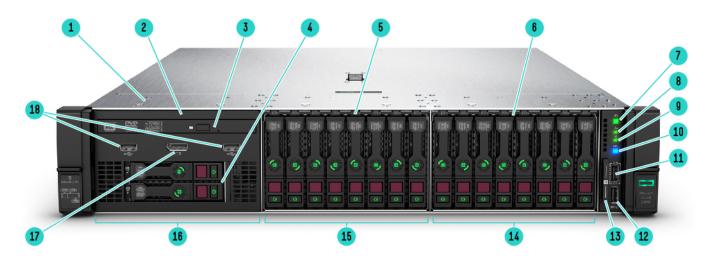
# QuickSpecs

## Overview

## HPE ProLiant DL380 Gen10 Server

Adaptable for diverse workloads and environments, the secure 2P 2U HPE ProLiant DL380 Gen10 delivers world-class performance with the right balance of expandability and scalability. Designed for supreme versatility and resiliency while being backed by a comprehensive warranty make it ideal for multiple environments from Containers to Cloud to Big Data. Standardize on the industry's most trusted compute platform.

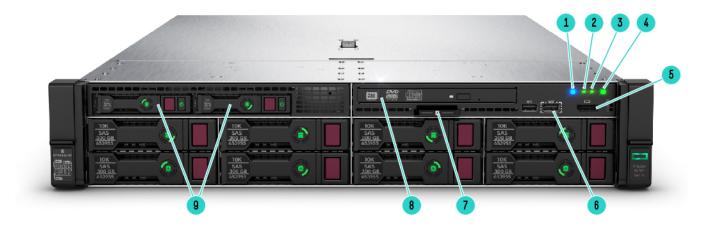


## Front View - SFF chassis with optional Universal Media bay with optical and 2 NVME plus 16 NVMe shown

- 1. Quick removal access panel
- 3. Optional Optical drive. Requires Universal Media bay
- 5. Drive Bay 2. NVMe shown (8 SFF, 6SFF+2NVMe or 8 NVMe PCIe SSD optional)
- 7. Power On/Standby button and system power LED button
- 9. NIC status
- 11. iLO Front Service Port
- 13. Serial label pull tag
- 15. Box 2
- 17. Optional front display port (Via Universal Media Bay)

- 2. Optional Universal Media bay. 2 USB 2.0 and Display port standard (8 SFF bay or 6 SFF+2NVMe or 8NVMe optional)
- 4. Optional 2 SFF HDD, requires optional Universal Media bay
- 6. 8 SFF Drive Cage Bay
- 8. Health LED
- 10. UID button
- 12. USB 3.0
- 14. Box 3
- 16. Box 1
- 18. Optional USB 2.0 (via Universal Media Bay)

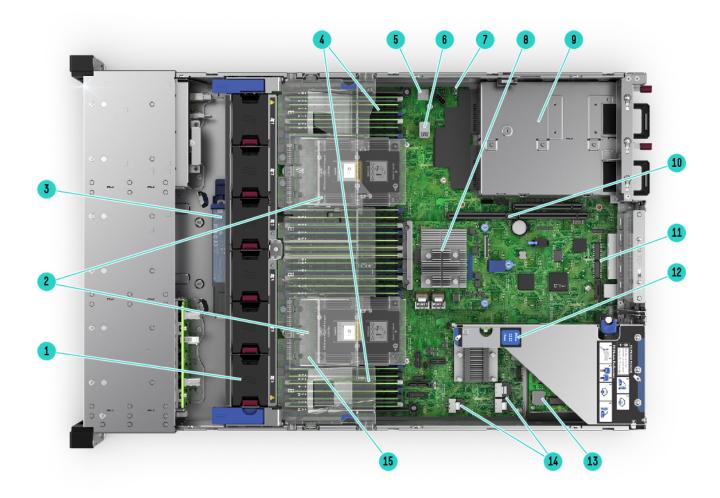




## Front View – 8LFF chassis with Universal media bay and optional 2SFF and optical drive shown

- 1. UID button
- 3. NIC status
- 5. Front display port
- 7. Serial label pull tag
- 9. Optional 2 SFF Drive bay, 2 NVMe shown

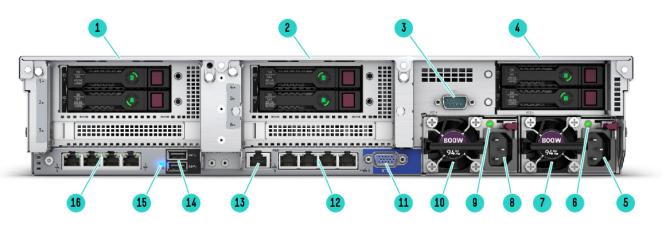
- 2. Health LED
- 4. Power On/Standby button and system power LED button
- 6. iLO Front Service Port
- 8. Optional optical drive shown (blank as standard)



## Internal View 8SFF chassis – with optional 2<sup>nd</sup> CPU, FlexLOM, Smart array shown

- 1. Fan cage shown with 6 standard Hot-plug fans (High Performance temperature fans optional)
- 3. Optional HPE Smart Storage Battery
- 5. MicroSD card slot (Optional Dual Micro-SD option)
- 7. Chassis intrusion detection connector
- 9. (Under) Hot Plug redundant HPE Flexible Slot Power supplies
- 11. Embedded 4x1Gbe NIC
- 13. Optional Flexible LOM slot
- 15. Clear air baffle

- 2. 2 Processors, heatsink showing
- 4. DDR4 DIMM slots. Shown fully populated in 24 slots (12 per processor)
- 6. Internal USB 3.0 connector
- 8. Optional HPE Smart Array (P408i-a shown)
- 10. Connection for second (optional) riser (Requires second CPU)
- 12. Primary PCIe riser, standard (Optional double wide GPU riser)
- 14. X4 SATA ports (1, 2 and 3)



#### Rear View – With optional FlexLOM, Rear drives and Serial port shown.

- 1. Primary Riser. PCI Slots (Slots 1-3 top to bottom, riser shipped standard, not shown), optional 2SFF rear drives
- 3. Optional serial port
- 5. Power supply Power connection
- 7. HPE Flexible Slot Power Supply bay 1 (800W shown)
- 9. Power supply Power LED
- 11. VGA connector
- 13. Dedicated iLO management port

- Secondary Riser. PCI Slots (Slots 4-6top to bottom, not shown, requires second riser card, and second processor). Showing optional 2 SFF rear
- 4. Tertiary Riser (Slots 7-8). Optional rear 2 SFF HDD (supported in 24 SFF or 12 LFF front end)
- 6. Power supply Power LED
- 8. Power supply Power connection
- 10. HPE Flexible Slot Power Supply bay 2 (800W shown)
- 12. Embedded 4 x 1GbE Network Adapter
- 14. USB connectors 3.0 (2)
- 16. Optional FlexibleLOM ports (Shown: 4 x 1GbE)

#### What's New:

15. Unit ID LED

- HPE Scalable Persistent Memory
- NVDIMMs available to ship
- High capacity 12TB LFF drives
- Large capacity 15.3TB SSDs
- HPE Specific IST Processor offering Gold 6143 and Platinum 8165 bins
- New AMD and NVIDIA Graphics card options
- 7.68TB capacity SATA RI SSDs
- 4TB capacity NVMe drives
- 4TB capacity PCIe accelerator cards

# **Platform Information**

Form Factor	2U rack
Chassis Types	<ul> <li>8 SFF with optional Universal Media Bay, and optional SFF or NVMe drive bay options</li> <li>24 SFF bay with additional 6SFF rear drive bay option to total 30 SFF drives</li> <li>8 LFF with Universal Media Bay</li> <li>12 LFF with optional 4 LFF mid-plane and optional 3LFF + 2 SFF rear drive bay to total 19 LFF drives +</li> <li>2 SFF drives</li> <li>NOTE: The 3 LFF rear drive box will consume space for the secondary and tertiary riser.</li> <li>NOTE: The 8 and 12 LFF chassis also supports the 2 SFF rear drive box which allows for the user to attach a secondary or tertiary riser.</li> <li>NOTE: The 8 NVMe drive option (826689-B21) can only be leveraged in the SFF chassis and replaces Box 1, 2 or 3, however there is a maximum of 20 NVMe drives supported with Partial population of Box 1.</li> <li>NOTE: The Premium cage (826690-B21, 6 SAS/SATA+2 NVMe) can only be leveraged in the SFF chassis and replaces Box 1, 2 or 3.</li> <li>NOTE: The Universal Media Bay (826708-B21) not available with the LFF chassis or the 24 SFF front end, and can only be populated in Box 1.</li> <li>NOTE: The 8 SFF can be upgraded with additional 8SFF drive box to total 16 or 24 SFF drives. For optimal upgrade Box 2 should be populated second, with Box 1 the last to be populated for a field upgrade to 24 SFF. For CTO builds requiring 24 SFF please use the 24 SFF chassis (868704-B21).</li> <li>NoTE: The 8 LFF chassis cannot be upgraded to 12 LFF front in the field; however the 4-LFF Mid plane (826686-B21) is supported, but will also require a performance fan kit (867810-B21).</li> <li>NOTE: The 8 LFF chassis ships with 6-standard fans.</li> <li>NOTE: All models come with the S100i Smart Array Controller with embedded software RAID support for 12 drives. The S100i uses 14 embedded SATA ports, but only 12 ports are accessible as 2 are leveraged to support the 2 M.2 options on the primary riser.</li> </ul>
System Fans	<ul> <li>Standard – fan types included</li> <li>NOTE: 1P models typically ship with 4 standard fans. The second processor option kit contains 2 additional fans. 1P Models have (4) (N+1 redundancy standard).</li> <li>NOTE: 2P models typically ship with 6 standard fans. 2P Models have (6) (N+1 redundancy standard).</li> <li>NOTE: The 12 LFF and 24 SFF chassis ship with 6 High performance fans as standard.</li> <li>NOTE: The 8LFF chassis ships with 6 standard fans as standard.</li> <li>NOTE: High performance fan kit is available to meet ambient temperature environments.</li> <li>NOTE: High performance fan kits are required for rear drives, Graphics (GPU) card or NVMe configurations.</li> </ul>

## **Standard Features**

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

**NOTE:** For more information regarding Intel Xeon processors, please see the following <u>http://www.intel.com/xeon</u>. **NOTE:** This table covers the public Intel offering only.

Intel Xeon Models	CPU Frequency	Cores	L3 Cache	Power	UPI	DDR4	Memory per socket
Platinum Processors							
Platinum 8180M Processor	2.5 GHz	28	38.50 MB	205W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Platinum 8180 Processor	2.5 GHz	28	38.50 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8176M Processor	2.1 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Platinum 8176 Processor	2.1 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8170M Processor	2.1 GHz	26	35.75 MB	165W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Platinum 8170 Processor	2.1 GHz	26	35.75 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8168 Processor	2.7 GHz	24	33.00 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8165 Processor	2.3 GHz	24	33.00 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8164 Processor	2.0 GHz	26	35.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8160M Processor	2.1 GHz	24	33.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Platinum 8160 Processor	2.1 GHz	24	33.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8158 Processor	3.0 GHz	12	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8156 Processor	3.6 GHz	4	16.50 MB	105W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8153 Processor	2.0 GHz	16	22.00 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold Processors							
Gold 6154 Processor	3.0 GHz	18	24.75 MB	200W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6152 Processor	2.1 GHz	22	30.25 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6150 Processor	2.7 GHz	18	24.75 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6148 Processor	2.4 GHz	20	27.50 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6146 Processor	3.2 GHz	12	24.75 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6144 Processor	3.5 GHz	8	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6143 Processor	2.8 GHz	16	22.00 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6142M Processor	2.6 GHz	16	22.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Gold 6142 Processor	2.6 GHz	16	22.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6140M Processor	2.3 GHz	18	24.75 MB	140W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Gold 6140 Processor	2.3 GHz	18	24.75 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6138 Processor	2.0 GHz	20	27.50 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6137 Processor	3.9 GHz	8	24.75 MB	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6136 Processor	3.0 GHz	12	24.75 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6134M Processor	3.2 GHz	8	24.75 MB	130W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Gold 6134 Processor	3.2 GHz	8	24.75 MB	130W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6132 Processor	2.6 GHz	14	19.25 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6130 Processor	2.1 GHz	16	22.00 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6128 Processor	3.4 GHz	6	19.25 MB	115W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6126 Processor	2.6 GHz	12	19.25 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB

Gold 5122 Processor	3.6 GHz	4	16.50 MB	105W	2 @ 10.4 GT/s	2666 MT/s	768GB
Gold 5120 Processor	2.2 GHz	14	19.25 MB	105W	2 @ 10.4 GT/s	2400 MT/s	768GB
Gold 5118 Processor	2.3 GHz	12	16.50 MB	105W	2 @ 10.4 GT/s	2400 MT/s	768GB
Gold 5115 Processor	2.4 GHz	10	13.75 MB	85W	2 @ 10.4 GT/s	2400 MT/s	768GB
Silver Processors							
Silver 4116 Processor	2.1 GHz	12	16.50 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4114 Processor	2.2 GHz	10	13.75 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4112 Processor	2.6 GHz	4	8.25 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4110 Processor	2.1 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4108 Processor	1.8 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Bronze Processors							
Bronze 3106 Processor	1.7 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2133 MT/s	768GB
Bronze 3104 Processor	1.7 GHz	6	8.25 MB	85W	2 @ 9.6 GT/s	2133 MT/s	768GB

NOTE: Platinum – 8100 Series – 2 Socket supports 2UPI, supports 6-Channel DDR4 @ 2666 MT/s providing up to 768GB memory capacity (1.5 TB on select processor skus). Intel Turbo Boost Technology, Intel Hyper-Threading Technology supported. Intel AVX-512 (2x 512-bit FMA), 48 lanes PCIe 3.0, advanced RAS.

NOTE: Gold – 5100, 6100 Series - 2 Socket supports 2UPI, supports 6-Channel DDR4 @ 2400 MHz (SKU 5122=supports 2666) providing up to 768GB memory capacity (1.5 TB on select skus). Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512(1x 512-bit FMA) (SKU 5122 supports 2x 512 bit FMA), 48 lanes PCIe 3.0, advanced RAS supported.

NOTE: Silver – 4100 Series - 2 Socket supports 2UPI @ 9.6 GT/s, 6-Channel DDR4 @ 2400 MHz providing up to 768 GB memory capacity. Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512(1x 512-bit FMA), 48 lanes PCIe 3.0, standard RAS supported.

NOTE: Bronze – 3100 Series - 2 Socket supports 2UPI @ 9.6 GT/s, supports 6-Channel DDR4 @ 2133 MHz providing up to 768GB memory capacity. Intel AVX-512(1x 512-bit FMA), 48 lanes PCIe 3.0, standard RAS supported.

## Chipset

Intel C621 Chipset

**NOTE:** For more information regarding Intel<sup>®</sup> chipsets, please see the following URL: http://www.intel.com/products/server/chipsets/

## **On System Management Chipset**

HPE iLO 5 ASIC

NOTE: Read and learn more in the iLO QuickSpecs.

#### Memory

One of the following depending on model

٦	ype:
	ype.

Туре:		HPE DDR4 SmartMemory, Registered (RDIMM), Load Reduced (LRDIMM)
DIMM Slots Available	24	12 DIMM slots per processor, 6 channels per processor, 2 DIMMs per channel
Maximum capacity (LRDIMM)	3.0 TB	24 x 128 GB LRDIMM @ 2666 MHz
Maximum capacity (RDIMM)	768 GB	24 x 32 GB RDIMM @ 2666 MHz
Maximum capacity (NVDIMM)	192 GB	12 x 16 GB NVDIMM @ 2666 MHz
Maximum Capacity (HPE Scalable Persistent Memory)	512 GB	Leveraging either 24 x 16 GB RDIMM or 12 x 32GB RDIMM

NOTE: NVDIMMs can be mixed with RDIMMs only.

