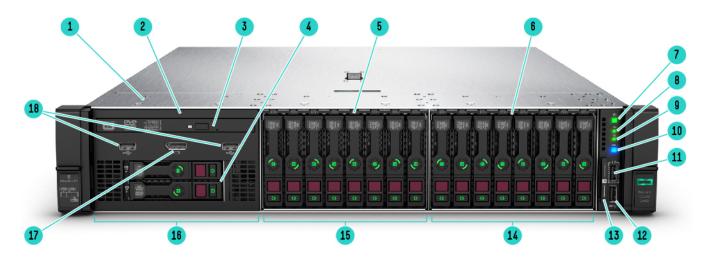
# QuickSpecs

### 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.

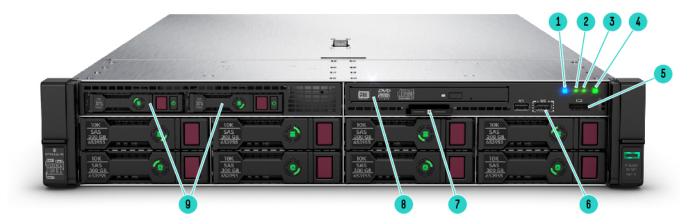


#### Front View – SFF chassis with optional Universal Media bay with optical and 2 NVME plus 16 NVMe shown

- 1. Quick removal access panel
- 2. Optional Universal Media bay. 2 USB 2.0 and Display port 1 standard (8 SFF bay or 6 SFF+2NVMe or 8NVMe optional)
- 3. Optional Optical drive. Requires Universal Media bay 12.
- Optional 2 SFF HDD, requires optional Universal Media bay 13.
   Drive Bay 2, NVMe shown (8 SFF. 6SFF+2NVMe or 8 14.
- NVMe PCle SSD optional)6.8 SFF Drive Cage Bay15.
- Power On/Standby button and system power LED button
- 8. Health LED
- 9. NIC status

- 10. UID button
- 11. iLO Front Service Port
  - USB 3.0
  - Serial label pull tag
- 14. Box 3
- 15. Box 2
- 16. Box 1
- 17. Optional front display port (Via Universal Media Bay)
- 18. Optional USB 2.0 (via Universal Media Bay)





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

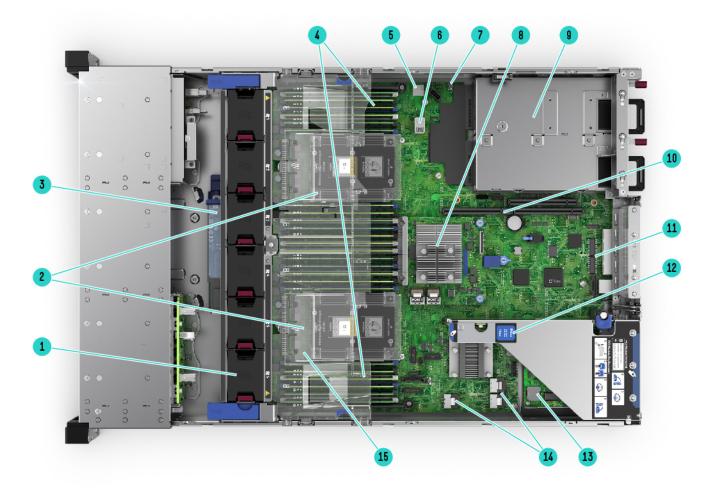
- 1. UID button
- 2. Health LED

5.

3. NIC status

Front display port

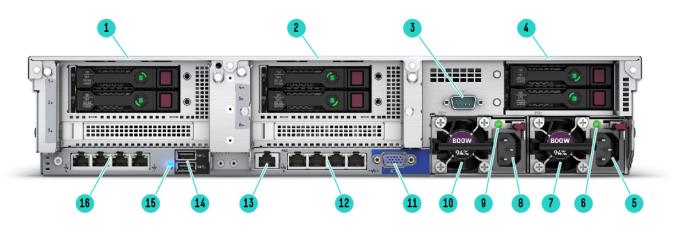
- 4. Power On/Standby button and system power LED button
- 6. iLO Front Service Port
- 7. Serial label pull tag
- 8. Optional optical drive shown (blank as standard)
- 9. Optional 2 SFF Drive bay, 2 NVMe shown



### 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)
- 2. 2 Processors, heatsink showing
- 3. Optional HPE Smart Storage Battery
- 4. DDR4 DIMM slots. Shown fully populated in 24 slots (12 per processor)
- 5. MicroSD card slot (Optional Dual Micro-SD option)
- 6. Internal USB 3.0 connector
- 7. Chassis intrusion detection connector
- 8. Optional HPE Smart Array (P408i-a shown)Clear air baffle

- 9.. (Under) Hot Plug redundant HPE Flexible Slot Power supplies
- 10. Connection for second (optional) riser (Requires second CPU)
- 11. Embedded 4x1Gbe NIC
- 12. Primary PCIe riser, standard (Optional double wide GPU riser)
- 13. Optional Flexible LOM slot
- 14. X4 SATA ports (1, 2 and 3)
- 15. Clear air baffle



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

- Primary Riser. PCI Slots (Slots 1-3 top to bottom, riser shipped 9. standard, not shown), optional 2SFF rear drives
- 2. Secondary Riser. PCI Slots (Slots 4-6top to bottom, not shown, requires second riser card, and second processor). Showing optional 2 SFF rear
- 3. Optional serial port
- 74. Tertiary Riser (Slots 7-8). Optional rear 2 SFF HDD (supported in 24 SFF or 12 LFF front end)
- 5. Power supply Power connection
- 6. Power supply Power LED
- 7. HPE Flexible Slot Power Supply bay 1 (800W shown)
- 8. Power supply Power connection

- Power supply Power LED
- 10. HPE Flexible Slot Power Supply bay 2 (800W shown)
- 11. VGA connector
- 12. Embedded 4 x 1GbE Network Adapter
- 13. Dedicated iLO management port
- 14. USB connectors 3.0 (2)
- 15. Unit ID LED
- 16. Optional FlexibleLOM ports (Shown: 4 x 1GbE)

### What's New:

- Xeon Gold 5117 Processor
- HPE StoreFabric 'CN1200R 10GBASE-T' and 'CN1300R 10/25Gb Dual Port' Converged Network Adapters
- AMD Radeon Pro V340 Graphics Accelerator
- HPE DDR-4 DIMM Blanks Kit
- Bezel Air Filter NEBS-compliant Kit
- NVIDIA Tesla V100-32GB PCIe Module
- Smart Array P824i-p MR Gen10 (24 Internal Lanes/4GB Cache/CacheCade) 12G SAS PCIe Controller

### **Platform Information**

### Form Factor

2U rack

### Chassis Types

8 SFF with optional Universal Media Bay, and optional SFF or NVMe drive bay options

24 SFF bay with additional 6SFF rear drive bay option to total 30 SFF drives

8 LFF with Universal Media Bay

12 LFF with optional 4 LFF mid-plane and optional 3LFF + 2 SFF rear drive bay to total 19 LFF drives + 2 SFF drives

NOTE: The 3 LFF rear drive box will consume space for the secondary and tertiary riser.

