes:

- MCC die
- Max 2
- High Performance Heat Sink or DLC Module must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Silver 4514Y 2.0GHz 16-core 150W Processor for HPE

P67092-B21

Notes:

- MCC die
- Max 2
- Standard Heat Sink or High Performance Heat Sink or DLC Module must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.

Intel Xeon-Silver 4510 2.4GHz 12-core 150W Processor for HPE

P67091-B21

Notes:

- EE LCC die
- Max 2
- Standard Heat Sink or High Performance Heat Sink or DLC Module must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.
- 96GB 5600B Memory cannot be selected.

Intel Xeon-Silver 4509Y 2.6GHz 8-core 125W Processor for HPE

P67090-B21

Notes:

- EE LCC die
- Max 2
- Standard Heat Sink or High Performance Heat Sink or DLC Module must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.
- If “HPE Energy Star4.0 configuration FIO kit” is selected then Qty2 of this Processor cannot be selected.
- 96GB 5600B Memory cannot be selected.

Configuration Information

Intel Xeon-Bronze 3508U 2.1GHz 8-core 125W Processor for HPE

P67100-B21

Notes: 18, 282, 283, 284, 285, 288, 309, 319, 320, 322, 323, 430, 436, 499, 500, 501, 510

- EE LCC die
- Max 1
- Standard Heat Sink or High Performance Heat Sink or DLC Module must be selected.
- Standard Fan kit or High Performance Fan Kit must be selected.
- Supports only PC5-5600B/ PC5-5200B Memory.
- If "HPE Energy Star4.0 configuration FIO kit" is selected then Qty2 of this Processor cannot be selected.
- 96GB 5600B Memory cannot be selected.
- Supports PCIe4.0 Only29, 30, 31, 32, 34, 259, 445, 449, 458, 475, 499

4th Generation Intel Xeon-Platinum

Notes:

- All SKUs below ship with processor only. Adequate fans and heatsinks must be selected.
- Processors with TDP equal to or greater than 150W require High Performance Heatsink (P48818-B21)
- Q series processors require Max Performance Heat Sink (P48817-B21)
- 8470Q processor is not supported with 12LFF CTO Server and 24SFF CTO Server.

Intel Xeon-Platinum 9462 2.7GHz 32-core 350W Processor for HPE

P49645-B21

Notes:

- This is Intel High Bandwidth Memory (HBM) CPU.
- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8490H 1.9GHz 60-core 350W Processor for HPE

P49630-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8480+ 2.0GHz 56-core 350W Processor for HPE

P49607-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8470Q 2.1GHz 52-core 350W Processor for HPE

P49609-B21

Notes:

- Requires selection of Max Performance Heat Sink or DLC Module
- Requires High Performance Fan Kit
- If Full Length (FL) GPU is selected with this Processor then DLC Module must be selected for Processors.

Intel Xeon-Platinum 8470 2.0GHz 52-core 350W Processor for HPE

P49606-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8470N 1.7GHz 52-core 300W Processor for HPE

P49649-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Configuration Information

Intel Xeon-Platinum 8468V 2.4GHz 48-core 330W Processor for HPE P49631-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8468 2.1GHz 48-core 350W Processor for HPE P49605-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8462Y+ 2.8GHz 32-core 300W Processor for HPE P49603-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8458P 2.7GHz 44-core 350W Processor for HPE P49632-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8460Y+ 2.0GHz 40-core 300W Processor for HPE P49604-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8452Y 2.0GHz 36-core 300W Processor for HPE P49616-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Platinum 8444H 2.9GHz 16-core 270W Processor for HPE P49625-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

4th Generation Intel Xeon-Gold

Intel Xeon-Gold 6458Q 3.1GHz 32-core 350W Processor for HPE P49608-B21

Notes:

- Requires selection of Max Performance Heat Sink or DLC Module
- Requires High Performance Fan Kit
- If Full Length (FL) GPU is selected with this Processor then DLC Module must be selected for Processors.

Intel Xeon-Gold 6448H 2.4GHz 32-core 250W Processor for HPE P49622-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Gold 6448Y 2.1GHz 32-core 225W Processor for HPE P49600-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Gold 6444Y 3.6GHz 16-core 270W Processor for HPE P49602-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Configuration Information

Intel Xeon-Gold 6442Y 2.6GHz 24-core 225W Processor for HPE	P49599-B21
Notes:	
– Requires High Performance Heat Sink	
– Requires High Performance Fan Kit	
Intel Xeon-Gold 6438N 2.0GHz 32-core 205W Processor for HPE	P49638-B21
Notes:	
– Requires High Performance Heat Sink	
– Requires High Performance Fan Kit	
Intel Xeon-Gold 6438Y+ 2.0GHz 32-core 205W Processor for HPE	P49615-B21
Notes:	
– Requires High Performance Heat Sink	
– Requires High Performance Fan Kit	
Intel Xeon-Gold 6434 3.7GHz 8-core 195W Processor for HPE	P49601-B21
Notes: Requires High Performance Heat Sink	
Intel Xeon-Gold 6430 2.1GHz 32-core 270W Processor for HPE	P49614-B21
Notes:	
– Requires High Performance Heat Sink	
– Requires High Performance Fan Kit	
Intel Xeon-Gold 6426Y 2.5GHz 16-core 185W Processor for HPE	P49598-B21
Notes: Requires High Performance Heat Sink	
Intel Xeon-Gold 6454S 2.2GHz 32-core 270W Processor for HPE	P49654-B21
Notes:	
– Requires High Performance Heat Sink	
– Requires High Performance Fan Kit	
Intel Xeon-Gold 6421N 1.8GHz 32-core 185W Processor for HPE	P49641-B21
Notes: Requires High Performance Heat Sink	
Intel Xeon-Gold 6418H 2.1GHz 24-core 185W Processor for HPE	P49621-B21
Notes: Requires High Performance Heat Sink	
Intel Xeon-Gold 6416H 2.2GHz 18-core 165W Processor for HPE	P49620-B21
Notes: Requires High Performance Heat Sink	
Intel Xeon-Gold 6414U 2.0GHz 32-core 250W Processor for HPE	P49619-B21
Notes:	
– This is a single socket CPU, max allowed = 1	
– Requires High Performance Heat Sink	
– Requires High Performance Fan Kit	
Intel Xeon-Gold 5415+ 2.9GHz 8-core 150W Processor for HPE	P49597-B21
Notes: Requires Standard Heat Sink	
Intel Xeon-Gold 5416S 2.0GHz 16-core 150W Processor for HPE	P49653-B21
Notes: Requires Standard Heat Sink	
Intel Xeon-Gold 5418N 1.8GHz 24-core 165W Processor for HPE	P49640-B21
Notes: Requires High Performance Heat Sink	
Intel Xeon-Gold 5418Y 2.0GHz 24-core 185W Processor for HPE	P49612-B21
Notes: Requires High Performance Heat Sink	

Configuration Information

Intel Xeon-Gold 5420+ 2.0GHz 28-core 205W Processor for HPE

P49613-B21

Notes:

- Requires High Performance Heat Sink
- Requires High Performance Fan Kit

Intel Xeon-Gold 5415+ 2.9GHz 8-core 150W Processor for HPE

P49597-B21

Notes:

- Requires Standard Heat Sink
- 4th Generation Intel Xeon-Silver

Intel Xeon-Gold 5411N 1.9GHz 24-core 165W Processor for HPE

P49639-B21

Notes: Requires High Performance Heat Sink

Intel Xeon-Silver 4410Y 2.0GHz 12-core 150W Processor for HPE

P49610-B21

Notes: Requires Standard Heatsink

Intel Xeon-Silver 4416+ 2.0GHz 20-core 165W Processor for HPE

P49611-B21

Notes:

- Requires Standard Heatsink
- 4th Generation Intel Xeon-Bronze

Intel Xeon-Bronze 3408U 1.8GHz 8-core 125W Processor for HPE

P49617-B21

Notes: Requires Standard Heatsink

Step 2b: Choose Memory Options

Please select one or more memory from below.

For new Gen11 memory population rule whitepaper and optimal memory performance guidelines, please go to:

HPE Memory Population Rules

For details on the HPE Server Memory Options Population Rules, please go to:

Memory population rules for HPE Gen11 servers with 4th Generation Intel Scalable Processors

Notes:

- HPE Server Memory compatibility for a specific server platform may vary or be limited within a server platform depending upon the specific configuration being requested. Because each server environment and requirements can vary, memory compatibility is based not only upon the server family, but may also be affected by the amount and type of additional hardware options installed within a specific server configuration. For this reason, some HPE memory DIMMs may be qualified for an HPE server model or family and yet occasionally not be supported with some configurations within that server family
- Memory should be installed in even quantity of DIMMs
- The maximum memory speed and capacity is a function of the memory type, memory configuration, and processor model.
- DDR5-4800 Memory Kits are only supported with 4th Generation Intel Xeon Scalable Series Processors.
- Memory compatibility may vary or be limited within a specific server family depending upon the specific configuration being requested. Because each server environment and requirements can vary, memory compatibility is based not only upon the server family, but may also be affected by the amount and type of additional hardware options installed within a specific server configuration. For this reason, some HPE memory DIMMs may be qualified for a server model or family and yet occasionally not be supported with limited configurations within that server family.
- Please consult with the HPE server QuickSpecs or your HPE representative if you have any questions regarding memory compatibility with a specific HPE server configuration.

Registered DIMMs DDR5 (RDIMMs)

HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit

P43322-B21

HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit

P43328-B21

HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit

P43331-B21

HPE 96GB (1x96GB) Dual Rank x4 DDR5-4800 CAS-46-45-45 EC8 Registered Smart Memory Kit

P66675-B21

Notes: 96GB DIMMs supported only on XCC and MCC CPUs.

Configuration Information

HPE 128GB (1x128GB) Dual Rank x4 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit	P69976-B21
HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P43334-B21
HPE 256GB (1x256GB) Octal Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P43337-B21

Notes:

- 4800 MT/s memory SKUs offer a transfer rate of 4800 MT/s at 1 DIMM per channel and 4400 MT/s at 2 DIMMs per channel
- Mixing of 3DS memory and non-3DS memory is not supported
- Mixing of x4 and x8 memory is not allowed
- Memory with larger than 128GB capacity will need High Performance Fan Kit (P48820-B21) and ambient limitation. 256GB DIMM will also need to limit the maximum front-end cage to two.
- If 96GB or higher density memory is selected then High Performance Fan Kit must be selected.
- 96GB memory cannot be mixed with any other memory.
- 96GB memory configuration must be either 8 or 16 only on 1 processor unit.
- 96GB memory configuration must be either 16 or 32 only on 2 processor unit.

Memory Blank Kit

HPE DDR4 DIMM Blank Kit	P07818-B21
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Notes: DIMM Blanks are optional and not required.

Step 2c: Choose Power Supplies

Select one or two power supplies from below.

Notes: Mixing of 2 different power supplies is NOT allowed.

HPE Flex Slot Power Supplies

HPE 1800W-2200W Flex Slot Titanium Hot Plug Power Supply Kit	P44712-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38997-B21
HPE 1600W Flex Slot -48VDC Hot Plug Power Supply Kit	P17023-B21
HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit	P03178-B21
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38995-B21

Notes:

- Select a minimum (1), maximum (2) power supplies.
- 1600W Power supplies only support high line voltage (200VAC to 240VAC).
- Prior to making a power supply selection it is highly recommended that the HPE Power Advisor is run to determine the right size power supply for your server configuration. The HPE Power Advisor is located at:
<https://www.hpe.com/info/hppoweradvisor>.
- All power supplies in a server should match.
- Mixing Power Supplies is not supported.
- HPE ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). Visit **HPE power cords** for a full list of optional power cords.
- Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, or Switzerland must include more efficient AC power supplies: 94% for multi-output and 96% for single-output.
- HPE Flexible Slot power supplies are single-output, and part numbers 865438-B21, P03178-B21, and P44712-B21 are 96% efficient, thus meeting requirements. HPE is on target to fulfil compliant systems ahead of time and will begin enforcing these requirements in advance to satisfy requests with the current power supplies by the set deadline.

Configuration Information

Step 3: Choose Additional Factory Integrable Options

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

HPE Security Options

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 Bezel Lock Kit 875519-B21

Notes: This option can be selected only if HPE Gen11 2U Bezel Kit (P50400-B21) is selected.

HPE ProLiant DL3XX Gen11 Intrusion Cable Kit P48922-B21

Notes: This option must be selected if HPE Trusted Supply Chain SKU (P36394-B21) is selected.

HPE Gen11 2U Bezel Kit P50400-B21

Factory Instructions and Server Settings

HPE ProLiant DL380 Gen11 8NVMe 1P FIO Bundle Kit P69548-B21

Notes:

- This bundle provides Direct Attach to 8NVMe Drives through First/ Single Processor
- If NVMe bundle is selected then defaulted Controller has to be deselected.
- If this NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit must be selected and defaulted.
- If this NVMe Bundle/ EDSFF Bundle is selected then Qty 1 of High Performance Fan Kit must be selected and defaulted.
- If 8NVMe Bundle is selected then Qty 1 (min/max) of 8SFF U.3 x4 cage OR 8SFF U.2 x4 cage must be selected.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If 8SFF U.3 x1 Cage is selected along with 8 OR 16 NVMe bundle then controller must be selected except SR308i-o/SR308i-p.
- If 8NVMe 1P Bundle is selected then Primary 3 x16 Cable Kit cannot be selected and vice-versa.

HPE ProLiant DL380 Gen11 36EDSFF FIO Bundle Kit P56075-B21

HPE ProLiant DL380 Gen11 20EDSFF FIO Bundle Kit P56076-B21

Notes:

- If this NVMe Bundle/ EDSFF Bundle is selected then Qty 1 of High Performance Fan Kit must be selected.
- If NVMe Bundle/ EDSFF Bundle is selected then Second Processor must be selected.
- For 12EDSFF CTO Server, If EDSFF Bundle is selected then Max Quantity of 256GB Memory is limited to 16.
- EDSFF Drive cage supports Direct attach Only and requires selection of EDSFF Bundle.
- If EDSFF Bundle is selected then Qty1 of HPE DL380 Gen11 12EDSFF CPU1/2 Cable Kit must be selected
- If EDSFF Bundle is selected then Qty2 of HPE DL380/DL560 G11 2U 12EDSFF NVMe Kit must be selected.
- EDSFF Bundle is supported with 12EDSFF CTO Server Only.
- If EDSFF Bundle is selected then OCP1 x16 Enablement Kit AND OCP2 x16 Enablement Kit AND CPU1 OCP2 x8 Enable kit cannot be selected.
- If EDSFF Bundle is selected then Tertiary Riser cannot be selected.
- If EDSFF Bundle is selected then HPE DL380 Gen11 x16/x16/x16 Prim Cable Kit AND HPE DL380 Gen11 x16/x16/x16 Sec Cable Kit cannot be selected.
- If 20EDSFF Bundle is selected then Maximum 20 EDSFF Drives only can be selected.

Configuration Information

HPE ProLiant DL380 Gen11 32NVMe Balanced FIO Bundle Kit

P53639-B21

Notes:

- If NVMe bundle is selected then default storage controller cannot be selected.
- If this NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit must be selected.
- If this NVMe Bundle/ EDSFF Bundle is selected then Qty 1 of High Performance Fan Kit must be selected.
- If 24NVMe Bundle/ 32NVMe Bundle is selected then Qty 3 (min/max) of 8SFF U.3 x4 cage must be selected.
- If 24NVMe Bundle/ 32NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 3x16 Primary riser must be selected.
- If 24NVMe Bundle/ 32NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 3x16 SEC Riser must be selected.
- If 24NVMe Bundle/ 32NVMe Bundle is selected then Qty 1 of OCP1 x16 Enablement Kit must be selected.
- If 24NVMe Bundle/ 32NVMe Bundle is selected then Qty 1 of OCP2 x16 Enablement Kit must be selected.
- If 24NVMe Bundle/ 32NVMe Bundle is selected then Qty 1 of HPE Gen4 Re-timer/-p Cable Kit must be selected.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If NVMe Bundle/ EDSFF Bundle is selected, then Second Processor must be selected.
- If 24NVMe/ 32NVMe Bundle is selected, then Tertiary Riser cannot be selected.
- For 8SFF CTO Server, 8SFF U.3 x4 Mid Tray requires selection of 32NVMe Bundle or SR932i controller.
- If 32NVMe Bundle is selected, then Qty 1 (min/max) of HPE DL380 G11 2U 8SFF x4 U.3 Mid TM Kit must be selected.
- If 32NVMe Bundle is selected, then Qty 4 of HPE DL385 Gen10+ 12Gb NVMe 2p Adapter must be selected.