NOTE: Maximum memory per socket is dependent on processor selection. Processors supporting 1.5 TB per CPU is indicated by the "M" in the processor model names (i.e. 8160M).

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

#### **Memory Protection**

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

#### **Expansion Slots**

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

**NOTE:** Bus Width Indicates the number of physical electrical lanes running to the connector. **NOTE:** This riser also supports dual m.2 cards.

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

## **Storage Controllers**

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

One of the following depending on model

#### Software RAID

## HPE Smart Array S100i SR Gen10 SW RAID

**NOTE:** HPE Smart Array S100i SR Gen10 SW RAID will operate in UEFI mode only. For legacy support an additional controller will be needed, and for CTO orders please also select the Legacy mode settings part, 758959-B22. **NOTE:** HPE Smart Array S100i SR Gen10 SW RAID is off by default and must be enabled.

**NOTE:** The S100i uses 14 embedded SATA ports, but only 12 ports are accessible as 2 are leveraged to support the 2 M.2 options on the primary riser.

**NOTE:** The S100i supports windows only

**NOTE:** For Linux users, HPE offers a solution that uses in-distro open-source software to create a two-disk RAID 1 boot volume. For more information visit: **https://downloads.linux.hpe.com/SDR/project/lsrrb/** 

Essential RAID Controller	HPE Smart Array E208i-a SR Gen10 Controller
	HPE Smart Array E208i-p SR Gen10 Controller
	HPE Smart Array E208e-p SR Gen10 Controller
Performance RAID	HPE Smart Array P408i-a SR Gen10 Controller
Controller	HPE Smart Array P408i-p SR Gen10 Controller
	HPE Smart Array P408e-p SR Gen10 Controller
	HPE Smart Array P816i-a SR Gen10 Controller

NOTE: Performance RAID Controllers require the HPE Smart Storage Battery (P01366-B21) which is sold separately.

#### **Internal Storage Devices**

One of the following de	pending on model	
Optical Drive	Ships standard in Performance Models	
	Optional: DVD-ROM, DVD-RW	
Hard Drives	None ship standard	

## **Maximum Internal Storage**

	CAPACITY	CONFIGURATION
Hot Plug SFF SAS	72.0 TB	24+6 x 2.4 TB* (with optional rear SFF drive cage)
Hot Plug SFF SATA	60.0 TB	24+6 x 7.68 TB (with optional SFF drive cage)
Hot Plug LFF SAS	231.84 TB	12+4+3 x 12 TB + 2 x 3.84 TB (with optional mid –tray and rear LFF drive cage, plus 2 SFF SSD rear)
Hot Plug LFF SATA	197.68 TB	12+4+3 x 10 TB + 2 x 3.84 TB (with optional mid –tray and rear LFF drive cage, plus 2 SFF SSD rear)
Hot Plug SFF SAS SSD	459 TB	24+6 x 15.2 TB (with optional rear SFF drive cage)
Hot Plug LFF SATA SSD	44.16 TB	12+4+3 x 1.92 TB + 2 x 3.84 TB (with optional mid –tray and rear LFF drive cage, plus 2 SFF SSD rear)
Hot Plug SFF NVMe PCIe SSD	80 TB NVMe	20 x4 TB NVMe
<b>NOTE:</b> 2x m.2 drives are supporte <b>NOTE:</b> uFF drives are also support		

## **Power Supply**

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit

NOTE: Available in 94% efficiency.

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

NOTE: Available in 94% and 96% efficiency.

NOTE: Also available in -48VDC and 227VAC/380VDC power inputs.

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

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

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

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

To review the power requirements for your selected system, please use the HPE Power Advisor Tool.

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

## Interfaces

Serial	Optional, rear
Display Port	1 (SFF 1 front, optional via Universal Media Bay, 826708-B21), 8 LFF chassis standard
FlexibleLOM Network Ports	$4  ext{ x 1}$ Gb ports shipping standard with optional FlexibleLOM or stand up card
HPE iLO Remote	1 Gb Dedicated

Management Network PortFront iLO Service Port1 standard (Not available on 12 LFF chassis or when SID is ordered, note iLO dongle<br/>required, 880123-B21)Micro SD Slot1 Micro SD**NOTE:** The Micro SD slot is not a hot-pluggable device. Customers should not attempt to plug an SD card into the SD slot<br/>while the server is powered.USB 3.0Up to 5 total: 1 front, 2 rear, 2 internal (secure), 2 optional USB 2.0 front via Universal Media<br/>Bay, or standard on 8LFF chassisSID (Systems Insight Display)Optional

NOTE: Not shipping as standard. Available as a CTO option or as a field upgrade (826703-B21).

## Operating Systems and Virtualization Software Support for ProLiant Servers

Windows Server 2012 R2 (Most Recent Version)

Windows Server 2016 (Most Recent Version)

VMware ESXi 6.0 U3

VMware ESXi 6.5 and U1 upon release

#### **CentOS**

#### Red Hat Enterprise Linux (RHEL) 6.9 and 7.3

#### SUSE Linux Enterprise Server (SLES) 11 SP4 and 12 SP2

### <u>Canonical Ubuntu</u>

## <u>ClearOS</u>

HPE and ClearCenter will help you lower the cost of building on-premise solutions without sacrificing security and ease of use. HPE ProLiant servers with ClearOS give you a simple, secure, and affordable operating system with an intuitive web based graphical user interface that provides a cloud-like experience on- premise, and an Application Marketplace with over 100 apps and growing. Whether you're starting out or scaling, you decide what applications you need and pay as you grow.

NOTE: ClearOS allows you to build a fully functional server that is just right for you at no upfront cost.

#### For more information on ClearOS, please visit http://www.hpe.com/servers/clearos.

**NOTE:** For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server.

## http://www.hpe.com/info/ossupport

#### **Industry Standard Compliance**

ACPI 6.1 Compliant PCIe 3.0 Compliant WOL Support Microsoft® Logo certifications PXE Support VGA/Display Port **NOTE:** This support is on the optional Universal Media Bay. USB 3.0 Compliant (internal) USB 2.0 Compliant (external ports via SUV) **NOTE:** This support is on the optional Universal Media Bay. Energy Star SMBIOS 3.1 UEFI 2.6 Redfish API IPMI 2.0

Secure Digital 2.0 Advanced Encryption Standard (AES) Triple Data Encrytion Standard (3DES) SNMP v3 TLS 1.2 DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP) Active Directory v1.0 ASHRAE A3/A4 **NOTE:** For additional technical thermal details regarding ambient temperatures, humidity and features support please visit: http://www.hpe.com/servers/ashrae. UEFI (Unified Extensible Firmware Interface Forum) **NOTE:** UEFI is the default for the DL380 Gen10. Legacy mode can be selected in the field or as a CTO option

(758959-B22).

#### Graphics

Integrated Video Standard

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

HPE iLO 5 on system management memory

- 32 MB Flash
- 4 Gbit DDR 3 with ECC protection

#### HPE Server UEFI/Legacy ROM

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

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

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

- Secure Boot and Secure Start enable for enhanced security
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.0 Stack
- Embedded UEFI Shell
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- PXE boot support for IPv6 networks
- Workload Profiles for simple performance optimization

UEFI Boot Mode only:

- TPM 2.0 Support
- NVMe Boot Support
- Platform Trust Technology (PTT) can be enabled.
- iSCSI Software Initiator Support.
- HTTP/HTTPs Boot support as a PXE alternative.
- Boot support for option cards that only support a UEFI option ROM

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

Standard Features	
Embedded Management HPE Integrated Lights-Out (HPE iLO)	Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at <b>http://www.hpe.com/info/ilo</b> .
UEFI	Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at <b>http://www.hpe.com/servers/uefi</b> .
Intelligent Provisioning	Hassle free server and OS provisioning for 1 or more servers with Intelligent Provisioning. Learn more at <b>http://www.hpe.com/servers/intelligentprovisioning</b> .
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 <b>http://www.hpe.com/info/restfulapi</b> .
Server Utilities	
Active Health System	The HPE Active Health System (AHS) is an essential component of the iLO management portfolio that provides continuous, proactive health monitoring of HPE servers. Learn more at <b>http://www.hpe.com/servers/ahs</b> .
Active Health System Viewer	Use the Active Health System Viewer, a web-based portal, to easily read AHS logs and speed problem resolution with HPE self-repair recommendations, to learn more visit: <b>http://www.hpe.com/servers/ahsv</b> .
Smart Update	Keep your servers up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP). Learn more at <b>http://www.hpe.com/info/smartupdate</b> .
iLO Amplifier Pack	Designed for large enterprise and service provider environments with hundreds of HPE servers, the iLO Amplifier Pack is a free, downloadable open virtual application (OVA) that delivers the power to discover, inventory and update Gen8, Gen9 and Gen10 HPE servers at unmatched speed and scale. Use with an iLO Advanced License to unlock full capabilities. Learn more at <u>http://www.hpe.com/servers/iLOamplifierpack</u> .
HPE iLO Mobile Application	Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: <b>http://www.hpe.com/info/ilo/mobileapp</b> .
<b>RESTful Interface Tool</b>	RESTful Interface tool (iLOREST) is a single scripting tool to provision using iLO RESTful API to discover and deploy servers at scale. Learn more at <b>http://www.hpe.com/info/resttool</b> .
Scripting Tools	Provision one to many servers using your own scripts to discover and deploy with Scripting Tool (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at http://www.hpe.com/servers/stk or http://www.hpe.com/servers/powershell.
HPE OneView Standard	HPE OneView Standard can be used for inventory, health monitoring, alerting, and reporting without additional fees. It can monitor multiple HPE server generations. The user interface is similar to the HPE OneView Advanced version, but the software-defined functionality is not available. Learn more at <b>http://www.hpe.com/info/oneview</b> .

HPE Systems Insight	Ideal for environments already using HPE SIM, it allows you to monitor the health of your HPE
Manager (HPE SIM)	ProLiant Servers and HPE Integrity Servers. Also provides you with basic support for non-HPE
	servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless
	firmware updates. Learn more at <b>http://www.hpe.com/info/hpesim</b> .

## Security

UEFI Secure Boot and Secure Start support Immutable Silicon Root of Trust FIPS 140-2 validation (iLO 5 certification in progress) Common Criteria certification (iLO 5 certification in progress) Configurable for PCI DSS compliance Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser Support for Commercial National Security Algorithms (CNSA) Tamper-free updates – components digitally signed and verified Secure Recovery – recover critical firmware to known good state on detection of compromised firmware Ability to rollback firmware Secure erase of NAND/User data TPM (Trusted Platform Module) 1.2 option TPM (Trusted Platform Module) 2.0 option Bezel Locking Kit option Chassis Intrusion detection option

#### Warranty

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

**NOTE:** Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at:

http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/

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

#### Accelerator and GPGPU Information

Hewlett Packard Enterprise supports various accelerators on select HPE Proliant servers to support different workloads. The accelerators enable seamless integration of GPU computing with HPE ProLiant servers for high-performance computing, large data center graphics, deep learning and virtual desktop deployments. These accelerators deliver all of the standard benefits of GPU computing while enabling maximum reliability and tight integration with system monitoring and management tools such as HPE Insight Cluster Management Utility.

#### **Rack and Power Infrastructure**

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

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

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

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

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

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

## One Config Simple (SCE)

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

https://h22174.www2.hpe.com/SimplifiedConfig/Welcome#

## Service and Support

## **HPE Pointnext - Service and Support**

#### Protect your business beyond warranty with HPE Support Services

HPE Pointnext provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation. From the onset of your transformation journey, Advisory and Transformational Services focus on designing the transformation and creating a solution roadmap. Professional Services specializes in creative configurations with flawless and on-time implementation, and on-budget execution. Finally, operational services provides innovative new approaches like Flexible Capacity and Datacenter Care, to keep your business at peak performance. HPE is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make the complex simple.

#### Connect your devices:

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

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

## Other related Services

#### **HPE Server Hardware Installation**

Provides for the basic hardware installation of HPE branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.

## https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf

#### **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.

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

#### **HPE Education Services**

Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment. <u>http://www.hpe.com/ww/learn</u>

#### HPE Support Center

The HPE Support Center is a personalized online support portal with access to information, tools and experts to support HPE business products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers. Learn more <u>http://www.hpe.com/support/hpesc</u>

HPE's Support Center Mobile App\* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE warranty, HPE Support Service or HPE contractual support agreement.

\*HPE Support Center Mobile App is subject to local availability. For more information: <u>http://www.hpe.com/services</u>

# **Pre-configured Models**

1. Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.

2. Hewlett Packard Enterprise does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.

3. If you desire a custom configuration please see "Configuration Information - Factory Integrated Models" section of this QuickSpecs.

	Entry Models			
[SKU Number]	868709-B21	826564-B21		
Model Name	Entry LFF	Entry SFF		
Processor	3106 (8-Core, 1.7 GHz, 85W)	3106 (8-Core, 1.7 GHz, 85W)		
Number of	One processor	One processor		
Processors				
Memory	16 GB RDIMM DR 2600 MT/s (1x 16 GB) <b>NOTE:</b> running at 2133 MT/s due to Processor limitation.	16 GB RDIMM DR 2600 MT/s (1x 16 GB) <b>NOTE:</b> running at 2133 MT/s due to Processor limitation.		
Network Controller	HPE 1Gb Ethernet 4-Port 331i Adapter plus optional HPE FlexibleLOM or stand up card	HPE 1Gb Ethernet 4-Port 331i Adapter plus optional HPE FlexibleLOM or stand up card		
Storage Controller	Embedded 14-Port S100i <b>NOTE:</b> SATA only, 12-PORT accessible.	Embedded 14-Port S100i <b>NOTE:</b> SATA only, 12-PORT accessible.		
Hard Drive	None ship as standard	None ship as standard		
Internal Storage	8 LFF chassis, with 2 SFF bays optional(upgradeable to 15LFF with 4LFF mid and 3LFF rear + 2SFF rear)	8 SFF Chassis (upgradeable to 24 SFF front + 6SFF rear)		
Optical Drive Bay	Optional via Universal Media Bay (included)	Optional Universal Media Bay (826708-B21)		
Optical Drive	None ship as standard	None ship as standard		
PCI-Express Slots	3-slots (x8, x16, x8) as standard	3-slots (x8, x16, x8) as standard		
Power Supply	1x 500W HPE FlexSlot Power Supply	1x 500W HPE FlexSlot Power Supply		
Fans	6-standard fans	4-standard fans		
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLC Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (require licenses)			
Energy Star	2.1 certified			
Form Factor	2U Rack, Easy Inst	all rails without CMA		
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.			