**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.

**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.

**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.

**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.

**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). Note a field upgrade to 24 SFF will require a High Performance fan kit (867810-B21).

**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).

**NOTE:** The 8LFF chassis ships with 6-standard fans.

**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.

### System Fans

Standard – fan types included

**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).

NOTE: 2P models typically ship with 6 standard fans. 2P Models have (6) (N+1 redundancy standard).

**NOTE:** The 12 LFF and 24 SFF chassis ship with 6 High performance fans as standard.

**NOTE:** The 8LFF chassis ships with 6 standard fans as standard.

**NOTE:** High performance fan kit is available to meet ambient temperature environments.

NOTE: High performance fan kits are required for rear drives, Graphics (GPU) card or NVMe configurations.

### **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 8176 Processor	2.1 GHz	28	38.50 MB	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
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 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 6142 Processor	2.6 GHz	16	22.00 MB	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6140 Processor	2.3 GHz	18	24.75 MB	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6138 Processor	2.0 GHz	20	27.50 MB	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 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 5117 processor	2.0GHz	14	19.25 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: <u>http://www.intel.com/products/server/chipsets/</u>

### **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

rype.		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

HPF DDR4 SmartMemory

### **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:

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

### **Memory Protection**

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

Expansion	Slots
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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	PCIe 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	PCIe 3.0	X8	X8	Full-height, full-length slot	Proc 2
2	PCIe 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 Controller	HPE Smart Array P408i-a SR Gen10 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 depending on model			
Optical Drive Ships standard in Performance Models			
	Optional: DVD-ROM, DVD-RW		
Hard Drives	None ship standard		

### **Maximum Internal Storage**

i laximani internai brorage		
	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 15.3 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
NOTE: 2x m.2 drives are suppor	ted on the Primary Riser.	
	and the second	

**NOTE:** uFF drives are also supported.

### **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  imes 1 Gb ports shipping standard with optional FlexibleLOM or stand up card
HPE iLO Remote Management Network Port	1 Gb Dedicated
Front iLO Service Port	1 standard (Not available on 12 LFF chassis or when SID is ordered, note iLO dongle required, 880123-B21)
Micro SD Slot	1 Micro SD
<b>NOTE:</b> The Micro SD slot is not a the server is powered.	a hot-pluggable device. Customers should not attempt to plug an SD card into the SD slot while
USB 3.0	Up to 5 total: 1 front, 2 rear, 2 internal (secure), 2 optional USB 2.0 front via Universal Media Bay, or standard on 8LFF chassis
SID (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 Canonical Ubuntu ClearOS

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.

### **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 <u>http://www.hpe.com/info/ilo</u>.

#### UEFI

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

#### Intelligent Provisioning

Hassle free server and OS provisioning for 1 or more servers with Intelligent Provisioning. Learn more at <u>http://www.hpe.com/servers/intelligentprovisioning</u>.

### **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 <u>http://www.hpe.com/info/restfulapi</u>.

### **Server Utilities**

### **Active Health System**

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

#### Active Health System Viewer

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

#### **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 <u>http://www.hpe.com/info/smartupdate</u>.

#### **iLO Amplifier Pack**

Designed for large enterprise and service provider environments with hundreds of HPE servers, the iLO Amplifier Pack is a free, downloadable open virtual application (OVA) that delivers the power to discover, inventory and update Gen8, Gen9 and Gen10 HPE servers at unmatched speed and scale. Use with an iLO Advanced License to unlock full capabilities. Learn more at http://www.hpe.com/servers/iLOamplifierpack.

#### **HPE iLO Mobile Application**

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

### **RESTful Interface Tool**

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

#### **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 <u>http://www.hpe.com/servers/stk</u> or <u>http://www.hpe.com/servers/powershell</u>.

### 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 <u>http://www.hpe.com/info/oneview</u>.

#### HPE Systems Insight Manager (HPE SIM)

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

### 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/

### **Optional Features**

### Server Management

### HPE iLO Advanced

HPE iLO Advanced licenses offer smart remote functionality without compromise, for all HPE ProLiant servers. The license includes the full integrated remote console, virtual keyboard, video, and mouse (KVM), multi-user collaboration, console record and replay, and GUI-based and scripted virtual media and virtual folders. You can also activate the enhanced security and power management functionality. Learn more about HPE iLO Advanced at http://www.hpe.com/servers/iloadvanced.

### HPE iLO Advanced Premium Security Edition

HPE iLO Advanced Premium Security Edition for iLO 5 includes iLO Advanced License plus high-end security modes, unique security capabilities, like Automatic FW recovery; Runtime FW verification, and Secure erase. Learn more about HPE iLO Advanced Premium Security Edition at: <u>http://www.hpe.com/servers/ilopremium</u>.

#### HPE OneView Advanced

HPE OneView brings a new level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It provides full-featured licenses which can be purchased for managing Gen8, Gen9 and Gen10 servers. To learn more visit **http://www.hpe.com/info/oneview**.

#### HPE Insight Cluster Management Utility (CMU)

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

#### 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 costeffective KVM switch for your first rack and multiple connection IP switches with remote management and security capabilities to keep your data center rack up and running.

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

### **Optional Features**

### One Config Simple (SCE)

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

### Service and Support

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

### Protect your business beyond warranty with HPE Pointnext Operational Service

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

#### Connect your devices:

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

### 1- IDC 2 – HP CSC reports 2014 – 2015

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

### **Recommended Services**

### HPE Proactive Care\* with 6 hour call-to-repair commitment, three year Support Service

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This Service combines three years' proactive reporting and advice with our highest level of hardware support - HPE's 24x7, six hour hardware call-to-repair. HPE is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable servers. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers.

### https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

#### HPE Proactive Care\* with 24x7 coverage, three year Support Service

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice This Service combines three years proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers.

#### https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

#### HPE Proactive Care\* - Next Business Day service, three year Support Service

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This service combines three years of Hardware Support where an HPE authorized representative will arrive at the Customer's site during the onsite coverage window to begin hardware maintenance service the next coverage day after the service request has been logged. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers.

### https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

\*HPE Proactive Care and HPE Proactive Care Advanced require that the customer connect their devices to make the most of these services and receive all the deliverables.

### Service and Support

### **Parts and Materials**

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

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

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

### Other related Services

### HPE Server Hardware Installation

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

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

#### HPE Installation and Startup Service

Provides for the installation of your HPE hardware according to product specifications including options. The HPE service delivery technician will connect the product to a LAN as appropriate and enable remote support to allow for automatic case creation for hardware failures. Installation and start up services also includes the installation of one supported operating system type (Windows<sup>®</sup> or Linux).

