Overview

Shape the Future of QuickSpecs – Your Input Matters

HPE Apollo 2000 Gen10 Plus System

HPE is bringing the power of supercomputing to datacenters of any size with the Apollo 2000 Gen10 Plus system.

The HPE Apollo 2000 Gen10 Plus System is a dense, multi-server platform that packs incredible performance and workload flexibility into a small datacenter space, while delivering the efficiencies of a shared infrastructure. It is designed to provide a bridge to scale-out architecture for traditional data centers, so enterprise and SME customers can achieve the space-saving value of density-optimized infrastructure in a cost-effective and non-disruptive manner.

The Apollo 2000 Gen10 Plus offers a density optimized, shared infrastructure with a flexible scale-out architecture to support a variety of workloads from remote site systems to large HPC clusters and everything in between. HPE iLO5 provides built-in firmware-level server security with silicon root of trust. It can be deployed cost-effectively starting with a single 2U, shared infrastructure chassis and configured with a variety of storage options to meet the configuration needs of a wide variety of scale-out workloads.

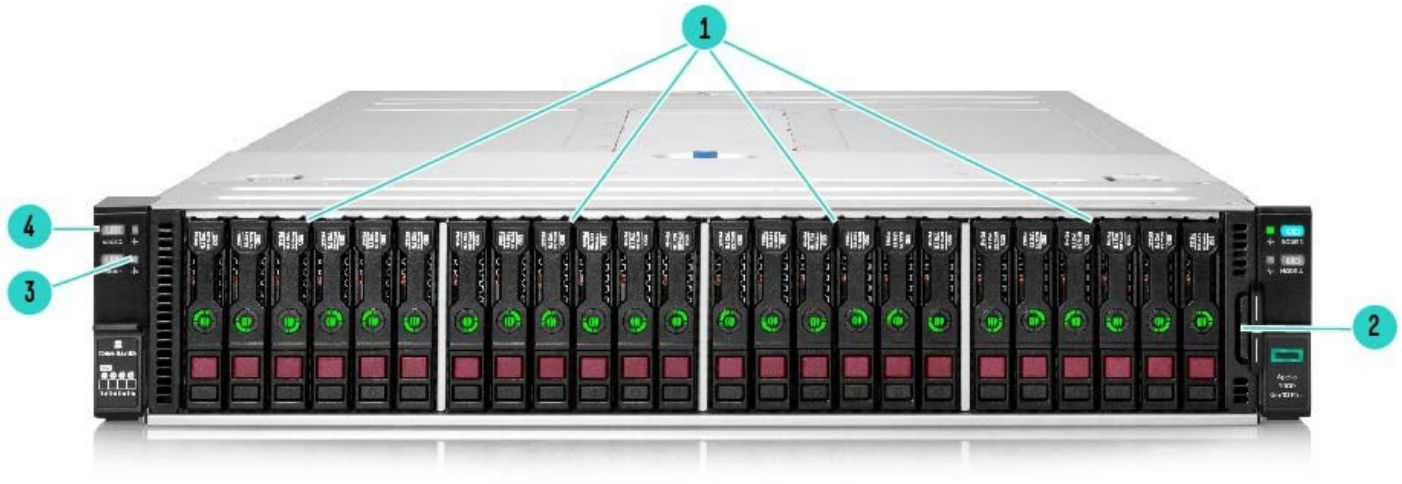
The Apollo 2000 Gen10 Plus System delivers up to four times the density of a traditional rack mount server with up to four ProLiant Gen10 Plus independent servers per 2U mounted in standard racks with rear-aisle serviceability access. A 42U rack fits up to 20 Apollo n2X00 series chassis accommodating up to 80 servers per rack.

What's New

- Support for up to four Xilinx Alveo U50 single wide GPU's in XL290n node.
- Enables a robust stack of Intel 3rd generation Xeon Scalable Processors to increase your power density and increase datacenter efficiency. Intel AVX-512* feature increases memory bandwidth, improves frequency management to enable greater performance. Also Speed Select Technology (SST) allows Core count and frequency flexibility*
- The Direct Liquid Cooling (DLC) option for the Apollo 2000 Gen10 Plus System comes ready to plug and play. Choose from either CPU only or CPU plus memory cooling options.
- Enables flexible choices with Intel 3rd Generation Xeon Scalable Processors and AMD 2nd and 3rd generation EPYC Processors
- New flexible infrastructure offers multiple storage options, 8 memory channels and 3200 MT/s memory, PCIe Gen4 and support for processors over 250W for improved application performance.
- Complete software portfolio for all customer workloads, for node to rack management, including comprehensive integrated cluster management software
- Secure from the start with firmware anchored into silicon with iLO5 and silicon root of trust for the highest level of system security

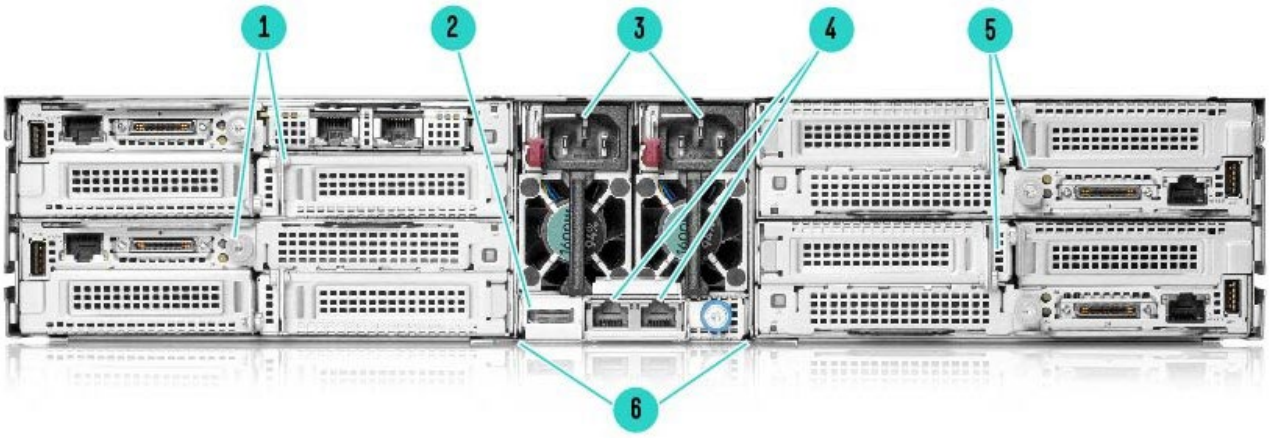
Notes: *Available on select processors

Overview



HPE Apollo n2600 Gen10 Plus SFF CTO Chassis supports both Intel and AMD based server nodes
HPE Apollo n2800 Gen10 Plus 24 SFF Flexible CTO chassis supports Intel based server nodes
Backplane selection determines number and type of drives supported

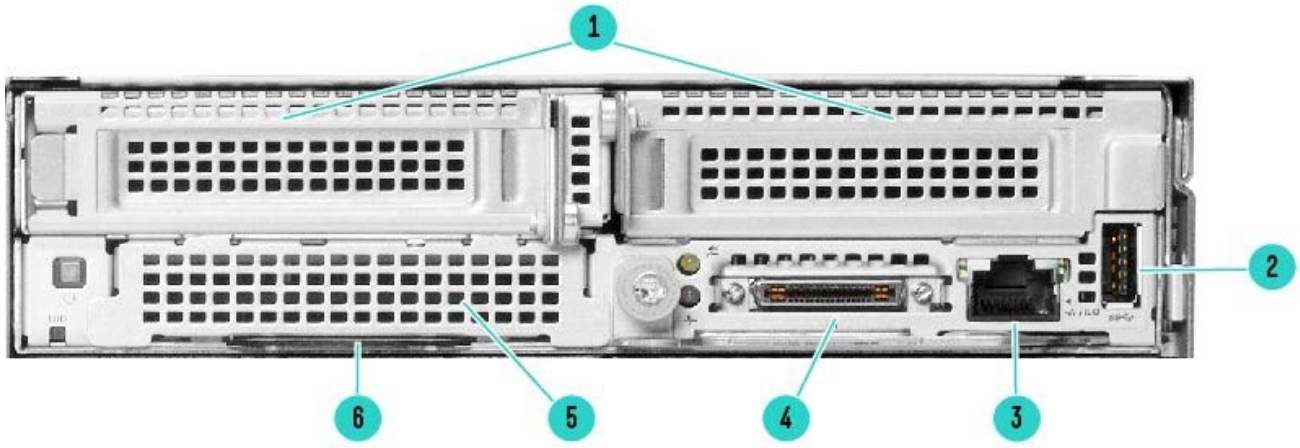
Item	Description	Item	Description
1	SFF hot-plug drives	3	Health LED
2	Serial number/iLO information pull tab	4	UID button LED



Chassis Rear Panel Components – 4 x 1U nodes

Item	Description	Item	Description
1	Server 3 & 4	4	iLO Ports
2	HPE Apollo Platform Manager (APM) 2.0 port	5	Server 1 & 2
3	Power supply 1 & 2	6	Optional Rack Consolidation Module (RCM)

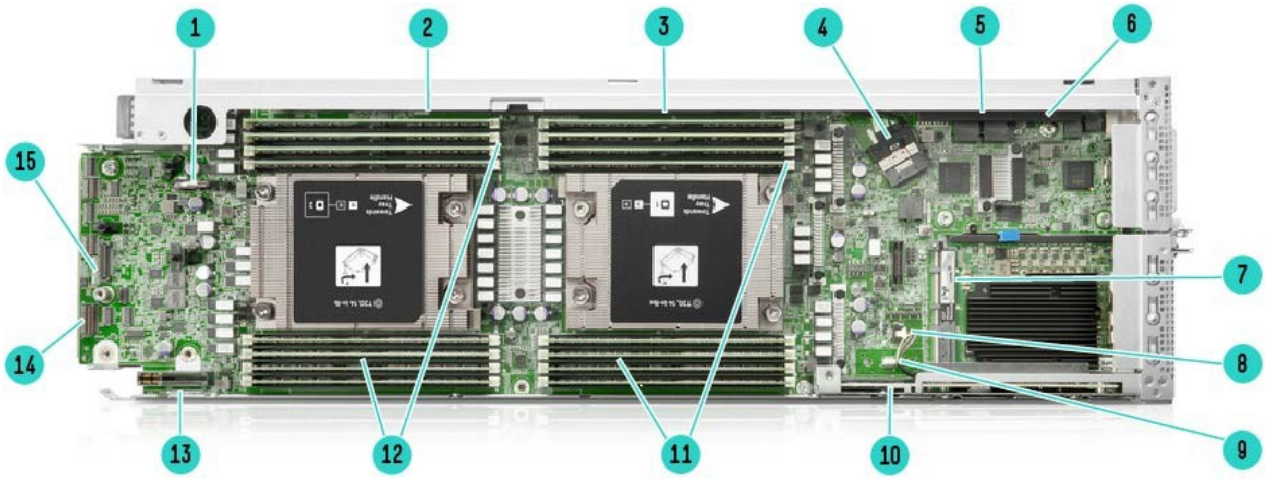
Overview



HPE ProLiant XL22Xn Gen10 Plus Server Rear Panel Components

Item	Description	Item	Description
1	Slot 1 & 2 PCIe4 x16 (16,8,4,2,1)	4	SUV port
2	USB 3.2Gen 1 Type-A port	5	OCP 3.0 NIC adapter slot
3	NIC/shared iLO network port (AMD only)	6	Server Serial number information pull tab