HPE ProLiant DL380 Gen11 8NVMe Balanced FIO Bundle Kit

P53633-B21

Notes:

- If this NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
- If this NVMe Bundle is selected, then Qty 1 of High Performance Fan Kit (P48820-B21) must be selected and defaulted.
- If 8NVMe Bundle is selected, then Qty 1 (min) of 8SFF U.3 x4 drive must be selected.
- If NVMe Bundle is selected, then 8SFF U.3 x4 Cage is defaulted.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If NVMe Bundle is selected, then Second Processor must be selected.
- If 8SFF U.3 x1 Cage is selected along with 8 OR 16 NVMe bundle, then controller must be selected.

HPE ProLiant DL380 Gen11 16NVMe Balanced FIO Bundle Kit

P53634-B21

Notes:

- If NVMe bundle is selected, then defaulted Controller has to be deselected.
- If this NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
- If this NVMe Bundle is selected, then Qty 1 of High Performance Fan Kit (P48820-B21) must be selected and defaulted.
- If 16NVMe Bundle is selected, then Qty 2 (min) of 8SFF U.3 x4 drive cage must be selected.
- If NVMe Bundle is selected, then 8SFF U.3 x4 drive cage will be defaulted.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If 16NVMe/ 24NVMe Bundle is selected, then Universal Media Bay kit cannot be selected.
- If NVMe Bundle is selected, then Second Processor must be selected.

Configuration Information

- If Tertiary Riser is selected along with 16NVMe Bundle, then 2x16 Tertiary FIO x8 Enable Kit (P53632-B21) must be selected
- If 8SFF U.3 x1 drive cage (P48813-B21) is selected along with 8 OR 16 NVMe bundle, then controller must be selected.

HPE ProLiant DL380 Gen11 24NVMe Balanced I/O FIO Bundle Kit

P53635-B21

Notes:

- If NVMe bundle is selected, then defaulted Controller has to be deselected.
- If NVMe Bundle is selected, then 8SFF U.3 x1 drive cage (P48813-B21) cannot be selected.
- If this NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
- If this NVMe Bundle is selected, then Qty 1 of High Performance Fan Kit (P48820-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 3 (min) of 8SFF U.3 x4 drives must be selected.
- If 24NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 3x16 Primary Riser (P48803-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 3x16 Secondary Riser (P51083-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of OCP1 x16 Enablement Kit (P48827-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of OCP2 x16 Enablement Kit (P48828-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 2 of HPE DL385 Gen10+ 12Gb NVMe 2p Adapter (P25527-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of HPE Gen4 Re-timer/-p Cable Kit must be selected and defaulted.
- If NVMe Bundle is selected, then 8SFF U.3 x4 drive cage will be defaulted.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If 16NVMe/ 24NVMe Bundle is selected, then Universal Media Bay kit cannot be selected.
- If NVMe Bundle is selected, then Second Processor must be selected.
- If 24NVMe Bundle is selected, then Tertiary Riser cannot be selected.
- If 24NVMe Balanced or 24NVMe DIFF IO-3 Bundle is selected, then CPU1 OCP2 x8 enablement OR CPU2 OCP2 x8 enablement kit cannot be selected.
- If 24NVMe Bundle is selected, then Primary 3 x16 Cable OR Secondary 3 x16 Cable cannot be selected.

HPE ProLiant DL380 Gen11 24NVMe Differential I/O OCP1/2 x8 FIO Bundle Kit

P53636-B21

Notes:

- If NVMe bundle is selected, then defaulted Controller has to be deselected.
- If NVMe Bundle is selected, then 8SFF U.3 x1 drive cage (P48813-B21) cannot be selected.
- If this NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
- If this NVMe Bundle is selected, then Qty 1 of High Performance Fan Kit (P48820-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 3 (min) of 8SFF U.3 x4 drive cage must be selected.
- If 24NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 3x16 Primary Riser (P48803-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected then Qty 1 of HPE DL380 Gen11 x8x16x8 Secondary Riser (P48802-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of HPE DL300 Gen11 CPU1 OCP2 x8 Enable kit (P51911-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of HPE DL385 Gen10+ 12Gb NVMe 2p Adapter (P25527-B21) must be selected and defaulted.

Configuration Information

- If 24NVMe Bundle is selected, then Qty 1 of HPE Gen4 Re-timer/-p Cable Kit (P54874-B21) must be selected and defaulted.
- If NVMe Bundle is selected, then 8SFF U.3 x4 drive cage will be defaulted.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If 16NVMe/ 24NVMe Bundle is selected, then Universal Media Bay kit cannot be selected.
- If NVMe Bundle is selected, then Second Processor must be selected.
- If Tertiary Riser is selected along with 16NVMe Bundle then 2x16 Tertiary FIO x8 Enable Kit (P53632-B21) must be selected
- If 24NVMe Diff IO-1 bundle is selected, then OCP1 x16 enablement Kit and OCP2 x16 enablement kit and CPU2 OCP2 x8 enablement Kit cannot be selected.
- If 24NVMe Bundle is selected then primary 3 x16 Cable OR Sec 3 x16 Cable cannot be selected.

HPE ProLiant DL380 Gen11 24NVME Differential I/O OCP1 x16 FIO Bundle Kit

P53637-B21

Notes:

- If NVMe bundle is selected, then defaulted Controller has to be deselected.
- If NVMe Bundle is selected, then 8SFF U.3 x1 drive cage (P48813-B21) cannot be selected.
- If this NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
- If this NVMe Bundle is selected, then Qty 1 of High-Performance Fan Kit (P48820-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 3 (min) of 8SFF U.3 x4 drive cage must be selected.
- If 24NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 3x16 Primary Riser (P48803-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 x8x16x8 Secondary Riser (P48802-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of OCP1 x16 Enablement Kit (P48827-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of HPE DL385 Gen10+ 12Gb NVMe 2p Adapter (P25527-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of HPE Gen4 Re-timer/-p Cable Kit (P54874-B21) must be selected and defaulted.
- If NVMe Bundle is selected, then 8SFF U.3 x4 drive cage will be defaulted.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If 16NVMe/ 24NVMe Bundle is selected, then Universal Media Bay kit cannot be selected.
- If NVMe Bundle is selected, then Second Processor must be selected.
- If 24NVMe Bundle is selected, then Tertiary Riser cannot be selected.
- If 24NVMe Diff IO-2 bundle is selected, then OCP2 x16 enablement kit and CPU2 OCP2 enablement Kit OR CPU1 OCP2 x8 enablement Kit OR OCP2 x16 enablement cannot be selected.
- If 24NVMe Bundle is selected, then primary 3 x16 Cable OR Sec 3 x16 Cable cannot be selected.

HPE ProLiant DL380 Gen11 24NVME Differential I/O OCP1/2 x16 FIO Bundle Kit

P53638-B21

Notes:

- If NVMe bundle is selected, then defaulted Controller has to be deselected.
- If NVMe Bundle is selected, then 8SFF U.3 x1 drive cage (P48813-B21) cannot be selected.
- If this NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 8NVMe CPU1/2 Cable Kit (P48825-B21) must be selected and defaulted.
- If this NVMe Bundle is selected, then Qty 1 of High Performance Fan Kit (P48820-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 3 (min) of 8SFF U.3 x4 drive cage must be selected.
- If 24NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 3x16 Primary Riser (P48803-B21) must be selected and defaulted.

Configuration Information

- If 24NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 x8x16x8 Secondary Riser (P51083-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of OCP1 x16 Enablement Kit (P48827-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of OCP2 x16 Enablement Kit (P48828-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 2 of HPE DL385 Gen10+ 12Gb NVMe 2p Adapter (P25527-B21) must be selected and defaulted.
- If 24NVMe Bundle is selected, then Qty 1 of HPE Gen4 Re-timer/-p Cable Kit (P54874-B21) must be selected and defaulted.
- If NVMe Bundle is selected, then 8SFF U.3 x4 drive cage will be defaulted.
- NVMe Bundle is supported with 8SFF CTO Server Only.
- If 16NVMe/ 24NVMe Bundle is selected, then Universal Media Bay kit cannot be selected.
- If NVMe Bundle is selected, then Second Processor must be selected.
- If 24NVMe Bundle is selected, then Tertiary Riser cannot be selected.
- If 24NVMe Balanced or 24NVMe DIFF IO-3 Bundle is selected, then CPU1 OCP2 x8 enablement OR CPU2 OCP2 x8 enablement kit cannot be selected
- If 24NVMe Bundle is selected, then primary 3 x16 Cable OR Sec 3 x16 Cable cannot be selected.

HPE iLO Common Password FIO Setting

P08040-B21

Notes: Sets common iLO password, instead of randomly generated password for each server during Factory Diagnostics.

HPE ProLiant Platform Certificate and IDevID iLO FIO Setting

P42104-B21

Notes:

- Initial Device Identity (IDevID) certificates are part of a Zero Trust Architecture. This SKU instructs factory to provision IDevID on HPE iLO.
- Directs HPE manufacturing site to create, digitally sign and store a platform certificate on the server.
- Requires HPE Trusted Platform Module (TPM).

HPE Converged Infrastructure Management Software

HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU

P8B26AAE

HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU

E5Y35AAE

vSAN ReadyNode

- 3, 6, 8 or 16 node vSAN Clusters (3 node minimum)
- HW is optimized for vSAN
- VMware vSAN Advanced LTU bundled

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 an HPE approved configurator. Contact your local sales representative for additional information.

Software as a Service Management

HPE Compute Ops Management

Base SKU

HPE Compute Ops Management Enhanced 3-year Upfront ProLiant SaaS R7A11AAE

Upgrade SKUS

HPE Compute Ops Management Enhanced 1-year Upfront ProLiant SaaS R7A10AAE

HPE Compute Ops Management Enhanced 5-year Upfront ProLiant SaaS R7A12AAE

HPE OneView

HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU E5Y35AAE

HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU P8B26AAE

Notes: For customers purchasing HPE Compute Ops Management, without a hardware purchase or a BTO purchase, use this base SKU within ASQ order:

HPE Compute Ops Management Base SaaS R6Z73AAE

For more information, visit the Compute Ops Management QuickSpecs: <https://www.hpe.com/psnow/doc/a50004263enw>

Supported Servers – CTO only. No OEM. – Complete list can be found here: Latest Supported Server List:

<https://www.hpe.com/info/com-supported-servers>

HPE Unique Options

HPE ProLiant DL380 Gen11 12EDSFF Drive Cage Kit P48808-B21

Notes:

- This is the 12EDSFF drive cage.
- This drive cages holds a maximum of 12 single thickness EDSFF drives
- Available for Factory Install Only orders and not available for standalone or upgrade ordering.

HPE ProLiant DL380 Gen11 2SFF U.3 Primary/Secondary Riser Cage Kit P48810-B21

Notes:

- 2SFF drive cage for rear in Primary or Secondary riser position.
- This Drive cage can be selected with 8SFF CTO Server and 24SFF CTO Server Only.
- For 8SFF/ 24SFF CTO Server, Max = 2.

HPE ProLiant DL380 Gen11 2SFF U.3 HDD Stacking Drive Cage Kit P48811-B21

Notes:

- This is a 2SFF drive cage for front or rear. For a front mount it installs into Universal Media Bay.
- This drive cage supports controller and Direct Attach. If Direct Attached then it will support NVMe Drives only
- For 8SFF CTO Server, Max = 2.

HPE ProLiant DL380 Gen11 2SFF U.3 Side-by-Side Drive Cage Kit P48812-B21

Notes:

- This is 2SFF side-by-side drive cage for the 8LFF CTO server only.
- This Drive cage supports controller and Direct Attach. If Direct Attached then it will support NVMe drives only.
- Max = 1



Core Options

HPE ProLiant DL380 Gen11 2U 8SFF x1 Tri-Mode U.3 Drive Cage Kit

P48813-B21

Notes:

- This is an 8SFF U.3 x1 front drive cage.
- This drive cage can be selected with 8SFF CTO Server Only.
- Max =3
- If Qty3 of 8SFF Front cage is selected then High Performance Fan Kit (P48820-B21) must be selected.
- This Drive cage supports controller and Direct Attach. If Direct Attached then it will support SATA Drives only and connects to SATA port on motherboard.

HPE ProLiant DL380 Gen11 8SFF U.3 Premium Drive Cage Kit

P48814-B21

Notes:

- This is an 8SFF U.3 x4 front drive cage.
- This Drive cage can be selected with 8SFF CTO Server Only.
- Max = 3
- If Qty3 is selected then High Performance Fan Kit (P48820-B21) must be selected.
- This drive cage supports controller and Direct Attach. If Direct Attached then it will support NVMe Drives only.

HPE ProLiant DL380 Gen11 4LFF SAS/SATA 12G LP Midplane Drive Cage Kit

P48809-B21

Notes:

- This is the 4LFF mid-tray drive cage.
- This drive cage holds a maximum of 4LFF drives.
- Max 16LFF SAS/SATA is possible when storage controller is selected
- Max 14LFF SATA is possible if mid-tray is direct connected to motherboard

HPE ProLiant DL380 Gen11 8SFF x1 Tri-Mode 24G U.3 BC Midplane Drive Cage Kit

P48815-B21

Notes:

- This is the 8SFF U.3 x1 mid-tray drive cage.
- This drive cage holds a maximum of 8 SAS/SATA/NVMe drives.

HPE ProLiant DL380 Gen11 2U 8SFF x4 U.3 Mid Tray Tri-Mode Drive Cage Kit

P48816-B21

Notes:

- This is the 8SFF U.3 x4 mid-tray drive cage.
- This drive cage holds a maximum of 8 SAS/SATA/NVMe drives.

HPE ProLiant DL380 Gen11 2LFF Primary Riser Cage Kit

P48823-B21

Notes:

- This is a 2LFF drive cage for the rear Primary Riser position.
- This Drive cage supports controller and Direct Attach. If Direct Attached then it will support SATA Drives only and connects to SATA port on motherboard.
- Max = 1
- This drive cage can be selected with 8LFF CTO Server and 12LFF CTO Server Only.

HPE ProLiant DL380 Gen11 2LFF Tertiary Riser Cage Kit

P48826-B21

Notes:

- This is a 2LFF drive cage for the rear Secondary + Tertiary Riser position.
- Max = 1

HPE ProLiant DL380 Gen11 SFF Universal Media Bay Kit

P50728-B21

Notes:

- This is the Universal Media Bay, it occupies an 8SFF drive cage slot on the front of the 8SFF CTO server.
- The Universal Media Bay can be selected with the 8SFF CTO Server only.

Core Options

HPE ProLiant DL380 Gen11 2LFF LP Secondary Riser Cage Kit P51095-B21

Notes:

- This is a 2LFF drive cage for the rear Primary Riser position.
- Max = 1
- This drive cage can be selected with 8LFF CTO Server and 12LFF CTO Server Only.

HPE ProLiant DL380/DL560 Gen11 2U High Performance Fan Kit P48820-B21

Notes:

- If Processor above 205W is selected then High Performance Fan Kit is required.
- If 128GB or higher memory is selected then High Performance Fan Kit is required.
- If quantity 3 of front drive cage is selected, then High Performance Fan Kit is required.
- If NVMe is selected, then High Performance Fan Kit is required.
- 24SFF CTO server comes with High Performance Fan Kit installed.

HPE ProLiant DL380 Gen11 Max Performance Heat Sink Kit P48817-B21

Notes:

- If Q series Processor is selected then Max Performance Heat Sink is required.
- Max = 1

HPE ProLiant DL380/DL560 Gen11 High Performance 2U Heat Sink Kit P48818-B21

Notes:

- If Processor above 150W is selected then High Performance Heat Sink is required.
- Number of Heat Sinks selected must match number of processor(s) selected.

HPE ProLiant DL3XX/560 Gen11 High Performance Heat Sink Kit P48905-B21

Notes: This is a low profile high performance heatsink, this is only used when storage mid-tray is selected.

HPE ProLiant DL380 Gen11 Standard Heat Sink Kit P49145-B21

Notes: Standard heatsink is for CPUs with 150W or lower TDP.

HPE ProLiant DL380/DL560 Gen11 2U Rear Serial Port Cable Kit P48824-B21

HPE ProLiant DL380 Gen11 System Insight Display Kit P48819-B21

Notes: Max = 1

HPE ProLiant DL380 Compute Gen11 2U 8-pin GPU Power Cable Kit P77896-B21

HPE Processors

Processor Option Kits

5th Generation Intel Xeon-Platinum

All SKUs below ship with processors only. Adequate fans and heatsinks must be selected.

Supports "HPE DDR5 Smart Memory – Registered (RDIMM), 5600MT/s".

Intel Xeon-Platinum 8593Q 2.2GHz 64-core 385W Processor for HPE P68449-B21

Notes:

- XCC die
- Max 2
- Requires selection of Max Performance Heat Sink or DLC Module.