# **Pre-configured Models**

	Base Models			
[SKU Number]	868710-B21	826565-B21		
Model Name	Base LFF	Base SFF		
Processor	4110 (8-Core, 2.1 GHz, 85W)	4114 (10-Core, 2.2 GHz, 85W)		
Number of Processors	One processor	One processor		
Memory	32 GB RDIMM DR 2600 MT/s (2x 16 GB) NOTE: running at 2400 MT/s due to Processor limitation.	32 GB RDIMM DR 2600 MT/s (2x 16 GB) NOTE: running at 2400 MT/s due to Processor limitation.		
Network Controller	HPE 1Gb Ethernet 4-Port 331i Adapter plus optional HPE FlexibleLOM or stand up card	HPE 1Gb Ethernet 4-Port 331i Adapter plus optional HPE FlexibleLOM or stand up card		
Storage Controller	P816i-a NOTE: 16-Port modular Smart Array. NOTE: Smart Storage battery included.	P408i-a <b>NOTE:</b> 8-Port modular Smart Array. <b>NOTE:</b> Smart Storage battery included.		
Hard Drive	None ship as standard	None ship as standard		
Internal Storage	12 LFF chassis (upgradeable to 19LFF with 4LFF mid and 3LFF rear + 2SFF)	8 SFF Chassis (upgradeable to 24 SFF front + 6SFF rear)		
Optical Drive Bay	Optional via Universal Media Bay (included)	Optional Universal Media Bay (826708-B21)		
Optical Drive	None ship as standard	None ship as standard		
PCI-Express Slots	3-slots (x8, x16, x8) as standard	3-slots (x8, x16, x8) as standard		
Power Supply	2x 800W HPE FlexSlot power supply	1x 500W HPE FlexSlot power supply		
Fans	6-High Performance fans	4-standard fans		
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (require licenses)			
Energy Star	2.1 certified			
Form Factor	2U Rack, Easy in	stall rails with CMA		
Warranty	3-year parts, 3-year labor, 3-year onsite	e support with next business day response		

# **Pre-configured Models**

	Performance Models	High Performance Models			
[SKU Number]	826566-B21	826567-B21	879938-B21		
Model Name	Performance	High-Perferformance	High-Perferformance		
Processor	5118 (12-Core, 2.3 GHz, 105W)	6130 (16-Core, 2.1 GHz, 120W)	6130 (16-Core, 2.1 GHz, 120W)		
Number of Processors	Two processors	Two processors	Two processors		
Memory	64 GB RDIMM DR 2666 MT/s (2x 32 GB) NOTE: running at 2400 MT/s due to processor limitation.	64 GB RDIMM DR 2666 MT/s (2x 32 GB)	64 GB RDIMM DR 2666 MT/s (2x 32 GB)		
Network Controller	HPE 1Gb Ethernet 4-Port 331i Adapter plus HPE Ethernet 10/25 Gb 2-port 640FLR-SFP28 Adapter (817749-B21)	HPE 1Gb Ethernet 4-Port 331i Adapter plus HPE Ethernet 10/25 Gb 2-port 640FLR-SFP28 Adapter (817749-B21)	HPE 1Gb Ethernet 4-Port 331i Adapter plus HPE Ethernet 25 Gb 2-port 631FLR Adapter (817709-B21)		
Storage Controller	P408i-a NOTE: 8-Port modular Smart Array. NOTE: Smart Storage battery included.	P408i-a NOTE: 8-Port modular Smart Array. NOTE: Smart Storage battery included.	P408i-a NOTE: 8-Port modular Smart Array. NOTE: Smart Storage battery included.		
Hard Drive	None ship as standard	None ship as standard	None ship as standard		
Internal Storage	8 SFF Chassis (upgradeable to 24 SFF front + 6SFF rear)	8 SFF Chassis (upgradeable to 24 SFF front + 6SFF rear)	8 SFF Chassis (upgradeable to 24 SFF front + 6SFF rear)		
Optical Drive Bay	Universal Media Bay (826708- B21)	Universal Media Bay (826708-B21)	Universal Media Bay (826708-B21)		
Optical Drive	DVD-RW	DVD-RW	DVD-RW		
PCI-Express Slots	6 total: 3-slots (x8, x16, x8 with m.2) as standard, plus 3 PCIe (x8, x16, x8)	6 total: 3-slots (x8, x16, x8 with m.2) as standard, plus 3 PCIe (x8, x16, x8)	6 total: 3-slots (x8, x16, x8 with m.2) as standard, plus 3 PCIe (x8, x16, x8)		
Power Supply	2x 800W HPE FlexSlot power supply	2x 800W HPE FlexSlot power supply	2x 800W HPE FlexSlot power supply		
Fans	6-standard fans				
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (require licenses)				
Energy Star	2.1 certified				
Form Factor	2U Rack, Easy Install rails with CMA				
Warranty		3-3-3			

# Smart Buy Models

[SKU Number]	875760-S01	875759-S01	875766-S01	875761-S01	
Model Name	HPE ProLiant DL380 Gen10 4110 85W 1P	HPE ProLiant DL380 Gen10 4112 85W 1P	HPE ProLiant DL380 Gen10 4114 85W 1P	HPE ProLiant DL380 Gen10 5115 85W 1P	
	16G-2R P408i-a 8SFF	16G-2R P408i-a 8LFF	16G-2R P408i-a 24SFF	16G-2R P408i-a 8SFF	
	1x500W US Svr/S-Buy	1x500W US Svr/S-Buy	2x800W US Svr/S-Buy	1x500W US Svr/S-Buy	
Chassis Type	8SFF	8LFF	24SFF	8SFF	
Processor	4110 (8-Core, 2.1 GHz, 85W)	4112 (4-Core, 2.6 GHz, 85W)	4114 (10-Core, 2.2 GHz, 85W)	5115 (10-Core, 2.4 GHz, 85W)	
Number of Processors	One processor With standard heatsink	One processor With standard heatsink	One processor With standard heatsink	One processor With standard heatsink	
Memory	16 GB (1x 16 GB RDIMM 2R 2666 MT/s) NOTE: runs at 2400	16 GB (1x 16 GB RDIMM 2R 2666 MT/s) <b>NOTE:</b> runs at 2400	16 GB (1x 16 GB RDIMM 2R 2666 MT/s) NOTE: runs at 2400 MT/s	16 GB (1x 16 GB RDIMM 2R 2666 MT/s) <b>NOTE:</b> runs at 2400	
	MT/s due to processor limitation.	MT/s due to processor limitation.	due to processor limitation.	MT/s due to processor limitation.	
Network Controller		Embeddeo	d 4-Port 1GbE		
Storage Controller	P408i-a/2GB + Smart Storage Battery	P408i-a/2GB + Smart Storage Battery	P408i-a/2GB + Smart Storage Battery + SAS Expander	P408i-a/2GB + Smart Storage Battery	
Hard Drive		None	included		
Optical Drive	None included	Optional via Universal Media Bay (included)	None included	None included	
PCIe Slots		3 PCle: 1 x1	.6 FH / 2 x8 FH		
Power Supply	1x 500W	1x 500W	2x 800W	1x 500W	
Fans	4-Standard	4-Standard	6-High Performance	4-Standard	
Management	HPE iLO5				
Rail Kit	SFF Easy Install w/o CMA				
Energy Star	Energy Star 2.1				
Form Factor	2U Rack				
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.			lay response.	
	NOTE: UEFI	is the standard default for	all Smart Buy models.		

# Smart Buy Models

			-	
[SKU Number]	875762-S01	875763-S01	875765-S01	875764-S01
Model Name	HPE ProLiant DL380 Gen10 5120 105W 1P 32G-2R P408i-a 8SFF 2x500W US Svr/S-Buy	HPE ProLiant DL380 Gen10 6126 125W 1P 32G-2R P408i-a 8SFF 2x500W US Svr/S-Buy	HPE ProLiant DL380 Gen10 6132 140W 2P 64G-2R P408i-a 8SFF 2x800W US Svr/S-Buy	HPE ProLiant DL380 Gen10 6148 150W 2P 64G-2R P408i-a 8SFF 2x800W US Svr/S-Buy
Chassis Type	8SFF	8SFF	8SFF	8SFF
Processor	5120 (14-Core, 2.2 GHz, 105W)	6126 (12-Core, 2.6 GHz, 125W)	6132 (14-Core, 2.6 GHz, 140W)	6148 (20-Core, 2.4 GHz, 150W)
Number of Processors	One processor With standard heatsink	One processor With standard heatsink	Two processors With high-performance heatsinks	Two processors With high-performance heatsinks
Memory	32 GB (2x 16 GB RDIMM 2R 2666 MT/s) <b>NOTE:</b> runs at 2666 MT/s	32 GB (2x 16 GB RDIMM 2R 2666 MT/s) <b>NOTE:</b> runs at 2666 MT/s	64 GB (4x 16 GB RDIMM 2R 2666 MT/s) NOTE: runs at 2666 MT/s	64 GB (4x 16 GB RDIMM 2R 2666 MT/s) <b>NOTE:</b> runs at 2666 MT/s
Network Controller	Embedded 4-Port 1GbE			
Storage Controller	P408i-a/2GB + Smart Storage Battery			
Hard Drive		None	included	
Optical Drive		None	included	
PCIe Slots	3 PCle: 1 x16 FH / 2 x8 FH		6 PCle: 2 x16 F	FH / 4 x8 FH
Power Supply	2x 5	500W	2x 80	OW
Fans	4 - St.	andard	6 - Star	ndard
Management		HP	E iLO5	
Rail Kit	SFF Easy Install w/o CMA			
Energy Star	Energy Star 2.1			
Form Factor	2U Rack			
Warranty	3-year parts	s, 3-year labor, 3-year onsite	e support with next business c	lay response.
	NOTE: UEFI	is the standard default for	all Smart Buy models.	

This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

1. Factory Integrated Models must start with a CTO Server.

2. FIO indicates that this option is only available as a factory installable option.

3. All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.

4. Some options may not be integrated at the factory. Contact your local sales representative for additional information.

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

CTO Server	HPE ProLiant DL380 Gen10 8 LFF CTO Server	HPE ProLiant DL380 Gen10 12 LFF CTO	HPE ProLiant DL380 Gen10 8 SFF CTO Server	HPE ProLiant DL380 Gen10 24 SFF CTO
		Server		Server
SKU Number	868706-B21	868705-B21	868703-B21	868704-B21
TAA SKU	875784-B21	875785-B21	875782-B21	875783-B21
Processor	Not included as standard	Not included as standard	Not included as standard	Not included as standard
DIMM Slots	24-DIMM slots	24-DIMM slots	24-DIMM slots	24-DIMM slots
Storage Controller	Embedded SW RAID with 14 SATA ports (12-ports accessible), choice of HPE modular Smart Array and PCIe plug-in controller			
PCIe	Three standard in primary riser (with dual M.2 support)			ort)
Drive Cage - included	8 LFF	12 LFF	8 SFF	24 SFF
Network Controller	HPE 1Gb Ethernet 4-Port 331i Adapter plus optional HPE FlexibleLOM or stand up card			or stand up card
Fans	6-Standard	6-High Performance	4-Standard	6-Performance
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advances and OneView (optional)			
USB	1x 3.0 standard plus iLo front service port	None as standard	1x 3.0 standard plus iLo front service port	1x 3.0 standard plus iLo front service port

**NOTE:** HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country. TAA compliance is only provided when HPE options are included as part of factory integrated orders (CTO). **NOTE:** The HPE ProLiant DL380 Gen10 12 LFF CTO Server ships with the cable required for the P816i-a installation. **NOTE:** All CTO servers are Energy Star 2.1 compliant.

CTO Server	8 SFF CTO Chassis	24 SFF CTO Chassis	8 LFF CTO Chassis	12 LFF CTO Chassis
Included Drive Cage	8 SFF SAS/SATA	3x 8 SFF SAS/SATA	8 LFF + UMB	12 LFF Chassis
Additional drive cages				
Universal Media Bay	1 Optional	Not available	1 Included	Not available
ODD	1 Optional with UMB	Not available	1 Optional	Not available
8 SFF Drive Cage	Up to 2 Optional	Not available	Not available	Not available
8 NVME/SAS Bay	Up to 3 Optional	Not available	Not available	Not available
8 NVME Cage	Up to 3 Optional	Not available	Not available	Not available
2 SFF SAS/SATA (Front)	1 Optional with UMB	Not available	1 Optional	Not available
2 SFF SAS/SATA (Rear)	1 Optional	1 Optional	1 Optional	1 Optional
2 NVMe (Front)	1 Optional with UMB	Not available	1 Optional	Not available

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## **Configuration Information - Factory Integrated Models**

4 LFF Mid-plane	Not available	Not available	1 Optional	1 Optional
3 LFF Rear	Not available	Not available	1 Optional	1 Optional

**NOTE:** This aplies to CTO configurations, field upgrades may differ depending field configuration. **NOTE:** 3x 8 NVMe option on SFF will only allow for partial population of Box1 to max 20 NVMe.

## Step 2a: Choose Required Options - Processors

## (only one of the following unless otherwise noted)

Please select one -L21 processor required below.

For second processor, please select the same processor model with –B21 from Core Options – HPE Processors section. For example: first processor, select 874752-L21 then for second processor, select 874752-B21.

**NOTE:** 8SFF CTO 1P models ship with 4 standard fans. The second processor option kit contains 2 additional fans. 12 LFF and 24 SFF CTO Servers ship with 6 High performance fans included; 8LFF CTO Servers ship with 6 Standard fans included. High performance fan kit is available to meet ambient temperature environments are are required for rear drives or NVMe configurations.

**NOTE:** Maximum memory capacity per processor is dependent on processor models. All processors support up to 768 GB max memory per processor except "M" model processors will support up to 1.5 TB max memory per processor. **NOTE:** Mixing of 2 different processor models are NOT allowed.

**NOTE:** DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

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

Processor Option Kits	Required Processor
HPE DL380 Gen10 Intel® Xeon-Platinum 8180M (2.5GHz/28-core/205W) FIO Processor Kit	874752-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8180 (2.5GHz/28-core/205W) FIO Processor Kit	871619-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8176M (2.1GHz/28-core/165W) FIO Processor Kit	874754-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8176 (2.1GHz/28-core/165W) FIO Processor Kit	871618-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8170M (2.1GHz/26-core/165W) FIO Processor Kit	874756-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8170 (2.1GHz/26-core/165W) FIO Processor Kit	871617-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8168 (2.7GHz/24-core/205W) FIO Processor Kit	869089-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8165 (2.3GHz/24-core/205W) FIO Processor Kit	879423-L21
NOTE: Ships with Performance Heatsink.	
NOTE: Supports "Core boosting" Learn more <u>http://www.hpe.com/info/ist</u> .	
<b>NOTE:</b> To enable this feature an iLO Advanced, or iLO Advanced Premium Security edition License are required.	
HPE DL380 Gen10 Intel® Xeon-Platinumn 8164 (2.0GHz/26-core/145W) FIO Processor Kit	869088-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8160M (2.1GHz/24-core/145W) FIO Processor Kit	874758-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8160 (2.1GHz/24-core/150W) FIO Processor Kit	869086-L21
NOTE: Ships with Performance Heatsink.	