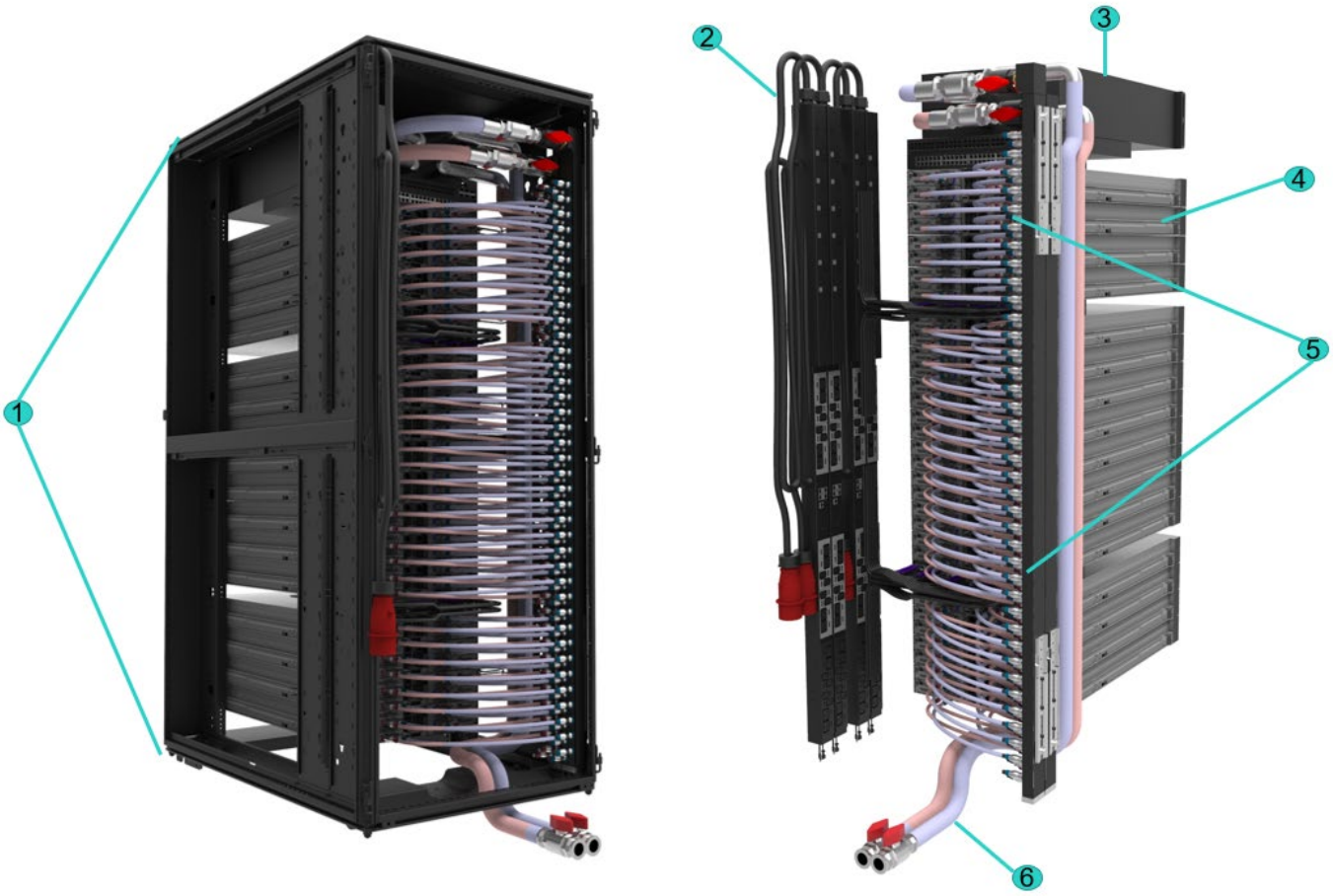
Notes: If ordering Apollo 2000 Gen10 Plus system with Direct Liquid Cooling, slot 1 is not available for use with PCIe cards



HPE ProLiant XL225n Gen10 Plus Server (Shown-Intel placement is the same)

Item	Description	Item	Description
1	System battery	9	TPM connector
2	Secondary PCIe4 x16 riser connector 5 (P2)	10	Primary PCIe4 ×16 riser connector 1 (P1)
3	Secondary PCIe4 x8 (P1), x16 (P2) riser connector 4	11	DIMM slots for processor 1
4	SATA 6GB/s port	12	DIMM slots for processor 2
5	Secondary riser connector 3	13	Power riser connector
6	Secondary PCIe4 ×16 riser connector 2 (P1)	14	System maintenance switch
7	OCP NIC 3.0 slot (P1)	15	Mezzanine card connector
8	Node power button cable connector		

Overview



HPE Apollo 2000 Gen10 Plus system with Direct Liquid Cooling

Item	Description	Item	Description
1	42U or 48U HPE Standard 800mm x 1200mm rack	4	Apollo 2000 Gen10 Plus Chassis with DLC
2	Rack mount Power Distribution Units inside rack	5	DLC Manifold
3	HPE Apollo Rack Mount CDU	6	Facility water hook up kit (supports top or bottom facility water feed)

Overview

Chassis Information

Form Factor

- 2U

There are three chassis options with different storage configurations

- HPE Apollo n2400 Gen10 Plus CTO chassis – Drive-less chassis at an entry level price point that provides power and cooling efficiencies ideal for supporting high power processors with air cooling
  - 0 drives
- HPE Apollo n2600 Gen10 Plus CTO chassis – allocated equally across server nodes
  - Offers 2 different storage configurations through backplane selection:
- 8 SFF SAS/SATA or NVME
- 24 SFF SAS/SATA (AMD)
- 24 SFF SAS/SATA or NVMe (Intel only)
- HPE Apollo n2800 Gen10 Plus Flexible CTO Chassis (Intel only)
  - 24SFF SAS Zoning allows for flexible allocation of drives to server nodes via an embedded SAS Expander Adapter

Each HPE Apollo 2000 Chassis is built with the following

- Four server slots (1U node)
- Supports up to two (2) power supplies for the chassis (1600W/1800-2200W/3000W)
- Five (5) dual-rotor fans standard and an additional Fan kit (2 fans) can be selected for additional cooling
- Optional integrated Rack Consolidation Module (RCM)
- Optional support for HPE Apollo Platform Manager (HPE APM) a rack level manager

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Server Tray Blank Kit

A chassis requires that four (4) server tray slots be populated with an HPE ProLiant XL225n Gen10 Plus or an HPE Apollo 2000 Gen10 Plus Server Node Blank Kit.

Server Tray

HPE ProLiant XL220n Gen10 Plus server

- 2P/1U half width server tray built on Intel 3rd generation Xeon Scalable processors. With choices from 8-40 cores up to 3.5GHz CPU speed and power ratings up to 270W (some CPU's may require DLC)The tray has 8 memory channels per socket and 3200 MT/s memory, two PCIe Gen4 slots, an OCP3.0 slot and multiple networking options including high speed fabric.
- Optional USB Mezz Riser Kit
- Separate NIC and iLO ports
- Up to 4 server trays per chassis

HPE ProLiant XL225n Gen10 Plus server

- 2P/1U half width server tray built on the AMD EPYC 7002 and EPYC 7003 processors. With choices from 8-64 cores, up to 3.7Ghz base and 4.1Ghz turbo CPU speed and power ratings 280W
- The tray has 8 memory channels per socket and 3200 MT/s memory, two PCIe Gen4 slots, an OCP3.0 slot and multiple networking options including high speed fabric.
- Optional USB Mezz Riser Kit
- NIC/shared iLO network port
- Up to 4 server trays are supported per chassis

HPE ProLiant XL290n Gen10 Plus server

- 2P/2U half width server tray built on Intel 3rd generation Xeon Scalable processors. With choices from 8-40 cores up to 3.5GHz CPU speed and power ratings up to 270W (some CPU's may require DLC)

Overview

- The tray has an 8 memory channels per socket and 3200 MT/s memory, two PCIe Gen4 slots, an OCP3.0 slot and multiple networking options including high speed fabric.
- Optional USB Mezz Riser Kit
- Separate NIC and iLO ports
- Up to two server trays per 2U chassis
- Future support for GPU's

Supported storage options: 0, up to 6 SFF SAS/SATA or 2 SFF SAS/SATA or NVME per node.
XL220n and XL290n can be mixed in a chassis. No mixing of Intel and AMD nodes in a chassis

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Rack Airflow Requirements

HPE Apollo 2000 Gen10 Plus System

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. For maximum cooling, HPE racks are recommended to allow these racks to be fully loaded with servers using the latest processors. For detail information please see Apollo 2000 Gen10 Plus System User Guide:
https://www.hpe.com/info/apollo2000gen10plus-docs

Notes:

- If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment.
- When selecting Direct Liquid Cooling (DLC), HPE racks are required for factory integration.
- Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels will result in improper cooling that can lead to thermal damage.

Direct Liquid Cooling (DLC) for Apollo 2000 Gen10 Plus

Unlock the entire CPU SKU stack, increase your power density, and increase datacenter efficiency with HPE's direct liquid cooling system that comes ready to plug and play into your data center. The DLC system comes pre-filled with liquid and will easily connect to facility water without the need for secondary plumbing to be installed on site. DLC is fully integrated, installed and supported by HPE. Choose from either CPU only or CPU plus memory cooling options.

DLC system includes:

- 42U or 48U HPE standard 800mm x1200mm rack
- Facility water hookup kit (top or bottom feed available)
- Each rack comes with HPE Apollo Rack Mount CDU and manifolds installed
  Minimum of one Apollo 2000 Gen10 Plus chassis with Direct Liquid Cooling option - comes pre-filled and ready to plug into rack manifold with no other action needed

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Standard Features

Processors up to 2 of the following depending on the model

Notes:

- All AMD EPYC and Intel Xeon processors can support up to 2TB of memory each on the Apollo 2000 Gen10 Plus system
- Certain limitations may apply to select processors, please contact your HPE sales representative
- Please contact your HPE sales representatives for any questions on processor support needed
- Some processors may require selection of Direct Liquid cooling options (L22 or L23)

AMD EPYC Processor	Cores	Base Frequency	Max Frequency	Max Memory	Wattage	Cache	Memory
EPYC 7H12	64	2.6GHz	3.3GHz	2TB	280	256MB	3200MT/s
EPYC 7742	64	2.25GHz	3.4GHz	2TB	225	256MB	3200MT/s
EPYC 7702	64	2.0GHz	3.35GHz	2TB	200	256MB	3200MT/s
EPYC 7662	64	2.0GHz	3.3GHz	2TB	225	256MB	3200MT/s
EPYC 7642	48	2.3GHz	3.3GHz	2TB	225	256MB	3200MT/s
EPYC 7552	48	2.2GHz	3.3GHz	2TB	200	192MB	3200MT/s
EPYC 7542	32	2.9GHz	3.4GHz	2TB	225	128MB	3200MT/s
EPYC 7532	32	2.4GHz	3.3GHz	2TB	200	256MB	3200MT/s
EPYC 7502	32	2.5GHz	3.35GHz	2TB	180	128MB	3200MT/s
EPYC 7452	32	2.35GHz	3.35GHz	2TB	155	128MB	3200MT/s
EPYC 7F72	24	3.2GHz	3.7GHz	2TB	240	192MB	3200MT/s
EPYC 7402	24	2.8GHz	3.35GHz	2TB	180	128MB	3200MT/s
EPYC 7352	24	2.3GHz	3.2GHz	2TB	155	128MB	3200MT/s
EPYC 7F52	16	3.5GHz	3.9GHz	2TB	240	256MB	3200MT/s
EPYC 7302	16	3.0GHz	3.3GHz	2TB	155	128MB	3200MT/s
EPYC 7282	16	2.8GHz	3.2GHz	2TB	120	64MB	3200MT/s
EPYC 7272	12	2.9GHz	3.2GHz	2TB	120	64MB	3200MT/s
EPYC 7F32	8	3.7GHz	3.9GHs	2TB	180	128MB	3200MT/s
EPYC 7262	8	3.2GHz	3.4GHz	2TB	155	128MB	3200MT/s
EPYC 7252	8	3.1GHz	3.2GHz	2TB	120	64MB	3200MT/s

AMD EPYC Processor	Cores	Base Frequency	Max Frequency	Max Memory	Wattage	Cache	Memory
EPYC 7773X	64	2.2GHz	3.5GHz	2TB	280	768MB	3200MT/s
EPYC 7763	64	2.45GHz	3.5GHz	2TB	280	256MB	3200MT/s
EPYC 7713	64	2.0GHz	3.675GHz	2TB	225	256MB	3200MT/s
EPYC 7663	56	2.0GHz	3.5GHz	2TB	240	256MB	3200MT/s
EPYC 7643	48	2.3GHz	3.6GHz	2TB	225	256MB	3200MT/s
EPYC 7573X	32	2.8GHz	3.6GHz	2TB	280	768MB	3200MT/s
EPYC 7543	32	2.8GHz	3.7GHz	2TB	225	256MB	3200MT/s
EPYC 7513	32	2.6GHz	3.65GHz	2TB	200	128MB	3200MT/s
EPYC 7453	28	2.75Hz	3.45Hz	2TB	225	64MB	3200MT/s
EPYC 7473X	24	2.8GHz	3.7GHz	2TB	240	768MB	3200MT/s
EPYC 7443	24	2.85GHz	4.0GHz	2TB	200	128MB	3200MT/s
EPYC 7413	24	2.65GHz	3.6GHz	2TB	180	128MB	3200MT/s
EPYC 7373X	16	3.05GHz	3.8GHz	2TB	240	768MB	3200MT/s
EPYC 7343	16	3.2GHz	3.9GHz	2TB	190	128MB	3200MT/s
EPYC 7313	16	3.0GHz	3.7GHz	2TB	155	128MB	3200MT/s
EPYC 75F3	32	2.95GHz	4.0GHz	2TB	280	256MB	3200MT/s
EPYC 74F3	24	3.2GHz	4.0GHz	2TB	240	256MB	3200MT/s
EPYC 73F3	16	3.5GHz	4.0GHz	2TB	240	256MB	3200MT/s
EPYC 72F3	8	3.7GHz	4.1GHz	2TB	180	256MB	3200MT/s
EPYC 7713P	64	2.0GHz	3.675GHz	2TB	225	256MB	3200MT/s
EPYC 7543P	32	2.8GHz	3.7GHz	2TB	225	256MB	3200MT/s