Intel Xeon-Platinum 8592+ 1.9GHz 64-core 350W Processor for HPE P67089-B21

Notes:

- XCC die
- Max 2

Core Options

Intel Xeon-Platinum 8592V 2.0GHz 64-core 330W Processor for HPE P67107-B21

Notes:

- XCC die
- Max 2

Intel Xeon-Platinum 8581V 2.0GHz 60-core 270W Processor for HPE P67109-B21

Notes:

- XCC die
- Max 1

Intel Xeon-Platinum 8580 2.0GHz 60-core 350W Processor for HPE P67088-B21

Notes:

- XCC die
- Max 2

Intel Xeon-Platinum 8570 2.1GHz 56-core 350W Processor for HPE P67087-B21

Notes:

- XCC die
- Max 2

Intel Xeon-Platinum 8568Y+ 2.3GHz 48-core 350W Processor for HPE P67086-B21

Notes:

- XCC die
- Max 2

Intel Xeon-Platinum 8562Y+ 2.8GHz 32-core 300W Processor for HPE P67085-B21

Notes:

- MCC die
- Max 2

Intel Xeon-Platinum 8558P 2.7GHz 48-core 350W Processor for HPE P67108-B21

Notes:

- XCC die
- Max 2

Intel Xeon-Platinum 8558 2.1GHz 48-core 330W Processor for HPE P67097-B21

Notes:

- XCC die
- Max 2

Intel Xeon-Platinum 8558U 2.0GHz 48-core 300W Processor for HPE P67102-B21

Notes:

- XCC die
- Max 1

Intel Xeon-Gold 6558Q 3.2GHz 32-core 350W Processor for HPE P67098-B21

Notes:

- MCC die
- Max 2
- Requires selection of Max Performance Heat Sink or DLC Module

Core Options

Intel Xeon-Gold 6554S 2.2GHz 36-core 270W Processor for HPE	P67110-B21
Notes:	
– XCC die	
– Max 2	
Intel Xeon-Gold 6548N 2.8GHz 32-core 250W Processor for HPE	P67105-B21
Notes:	
– MCC die	
– Max 2	
Intel Xeon-Gold 6548Y+ 2.5GHz 32-core 250W Processor for HPE	P67082-B21
Notes:	
– MCC die	
– Max 2	
Intel Xeon-Gold 6544Y 3.6GHz 16-core 270W Processor for HPE	P67084-B21
Notes:	
– MCC die	
– Max 2	
Intel Xeon-Gold 6542Y 2.9GHz 24-core 250W Processor for HPE	P67081-B21
Notes:	
– MCC die	
– Max 2	
Intel Xeon-Gold 6538N 2.1GHz 32-core 205W Processor for HPE	P67104-B21
Notes:	
– MCC die	
– Max 2	
Intel Xeon-Gold 6538Y+ 2.2GHz 32-core 225W Processor for HPE	P67096-B21
Notes:	
– MCC die	
– Max 2	
Intel Xeon-Gold 6534 3.9GHz 8-core 195W Processor for HPE	P67083-B21
Notes:	
– MCC die	
– Max 2	
Intel Xeon-Gold 6530 2.1GHz 32-core 270W Processor for HPE	P67095-B21
Notes:	
– XCC die	
– Max 2	
Intel Xeon-Gold 6526Y 2.8GHz 16-core 195W Processor for HPE	P67080-B21
Notes:	
– MCC die	
– Max 2	
Intel Xeon-Gold 5520+ 2.2GHz 28-core 205W Processor for HPE	P67094-B21
Notes:	
– MCC die	
– Max 2	



Core Options

Intel Xeon-Gold 5515+ 3.2GHz 8-core 165W Processor for HPE P67079-B21

Notes:

- MCC die
- Max 2

Intel Xeon-Silver 4516Y+ 2.2GHz 24-core 185W Processor for HPE P67093-B21

Notes:

- MCC die
- Max 2

Intel Xeon-Silver 4514Y 2.0GHz 16-core 150W Processor for HPE P67092-B21

Notes:

- MCC die
- Max 2

Intel Xeon-Silver 4510 2.4GHz 12-core 150W Processor for HPE P67091-B21

Notes:

- EE LCC die
- Max 2
- If this Processor is selected, then 96GB 5600B Memory cannot be selected.

Intel Xeon-Silver 4509Y 2.6GHz 8-core 125W Processor for HPE P67090-B21

Notes:

- EE LCC die
- Max 2
- If this Processor is selected, then 96GB 5600B Memory cannot be selected.

Intel Xeon-Bronze 3508U 2.1GHz 8-core 125W Processor for HPE P67100-B21

Notes:

- EE LCC die
- Max 1
- If this Processor is selected, then 96GB 5600B Memory cannot be selected.
- Supports PCIe4.0 Only

4th Generation Intel Xeon-Platinum

Notes: All SKUs below ship with processor only. Adequate fans and heatsinks must be selected.

Intel Xeon-Platinum 9462 2.7GHz 32-core 350W Processor for HPE P49645-B21

Notes: This is Intel High Bandwidth Memory (HBM) CPU.

Intel Xeon-Platinum 8490H 1.9GHz 60-core 350W Processor for HPE P49630-B21

Intel Xeon-Platinum 8480+ 2.0GHz 56-core 350W Processor for HPE P49607-B21

Intel Xeon-Platinum 8470Q 2.1GHz 52-core 350W Processor for HPE P49609-B21

Intel Xeon-Platinum 8470 2.0GHz 52-core 350W Processor for HPE P49606-B21

Intel Xeon-Platinum 8470N 1.7GHz 52-core 300W Processor for HPE P49649-B21

Intel Xeon-Platinum 8468V 2.4GHz 48-core 330W Processor for HPE P49631-B21

Intel Xeon-Platinum 8468 2.1GHz 48-core 350W Processor for HPE P49605-B21

Intel Xeon-Platinum 8458P 2.7GHz 44-core 350W Processor for HPE P49632-B21

Intel Xeon-Platinum 8460Y+ 2.0GHz 40-core 300W Processor for HPE P49604-B21

Intel Xeon-Platinum 8452Y 2.0GHz 36-core 300W Processor for HPE P49616-B21

Intel Xeon-Platinum 8444H 2.9GHz 16-core 270W Processor for HPE P49625-B21

4th Generation Intel Xeon-Gold

Notes: All SKUs below ship with processor only. Adequate fans and heatsinks must be selected.

Intel Xeon-Gold 6458Q 3.1GHz 32-core 350W Processor for HPE P49608-B21

Intel Xeon-Gold 6448H 2.4GHz 32-core 250W Processor for HPE P49622-B21

Core Options

Intel Xeon-Gold 6448Y 2.1GHz 32-core 225W Processor for HPE	P49600-B21
Intel Xeon-Gold 6444Y 3.6GHz 16-core 270W Processor for HPE	P49602-B21
Intel Xeon-Gold 6442Y 2.6GHz 24-core 225W Processor for HPE	P49599-B21
Intel Xeon-Gold 6438N 2.0GHz 32-core 205W Processor for HPE	P49638-B21
Intel Xeon-Gold 6438Y+ 2.0GHz 32-core 205W Processor for HPE	P49615-B21
Intel Xeon-Gold 6434 3.7GHz 8-core 195W Processor for HPE	P49601-B21
Intel Xeon-Gold 6430 2.1GHz 32-core 270W Processor for HPE	P49614-B21
Intel Xeon-Gold 6454S 2.2GHz 32-core 270W Processor for HPE	P49654-B21
Intel Xeon-Gold 6426Y 2.5GHz 16-core 185W Processor for HPE	P49598-B21
Intel Xeon-Gold 6414U 2.0GHz 32-core 250W Processor for HPE	P49619-B21

Notes: Single socket capable, no dual socket support.

Intel Xeon-Gold 6421N 1.8GHz 32-core 185W Processor for HPE	P49641-B21
Intel Xeon-Gold 6418H 2.1GHz 24-core 185W Processor for HPE	P49621-B21
Intel Xeon-Gold 6416H 2.2GHz 18-core 165W Processor for HPE	P49620-B21
Intel Xeon-Gold 5415+ 2.9GHz 8-core 150W Processor for HPE	P49597-B21
Intel Xeon-Gold 5416S 2.0GHz 16-core 150W Processor for HPE	P49653-B21
Intel Xeon-Gold 5418N 1.8GHz 24-core 165W Processor for HPE	P49640-B21
Intel Xeon-Gold 5418Y 2.0GHz 24-core 185W Processor for HPE	P49612-B21
Intel Xeon-Gold 5420+ 2.0GHz 28-core 205W Processor for HPE	P49613-B21
Intel Xeon-Gold 5411N 1.9GHz 24-core 165W Processor for HPE	P49639-B21

4thGeneration Intel Xeon-Silver

Notes: All SKUs below ship with processor only. Adequate fans and heatsinks must be selected.

Intel Xeon-Silver 4410Y 2.0GHz 12-core 150W Processor for HPE	P49610-B21
Intel Xeon-Silver 4416+ 2.0GHz 20-core 165W Processor for HPE	P49611-B21

4thGeneration Intel Xeon-Bronze

Notes: All SKUs below ship with processor only. Adequate fans and heatsinks must be selected.

Intel Xeon-Bronze 3408U 1.8GHz 8-core 125W Processor for HPE	P49617-B21
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Memory Selection

To streamline the configuration process for HPE ProLiant Gen11 servers and to provide the best product availability, HPE recommends memory from the list located here: <https://www.hpe.com/products/recommend>.

Best product availability is limited to US, Canada, and Latin America at this time.

Notes:

- HPE Server Memory compatibility for a specific server platform may vary or be limited within a server platform depending upon the specific configuration being requested. Because each server environment and requirements can vary, memory compatibility is based not only upon the server family, but may also be affected by the amount and type of additional hardware options installed within a specific server configuration. For this reason, some HPE memory DIMMs may be qualified for an HPE server model or family and yet occasionally not be supported with some configurations within that server family
- Maximum memory capacity and speed per processor is dependent on processor model selection or limitation.

HPE DDR5 Memory

Registered DIMMs (RDIMMs)

HPE 16GB (1x16GB) Single Rank x8 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit	P64705-B21
HPE 32GB (1x32GB) Dual Rank x8 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit	P64706-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit	P64707-B21

Notes: If Memory Fault Tolerance is selected then only x4 memory options can be selected.

Core Options

HPE 96GB (1x96GB) Dual Rank x4 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit P64708-B21

Notes:

- 96GB Memory cannot be mixed with any other Memory.
- 96GB 5600 Memory cannot be selected with EE LCC (Edge Enhanced Low Core Count) die of the New 5th Generation Intel® Xeon® Scalable Processors.
- For 1 Processor, the allowed qty of 96GB 5600 Memory is 1, 6, 8, 12, 16 only.
- For 2 Processor, the allowed qty of 96GB 5600 Memory is 2, 12, 16, 24, 32 only.
- If Memory Fault Tolerance is selected, then only x4 memory options can be selected.

HPE 128GB (1x128GB) Quad Rank x4 DDR5-5600 CAS-52-45-45 EC8 Registered 3DS Smart Memory Kit P64709-B21

Notes: If Memory Fault Tolerance is selected then only x4 memory options can be selected.

HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit P43322-B21

HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit P43328-B21

HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit P43331-B21

Notes: If Memory Fault Tolerance is selected then only x4 memory options can be selected.

HPE 96GB (1x96GB) Dual Rank x4 DDR5-4800 CAS-46-45-45 EC8 Registered Smart Memory Kit P66675-B21

Notes: 96GB DIMMs supported on XCC and MCC processors only.

HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit P43334-B21

HPE 256GB (1x256GB) Octal Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit P43337-B21

HPE 256GB (1x256GB) Octal Rank x4 DDR5-5600 CAS-52-45-45 EC8 Registered 3DS Smart Memory Kit P64710-B21

Notes:

- Memory should be installed in even quantity of DIMMs
- 4800 MT/s memory SKUs offer a transfer rate of 4800 MT/s at 1 DIMM per channel and 4400 MT/s at 2 DIMMs per channel
- Mixing of 3DS memory and non-3DS memory is not supported
- Mixing of x4 and x8 memory is not allowed
- If 96GB or higher density memory is selected then High Performance Fan Kit must be selected.
- 96GB memory cannot be mixed with any other memory.
- 96GB memory configuration must be either 8 or 16 only on 1 processor unit.
- 96GB memory configuration must be either 16 or 32 only on 2 processor unit.

HPE DDR Blank Kit

HPE DDR4 DIMM Blank Kit P07818-B21

Notes: DIMM Blanks are optional and not required.

HPE Optical Drives

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

Notes: HPE DL38X Gen11 Universal Media Bay Kit (P50728-B21) is required for this option on a SFF model. No support in 12LFF or 24SFF models.

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

Notes: HPE DL38X Gen11 Universal Media Bay Kit (P50728-B21) is required for this option on a SFF model. No support in 12LFF or 24SFF models.

HPE Mobile USB DVD-RW Optical Drive 701498-B21

Notes: This is only supported on USB 3.0 ports.

Core Options

Media Bay Kits

HPE ProLiant DL380 Gen11 SFF Universal Media Bay Kit

P50728-B21

Notes:

- The HPE DL380 Gen11 Universal Media Bay provides front Display Port and 2xUSB 2.0; plus support for 2x SFF front drives or 2 NVME front drives (riser required) and ODD support (Not included); and can only be located in Box1 in either an 8 SFF or 8+8 SFF model.
- This is a SFF model option only.
- Not supported on 12EDSFF, 24SFF, 12FF, or 8LFF CTO servers.

HPE Hard Disk Drives

Mission Critical – 12G SAS – SFF Drives

HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Self-encrypting FIPS HDD

P28618-B21

HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Self-encrypting FIPS HDD

P28622-B21

Enterprise – 12G SAS – SFF Drives

HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD

P28352-B21

HPE 1.8TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD

P53562-B21

HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD

P28586-B21

HPE 600GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD

P53561-B21

HPE 300GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD

P40430-B21

Midline – 6G SATA – SFF Drives

HPE 2TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD

P28500-B21

Midline – 12G SAS – LFF Drives

HPE 20TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD

P53553-B21

HPE 16TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD

P23608-B21

HPE 14TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD

P09155-B21

HPE 12TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD

881781-B21

HPE 8TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD

834031-B21

HPE 6TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD

861746-B21

HPE 4TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD

833928-B21

HPE 2TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD

833926-B21

Midline – 6G SATA – LFF Drives

HPE 20TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD

P53554-B21

HPE 16TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD

P23449-B21

HPE 12TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD

881787-B21

HPE 8TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD

834028-B21

HPE 6TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD

861742-B21

HPE 4TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD

861683-B21

HPE 2TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD

861681-B21

HPE 1TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD

861686-B21

Core Options

SSD Selection

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

Read Intensive – NVMe – EDSFF – Solid State Drives

HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61187-B21
HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD	P57807-B21
HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD	P57803-B21
HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61183-B21
HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD	P57803-B21
HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61179-B21
HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD	P57799-B21
HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70392-B21
HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69234-B21

Mixed Use – NVMe – EDSFF – Solid State Drives

HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70399-B21
HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 EDSFF SPDM CM7 SSD	P61191-B21
HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 EDSFF SPDM CM7 SSD	P61195-B21
HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69241-B21

Read Intensive – 24G SAS – SFF – Solid State Drives

HPE 15.36TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49045-B21
HPE 3.84TB SAS Read Intensive SFF BC Self-encrypting FIPS 140-2 PM7 SSD	P63875-B21
HPE 7.68TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49041-B21
HPE 3.84TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49035-B21
HPE 1.92TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49031-B21
HPE 960GB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49029-B21

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

HPE 7.68TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40509-B21
HPE 3.84TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40508-B21
HPE 1.92TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40507-B21
HPE 960GB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40506-B21
HPE 960GB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49029-B21

Mixed Use – 24G SAS – SFF – Solid State Drives

HPE 1.6TB SAS Mixed Use SFF BC Self-encrypting FIPS 140-2 PM7 SSD	P63871-B21
HPE 6.4TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49057-B21
HPE 3.2TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49053-B21
HPE 1.6TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49049-B21
HPE 800GB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49047-B21

Mixed Use – 12G SAS – SFF – Solid State Drives

HPE 3.84TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P40512-B21
HPE 1.92TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P40511-B21
HPE 960GB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P40510-B21

Read Intensive – 6G SATA – SFF – Solid State Drives

HPE 480GB SATA 6G Read Intensive SFF BC PM893a SSD	P63886-B21
HPE 480GB SATA 6G Read Intensive SFF BC PM893a SSD	P63886-B21
HPE 3.84TB SATA 6G Read Intensive SFF BC PM893a SSD	P63910-B21
HPE 3.84TB SATA 6G Read Intensive SFF BC PM893a SSD	P63910-B21
HPE 7.68TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40501-B21
HPE 3.84TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40500-B21

Core Options

HPE 1.92TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40499-B21
HPE 480GB SATA 6G Read Intensive SFF BC Self-encrypting 5400P SSD	P58236-B21
HPE 480GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40497-B21
HPE 960GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40498-B21
HPE 240GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40496-B21
Mixed Use – 6G SATA – SFF – Solid State Drives	
HPE 3.84TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40505-B21
HPE 1.92TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40504-B21
HPE 960GB SATA 6G Mixed Use SFF BC Self-encrypting 5400M SSD	P58244-B21
HPE 960GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40503-B21
HPE 480GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40502-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 – 6G SATA – LFF – Solid State Drives	
HPE 960GB SATA 6G Read Intensive LFF LPC Multi Vendor SSD	P47808-B21
Read Intensive – NVMe – SFF – Solid State Drives	
HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PS1010 SSD	P70436-B21
HPE 15.36TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static SPDM Multi Vendor SSD	P69255-B21
HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD	P63841-B21
HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50224-B21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PS1010 SSD	P70434-B21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD	P63837-B21
HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD	P64848-B21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50222-B21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD	P63833-B21
HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD	P64846-B21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50219-B21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD	P63829-B21
HPE 1.92TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD	P64844-B21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50216-B21
HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD	P64842-B21
Mixed Use – NVMe – SFF – Solid State Drives	
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PS1030 SSD	P70428-B21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD	P63853-B21
HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD	P65023-B21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50233-B21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PS1030 SSD	P70426-B21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD	P63849-B21
HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD	P65015-B21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50230-B21
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD	P63845-B21
HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD	P65007-B21
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50227-B21
HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD	P64999-B21

Core Options

Hard Drive Blank Kits

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

Hard Drive Cage Kits

HPE ProLiant DL380 Gen11 12EDSFF Drive Cage Kit	P48808-B21
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Notes: Currently available as Factory Install Only and not available for standalone or upgrade ordering.