HPE DL380 Gen10 Intel® Xeon-Platinum 8158 (3.0GHz/12-core/150W) FIO Processor Kit	869090-L21
NOTE: Ships with Performance Heatsink. HPE DL380 Gen10 Intel® Xeon-Platinum 8156 (3.6GHz/4-core/105W) FIO Processor Kit	871616-L21
<b>NOTE:</b> Ships with Performance Heatsink.	071010-L21
HPE DL380 Gen10 Intel® Xeon-Platinum 8153 (2.0GHz/16-core/125W) FIO Processor Kit	826890-L21
HPE DL380 Gen10 Intel® Xeon-Gold 6154 (3.0GHz/18-core/200W) FIO Processor Kit	826888-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6152 (2.1GHz/22-core/140W) FIO Processor Kit	826886-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6150 (2.7GHz/18-core/165W) FIO Processor Kit	826884-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6148 (2.4GHz/20-core/150W) FIO Processor Kit	826882-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6146 (3.2GHz/12-core/165W) FIO Processor Kit	826868-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6144 (3.5GHz/8-core/150W) FIO Processor Kit	826860-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6143 (2.8GHz/16-core/205W) FIO Processor Kit	879424-L21
NOTE: Ships with Performance Heatsink.	
NOTE: Supports "Core boosting" Learn more <u>http://www.hpe.com/info/ist</u> .	
<b>NOTE:</b> To enable this feature an iLO Advanced, or iLO Advanced Premium Security edition License are	
required. HPE DL380 Gen10 Intel® Xeon-Gold 6142M (2.6GHz/16-core/150W) FIO Processor Kit	874760-L21
<b>NOTE:</b> Ships with Performance Heatsink.	074700-L21
HPE DL380 Gen10 Intel® Xeon-Gold 6142 (2.6GHz/16-core/150W) FIO Processor Kit	826880-L21
<b>NOTE:</b> Ships with Performance Heatsink.	020000 221
HPE DL380 Gen10 Intel® Xeon-Gold 6140M (2.3GHz/18-core/135W) FIO Processor Kit	874762-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6140 (2.3GHz/18-core/150W) FIO Processor Kit	826878-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6138 (2.0GHz/20-core/125W) FIO Processor Kit	826876-L21
HPE DL380 Gen10 Intel® Xeon-Gold 6137 (3.9GHz/8-core/205W) FIO Processor Kit	880168-L21
NOTE: Ships with Performance Heatsink.	
<b>NOTE:</b> High frequency bin targeting FSI workloads. Configuration restrictions will apply, support on 8SFF only.	
<b>NOTE:</b> The system inlet ambient temperature is restricted at 22C.	
<b>NOTE:</b> NVMe drives CANNOT be ordered with this Processor.	
<b>NOTE:</b> This option requires the High Performance Fan Kit (867810-B21) to be selected.	
<b>NOTE:</b> No rear drives are supported with this processor.	
<b>NOTE:</b> No Graphic cards (GPUs) are available with this processor selection.	
NOTE: For additional details on this processor please visit: http://h20195.www2.hpe.com/V2/GetDocument.aspx?docname=a00036300enw	
HPE DL380 Gen10 Intel® Xeon-Gold 6136 (3.0GHz/12-core/150W) FIO Processor Kit	826874-L21
<b>NOTE:</b> Ships with Performance Heatsink.	020077 221
HPE DL380 Gen10 Intel® Xeon-Gold 6134M (3.2GHz/8-core/130W) FIO Processor Kit	873645-L21

NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6134 (3.2GHz/8-core/130W) FIO Processor Kit	826872-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6132 (2.6GHz/14-core/140W) FIO Processor Kit	826870-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6130 (2.1GHz/16-core/120W) FIO Processor Kit	826866-L21
HPE DL380 Gen10 Intel® Xeon-Gold 6128 (3.4GHz/6-core/115W) FIO Processor Kit	826864-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6126 (2.6GHz/12-core/120W) FIO Processor Kit	826862-L21
HPE DL380 Gen10 Intel® Xeon-Gold 5122 (3.6GHz/4-core/105W) FIO Processor Kit	826858-L21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 5120 (2.2GHz/14-core/105W) FIO Processor Kit	826856-L21
HPE DL380 Gen10 Intel® Xeon-Gold 5118 (2.3GHz/12-core/105W) FIO Processor Kit	826854-L21
HPE DL380 Gen10 Intel® Xeon-Gold 5115 (2.4GHz/10-core/85W) FIO Processor Kit	876562-L21
HPE DL380 Gen10 Intel® Xeon-Silver 4116 (2.1GHz/12-core/85W) FIO Processor Kit	826852-L21
HPE DL380 Gen10 Intel® Xeon-Silver 4114 (2.2GHz/10-core/85W) FIO Processor Kit	826850-L21
HPE DL380 Gen10 Intel® Xeon-Silver 4112 (2.6GHz/4-core/85W) FIO Processor Kit	873647-L21
HPE DL380 Gen10 Intel® Xeon-Silver 4110 (2.1GHz/8-core/85W) FIO Processor Kit	826846-L21
HPE DL380 Gen10 Intel® Xeon-Silver 4108 (1.8GHz/8-core/85W) FIO Processor Kit	826848-L21
HPE DL380 Gen10 Intel® Xeon-Bronze 3106 (1.7GHz/8-core/85W) FIO Processor Kit	873643-L21
HPE DL380 Gen10 Intel® Xeon-Bronze 3104 (1.7GHz/6-core/85W) FIO Processor Kit	873641-L21
<b>NOTE:</b> Processors above 130W use a High Performance Heatsink, along with the 8156, 6128 and 5122.	

## Step 2b: Choose Memory Options

Please select one or more memory from below.

For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go to:

## https://www.hpe.com/docs/memory-population-rules

For Gen10 memory speed table, please go to: https://www.hpe.com/docs/memory-speed-table	
For memory Reliability, Accessibility, Serviceability (RAS) features whitepaper like Gen10 Fast Fault Toleran	ce and legacy
mirrored memory feature etc. please go to: <b>http://www.hpe.com/docs/memory-ras-feature</b>	
<b>NOTE:</b> Memory DIMM availability with a server platform is dependent upon completion of certification te	sting.
<b>NOTE:</b> The maximum memory speed is a function of the memory type, memory configuration, and proce	ssor model.
HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815097-B21
HPE 8GB (1x8GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	876181-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815098-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815100-B21
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit	815101-B21
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2666 CAS-22-19-19 3DS Load Reduced Memory Kit	815102-B21
HPE Persistent Memory (NVDIMM)	
HPE 16GB NVDIMM Single Rank x4 DDR4-2666 Module Kit	845264-B21
NOTE: A maximum of 12 NVDIMMs supported.	

NOTE: Can only be mixed with RDIMMs.

NOTE: For General Server Memory and NVDIMM Population Rules and Guidelines for Gen10 see details

## here: http://www.hpe.com/docs/memory-population-rules

## **HPE Scalable Persistent Memory**

**NOTE:** Scalable Persistent Memory is available as HPE Factory Configure To Order only For details on HPE Scalable Persistent Memory please go to: <u>http://www.hpe.com/info/persistentmemory</u>

<b>NOTE:</b> Scalable Persistent Memory requires dedicated flash backup. The 1.6TB NVME MU SFF (877994-B21) drive is required, with respective drive cages and associated options (Enablement kit, riser and Fan kit) and must be installed in Box 3. A Qty of 2 are required for the 256GB and 4 required for the 512GB installation.	
<b>NOTE:</b> Scalable Persistent Memory requires Back up power and the 800W PSU/400w BBU (827608-B21) needs to be selected.	
<b>NOTE:</b> Support for Scalable Persistent Memory is limited to 25C inlet ambient temperature.	
HPE Scalable Persistent Memory 256GB for 2-socket Servers	876401-B21
<b>NOTE:</b> Includes 384GB of total memory (256GB for Scalable PMEM and 128GB for server memory) using either (24) 16GB or (12) 32GB DIMMs.	
<b>NOTE:</b> 128GB is minimum server memory for this solution. Additional server memory can be added if using 32GB DIMMs in this configuration.	
HPE Scalable Persistent Memory 512GB for 2-socket Servers	876402-B21
<b>NOTE:</b> Includes 768GB of total memory (512GB for Scalable PMEM and 256GB for server memory) using either (24) 32GB or (12) 64GB DIMMs.	
<b>NOTE:</b> 256GB is minimum server memory for this solution. Additional server memory can be added if using 64GB DIMMs in this configuration.	
HPE Scalable Persistent Memory 800W Flex Slot PSU and 400W BBU 2-pack FIO Kit	827608-B21
<b>NOTE:</b> Is required for all Scalable Persistent Memory installations	
Step 2c: Choose Power Supplies	
Select one or two power supplies from below. <b>NOTE:</b> Mixing of 2 different power supplies is NOT allowed.	
HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21
Step 3: Choose Additional Factory Integratable Options	
One of the following from each list may be selected if desired at time of factory integration	
HPE Security Options	
HPE Gen10 TPM 1.2 FIO Setting	872108-B21
<b>NOTE:</b> TPM 2.0 is set as default, for 1.2 TPM setting instead, please select this option.	
HPE Legacy FIO Mode Setting	758959-B22
NOTE: UEFI is the default, this FIO part can be used for CTO to enable Legacy mode.	
HPE Unique Options	
HPE DL38X Gen10 Slot 1/2 x16/x16 FIO Riser Kit	871674-B21
NOTE: Slot 1 or 2 in Primary location.	
<b>NOTE:</b> Supports Full Height and Full length cards. <b>NOTE:</b> Bus width x16, x16, Connector Width x16, x16.	
HPE DL38X Gen10 x16/x16 GPU Slot2/3 FIO Riser Kit	871676-B21
<b>NOTE:</b> Primary Riser, Connector in slot 2 & 3 for GPU support.	
NOTE: Supports Full Height and Full length cards.	
<b>NOTE:</b> Bus width x16, x16, Connector Width x16, x16.	07010/ 001
HPE 4 NVMe Box 1 Instr Spec FIO	878186-B21
HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe Slim SAS FIO Riser Kit	871673-B21
<b>NOTE:</b> Supports 3x 8 and 1-port for NVMe.	

<b>NOTE:</b> Supports Full Height and half-length cards. <b>NOTE:</b> Bus width x8, x8, x8 Connector Width x8, x8, x8.	
HPE 2 NVMe Instr Spec FIO	878189-B21
NOTE: This is a factory integrated only option.	
<b>NOTE:</b> This will connect 2 SFF cage installed in the front of the chassis to NVMe.	
HPE 6+2 NVMe Instr Spec FIO	878192-B21
<b>NOTE:</b> This is a factory integrated only option.	
<b>NOTE:</b> Indicates the cage will also have an NVMe connection.	
HPE 8SFF Front Remove SPEC Perf FIO	873763-B21
<b>NOTE:</b> This is a factory integrated only option.	
<b>NOTE:</b> Will remove the Primary 8SFF cage in Box 3 of the 8SFF and replace with a Box blank.	
HPE Riser Remove SPEC FIO	873766-B21
NOTE: This is a factory integrated only option.	
<b>NOTE:</b> Will remove the Primary shipping PCIe riser.	
HPE Legacy FIO Mode Setting	758959-B22
<b>NOTE:</b> UEFI is the default, this FIO part can be used for CTO to enable Legacy mode.	
HPE Memory Fast Fault Tolerance FIO Kit	875293-B21
<b>NOTE:</b> Fast Fault Tolerance is a new feature in Gen10 server memory that enables the system to boot with full memory performance while monitoring for DRAM device failures.	
HPE Converged Infrastructure Management Software	
HPE OneView for ProLiant DL Server including 3yr 24x7 Support FIO Bundle Physical 1-server LTU	E5Y43A
HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	P8B31A
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Step 4: Choose additional options for Factory Integration from Core and Additional	
Options sections below	

<b>NOTE:</b> Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewl Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for additionation. Note the <a href="http://www.hpe.com/info/CablingMatrixGen10">http://www.hpe.com/info/CablingMatrixGen10</a> can help to explain the cable routing for each sales representative for additional sales representative for additionad sales representative for additionad	litional
HPE Unique Options	
HPE DL38X NVMe 8 Solid State Drive Express Bay Enablement Kit	826689-B21
NOTE: This option provides support for up to 8 NVMe drives, and can only be populated in Box 1, Box 2	
and Box 3 of the SFF chassis, note Box 1 can only be partially populated with four drives if Box 2 and Box 3	
are fully populated with NVMe drives.	
NOTE: The HPE DL380 Gen10 High Performance fan kit is required for NVMe support (867810-B21).	
NOTE: The HPE DL38X Gen10 4-port 8 NVMe SlimSAS Riser (867807-B21) is required to support this.	
<b>NOTE:</b> There are limitations on GPU support with the NVMe bay installed.	
HPE DL38X Gen10 Universal Media Bay Kit	826708-B21
<b>NOTE:</b> The HPE DL380 Gen10 Universal Media bay provides front Display Port and 2xUSB 2.0; plus	
support for 2x SFF front drives or 2 NVME front drives (826687-B21, riser required) and ODD support	
(Not included); and can only be located in Box1 in either an 8 SFF or 8+8 SFF model.	
NOTE: This is a SFF model option only.	
HPE DL38X Gen10 Premium 6 SFF SAS/SATA + 2 NVMe or 8 SFF SAS/SATA Bay Kit	826690-B21
<b>NOTE:</b> This kit can be supported in Box 1, 2 or 3 and provides support for up to 8 SFF SAS/SATA or 6	
SAS/SATA + 2 NVMe drives per Box.	
<b>NOTE:</b> With NVMe drives a specific riser is required.	
<b>NOTE:</b> When adding to Box 1 the addition of the High Performance Fan kit (867810-B21) is required.	02/70/ 021
HPE DL380 Gen10 High Performance Heat Sink Kit	826706-B21
NOTE: Required for GPU installations.	
<b>NOTE:</b> Processor kits above 130W include a High Performance Heatsink, along with the 8156, 6128 and	
5122. NOTE: This kit contains 2 High Performance Heatsinks.	
	047010 001
HPE DL38X Gen10 High Performance Temperature Fan Kit	867810-B21
<b>NOTE:</b> This kit is required for specific <b>Ambient temperature environments</b> , coming in 2H2017. <b>NOTE:</b> This kit is also required to support GPUs configurations.	
<b>NOTE:</b> This is required for NVMe configurations.	
<b>NOTE:</b> This kit provides maximum cooling for your Server.	
<b>NOTE:</b> This kit is required when Box 1, 2 and 3 are populated.	
HPE DL38X Gen10 2SFF HDD SAS/SATA Riser Kit	826688-B21
<b>NOTE:</b> 2 SFF in the rear is only supported with a 24 SFF model or 12 LFF model.	
<b>NOTE:</b> In the rear this leaves 1x16 slot accessible.	
NOTE: Rear drives require the addition of the High Performance Fan kit (867810-B21).	
HPE DL38X Gen10 2SFF Premium HDD Front NVMe or Front/Rear SAS/SATA Kit	826687-B21
<b>NOTE:</b> Supports 2SFF SAS/SATA/NVMe in Universal Media bay (826708-B21).	
NOTE: NVMe drives require the addition of the High Performance Fan kit (867810-B21).	
<b>NOTE:</b> NVMe drives require the addition of an NVMe capable riser.	
<b>NOTE:</b> Drive cage can be used in the rear of the chassis, but will not support NVMe drives rear.	
NOTE: Supports uFF drives.	
HPE DL38X Gen10 8LFF Front 2SFF SAS/SATA HDD Kit	867805-B21
<b>NOTE:</b> Adds support for 2 SFF in front of 8 LFF chassis (868706-B21).	
HPE DL38X Gen10 8LFF Front 2NVMe HDD Bay Kit	873781-B21
NOTE: Supports 2 NVMe in the Universal Media bay (included) on the 8 LFF model.	
<b>NOTE:</b> For support of the 2 NVMe drives this will require the addition of the HPE DL38X Gen10 x8/x8/x8	
1-port 2 NVMe SlimSAS Riser (867806-B21); or the HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser	
(867808-B21).	
<b>NOTE:</b> NVMe drives require the addition of the High Performance Fan kit (867810-B21).	