Standard Features

EPYC 7443P	24	2.85GHs	4.0GHz	2TB	200	128MB	3200MT/s
EPYC 7313P	16	3.0GHz	3.7GHz	2TB	155	128MB	3200MT/s
Intel Xeon Processor	**Cores**	**Base Frequency**	**Max Frequency**	**Max Memory**	**Wattage**	**Cache 1.5MB/core**	**Memory**
Xeon 8380	40	2.3GHz	3.4GHz	6TB/socket	270	60MB	3200MT/s
Xeon 8368	38	2.4GHz	3.4GHz	6TB/socket	270	57MB	3200MT/s
Xeon 8360Y	36	2.4GHz	3.5GHz	6TB/socket	250	54MB	3200MT/s
Xeon 8358	32	2.6GHZ	3.4GHz	6TB/socket	250	48MB	3200MT/s
Xeon 8352Y	32	2.2GHz	3.4GHz	6TB/socket	205	48MB	3200MT/s
Xeon 6354	18	3.0GHz	3.6GHz	6TB/socket	205	39MB	3200MT/s
Xeon 6348	28	2.6GHz	3.5GHz	6TB/socket	235	42MB	3200MT/s
Xeon 6346	16	3.1GHz	3.6GHz	6TB/socket	205	36MB	3200MT/s
Xeon 6338	32	2.0GHz	3.2GHz	6TB/socket	205	48MB	3200MT/s
Xeon 6330	28	2.0GHZ	3.1GHz	6TB/socket	205	42MB	3200MT/s
Xeon 6342	24	2.8GHZ	3.5GHz	6TB/socket	230	36MB	3200MT/s
Xeon 4309Y	8	2.8GHz	3.6GHz	6TB/socket	105	12MB	3200MT/s
Xeon 4310	12	2.1GHz	3.3GHz	6TB/socket	120	18MB	3200MT/s
Xeon 4314	16	2.4GHz	3.4GHz	6TB/socket	135	24MB	3200MT/s
Xeon 4316	20	2.3GHz	3.4GHz	6TB/socket	150	30MB	3200MT/s
Xeon 5318Y	24	2.1GHz	3.4GHz	6TB/socket	165	36MB	3200MT/s
Xeon 5320	26	2.2GHz	3.4GHz	6TB/socket	185	39MB	3200MT/s
Xeon 6336Y	24	2.4GHz	3.6GHz	6TB/socket	185	36MB	3200MT/s
Xeon 5115Y	8	3.2GHz	3.6GHz	6TB/socket	140	12MB	3200MT/s
Xeon 5317	12	3.0GHz	3.6GHZ	6TB/socket	150	18MB	3200MT/s
Xeon 6326	16	2.9GHz	3.5GHz	6TB/socket	185	24MB	3200MT/s
Xeon 6334	8	3.6GHz	3.7GHz	6TB/socket	165	18MB	3200MT/s

Chipset

No Chipset – System on Chip (SoC) design

On System Management Chipset

HPE iLO 5 ASIC

Read and learn more in the **iLO QuickSpecs**

NIC/shared iLO network port-AMD only

Can choose dedicated NIC or shared NIC interface

Notes: For additional information please see the user guide: **https://www.hpe.com/info/apollo2000gen10plus-docs**

Memory

Applicable for XL220n, XL225n, and XL290n.

Type	HPE DDR4 Smart Memory, Registered (RDIMM) or Load reduced (LRDIMM)
DIMM slots available	16 slots per server 8 channels per processor, 1 DIMM per channel
Maximum capacity (LRDIMM)	2.0TB 16 x 128 GB @3200 MT/s
Maximum capacity (RDIMM)	1TB 16 x 64 GB @3200 MT/s

Notes:

- LRDIMM and RDIMM are distinct memory technologies and cannot be mixed within a server
- Memory DIMM availability with a server platform is dependent upon completion of certification testing

Standard Features

Expansion slots & riser information for XL220n Gen10 Plus server

Low Profile Left Riser (P20260-B21)					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Source**
1	PCIe 4.0	x16	x16	Low Profile	CPU1
Low Profile CPU1 Right Riser (P20261-B21)					
Slots #	**Technology**	**Bus Width***	**Connector Width**	**Slot Form Factor**	**Source**
2	PCIe 4.0	x16	x16	Low Profile	CPU1
Low Profile CPU2 Right Riser (P20264-B21)					
Slots #	**Technology**	**Bus Width***	**Connector Width**	**Slot Form Factor**	**Source**
2	PCIe 4.0	x16	x16	Low Profile	CPU2
Low Profile CPU1 NVMe Right Riser (P22337-B21)					
Slots #	**Technology**	**Bus Width***	**Connector Width**	**Slot Form Factor**	**Source**
2	PCIe 4.0	x16	x16	Low Profile	CPU1

Notes:

- If choosing Direct Liquid Cooling for the Apollo 2000 Gen10 plus system slot 1 is not available for use with a PCIe card
- Low Profile CPU1 NVMe Right Riser supports 6 NVMe drives direct CPU2 when chosen with the 6 SFF U.3 BP Prem FIO BP Kit is chosen
- Low Profile CPU1 NVMe Right Riser supports 2 NVMe drives direct CPU2 when chosen with the 4 SFF U.3 BP Prem FIO BP Kit is chosen
- Right riser is required to support SATA drives
- Requires 2 CPUs if selected with HPE n2600 Gen10plus 4 SFF U.3 Prem FIO BP Kit or 6SFF U.3 Prem FIO BP Kit
- *Bus Width indicates the number of physical electrical lanes running to the connector

Expansion slots & riser information for XL225n Gen10 Plus server

Low Profile Left Riser (P20260-B21)					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Source**
1	PCIe 4.0	x16	x16	Low Profile	CPU1
Low Profile CPU1 Right Riser (P20261-B21)					
Slots #	**Technology**	**Bus Width***	**Connector Width**	**Slot Form Factor**	**Source**
2	PCIe 4.0	x16	x16	Low Profile	CPU1
Low Profile CPU2 Right Riser (P20264-B21)					
Slots #	**Technology**	**Bus Width***	**Connector Width**	**Slot Form Factor**	**Source**
2	PCIe 3.0	x16	x16	Low Profile	CPU2
Low Profile CPU1 NVMe Right Riser (P22337-B21)					
Slots #	**Technology**	**Bus Width***	**Connector Width**	**Slot Form Factor**	**Source**
2	PCIe 4.0	x16	x16	Low Profile	CPU1

Notes:

- If choosing Direct Liquid Cooling for the Apollo 2000 Gen10 plus system slot 1 is not available for use with a PCIe card
- Low Profile CPU1 NVMe Right Riser supports 2 NVMe drives direct CPU2 when chosen with the 4 SFF U.3 BP Prem FIO BP Kit is chosen
- Right riser is required to support SATA drives
- Requires 2 CPUs if selected with HPE n2600 Gen10plus 4 SFF U.3 Prem FIO BP Kit
- *Bus Width indicates the number of physical electrical lanes running to the connector
- When P20264-B21 riser is installed, PCIe Gen4 devices installed in the riser will only operate at PCIe Gen3 speeds (8 GT/s)

Standard Features

Expansion slots & riser information for XL290n Gen10 Plus server

Low Profile Left Riser (P20260-B21)					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Source**
1	PCIe 4.0	x16	x16	Low Profile	CPU1
CPU1/2 Right Riser (P20266-B21)					
Slots #	**Technology**	**Bus Width***	**Connector Width**	**Slot Form Factor**	**Source**
2	PCIe 4.0	x16	x16	Low Profile	CPU2
3	PCIe 4.0	x16	x16	Double Width/Single Width Full Height/up to 10.5”	CPU1
4	PCIe 4.0	x16	x16	Single Width Full Height/up to 10.5”	CPU2
5	PCIe 4.0	x16	x16	Double Width/Single Width Full Height/up to 10.5”	CPU2

CPU2 Right Riser (P20269-B21)					
Slots #	**Technology**	**Bus Width***	**Connector Width**	**Slot Form Factor**	**Source**
2	PCIe 4.0	x16	x16	Low Profile	CPU2
3	PCIe 4.0	x16	x16	Double Width/Single Width Full Height/up to 10.5”	CPU2
4	PCIe 4.0	x16	x16	Single Width Full Height/up to 10.5”	CPU1
5	PCIe 4.0	x16	x16	Double Width/Single Width Full Height/up to 10.5”	CPU2
4xGPU Right Riser (P20293-B21)					
Slots #	**Technology**	**Bus Width***	**Connector Width**	**Slot Form Factor**	**Source**
2	PCIe 3.0	x4	x8	Low Profile	PCH
3	PCIe 4.0	x16	x16	Single Width Full Height/up to 10.5”	CPU2
4	PCIe 4.0	x16	x16	Single Width Full Height/up to 10.5”	CPU1
5	PCIe 4.0	x16	x16	Single Width Full Height/up to 10.5”	CPU2
6	PCIe 4.0	x16	x16	Single Width Full Height/up to 10.5”	CPU2
CPU1/2 NVMe Right Riser (P20268-B21)					
Slots #	**Technology**	**Bus Width***	**Connector Width**	**Slot Form Factor**	**Source**
2	PCIe 4.0	x16	x16	Low Profile	CPU2
3	PCIe 4.0	x16	x16	Double Width/Single Width Full Height/up to 10.5”	CPU1
5	PCIe 4.0	x16	x16	Double Width/Single Width Full Height/up to 10.5”	CPU2

Notes:

- CPU1/2 NVMe Right Riser supports 12 NVMe drives direct CPU1 and CPU2 when chosen with the 6 SFF U.3 BP Prem FIO BP Kit is chosen
- CPU1/2 NVMe Right Riser supports 4 NVMe drives direct CPU1 and CPU2 when chosen with the 6 SFF U.3 BP Prem FIO BP Kit is chosen
- Right riser is required to support SATA drives
- Requires 2 CPUs if selected with HPE n2600 Gen10plus 4 SFF U.3 Prem FIO BP Kit or 6SFF U.3 Prem FIO BP Kit
- *Bus Width indicates the number of physical electrical lanes running to the connector

Standard Features

Essential RAID Controller

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

Performance RAID Controller

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

Notes:

- Performance RAID Controllers require the HPE Smart Storage Battery (P01366-B21) which is sold separately
- Embedded controller will be default controller if no other controller is selected
- By default, Embedded Controller will work in AHCI Mode. If "P28417-B21 - HPE SR100i Gen10+ Software RAID" is selected, then Embedded Controller will work in SR100i Mode.
- HPE SR100i supports SATA RAID with plans to support NVMe in the future

Host Bus Adapter

- HPE SN1100Q 16Gb 1p FC HBA
- HPE SN1100Q 16Gb 2p FC HBA
- HPE SN1610E 32Gb 1p FC HBA
- HPE SN1610E 32Gb 2p FC HBA
- HPE SN1200E 16Gb 1p FC HBA
- HPE SN1200E 16Gb 2p FC HBA
- HPE SN1610Q 32Gb 1p FC HBA
- HPE SN1610Q 32Gb 2p FC HBA
- HPE SN1700E 64Gb 2p FC HBA
- HPE SN1700E 64Gb 1p FC HBA
- HPE NV60100M 100Gb Sroage Offload Adapter

Storage Controller Cable Kits

- HPE XL22xn Gen10+ E208ip/P408ip Cbl Kit
- HPE XL225n Gen10+ SATA Cbl Kit

Notes: By default, Embedded Controller will work in AHCI Mode. If "P28417-B21 - HPE SR100i Gen10+ Software RAID" is selected, then Embedded Controller will work in SR100i Mode.