#### **HPE Datacenter Care service**

HPE Datacenter Care helps improve IT stability and security, increase the value of IT, and enable agility and innovation. It is a structured framework of repeatable, tested, and globally available services "building blocks." You can deploy, operate, and evolve your datacenter wherever you are on your IT journey. With HPE Datacenter Care, you benefit from a personalized relationship with HPE via a single point of accountability for HPE and others' products. For more information, visit <u>http://www.hpe.com/services/datacentercare</u>

#### HPE GreenLake Flex Capacity

With HPE GreenLake Flex Capacity, you get the speed, scalability, and economics of the public cloud in the privacy of your data center. Gain the advantages of the public cloud—consumption-based payment, rapid scalability without worrying about capacity constraints. Reduce the "heavy lifting" needed to operate a data center. And retain the advantages that IT provides the business (i.e., control, security). Deliver the right user experience, choose the right technology for the business, manage privacy and compliance, and manage the cost of IT. And, you have the option to use the public cloud when needed.

#### **DC for Hyperscale**

Datacenter Care for Hyperscale is available for Service Providers and HPC customers who use a scale out approach to computing with a high volume homogenous infrastructure and resilient architecture can take advantage of this environment support tailored to their operating model.

#### HPE Factory Express for Servers and storage

HPE Factory Express offers configuration, customization, integration and deployment services for HPE servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HPE products supported through Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE Apollo, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx3PAR suite, XP, rackable tape libraries and configurable network switches.

### **HPE Service Credits**

HPE Service Credits offers flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

### **HPE Education Services**

Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment.

### http://www.hpe.com/ww/learn

### HPE Support Center

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

### Learn more <a href="http://www.hpe.com/support/hpesc">http://www.hpe.com/support/hpesc</a>.

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>** 

**NOTE:** HPE ProLiant DL380 Gen10 Server is covered under the HPE Service Contract applied to the HPE ProLiant Server. No separate HPE support services need to be purchased.

Warranty and Support Services will extend to include HPE options configured with your server or storage device. The price of support service is not impacted by configuration details. HPE sourced options that are compatible with your product will be covered under your server support at the same level of coverage allowing you to upgrade freely. Installation for HPE options is available as needed. To keep support costs low for everyone, some high value options will require additional support. Additional support is only required on select high value workload accelerators, fibre switches, InfiniBand and UPS batteries over 12KVA. See the specific high value options that require additional support **HERE**.

For Standard Features shipped in the "Factory Integrated Models", please see "Configuration Information - Factory Integrated Models" section.

1. Pre-configured models ship with configurations below. Options can be selected from 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 a custom configuration is desired, 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 Processors	One processor	One processor
Memory	16 GB RDIMM DR 2600 MT/s (1x 16 GB) NOTE: 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	Advanced, HPE iLO Advanced Premium S	ed), HPE OneView Standard (requires download); HPE iL( ecurity Edition and HPE OneView Advanced licenses)
Energy Star	2.1 c	ertified
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.

	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	One processor	One processor	
Processors			
Memory	32 GB RDIMM DR 2600 MT/s (2x 16 GB)	32 GB RDIMM DR 2600 MT/s (2x 16 GB)	
	<b>NOTE:</b> running at 2400 MT/s due to Processor	<b>NOTE:</b> running at 2400 MT/s due to Processor	
	limitation.	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	P816i-a	P408i-a	
Controller	NOTE: 16-Port modular Smart Array.	NOTE: 8-Port modular Smart Array.	
	<b>NOTE:</b> Smart Storage battery included.	NOTE: 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		dded), HPE OneView Standard (requires download); HPE 2 Edition and HPE OneView Advanced (require licenses)	
Energy Star	2.1 c	certified	
Form Factor	2U Rack, Easy in	Istall rails with CMA	
Warranty	3-vear parts. 3-vear labor. 3-vear onsite	e support with next business day response	

	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 Advanced with Intelligent Provisioning, HPE OneView Standard (requires download) Optional (require licenses): HPE iLO Advanced Premium Security Edition, HPE OneView Advanced			
Energy Star	2.1 certified			
Form Factor	2U Rack, Easy Install rails with CMA			
Warranty		3-3-3		

SKU Number	P06419-B21	P06420-B21
Model Name	HPE ProLiant DL380 Gen10 3104 1.7GHz 6- core 1P 16GB-R S100i 8LFF 500W PS Entry SATA Server	HPE ProLiant DL380 Gen10 4110 2.1GHz 8-core 1P 16GB-R P408i-a 8SFF 500W PS Performance Server
Chassis	8LFF	8SFF
Processor	3104 (6 core, 1.7 GHz, 85W)	4110 (8 core, 2.1 GHz, 85W)
Number of Processors	One processor With standard heatsink	One processor With standard heatsink
Memory	16 GB RDIMM 2R 2666 MT/s (1x 16 GB) NOTE: Runs at 2133 MT/s due to processor limitation.	16 GB RDIMM 2R 2666 MT/s (1x 16 GB) <b>NOTE:</b> Runs at 2400 MT/s due to processor limitation.

Network Controller	HPE 1Gb Ethernet 4-Port 331i Adapter	HPE 1Gb Ethernet 4-Port 331i Adapter		
Storage Controller	Embedded 14-port S100i <b>NOTE:</b> SATA only, 12-port accessible.	P408i-a/2GB with Smart Storage Battery		
Hard Drive	None included	None included		
Optical Drive	None included	None included		
PCIe Slots	3 PCle: 2 x16, 1 x8	3 PCle: 2 x16, 1 x8		
Power Supply	1x 500W	1x 500W		
Fans	4 - Standard	4 - Standard		
Management	HPE iLO 5	HPE iLO 5		
Rail Kit	LFF Easy Install w/o CMA	SFF Easy Install with 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.			
	NOTE: UEFI is the standar	d default for all SMB models.		