HPE ProLiant DL380 Gen11 2U 8SFF x1 Tri-Mode U.3 Drive Cage Kit	P48813-B21
HPE ProLiant DL380 Gen11 8SFF U.3 Premium Drive Cage Kit	P48814-B21
HPE ProLiant DL380 Gen11 SFF Universal Media Bay Kit	P50728-B21
HPE ProLiant DL380 Gen11 2SFF U.3 HDD Stacking Drive Cage Kit	P48811-B21
HPE ProLiant DL380 Gen11 2SFF U.3 Side-by-Side Drive Cage Kit	P48812-B21
HPE ProLiant DL380 Gen11 2SFF U.3 Primary/Secondary Riser Cage Kit	P48810-B21
HPE ProLiant DL380 Gen11 8SFF x1 Tri-Mode 24G U.3 BC Midplane Drive Cage Kit	P48815-B21
HPE ProLiant DL380 Gen11 2U 8SFF x4 U.3 Mid Tray Tri-Mode Drive Cage Kit	P48816-B21
HPE ProLiant DL380 Gen11 4LFF SAS/SATA 12G LP Midplane Drive Cage Kit	P48809-B21
HPE ProLiant DL380 Gen11 2LFF Primary Riser Cage Kit	P48823-B21
HPE ProLiant DL380 Gen11 2LFF LP Secondary Riser Cage Kit	P51095-B21
HPE ProLiant DL380 Gen11 2LFF Tertiary Riser Cage Kit	P48826-B21

HPE Networking

1 Gigabit Ethernet adapters

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T Adapter for HPE	P51178-B21
Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter for HPE	P21106-B21

10 Gigabit Ethernet adapters

Notes: Unless otherwise noted, one of the below 10Gb networking adapters below can be selected as the primary networking choice when configuring a Networking Choice (NC) Configure-to-Order (CTO) chassis. The DL380 Gen11 NC CTO chassis does not come with embedded networking, hence the requirement to configure with either a FlexibleLOM or select PCIe networking adapter.

Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE	P26253-B21
Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ Adapter for HPE	P26259-B21

25 Gigabit Ethernet adapters

Notes: Unless otherwise noted, one of the below 10/25Gb networking adapters below can be selected as the primary networking choice when configuring a Networking Choice (NC) Configure-to-Order (CTO) chassis. The DL380 Gen11 NC CTO chassis does not come with embedded networking, hence the requirement to configure with either an OCP3 or select PCIe networking adapter.

Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P26264-B21
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26262-B21
HPE Ethernet 10/25Gb 2-port Secure Network Adapter	S2A69A
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P08443-B21
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P08458-B21
Xilinx X2522-25G-PLUS Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P21109-B21
Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P42044-B21
Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	P25960-B21

100 Gigabit Ethernet Adapters

Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	P25960-B21
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Core Options

Recommended System Ambient Temperature

System Config P25960-B21

8LFF	25C
24SFF	Not support
16SFF	25C
8SFF	25C

Other Restrictions

1. These cards are not supported with 12LFF CTO server and 24SFF CTO server config.
2. Required to use High Performance Fan Kit (P48820-B21)
3. Only supported on x16 physical and electrical slots.

Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE

P21112-B21

Recommended System Ambient Temperature

System Config P21112-B21

8LFF	25C
24SFF	Not supported
16SFF	25C
8SFF	30C

Notes:

- This adapter requires High Performance Fan Kit (P48820-B21).
- Not supported on 8SFF CTO server with 3x drive cages.
- Not Supported with 24SFF and 12LFF CTO Servers.
- Only supported on x16 physical and electrical slots.

200 Gigabit Ethernet Adapters

Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE

P10180-B21

Recommended Ambient Temperature

System Config P10180-B21

8LFF	25C
24SFF	25C (3 max)
16SFF	25C
8SFF	30C

200 Gigabit Slingshot Adapters

HPE Slingshot SA210S Ethernet 200Gb 1-port PCIe NIC

R4K46A

Notes:

- Can only be selected or configured for a Cray or Slingshot Solution. Not allowed for a Non-Cray or Non-Slingshot Solution.
- Cannot have the following networking options configured within the same server: Slingshot 11 or Slingshot 22.

Storage Offload Adapters

HPE NV60100M 100Gb 2-port Storage Offload Adapter

R8M41A

Notes: This storage offload adapter requires selection 2 each of either 100GbE QSFP28 PSM4 500m XCVR OR 100GbE QSFP28 SR4 100m XCVR transceivers OR HPE 100GbE QSFP28 to QSFP28 5m AOC.

Core Options

OCP 3.0 Adapters

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P51181-B21
Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P08449-B21
Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T OCP3 Adapter for HPE	P10097-B21
Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ OCP3 Adapter for HPE	P26256-B21
Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE	P26269-B21
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10115-B21
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE	P41614-B21
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10106-B21
Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P42041-B21
Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE	P22767-B21

OCP 3.0 Enablement

HPE ProLiant DL360 Gen11 CPU1 to OCP2 x8 Enablement Kit	P51911-B21
HPE ProLiant DL3XX Gen11 OCP1 x16 Enablement Kit	P48827-B21
HPE ProLiant DL3XX Gen11 OCP2 x16 Enablement Kit	P48828-B21
HPE ProLiant DL3XX Gen11 CPU2 to OCP2 x8 Enablement Kit	P48830-B21

DL380 Gen11 OCP 1 and OCP 2 Priority Support Matrix

OCP Slot Location	1 OCP Storage Controller (OROC) + 1 OCP NIC	1 OCP NIC	2 OCP NICs	1 OCP Storage Controller (OROC)	2 OCP Storage Controllers (OROC)
OCP 1	OROC	N/A	OCP NIC	OROC (Higher priority)	OROC (Higher priority)
OCP 2 (with shared NIC and WoL)	OCP NIC	NIC (higher priority)	OCP NIC (higher priority)	N/A	OROC

HPE InfiniBand

HPE InfiniBand NDR/Ethernet 400Gb 1-port OSFP PCIe5 x16 MCX75310AAS-NEAT Adapter	P45641-B23
HPE InfiniBand NDR200/Ethernet 200Gb 1-port OSFP PCIe5 x16 MCX75310AAS-HEAT Adapter	P45642-B22
HPE InfiniBand NDR200/Ethernet 200GbE 2-port QSFP112 PCIe5 x16 MCX755106AC-HEAT Adapter	P65333-B21
HPE InfiniBand NDR 1-port OSFP PCIe5 x16 MCX75310AAS-NEAT Adapter	P45641-B21

Notes:

- High Performance Fan Kit is required (P48820-B21).
- Must be populated in x16 physical and electrical slot.
- Ambient temperature should not exceed 25C.

Core Options

Recommended Ambient Temperature

System Config	P31323-B21
8LFF	25C (only to OCP2)
24SFF	Not supported
16SFF	25C (only to OCP2)
8SFF	30C (only to OCP2)

HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter

P31348-B21

Recommended Ambient Temperature

System Config	P31323-B21
8LFF	Not supported
24SFF	Not supported
16SFF	Not supported
8SFF	25C (only to OCP2)

Other Restrictions

1. High Performance Fan Kit is required (P48820-B21).
2. Not supported on 24SFF CTO server or 12LFF CTO server.
3. Ambient temperature should not exceed 25C.
4. OCP2 x16 Enablement Kit (P48828-B21) is required.
5. 256GB DIMMs not supported if these adapters are selected.
6. Max = 1 Could observe sub-optimal performance if installed in x8 slot.

HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 MCX653105A-HDAT Adapter

P23664-B21

Recommended Ambient Temperature

System Config	P23664-B21
8LFF	25C
24SFF	25C
16SFF	25C
8SFF	30C

Other Restrictions

1. High Performance Fan Kit is required (P48820-B21).
2. Must be populated in x16 physical and electrical slot.
3. Ambient temperature should not exceed 25C.

If configured for a Cray or Slingshot Solution, this option is to be used as the Slingshot 10 networking card.

HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter

P31324-B21

Recommended System Ambient Temperature

System Config	P31324-B21
8LFF	25C
24SFF	Not supported
16SFF	25C
8SFF	25C

Other Restrictions

1. High Performance Fan Kit is required (P48820-B21).
2. Not supported on 24SFF CTO server or 12LFF CTO server.
3. Must be populated in x16 physical and electrical slot.
4. Ambient temperature should not exceed 25C.

If configured for a Cray or Slingshot Solution, this option is to be used as the Slingshot 10 networking card.

Core Options

HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel Omni-Path Architecture Adapter

829335-B21

Notes:

- High Performance Fan Kit is required (P48820-B21).
- Must be populated in x16 physical and electrical slot.

HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter

P23665-B21

Notes: High Performance Fan Kit is required (P48820-B21).

HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653106A-ECAT Adapter

P23666-B21

Recommended Ambient Temperature

System Config	P23665-B21	P23666-B21
8LFF	30C	25C
24SFF	30C	Not supported
16SFF	30C	25C
8SFF	30C	30C

Notes:

- High Performance Fan Kit is required (P48820-B21).
- Must be populated in x16 physical and electrical slot.
- If 2SFF drive cage is selected then Max = 2
- Max = 4

HPE I/O Expansion Options

Notes:

- The Primary Riser shipping default in the CTO server is a x8 FH, FL, x16 FH, FL and x8 FH, HL.
- For a Secondary/Tertiary riser, the second processor is required.
- x16 cards installed on x8 slots could observe sub-optimal performance.

HPE ProLiant DL380 Gen11 2U x16/x16/x16 Primary Riser Kit

P48803-B21

Notes:

- Slot 1 – PCIe 5.0 x16 Full Height and Full Length
- Slot 2 – PCIe 5.0 x16 Full Height and Full Length
- Slot 3 – PCIe 5.0 x16 Full Height and Half Length
- If 24NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 3x16 Primary riser must be selected and defaulted.
- If this Primary Riser is selected, then default Primary Riser is replaced with this riser.
- If Slot 1 of HPE DL380 Gen11 2U 3x16 Primary Riser Kit needs to be enabled then 3 x16 Primary Cable Kit (P56073-B21) must be selected.
- If Primary 3 x16 Cable Kit is NOT selected, then only Slot 2 and Slot 3 will be available for PCIe card selection and no PCIe cards can be selected for Slot 1.

HPE ProLiant DL380 Gen11 2U x16/x16/x16 Secondary Riser Kit

P51083-B21

Notes:

- Slot 4 - PCIe 5.0 x16 Full Height and Full Length
- Slot 5 - PCIe 5.0 x16 Full Height and Full Length
- Slot 6 - PCIe 5.0 x16 Full Height and Half Length
- When 2LFF Tertiary Cage is selected then Secondary and Tertiary Riser cannot be selected.
- When 2LFF Secondary Cage is selected then Secondary Riser cannot be selected.
- If 24NVMe Bundle is selected, then Qty 1 of HPE DL380 Gen11 3x16 SEC Riser must be selected and defaulted.
- If Slot 4 of HPE DL380 Gen11 2U 3x16 Secondary Riser Kit needs to be enabled then 3 x16 Secondary Cable Kit (P56074-B21) must be selected.

Core Options

- If Secondary 3 x16 Cable Kit is NOT selected, then only Slot 5 and Slot 6 will be available and no PCIe cards can be selected for Slot4.
- If Secondary OR Tertiary Riser is selected, then Second Processor must be selected.
- Tertiary Riser and Secondary 3 x16 Riser cannot be selected together.

HPE ProLiant DL380 Gen11 2U Primary/Secondary NEBS-compliant Riser Kit

P48805-B21

Notes:

- GPU and NEBS Riser cannot be selected together.
- When this riser is selected it replaces the default Primary Riser.
- When Primary and Secondary NEBS risers are selected the Tertiary Riser cannot be selected.
- NEBS risers cannot be mixed with other non-NEBS risers.

HPE ProLiant DL380 Gen11 2U Secondary/Tertiary NEBS-compliant Riser Kit

P48806-B21

Notes:

- This riser requires selection of second processor.
- GPU and NEBS Riser cannot be selected together.
- When Primary and Secondary NEBS risers are selected the Tertiary Riser cannot be selected.
- NEBS risers cannot be mixed with other non-NEBS risers.
- When 24 NVMe or 32 NVMe bundles are selected the Tertiary Riser cannot be selected.

HPE ProLiant DL380 Gen11 2U x8/x16/x8 Secondary Riser Kit

P48802-B21

Notes:

- Slot 4 – PCIe 5.0 x8 Full Height and Full Length
- Slot 5 – PCIe 5.0 x16 Full Height and Full Length
- Slot 6 – PCIe 5.0 x8 Full Height and Half Length
- If quantity 1 of 2SFF Primary/Secondary Drive Cage is selected, then HPE DL380 Gen11 x8x16x8 secondary riser is required.
- If quantity 1 of 2SFF Primary/Secondary Drive Cage is selected, then top two slots (Slot 4 and Slot 5) of HPE DL380 Gen11 x8x16x8 Secondary Riser will be blocked by Drive Cage.
- If 2LFF Tertiary Drive Cage is selected, then Secondary and Tertiary Riser cannot be selected.
- If 2LFF Secondary Drive Cage is selected then Secondary Riser cannot be selected.
- If 24NVMe Bundle is selected, then quantity 1 of HPE DL380 Gen11 x8x16x8 secondary riser must be selected.
- If Secondary OR Tertiary Riser is selected, then Second Processor must be selected.

HPE ProLiant DL380 Gen11 2U x16/x16 Tertiary Riser Kit

P48804-B21

Notes:

- This is the tertiary riser.
- Slot 7 - PCIe 5.0 x16 Full Height and Full Length
- Slot 8 - PCIe 4.0 x16 Full Height and Full Length

HPE ProLiant DL380 Gen11 x16/x16/x16 Primary Cable Kit

P56073-B21

HPE ProLiant DL380 Gen11 x16/x16/x16 Secondary Cable Kit

P56074-B21

HPE ProLiant DL380 Gen11 2x16 Tertiary Riser x8 Enablement FIO Bundle Kit

P53632-B21

Core Options

Risers

Riser Information*							
Part number	Description	Riser position			Bus width (Gen5 lanes)		
		Primary	Secondary	Tertiary	Top slot	Middle Slot	Bottom slot
N/A	This is the default riser in the chassis	D	N	N	x8	x16	x8
P48803-B21	HPE DL380 Gen11 x16/x16/x16 Primary Riser Kit	O	N	N	x16	x16	x16 ¹
P51083-B21	HPE DL380 Gen11 x16/x16/x16 Secondary Riser Kit	N	O	N	x16	x16	x16 ²
P48802-B21	HPE DL38X Gen11 x8/x16/x8 Sec Riser Kit	N	O	N	x8	x16	x8
P48804-B21	HPE DL38X Gen11 2x16 Tertiary Riser Kit	N	N	O	x16	x16 ³	
P48805-B21	HPE ProLiant DL380 Gen11 2U Primary/Secondary NEBS-compliant Riser Kit	O	N	N	x8	x16	x8
P48806-B21	HPE ProLiant DL380 Gen11 2U Secondary/Tertiary NEBS-compliant Riser Kit	N	O	N	x8	x16	x8

Notes:

- D = Default on chassis; O = Optional; N = not supported or slot/connector not present.
- ¹Requires HPE DL380 Gen11 x16/x16/x16 Primary Cable Kit (P56073-B21)
- ²Requires HPE DL380 Gen11 x16/x16/x16 Secondary Cable Kit (P56074-B21)
- ³PCIe Gen4 lanes.
- x16 cards installed on x8 slots could observe sub-optimal performance.

HPE Power Supplies

HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit P38995-B21

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

HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit P03178-B21

Notes: Flex Slot Titanium power supplies support power efficiency of up to 96% and include a standard C-14 power inlet connector.

HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit P38997-B21

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

HPE 1600W Flex Slot -48VDC Hot Plug Power Supply Kit P17023-B21

Notes: Requires selection of HPE 1600W DC PSU power lug option kit OR HPE 1600W DC PSU Power Cable Kit.

HPE 1600W -48VDC Power Cable Lug Kit P36877-B21

HPE 1800W-2200W Flex Slot Titanium Hot Plug Power Supply Kit P44712-B21

Notes:

- Flex Slot Platinum power supplies support power efficiency of up to 94% and are EU Lot 9 compliant.
- Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, or Switzerland must include more efficient AC power supplies: 94% for multi-output and 96% for single output. HPE Flexible Slot power supplies are single-output, and part numbers 865438-B21, P03178-B21, and P44712-B21 are 96% efficient, thus meeting requirements. HPE is on target to fulfil compliant systems ahead of time and will begin enforcing these requirements in advance to satisfy requests with the current power supplies by the set deadline.

Core Options

HPE Cooling Options

HPE ProLiant DL380/DL560 Gen11 2U High Performance Fan Kit

P48820-B21

Notes:

- This kit is required for specific **Ambient temperature environments**.
- High Performance fan kit consists of 6 fans, these will need to replace all the standard fans in the unit and fill all 6 fan cages.
- The 24SFF CTO server will already include 6 High Performance fans.
- The High-Performance fan kit is needed to support certain ASHRAE operating environments.
- For elevated ambient temperature support please see:
DL380 Gen11 Extended Ambient Temperature Guidelines.

HPE ProLiant DL380 Gen11 Standard Fan Kit

P49146-B21

Notes:

- Includes two standard fans.
- Not supported with 24SFF and 12EDSFF CTO Server.
- High Performance Fan Kit and Standard Fan Kit cannot be selected together.
- High Performance Fan Kit can be selected over Standard Fan Kit in all configurations.

HPE ProLiant DL380 Gen11 Max Performance Heat Sink Kit

P48817-B21

Notes: This kit is required for “Q” series processors.

HPE ProLiant DL380/DL560 Gen11 High Performance 2U Heat Sink Kit

P48818-B21

Notes: This kit is CPUs with TDP over 150W.

HPE ProLiant DL3XX/560 Gen11 High Performance Heat Sink Kit

P48905-B21

Notes: This kit is a low-profile high performance heatsink. This heatsink is required when a mid-tray storage cage is selected.

HPE ProLiant DL380 Gen11 Standard Heat Sink Kit

P49145-B21

Notes: The standard heatsink is for CPUs with TDP equal to or lower than 150W.

HPE Direct Liquid Cooling Options for HPE ProLiant DL380 Gen11

HPE ProLiant DL380 Gen11 Cold Plate Module NS204 Quick Disconnect Tube Set FIO Kit

P62023-B21

Notes:

- This kit is the Direct Liquid Cooling Kit that uses the NS204i-u slot for connections
- If this option is selected the HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device(P48183-B21) cannot be selected.
- This kit contains 2 Cold Plate Modules and 1 Quick Disconnect Module.

HPE ProLiant DL3XX Gen11 Cold Plate Module FIO Kit from PCIe

P62029-B21

Notes:

- This kit is the Direct Liquid Cooling Kit that uses a PCIe slot on the Primary Riser.
- If this option is selected the Primary Riser will have one less PCIe slot available for PCIe adapters. Please keep this in mind when considering total number of PCIe adapters required.
- This kit contains 2 Cold Plate Modules and 1 Quick Disconnect Module.

HPE ProLiant DL3XX Gen11 Direct Liquid Cooling 600mm FIO Hose Kit

P62038-B21

Notes:

- This kit includes the 65CM tube kit for Direct Liquid Cooling.
- This kit must be selected when using the Direct Liquid Colling Kit in the NS204i-u slot (P62023-B21).

HPE ProLiant DL3XX Gen11 Direct Liquid Cooling 55cm Quick Disconnect Tube Set FIO Kit

P62042-B21

Notes:

- This kit includes the 55CM tube kit for Direct Liquid Cooling.
- This kit must be selected when using the Direct Liquid Colling Kit in the Primary Riser slot (P62029-B21).

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.

HPE Computation and Graphics Accelerators

NVIDIA H100 NVL 94GB PCIe Accelerator for HPE

S2D86C

Notes:

- Max = 3
- This GPU is PCIe x16, so it must be populated on a x16 slot only. The “PCIe Card Capacity Limits” must account for this limitation.
- Thermal constraints for this GPU are based on ambient temperature of 25 degrees Centigrade.
- Mixing of Graphics options is not allowed.
- High Performance Fan Kit is required.
- The system memory must be at least twice the memory of all GPUs.
- When this GPU is selected then the top x16 PCIe slot (FH FL) connector on the riser kit CANNOT be utilized as the GPU occupies this space. The “PCIe Card Capacity Limits” must account for this limitation.
- If this GPU is selected, then HPE DL380/DL560 Gen11 2U GPU Power Cable Kit (P56072-B21) must be selected.
- For best performance across common workloads, HPE recommends system main memory at least twice the memory of all GPU.
- Full Length (FL) PCIe Card and Mid Tray cannot be selected together.
- GPU and NEBS Riser cannot be selected together.

NVIDIA RTX 4000 Ada Graphics Accelerator for HPE

S3T54C

Notes:

- Max = 5
- When this GPU is selected then the top x16 PCIe slot (FH FL) connector on the riser kit CANNOT be utilized as the GPU occupies this space. The “PCIe Card Capacity Limits” must account for this limitation.
- Thermal constraints for this GPU are based on ambient temperature of 25 degrees Centigrade.
- Mixing of Graphics options is not allowed.
- High Performance Fan Kit is required.
- The system memory must be at least twice the memory of all GPUs.
- If this GPU is selected, then HPE DL380/DL560 Gen11 2U GPU Power Cable Kit (P56072-B21) must be selected.
- GPU and NEBS Riser cannot be selected together.

Intel Data Center GPU Max 1100 48GB Accelerator for HPE

S1T66C

Notes:

- Max = 3
- This GPU is PCIe x16, so it must be populated on a x16 slot only. The “PCIe Card Capacity Limits” must account for this limitation.
- Thermal constraints for this GPU are based on ambient temperature of 25 degrees Centigrade.
- Mixing of GPU types is not allowed.
- High Performance Fan Kit is required.
- This GPU is not supported with 12LFF CTO Server and 24SFF CTO Server.
- The system memory must be at least twice the memory of all GPUs.
- When this GPU is selected then the top x16 PCIe slot (FH FL) connector on the riser kit CANNOT be utilized as the GPU occupies this space. The “PCIe Card Capacity Limits” must account for this limitation.
- For the DL380 Gen11 12EDSFF CTO Server, If EDSFF Bundle is selected then this GPU cannot be selected.
- If this GPU is selected, then HPE DL380/DL560 Gen11 2U GPU Power Cable Kit (P56072-B21) must be selected.
- If this GPU is selected, then High Performance Heatsink or Direct Liquid Cooling (DLC) must be selected.



Additional Options

- If this GPU is selected with Intel Liquid Cooled Processors (Q) then Direct Liquid Cooling (DLC) must be selected.

NVIDIA H100 80GB PCIe Accelerator for HPE

R9S41C

Notes:

- Max = 3
- Must be populated in x16 slot.
- System memory should be 2x of GPU memory.
- Requires selection of High-Performance Fan Kit.
- This GPU requires HPE ProLiant DL380/DL560 Gen11 2U GPU Power Cable Kit - P56072-B21
- Not supported with 12LFF CTO Server, 24SFF CTO Server, or 8SFF CTO Server with 3x 8SFF drive cages.
- For 12EDSFF CTO Server, If no additional cage is selected then Max of 2 GPU can be selected per Server.
- On 12EDSFF CTO Server, when one additional 8SFF cage is selected with DLC Component then Max 1 GPU can be selected per sever.
- On 8SFF CTO Server, If Qty2 of 8SFF Front cage is selected with DLC Component then Max 1 GPU can be selected per sever.
- On 8SFF CTO Server, If Qty2 of 8SFF Front cage is selected without DLC Component then this GPU is not supported.
- For 12EDSFF CTO Server, when additional cages are selected without DLC Component then this GPU is not supported
- On 8LFF CTO Server, If DLC component is selected then Max 1 GPU can be selected per sever.
- If Qty1 of this GPU is selected, then Secondary OR Tertiary Riser Must be selected.
- If Qty2 of this GPU is selected, then Secondary AND Tertiary Riser Must be selected.

NVIDIA L40S 48GB PCIe Accelerator

S2L70C

Notes:

- Max = 2
- Must be populated in x16 slot.
- If Qty2 of DW GPU is selected with no tertiary riser, then primary 3 x16 riser cable and secondary 3 x16 Riser Cable cannot be selected.
- Thermal constraints are based on Ambient Temp 25C.
- Mixing of GPU types is not allowed.
- For 8SFF/ 8LFF/ 12LFF/ 12EDSFF CTO Server, If GPU is selected then High-Performance Fan Kit must be selected and defaulted.
- This GPU is not supported with 12LFF CTO Server and 24SFF CTO Server.
- For 8SFF CTO Server, If Qty3 of 8SFF Front cage is selected then this GPU cannot be selected.
- For best performance across common workloads, HPE recommends system main memory at least twice the memory of all GPU.
- If doublewide GPU is selected on this riser, then the top x16 PCIe slot (FH FL) connector on this riser kit cannot be utilized as the doublewide GPU occupies this space. The “PCIe Card Capacity Limits” must account for this limitation.
- If Qty1 of 2SFF primary/secondary cage is selected, then Doublewide GPU Cannot be populated on HPE DL380 G11 2U x8/x16/x8 Sec Riser Kit.
- If Qty2 of 2SFF Primary/secondary cage is selected, then Doublewide GPU Cannot be populated on HPE DL380 G11 2U x8/x16/x8 Sec Riser Kit and Default Primary Riser.
- Full Length (FL) PCIe Card and Mid Tray cannot be selected together.
- For 12EDSFF CTO Server, If EDSFF Bundle is selected then this GPU cannot be selected.
- If this GPU is selected, then HPE DL380/DL560 Gen11 2U GPU Power Cable Kit must be selected and defaulted.
- For 8SFF CTO Server, If Qty1 of 8SFF Front cage is selected then Max of 2 GPU can be selected per Server.
- For 12EDSFF CTO Server, if no additional cage is selected then Max of 2 GPU can be selected per Server.

Additional Options

- For 8SFF CTO Server, If Qty2 of 8SFF Front cage is selected with NO DLC Component then this GPU is not supported.
- For 12EDSFF CTO Server, if additional cage is selected with NO DLC Component then this GPU is not supported
- For 8LFF CTO Server, If NO DLC component is selected then this GPU is not supported.
- For 8SFF CTO Server, If Qty2 of 8SFF Front cage is selected with DLC Component then Max 1 GPU can be selected per sever.
- For 12EDSFF CTO Server, if one additional 8SFF cage is selected with DLC Component then Max 1 GPU can be selected per sever.
- For 8LFF CTO Server, If DLC component is selected then Max 1 GPU can be selected per sever.
- For 8SFF CTO Server with two 8SFF cages/ 8LFF CTO Server/ 12EDSFF CTO Server with 8SFF Cage or EDSFF Bundle/ 12LFF CTO Server/ 24SFF CTO Server,
- If Qty1 or 2 of this GPU is selected with NO DLC Component then Secondary 3x16 cable cannot be selected
- If Qty1 of this GPU is selected then Secondary OR Tertiary Riser Must be selected. If Qty2 of this GPU is selected then Secondary AND Tertiary Riser Must be selected.
- GPU and NEBS Riser cannot be selected together.
- If Full Length (FL) GPU is selected then High Performance HS or DLC must be selected for Processors.
- If Full Length (FL) GPU is selected with this Processor then DLC Module must be selected for Processors.
- If Doublewide GPU is selected on default Primary Riser then the top x16 PCIe slot (FH FL) connector CANNOT be utilized as the Doublewide GPU occupies this space. The “PCIe Card Capacity Limits” must account for this limitation.
- If this GPU is selected then Secondary 3x16 cable cannot be selected.
- This GPU cannot be populated on primary Riser. The “PCIe Card Capacity Limits” must account for this limitation.
- For 8SFF CTO Server with two 8SFF cages/ 8LFF CTO Server/ 12EDSFF Server with one 8SFF Cage, If Qty1 this GPU is selected with DLC Module then Tertiary Riser must be selected. GPU is populated on Tertiary Riser.

NVIDIA L40 48GB PCIe Accelerator for HPE

S0K90C

Notes:

- Max = 3
- Must be populated in x16 slot.
- System memory should be 2x of GPU memory.
- Requires selection of High-Performance Fan Kit.
- This GPU requires HPE ProLiant DL380/DL560 Gen11 2U GPU Power Cable Kit - P56072-B21
- On 8SFF CTO Server, if Qty2 of 8SFF Front cage is selected without DLC component then Max of 2 GPU can be selected per Server.
- On 8SFF CTO Server, if Qty1 of 8SFF Front cage is selected then Max of 3 GPU can be selected per Server.
- On 8LFF CTO Server, if NO DLC component is selected then Max of 2 GPU can be selected per Server
- On 8LFF CTO Server, if DLC component is selected then Max of 3 GPU can be selected per Server.
- On 12LFF CTO Server, 24SFF CTO Server, or 8SFF CTO Server with Qty3 8SFF drive cages if NO DLC component is selected then Max of 1 GPU can be selected per Server
- On 12LFF CTO Server, 24SFF CTO Server, or 8SFF CTO Server with Qty3 8SFF drive cages and DLC component is selected then Max of 2 GPU can be selected per Server.
- On 12EDSFF CTO Server, if one additional 8SFF cage is selected without DLC Component then Max 2 GPU can be selected per sever.
- On 12EDSFF CTO Server, if one additional 8SFF cage is selected with DLC Component then Max 3 GPU can be selected per sever.
- On 8SFF CTO Server, if Qty2 of 8SFF Front cage is selected with DLC component then Max of 3 GPU can be selected per Server.

Additional Options

NVIDIA L4 24GB PCIe Accelerator for HPE

S0K89C

Notes:

- Max = 8
- System memory should be 2x of GPU memory.
- Requires selection of High-Performance Fan Kit
- On 12LFF CTO Server, 24SFF CTO Server, or 8SFF CTO Server with Qty3 8SFF drive cages are selected without DLC component then Max of 5 can be selected per server

NVIDIA A16 64GB PCIe Non-CEC Accelerator for HPE

R8T26C

Notes:

- Max = 3
- System memory should be 2x of GPU memory.
- This GPU requires power Cable Kit (P39102-B21) to also be selected.
- This GPU requires HPE DL380/DL560 G11 2U High Perf Fan Kit P48820-B21.

Intel Data Center GPU Max 1100 48GB Accelerator for HPE

S1T66C

Notes:

- Max = 3
- This GPU is PCIe x16, so it must be populated on a x16 slot only. The “PCIe Card Capacity Limits” must account for this limitation.
- Mixing of GPU types is not allowed.
- Requires selection of High-Performance Fan Kit.
- System memory should be 2x of GPU memory.
- Quantity1 of this cable can support max of 3 double wide GPUs.
- When this GPU is selected then the top x16 PCIe slot (FH FL) connector on the riser kit CANNOT be utilized as the GPU occupies this space. The “PCIe Card Capacity Limits” must account for this limitation.
- Full Length (FL) PCIe Card and Mid Tray cannot be selected together.
- This GPU requires HPE DL380/DL560 Gen11 2U GPU Power Cable Kit (P56072-B21)
- If Qty2 of this GPU is selected, then Secondary Riser must be selected.
- For 12LFF CTO Server/ 24SFF CTO Server/ 8SFF CTO Server with front 3 8SFF Cage/ 12EDSFF CTO Server with EDSFF Bundle, if this GPU is selected then DLC Must be selected.
- If Qty3 of DW GPU is selected, then primary 3 x16 Riser cable and secondary 3 x16 Riser Cable cannot be selected.

HPE ProLiant DL300 Gen10 Plus GPU 8-pin Keyed Cable Kit

P39102-B21

Notes:

- This GPU power cable is used for NVIDIA A16.
- One power cable supports up to 3x GPUs

HPE ProLiant DL380/DL560 Gen11 2U GPU Power Cable Kit

P56072-B21

Notes:

- This GPU power cable is used for NVIDIA H100 and NVIDIA L40 GPUs.
- One power cable supports up to 3x GPUs

Additional Options

GPU Information

Notes: The listed ambient temperatures represent the maximum levels allowed without any impact on system performance (e.g., throttling). It is possible to exceed these temperatures by an additional +5°C without causing a system shutdown, but performance degradation might be expected.