Maximum Internal StoragePer node		
Drive	**Capacity**	**Configuration**
Hot Plug SFF SATA SSD	46TB	6 x 7.68TB
Hot Plug SFF SAS SSD	91TB	6 x 15.3TB
Hot Plug NVMe SSD (AMD)	30TB	2x 15.3TB
Hot Plug NVMe SSD (Intel)	92TB	6x 15.3TB

Notes: NVMe is x2 for Intel

Internal Storage Devices

Optional USB Mezz Riser Kit

Standard Features

Interfaces

KVM	Serial USB Video Port (SUV)
USB Ports	3 external USB ports via SUV (2 regular USB, 1 USB management); 1 USB 3.2 Gen1 Type A Port (external)
HPE iLO Remote Management Network Port	NIC/Shares iLO network port (AMD only) Separate NIC and iLO ports on Intel node
Health LED	1
Power	1
UID	1
Do not remove LED	1

Industry Standard Compliance

- ACPI 6.3 Compliant
- PCIe 4.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- USB 3.0 Compliant (internal); USB 2.0 compliant (external ports via SUV)
- SMBIOS 3.2
- UEFI 2.8
- Redfish API
- European Union Erp Lot 9 Regulation European Union (EU) eco-design regulations for server and storage products, known as Lot 9, establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 Plus servers are compliant with Lot9 requirements.

  Please visit: **https://www.hpe.com/us/en/about/environment/msds-specs-more.html** for more information regarding HPE Lot 9 conformance.

  Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, Ireland, Switzerland or Turkey, 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 fulfill 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.

Power Specifications

To review additional power cord information check the **ProLiant Power Cables** web page
For information on power specifications and technical content visit: **https://www.hpe.com/info/qs**

HPE Server UEFI /Legacy ROM

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

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

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

- Secure Boot and Secure Start enable for enhanced security
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.0 Stack

Standard Features

- Embedded UEFI Shell
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- PXE boot support for IPv6 networks
- Workload Profiles for simple performance optimization

UEFI Boot Mode only

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

Notes:

– For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.
– UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant XL22Xn Gen10 Plus Server

UEFI

Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI).
Learn more at: **http://www.hpe.com/servers/uefi**

Software Portfolio for HPE Apollo 2000 Gen10 Plus Systems

Hewlett Packard Enterprise offers customers complete software stack so they can choose the right mix of software solutions to fit their needs – from system software to application and software development tools:
Notes: For more information on software portfolio for APOLLO 2000 Gen10 Plus systems, **visit this page**

Operating Systems and Virtualization Software Support for ProLiant Servers

- Windows Server 2016 (Most Recent Version)
- Windows Server 2019 (Most Recent Version)
- Windows Server 2022
- VMware ESXi 6.5 U3
- VMware ESXi 6.7 U3
- VMware ESXi 7 (2019)
- Red Hat Enterprise Linux (RHEL) (64 bit)
- SUSE Linux Enterprise Server (SLES) 12 SP4 (64 bit)
- SUSE Linux Enterprise Server (SLES) 15 SP1 (64 bit)
- Ubuntu 20.04 LTS (5.4)
- Citrix XenServer 8.1CR (AMD only)

Notes: For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server.
https://www.hpe.com/us/en/servers/server-operating-systems.html

Fabric software

- Mellanox UFM

Standard Features

Server Management

HPE iLO 5 Advanced

Embedded, in-depth server-level monitoring and management technology offering system management, service alerting, reporting and remote management as well as enhanced security and power management features for HPE Apollo 2000 systems.

iLO RESTful API

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

For clustered HPE Apollo 2000 system deployments (for HPC or other emerging workloads such as AI), customers can use the following cluster management software solutions:

HPE Performance Cluster Manager

Fully integrated system management solution offering all the functionalities you need to manage your HPE Linux®-based high performance computing (HPC) clusters, all day every day.
HPE Performance Cluster Manager aggregates system metrics + remote management from iLO.

The software provides:

- System setup
- Hardware monitoring and management including GPU management
- Image management and software updates
- Power management
- Integration with ISV & open source software solutions

Alternatively, to manage heterogeneous clusters or for customers with additional requirements, HPE also offers:

Bright Cluster Manager

Automates the process of building clusters in the datacenter and in the cloud. Ideal for heterogeneous clusters or customers with additional requirements.

Additional HPE system management software (optional)

HPE iLO 5 Advanced - additional enhanced security and power management features for Apollo servers.
Learn more at: **http://www.hpe.com/info/ilo**

HPE OneView – integration of Apollo systems into overall enterprise data center structure.
Learn more at: **http://www.hpe.com/info/oneview**

Software Development Tools (Programming languages, debuggers, libraries)

HPE Cray Programming Environment – is a fully integrated software development suite offering programmers comprehensive set of tools for developing, porting, debugging, and tuning of their applications so they can shorten application development time and accelerate their performance.

Notes: For more information on HPE Cray Programming Environment **visit this page**

HPE Message Passing Interface (MPI) - an MPI development environment designed by HPE to enable optimization of high-performance computing (HPC) applications on HPE Apollo 200 Gen10 Plus systems. The HPE Performance Software—MPI leverages a scalable MPI library and boosts performance of existing applications without requiring recompilation.

Additional 3rd party software developmental tools:

- AMD AOCC
- Intel® oneAPI
- GNU Compiler Collection
- Perforce® TotalView®

Standard Features

- Arm® Forge
- Mellanox HPC-X

Server Utilities

Active Health System

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

Active Health System Viewer

Use the Active Health System Viewer, a web-based portal, to easily read AHS logs and speed problem resolution with HPE self-repair recommendations. Learn more at **http://www.hpe.com/servers/ahsv**

Smart Update

Keep your servers up to date with HPE's 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 at unmatched speed and scale. Use with an iLO Advanced License to unlock full capabilities.
http://www.hpe.com/servers/iLOamplifierpack

HPE iLO Mobile Application

Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices.
http://www.hpe.com/info/ilo/mobileapp

RESTful Interface Tool

RESTful Interface tool (iLOREST) is a single scripting tool to provision using iLO RESTful API to discover and deploy servers at scale. **http://www.hpe.com/info/resttool**

HPE iLO Scale-Out

HPE iLO Scale-Out is the preferred license built for web hosting, cloud service providers, and high-performance computing data centers, managing massive scale out environments. This license offers sophisticated scripting tools that provides remote access through Text Console via SSH, Dynamic power capping, Email-based Alerting, and proactive notifications.

Scripting tools

Provision 1 to many servers using your own scripts to discover and deploy with Scripting Toolkit (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. **http://www.hpe.com/servers/powershell**

HPE Systems Insight Manager (HPE SIM)

Ideal for environments already using HPE SIM, it allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers. Also provides you with basic support for non-HPE servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless firmware updates. **www.hpe.com/info/hpesim**

Software Licenses

- HPE iLO Standard (embedded in server)
- HPE iLO Advanced (requires license)
- Intelligent Provisioning (embedded in server)
- HPE OneView Standard (requires download)
- HPE OneView Advanced (requires license)

For more information on Server Management – **http://www.hpe.com/info/servermanagement**

Standard Features

For more information on HPE OneView — **http://www.hpe.com/info/hpeoneview**

Security

- UEFI Secure Boot and Secure Start support
- Immutable Silicon Root of Trust
- Support for Commercial National Security Algorithms (CNSA)
- iLO Advanced Premium Security Edition
- Granular control over iLO interfaces
- Common Access Card (CAC) 2-factor Authentication
- Tamper-free updates – components digitally signed and verified
- Secure Recovery – recover critical firmware to known good state on detection of compromised firmware
- TPM (Trusted Platform Module) Gen10 Plus Module Kit option
- Runtime Firmware Validation – Periodically scan essential firmware for compromised code during runtime

HPE Motivair Liquid Cooled Doors

HPE Motivair Liquid Cooled Doors can meet critical cooling requirements of HPE Apollo 2000 Gen10 Plus System servers in HPE racks in the modern datacenter.

HPE Motivair Liquid Cooled Doors is a liquid to air heat exchanger cooling system that is mounted directly to the rear panel of HPE racks.

For additional information, please visit HPE Motivair Liquid Cooled Doors QuickSpecs **here**.

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/completecare

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
http://www.hpe.com/services

Additional Options

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 a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.
Notes: FIO indicates that this option is only available as a factory installable option.

Step 1: Choose a Chassis

HPE Apollo n2600 Gen10 Plus Small Form Factor Configure-to-order Chassis	P19878-B21
HPE Apollo n2400 Gen10 Plus Configure-to-order Chassis	P30036-B21
HPE Apollo n2800 Gen10 Plus Small Form Factor Configure-to-order Chassis	P23142-B21

Notes:
- n2400 chassis does not support any type of drive backplane
- n2800 chassis supports Intel server nodes only

Choose a Backplane for n2600 chassis

HPE n2600 Gen10 Plus 6SFF SAS/SATA HDD/SSD FIO Backplane Kit	P20285-B21
HPE n2600 Gen10 Plus 4SFF U3 Premium HDD/SSD FIO Backplane Kit	P20288-B21
HPE n2600 Gen10 Plus 6SFF U3 Premium HDD/SSD FIO Backplane Kit	P20287-B21
HPE ProLiant XL225n Gen10 Plus 4SFF x4 U.3 Premium FIO Backplane Kit	P43713-B21
HPE n2610 Gen10 Plus 6SFF SAS/SATA HDD/SSD FIO Backplane Kit with Broadcom	P56318-B21
HPE n2610 Gen10 Plus 4SFF x2 NVMe/SAS FIO Backplane Kit with Broadcom	P56322-B21

Notes:
- For NVME drives on XL225n, select P43713-B21 backplane; P20288-B21 not selectable for NVME.
- P20288-B21 backplane supports SAS/SATA drives and P408i-p/E208i-p controller must be selected with this backplane; Switch to P43713-B21 backplane when AHCI/SR100i controller is desired.

Choose Zoning Options for n2800 chassis

HPE n2800 Gen10 Plus FIO Drive Bay Zoning 1 Node	P30069-B21
HPE n2800 Gen10 Plus FIO Drive Bay Zoning 2 Node	P30070-B21
HPE n2800 Gen10 Plus FIO Drive Bay Zoning 3 Node	P30071-B21
HPE n2800 Gen10 Plus FIO Drive Bay Zoning 4 Node	P30072-B21

Notes:
- Drive backplanes only compatible with n2600 chassis
- When choosing P20285-B21 (HPE n2600 G10+ 6SFF SAS/SATA FIO BP Kit) 4 units must always be selected. This selection results in a total of 24 SFF SAS/SATA drives per chassis or 6 SAS/SATA drives per node.
- When choosing P20288-B21 (HPE n2600 Gen10+ 4SFF U3 Prem FIO BP Kit) 2 units must always be selected. This selection results in a total of 8 SFF drives per chassis (2 SAS/SATA or 2 SFF NVMe drives per node)

Step 2: Choose air cooling options

HPE air Cooling Options

HPE Apollo 2000 Gen10 Plus Server Node Blank Kit	P20280-B21

Notes: Required for any non-populated slots in the chassis for designed thermal performance, including system operation and node servicing

HPE n2x00 Gen10 Plus Fan Kit	P20279-B21

Notes:
- Must select quantity for fan modules: 0 fan kit; 1 fan kit for additional cooling
- One fan kit contains 2 fans; chassis comes with default of 5 fans
- Fan redundancy available with 5 or 7 dual-rotor fans depends on configuration

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Additional Options

Step 3: Choose the following rail kit and bracket per chassis

HPE Rail Kits

HPE n2x00 Gen10 Plus 2U Shelf Mount Rail Kit	P25006-B21

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

Step 4: Choose Base configuration

Server Trays

HPE ProLiant XL225n Gen10 Plus 1U Node Configure-to-order Server	P21163-B21
HPE ProLiant XL220n Gen10 Plus 1U Node Configure-to-order Server	P19879-B21
HPE ProLiant XL290n Gen10 Plus 2U Node Configure-to-order Server	P19880-B21

Notes:

- Up to 4 single 1U half width server trays (XL22Xn Gen10 Plus) can be added to the HPE Apollo 2000 Gen10 Plus Chassis
- Up to 2 single 2U half width server trays (XL290n) or 2 single 1U half width server tray with a single 2U half width server tray
- Mixing of AMD and Intel nodes is not allowed