HPE DL38X Gen10 12Gb SAS Expander Card Kit with Cables NOTE: SAS expander to enable 24 SFF field upgrade.	870549-B21
<b>NOTE:</b> SAS expander to enable 24 SFF field upgrade. <b>NOTE:</b> Primary population in slot 3 of the primary riser.	
HPE DL380 Gen10 SFF Systems Insight Display Kit	826703-B21
<b>NOTE:</b> Systems Insight Display no longer ships as standard but is available as a Factory Integrated or field	020705-021
upgrade option.	
HPE DL3XX Gen10 Rear Serial Cable and Enablement Kit	873770-B21
PE Processors	
rocessor Option Kits	
HPE DL380 Gen10 Intel® Xeon-Platinum 8180M (2.5GHz/28-core/205W) Processor Kit	874752-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8180 (2.5GHz/28-core/205W) Processor Kit	871619-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8180 (2.5GHz/28-core/205W) Processor Kit	871619-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8176M (2.1GHz/28-core/165W) Processor Kit	874754-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8176 (2.1GHz/28-core/165W) Processor Kit	871618-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8170M (2.1GHz/26-core/165W) Processor Kit	874756-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8170 (2.1GHz/26-core/165W) Processor Kit	871617-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8168 (2.7GHz/24-core/205W) Processor Kit	869089-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8165 (2.3GHz/24-core/205W) Processor Kit	879423-B21
NOTE: Ships with Performance Heatsink.	
NOTE: Supports "Core boosting" Learn more <u>http://www.hpe.com/info/ist</u> .	
<b>NOTE:</b> To enable this feature an iLO Advanced, or iLO Advanced Premium Security edition License are required.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8164 (2.0GHz/26-core/145W) Processor Kit	869088-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8160M (2.1GHz/24-core/145W) Processor Kit	874758-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8160 (2.1GHz/24-core/150W) Processor Kit	869086-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8158 (3.0GHz/12-core/150W) Processor Kit	869090-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8156 (3.6GHz/4-core/105W) Processor Kit	871616-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Platinum 8153 (2.0GHz/16-core/125W) Processor Kit	826890-B21
HPE DL380 Gen10 Intel <sup>®</sup> Xeon-Gold 6154 (3.0GHz/18-core/200W) Processor Kit	826888-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6152 (2.1GHz/22-core/140W) Processor Kit	826886-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6150 (2.7GHz/18-core/165W) Processor Kit	826884-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6148 (2.4GHz/20-core/150W) Processor Kit	826882-B21
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NOTE: Shine with Defermence Hesteink	
NOTE: Ships with Performance Heatsink. HPE DL380 Gen10 Intel® Xeon-Gold 6146 (3.2GHz/12-core/165W) Processor Kit	826868-B21
NOTE: Ships with Performance Heatsink.	020000-D21
HPE DL380 Gen10 Intel® Xeon-Gold 6144 (3.5GHz/8-core/150W) Processor Kit	826860-B21
<b>NOTE:</b> Ships with Performance Heatsink.	020000-021
HPE DL380 Gen10 Intel® Xeon-Gold 6143 (2.8GHz/16-core/205W) Processor Kit	879424-B21
<b>NOTE:</b> Ships with Performance Heatsink.	077424 021
<b>NOTE:</b> Supports "Core boosting" Learn more <u>http://www.hpe.com/info/ist</u> .	
<b>NOTE:</b> To enable this feature an iLO Advanced, or iLO Advanced Premium Security edition License are	
required.	
HPE DL380 Gen10 Intel® Xeon-Gold 6142M (2.6GHz/16-core/150W) Processor Kit	874760-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6142 (2.6GHz/16-core/150W) Processor Kit	826880-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6140M (2.3GHz/18-core/135W) Processor Kit	874762-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6140 (2.3GHz/18-core/150W) Processor Kit	826878-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6138 (2.0GHz/20-core/125W) Processor Kit	826876-B21
HPE DL380 Gen10 Intel® Xeon-Gold 6137 (3.9GHz/8-core/205W) Processor Kit	880168-B21
NOTE: Ships with Performance Heatsink.	
<b>NOTE:</b> High frequency bin targeting FSI workloads. Configuration restrictions will apply, support on 8SFF	
only.	
<b>NOTE:</b> The system inlet ambient temperature is restricted at 22C. <b>NOTE:</b> NVMe drives CANNOT be ordered with this Processor.	
<b>NOTE:</b> This option requires the High Performance Fan Kit (867810-B21) to be selected. <b>NOTE:</b> No rear drives are supported with this processor.	
<b>NOTE:</b> No fear drives are supported with this processor. <b>NOTE:</b> No Graphic cards (GPUs) are available with this processor selection.	
<b>NOTE:</b> For additional details on this processor please visit:	
http://h20195.www2.hpe.com/V2/GetDocument.aspx?docname=a00036300enw	
HPE DL380 Gen10 Intel® Xeon-Gold 6136 (3.0GHz/12-core/150W) Processor Kit	826874-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6134M (3.2GHz/8-core/130W) Processor Kit	873645-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6134 (3.2GHz/8-core/130W) Processor Kit	826872-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6132 (2.6GHz/14-core/140W) Processor Kit	826870-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6130 (2.1GHz/16-core/120W) Processor Kit	826866-B21
HPE DL380 Gen10 Intel® Xeon-Gold 6128 (3.4GHz/6-core/115W) Processor Kit	826864-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 6126 (2.6GHz/12-core/120W) Processor Kit	826862-B21
HPE DL380 Gen10 Intel® Xeon-Gold 5122 (3.6GHz/4-core/105W) Processor Kit	826858-B21
NOTE: Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel® Xeon-Gold 5120 (2.2GHz/14-core/105W) Processor Kit	826856-B21
HPE DL380 Gen10 Intel® Xeon-Gold 5118 (2.3GHz/12-core/105W) Processor Kit	826854-B21 876562-B21
HPE DL380 Gen10 Intel® Xeon-Gold 5115 (2.4GHz/10-core/85W) Processor Kit HPE DL380 Gen10 Intel® Xeon-Silver 4116 (2.1GHz/12-core/85W) Processor Kit	876562-B21 826852-B21
HPE DL380 Gen10 Intel® Xeon-Silver 4116 (2.2GHz/12-core/85W) Processor Kit	826850-B21
HPE DL380 Gen10 Intel® Xeon-Silver 4112 (2.6GHz/4-core/85W) Processor Kit	873647-B21
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HPE DL380 Gen10 Intel® Xeon-Silver 4110 (2.1GHz/8-core/85W) Processor Kit	826846-B21
HPE DL380 Gen10 Intel® Xeon-Silver 4108 (1.8GHz/8-core/85W) Processor Kit	826848-B21
HPE DL380 Gen10 Intel® Xeon-Bronze 3106 (1.7GHz/8-core/85W) Processor Kit	873643-B21
HPE DL380 Gen10 Intel® Xeon-Bronze 3104 (1.7GHz/6-core/85W) Processor Kit	873641-B21
NOTE that the second second second by former of Madels for both the second	

**NOTE:** Up to two processors supported. Performance Models include two processors.

**NOTE:** HT indicates that the processor model supports Intel<sup>®</sup> Hyper-Threading Technology.

**NOTE:** Turbo2: Intel<sup>®</sup> Turbo Boost Technology 2.0 provides more computing power when you need it with performance that adapts to spikes in your workload and delivers more performance upside than then previous generation turbo technology. **NOTE:** DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

**NOTE:** The xxxxx-B21 is the 2nd processor and ships with 2 additional fans for factory of field installation.

**NOTE:** Maximum memory per socket depends on the processor selected.

**NOTE:** Processors above 130W use a High Performance Heatsink, along with the 8156, 6128 and 5122.

## **Memory Selection**

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

## HPE DDR4 Memory

## **Registered DIMMs (RDIMMs)**

Registered Diffinits (RDIFINIS)	
HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815097-B21
HPE 8GB (1x8GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	876181-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815098-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815100-B21
Load Reduced DIMMs (LRDIMMs)	
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit	815101-B21
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2666 CAS-22-19-19 3DS Load Reduced Memory Kit	815102-B21
<b>NOTE:</b> Memory DIMM availability with a server platform is dependent upon completion of certification	OIDIGE DEI
testing.	
<b>NOTE:</b> The maximum memory speed is a function of the memory type, memory configuration, and	
processor model.	
NOTE: Mixing of RDIMM and LRDIMM is not supported.	
HPE Persistent Memory (NVDIMM)	
HPE 16GB NVDIMM Single Rank x4 DDR4-2666 Module Kit	845264-B21
NOTE: A maximum of 12 NVDIMMs supported.	
NOTE: Can only be mixed with RDIMMs.	
NOTE: For General Server Memory and NVDIMM Population Rules and Guidelines for Gen10 see details	
here: http://www.hpe.com/docs/memory-population-rules	
HPE Optical Drives	
HPE 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive	726536-B21
<b>NOTE:</b> The Universal Media Bay (826708-B21) is required for this option on a SFF model. No support in 12	,20000 021
LFF or 24 SFF models.	
HPE 9.5mm SATA DVD-RW JackBlack G9 Optical Drive	726537-B21
<b>NOTE:</b> The Universal Media Bay (826708-B21) is required for this option on a SFF model. No support in 12	,2000, 821
LFF or 24 SFF models.	
HPE Mobile USB Non Leaded System DVD RW Drive	701498-B21
<b>NOTE:</b> This is only supported on USB 3.0 ports.	, or , , o ber

## **HPE Drives**

## Enterprise - 12G SAS - SFF Drives

Enterprise - 12G SAS - SFF Drives	
HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870753-B21
HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872475-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870757-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	870763-B21
HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872477-B21
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870759-B21
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	870765-B21
HPE 900GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD	785069-B21
HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872479-B21
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	872481-B21
HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	881457-B21
Midline - 12G SAS - SFF Drives	
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	832514-B21
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765464-B21
HPE 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	765466-B21
Midline - 12G SAS - LFF Drives	
HPE 1TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846524-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	818365-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872485-B21
HPE 3TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846528-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	818367-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861756-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872487-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846514-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861754-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	861590-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	819201-B21
HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857644-B21
HPE 12TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	881779-B21
Midline - 6G SATA - SFF Drives	
HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	655710-B21
HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765453-B21
HPE 2TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765455-B21
Midline - 6G SATA - LFF Drives	
HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861691-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872489-B21
HPE 3TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	861693-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861752-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872491-B21
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846510-B21
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861750-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	819203-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	861594-B21
HPE 10TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857648-B21
HPE 12TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	881785-B21

### **SSD Selection**

To streamline the configuration process for HPE ProLiant Gen10 servers and to provide the best product availability. HPE recommends SSDs from the list located here: http://www.hpe.com/products/recommend Read Intensive - 12G SAS - SFF - Solid State Drives HPE 480GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 875311-B21 HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872390-B21 HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 875313-B21 HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872392-B21 HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 875326-B21 HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872394-B21 HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 875330-B21 HPE 7.68TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 870144-B21 HPE 15.3TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 870148-B21 HPE 15.4TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD Mixed Use - 12G SAS - SFF - Solid State Drives HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872374-B21 HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 873359-B21 HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872376-B21 HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 873363-B21 HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872382-B21 HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 873365-B21 HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872386-B21 HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 873367-B21 Write Intensive - 12G SAS - SFF - Solid State Drives HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 873351-B21 HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 873355-B21 HPE 1.6TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 873357-B21 Mixed Use - 12G SAS - LFF - Solid State Drives HPE 800GB SAS 12G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD 872378-B21 Mixed Use - 6G SATA - SFF - Solid State Drives HPE 240GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 875483-B21 875470-B21 HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 875474-B21 HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 875478-B21 Write Intensive - 6G SATA - SFF - Solid State Drives HPE 400GB SATA 6G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872355-B21 HPE 400GB SATA 6G Write Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD 872357-B21 HPE 800GB SATA 6G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872359-B21 HPE 800GB SATA 6G Write Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD 872361-B21 HPE 1.6TB SATA 6G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872363-B21 HPE 1.6TB SATA 6G Write Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD 872365-B21 Mixed Use - 6G SATA - LFF - Solid State Drives HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD 875472-B21 HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD 875476-B21 HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD 875480-B21 Write Intensive - PCIe/NVMe - SFF - Solid State Drives

HPE 400GB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty SSD736936-B21HPE 800GB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty SSD736939-B21HPE 1.6TB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty SSD764892-B21

NOTE: An NVME (826689-B21 or 873781-B21) or Premium (826690-B21) drive cage are required to support these drives in conjunction with a NVMe riser kit.

**NOTE:** HPE has qualified the NVMe drive portfolio using the Operating System inbox drivers, full detail on

the HPE Solid State Drive QuickSpecs.

**NOTE:** With NVMe support only 1x Double Wide Graphics card is supported.

## Read Intensive - 6G SATA - SFF - Solid State Drives

HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868814-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875503-B21
HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877740-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868818-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875509-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877746-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	869384-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868822-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875511-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877752-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868826-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875513-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877758-B21
HPE 3.8TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	868830-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877764-B21
Mixed Use - 6G SATA - SFF - Solid State Drives	
HPE 3.2TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	877998-B21
HPE 240GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	880295-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877776-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877782-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877788-B21
Read Intensive - 6G SATA - LFF - Solid State Drives	
HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877748-B21
HPE 960GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877754-B21
HPE 1.92TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877760-B21
Mixed Use - 6G SATA - LFF - Solid State Drives	
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877784-B21
HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877790-B21
Read Intensive - 6G SATA - M.2 - Solid State Drives	
HPE 150GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875317-B21
HPE 340GB SATA 6G Read Intensive M.2 2280 3yr Wty SSD	777264-B21
HPE 480GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875319-B21
HPE 480GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875498-B21
HPE 960GB SATA 6G Read Intensive M.2 2280 3yr Wty Digitally Signed Firmware SSD	875500-B21
NOTE: M.2 drives go in the Primary Riser and use S100i SATA controller only.	
NOTE: M.2 supports Software RAID only.	
Read Intensive - NVMe - SFF - Solid State Drives	
HPE 400GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty SSD	764904-B21
HPE 480GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875587-B21
HPE 960GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875589-B21
HPE 1.2TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty SSD	764906-B21

HPE 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD 875591-B21 HPE 4TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD 877988-B21

Mixed Use - 6G SATA - SFF - Solid State Drives	
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872344-B21
HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872346-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872350-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872348-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872352-B21
Mixed Use - 6G SATA - M.2 - Solid State Drives	
HPE 240GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD	875488-B21
HPE 480GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD	875490-B21
HPE 960GB SATA 6G Mixed Use M.2 2280 3yr Wty Digitally Signed Firmware SSD	875492-B21
Mixed Use - NVMe - SFF - Solid State Drives	
HPE 400GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875593-B21
HPE 800GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875595-B21
HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty SSD	765038-B21
HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875597-B21
HPE 2TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty SSD	765044-B21
<b>NOTE:</b> An NVME (826689-B21 or 873781-B21) or Premium (826690-B21) drive cage is required to	
support these drives in conjunction with a NVMe riser kit.	
<b>NOTE:</b> HPE has qualified the NVMe drive portfolio using the Operating System inbox drivers, full detail on	
the HPE Solid State Drive QuickSpecs.	
<b>NOTE:</b> With NVMe support only 1x Double Wide Graphics card is supported.	
<b>NOTE:</b> Not supported by HPE Smart Array controllers.	
<b>NOTE:</b> NVMe drives require the addition of the High Performance Fan kit (867810-B21).	
Read Intensive – 6G SATA uFF - Solid State Drives	00050/ 004
HPE 120GB SATA 6G Read Intensive UFF 3yr Wty M.2 Kit	822594-B21
HPE 340GB SATA 6G Read Intensive UFF 3yr Wty M.2 Kit	815606-B21
HPE 340GB SATA 6G Read Intensive UFF 3yr Wty Dual M.2 Kit	815605-B21
HPE Dual 150GB SATA Read Intensive M.2 - UFF to SFF SCM 3yr Wty Digitally Signed Firmware SSD	880875-B21
HPE Dual 150GB SATA Read Intensive M.2 - UFF to SFF SCM 3yr Wty Digitally Signed Firmware SSD	880875-B21
HPE Dual 480GB SATA Read Intensive M.2 - UFF to SFF SCM 3yr Wty Digitally Signed Firmware SSD	880877-B21
Hard Drive Blank Kits	070707 004
HPE Universal SATA HHHL 3yr Wty M.2 Kit	878783-B21
NOTE: This is a M.2 enablement standup card.	
HPE Large Form Factor Hard Drive Blank Kit	666986-B21
HPE Small Form Factor Hard Drive Blank Kit	666987-B21
Hard Drive Kits	
HPE DL38X Gen10 3LFF Rear SAS/SATA Drive Kit	826685-B21
<b>NOTE:</b> This is supported in the LFF model only.	
<b>NOTE:</b> 3 LFF rear drives will consume the 2nd riser expansion slot.	00//0/ 00/
HPE DL38X Gen10 4LFF Midplane SAS/SATA HDD Kit	826686-B21
NOTE: Supported with both the 8 and 12 LFF model.	
<b>NOTE:</b> Ships with low profile HeatSink for installation. Supporting processors below 125W.	
<b>NOTE:</b> No support for the 8156, 6128 or the 5122 Processors. <b>NOTE:</b> With this mid-tray only single-wide (8.5-inch cards with connections or less) cards are supported.	
<b>NOTE:</b> This drive does support hot-swap drives.	
NOTE: This requires High Performance Fans (867810-B21).	
HPE DL38X Gen10 2SFF Premium HDD Front NVMe or Front/Rear SAS/SATA Kit	826687-B21
<b>NOTE:</b> Supports 2SFF SAS/SATA/NVMe in Universal Media bay (826708-B21).	02000, 021
<b>NOTE:</b> NVMe drives require the addition of the High Performance Fan kit (867810-B21).	
<b>NOTE:</b> NVMe drives require the addition of an NVMe capable riser.	
	Dece 75