SKU Number	P06421-B21	P06422-B21	P06423-B21
Model Name	HPE ProLiant DL380 Gen10 4114 2.2GHz 10-core 1P 32GB-R P408i- a 8SFF 800W PS Performance Server	2.3GHz 12-core 1P 64GB-R P408i-a	HPE ProLiant DL380 Gen10 6130 2.1GHz 16-core 1P 64GB-R P408i-a 8SFF 800W RPS Performance Server
Chassis	8SFF	8SFF	8SFF
Processor	4114 (10 core, 2.2 GHz, 85W)	5118 (12 core, 2.3 GHz, 105W)	6130 (16 core, 2.1 GHz, 125W)
Number of Processors	One processor With standard heatsink	One processor With standard heatsink	One processor With standard heatsink
Memory	32 GB RDIMM 2R 2666 MT/s (1x 32 GB) NOTE: Runs at 2400 MT/s due to processor limitation.	64 GB RDIMM 2R 2666 MT/s (2x 32 GB) NOTE: Runs at 2400 MT/s due to processor limitation.	64 GB RDIMM 2R 2666 MT/s (2x 32 GB) <b>NOTE: Runs at 2666 MT/s</b> .
Network Controller	HPE 1Gb Ethernet 4-Port 331i Adapter	HPE 1Gb Ethernet 4-Port 331i Adapter	HPE 1Gb Ethernet 4-Port 331i Adapter
Storage Controller	P408i-a/2GB with Smart Storage Battery	P408i-a/2GB with Smart Storage Battery	P408i-a/2GB with Smart Storage Battery
Hard Drive	None included	None included	None included
Optical Drive	None included	None included	None included
PCIe Slots	3 PCle: 2 x16, 1 x8	3 PCIe: 2 x16, 1 x8	3 PCle: 2 x16, 1 x8
Power Supply	1x 800W	2x 800W	2x 800W
Fans	4 - Standard	4 - Standard	4 - Standard
Management	HPE iLO 5	HPE iLO 5	HPE iLO 5
Rail Kit	SFF Easy Install with CMA		
Energy Star	Energy Star 2.1		
Form Factor	2U Rack		
Warranty	3-year parts, 3-year l	abor, 3-year onsite support with next	business day response
	NOTE: UEFI is the	e standard default for all SMB models	

SKU Number	P05524-B21
Model Name	HPE ProLiant DL380 Gen10 4110 2.1GHz 8-core 1P 16GB-R P408i-a 8SFF 500W RPS Solution Server
Chassis	8SFF
Processor	4110 (8 core, 2.1 GHz, 85W)
Number of Processors	One processor With standard heatsink
Memory	16 GB RDIMM 2R 2666 MT/s
	(1x 16 GB)
	<b>NOTE:</b> Runs at 2400 MT/s due to processor limitation.
Network Controller	HPE 1Gb Ethernet 4-Port 331i Adapter
Storage Controller	P408i-a/2GB with Smart Storage Battery
Hard Drive	None included
Optical Drive	None included
PCIe Slots	3 PCle: 2 x16, 1 x8
Power Supply	2x 500W
Fans	4 - Standard
Management	HPE iLO 5
Rail Kit	SFF Easy Install with CMA
Energy Star	Energy Star 2.1
Form Factor	2U Rack
Operating System	ClearOS/VM Installer (USB)
	NOTE: ClearOS, an easy to use OS with an application marketplace, allows you to build a fully
	functional server that is just right for you at no upfront cost. To learn more on what you can do, please
	visit http://www.hpe.com/servers/clearos
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.
	<b>NOTE:</b> UEFI is the standard default for all SMB 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	HPE ProLiant DL380	HPE ProLiant DL380	HPE ProLiant DL380	
CTO Server	Gen10 8 LFF CTO Server	Gen10 12 LFF CTO	Gen10 8 SFF CTO Server	Gen10 24 SFF CTO Server	
	Gento o LFF CTO Server	Server	Gento o SFF CTO Server	Genito 24 SFF CTO 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	Embedded SW RAID with 14 SATA ports (12-ports accessible), choice of HPE modular Smart Array and PCIe plug-				
Controller	in controller				
PCle	Three standard in primary riser (with dual M.2 support)				
Drive Cage -		12155	0.000		
included	8 LFF	12 LFF	8 SFF	24 SFF	
Network	HPE 1Gb Ethernet 4-Port 331i Adapter plus optional HPE FlexibleLOM or stand up card			or stand up card	
Controller					
Fans	6-Standard	6-High Performance	4-Standard	6-Performance	
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advances and OneView (optional)				
	1x 3.0 standard plus iLo	None as standard	1x 3.0 standard plus iLo	1x 3.0 standard plus iLo	
USB	front service port		front service port	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
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 and 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
Intel Xeon-Platinum	
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 8176 (2.1GHz/28-core/165W) FIO Processor Kit	871618-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 http://www.hpe.com/info/ist.	

Required

NOTE: 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
<b>NOTE:</b> Ships with Performance Heatsink.	007000 LZ1
HPE DL380 Gen10 Intel Xeon-Platinum 8160 (2.1GHz/24-core/150W) FIO Processor Kit	869086-L21
<b>NOTE:</b> Ships with Performance Heatsink.	
HPE DL380 Gen10 Intel Xeon-Platinum 8158 (3.0GHz/12-core/150W) FIO Processor Kit	869090-L21
<b>NOTE:</b> Ships with Performance Heatsink.	007070 221
HPE DL380 Gen10 Intel Xeon-Platinum 8156 (3.6GHz/4-core/105W) FIO Processor Kit	871616-L21
<b>NOTE:</b> Ships with Performance Heatsink.	0,1010 221
HPE DL380 Gen10 Intel Xeon-Platinum 8153 (2.0GHz/16-core/125W) FIO Processor Kit	826890-L21
Intel Xeon-Gold	020070 221
HPE DL380 Gen10 Intel Xeon-Gold 6154 (3.0GHz/18-core/200W) FIO Processor Kit	826888-L21
<b>NOTE:</b> Ships with Performance Heatsink.	020000 221
HPE DL380 Gen10 Intel Xeon-Gold 6152 (2.1GHz/22-core/140W) FIO Processor Kit	826886-L21
<b>NOTE:</b> Ships with Performance Heatsink.	020000 221
HPE DL380 Gen10 Intel Xeon-Gold 6150 (2.7GHz/18-core/165W) FIO Processor Kit	826884-L21
<b>NOTE:</b> Ships with Performance Heatsink.	02000 1 222
HPE DL380 Gen10 Intel Xeon-Gold 6148 (2.4GHz/20-core/150W) FIO Processor Kit	826882-L21
<b>NOTE:</b> Ships with Performance Heatsink.	010001 111
HPE DL380 Gen10 Intel Xeon-Gold 6146 (3.2GHz/12-core/165W) FIO Processor Kit	826868-L21
<b>NOTE:</b> Ships with Performance Heatsink.	020000 222
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 6142 (2.6GHz/16-core/150W) FIO Processor Kit	826880-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) Financial Sector FIO Processor Kit	880168-L21
NOTE: Ships with Performance Heatsink.	
NOTE: 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> HPE DL38X Gen10 High Performance Temperature Fan Kit (867810-B21) to be selected.	
<b>NOTE:</b> No rear drives are supported with this processor.	
NOTE: No Graphic cards (GPUs) are available with this processor selection.	
<b>NOTE:</b> For additional details on this processor please visit:	
https://h20195.www2.hpe.com/v2/Getdocument.aspx?docname=a00039606enw	
HPE DL380 Gen10 Intel Xeon-Gold 6136 (3.0GHz/12-core/150W) FIO Processor Kit	826874-L21
NOTE: Ships with Performance Heatsink.	00/070
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 6134M (3.2GHz/8-core/130W) FIO Processor Kit	873645-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 5117 (2.0GHz/14-core/105W) FIO Processor Kit (Recommended)	P00756-L21
HPE DL380 Gen10 Intel Xeon-Gold 5115 (2.4GHz/10-core/85W) FIO Processor Kit	876562-L21
Intel Xeon-Silver	
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
Intel Xeon-Bronze	
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: <a href="https://www.hpe.com/docs/memory-population-rules">https://www.hpe.com/docs/memory-population-rules</a>	
For Gen10 memory speed table, please go to: https://www.hpe.com/docs/memory-speed-table	
For memory Reliability, Accessibility, Serviceability (RAS) features whitepaper like Gen10 Fast Fault Tolerance and leg	gacy mirrored
memory feature etc. please go to: http://www.hpe.com/docs/memory-ras-feature	
<b>NOTE:</b> Memory DIMM availability with a server platform is dependent upon completion of certification testing.	-1
<b>NOTE:</b> The maximum memory speed is a function of the memory type, memory configuration, and processor mode	21.
Registered DIMMs (RDIMMs)	
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 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 815100-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit Load Reduced DIMMs (LRDIMMs)	012100-R5T

HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit815101-B21HPE 128GB (1x128GB) Octal Rank x4 DDR4-2666 CAS-22-19-19 3DS Load Reduced Memory Kit815102-B21

### HPE Persistent Memory (NVDIMM)

HPE 16GB NVDIMM Single Rank x4 DDR4-2666 Module Kit

**NOTE:** A maximum of 12 NVDIMMs supported.

**NOTE:** Can only be mixed with RDIMMs.

845264-B21

<b>NOTE:</b> For General Server Memory and NVDIMM Population Rules and Guidelines for Gen10 see details here: <a href="http://www.hpe.com/docs/memory-population-rules">http://www.hpe.com/docs/memory-population-rules</a>	
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 Flex Slot Power Supplies	
HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
HPE 800W Flex Slot 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 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-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
NOTE: TPM 2.0 is set as default, for 1.2 TPM setting instead, please select this option.	
HPE Unique Options	
HPE DL38X Gen10 Slot 1/2 x16/x16 FIO Riser Kit	871674-B21
NOTE: Slot 1 or 2 in Primary location.	
NOTE: 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. <b>NOTE:</b> Supports Full Height and Full length cards.	
<b>NOTE:</b> Bus width x16, x16, Connector Width x16, x16.	
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.	
NOTE: 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 Special Enablement Kits	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.	075705 DZ1
<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
<b>NOTE:</b> This is a factory integrated only option.	
NOTE: Will remove the Primary shipping PCIe riser.	
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 Smart Memory Fast Fault Tolerance FIO Setting	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 2U Bezel Air Filter NEBS-compliant Kit	P05420-B21
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
Step 4: Choose additional options for Factory Integration from Core and Additional Options sections below	

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. Note the http://www.hpe.com/info/CablingMatrixGen10 can help to explain the cable routing for each option: **HPE Unique Options** 826689-B21 HPE DL38X NVMe 8 Solid State Drive Express Bay Enablement Kit 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. **NOTE:** There are limitations on GPU support with the NVMe bay installed. HPE DL38X Gen10 Universal Media Bay Kit 826708-B21 **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. HPE DL38X Gen10 Premium 6 SFF SAS/SATA + 2 NVMe or 8 SFF SAS/SATA Bay Kit 826690-B21 NOTE: 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. NOTE: With NVMe drives a specific riser is required. NOTE: When adding to Box 1 the addition of the High Performance Fan kit (867810-B21) is required. HPE DL380 Gen10 High Performance Heat Sink Kit 826706-B21 **NOTE:** Required for GPU installations. NOTE: Processor kits above 130W include a High Performance Heatsink, along with the 8156, 6128 and 5122. NOTE: This kit contains 2 High Performance Heatsinks. 867810-B21 HPE DL38X Gen10 High Performance Temperature Fan Kit **NOTE:** This kit is required for specific **Ambient temperature environments**, coming in 2H2017. **NOTE:** This kit is also required to support GPUs configurations. **NOTE:** This is required for NVMe configurations. **NOTE:** This kit provides maximum cooling for your Server. **NOTE:** This kit is required when Box 1, 2 and 3 are populated. HPE DL38X Gen10 2SFF HDD SAS/SATA Riser Kit 826688-B21 **NOTE:** 2 SFF in the rear is only supported with a 24 SFF model or 12 LFF model. NOTE: 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 NOTE: HPE DL38X Gen10 Universal Media Bay Kit (826708-B21). **NOTE:** NVMe drives require the addition of the High Performance Fan kit (867810-B21). **NOTE:** NVMe drives require the addition of an NVMe capable riser. NOTE: 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 2NVMe HDD Bay Kit 873781-B21 NOTE: Supports 2 NVMe in the Universal Media bay (included) on the 8 LFF model. **NOTE:** For support of the 2 NVMe drives this will require the addition of the HPE DL38X Gen10 x8/x8/x8 1port 2 NVMe SlimSAS Riser (867806-B21); or the HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser (867808-B21). NOTE: NVMe drives require the addition of the High Performance Fan kit (867810-B21). HPE DL38X Gen10 12Gb SAS Expander Card Kit with Cables 870549-B21 NOTE: SAS expander to enable 24 SFF field upgrade.