Power supplies

HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	P38997-B21
HPE 1800W-2200W Flex Slot Platinum Hot Plug Power Supply Kit	876935-B21
HPE 3000W 200-277VAC Platinum Hot Plug Power Supply	P24681-B21
HPE 3000W 12V Output 200-277VAC Titanium Hot Plug Power Supply	P47526-B21
HPE n2x00 Gen10 Plus Flex Slot Power Interface Board	P20283-B21
HPE n2x00 Gen10 Plus 3000W Power Interface Board	P20284-B21

Notes:

- If choosing the 1600W PS or the 1800-2200W PS, then P20283-B21 is required
- 830272-B21 is used for AMD 7002 (2nd generation) series processor systems
- P38997-B21 is used for AMD 7003 (3rd generation) series and all Intel processor systems
- If choosing the 3000W PS, then P20284-B21 is required
- 3000W PS is 95% power efficiency (Platinum 80 Plus certified)
- Power supplies cannot be mixed
- 1800-2200W power supply (876935-B21) requires the selection of one power cord per power supply
- If choosing the 3000W PS, then a power cord must be selected from 3000W power cord section; one power cord required per power supply
- 2000 chassis is 4000W

Power Cords for 3000W PS

HPE SDG300 - C20 250V 16Amp Black 0.5m Jumper Cord	P24672-B21
HPE SDG300 - C20 250V 16Amp Black 1m Jumper Cord	P24675-B21
HPE SDG300 - C20 250V 16Amp Black 2m Jumper Cord	P24678-B21
HPE SDG300 - C20 250V 16Amp 2m IN Jumper Cord	P56012-B21
HPE SDG23A-SDG23B 277V 0.76m Jumper Cord	P9B75A
HPE SDG23A-SDG23B 277V 2.0m Jumper Cord	P9B77A

Notes: 3000W Power Supply (P24681-B21) requires selection of one of above power cords; one power cord required per power supply

Power Cords for 1800-2200W PS

HPE C15 EU 250V 10Amp 2.5m Black Power Cord	Q7F45A
HPE C15 UK 250V 10Amp 2.5m Black Power Cord	Q7F46A
HPE C15 US 250V 10Amp 2.5m Black Jumper Cord	Q7F57A

Additional Options

HPE C15 EU 250V 10Amp 0.76m Black Jumper Cord	Q7F60A
HPE C15 US 250V 10Amp 1m Black Jumper Cord	Q7F61A
HPE C15 EU 250V 10Amp 1m Black Jumper Cord	Q7F62A
HPE C15-C14 IN 250V 10Amp 2.5m Black Jumper Cord	R1C67A
HPE C15-C14 IN 250V 10Amp 1m Black Jumper Cord	R1C68A

Notes: 1800-2200W Power Supply (876935-B21) requires selection of one of above power cords; one power cord required per power supply

Power Cords for 1600W PS

HPE C13 - C14 WW 250V 10Amp 2.0m Jumper Cord	A0K02A
HPE C13-NEMA 6-15P 10A/250V 3.6m Black Power Cord	A0N33A
HPE C13 - Nema 5-15P US/CA 110V 10Amp 1.83m Power Cord	AF556A
HPE C13 - GB-1002 CN 250V 10Amp 1.83m Power Cord	AF557A
HPE C13 - IRAM -2073 AR 250V 10A 2.5m Power Cord	AF558A
HPE C13 - Nema 5-15P TH/PH 250V 10Amp 1.83m Power Cord	AF559A
HPE C13 - KSC- 8305 KR 250V 10Amp 1.83m Power Cord	AF560A
HPE C13 - CNS-690 TW 110V 13Amp 1.83m Power Cord	AF561A
HPE C13 - IS-1293 IN 240V 6Amp LV 2.0m Power Cord	AF562A
HPE C13 - SI-32 IL 250V 10Amp 1.83m Power Cord	AF564A
HPE C13 - SEV 1011 CH 250V 10Amp 1.83m Power Cord	AF565A
HPE C13 - DK-2.5A DK 250V 10Amp 1.83m Power Cord	AF566A
HPE C13 - SABS-164 ZA 250V 10Amp 2.5m Power Cord	AF567A
HPE C13 - CEE-VII EU 250V 10Amp 1.83m Power Cord	AF568A
HPE C13 - AS3112-3 AU 250V 10Amp 2.5m Power Cord	AF569A
HPE C13 - BS-1363A UK/HK/SG 250V 10Amp 1.83m Power Cord	AF570A
HPE C13 - JIS C8303 JP 100V 12Amp 2.0m Power Cord	AF572A
HPE C13 - C14 WW 250V 10Amp Flint Gray 2.0m Jumper Cord	AF573A
HPE C13 - NBR-14136 BR 250V 10Amp 1.83m Power Cord	AF591A
HPE C13-C14 IN 250V 10Amp 2m Black Jumper Cord	R1C65A

Notes: Above Power cords are compatible with 1600W Power Supply kit (830272-B21) only

Additional Options

Step 5: Choose from chassis options

RCM Module

HPE n2x00 Gen10 Plus Rack Consolidation Module Kit P20290-B21

Notes:

- The RCM (Rack Consolidation Management) module kit which allows iLO aggregation at the chassis level and the port for the HPE APM is optional on all chassis. The RCM Module consists of 2 iLO ports for redundancy. It can also be daisy chained to connect to a Top of the Rack (TOR) management switch.
- If using the RCM module iLO port to connect to a network, the network must operate at a speed of Mbps. On-board shared iLO management port could be run at 10/100/1000 Mbps network speed.

HPE Apollo 2000 Rack Consolidation Module 2.0-1.0 Adapter Kit 800063-B21

Notes: 800063-B21 is required if there is one APM in the rack and more than 10 Apollo 2000 Gen10 plus chassis

HPE Advanced Power Manager

HPE Apollo Platform Manager Kit 741192-B21

HPE Apollo Platform Manager Distribution Module Kit 620002-B21

Notes:

- 741192-B21 is an optional kit, however it is highly recommended to enable power capping and aggregated power control using a single dashboard. Each HPE APM can connect up to 10 chassis via consolidated chassis management cables
- 620002-B21 is required if there is one APM in the rack and more than 10 Apollo 2000 Gen10 plus chassis. Each APMD can connect up to 10 chassis.
- Refer to HPE APM QuickSpecs for further details at **https://h20195.www2.hpe.com/v2/GetPDF.aspx/c04111481.pdf**

Step 6: Choose between Air Cooled or Liquid Cooled required options

Notes: For Air Cooling options, skip to step 7.

Step 6a: Choose between Direct Liquid Cooling of Processor Only (L22) or Processor plus Memory (L23).

Select one (1) SKU for each server configuration. Cannot be configured with an Air Cooled option.

Notes: For DLC Processor plus Memory, skip to step 6b.

Intel DLC Kit for Processor only – XL220n

Intel Xeon-Platinum 8380 2.3GHz 40-core 270W FIO DLC Processor for HPE ProLiant XL220n Gen10 Plus P36816-L22

Intel Xeon-Platinum 8368 2.4GHz 38-core 270W FIO DLC Processor for HPE ProLiant XL220n Gen10 Plus P36815-L22

Intel Xeon-Platinum 8360Y 2.4GHz 36-core 250W FIO DLC Processor for HPE ProLiant XL220n Gen10 Plus P36814-L22

Intel Xeon-Platinum 8358 2.6GHz 32-core 250W FIO DLC Processor for HPE ProLiant XL220n Gen10 Plus P36813-L22

Intel Xeon-Gold 6348 2.6GHz 28-core 235W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36812-L22

Intel Xeon-Gold 6330 2.0GHz 28-core 205W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36802-L22

Intel Xeon-Gold 6338 2.0GHz 32-core 205W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36803-L22

Intel Xeon-Platinum 8352Y 2.2GHz 32-core 205W FIO DLC Processor for HPE ProLiant XL220n Gen10 Plus P36804-L22

Intel Xeon-Gold 6346 3.1GHz 16-core 205W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36809-L22

Intel Xeon-Gold 6354 3.0GHz 18-core 205W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36810-L22

Intel Xeon-Silver 4309Y 2.8GHz 8-core 105W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36795-L22

Intel Xeon-Silver 4310 2.1GHz 12-core 120W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36796-L22

Intel Xeon-Silver 4314 2.4GHz 16-core 135W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36797-L22

Intel Xeon-Silver 4316 2.3GHz 20-core 150W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36798-L22

Intel Xeon-Gold 5318Y 2.1GHz 24-core 165W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36799-L22

Intel Xeon-Gold 5320 2.2GHz 26-core 185W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36800-L22

Intel Xeon-Gold 6336Y 2.4GHz 24-core 185W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus P36801-L22

Additional Options

Intel Xeon-Gold 5315Y 3.2GHz 8-core 140W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus	P36805-L22
Intel Xeon-Gold 5317 3.0GHz 12-core 150W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus	P36806-L22
Intel Xeon-Gold 6326 2.9GHz 16-core 185W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus	P36807-L22
Intel Xeon-Gold 6334 3.6GHz 8-core 165W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus	P36808-L22
Intel Xeon-Gold 6342 2.8GHz 24-core 230W FIO DLC Processor Kit for HPE ProLiant XL220n Gen10 Plus	P36811-L22

Notes:

- All DLC Processor kits come with 2 processors and 1 node cooling loop for processors
- Min 2 memory required per DLC processor kit
- If DLC processor kit is chosen slot 1 in the server can no longer be used for the HPE XL2xxn Gen10 Plus LP Left Riser kit (P20260-B21)

Step 6b: Choose Direct Liquid Cooled Kit for Processor plus Memory

Intel DLC Kit for Processor plus Memory – XL220n

Intel Xeon-Platinum 8380 2.3GHz 40-core 270W FIO DLC CPU/Memory for HPE ProLiant XL2x0n Gen10 Plus	P36816-L23
Intel Xeon-Platinum 8368 2.4GHz 38-core 270W FIO DLC CPU/Memory for HPE ProLiant XL2x0n Gen10 Plus	P36815-L23
Intel Xeon-Platinum 8360Y 2.4GHz 36-core 250W FIO DLC CPU/Memory for HPE ProLiant XL2x0n Gen10 Plus	P36814-L23
Intel Xeon-Platinum 8358 2.6GHz 32-core 250W FIO DLC CPU/Memory for HPE ProLiant XL2x0n Gen10 Plus	P36813-L23
Intel Xeon-Gold 6348 2.6GHz 28-core 235W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36812-L23
Intel Xeon-Gold 6330 2.0GHz 28-core 205W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36802-L23
Intel Xeon-Gold 6338 2.0GHz 32-core 205W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36803-L23
Intel Xeon-Platinum 8352Y 2.2GHz 32-core 205W FIO DLC CPU/Memory for HPE ProLiant XL2x0n Gen10 Plus	P36804-L23
Intel Xeon-Gold 6346 3.1GHz 16-core 205W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36809-L23
Intel Xeon-Gold 6354 3.0GHz 18-core 205W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36810-L23
Intel Xeon-Silver 4309Y 2.8GHz 8-core 105W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36795-L23
Intel Xeon-Silver 4310 2.1GHz 12-core 120W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36796-L23
Intel Xeon-Silver 4314 2.4GHz 16-core 135W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36797-L23
Intel Xeon-Silver 4316 2.3GHz 20-core 150W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36798-L23
Intel Xeon-Gold 5318Y 2.1GHz 24-core 165W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36799-L23
Intel Xeon-Gold 5320 2.2GHz 26-core 185W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36800-L23
Intel Xeon-Gold 6336Y 2.4GHz 24-core 185W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36801-L23
Intel Xeon-Gold 5315Y 3.2GHz 8-core 140W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36805-L23
Intel Xeon-Gold 5317 3.0GHz 12-core 150W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36806-L23
Intel Xeon-Gold 6326 2.9GHz 16-core 185W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36807-L23
Intel Xeon-Gold 6334 3.6GHz 8-core 165W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36808-L23
Intel Xeon-Gold 6342 2.8GHz 24-core 230W FIO DLC CPU/Memory Kit for HPE ProLiant XL2x0n Gen10 Plus	P36811-L23

Notes:

- All DLC Processor kits come with 2 processors and 1 node cooling loop for processors and memory
- For L23 SKUs all memory slots must be populated
- If DLC processor kit is chosen slot 1 in the server can no longer be used for the HPE XL2xxn Gen10 Plus LP Left Riser kit (P20260-B21)

DLC Installation kit

Notes: 1 installation kit needed per site install

Additional Options

Step 7: Choose from Air Cooled Processor options (cannot be configured with a DLC option)

Notes:

- Certain limitations may apply to select processors, please contact your HPE sales representative
- All AMD EPYC processors can support up to 2TB of memory each
- Please contact your HPE sales representatives for any questions on processor support needed