Core Options	
NOTE: Drive cage can be used in the rear of the chassis, but will not support NVMe drives rear. HPE DL38X Gen10 2SFF HDD SAS/SATA Riser Kit NOTE: Supports 2 SFF rear in Riser1 or 2 location – max 2 supported SFF model. NOTE: Supports 2 SFF rear in Riser1 or 2 location in LFF model. Note is 3 LFF rear option is selected maximum of one in riser 1 location.	826688-B21
NOTE: Supports uFF drives.	
HPE DL38X NVMe 8 Solid State Drive Express Bay Enablement Kit <b>NOTE:</b> This option provides support for up to 8NVMe drives, and can be populated in all Boxes in the 8 SFF model.	826689-B21
<ul> <li>NOTE: A maximum of 20 NVMe drives only are supported., this will mean partial population (4 drives) when the 3<sup>rd</sup> cage is populated in Box 1.</li> <li>NOTE: This will require the HPE DL38X Gen10 4-port 8 NVMe SlimSAS Riser (867807-B21).</li> <li>NOTE: NVMe drives require the addition of the High Performance Fan kit (867810-B21).</li> <li>HPE DL38X Gen10 Premium 6 SFF SAS/SATA + 2 NVMe or 8 SFF SAS/SATA Bay Kit</li> <li>NOTE: This option provides supports up to 8 SAS/SATA SFF drives or a combination of 6 SAT/SATA and 2 NVMe drives in the same cage, and can be populated in all Boxes in the SFF model.</li> <li>NOTE: For support of the 2 NVMe drives this will require the addition of the HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe SlimSAS Riser (867806-B21); or the HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser (867808-B21).</li> </ul>	826690-B21
NOTE: NVMe drives require the addition of the High Performance Fan kit (867810-B21).	
HPE DL38X Gen10 SFF Box1/2 Cage/Backplane Kit	826691-B21
NOTE: Supports 8 SAS/SAFA SFF drives in Box 1 or 2 to a max of 24 SFF SAS/SATA front. HPE DL38X Gen10 8LFF Front 2SFF SAS/SATA HDD Kit NOTE: For 2 SFF SAS/SATA in UMB on 8 LFF model only.	867805-B21
<ul> <li>HPE DL38X Gen10 8LFF Front 2NVMe HDD Bay Kit</li> <li>NOTE: Supports 2 NVMe in the Universal Media bay (included) on the 8 LFF model.</li> <li>NOTE: For support of the 2 NVMe drives this will require the addition of the HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe SlimSAS Riser (867806-B21); or the HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser (867808-B21).</li> <li>NOTE: NVMe drives require the addition of the High Performance Fan kit (867810-B21).</li> </ul>	873781-B21
<ul> <li>Media Bay Kits         HPE DL38X Gen10 Universal Media Bay Kit         NOTE: The HPE DL380 Gen10 Universal Media bay provides front Display Port and 2xUSB 2.0; plus support for 2x SFF front drives or 2 NVME front drives (826687-B21, riser required) and ODD support (Not included); and can only be located in Box1 in either an 8 SFF or 8+8 SFF model.         NOTE: This is a SFF model option only.     </li> </ul>	826708-B21

## **HPE Networking**

1(	Gigabit	Ethernet	adapters
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HPE Ethernet 1Gb 4-port 331T Adapter	647594-B21
HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
HPE Ethernet 1Gb 2-port 361T Adapter	652497-B21
HPE Ethernet 1Gb 4-port 366T Adapter	811546-B21
10 Gigabit Ethernet adapters	
HPE Ethernet 10Gb 2-port 521T Adapter	867707-B21
HPE Ethernet 10Gb 2-port 530T Adapter	656596-B21
HPE Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
HPE Ethernet 10Gb 2-port 535T Adapter	813661-B21
HPE Ethernet 10Gb 2-port 562SFP+ Adapter	727055-B21
HPE Ethernet 10Gb 2-port 562T Adapter	817738-B21
25 Gigabit Ethernet adapters	
HPE Ethernet 4x25Gb 1-port 620QSFP28 Adapter	817762-B21
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Core Options	
HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter	867328-B21
HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter	817718-B21
HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter	817753-B21
<b>NOTE:</b> The DL380 Gen10 ships with 4x 1 Gb Embedded.	
<b>NOTE:</b> A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.	
<b>NOTE:</b> Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic	
environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information:	
http://www.hpe.com/us/en/product-catalog/servers/server-adapters.hits-12.html	
FlexibleLOM adapters	
HPE Ethernet 1Gb 4-port 331FLR Adapter	629135-B22
HPE Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
NOTE: Delayed availability.	
HPE FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HPE Ethernet 10Gb 2-port 535FLR-T Adapter	817721-B21
HPE FlexFabric 10Gb 4-port 536FLR-T Adapter	764302-B21
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21
HPE Ethernet 10Gb 2-port 562FLR-T Adapter	817745-B21
HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter	867334-B21
HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter	817709-B21
HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter	817749-B21
<b>NOTE:</b> The DL380 Gen10 chassis ships with 4x 1 Gb embedded.	
<b>NOTE:</b> Only one FlexibleLOM can be added to the server. These options are upgradeable and can be	
changed from the original configuration after the server is shipped. <b>NOTE:</b> Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic	
environments must be purchased separately. Please see the related NIC QuickSpecs for Technical	
Specifications and additional information:	
http://www.hpe.com/us/en/product-catalog/servers/server-adapters.hits-12.html	
HPE InfiniBand	
HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21
HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	825110-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	825111-B21
HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter	872725-B21
HPE 100Gb 1-port OP101 QSFP28 x8 PCIe Gen3 with Intel® Omni-Path Architecture Adapter	829334-B21
HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel® Omni-Path Architecture Adapter	829335-B21
HPE I/O Expansion Options	
NOTE: The Primary Riser shipping default in the chassis is a x8 FH, FL, x16 FH, FL and x8 FH, HL with m.2	
support.	
<b>NOTE:</b> For a Secondary/Tertiary riser the second processor is required.	
HPE DL38X Gen10 x16/x16 Riser Kit	826694-B21
<b>NOTE:</b> Slot 1 or 2 in Primary or Secondary location.	
NOTE: Supports Full Height and Full length cards.	
<b>NOTE:</b> Bus width x16, x16, Connector Width x16, x16.	
HPE DL Gen10 x8/x16/x8 Riser Kit	870548-B21
<b>NOTE:</b> No M.2 support on this riser.	
<b>NOTE:</b> Supports Full Height, Half- length cards; Full Height, Full-length cards and Full Height, Half- length cards.	
NOTE: Bus width x8, x16, x8, Connector Width x8, x16, x8.	

## **Core Options**

HPE DL Gen10 x16/x16 GPU Riser Kit	826704-B21
<b>NOTE:</b> Primary or Secondary Riser, Connector in slot 2 & 3 for GPU support.	
NOTE: Supports Full Height and Full length cards.	
NOTE: Bus width x16, x16, Connector Width x16, x16.	
HPE DL38X Gen10 2SFF HDD SAS/SATA Riser Kit	826688-B21
<b>NOTE:</b> Premium bay supporting SFF SAS/SATA .	
NOTE: Available in Primary or Secondary Riser location.	
NOTE: Will leave 1 x16 Connector available in bottom slot.	
HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe SlimSAS Riser	867806-B21
NOTE: Supports NVMe drives in Primary or Secondary location.	
NOTE: Supports Full Height and half-length cards.	
<b>NOTE:</b> Bus width x8, x8, x8 Connector Width x8, x8, x8.	
HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser	867808-B21
NOTE: Supports up to 4 NVMe drives in Tertiary location.	
HPE DL38X Gen10 4-port 8 NVMe Secondary Slim SAS Riser	873732-B21
<b>NOTE:</b> Riser supporting up to 8 NVMe drives in Secondary location.	
HPE DL38X Gen10 2 x8 PCIe Tertiary Riser Kit	875780-B21
<b>NOTE:</b> Supports 2x 8 slots in the Tertiary location.	
HPE DL38X Gen10 x16 Tertiary Riser Kit	826700-B21
<b>NOTE:</b> Supports 1x 16 slot in the Tertiary location.	
NOTE: Supports Full Height and full-length card.	
NOTE: Bus width x16 Connector Width x16.	

## **Core Options**

# **Riser Information**

Riser informa			Riser position	1	Bus w	idth (Gen	3 lanes)	NVMe Conr	
Part number	Description	Primary	Secondary	Tertiary	Top slot	Middle Slot	Bottom slot	Ports	Drive count
n/a	This is the default riser in the chassis	D	Ν	Ν	x8	x16	x8		
870548-B21	HPE DL Gen10 x8/x16/x8 Riser Kit	0	0	Ν	x8	x16	x8		
826704-B21	HPE DL Gen10 x16/x16 GPU Riser Kit	0	0	Ν	0	x16	x16		
826694-B21	HPE DL38X Gen10 x16/x16 Riser Kit	0	0	Ν	x16	x16	0		
867807-B21	HPE DL38X Gen10 4-port 8 NVMe Primary SlimSAS Riser	0	N	Ν	0	0	0	4	8
867808-B21	HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser	Ν	N	0	0	0	0	2	4
873732-B21	HPE DL38X Gen10 4-port 8 NVMe Secondary SlimSAS Riser	Ν	0	Ν	0	0	0	4	8
867806-B21	HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe SlimSAS Riser	0	0	Ν	x8	x8	x8	1	2
871673-B21	HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe SlimSAS FIO Riser Kit	0	N	Ν	x8	x8	x8	1	2
826688-B21	HPE DL38X Gen10 2SFF HDD SAS/SATA Riser Kit	0	0	Ν	0	0	x16		
826700-B21	HPE DL38X Gen10 x16 Tertiary Riser Kit	N	N	0	X16	0	0		
875780-B21	HPE DL38X Gen10 2 x8 PCIe Tertiary Riser Kit	N	N	0	X8	X8	0		
871674-B21	HPE DL38X Gen10 Slot 1/2 x16/x16 FIO Riser Kit	0	0	Ν	x16	x16	0		
871676-B21	HPE DL38X Gen10 x16/x16 GPU Slot2/3 FIO Riser Kit	0	0	Ν	0	x16	x16		

## **NOTE:** The 826687-B21 premium 2SFF cage is leveraged both UMB, plus 2SFF rear over PS.

HPE Power Supplies	
HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
NOTE: Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard	
C-14 power inlet connector.	
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
NOTE: Flex Slot Titanium power supplies support power efficiency of up to 96% and include a standard	
C-14 power inlet connector.	
HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21
<b>NOTE:</b> Flex Slot universal power supplies support power efficiency of up to 94% and support both	
277VAC/380VDC power inputs.	
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21
<b>NOTE:</b> Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard	
C-14 power inlet connector.	
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21
<b>NOTE:</b> Flex Slot -48VDC power supplies support power efficiency of up to 94%.	
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21
<b>NOTE:</b> Flex Slot Platinum Plus power supplies support power efficiency of up to 94% and include a C-14	
power inlet connector that can support HPE Power Discovery Services (blue connector).	

<b>GPGPU</b> Int	formation											
						DL380 configuration						
Part number	Card	Qty supported	Processor supported	PCle speed	8SFF	8LFF	16SFF +UMB with 2SFF	16SFF +8NVMe	24SFF	24SFF +SFF rear	12LFF	12LFF +2SFF rear
Q0J62A	NVIDIA Tesla M10 4GB Module <sup>2</sup>	2	165W or below	Gen3	35C	35C	35C	25C <sup>1</sup>	35C	35C	30C	30C1
M3X67A	NVIDIA GRID M60 RAF Module	3	165W or below	Gen3	30C	25C	25C	25C <sup>1</sup>	25C	25C1	Not supported	Not supported
Q0V79A	NVIDIA Tesla P4 8GB Module	5	All	Gen3	35C	35C	35C	35C1	35C	35C1	35C	35C <sup>1</sup>
Q0V80A	NVIDIA Tesla P40 24GB Module	3	165W or below	Gen3	35C	35C	25C	25C1	25C	25C1	20C	20C <sup>1</sup>
Q0E21A	NVIDIA Tesla P100 16GB PCle	3	165W or below	Gen3	30C	25C	30C	25C <sup>1</sup>	25C	25C1	20C	20C <sup>1</sup>
Q2S42A	NVIDIA Tesla P100 12GB PCle	3	165W or below	Gen3	30C	25C	30C	25C <sup>1</sup>	25C	25C1	20C	20C <sup>1</sup>
Q2N68A	HPE NVIDIA Tesla V100 PCle 16GB Module	3	165W or below	Gen3	30C	25C	25C	25C <sup>1</sup>	25C	25C1	Not supported	Not supported
Q0V77A	NVIDIA Quadro P2000 GPU Module	5	All	Gen3	35C	35C	35C	35C1	35C	35C1	35C	35C <sup>1</sup>
Q0V78A	NVIDIA Quadro P4000 GPU Module	5	All	Gen3	35C	35C	35C	35C1	35C	35C1	35C	35C <sup>1</sup>
Q0V76A	NVIDIA Quadro P6000 PCle GPU Adptr	3	165W or below	Gen3	35C	35C	35C	25C <sup>1</sup>	35C	35C1	35C	35C <sup>1</sup>
Q1K38A	AMD Radeon Instinct MI25	3	165W or below	Gen3	35C	25C	25C	25C1	25C	25C1	Not supported	Not supported

**NOTE:** 1x 1600W PS recommended, but this card will work with 1x800W PS (per GPU). However check the power usage via the HPE Power Advisor Tool located at <u>http://www.hpe.com/info/hppoweradvisor</u>.

**NOTE:** Performance fans (867810-B21) are required for all GPU installations (Note these ship as standard with the 24SFF and 12LFF models).

**NOTE:** Performance Heatsinks (826706-B21) are required for Double Wide GPU installations (Note these ship as standard on Processors over 130W processors and the 8156, 6128 and 5122)

**NOTE:** Mixing of GPUs is not supported.

**NOTE:** With the Standard Primary Riser the top x8 PCIe Slot connector will not be accessible with the installation of a doublewide GPU.

**NOTE:** The P100, M10, P6000 and P40 cards are not supported with Processors over 160W.

**NOTE:** Only 2 SFF rear drives supported over Power Supply as would require Riser 1 and Riser 2 for GPU support. **NOTE:** 4 LFF mid-tray will not support any GPU cards.

### **Core Options**

**NOTE:** <sup>1</sup> Invalid configuration or no HW support may apply to multiple GPUs installed. HW limitation may not be a thermal limitation.