### QuickSpecs

# **Core Options**

<b>NOTE:</b> Primary population in slot 3 of the primary riser. HPE DL380 Gen10 SFF Systems Insight Display Kit <b>NOTE:</b> Systems Insight Display no longer ships as standard but is available as a Factory Integrated or field	826703-B21
upgrade option. HPE DL3XX Gen10 Rear Serial Cable and Enablement Kit HPE DL38X Gen10 8LFF Front 2SFF SAS/SATA HDD Kit	873770-B21 867805-B21
<b>NOTE:</b> HPE ProLiant DL380 Gen10 8LFF with Universal Media Bay Configure-to-order Server (868706-B21). HPE 2U Bezel Air Filter NEBS-compliant Kit	P05420-B21
HPE Processors Processor Option Kits	
Intel Xeon-Platinum	
HPE DL380 Gen10 Intel Xeon-Platinum 8180M (2.5GHz/28-core/205W) Processor Kit	874752-B21
<b>NOTE:</b> 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
<b>NOTE:</b> Ships with Performance Heatsink.	0/101/ 021
HPE DL380 Gen10 Intel Xeon-Platinum 8176 (2.1GHz/28-core/165W) Processor Kit NOTE: Ships with Performance Heatsink.	871618-B21
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 NOTE: Ships with Performance Heatsink.	879423-B21
NOTE: Supports "Core boosting" Learn more http://www.hpe.com/info/ist	
<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.	0/000/ 001
HPE DL380 Gen10 Intel Xeon-Platinum 8160 (2.1GHz/24-core/150W) Processor Kit NOTE: Ships with Performance Heatsink.	869086-B21
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 NOTE: Ships with Performance Heatsink.	871616-B21
HPE DL380 Gen10 Intel Xeon-Platinum 8153 (2.0GHz/16-core/125W) Processor Kit	826890-B21
Intel Xeon-Gold	
HPE DL380 Gen10 Intel Xeon-Gold 6154 (3.0GHz/18-core/200W) Processor Kit	826888-B21
<b>NOTE:</b> Ships with Performance Heatsink. HPE DL380 Gen10 Intel Xeon-Gold 6152 (2.1GHz/22-core/140W) Processor Kit	826886-B21
<b>NOTE:</b> Ships with Performance Heatsink.	020000 021
HPE DL380 Gen10 Intel Xeon-Gold 6150 (2.7GHz/18-core/165W) Processor Kit	826884-B21
<b>NOTE:</b> Ships with Performance Heatsink. HPE DL380 Gen10 Intel Xeon-Gold 6148 (2.4GHz/20-core/150W) Processor Kit	826882-B21
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.	
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
NOTE: Ships with Performance Heatsink.	
NOTE: Supports "Core boosting" Learn more <u>http://www.hpe.com/info/ist</u> .	
NOTE: To enable this feature an iLO Advanced, or iLO Advanced Premium Security edition License are	
required.	
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 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) Financial Sector 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> HPE DL38X Gen10 High Performance Temperature 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.	
<b>NOTE:</b> For additional details on this processor please	
visit: https://h20195.www2.hpe.com/v2/Getdocument.aspx?docname=a00039606enw	826874-B21
HPE DL380 Gen10 Intel Xeon-Gold 6136 (3.0GHz/12-core/150W) Processor Kit <b>NOTE:</b> Ships with Performance Heatsink.	8208/4-821
HPE DL380 Gen10 Intel Xeon-Gold 6134M (3.2GHz/8-core/130W) Processor Kit	873645-B21
NOTE: Ships with Performance Heatsink.	8/3045-821
HPE DL380 Gen10 Intel Xeon-Gold 6134 (3.2GHz/8-core/130W) Processor Kit	826872-B21
<b>NOTE:</b> Ships with Performance Heatsink.	020072 021
HPE DL380 Gen10 Intel Xeon-Gold 6132 (2.6GHz/14-core/140W) Processor Kit	826870-B21
<b>NOTE:</b> Ships with Performance Heatsink.	020070 021
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
<b>NOTE:</b> 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
HPE DL380 Gen10 Intel Xeon-Gold 5117 (2.0GHz/14-core/105W) Processor Kit	P00756-B21
HPE DL380 Gen10 Intel Xeon-Gold 5115 (2.4GHz/10-core/85W) Processor Kit	876562-B21
Intel Xeon-Silver	
HPE DL380 Gen10 Intel Xeon-Silver 4116 (2.1GHz/12-core/85W) Processor Kit	826852-B21
HPE DL380 Gen10 Intel Xeon-Silver 4114 (2.2GHz/10-core/85W) Processor Kit	826850-B21
HPE DL380 Gen10 Intel Xeon-Silver 4112 (2.6GHz/4-core/85W) Processor Kit	873647-B21
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
Intel Xeon-Bronze	077//7 004
HPE DL380 Gen10 Intel Xeon-Bronze 3106 (1.7GHz/8-core/85W) Processor Kit HPE DL380 Gen10 Intel Xeon-Bronze 3104 (1.7GHz/6-core/85W) Processor Kit	873643-B21 873641-B21
TIEL DE300 GENTO IIIIEI VEOLEDIONZE STO4 (T./ GHZ/O-COLE/OSW) FLOCESSOL VII	873641-821 Page 33

**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 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>**.

### HPE DDR4 Memory

### **Registered DIMMs (RDIMMs)**

HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit HPE 8GB (1x8GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815097-B21 876181-B21 815098-B21 835955-B21 815100-B21
Load Reduced DIMMs (LRDIMMs) HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit HPE 128GB (1x128GB) Octal Rank x4 DDR4-2666 CAS-22-19-19 3DS Load Reduced Memory Kit NOTE: Memory DIMM availability with a server platform is dependent upon completion of certification testing. NOTE: The maximum memory speed is a function of the memory type, memory configuration, and processor model.	815101-B21 815102-B21
NOTE: Mixing of RDIMM and LRDIMM is not supported. HPE Persistent Memory (NVDIMM) HPE 16GB NVDIMM Single Rank x4 DDR4-2666 Module Kit 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 DDR-4 Blank Kit	845264-B21
HPE DDR4 DIMM Blank Kit	P07818-B21
HPE Optical Drives HPE 9.5mm SATA DVD-ROM Optical Drive NOTE: HPE DL38X Gen10 Universal Media Bay Kit (826708-B21) is required for this option on a SFF model.	726536-B21
No support in 12 LFF or 24 SFF models. HPE 9.5mm SATA DVD-RW Optical Drive <b>NOTE:</b> HPE DL38X Gen10 Universal Media Bay Kit (826708-B21) is required for this option on a SFF model. No support in 12 LFF or 24 SFF models.	726537-B21
HPE Mobile USB DVD-RW Optical Drive NOTE: This is only supported on USB 3.0 ports.	701498-B21

### **HPE 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 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 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 Digitally Signed Firmware HDD	872485-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 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	001/// 021
HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	655710-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	705455-021
	041401 001
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 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 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 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	-1
To streamline the configuration process for HPE ProLiant Gen10 servers and to provide the best produce availability, HPE recommends SSDs from the list located here: <u>http://www.hpe.com/products/recommend</u> .	CT
Read Intensive - 12G SAS - SFF - Solid State Drives	
HPE 480GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	075711 001
	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 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06584-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 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06586-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 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06588-B21
HPE 7.68TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	870144-B21
HPE 7.68TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06590-B21
HPE 15.3TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	870148-B21
HPE 15.3TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06592-B21
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	873367-B21
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	872386-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
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	875470-B21
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
Mixed Use - 6G SATA - LFF - Solid State Drives	
HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	875480-B21
Read Intensive - 6G SATA - SFF - Solid State Drives	
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	P04556-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	P06194-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	P04560-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04474-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	875511-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06196-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04564-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04476-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06198-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	P04566-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04478-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06200-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04480-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04570-B21
HPE 7.68TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04482-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	880295-B21
HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P07922-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	P07926-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P07930-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	877788-B21
HPE 3.84TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P00896-B21

Read Intensive - 6G SATA - LFF - Solid State Drives	
HPE 600GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD	P04695-B21
HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877748-B21
HPE 300GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD	P04693-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	P07924-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	P07928-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	P03691-B21
HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877790-B21
HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	P07932-B21
Read Intensive - 6G SATA - M.2 - Solid State Drives	
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 4TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	877988-B21
HPE 2TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	877986-B21
HPE 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875591-B21
HPE 1TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	877984-B21
HPE 960GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875589-B21
HPE 480GB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875587-B21
HPE 375GB NVMe x4 Lanes Write Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	878014-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
Dual – SATA 6G M.2 UFF to SFF SCM – Solid State Drives	
HPE Dual 480GB SATA 6G Read Intensive M.2 - UFF to SFF SCM 3yr Wty Digitally Signed Firmware SSD	P06609-B21
HPE Dual 240GB SATA 6G Mixed Use M.2 - UFF to SFF SCM 3yr Wty Digitally Signed Firmware SSD	P06607-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 Digitally Signed Firmware SSD	877994-B21
HPE 1.6TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	875597-B21
HPE 3.2TB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	877998-B21
NOTE: 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.	
NOTE: 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.	
NOTE: Not supported by HPE Smart Array controllers.	
<b>NOTE:</b> NVMe drives require the addition of the High Performance Fan kit (867810-B21).	
Hard Drive Blank Kits	070707 001
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