AMD Processors – Factory Integrated Processor Kit for XL225n

AMD EPYC 7713 2.0GHz 64-core 225W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38730-L21
AMD EPYC 7663 2.0GHz 56-core 240W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38729-L21
AMD EPYC 7643 2.3GHz 48-core 225W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P39472-L21
AMD EPYC 7543 2.8GHz 32-core 225W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38728-L21
AMD EPYC 7513 2.6GHz 32-core 200W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38727-L21
AMD EPYC 7453 2.75GHz 28-core 225W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38725-L21
AMD EPYC 7443 2.85GHz 24-core 200W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38726-L21
AMD EPYC 7413 2.65GHz 24-core 180W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38724-L21
AMD EPYC 7343 3.2GHz 16-core 190W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38723-L21
AMD EPYC 7313 3.0GHz 16-core 155W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38722-L21
AMD EPYC 74F3 3.2GHz 24-core 240W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38734-L21
AMD EPYC 73F3 3.5GHz 16-core 240W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38733-L21
AMD EPYC 72F3 3.7GHz 8-core 180W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38732-L21
AMD EPYC 7713P 2.0GHz 64-core 225W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38739-L21
AMD EPYC 7543P 2.8GHz 32-core 225W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38738-L21
AMD EPYC 7443P 2.85GHz 24-core 200W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38737-L21
AMD EPYC 7313P 3.0GHz 16-core 155W FIO Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38736-L21

Intel Processors – Factory Integrated Processor Kit for XL220n & XL290n

Intel Xeon-Platinum 8380 2.3GHz 40-core 270W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36816-L21
Intel Xeon-Platinum 8368 2.4GHz 38-core 270W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36815-L21
Intel Xeon-Platinum 8360Y 2.4GHz 36-core 250W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36814-L21
Intel Xeon-Platinum 8358 2.6GHz 32-core 250W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36813-L21
Intel Xeon-Gold 6348 2.6GHz 28-core 235W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36812-L21
Intel Xeon-Gold 6330 2.0GHz 28-core 205W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36802-L21
Intel Xeon-Gold 6338 2.0GHz 32-core 205W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36803-L21
Intel Xeon-Platinum 8352Y 2.2GHz 32-core 205W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36804-L21
Intel Xeon-Gold 6346 3.1GHz 16-core 205W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36809-L21
Intel Xeon-Gold 6354 3.0GHz 18-core 205W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36810-L21
Intel Xeon-Silver 4309Y 2.8GHz 8-core 105W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36795-L21
Intel Xeon-Silver 4310 2.1GHz 12-core 120W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36796-L21
Intel Xeon-Silver 4314 2.4GHz 16-core 135W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36797-L21
Intel Xeon-Silver 4316 2.3GHz 20-core 150W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36798-L21
Intel Xeon-Gold 5318Y 2.1GHz 24-core 165W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36799-L21
Intel Xeon-Gold 5320 2.2GHz 26-core 185W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36800-L21
Intel Xeon-Gold 6336Y 2.4GHz 24-core 185W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36801-L21
Intel Xeon-Gold 5315Y 3.2GHz 8-core 140W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36805-L21
Intel Xeon-Gold 5317 3.0GHz 12-core 150W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36806-L21
Intel Xeon-Gold 6326 2.9GHz 16-core 185W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36807-L21
Intel Xeon-Gold 6334 3.6GHz 8-core 165W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36808-L21
Intel Xeon-Gold 6342 2.8GHz 24-core 230W FIO Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36811-L21

Notes:

Additional Options

- Must select one xxxxxx-L21 processor. If one processor is desired, select one xxxxxx-L21. If two processors are desired, select one corresponding xxxxxx-B21. Mixing of processor speeds and types is not supported.
- DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed. For the maximum supported memory speeds for each processor listed above, please reference the 'Memory Speed by Processor Model' table in the Memory section of the QuickSpecs
- P type processors are 1P socket count ONLY. Cannot be mixed with any other processor.

AMD Processors – Processor Kit for XL225n

AMD EPYC 7713 2.0GHz 64-core 225W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38730-B21
AMD EPYC 7663 2.0GHz 56-core 240W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38729-B21
AMD EPYC 7643 2.3GHz 48-core 225W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P39472-B21
AMD EPYC 7543 2.8GHz 32-core 225W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38728-B21
AMD EPYC 7513 2.6GHz 32-core 200W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38727-B21
AMD EPYC 7453 2.75GHz 28-core 225W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38725-B21
AMD EPYC 7443 2.85GHz 24-core 200W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38726-B21
AMD EPYC 7413 2.65GHz 24-core 180W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38724-B21
AMD EPYC 7343 3.2GHz 16-core 190W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38723-B21
AMD EPYC 7313 3.0GHz 16-core 155W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38722-B21
AMD EPYC 74F3 3.2GHz 24-core 240W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38734-B21
AMD EPYC 73F3 3.5GHz 16-core 240W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38733-B21
AMD EPYC 72F3 3.7GHz 8-core 180W Processor Kit for HPE ProLiant XL225n Gen10 Plus	P38732-B21

Intel Processors – Processor Kit for XL220n & XL290n

Intel Xeon-Platinum 8380 2.3GHz 40-core 270W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36816-B21
Intel Xeon-Platinum 8368 2.4GHz 38-core 270W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36815-B21
Intel Xeon-Platinum 8360Y 2.4GHz 36-core 250W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36814-B21
Intel Xeon-Platinum 8358 2.6GHz 32-core 250W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36813-B21
Intel Xeon-Gold 6348 2.6GHz 28-core 235W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36812-B21
Intel Xeon-Gold 6330 2.0GHz 28-core 205W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36802-B21
Intel Xeon-Gold 6338 2.0GHz 32-core 205W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36803-B21
Intel Xeon-Platinum 8352Y 2.2GHz 32-core 205W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36804-B21
Intel Xeon-Gold 6346 3.1GHz 16-core 205W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36809-B21
Intel Xeon-Gold 6354 3.0GHz 18-core 205W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36810-B21
Intel Xeon-Silver 4309Y 2.8GHz 8-core 105W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36795-B21
Intel Xeon-Silver 4310 2.1GHz 12-core 120W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36796-B21
Intel Xeon-Silver 4314 2.4GHz 16-core 135W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36797-B21
Intel Xeon-Silver 4316 2.3GHz 20-core 150W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36798-B21
Intel Xeon-Gold 5318Y 2.1GHz 24-core 165W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36799-B21
Intel Xeon-Gold 5320 2.2GHz 26-core 185W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36800-B21
Intel Xeon-Gold 6336Y 2.4GHz 24-core 185W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36801-B21
Intel Xeon-Gold 5315Y 3.2GHz 8-core 140W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36805-B21
Intel Xeon-Gold 5317 3.0GHz 12-core 150W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36806-B21
Intel Xeon-Gold 6326 2.9GHz 16-core 185W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36807-B21
Intel Xeon-Gold 6334 3.6GHz 8-core 165W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36808-B21
Intel Xeon-Gold 6342 2.8GHz 24-core 230W Processor Kit for HPE ProLiant XL2x0n Gen10 Plus	P36811-B21

Notes:

- DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed. For the maximum supported memory speeds for each processor listed above, please reference the 'Memory Speed by Processor Model' table in the Memory section of the QuickSpecs P type processors are 1P socket count ONLY. Cannot be mixed with any other processor.

Additional Options

Step 8: Choose Additional Options from Core and Additional Options sections below

HPE Memory

Registered DIMMs (RDIMMs for AMD platform)

HPE 8GB (1x8GB) Single Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07638-H21
HPE 16GB (1x16GB) Single Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07640-H21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07642-H21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07646-H21
HPE 64GB (1x64GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07650-H21

Registered DIMMs (RDIMMs for Intel platform)

HPE 8GB (1x8GB) Single Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P07525-H21
HPE 16GB (1x16GB) Single Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06029-H21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06031-H21
HPE 32GB (1x32GB) Single Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P40007-H21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06033-H21
HPE 64GB (1x64GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Smart Memory Kit	P06035-H21

Notes:

- Intel Optane 512GB only available on XL220n. Intel Optane memory not supported with VMWare
- Minimum 1 DIMM are required per server; up to 8 DIMMs per processor.
- A maximum of 16 DIMMs are supported per XL22Xn server tray (or 8 DIMMs max per processor).
- LRDIMM and RDIMM are distinct memory technologies and cannot be mixed within a server.
- No mixing of x4 and x8 memory allowed
- To maximize performance in most potential applications, it is recommended to balance the total memory capacity across all installed processors. Load the channels similarly whenever possible to enable optimal interleaving.
- HPE memory from previous generation servers is not compatible with this server. HPE Smart Memory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen10 Plus. For additional information, please see the HPE Smart Memory QuickSpecs at:
  https://www.hpe.com/h20195/v2/GetPDF.aspx/c04355083.pdf

- Memory Population Table or the Online Memory Configuration Tool can be found at:
  https://h20195.www2.hpe.com/v2/Getdocument.aspx?docname=a00038346enw
  https://www.hpe.com/docs/amd-population-rules-Gen10plus

HPE PCIe riser kits

All Server Node Compatible – HPE XL2xxn

HPE XL2xxn Gen10 Plus Low Profile Left Riser Kit	P20260-B21

Notes:

- To support SATA drives a right riser selection is required
- If DLC option is chosen Left Riser kit cannot be ordered
- HPE XL2xxn Gen10 Plus Low Profile Left Riser Kit total available PCIe slots is one (1x16)
- HPE XL2xxn Gen10 Plus Low Profile Left Riser Kit & HPE XL22xn G10+ LP CPU1 Right Riser Kit P20261-B21 total available PCIe slots is two (2x16)
- HPE XL2xxn Gen10 Plus Low Profile Left Riser & HPE XL22xn G10+ LP CPU2 Right Riser Kit P20264-B21 total available PCIe slots is two (2x16). When P20264-B21 riser is installed, PCIe Gen4 devices installed in this riser will only operate at PCIe Gen3 speeds (8 GT/s)HPE XL2xxn Gen10 Plus Low Profile Left Riser Kit & HPE XL225n Gen10+ LP CPU1 NVMe Riser Kit P22337-B21 total available PCIe slots is two (2x16)
  HPE XL2xxn Gen10 Plus Low Profile Left Riser Kit & HPE XL225n Gen10+ LP CPU1 NVMe Riser Kit P22337-B21 total available PCIe slots is two (2x16)

Additional Options

HPE XL2xxn Gen10 Plus USB Mezzanine Riser Kit P20291-B21

Notes:

- Can choose either P20291-B21 USB Mezz riser or P20292-B21 NVME boot controller not both
- Riser does not take up a PCIe slot in the system

HPE XL220n & XL225n Compatible

HPE XL22xn Gen10 Plus Low Profile CPU1 Right Riser Kit P20261-B21

HPE XL225n Gen10 Plus 4SFF x4 NVMe/SAS FIO Backplane Kit with Broadcom P56314-B21

Notes:

- HPE XL22xn G10+ LP CPU1 Right Riser Kit & HPE XL2xxn Gen10 Plus Low Profile Left Riser Kit (P20260-B21) total available PCIe slots is two (2x16)
- This riser can support SAS/SATA drives

HPE XL22xn Gen10 Plus Low Profile CPU2 Right Riser Kit P20264-B21

Notes:

- HPE XL22xn G10+ LP CPU2 Right Riser Kit & HPE XL2xxn Gen10 Plus Low Profile Left Riser Kit (P20260-B21) total available PCIe slots is two (2x16)
- This riser can support SAS/SATA drives
- PCIe devices installed in this riser are limited to PCIe Gen3 speeds

HPE XL220n Exclusive

HPE XL220n Gen10 Plus Low Profile CPU1 Direct Attach NVMe Right Riser Kit P20263-B21

Notes:

- Select up to one NVMe Riser kit.
- This riser must be selected if "HPE n2600 Gen10+ 4SFF U3 Prem FIO BP Kit" or "HPE n2600 Gen10+ 6SFF U3 Prem FIO BP Kit" is selected in the Chassis and U.3 NVMe drive is selected in this Node. Each riser can support Six U.3 NVMe drives per Node.
- Requires 2 CPUs if selected with "HPE n2600 Gen10+ 4SFF U3 Prem FIO BP Kit" or "HPE n2600 Gen10+ 6SFF U3 Prem FIO BP Kit" and U.3 NVMe drive.