**NOTE:** <sup>2</sup> Only 2xM10 can be supported (on any x16 slot 2, 5 or 7) due to system running out of PCIe lanes.

**NOTE:** The M10 is limited to a max memory support of under 1TB.

NOTE: Any GPU installation does not meet Energy Star requirements.

NOTE: Installations with Graphics cards do not support Microsoft Windows Server 2012 R2 installations.

**NOTE:** V100 requires "Max Cooling" settings in current ROM.

**NOTE:** For Graphics cards there is a limitation of 1 single wide GPU on the slot 2/3 riser (826704-B21 Secondary and 871676-B21 Primary).

#### **HPE Computation and Graphics Accelerators** HPE NVIDIA Quadro P2000 Graphics Accelerator Q0V77A **NOTE:** Performance Heatsink is not required. **NOTE:** 5 of these cards are supported. NOTE: System Memory Restriction <128TB. HPE NVIDIA Quadro P4000 Graphics Accelerator Q0V78A NOTE: This required the HPE GPU 6px6p Y-Power Cable Kit 874212-B21. NOTE: Performance Heatsink is not required. **NOTE:** 5 of these cards are supported. **NOTE:** System Memory Restriction <128TB. Q0V76A HPE NVIDIA Quadro P6000 Graphics Accelerator NOTE: This required the HPE DL380 Gen10 8P Cable Kit 871828-B21. **NOTE:** 3 of these cards are supported, with a processor 165W or below. **NOTE:** System Memory Restriction <128TB. NVIDIA Tesla M10 Quad GPU Module Q0J62A NOTE: This required the HPE DL380 Gen10 8P Cable Kit 871828-B21. NOTE: Only 2x M10 can be supported (on any x16 slot 2, 5 or 7) due to system running out of PCIe lanes. **NOTE:** 2 of these cards are supported with a processor 165W or below. NOTE: GRID Lic required. **NOTE:** System Memory Restriction <1TB. Q0V79A HPE NVIDIA Tesla P4 8GB Computational Accelerator **NOTE:** Performance Heatsink is not required. NOTE: 5 of these cards are supported. **NOTE:** System Memory Restriction <128TB. HPE NVIDIA Tesla P40 24GB Computational Accelerator Q0V80A **NOTE:** This required the HPE DL380 Gen10 8P Keved Cable Kit 871829-B21. **NOTE:** 3 of these cards are supported with a processor 165W or below. NOTE: System Memory Restriction <128TB. HPE NVIDIA Tesla P100 PCIe 12GB Computational Accelerator Q2S42A NOTE: This required the HPE DL380 Gen10 8P Keyed Cable Kit 871829-B21. **NOTE:** 3 of these cards are supported, with a processor 165W or below. NOTE: System Memory Restriction <128TB. HPE NVIDIA Tesla P100 PCIe 16GB Computational Accelerator QOE21A NOTE: This required the HPE DL380 Gen10 8P Keyed Cable Kit 871829-B21. **NOTE:** 3 of these cards are supported, with a processor 165W or below. **NOTE:** System Memory Restriction <128TB. HPE NVIDIA Tesla V100 PCIe 16GB Computational Accelerator Q2N68A **NOTE:** 3 of these cards are supported. NOTE: System Memory Restriction <128TB. **NOTE:** No support on 12LFF chassis. NOTE: V100 requires "Max Cooling" settings in current ROM.

## **Core Options**

HPE NVIDIA Tesla M60 Reverse Air Flow Dual GPU PCIe Graphics Accelerator	M3X67A
<b>NOTE:</b> 3 of these cards are supported.	
NOTE: GRID Lic required.	
NOTE: System Memory Restriction <128TB.	
NOTE: Not supported in a 12LFF chassis.	
HPE AMD Radeon Instinct MI25 Graphics Accelerator	Q1K38A
NOTE: 3 of these cards are supported.	
NOTE: Not supported in a 12LFF chassis.	
Graphics Cable Kits	
HPE GPU 6px6p Y-Power Cable Kit	874212-B21
HPE DL380 Gen10 8-pin Cable Kit	871828-B21
HPE DL380 Gen10 8-pin Keyed Cable Kit	871829-B21
HPE DL380 Gen10 8x 6-pin Cable Kit	871830-B21

## **HPE Cooling Options**

HPE DL38X Gen10 High Performance Temperature Fan Kit	867810-B21
NOTE: This kit is required for specific Ambient temperature environments.	
NOTE: High Performance fan kit consists of 6 fans, these will need to replace all the standard fans in the	
unit, and fill all 6 fan cages.	
NOTE: The 12 LFF and 24 SFF models (including field upgrades to 24 SFF) will already include 6 High	
Performance fan kits.	
<b>NOTE:</b> The High Performance fan kit is needed to support certain Passive GPGPU (Graphics cards)	
configurations; or ASHRAE operating environments.	
NOTE: For elevated ambient temperature support please see: <a href="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a> .	

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

#### **Embedded Management**

### **HPE iLO Advanced**

HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features	E6U59ABE
HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	512485-B21
HPE iLO Advanced Flexible Quantity License with 1yr Support on iLO Licensed Features	512486-B21
HPE iLO Advanced AKA Tracking License with 1yr Support on iLO Licensed Features	512487-B21
HPE iLO Advanced Electronic License with 3yr Support on iLO Licensed Features	E6U64ABE
HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A
HPE iLO Advanced Flexible Quantity License with 3yr Support on iLO Licensed Features	BD506A
HPE iLO Advanced AKA Tracking License with 3yr Support on iLO Licensed Features	BD507A
HPE iLO Advanced Security	
HPE iLO Advanced Premium Security Upgrade Electronic License with 3yr Support on Licensed Features	Q7E12AAE
HPE iLO Advanced Premium Security Edition License with 1yr Support on Licensed Features	Q7E31A
HPE iLO Advanced Premium Security Flex Qty License with 1yr Support on Licensed Features	Q7E32A
HPE iLO Advanced Premium Security Edition Electronic License with 1yr Support on Licensed Features	Q7E32AAE
HPE iLO Advanced Premium Security AKA Tracking License with 1yr Support on Licensed Features	Q7E35A
HPE iLO Advanced Premium Security Upgrade Electronic License with 3yr Support on Licensed Features	Q7E12AAE
HPE iLO Advanced Premium Security Edition License with 3yr Support on Licensed Features	Q7E33A
HPE iLO Advanced Premium Security Flex Qty License with 3yr Support on Licensed Features	Q7E34A
HPE iLO Advanced Premium Security Edition Electronic License with 3yr Support on Licensed Features	Q7E34AAE
HPE iLO Advanced Premium Security AKA Tracking License with 1yr Support on Licensed Features	Q7E36A
HPE Converged Infrastructure Management Software	
HPE OneView Physical Media Kit LTU	E5Y37A
HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A
HPE OneView including 3yr 24x7 Support Track 1-server LTU	E5Y36A
HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE
HPE OneView Upgrade from Insight Management 3yr 24x7 Support 1-server LTU	F6Q91A
HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU	P8B24A
HPE OneView w/o iLO including 3yr 24x7 Support Track 1-server LTU	P8B25A
HPE OneView w/o iLO Advance including 3yr 24x7 Support Track 1-server LTU	E5Y40A
HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU	P8B26AAE
<b>NOTE:</b> Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be <b>dow</b>	vnloaded.

### HPE PCIe Workload Accelerator Options

803195-B21
803197-B21
803200-B21
803202-B21
877825-B21

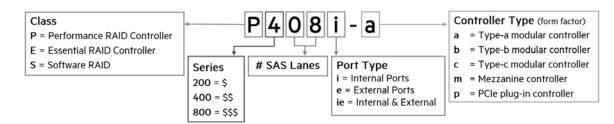
HPE 3.2TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	877827-B21
HPE 6.4TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	877829-B21
HPE 4TB PCIe x4 Lanes Read Intensive HHHL 3yr Wty Digitally Signed Firmware Card	877831-B21
HPE 1.5TB PCIe x4 Lanes Write Intensive HHHL 3yr Wty Digitally Signed Firmware Card	P01058-B21
<b>NOTE:</b> Please see the <b>HPE PCIe Workload Accelerators for ProLiant Servers QuickSpecs</b> for Specifications and additional information.	Technical
HPE Security	
HPE Gen10 2U Bezel Kit	867809-B21
HPE Bezel Lock Kit	875519-B21
HPE Gen10 Chassis Intrusion Detection Kit	867824-B21

NOTE: This provides a physical connection from the chassis board and hood and detects any physical<br/>intrusion into the chassis, providing security during the entire supply chain process of shipping, receiving,<br/>distribution, and operation.864279-B21HPE Trusted Platform Module 2.0 Gen10 Option864279-B21

**NOTE:** HPE Trusted Platform Module 2.0 option works with Gen10 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants. **NOTE:** HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

#### **HPE Smart Array Controllers**

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



### HPE Flexible Smart Array Controllers

<b>NOTE:</b> All performance RAID controllers are supported by the HPE Smart Storage Battery (P01366-B21), which supports multiple devices and is sold separately. <b>NOTE:</b> Flexible Smart Array controllers do not consume a PCIe slot.	
HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller	804338-B21
<b>NOTE:</b> Does not occupy a PCIe expansion slot and includes SmartCache license. <b>NOTE:</b> The P816i-a cable ships in the 12LFF chassis only (868705-B21).	
HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller	804331-B21
HPE Smart Array E208i-a SR Gen10 (8 Internal Lanes/No Cache) 12G SAS Modular Controller	804326-B21
Performance RAID Controllers	
<b>NOTE:</b> All performance RAID controllers are supported by the HPE Smart Storage Battery (P01366-B21), which supports multiple devices and is sold separately.	
HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller	830824-B21
HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller	804405-B21
Essential RAID Controllers	
HPE Smart Array E208i-p SR Gen10 (8 Internal Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804394-B21

HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804398-B21
HPE Cable Options	
HPE DL380 SFF Smart Array HBA H200/P400 Series SAS Cable Kit	786092-B21
HPE DL380 Gen10 Mini SAS 3POS Cable Kit	826709-B21
HPE DL38X Gen10 2 Drive NVMe Slim SAS Cable Kit	871827-B21
NOTE: For details on cabling options, additional information available here:	
http://www.hpe.com/info/CablingMatrixGen10	
Optional Software	
HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU	Q2F26AAE
HPE Smart Array SR SmartCache (Single Key/Single Server) LTU	D7S26A
HPE Smart Array SR SmartCache (Single Key/Multiple Servers) LTU	D7S27A
HPE Smart Array SR SmartCache (Single Key/Multiple Servers) E-LTU	D7S27AAE
<b>NOTE:</b> SmartCache is offered on HPE Smart Array performance RAID controllers and comes standard (no licensing is required) if the HPE Smart Array P816i-a SR Gen10 Controller is installed in the server.	
Optional Upgrades	
HPE 96W Smart Storage Battery (up to 20 Devices) with 145mm Cable Kit	P01366-B21
<b>NOTE:</b> Provides backup power for multiple HPE Smart Array controllers or other devices. Is required with performance RAID controllers.	
HPE Tape Backup	
NOTE: For the complete range of tape drives, autoloaders, libraries and media see:	
https://www.hpe.com/us/en/storage/storeever-tape-storage.html. For hardware and software	
compatibility of Hewlett Packard Enterprise tape backup products	
http://www.hpe.com/storage/BURAcompatibility.	
HPE Storage Options	
Emulex Fibre Channel HBAs	
HPE StoreFabric SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	Q0L13A
HPE StoreFabric SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	Q0L14A
HPE StoreFabric SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	Q0L11A

QLogic Fibre Channel HBAs	
HPE StoreFabric SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter	P9D93A
HPE StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	P9M75A
HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	P9M76A
Converged Network Adapters	
HPE StoreFabric CN1100R Dual Port Converged Network Adapter	QW990A
HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter	N3U52A
HPE StoreFabric CN1200E 10Gb Converged Network Adapter	E7Y06A
HPE StoreFabric CN1200E 10GBASE-T Dual Port Converged Network Adapter	N3U51A
<b>NOTE:</b> For the complete listing of Fibre Channel Host Bus Adapters for Windows 2000, Windows Server 2003 please see: <a href="https://www.hpe.com/us/en/product-catalog/storage/storage-adapters.hits-12.html">https://www.hpe.com/us/en/product-catalog/storage/storage-adapters.hits-12.html</a>	and Linux,

HPE StoreFabric SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

QOL12A

#### **HPE Racks**

**NOTE:** Please see the <u>HPE Advanced Series Racks QuickSpecs</u> for information on additional racks options and rack specifications.

**NOTE:** Please see the <u>HPE Enterprise Series Racks QuickSpecs</u> for information on additional racks options and rack specifications.

**NOTE:** Please see the **HPE Standard Series Racks QuickSpecs** for information on additional racks options and rack specifications.

#### **HPE Power Distribution Units (PDUs)**

**NOTE:** Please see the <u>HPE Basic Power Distribution Units (PDU) QuickSpecs</u> for information on these products and their specifications.

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

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

**NOTE:** Please see the <u>HPE Metered and Switched Power Distribution Units (PDU) QuickSpecs</u> for information on these products and their specifications.

#### HPE Uninterruptible Power Systems (UPS)

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

**NOTE:** Please see the <u>HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs</u> for information on these products and their specifications.

**NOTE:** Please see the <u>HPE Line Interactive Single Phase UPS QuickSpecs</u> for information on these products and their specifications.

#### **HPE Rack Options**

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

#### Rail Kits

**NOTE:** Ball bearing and Easy Install rail kits contain telescoping rails which allow for in-rack serviceability. **NOTE:** To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (695539-001).