**NOTE:** This is supported in the LFF model only.

**NOTE:** 3 LFF rear drives will consume the 2nd riser expansion slot.

HPE DL38X Gen10 4LFF Midplane SAS/SATA HDD Kit

**NOTE:** Supported with both the 8 and 12 LFF model.

**NOTE:** Ships with low profile HeatSink for installation. Supporting processors below 125W.

**NOTE:** No support for the 8156, 6128 or the 5122 Processors.

NOTE: With this mid-tray only single-wide (8.5-inch cards with connections or less) cards are supported.

**NOTE:** This drive does support hot-swap drives.

NOTE: This requires High Performance Fans (867810-B21).

CPUs Supported with 4L	FF mid-tray								
	Must install DIMM blanks on all empt	Must install DIMM blanks on all empty DIMM Slots							
System Inlet Ambient	8LFF/12LFF with 4LFF mid-tray	8LFF/12LFF + 4LFF mid-tray + any rear SAS/SATA HDDs							
35C	CPU≤125W 140W (6152, 6140)								
30C	140W (6132) 165 W (8176, 8170, 6150)	CPU≤125W 140W (6152, 6140)							
25C	105W (5122, 8156) 115W (6128) 130W (6134) 150W (8164, 8160, 8158, 6148, 6142, 6136)	140W (6132) 165 W (8176, 8170, 6150)							
20C	150W (6144) 165W (6146) 200W (6154) 205W (8180, 8168)	105W (5122, 8156) 115W (6128) 130W (6134) 150W (8164, 8160, 8158, 6148, 6142, 6136)							

HPE DL38X Gen10 2SFF Premium HDD Front NVMe or Front/Rear SAS/SATA Kit

NOTE: HPE DL38X Gen10 Universal Media Bay Kit (826708-B21).

**NOTE:** NVMe drives require the addition of the High Performance Fan kit (867810-B21).

**NOTE:** NVMe drives require the addition of an NVMe capable riser.

**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.

**NOTE:** Supports uFF drives.

HPE DL38X NVMe 8 Solid State Drive Express Bay Enablement Kit

**NOTE:** This option provides support for up to 8NVMe drives, and can be populated in all Boxes in the 8 SFF model.

**NOTE:** A maximum of 20 NVMe drives only are supported., this will mean partial population (4 drives) when the  $3^{rd}$  cage is populated in Box 1.

**NOTE:** This will require the HPE DL38X Gen10 4-port 8 NVMe SlimSAS Riser (867807-B21).

### **NOTE:** NVMe drives require the addition of the High Performance Fan kit (867810-B21).

#### HPE DL38X Gen10 Premium 6 SFF SAS/SATA + 2 NVMe or 8 SFF SAS/SATA Bay Kit

**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.

**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).

**NOTE:** NVMe drives require the addition of the High Performance Fan kit (867810-B21).

826686-B21

826687-B21

826688-B21

826689-B21

826690-B21

Core Options	
HPE DL38X Gen10 SFF Box1/2 Cage/Backplane Kit	826691-B21
<b>NOTE:</b> Supports 8 SAS/SAFA SFF drives in Box 1 or 2 to a max of 24 SFF SAS/SATA front.	020071 021
HPE DL38X Gen10 8LFF Front 2NVMe HDD Bay Kit	873781-B21
<b>NOTE:</b> Supports 2 NVMe in the Universal Media bay (included) on the 8 LFF model.	0/5/01 021
<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).	
Hard Drive Kits	
HPE DL38X Gen10 8LFF Front 2SFF SAS/SATA HDD Kit	867805-B21
NOTE: For 2 SFF SAS/SATA in UMB on 8 LFF model only.	
Media Bay Kits	
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	020700 021
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.	
<b>NOTE:</b> This is a SFF model option only.	
HPE Networking	
100 Gigabit Ethernet Adapters	
HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	874253-B21
1 Gigabit Ethernet adapters	
HPE Ethernet 1Gb 4-port 331T Adapter	647594-B21
HPE Ethernet 1Gb 4-port 366T Adapter	811546-B21
HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
HPE Ethernet 1Gb 2-port 361T Adapter	652497-B21
10 Gigabit Ethernet adapters	
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 521T Adapter	867707-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 10/25Gb 2-port 631SFP28 Adapter	817718-B21
HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter	817753-B21
HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter	867328-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.	
NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic	
environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications	
and additional information:	
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
HUL FlovEabric 101-b / port 536ELU / Adaptor	161 (1) 001

HPE FlexFabric 10Gb 4-port 536FLR-T Adapter

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764302-B21

HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter	817709-B21
HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter	817749-B21
FlexibleLOM adapters	
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
<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.	
NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic	
environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications	
and additional information:	
http://www.hpe.com/us/en/product-catalog/servers/server-adapters.hits-12.html	
HPE InfiniBand	
HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	879482-B21
HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	872726-B21
<b>NOTE:</b> 8SFF, 16SFF, 8LFF no restrictions; 24SFF, 12LFF supported, but limited to 25C.	
HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter	872725-B21
HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel Omni-Path Architecture Adapter	829335-B21
HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	825110-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	825111-B21
HPE I/O Expansion Options	
<b>NOTE:</b> 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
NOTE: 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.	
<b>NOTE:</b> Bus width x8, x16, x8, Connector Width x8, x16, x8.	
HPE DL38X Gen10 4-port 8 NVMe Primary Slim SAS FIO Riser	867807-B21
NOTE: Riser supporting up to 8 NVMe drives in Primary location.	
<b>NOTE:</b> This is a factory integrated only option.	
<b>NOTE:</b> This can be connected to an 8SFF NVMe drive cage in box 3.	
<b>NOTE:</b> To achieve max 20 NVMe support, connect 4 NVMe drives to the tertiary riser.	
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 v16 v16 Connector Width v16 v16	

**NOTE:** Bus width x16, x16, Connector Width x16, x16.

NOTE: For additional details on ProLiant DL Gen10 server risers please visit:

https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00043229enw

HPE DL38X Gen10 2SFF HDD SAS/SATA Riser Kit826688-B21NOTE: Premium bay supporting SFF SAS/SATA .826688-B21