HPE XL225n Exclusive

HPE XL225n Gen10 Plus Low Profile CPU1 Direct Attach NVMe Right Riser Kit P22337-B21

Notes:

- This riser must be chosen if HPE n2600 Gen10plus 4 SFF U.3 Prem FIO BP Kit is selected in the chassis and U.3 NVMe drive is selected in this node. Can support two NVMe drives direct CPU2 per node.
- Requires 2 CPUs if selected with HPE n2600 Gen10plus 4 SFF U.3 Prem FIO BP Kit
- HPE XL225n Gen10+ LP CPU1 NVMe Riser Kit & HPE XL2xxn Gen10 Plus Low Profile Left Riser Kit (P20260-B21) total available PCIe slots is two (2x16)

HPE XL290n Exclusive

HPE XL290n Gen10 Plus CPU1/2 Right Riser Kit P20266-B21

HPE XL290n Gen10 Plus MR216i-p/MR416i-p Cable Kit P56338-B21

HPE XL290n Gen10 Plus 4GPU MR216i-p/MR416i-p Cable Kit P56341-B21

HPE XL290n Gen10 Plus CPU1/2 Direct Attach NVMe Right Riser Kit P20268-B21

HPE XL290n Gen10 Plus CPU2 Right Riser Kit P20269-B21

Notes: Select up to one Right Riser kit above. Two (2) CPUs required.

HPE XL290n Gen10 Plus 4x GPU Right Riser Kit P20293-B21

Notes:

- If this riser is selected and Node gets integrated into Chassis (n2400/ n2600), then chassis must contain a minimum of two identical nodes or two Blank Kits (P20280-B21) must be ordered.
- Cannot be selected with NVMe drives.
- Cannot be selected with n2800 Chassis
- Two (2) CPUs required. Maximum of one (1) right riser.
- Minimum Two PCIe cards (InfiniBand / PCIe Accelerators) must be ordered.

Additional Options

Graphic Card Accessories

HPE XL290n Gen10 Plus GPU Enablement Kit	P26213-B21
HPE ProLiant XL290n Gen10 Plus CPU 8-pin Cable Kit for NVIDIA GPU	P20276-B21
HPE XL290n Gen10 Plus Slot 5 Adapter Kit	P25636-B21
HPE XL290 Gen10 Plus 4xGPU PCIe 2x8p Slot5/Slot6 Cable Kit	P25472_B21
HPE XL290n Gen10 Plus MR216i-p/MR416i-p Cable Kit	P56338-B21
HPE XL290n Gen10 Plus 4GPU MR216i-p/MR416i-p Cable Kit	P56341-B21

Notes:

The following table summarizes the configuration options for risers associated with GPU cards

	HPE NVIDIA Tesla T4 16GB Module (R0W29A)	Xilinx Alveo U50 Accelerator for HPE (R4B02A)	NVIDIA A100 80GB GPU Module for HPE (R9P49A)
Low Profile Left Riser (P20260-B21)	X	X	X
CPU1/2 Right Riser (P20266-B21)	X	X	X
CPU2 Right Riser (P20269-B21)	X	X	X
4xGPU Right Riser (P20293-B21)	X	X	
CPU1/2 NVMe Right Riser (P20268-B21)	X	X	X

Notes:

- P26213-B21 HPE XL290 Gen10+ GPU Enable Kit is required when ordering 4xGPU Right Riser (P20293-B21) and NVIDIA T4 16GB Module (R0W29A)
- HPE XL290n Gen10+ NVIDIA CPU 8p kit (P20276-B21) and HPE XL290n Gen10+ Slot 5 Adptr Kit (P25636-B21) are required when ordering one or two NVIDIA A100 80GB GPU (R6B53A)
- HPE XL290 Gen10 Plus 4xGPU 2x8p slot 3/Slot4 Cable (P25469-B21) required when ordering Xilinix U50 GPU for slot 3 and 4
- HPE XL290 Gen10 Plus 4xGPU PCIe 2x8p Slot 5/Slot 6 Cable (P25472-B21) required when ordering Xilinx U50 for slot 5 and 6
- Both P25469-B21 and P25472-B21 cables are required when 4 Xilinx U50 GPU are ordered

Boot Controller

HPE NS204i-t Gen10 Plus x2 Lanes NVMe PCIe 3 x8 Boot Controller	P20292-B21

Notes:

- OS Boot controller RAID1 (not configurable) . Requires the selection of 2x 480GB NVMe M.2 devices. Riser does not take up a PCIe slot in the system
- Can choose either P20291-B21 USB Mezz riser or P20292-B21 NVME boot controller not both.

HPE Storage Controller

Notes: Required to select one of the following when SAS Drives are installed on the server

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

Notes:

- Supports up to 6 internal SAS/SATA Drives
- Requires the selection of a Right Riser kit
- Requires selection of HPE XL22xn Gen10+ E208ip/P408ip Cbl Kit (P20271-B21)

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

Notes:

- Supports 0 internal SAS/SATA Drives.
- Requires the selection of Left or Right Riser kit
- This controller may support- SAS tape device (external), SAS Storage (external)

HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller 804405-B21

Notes:

- Supports 0 internal SAS/SATA Drives
- Requires the selection of Left or Right Riser kit
- This controller may support- SAS tape device (external), SAS Storage (external)
- The battery cable kit needs to be selected if the node has the P series controller in the node configuration

Additional Options

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

Notes:

- Supports up to 6 internal SAS/SATA Drives.
- Requires the selection of a Right Riser kit.
- Requires selection of HPE XL22xn Gen10+ E208ip/P408ip Cbl Kit (P20271-B21)
- The battery cable kit needs to be selected if the node has the P series controller in the node configuration

HPE Storage Cables

HPE XL225n Gen10 Plus SATA Cable Kit P24055-B21

HPE ProLiant XL22xn Gen10 Plus MR216i-p/MR416i-p Cable Kit P56335-B21

Notes: Required when AHCI is the primary controller; supports to connect to SATA drives; select 1 cable kit/node

HPE XL22xn Gen10 Plus Smart Array E208ip/P408ip Cable P20271-B21

Notes: Required to be selected when E208i-p or P408i-p is selected with HPE n2600 G10+ 6SFF SAS/SATA FIO BP Kit or with "HPE n2600 Gen10+ 4SFF U3 Prem FIO BP Kit" and no NVMe drive is selected for this drive cage

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

Notes: The battery cable kit needs to be selected if the node has the P series controller in the node configuration

Step 9: Choose Additional Factory Integrated Options (only one from each category unless otherwise noted)

BIOS Model

HPE Legacy FIO Mode Setting 758959-B22

Notes: The system BIOS provides two different Boot Modes: UEFI (Standard) and Legacy BIOS (optional).When this option is selected, then BIOS need to be switched from default UEFI Mode to Legacy Mode

HPE Security Hardware

HPE Gen10 TPM 1.2 FIO Setting 872108-B21

Notes:

- This can be selected only when HPE Gen10 Plus TPM WR Module Kit (P17413-B21) is selected
- HPE Gen10 Plus TPM WR Module Kit (P17413-B21) UEFI Mode (default) can support either TPM 1.2 or TPM 2.0. The default mode is the TPM 2.0 mode.

Raid Settings

HPE RAID 0 Drive 1 FIO Setting 339777-B21

HPE RAID 1 Drive 1 FIO Setting 339778-B21

HPE RAID 5 Drive 1 FIO Setting 339779-B21

HPE Raid 5 w/SP Drive 1 FIO Setting 339780-B21

HPE RAID FIO Advanced Data Guarding Option 339781-B21

HPE Customer Defined RAID Setting Service 389692-B21

Controller state

HPE SR100i Gen10 Plus FIO Software RAID P28417-B21

Notes:

- Embedded Controller works in either AHCI Mode or SR100i Mode.
- By default, Embedded controller will work in "AHCI Mode"
- If "P28417-B21 - HPE SR100i Gen10+ Software RAID", then Embedded controller will work in "SR100i Mode"
- If chosen RAID supportability for SATA is RAID0,1 & 5
- HPE Smart Array SR100i Gen10 Plus Software RAID only supports Windows and does not support Linux or VMware on Gen10 Plus servers
- P28417-B21 is only supported if P20285-B21 HPE n2600 Gen10 Plus 6SFF SAS/SATA HDD/SSD FIO Backplane Kit is chosen

HPE Networking

Ethernet Options

Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE P08443-B21

Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE P08449-B21

Mellanox MCX562A-ACAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE P10112-B21

Mellanox MCX512F-ACHT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE P13188-B21

Additional Options

Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter for HPE	P21106-B21
Xilinx X2522-25G-PLUS Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P21109-B21
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10115-B21
Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE	P26253-B21
Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ OCP3 Adapter for HPE	P26256-B21
Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ Adapter for HPE	P26259-B21
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26262-B21
Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	P25960-B21
Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T OCP3 Adapter for HPE	P10097-B21
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10106-B21
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P08458-B21
Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T Adapter for HPE	P51178-B21
Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P51181-B21

Notes:

- For 1U, total Slots available for PCIe is 2, total Slots available for OCP3.0 is 1. This is a total selection from anything in the following categories: InfiniBand, Networking, Controllers, PCI Accelerator
- Requires the selection of Left or Right Riser kit
- P08458-B21 is for XL290n only (full height device)

InfiniBand Options

HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 MCX653105A-HDAT Adapter	P23664-H21
HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter	P23665-H21
HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653106A-ECAT Adapter	P23666-H21
HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter	P31324-H21
HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter	P31348-H21
HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel Omni-Path Architecture Adapter	829335-B21
HPE InfiniBand NDR200/Ethernet 200Gb 1-port OSFP PCIe5 x16 MCX75310AAS-HEAT Adapter	P45642-H22
HPE 15.36TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static SPDM Multi Vendor SSD	P69255-H21

Notes:

- Requires the selection of Left or Right Riser kit. Maximum PCIe card limit is depending on the selection of Left and/ or Right riser kit
- Please see the QuickSpecs for Technical Specifications and additional information:

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

Storage Offload Adapters

NVIDIA Ethernet 100Gb 2-port NVMe-oF Offload Adapter for HPE	R8M41A

HPE Drives

Notes:

- SATA drive support requires the selection of the right riser kit
- NVMe SED Support
- TPM is required for direct attach SED when using “Local Key Management.” TPM is not required for direct attach SED Remote Key Management
  For “Remote Key Management,” iLO Advanced license is requiredfor remote key manager (example ESKM) support

Enterprise – 12G SAS – SFF – Hard Disk Drives

HPE 2.4TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty 512e Multi Vendor HDD	881457-H21
HPE 300GB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	872475-H21
HPE 600GB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	872477-H21
HPE 1.2TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	872479-H21
HPE 1.8TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty 512e Multi Vendor HDD	872481-H21

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

HPE 1.92TB SAS 12G Mixed Use SFF SC Value SAS Multi Vendor SSD	P37011-H21
HPE 1.6TB SAS Mixed Use SFF BC Self-encrypting FIPS 140-2 PM7 SSD	P63871-B21

Additional Options

Read Intensive – 12G SAS – SFF – Solid State Drives	
HPE 1.92TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P36999-H21
HPE 3.84TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P37001-H21
HPE 7.68TB SAS Read Intensive SFF BC Self-encrypting FIPS 140-2 PM7 Private SSD	P63879-B21
Read Intensive – 6G SATA – SFF – Solid State Drives	
HPE 240GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18420-H21
HPE 480GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18422-H21
HPE 960GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18424-H21
HPE 1.92TB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18426-H21
HPE 3.84TB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18428-H21
Mixed Use - 6G SATA - SFF - Solid State Drives	
HPE 480GB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18432-H21
HPE 960GB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18434-H21
HPE 3.84TB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18438-H21
HPE 1.92TB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18436-H21
Mixed Use /RI NVMe SED SSD's	
HPE 1.92TB NVMe RI SC FIPS U.3 CM6 SSD	P44658-H21
Read Intensive - NVMe - SFF - Solid State Drives	
HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD	P64842-H21
HPE 1.92TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD	P64844-H21
HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD	P64846-H21
HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD	P64848-H21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD	P63829-K21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD	P63833-K21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD	P63837-K21
HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD	P63841-K21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PS1030 SSD	P70426-H21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PS1030 SSD	P70428-H21
Mixed Use - NVMe - SFF - Solid State Drives	
HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD	P64999-H21
HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD	P65007-H21
HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD	P65015-H21
HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD	P65023-H21
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD	P63845-K21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD	P63849-K21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD	P63853-K21
HBA Storage Controllers	
HPE SN1610E 32Gb 1-port Fibre Channel Host Bus Adapter	R2J62A
HPE SN1610E 32Gb 2-port Fibre Channel Host Bus Adapter	R2J63A
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	Q0L13A
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	Q0L14A
HPE SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter	P9D93A
HPE SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
HPE SN1700Q 64Gb 1-port Fibre Channel Host Bus Adapter	R7N86A
HPE SN1700Q 64Gb 2-port Fibre Channel Host Bus Adapter	R7N87A
HPE SN1610Q 32Gb 1-port Fibre Channel Host Bus Adapter	R2E08A
HPE SN1610Q 32Gb 2-port Fibre Channel Host Bus Adapter	R2E09A
HPE SN1700E 64Gb 1-port Fibre Channel Host Bus Adapter	R7N77A
HPE SN1700E 64Gb 2-port Fibre Channel Host Bus Adapter	R7N78A

Additional Options

HPE Integrated Light-Out (iLO)

HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features	E6U59ABE
HPE iLO Advanced Electronic License with 3yr Support on iLO Licensed Features	E6U64ABE
HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A
HPE iLO Advanced AKA Tracking License with 3yr Support on iLO Licensed Features	BD507A
HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	512485-B21
HPE iLO Advanced AKA Tracking License with 1yr Support on iLO Licensed Features	512487-B21

Notes:

- For additional license options please see the QuickSpecs at: **http://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04154343**
- For more information, visit: **http://www.hpe.com/info/ilo**

HPE Performance Cluster Manager

For additional information, please visit HPE Performance Cluster Manager QuickSpecs **here**

HPE Performance Cluster Manager 1 Node 3yr 24x7 Support Perpetual E-LTU

Notes:

- One license per node
- Includes three years of support
- This is an electronic license
- This is a perpetual license. The Software will continue working even when the support term ends

HPE Performance Cluster Manager 1 Node 3yr 24x7 Support Perpetual LTU

Notes:

- One license per node.
- Includes three years of support.
- This is a perpetual license. The software will continue working even when the support term ends.