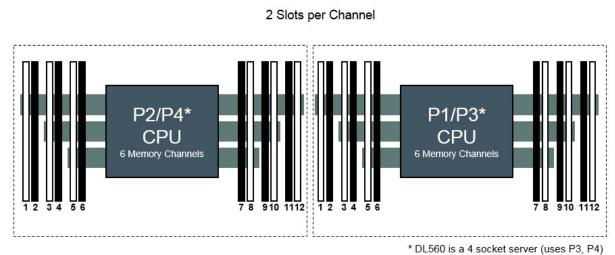
**CAUTION:** Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

HP 2U Small Form Factor Easy Install Rail Kit	733660-B21
NOTE: Does not include CMA (733664-B21).	
HP 2U Large Form Factor Easy Install Rail Kit	733662-B21
NOTE: Does not include CMA (733664-B21).	
HP 2U Cable Management Arm for Easy Install Rail Kit	733664-B21
HPE 2U Small Form Factor Ball Bearing Rail Kit	720863-B21
NOTE: Does not include CMA (720865-B21).	
HPE 2U Large Form Factor Ball Bearing Rail Kit	720864-B21
NOTE: Does not include CMA (720865-B21).	
HPE 2U Cable Management Arm for Ball Bearing Rail Kit	720865-B21
HPE Other Options	
HPE Rack LED Light Kit	BW939A

HP Kit LCD 1.83m Latch Display Port Cable	G7T29A
HPE USB and SD Options	
HPE Enterprise Mainstream Flash Media Kits for Memory Cards	
HPE 32GB microSD Mainstream Flash Media Kit	700139-B21
HPE 8GB microSD Enterprise Mainstream Flash Media Kit	726116-B21
HPE 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	737953-B21
HPE Dual 8GB microSD Enterprise Midline USB Kit	741279-B21
HPE Support Services	
Installation & Startup Services	
HPE Install ProLiant DL38x(p) Service	U4554E
HPE Installation and Startup DL38x(p) Service	U4555E
Proactive Care	
HPE 3 Year Proactive Care 24x7 DL38x Gen10 Service	H8QQ0E
HPE 3 Year Proactive Care 24x7 with DMR DL38x Gen10 Service	H8QQ1E
HPE 3 Year Proactive Care 24x7 with CDMR DL38x Gen10 Service	H8QQ2E
HPE 3 Year Proactive Care Call-To-Repair DL38x Gen10 Service	H8QQ9E
HPE 3 Year Proactive Care Call-To-Repair 24x7 with DMR DL38x Gen10 Service	H8QR0E
HPE 3 Year Proactive Care Call-To-Repair with CDMR DL38x Gen10 Service	H8QR1E

## Memory

**Memory Population guidelines** 



HPE Gen10 DL360 / DL380 / DL560\* Servers

## Front of Server

HPE ProLiant Gen10 12 slot per CPU DIMM Population Order												
		DIMI	MP	ορι	ilati	on	Orc	ler				
1 DIMM								8				
2 DIMMs								8		10		
3 DIM M s								8		10		12
4 DIMMs			3		5			8		10		
5 DIMMs*			3		5			8		10		12
6 DIMMs	1		3		5			8		10		12
7 DIM M s *	1		3		5		7	8		10		12
8 DIM M s			3	4	5	6	7	8	9	10		
9 DIM M s *	1		3		5		7	8	9	10	11	12
10 DIMMs *	1		3	4	5	6	7	8	9	10		12
11 DIM Ms *	1		3	4	5	6	7	8	9	10	11	12
12 DIMMs	1	2	3	4	5	6	7	8	9	10	11	12
* (	Jnb	ala	nce	d, n	otı	reco	mn	nen	ded			

### General Memory Population Rules and Guidelines:

- . Install DIMMs only if the corresponding processor is installed.
- . If only one processor is installed in a two-processor system, only half of the DIMM slots are available.
- . To maximize performance, it is recommended to balance the total memory capacity between all installed processors.
- . When two processors are installed, balance the DIMMs across the two processors.
- . White DIMM slots denote the first slot to be populated in a channel.
- . Mixing of DIMM types (UDIMM, RDIMM, and LRDIMM) is not supported.
- . The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- . The maximum memory capacity is a function of the number of DIMM slots on the platform, the largest DIMM capacity qualified on the platform, the number and model of installed processors qualified on the platform.

#### QuickSpecs

### Memory

- . For details on the HPE Server Memory Options Population Rules, visit: <u>http://www.hpe.com/docs/memory-population-rules</u>
- . To realize the performance memory capabilities listed in this document, HPE DDR4 SmartMemory is required. For additional information, please see the **HPE DDR4 SmartMemory QuickSpecs**.

DIMM Type	Register DIMM (RDIMM)						
HPE SKU P/N	815097-B21	815098-B21	835955-B21	815100-B21			
	HPE 8GB 1Rx8	HPE 16GB 1Rx4	HPE 16GB 2Rx8	HPE 32GB 2Rx4			
SKU Description	PC4-2666V-R Kit	PC4-2666V-R Kit	PC4-2666V-R Kit	PC4-2666V-R Kit			
DIMM Rank ->	Single Rank (1R)	Single Rank (1R)	Dual Rank (2R)	Dual Rank (2R)			
DIMM Capacity ->	8GB	16GB	16GB	32GB			
Voltage	1.2V	1.2V	1.2V	1.2V			
DRAM depth [bit]	1G	2G	1G	2G			
DRAM Width [bit]	x8	х4	x8	x4			
DRAM Density	8Gb	8Gb	8Gb	8Gb			
CAS Latency	19-19-19	19-19-19	19-19-19	19-19-19			
DIMM Native Speed (MT/s)	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s			
Intel Xeon®Platinum/Gold 8	1xx/61xx Processors Of	ficially Supported Memo	ory Speed (MT/s)				
1 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s			
2 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s			
Intel Xeon®Gold/Silver 51xx	/41xx Processors Officia	ally Supported Memory	Speed (MT/s)				
1 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s			
2 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s			
Intel Xeon®Bronze 31xx Pro	cessors Officially Suppo	rted Memory Speed (M1	[/s)				
1 DIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s			
2 DIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s			
HPE Server Memory Speed (	(MT/s): Intel Xeon®Platir	num/Gold 81xx/61xx Pr	ocessors *				
1 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s			
2 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s			
HPE Server Memory Speed (	(MT/s): Intel Xeon®Gold/	Silver 51xx/41xx Proce	ssors *				
1 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s			
2 DIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s			
HPE Server Memory Speed (	(MT/s): Intel Xeon®Bronz	ze 31xx Processors *					
1 DIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s			
2 DIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s			

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

## Memory

DIMM Type	Load Reduce	Load Reduced (LRDIMM)				
HPE SKU P/N	815101-B21	815102-B21				
SKU Description	HPE 64GB 4Rx4 PC4-2666V-L Kit	HPE 128GB 8Rx4 PC4-2666V-L Kit				
DIMM Rank ->	Quad Rank (4R)	Octal Rank (8R)				
DIMM Capacity ->	64GB	128GB				
Voltage	1.2V	1.2V				
DRAM depth [bit]	2G	2G				
DRAM Width [bit]	x4	x4				
DRAM Density	8Gb	8Gb				
CAS Latency	19-19-19	22-19-19				
DIMM Native Speed (MT/s)	2666	2666				
Intel Xeon® Platinum/Gold 81xx/61	xx Processors Officially Supported Memory Sp	eed (MT/s)				
1 DIMM Per Channel	2666 MT/s	2666 MT/s				
2 DIMM Per Channel	2666 MT/s	2666 MT/s				
Intel Xeon® Gold/Silver 51xx/41xx	Processors Officially Supported Memory Speed	d (MT/s)				
1 DIMM Per Channel	2400 MT/s	2400 MT/s				
2 DIMM Per Channel	2400 MT/s	2400 MT/s				
Intel Xeon <sup>®</sup> Bronze 31xx Processor	s Officially Supported Memory Speed (MT/s)					
1 DIMM Per Channel	2133 MT/s	2133 MT/s				
2 DIMM Per Channel	2133 MT/s	2133 MT/s				
HPE Server Memory Speed (MT/s):	Intel Xeon® Platinum/Gold 81xx/61xx Process	ors *				
1 DIMM Per Channel	2666 MT/s	2666 MT/s				
2 DIMM Per Channel	2666 MT/s	2666 MT/s				
HPE Server Memory Speed (MT/s):	Intel Xeon® Gold/Silver 51xx/41xx Processors	*				
1 DIMM Per Channel	2400 MT/s	2400 MT/s				
2 DIMM Per Channel	2400 MT/s	2400 MT/s				
HPE Server Memory Speed (MT/s):	Intel Xeon® Bronze 31xx Processors *	•				
1 DIMM Per Channel	2133 MT/s	2133 MT/s				
2 DIMM Per Channel	2133 MT/s	2133 MT/s				

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

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

Pre Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
3106	16 GB (1x16 GB RDIMM DR)	384 GB (24x 16 GB)	3072 GB (24x 128 GB)
4110	32 GB (2x16 GB RDIMM DR)	384 GB (24x 16 GB)	3072 GB (24x 128 GB)
4114	32 GB (2x16 GB RDIMM DR)	384 GB (24x 16 GB)	3072 GB (24x 128 GB)
5118	64 GB (2x32 GB RDIMM DR)	768 GB (24x 32 GB)	3072 GB (24x 128 GB)
6130	64 GB (2x32 GB RDIMM DR)	768 GB (24x 32 GB)	3072 GB (24x 128 GB)

### **NOTE:** 128 GB coming 2H 2017.

### Memory

#### DDR4 memory options part number decoder

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

- 8GB = 8,192 MB
- 16GB = 16,384 MB
- 32GB = 32,768 MB
- 64GB = 65,536 MB

For more information on memory, please see the Memory Quickspecs: HPE DDR4 SmartMemory

#### QuickSpecs

## Storage

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

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12 LFF + 3 rear LFF drives

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12 LFF + 2 rear SFF drives

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6 rear SFF drives

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24 SFF + rear 2 SFF drives

	2	<b>())</b> 3	0)) 4	<b>9</b> 5	<b>)))</b> 6 ())	<b>9</b> 7 <b>0</b>	<b>))</b> ~ ())	9	<b>1</b> 000 10	<b>9)</b> 11	<b>9)</b> 12	<b>)))</b> 13 ())	0)10	<b>)))</b> 15	1000	100 17	<b>9))</b> 18	<b>9))</b> 19	20 ©	21 ©	<b>9</b> 22	<b>8</b> 23		• 0000000	
l	۲	۲	۹		0	0	0		0	۲	0	•	•	9	•		•	۲	۲	•	0	•	•	40	

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# **Technical Specifications**

### System Unit

System Onn							
Dimensions	8.73 x 44.54 3.44 x 17.54		SFF Drives:				
	8.73 x 44.54 3.44 x 17.54		LFF Drives:				
Weight (approximate)	Maximum:	19.5 kg 43.00 lbs	Minimum: 8 SFF chassis with 1x SFF HDD and 7 HDD blanks, 2x Drive Bay blanks, 1x processor including standard heatsink, 1x power supply				
	Minimum:	14.9 kg 32.75 lbs	(plus blank), 1x Smart Array, 1x Riser installed, cables for the above)				
	Maximum:	24.5 kg 54 lbs	Maximum: 12 LFF hard drives (no rear drives), 2x processors, 2x power supplies, 1x Smart Array, 2x Risers installed)				
	Minimum:	17.1 kg 37.75 lbs					
Input Requirements (per power supply)	Rated Line V	/oltage	100 to 120 VAC 200 to 240 VAC				
BTU Rating	Maximum		For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VAC) for China Only				
			For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VAC) for China Only				
Power Supply Output	Rated Stead	y-State Power	For 1400W Power Supply: 1400W (at 240 VAC), 1400W (at 240 VAC)				
(per power supply)			For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VAC) input for China only				
			For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VAC) input for China only				
	Maximum Pe	eak Power	For 1400W Power Supply: 1400W (at 200 to 240 1VAC), 1400W (at 240 VAC) input for China only				
			For 800W Power Supply: 800W (at 100 to 127 VAC), 800W (at 200 to 240 1VAC), 800W (at 240 VAC) input for China only				
			For 500W Power Supply: 500W (at 100 to 127 VAC), 500W (at 200 to 240 VAC), 500W (at 240 VAC) input for China only				
System Inlet Temperature	Standard Op Temperature	-	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed.				
			System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).				
	Extended Ar Operating To		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				
			<u>1111247 www.ilpc.com/sci 4615/a5111 ac</u>				
			For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft)				

		above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: http://www.hpe.com/servers/ashrae
		System performance may be reduced if operating in the extended ambient operating range or with a fan fault.
	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
Relative Humidity	Operating	8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.
(non-condensing)	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing
Altitude	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Acoustic Noise	position A-Weighted soun environment. Noise emissi declared in accordance wi shipping configurations. <i>A</i>	Weighted sound power levels ( $L_{WAd}$ ) and declared average bystander d pressure levels ( $L_{pAm}$ ) when the product is operating in a 23°C ambient ions were measured in accordance with ISO 7779 (ECMA 74) and th ISO 9296 (ECMA 109). The listed sound levels apply to standard Additional options may result in increased sound levels. Please have your de information from the HPE EMESC website for further technical details ons listed below.
	LWAd	4.8 B Entry
		4.4 B Base
		4.6 B Perf
	LpAm	37 dBA Entry
	1	31 dBA Base
		31 dBA Perf
	Operating	
	LWAd	4.8 B Entry
		4.4 B Base
		4.6 B Perf
	LpAm	37 dBA Entry
		31 dBA Base
		31 dBA Perf
	NOTE: Acquistica lavala p	resented here are generated by the test configuration only. Acoustics
	levels will vary depending notification and are for re <b>NOTE:</b> Product conforma	on system configuration. Values are subject to change without
	compliance logos and sta <b>NOTE:</b> The Listed sound may result in increased so	levels apply to standard shipping configurations. Additional options
Emissions Classification (EMC) – Regulatory Information	To view the regulatory inf for Server, Storage, Power Enterprise Support Center	ormation for your product, view the Safety and Compliance Information , Networking, and Rack Products, available at the Hewlett Packard

Enterprise Support Center: http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts

### **Technical Specifications**

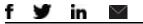
For information on the HPE Smart Array E208i-a SR Gen10 Controller please refer to their **QuickSpecs**. For information on the HPE Smart Array E208i-p SR Gen10 Controller please refer to their **QuickSpecs**. For information on the HPE Smart Array E208e-p SR Gen10 Controller please refer to their **QuickSpecs**. For information on the HPE Smart Array P408i-a SR Gen10 Controller please refer to their **QuickSpecs**. For information on the HPE Smart Array P408i-p SR Gen10 Controller please refer to their **QuickSpecs**. For information on the HPE Smart Array P408i-p SR Gen10 Controller please refer to their **QuickSpecs**. For information on the HPE Smart Array P408e-p SR Gen10 Controller please refer to their **QuickSpecs**. For information on the HPE Smart Array P408e-p SR Gen10 Controller please refer to their **QuickSpecs**.

Environment-<br/>friendly Products<br/>and ApproachEnd-of-life Management and<br/>RecyclingHewlett Packard Enterprise offers end-of-life product return, trade-in,<br/>and recycling programs, in many geographic areas, for our products.<br/>Products returned to Hewlett Packard Enterprise will be recycled,<br/>recovered or disposed of in a responsible manner.The EU WEEE directive (2002/95/EC) requires manufacturers to provide<br/>treatment information for each product type for use by treatment facilities.<br/>This information (product disassembly instructions) is posted on the<br/>Hewlett Packard Enterprise web site. These instructions may be used by<br/>recyclers and other WEEE treatment facilities as well as Hewlett Packard<br/>Enterprise OEM customers who integrate and re-sell Hewlett Packard<br/>Enterprise equipment.

# Summary of Changes

Date	Version History	Action	Description of Change
05-Feb-2018	From Version 8 to 9	Added	Added new SATA SSDs, NVMe drives, and PCIe accelerator cards.
18-Dec-2017	From Version 7 to 8	Changed	Weight specifications were revised.
04-Dec-2017	From Version 6 to 7	Added	Added HPE Scalable Persistent Memory. Added HPE Specific IST Processor offering Gold 6143 and Platinum 8165 bins. Added Large capacity 15.3TB SSDs. Added new AMD and NVIDIA Graphics card options.
		Changed	Processors, Memory, Maximun Internal Storage, Configuration Information - Factory Integrated Models, Core Options, and Additional Options were revised.
23-Oct-2017	From Version 5 to 6	Changed	Memory speed table was updated to display the 61XX processors running at 2666MT/s.
16-Oct-2017	From Version 4 to 5	Added	8GB Dual Rank Memory was added. Riser table was added under Core Options.
		Changed	Platform Information, FlexibleLOM adapters, GPGPU table under Core Options, HPE Computation and Graphics Accelerators, and HPE Smart Array Controllers were revised.
25-Sep-2017	From Version 3 to 4	Added	Added new 128GB GB DIMM. Additional Intel® Xeon® Processor Scalable Family processor bins were added. Added new NVIDIA GPU cards. Added new drive options offering (SSD, m.2, NVMe).
		Changed	Memory, Standard Features, Configuration Information - Factory Integrated Models, Core Options, Additional Options, and Technical Specifications were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
4-Sep-2017	From Version 2 to 3	Changed	Smart Buy models section was revised (NA version only).
7-Aug-2017	From Version 1 to 2	Added	Added new Solid State Drives offering to the HPE Drives section.
		Changed	Platform Information, Standard Features, Optional Features, Pre-configured Models, Configuration Information - Factory Integrated Models, Core Options, and Additional Options section were revised.
11-Jul-2017	Version 1	New	New QuickSpecs.

## Summary of Changes



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

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