HPE DL380 Gen11 Configuration						
Part number	Card	Qty Supported	PCIe	8SFF	16SFF/8LFF	24SFF/12LFF
S1T66C	Intel® Data Center GPU Max 1100	2 or 3	Gen5	3@30C(Air)	3@25C(Air) 3@30C(Air) if CPU ≤ 185W	Not Supported
R9S41C	NVIDIA H100 80GB PCIe Accelerator	2 or 3	Gen5	2@25C (Air) 3@25C (DLC)	2 @ 20C (Air) 2 @ 25C (DLC) 1 @ 25C (Air) if CPU ≤ 185W	Not Supported
S2D86C	NVIDIA H100 NVL 94GB PCIe Accelerator	1, 2 or 3	Gen5	3@27C (Air) 2@30C (Air) 3@30C (DLC)	3@18C (Air) 2@27C (Air) 3@25C (DLC)	1@25C (Air) 2@25C (DLC)
S3T54C	NVIDIA RTX 4000 Ada Graphics Accelerator for HPE	up to 5	Gen4	3@30C(Air) 3@30C(DLC) 5@27C(Air) 5@27C(DLC)	3@30C(Air) 3@30C(DLC) 5@27C(Air) 5@27C(DLC)	3@30C(Air) 3@30C(DLC) 5@27C(Air) 5@27C(DLC)
S0K90C	NVIDIA L40 48GB PCIe Accelerator	1, 2 or 3	Gen4	3@25C(Air) 2@30C(Air) 3@30C(DLC)	2@30C(Air) 3@25C(DLC) 2@30C(Air) if CPU ≤ 185W 3@25C(Air) if CPU ≤ 185W	1@25C(Air) 2@25C(DLC) 2@25C(Air) if CPU ≤ 185W
S2L70C	NVIDIA L40S 48GB PCIe Accelerator	1 or 2	Gen5	2@25C (Air) 3@25C (DLC)	2 @ 20C (Air) 2 @ 25C (DLC) 1 @ 25C (Air) if CPU ≤ 185W 3 @ 25C (DLC) if CPU ≤ 185W	Not Supported
S0K89C	NVIDIA L4 24GB PCIe Accelerator	Up to 8	Gen4	8@30C(Air) 8@30C(Air)	5@30C(Air) 8@25C(Air) 8@30C(DLC)	5@25C(Air) 8@25C(DLC)
R8T26C	NVIDIA A16 64GB PCIe Non-CEC Accelerator for HPE	1, 2 or 3	Gen4	30C	2@30C(Air) 3@30C(DLC) 3@25C(Air) if CPU ≤ 185W	1@30C(Air) 2@25C(Air) 3@25C(DLC) 3@25C(Air) if CPU ≤ 185W

Qty SFF Drive Cages	Cooling Method	NVIDIA A16
1 drive cage	Air Cooled + Heatsink	3
2 drive cages	Air Cooled + Heatsink	2
3 drive cages	Air Cooled + Heatsink	1
1 drive cage	Direct Liquid Cooling	3
2 drive cages	Direct Liquid Cooling	3
3 drive cages	Direct Liquid Cooling	2

Additional Options

Embedded Management

HPE iLO Common Password FIO 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 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 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 AKA Tracking License with 3yr Support on iLO Licensed Features	BD507A

HPE Converged Infrastructure Management Software

HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE
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.

HPE Security

HPE Trusted Supply Chain for HPE ProLiant

P36394-B21

Notes:

- HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries needing enhanced security and compliance needs. Applying this option to a DL380 Gen11 CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build, and additional safeguards are put in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL380 Gen11 is re-branded as a HPE ProLiant DL380T Gen11 to denote the HPE Trusted Supply Chain security enhancements. The DL380T Gen11 is Trade Agreement Act (TAA) compliant. Learn more at <https://www.hpe.com/security>
- This option requires the selection of HPE Gen11 Intrusion Detection Kit (P48922-B21)
- This option requires the selection of either HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features (BD505A) or HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features (512485-B21)
- This option is limited to stand-alone DL380 Gen11 CTO servers only. The HPE Trusted Supply Chain configuration will not be available if the server is ordered as factory integrated into a rack
- One instance of the following Electronic License to Use is required per order (not per server): R6X85AAE
- HPE Trusted Supply Chain E-LTU
- Logistics delivery speeds and services are available and selectable within Next Gen Quoter.
- This option cannot be selected with TAA instruction SKU nor TAA CTO Models

Additional Options

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 Gen11 2U Bezel Kit P50400-B21

HPE Bezel Lock Kit 875519-B21

Notes: Requires the bezel kit

HPE Boot Controllers

HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device P48183-B21

Notes:

- This is the NS204i-u hot pluggable boot device
- Default is NVMe are internal to system and not hot pluggable
- If external accessible drives are needed please add trigger SKU P54542-B21 HPE ProLiant DL380 Gen11 NS204i-u FIO Bundle Kit. This trigger SKU allows NVMe drives to be externally accessible and hot pluggable.
- Max = 1

HPE ProLiant DL380 Gen11 NS204i-u Internal Cable Kit P52152-B21

Notes:

- If NS204i-u Gen11 Hot Plug Boot Option Device is selected then HPE DL380 Gen11 NS204i-u Internal Cable Kit is required.
- Max = 1

HPE ProLiant DL380 Gen11 NS204i-u FIO Bundle Kit P54542-B21

Notes:

- This SKU is required only when external accessible drives are required for the NS204i-u.
- Max = 1

HPE Storage Controllers

The Gen11 storage controller portfolio has been updated to include new technology like OCP3.0 as well as PCIe adapters. For a more detailed breakout of the available Gen11 controllers visit the storage controllers QuickSpecs site:

HPE MegaRAID Storage Controllers

HPE Tri-Mode Controllers

HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller P47777-B21

HPE MR416i-o Gen11 x16 Lanes 8GB Cache OCP SPDM Storage Controller P47781-B21

HPE MR216i-p Gen11 x16 Lanes without Cache PCI SPDM Plug-in Storage Controller P47785-B21

HPE MR216i-o Gen11 x16 Lanes without Cache OCP SPDM Storage Controller P47789-B21

HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller P58335-B21

HPE ProLiant DL320/DL380 Gen11 PCIe Gen5 Retimer Card P48833-B21

Notes: When adding this Retimer as a field upgrade, it is recommended to update the UBM5 PIC to a minimum of version 1.10. This firmware can be downloaded at:

https://support.hpe.com/connect/s/softwaredetails?language=en_US&softwareId=MTX_23c46bfbef394b5e9353075c5e

HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage Controller P47184-B21

Notes: Requires x16 riser slot

Additional Options

Essential RAID Controllers

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

NVMe Adapter

HPE DL385 Gen10 Plus 12Gb NVMe 2-port Adapter P25527-B21

HPE Cable Options

HPE ProLiant DL380 Gen11 12EDSFF CPU1/2 Cable Kit P52153-B21

HPE ProLiant DL360 Gen11 Storage Controller Enablement Cable Kit P48918-B21

HPE ProLiant DL380 Gen11 8SFF CPU1/2 NVMe Cable Kit P48825-B21

HPE ProLiant DL380 Gen11 8SFF OROC1/2 x2 Cable Kit P48829-B21

HPE ProLiant DL380 Gen11 2U Tri-Mode Premium Cable Kit P48831-B21

HPE ProLiant DL380 Gen11 Tri-Mode Splitter Cable Kit P48832-B21

HPE ProLiant DL380 Gen11 PCIe Gen5 Retimer Card Cable Kit P52154-B21

HPE ProLiant DL380 Gen11 8SFF to Retimer/-P Controller Cable Kit P54874-B21

HPE ProLiant DL380 Gen11 LFF Front Tri-Mode Cable Kit P56995-B21

Optional Upgrades

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

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

Notes: Provides backup power for multiple HPE storage controllers or other devices.

HPE Tape Backup

For the complete range of tape drives, autoloaders, libraries and media see:

<https://www.hpe.com/us/en/storage/storeever-tape-storage.html>.

For hardware and software compatibility of Hewlett Packard Enterprise tape backup products please visit the StoreEver Tape Solutions in SPOCK (requires registration/login) <https://h20272.www2.hpe.com/SPOCK/default.aspx>.

Only external drives supported

All libraries and autoloaders supported via compatible FC or SAS controller. Refer to the StoreEver Tape Solutions Compatibility Matrix link above.

HPE Storage Options

Emulex Fibre Channel HBAs

HPE SN1610E 32Gb 1-port Fibre Channel Host Bus Adapter R2J62A

HPE SN1610E 32Gb 2-port Fibre Channel Host Bus Adapter R2J63A

HPE SN1700E 64Gb 1-port Fibre Channel Host Bus Adapter R7N77A

HPE SN1700E 64Gb 2-port Fibre Channel Host Bus Adapter R7N78A

QLogic Fibre Channel HBAs

HPE SN1610Q 32Gb 1-port Fibre Channel Host Bus Adapter R2E08A

HPE SN1610Q 32Gb 2-port Fibre Channel Host Bus Adapter R2E09A

HPE SN1700Q 64Gb 1-port Fibre Channel Host Bus Adapter R7N86A

HPE SN1700Q 64Gb 2-port Fibre Channel Host Bus Adapter R7N87A

HPE Racks

- Please see the HPE Advanced Series Racks QuickSpecs for information on additional racks options and rack specifications. **[HPE G2 Advanced Series Racks](#)**

Additional Options

- Please see the HPE Enterprise Series Racks QuickSpecs for information on additional racks options and rack specifications. [HPE G2 Enterprise Series Racks](#)

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 Direct Flow 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 KVM Switches web page](#) for information on these products and their specifications.

Easy Install Rail Kits

Easy Install rail kits contain telescoping rails which allow for in-rack serviceability.

To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative.

Notes:

- Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.
- HPE rail kits are designed to work with HPE racks in compliance with industry standard EIA-310-E. In the event a customer elects to purchase a third-party rack for use with an HPE rail kit, any such use is at customer's own risk. HPE makes no express or implied warranties with respect to such third-party racks and specifically disclaims any implied warranties of merchantability and fitness for a particular purpose. Furthermore, HPE has no obligation and assumes no liability for the materials, design, specifications, installation, safety, and compatibility of any such third-party racks with any rail kits, including HPE rail kits.

HPE ProLiant DL3XX Gen11 Easy Install Rail 3 Kit

P52341-B21

Notes: Does not include Cable Management Arm (CMA) (P22020-B21).

HPE DL38X Gen10 Plus 2U Cable Management Arm for Rail Kit

P22020-B21

HPE USB and SD Options

Notes:

- In vSphere 7.0, VMware made changes that impact the use of an SD Card/USB media as a standalone boot device and will be removing support for them after version 7.x.
- SD Card/USB media can still be used as a standalone boot option through all 7.x releases via published Customer Advisory **Usage of SD Card/USB Devices As Standalone Boot Devices Has Changed Due to System Storage Changes For VMware ESXi 7.0 (Or Later)**.
- For any major release beyond VMware ESXi 7.x, VMware will require M.2 or another local persistent device as the standalone boot option.

Additional Options

HPE USB Keyboard/Mouse Kits

HPE USB CN Keyboard/Mouse Kit	631364-B21
HPE USB KR Keyboard/Mouse Kit	672097-KD3

HPE Support Services

Installation & Startup Services

HPE ProLiant DL/ML Install Service	U4554E
HPE ProLiant DL/ML Startup Service	U4555E

Tech Care Services

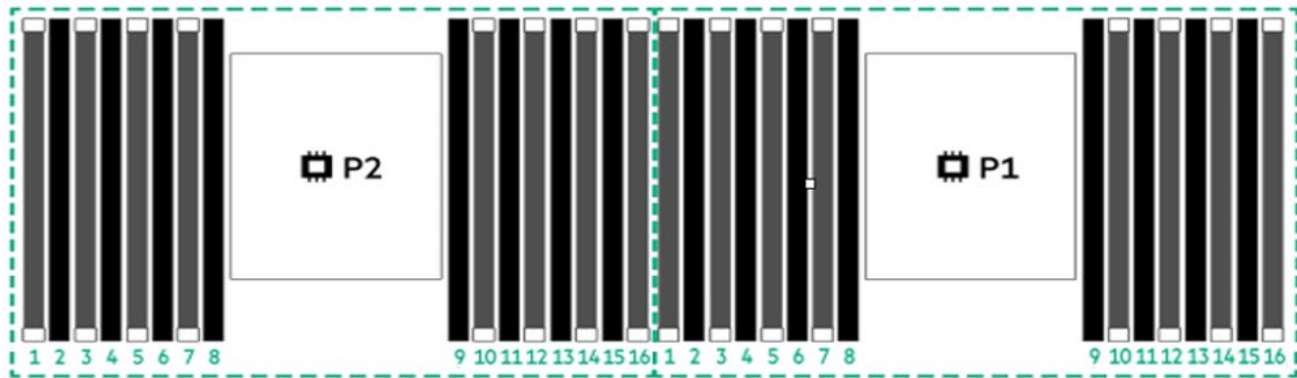
HPE 3 Year Tech Care Essential DL380 Gen11 HW Service	H93G4E
HPE 3 Year Tech Care Essential wDMR DL380 Gen11 HW Service	H93G5E
HPE 5 Year Tech Care Essential DL380 Gen11 HW Service	H93J8E
HPE 5 Year Tech Care Essential wDMR DL380 Gen11 HW Service	H93J9E

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



Memory

Memory Population guidelines



HPE ProLiant DL380 Gen11

HPE ProLiant Gen11 16 slot per CPU DIMM population order

DIMM population order

DIMM slot	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 DIMM										10						
2 DIMMs ²			3							10						
4 DIMMs ²			3				7			10				14		
6 DIMMs			3		5		7			10				14		16
8 DIMMs ^{1,2}	1		3		5		7			10		12		14		16
12 DIMMs	1	2	3		5	6	7			10	11	12		14	15	16
16 DIMMs ^{1,2}	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Notes:

- Omitted DIMM counts/socket not qualified by Intel.
- ¹ Supports SGX (Software Guard Extensions)
- ² Support Hemi (hemisphere mode).

General Memory Population Rules and Guidelines:

- DIMMs should be installed in quantities of even numbers.
- 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.
- Mixing of x4 and x8 memory is not allowed.
- 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, and the number and model of installed processors qualified on the platform.
- For details on the HPE Server Memory Options Population Rules, visit:
Server memory populations rules for HPE Gen11 servers with 4th Gen Intel Xeon Scalable processors
- To realize the performance memory capabilities listed in this document, HPE DDR5 Smart Memory is required.
- For additional information, please see the **HPE DDR5 Smart Memory QuickSpecs**.

Memory

HPE SKU P/N	P43322-B21	P43328-B21	P43331-B21
SKU Description	HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit
DIMM Capacity	16GB	32GB	64GB
DIMM Rank	Single Rank (1R)	Dual Rank (2R)	Dual Rank (2R)
Voltage	1.1 V	1.1 V	1.1 V
DRAM Depth [bit]	2G	2G	4G
DRAM Width [bit]	x8	x8	x4
DRAM Density	16Gb	16Gb	16Gb
CAS Latency	40-39-39	40-39-39	40-39-39
DIMM Native Speed	4800 MT/s	4800 MT/s	4800 MT/s

HPE SKU P/N	P43334-B21	P43337-B21
SKU Description	HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	HPE 256GB (1x256GB) Octal Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit
DIMM Capacity	128GB	256GB
DIMM Rank	Quad Rank (4R)	Octal Rank (8R)
Voltage	1.1 V	1.1 V
DRAM Depth [bit]	4G	4G
DRAM Width [bit]	x4	x4
DRAM Density	16Gb	16Gb
CAS Latency	40-39-39	40-39-39
DIMM Native Speed	4800 MT/s	4800 MT/s

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>

DDR5 memory options part number decoder

Notes:

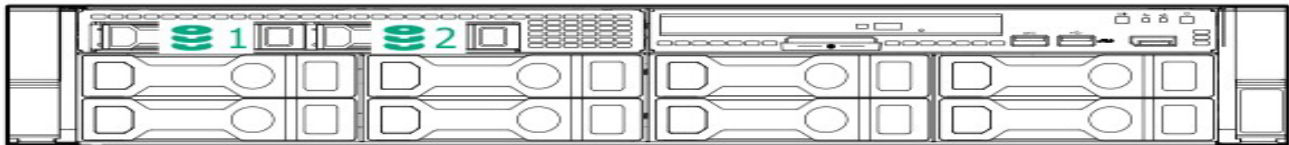
- Capacity references are rounded to the common gigabyte (GB) values.
 - o 8GB = 8,192 MB
 - o 16GB = 16,384 MB
 - o 32GB = 32,768 MB
 - o 64GB = 65,536 MB
 - o 96GB = 98,304 MB
 - o 128GB = 131,072 MB
 - o 256GB = 262,144 MB
 - o 512GB = 524,288 MB

For more information on memory, please see the Memory QuickSpecs: [HPE DDR5 Smart Memory](#)