HPE Performance Cluster Manager FIO Software

Notes:

- For factory installation only with HPE SGI 8600. This SKU does not include the license. Please order with Q9V60AAE.
- Order one per node

HPE Performance Cluster Manager Media Kit

Notes: One media kit per solution.

USB Flash Kit

HPE XL2xxn Gen10 Plus 36-pin Serial/USB/VGA Cable	P24887-B21

Security Hardware

Trusted Platform Module

HPE Gen10 Plus TPM WR Module Kit	P17413-B21

Notes: HPE Gen10 Plus TPM WR Module Kit (P17413-B21) UEFI Mode (default) can support either TPM 1.2 or TPM 2.0. The default mode is the TPM 2.0 mode. For more information visit TPM QS:
https://h20195.www2.hpe.com/v2/GetPDF.aspx/c04939549.pdf

Transceivers

HPE BladeSystem c-Class Virtual Connect 1G SFP SX Transceiver	453151-B21
HPE BladeSystem CClass Virtual Connect 1G SFP RJ45 Transceiver	453154-B21
HPE BladeSystem c-Class 10Gb SFP+ SR Transceiver	455883-B21
HPE BladeSystem c-Class 10Gb SFP+ LR Transceiver	455886-B21
HPE 25Gb SFP28 SR 100m Transceiver	845398-B21
HPE 100Gb QSFP28 MPO SR4 100m Transceiver	845966-B21

Additional Options

Notes: Please see the QuickSpecs for Technical Specifications and additional information:
https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=c04168349

HPE XL2xxn Gen10 Plus 36-pin Serial/USB/VGA Cable	P24887-B21

HPE Tape Backup

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

HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A
HPE StoreEver MSL6480 Scalable Base Module	QU625A
HPE StoreEver MSL2024 0-drive Tape Library	AK379A
HPE StoreEver MSL LTO-7 Ultrium 15000 SAS Drive Upgrade Kit	N7P37A
HPE StoreEver MSL LTO-7 Ultrium 15000 FC Drive Upgrade Kit	N7P36A

Bulk Packaging

HPE Apollo 2000 Gen10 Plus 1U/2U Server Bulk Package	P41879-B21

Technical Specifications

HPE Apollo n2600/n2800 Gen10 Plus Chassis		
Dimensions	**Height**	3.44 in (8.75 cm)
	Width	17.32 in (44 cm)
	Depth	36.38 in (92.4cm)
Shipping Dimensions	**Height**	12.5 in (31.75 cm)
	Width	23.63 in (60.02 cm)
	Depth	39.37 in (100.01 cm)
Chassis Weight	**Empty (no drives, power supplies, RCM, server nodes and server blanks)**	29.03 lbs. (13.7 kg)
Max Enclosure Weight	**Approximate – 24 SFF drive configuration**	103.02 lbs. (46.73 kg)

HPE Proliant XL220n/XL225n Gen10 Plus Server Node		
Server Dimensions (H x W x D)	1.63 x 6.94 x 24.28 in (4.13 x 17.615 x 61.663 cm)	
Weight (approximate)	Minimum	10.16 lbs. (4.61 kg)
Weight (approximate)	Maximum	11.63 lbs. (5.27 kg)

HPE Proliant XL290n Gen10 Plus Server Node		
Server Dimensions (H x W x D)	3.27 x 6.94 x 24.42 in (8.3 x 17.615 x 62.035 cm)	
Weight (approximate)	Minimum	11.06 lbs. (5.26 kg)
Weight (approximate)	Maximum	19.62 lbs. (8.9 kg)

Apollo 2000 Gen10 Plus System with Direct Liquid Cooling		
CDU	Weight (filled)	137 lbs. (62.14 kg)
Manifold	Weight (filled)	35 lbs. (15.88 kg)
Chassis (filled)	Weight (filled) - Approximate	103.02 lbs. (46.73 kg)
HPE Proliant XL225n Gen10 Plus		
System Inlet Temperature Standard Operating Support	10° to 35°C (50° to 95°F)	At sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed.

Technical Specifications

Extended Ambient Operating Support	10° to 5°C (50° to 41°F) and 35° to 40°C (95° to 104°F)	System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F). For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL:**http://www.hpe.com/servers/ashrae** For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL:**http://www.hpe.com/servers/ashrae** System performance may be reduced if operating in the extended ambient operating range or with a fan fault.
	-30° o 60°C (-22° to 140°F).	Maximum rate of change is 20°C/hr (36°F/hr).
Relative Humidity (non-condensing) Operating	8% to 90%	Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.
Non-operating	5 to 95%	Relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
Altitude Operating	3050 m (10,000 ft).	This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Non-operating	9144 m (30,000 ft).	Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Thermal limitations

For a full list of thermal limitations please see the HPE ProLiant XL225n Gen 10 Plus Server User Guide.
https://www.hpe.com/support/xl225ngen10plus-thermal)

TCO Certified

Environmental-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 (2012/19/EU) 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.

TCO Certified

TCO Certified The HPE ProLiant XL225n servers has been TCO Certified. All HPE TCO Certified products can be found on TCO Certified Product Finder. More information on TCO Certified can be downloaded here :
https://www.hpe.com/us/en/about/environment/eco-labels.html

Summary of Changes

Date	Version History	Action	Description of Change
28-Jul-2025	**Version 39**	Changed	Additional Options section was updated. Naming on two SKUs was updated: S2A69A and R8M41A.
		Removed	OBS SKUs were removed: Power Cords, AMD DLC Kit for Processor only – XL225n, AMD DLC Kit for Processor plus Memory – XL225n, AMD Processors – Factory Integrated Processor Kit for XL225n, Load Reduced DIMMs (LRDIMMs) – DDR4-3200 for AMD platform, Load Reduced DIMMs (LRDIMMs) – DDR4-3200 for Intel platform, InfiniBand Options, Enterprise – 12G SAS – SFF – Hard Disk Drives, Midline – 12G SAS – SFF – Hard Disk Drives, Midline – 6G SATA – SFF – Hard Disk Drives, Mixed Use – 12G SAS – SFF – Solid State Drives, Read Intensive – 12G SAS – SFF – Solid State Drives, Read Intensive – 6G SATA – SFF – Solid State Drives, Mixed Use /RI NVMe SED SSD's, Read Intensive - NVMe - SFF - Solid State Drives, Mixed Use - NVMe - SFF - Solid State Drives, HPE Integrated Light-Out (iLO) and USB and SD Options.
01-Jul-2024	**Version 38**	Changed	Additional Options section was updated.
03-Jun-2024	**Version 37**	Changed	Additional Options section was updated. Obsolete SKUs were removed
04-Mar-2024	**Version 36**	Changed	Additional Options section was updated. Obsolete SKUs were removed
05-Feb-2024	**Version 35**	Changed	Overview, Standard Features and Additional Options section was updated. Obsolete SKUs were removed
08-Jan-2024	**Version 34**	Changed	Additional Options section was updated. Obsolete SKUs were removed
18-Dec-2023	**Version 33**	Changed	HPE Services Rebranding Obsolete SKUs were removed
02-Oct-2023	**Version 32**	Changed	Standard Features and Additional options sections were updated. Obsolete SKUs were removed
05-Sep-2023	**Version 31**	Changed	Additional Options section was updated. Obsolete SKUs were removed
24-Jul-2023	**Version 30**	Changed	Standard Features section was updated.
06-Feb-2023	**Version 29**	Changed	QuickSpecs was updated.
05-Dec-2022	**Version 28**	Changed	Additional Options section was updated. Obsolete SKUs were removed
06-Sep-2022	**Version 27**	Changed	Standard Features Section was updated
05-Jul-2022	**Version 26**	Changed	Additional Options section was removed. Obsolete SKU was removed
20-Jun-2022	**Version 25**	Changed	Standard Features and Configuration Information sections were updated.
16-May-2022	**Version 24**	Changed	Additional Options section was updated. Obsolete SKUs were removed
21-Mar-2022	**Version 23**	Changed	Additional Options section was updated. Obsolete SKUs were removed
06-Dec-2021	**Version 22**	Changed	Additional Options section was updated. Obsolete SKU was removed
01-Nov-2021	**Version 21**	Changed	Update Software development tools Standard Features and Configuration Information sections were updated. Obsolete SKUs were removed.
04-Oct-2021	**Version 20**	Changed	Additional Options section was updated.
07-Sep-2021	**Version 19**	Changed	Obsolete SKU was removed Overview and Additional Options sections were updated.
02-Aug-2021	**Version 18**	Changed	Obsolete SKU was removed Overview and Additional Options sections were updated.

Summary of Changes

Date	Version History	Action	Description of Change
06-Jul-2021	**Version 17**	Changed	Overview and Additional Options sections were updated.
07-Jun-2021	**Version 16**	Changed	Overview, Standard Features and Additional Options sections were updated. Obsolete SKUs were removed
26-Apr-2021	**Version 15**	Changed	Overview, Standard Features and Additional Options sections were updated.
19-Apr-2021	**Version 14**	Changed	Additional Options section was removed. Obsolete SKU was removed
06-Apr-2021	**Version 13**	Changed	Overview, Standard Features and Additional Options sections were updated. Obsolete SKUs were removed
22-Mar-2021	**Version 12**	Changed	Configuration Information section was updated. Obsolete SKUs were removed
01-Feb-2021	**Version 11**	Changed	Overview and Additional Options sections were updated.
07-Dec-2020	**Version 10**	Changed	Configuration Information and Additional Options sections were updated Obsolete SKUs were removed.
02-Nov-2020	**Version 9**	Changed	Standard Features and Additional Options sections were updated. Obsolete SKUs were removed
05-Oct-2020	**Version 8**	Changed	Overview, Standard Features and Additional Options sections were updated
08-Sep-2020	**Version 7**	Changed	Overview, Standard Features, Configuration Information and Additional Options sections were updated Obsolete SKUs were removed.
10-Aug-2020	**Version 6**	Changed	Additional Options section was updated
03-Aug-2020	**Version 5**	Changed	Overview, Standard Features, Configuration Information and Technical Specifications sections were updated
13-Jul-2020	**Version 4**	Changed	Standard Features, Configuration Information and Technical Specifications sections were updated
29-Jun-2020	**Version 3**	Changed	Overview, Standard Features, Configuration Information and Technical Specifications sections were updated
04-May-2020	**Version 2**	Changed	Overview, Standard Features, Configuration Information and Technical Specifications sections were updated
06-Apr-2020	**Version 1**	New	New QuickSpecs

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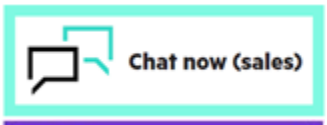

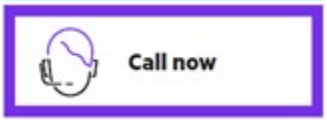

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