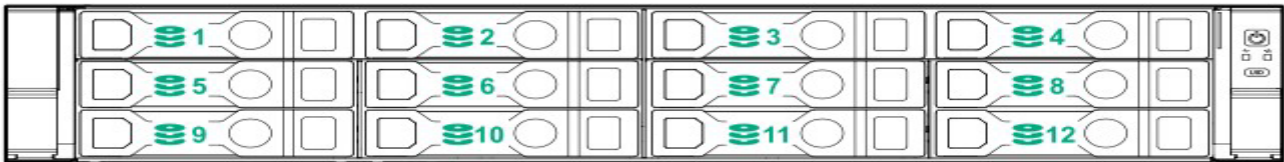
Memory Speed Table for HPE ProLiant DL380 Gen11

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

Storage



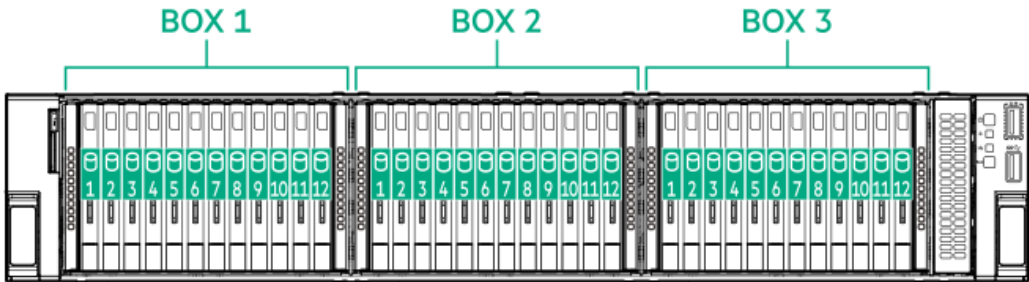
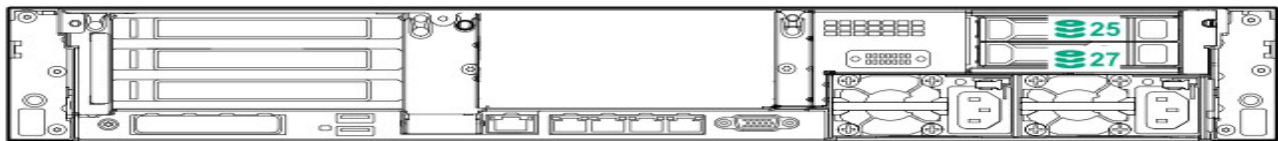
8LFF chassis with Universal media bay and optional 2SFF and optical drive shown



12LFF chassis



24SFF + rear 2 SFF drives



12EDSFF chassis



Technical Specifications

System Unit

Dimensions

- **SFF CTO servers:**
8.75 x 44.8 x 72.7 cm / 3.44 x 17.64 x 28.62 in
- **LFF CTO servers:**
8.75 x 44.8 x 73.25 cm / 3.44 x 17.64 x 28.84 in

Weight (approximate)

- **Maximum:** 8 SFF hard drives (no rear drives), 2x processors, 2x power supplies, 1x RAID controller, 2x Risers installed
 - **Maximum:** 33kg/72.75 lbs.
 - **Minimum:** 16kg/35.27 lbs.
- **Maximum:** 12LFF hard drives (no rear drives), 2x processors, 2x power supplies, 1x RAID controller, 2x Risers installed
 - **Maximum:** 37kg/81.57 lbs.
 - **Minimum:** 18kg/39.68 lbs.

Input Requirements (per power supply)

Rated Line Voltage

- For 1800W-2200W (Titanium) Power Supply: 200-240 VAC
- For 1600W (Platinum) Power Supply: 200-240 VAC
- For 1000W (Titanium): 100 to 240 VAC
- For 800W (Titanium) Power Supply: 200-240 VAC
- For 800W (Platinum) Power Supply: 100-240 VAC
- For 800W (Universal) Power Supply: 200-277 VAC

BTU Rating

Maximum

- For 1800W-2200W Power Supply: 6497 BTU/hr. (at 200 VAC), 6868 BTU/hr. (at 208 VAC), 7230 BTU/hr. (at 220 VAC), 7596 BTU/hr. (at 230VAC), 7962 BTU/hr. (at 240VAC)
- For 1600W Power Supply: 5918 BTU/hr. (at 200 VAC), 5888 BTU/hr. (at 220 VAC), 5884 BTU/hr. (at 240 VAC)
- For 1000W (Titanium) Power Supply: 3741 BTU/hr. (at 100 VAC), 3596 BTU/hr. (at 200 VAC), 3582 BTU/hr. (at 240 VAC)
- For 800W (Titanium) Power Supply: 2905 BTU/hr. (at 200 VAC), 2899 BTU/hr. (at 220 VAC), 2893 BTU/hr. (at 240 VAC)
- For 800W (Platinum) Power Supply: 3067 BTU/hr. (at 100 VAC), 2958 BTU/hr. (at 200 VAC), 2949 BTU/hr. (at 240 VAC)
- For 800W (Universal) Power Supply: 2964 BTU/hr. (at 200 VAC), 2951 BTU/hr. (at 230 VAC), 2936 BTU/hr. (at 277 VAC)

Relative Humidity (non-condensing)

- **Operating**
8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.
 - **Non-operating**
5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
-



Technical Specifications

Power Supply Output

(per power supply)

Rated Steady-State Power

- For 1800W-2200W Power Supply: 1800W (at 200 VAC), 1900W (at 208 VAC), 2000W (at 220 VAC), 2100W (at 230VAC), 2200W (at 240VAC)
- For 1600W Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
- For 1000W (Titanium) Power Supply: 1097W (at 100 VAC), 1000W (at 240 VAC), 1000W (at 240 VDC) input for China only
- For 800W (Titanium) Power Supply: 800W (at 200 VAC), 800W (at 240 VAC), 800W (at 240 VDC) for China only
- For 800W (Platinum) Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
- For 800W (Universal) Power Supply: 800W (at 200 VAC), 800W (at 277 VAC)

Maximum Peak Power

- For 1800W-2200W Power Supply: 1800W (at 200 VAC), 1900W (at 208 VAC), 2000W (at 220 VAC), 2100W (at 230VAC), 2200W (at 240VAC)
- For 1600W Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
- For 1000W (Titanium) Power Supply: 1000W (at 100 VAC), 1000W (at 240 VAC), 1000W (at 240 VDC) input for China only
- For 800W (Titanium) Power Supply: 800W (at 200 VAC), 800W (at 240 VAC), 800W (at 240 VDC) for China only
- For 800W (Platinum) Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
- For 800W (Universal) Power Supply: 800W (at 200 VAC), 800W (at 277 VAC)

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: [**DL380 Gen11 Extended Ambient Temperature Guidelines**](#)

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:

[**DL380 Gen11 Extended Ambient Temperature Guidelines**](#)

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

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 (LwA,m) and declared average bystander position A-Weighted sound pressure levels (LpA,m) 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.

Acoustic Noise	
Idle	
LwA,m	4.2 B Entry 4.2 B Base 4.2 B Performance
LpAm	28 dBA Entry 27 dBA Base 30 dBA Performance
Operating	
LwA,m	4.2 B Entry 4.2 B Base 4.2 B Performance
LpAm	29 dBA Entry 27 dBA Base 29 dBA Performance
Kv	0.4 B Entry 0.4 B Base 0.4 B Performance

Notes:

- The declared mean A-weighted sound power level, LwA,m, is computed as the arithmetic average of the measured.
- A-weighted sound power levels for a randomly selected sample, rounded to the nearest 0,1 B.
- The declared mean A-weighted emission sound pressure level, LpA,m, is computed as the arithmetic average of the measured A-weighted emission sound pressure levels at the bystander positions for a randomly selected sample, rounded to the nearest 1 dB.
- The statistical adder for verification, Kv, is a quantity to be added to the declared mean A-weighted sound power level, LwA,m, such that there will be a 95 % probability of acceptance, when using the verification procedures of ISO 9296, if no more than 6,5 % of the batch of new equipment, has A-weighted sound power levels greater than (LwA,m + Kv).
- The quantity, LwA,c (formerly called LwAd), can be computed from the sum of LwA,m and Kv.
- All measurements made to conform to ISO 7779 / ECMA-74 and declared to conform to ISO 9296 / ECMA-109.
- B, dB, abbreviations for bels and decibels, respectively, where 1 B = 10 dB.
- The results in this declaration apply only to the model numbers listed above when operating and tested according to the indicated modes and standards. A system with additional configuration components or increased operating functionality may increase the noise emission values.
- System under abnormal conditions may increase the noise level, persons in the vicinity of the product [cabinet] for extended periods of time should consider wearing hearing protection or using other means to reduce noise exposure.

Technical Specifications

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:

<https://www.hpe.com/support/Safety-Compliance-EnterpriseProducts>

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.

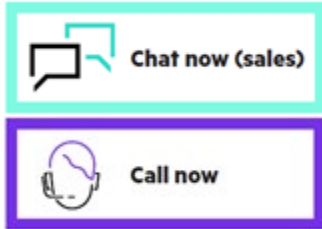
The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site. These instructions may be used by recyclers and other 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-Jan-2025	Version 29	Changed	Overview, Core Options and Storage sections were updated.
02-Dec-2024	Version 28	Changed	Core Options and Additional Options sections were updated. (Removed OBS items: HDDs, SSDs, iLO Licenses, and Mouse/Keyboard options).
04-Nov-2024	Version 27	Changed	Standard Features, Configuration Information and Additional Options sections were updated.
07-Oct-2024	Version 26	Changed	Standard Features, Core Options and Additional Options sections were updated.
03-Sep-2024	Version 25	Changed	Standard Features (Operating Systems and Virtualization Software Support for HPE Servers) and Pre-Configured Models sections were updated.
05-Aug-2024	Version 24	Changed	Standard Features, Core Options and Additional Options sections were updated.
15-Jul-2024	Version 23	Changed	Pre-Configured Models section was updated.
01-Jul-2024	Version 22	Changed	Standard Features, Core Options and Additional Options sections were updated.
17-Jun-2024	Version 21	Changed	Pre-Configured Models section was updated.
03-Jun-2024	Version 20	Changed	Standard Features, Configuration Information, Core Options, Additional Options and Technical Specifications sections were updated.
29-Apr-2024	Version 19	Changed	Core Options section was updated.
15-Apr-2024	Version 18	Changed	Pre-Configured Models section was updated.
01-Apr-2024	Version 17	Changed	Standard Features, Pre-Configured Models, Configuration Information, Core Options and Additional Options sections were updated.
18-Mar-2024	Version 16	Changed	Pre- Configured Models section was updated.
04-Mar-2024	Version 15	Changed	Configuration Information and Core Options sections were updated
05-Feb-2024	Version 14	Changed	Overview, Standard Features, Configuration Information, Core Options and Technical Specifications sections were updated
14-Dec-2023	Version 13	Changed	Overview, Configuration Information and Additional Options sections were updated
06-Nov-2023	Version 12	Changed	Overview, Configuration Information and Additional Options sections were updated
02-Oct-2023	Version 11	Changed	Overview, Configuration Information and Additional Options sections were updated
11-Sep-2023	Version 10	Changed	Standard Features section was updated
05-Sep-2023	Version 9	Changed	Overview, Standard Features, Configuration Information, Core Options and Memory sections were updated
24-Jul-2023	Version 8	Changed	Standard Features section was updated
10-Jul-2023	Version 7	Changed	Overview, Standard Features, Pre- Configured Models, Configuration Information and Core Options sections were updated
05-Jun-2023	Version 6	Changed	Overview, Standard Features, Pre- Configured Models, Configuration Information and Core Options sections were updated
01-May-2023	Version 5	Changed	Standard Features, Configuration Information, Core Options and Technical Specifications sections were updated.
03-Apr-2023	Version 4	Changed	Standard Features, Pre- Configured Models, Configuration Information, Core Options and Technical Specifications sections were updated.
06-Mar-2023	Version 3	Changed	Standard Features and Core Options sections were updated.
15-Feb-2023	Version 2	Changed	Standard Features section was updated
10-Jan-2023	Version 1	New	New QuickSpecs

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

a50004307enw - 16911 - Worldwide - V29 - 06-January-2025



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.00 GHz, Intel Xeon Gold 5418Y)

SPECrate®2017_fp_base = 536

SPECrate®2017_fp_peak = 550

CPU2017 License: 3

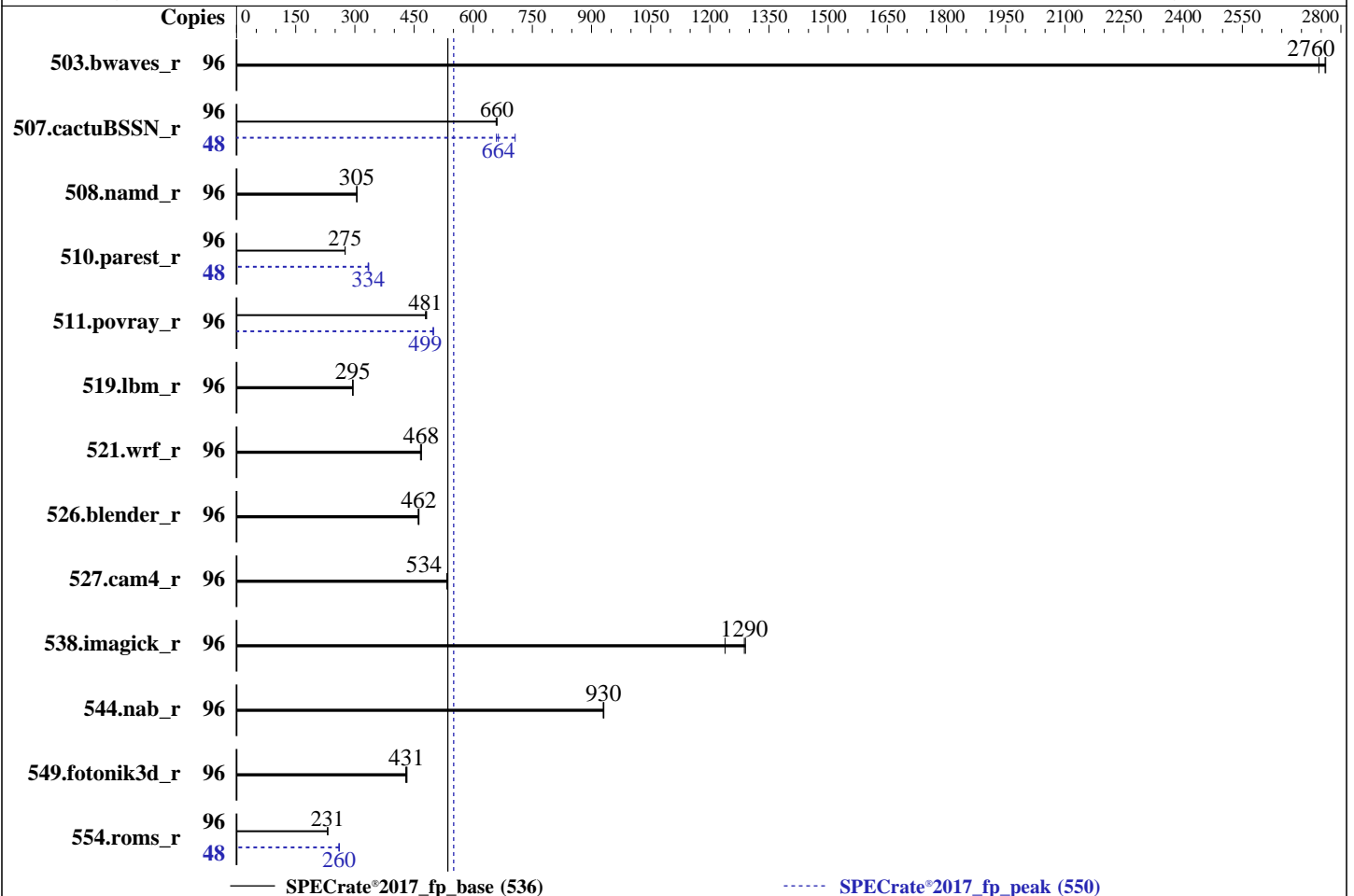
Test Sponsor: HPE

Tested by: HPE

Test Date: May-2023

Hardware Availability: Apr-2023

Software Availability: Dec-2022



Hardware

CPU Name: Intel Xeon Gold 5418Y
Max MHz: 3800
Nominal: 2000
Enabled: 48 cores, 2 chips, 2 threads/core
Orderable: 1, 2 chip(s)
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 2 MB I+D on chip per core
L3: 45 MB I+D on chip per chip
Other: None
Memory: 512 GB (16 x 32 GB 2Rx8 PC5-4800B-R, running at 4400)
Storage: 1 x 960 GB SATA SSD
Other: None

Software

OS: Red Hat Enterprise Linux release 9.0 (Plow)
Kernel 5.14.0-70.13.1.el9_0.x86_64
Compiler: C/C++: Version 2023.0 of Intel oneAPI DPC++/C++ Compiler for Linux;
Fortran: Version 2023.0 of Intel Fortran Compiler for Linux
Parallel: No
Firmware: HPE BIOS Version v1.30 03/01/2023 released Mar-2023
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other: jemalloc memory allocator V5.0.1
Power Management: BIOS and OS set to prefer performance at the cost of additional power usage



SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2023 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.00 GHz, Intel Xeon Gold 5418Y)

SPECrate®2017_fp_base = 536

SPECrate®2017_fp_peak = 550

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: May-2023

Hardware Availability: Apr-2023

Software Availability: Dec-2022

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	96	351	2740	349	2760	349	2760	96	351	2740	349	2760	349	2760
507.cactuBSSN_r	96	184	660	185	658	184	660	48	91.6	664	86.0	706	92.2	659
508.namd_r	96	299	305	299	305	299	305	96	299	305	299	305	299	305
510.parest_r	96	912	275	913	275	913	275	48	376	334	375	335	376	334
511.povray_r	96	465	482	468	479	466	481	96	449	499	449	499	450	499
519.lbm_r	96	343	295	343	295	344	294	96	343	295	343	295	344	294
521.wrf_r	96	461	466	459	468	459	469	96	461	466	459	468	459	469
526.blender_r	96	318	460	316	462	316	463	96	318	460	316	462	316	463
527.cam4_r	96	314	535	315	534	315	533	96	314	535	315	534	315	533
538.imagick_r	96	185	1290	185	1290	193	1240	96	185	1290	185	1290	193	1240
544.nab_r	96	173	931	174	930	174	930	96	173	931	174	930	174	930
549.fotonik3d_r	96	872	429	866	432	868	431	96	872	429	866	432	868	431
554.roms_r	96	660	231	660	231	661	231	48	294	260	293	260	293	260

SPECrate®2017_fp_base = 536

SPECrate®2017_fp_peak = 550

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
sync; echo 3> /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
tuned-adm profile was set to Throughput-Performance using "tuned-adm profile throughput-performance"

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2017_19/lib/intel64:/home/cpu2017_19/je5.0.1-64"
MALLOC_CONF = "retain:true"

General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM
memory using Red Hat Enterprise Linux 8.0
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

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Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.00 GHz, Intel Xeon Gold 5418Y)

SPECrate®2017_fp_base = 536

SPECrate®2017_fp_peak = 550

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: May-2023

Hardware Availability: Apr-2023

Software Availability: Dec-2022

General Notes (Continued)

is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)

is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)

is mitigated in the system as tested and documented.

jemalloc, a general purpose malloc implementation

built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

sources available from jemalloc.net or <https://github.com/jemalloc/jemalloc/releases>

Platform Notes

The system ROM used for this result contains Intel microcode version 0x2b0001b0 for the Intel Xeon Gold 5418Y processor.

BIOS Configuration:

Workload Profile set to General Throughput Compute

Thermal Configuration set to Maximum Cooling

Enhanced Processor Performance Profile set to Aggressive

Last Level Cache (LLC) Dead Line Allocation set to Disabled

Memory Patrol Scrubbing set to Disabled

Workload Profile set to Custom

DCU Stream Prefetcher set to Disabled

Adjacent Sector Prefetch set to Disabled

Minimum Processor Idle Power Package C-State set to Package C6 (non-retention) State

Sysinfo program /home/cpu2017_19/bin/sysinfo

Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197

running on localhost.localdomain Thu May 4 23:48:15 2023

SUT (System Under Test) info as seen by some common utilities.

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SPEC CPU®2017 Floating Point Rate Result

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Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.00 GHz, Intel Xeon Gold 5418Y)

SPECrate®2017_fp_base = 536

SPECrate®2017_fp_peak = 550

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: May-2023

Hardware Availability: Apr-2023

Software Availability: Dec-2022

Platform Notes (Continued)

```
1. uname -a
Linux localhost.localdomain 5.14.0-70.13.1.el9_0.x86_64 #1 SMP PREEMPT Thu Apr 14 12:42:38 EDT 2022 x86_64
x86_64 x86_64 GNU/Linux
```

```
2. w
23:48:15 up 1 min, 0 users, load average: 0.29, 0.13, 0.05
USER      TTY      LOGIN@  IDLE   JCPU   PCPU WHAT
```

```
3. Username
From environment variable $USER: root
```

```
4. ulimit -a
real-time non-blocking time (microseconds, -R) unlimited
core file size              (blocks, -c) 0
data seg size               (kbytes, -d) unlimited
scheduling priority         (-e) 0
file size                   (blocks, -f) unlimited
pending signals             (-i) 2062807
max locked memory           (kbytes, -l) 64
max memory size             (kbytes, -m) unlimited
open files                  (-n) 1024
pipe size                   (512 bytes, -p) 8
POSIX message queues        (bytes, -q) 819200
real-time priority          (-r) 0
stack size                  (kbytes, -s) unlimited
cpu time                    (seconds, -t) unlimited
max user processes          (-u) 2062807
virtual memory              (kbytes, -v) unlimited
file locks                  (-x) unlimited
```

```
5. sysinfo process ancestry
/usr/lib/systemd/systemd --switched-root --system --deserialize 28
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: root [priv]
sshd: root@notty
bash -c cd $SPEC/ && $SPEC/fprate_spr.sh
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=96 -c
ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=48 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base,peak -o all fprate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=96 --configfile
ic2023.0-lin-sapphirerapids-rate-20221201.cfg --define smt-on --define cores=48 --define physicalfirst
--define invoke_with_interleave --define drop_caches --tune base,peak --output_format all --nopower
--runmode rate --tune base:peak --size refrate fprate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2017.001/templogs/preenv.fprate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017_19
```

```
6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) Gold 5418Y
vendor_id       : GenuineIntel
cpu family      : 6
model           : 143
stepping        : 7
microcode       : 0x2b0001b0
bugs             : spectre_v1 spectre_v2 spec_store_bypass swapgs
```

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Software Availability: Dec-2022

Platform Notes (Continued)

cpu cores : 24
siblings : 48
2 physical ids (chips)
96 processors (hardware threads)
physical id 0: core ids 0-23
physical id 1: core ids 0-23
physical id 0: apicids 0-47
physical id 1: apicids 128-175

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for virtualized systems. Use the above data carefully.

7. lscpu

From lscpu from util-linux 2.37.4:

```
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:          46 bits physical, 57 bits virtual
Byte Order:             Little Endian
CPU(s):                 96
On-line CPU(s) list:    0-95
Vendor ID:              GenuineIntel
BIOS Vendor ID:         Intel(R) Corporation
Model name:             Intel(R) Xeon(R) Gold 5418Y
BIOS Model name:        Intel(R) Xeon(R) Gold 5418Y
CPU family:             6
Model:                  143
Thread(s) per core:     2
Core(s) per socket:     24
Socket(s):              2
Stepping:               7
BogoMIPS:               4000.00
Flags:                  fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36
                        clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp
                        lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology
                        nonstop_tsc cpuid aperfmperf tsc_known_freq pni pclmulqdq dtes64 monitor
                        ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4_1
                        sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand
                        lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cat_l2 cdp_l3
                        invpcid_single cdp_l2 ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow
                        vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 avx2 smep bmi2
                        erms invpcid cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
                        clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl xsaveopt xsavec
                        xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
                        split_lock_detect avx_vnni avx512_bf16 wbnoinvd dtherm ida arat pln pts
                        avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni vaes vpclmulqdq
                        avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid bus_lock_detect
                        cldemote movdiri movdir64b enqcmd fsrm md_clear serialize tsxldtrk pconfig
                        arch_lbr avx512_fp16 amx_tile flush_lld arch_capabilities
Virtualization:         VT-x
L1d cache:              2.3 MiB (48 instances)
L1i cache:              1.5 MiB (48 instances)
L2 cache:               96 MiB (48 instances)
L3 cache:               90 MiB (2 instances)
NUMA node(s):           2
NUMA node0 CPU(s):      0-23,48-71
NUMA node1 CPU(s):      24-47,72-95
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf:     Not affected
Vulnerability Mds:      Not affected
```

(Continued on next page)



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Platform Notes (Continued)

Vulnerability Meltdown: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Enhanced IBRS, IBPB conditional, RSB filling
Vulnerability Srbds: Not affected
Vulnerability Tsx async abort: Not affected

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	2.3M	12	Data	1	64	1	64
L1i	32K	1.5M	8	Instruction	1	64	1	64
L2	2M	96M	16	Unified	2	2048	1	64
L3	45M	90M	15	Unified	3	49152	1	64

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

available: 2 nodes (0-1)
node 0 cpus: 0-23,48-71
node 0 size: 257714 MB
node 0 free: 256542 MB
node 1 cpus: 24-47,72-95
node 1 size: 258026 MB
node 1 free: 257273 MB
node distances:
node 0 1
0: 10 20
1: 20 10

9. /proc/meminfo

MemTotal: 528119040 kB

10. who -r

run-level 3 May 4 23:47

11. Systemd service manager version: systemd 250 (250-6.el9_0)

Default Target Status
multi-user running

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	NetworkManager NetworkManager-dispatcher NetworkManager-wait-online auditd crond dbus-broker firewalld getty@ irqbalance kdump lvm2-monitor mdmonitor microcode nis-domainname rhsmcertd rsyslog selinux-autorelabel-mark sshd sssd systemd-network-generator tuned udisks2 upower
enabled-runtime	systemd-remount-fs
disabled	blk-availability canberra-system-bootup canberra-system-shutdown canberra-system-shutdown-reboot chrony-wait chronyd console-getty cpupower debug-shell hwloc-dump-hwdata kvm_stat man-db-restart-cache-update nftables powertop rdisc rhsm rhsm-facts rpmdm-rebuild serial-getty@ sshd-keygen@ systemd-boot-check-no-failures systemd-pstore systemd-sysext
indirect	sssd-autofs sssd-kcm sssd-nss sssd-pac sssd-pam sssd-ssh sssd-sudo

13. Linux kernel boot-time arguments, from /proc/cmdline

BOOT_IMAGE=(hd0,gpt2)/vmlinuz-5.14.0-70.13.1.el9_0.x86_64

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Software Availability: Dec-2022

Platform Notes (Continued)

```
root=/dev/mapper/rhel-root
ro
resume=/dev/mapper/rhel-swap
rd.lvm.lv=rhel/root
rd.lvm.lv=rhel/swap
```

14. cpupower frequency-info

```
analyzing CPU 0:
  Unable to determine current policy
  boost state support:
    Supported: yes
    Active: yes
```

15. tuned-adm active

```
Current active profile: throughput-performance
```

16. sysctl

```
kernel.numa_balancing          1
kernel.randomize_va_space      2
vm.compaction_proactiveness     20
vm.dirty_background_bytes       0
vm.dirty_background_ratio       10
vm.dirty_bytes                  0
vm.dirty_expire_centisecs       3000
vm.dirty_ratio                  40
vm.dirty_writeback_centisecs    500
vm.dirtytime_expire_seconds     43200
vm.extfrag_threshold            500
vm.min_unmapped_ratio           1
vm.nr_hugepages                 0
vm.nr_hugepages_mempolicy       0
vm.nr_overcommit_hugepages      0
vm.swappiness                    10
vm.watermark_boost_factor       15000
vm.watermark_scale_factor       10
vm.zone_reclaim_mode            0
```

17. /sys/kernel/mm/transparent_hugepage

```
defrag          always defer+madvise [madvise] never
enabled         [always] madvise never
hpage_pmd_size  2097152
shmem_enabled   always within_size advise [never] deny force
```

18. /sys/kernel/mm/transparent_hugepage/khugepaged

```
alloc_sleep_millisecs  60000
defrag                  1
max_ptes_none          511
max_ptes_shared         256
max_ptes_swap           64
pages_to_scan          4096
scan_sleep_millisecs   10000
```

19. OS release

```
From /etc/*-release /etc/*-version
```

(Continued on next page)



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Platform Notes (Continued)

```
os-release      Red Hat Enterprise Linux 9.0 (Plow)
redhat-release  Red Hat Enterprise Linux release 9.0 (Plow)
system-release  Red Hat Enterprise Linux release 9.0 (Plow)
```

20. Disk information

SPEC is set to: /home/cpu2017_19

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/mapper/rhel-home	xfs	819G	343G	476G	42%	/home

21. /sys/devices/virtual/dmi/id

```
Vendor:      HPE
Product:     ProLiant DL380 Gen11
Product Family: ProLiant
Serial:      CNX21000G7
```

22. dmidecode

Additional information from dmidecode 3.3 follows. WARNING: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

Memory:

```
5x Hynix HMC88AEBRA168N 32 GB 2 rank 4800, configured at 4400
8x Hynix HMC88MEBRA113N 32 GB 2 rank 4800, configured at 4400
3x Hynix HMC88MEBRA115N 32 GB 2 rank 4800, configured at 4400
```

23. BIOS

(This section combines info from /sys/devices and dmidecode.)

```
BIOS Vendor:      HPE
BIOS Version:     1.30
BIOS Date:        03/01/2023
BIOS Revision:    1.30
Firmware Revision: 1.30
```

Compiler Version Notes

```
=====  
C | 519.lbm_r(base, peak) 538.imagick_r(base, peak) 544.nab_r(base, peak)  
=====
```

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

```
=====  
C++ | 508.namd_r(base, peak) 510.parest_r(base, peak)  
=====
```

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

```
=====  
C++, C | 511.povray_r(base, peak) 526.blender_r(base, peak)  
=====
```

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
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Compiler Version Notes (Continued)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
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=====
C++, C, Fortran | 507.cactuBSSN_r(base, peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

=====
Fortran | 503.bwaves_r(base, peak) 549.fotonik3d_r(base, peak) 554.roms_r(base, peak)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

=====
Fortran, C | 521.wrf_r(base, peak) 527.cam4_r(base, peak)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2023.0.0 Build 20221201
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

Benchmarks using both Fortran and C:

ifx icx

Benchmarks using both C and C++:

icpx icx

Benchmarks using Fortran, C, and C++:

icpx icx ifx



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Base Portability Flags

```
503.bwaves_r: -DSPEC_LP64
507.cactuBSSN_r: -DSPEC_LP64
508.namd_r: -DSPEC_LP64
510.parest_r: -DSPEC_LP64
511.povray_r: -DSPEC_LP64
519.lbm_r: -DSPEC_LP64
521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char
527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG
538.imagick_r: -DSPEC_LP64
544.nab_r: -DSPEC_LP64
549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64
```

Base Optimization Flags

C benchmarks:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

C++ benchmarks:

```
-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both Fortran and C:

```
-w -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-Wno-implicit-int -mprefer-vector-width=512 -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both C and C++:

```
-w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
```

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Base Optimization Flags (Continued)

Benchmarks using both C and C++ (continued):

`-ljemalloc -L/usr/local/jemalloc64-5.0.1/lib`

Benchmarks using Fortran, C, and C++:

`-w -m64 -std=c++14 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib`

Peak Compiler Invocation

C benchmarks:

`icx`

C++ benchmarks:

`icpx`

Fortran benchmarks:

`ifx`

Benchmarks using both Fortran and C:

`ifx icx`

Benchmarks using both C and C++:

`icpx icx`

Benchmarks using Fortran, C, and C++:

`icpx icx ifx`

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

`519.lbm_r: basepeak = yes`

(Continued on next page)



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Tested by: HPE

Test Date: May-2023

Hardware Availability: Apr-2023

Software Availability: Dec-2022

Peak Optimization Flags (Continued)

538.imagick_r: basepeak = yes

544.nab_r: basepeak = yes

C++ benchmarks:

508.namd_r: basepeak = yes

510.parest_r: -w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids
-Ofast -ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -mprefer-vector-width=512
-ljemalloc -L/usr/local/jemalloc64-5.0.1/lib

Fortran benchmarks:

503.bwaves_r: basepeak = yes

549.fotonik3d_r: basepeak = yes

554.roms_r: -w -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs
-align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

Benchmarks using both Fortran and C:

521.wrf_r: basepeak = yes

527.cam4_r: basepeak = yes

Benchmarks using both C and C++:

511.povray_r: -w -std=c++14 -m64 -std=c11 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -Wno-implicit-int
-mprefer-vector-width=512 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib

526.blender_r: basepeak = yes

Benchmarks using Fortran, C, and C++:

-w -m64 -std=c++14 -std=c11 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops

(Continued on next page)



SPEC CPU®2017 Floating Point Rate Result

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Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL380 Gen11

(2.00 GHz, Intel Xeon Gold 5418Y)

SPECrate®2017_fp_base = 536

SPECrate®2017_fp_peak = 550

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: May-2023

Hardware Availability: Apr-2023

Software Availability: Dec-2022

Peak Optimization Flags (Continued)

Benchmarks using Fortran, C, and C++ (continued):

```
-qopt-mem-layout-trans=4 -Wno-implicit-int -mprefer-vector-width=512  
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc  
-L/usr/local/jemalloc64-5.0.1/lib
```

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-SPR-rev1.2.html>

<http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-SPR-rev1.2.xml>

<http://www.spec.org/cpu2017/flags/Intel-ic2023-official-linux64.xml>

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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

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