**NOTE:** Available in Primary or Secondary Riser location.

867806-B21
867808-B21
873732-B21
875780-B21
826700-B21

**NOTE:** Bus width x16 Connector Width x16.

<b>Riser Informa</b>	ation*								
<b>.</b>	<b>_</b>		Riser position Bus width (Gen3 lanes)			Bus width (Gen3 lanes)			Direct nect
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	N	N	x8	x16	x8		
870548-B21	HPE DL Gen10 x8/x16/x8 Riser Kit	0	0	N	x8	x16	x8		
826704-B21	HPE DL Gen10 x16/x16 GPU Riser Kit	0	0	N	0	x16	x16		
826694-B21	HPE DL38X Gen10 x16/x16 Riser Kit	0	0	N	x16	x16	0		
867807-B21	HPE DL38X Gen10 4-port 8 NVMe Primary SlimSAS Riser	0	N	N	0	0	0	4	8
867808-B21	HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser	N	N	0	0	0	0	2	4
873732-B21	HPE DL38X Gen10 4-port 8 NVMe Secondary SlimSAS Riser	N	0	N	0	0	0	4	8
867806-B21	HPE DL38X Gen10 x8/x8/x8 1- port 2 NVMe SlimSAS Riser	0	0	N	x8	x8	x8	1	2
871673-B21	HPE DL38X Gen10 x8/x8/x8 1- port 2 NVMe SlimSAS FIO Riser Kit	0	N	N	x8	x8	x8	1	2
826688-B21	HPE DL38X Gen10 2SFF HDD SAS/SATA Riser Kit	0	0	N	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 PCle Tertiary Riser Kit	N	N	0	X8	X8	0		
871674-B21	HPE DL38X Gen10 Slot 1/2 x16/x16 FIO Riser Kit	0	0	N	x16	x16	0		
871676-B21	HPE DL38X Gen10 x16/x16 GPU Slot2/3 FIO Riser Kit	0	0	N	0	x16	x16		

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

NOTE: D = Default on chassis; O = Optional; N = not supported or slot/connector not present.

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

**NOTE:** \*For additional details on ProLiant DL Gen10 server risers

please visit: https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00043229enw

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 Platinum Hot Plug Low Halogen Power Supply Kit	865414-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 -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 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21
NOTE: Flex Slot universal power supplies support power efficiency of up to 94% and support both	
277VAC/380VDC power inputs.	
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).	

							D	L380 co	nfigurat	tion		
Part number	Card	Qty supported	Processor supported	PCIe 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	35C <sup>1</sup>	35C	35C <sup>1</sup>	35C	35C <sup>1</sup>
Q0V80A	NVIDIA Tesla P40 24GB Module	3	165W or below	Gen3	35C	35C	25C	25C <sup>1</sup>	25C	25C <sup>1</sup>	20C	20C <sup>1</sup>
Q0E21A	NVIDIA Tesla P100 16GB PCle	3	165W or below	Gen3	30C	25C	30C	25C <sup>1</sup>	25C	25C <sup>1</sup>	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	25C <sup>1</sup>	Not supported	Not supported
Q0V77A	NVIDIA Quadro P2000 GPU Module	5	All	Gen3	35C	35C	35C	35C <sup>1</sup>	35C	35C <sup>1</sup>	35C	35C <sup>1</sup>
Q0V78A	NVIDIA Quadro P4000 GPU Module	5	All	Gen3	35C	35C	35C	35C <sup>1</sup>	35C	35C <sup>1</sup>	35C	35C <sup>1</sup>

QOV76A	NVIDIA Quadro P6000 PCIe 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
Q1K34A	NVIDIA Quadro GV100	3	165W or below	Gen3	35C	35C	35C	35C <sup>1</sup>	35C	35C1	35C	35C <sup>1</sup>
M3X68A	AMD FirePro S7150x2	3	165W or below	Gen3	35C	30C	30C	30C1	30C	30C	20C	20C <sup>1</sup>
Q8Z50A	HPE NVIDIA Tesla V100 PCIe 16GB FHHL Module	5	165W or below	Gen3	35C	25C	30C	20C <sup>1</sup>	20C	20C	Not supported	Not supported
Q9U36A	HPE NVIDIA Tesla V100 PCle 32GB Module	3	165W or below	Gen3	30C	25C	25C	25C <sup>1</sup>	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:** 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.

**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:** 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 AMD Radeon Pro V340 Graphics Accelerator	Q0Y81A
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.	
HPE NVIDIA Quadro P6000 Graphics Accelerator	Q0V76A
NOTE: This required the HPE DL380 Gen10 8P Cable Kit 871828-B21.	
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#### **NOTE:** 3 of these cards are supported, with a processor 165W or below. **NOTE:** System Memory Restriction <128TB. HPE NVIDIA Quadro GV100 Graphics Accelerator Q1K34A 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 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 Q0F21A 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 with a processor 165W or below. **NOTE:** System Memory Restriction <128TB. NOTE: No support on 12LFF chassis. NOTE: V100 requires "Max Cooling" settings in current ROM. NOTE: This requires the HPE DL380 Gen10 8P Keyed Cable Kit 871829-B21. HPE NVIDIA Tesla V100 FHHL 16GB Computational Accelerator Q8750A HPE NVIDIA Tesla M60 Reverse Air Flow Dual GPU PCIe Graphics Accelerator M3X67A **NOTE:** 5 of these cards are supported. **NOTE:** GRID Lic required. NOTE: System Memory Restriction <1TB. **NOTE:** Not supported in a 12LFF chassis. **NOTE:** This requires the HPE DL380 Gen10 8P Keyed Cable Kit 871829-B21. Q9U36A HPE NVIDIA Tesla V100 PCIe 32GB Computational Accelerator **NOTE:** 3 of these cards are supported with a processor 165W or below. **NOTE:** System Memory Restriction <128TB. NOTE: No support on 12LFF chassis. **NOTE:** V100 requires "Max Cooling" settings in current ROM. NOTE: This requires the HPE DL380 Gen10 8P Keyed Cable Kit 871829-B21. HPE AMD Radeon Instinct MI25 Graphics Accelerator Q1K38A NOTE: 3 of these cards are supported. **NOTE:** Not supported in a 12LFF chassis. **NOTE:** This requires the HPE DL380 Gen10 8x6P Cable Kit 871830-B21. HPE AMD Radeon Pro WX7100 Graphics Accelerator Q1K37A HPE AMD FirePro S7150x2 Accelerator Kit M3X68A **Graphics Cable Kits** 874212-B21 HPE DL38x GPU 6px6p Y-Power Cable Kit HPE DL38x Gen10 8-pin Cable Kit 871828-B21 871829-B21 HPE DL38x Gen10 8-pin Keyed Cable Kit

HPE GPU 2x 8-pin Cable Kit HPE DL38x Gen10 8x 6-pin Cable Kit	P03849-B21 871830-B21
HPE Cooling Options	
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.	
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.	
NOTE: 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: <u>http://www.hpe.com/servers/ashrae</u> .	

**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 3yr 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 Flexible Quantity E-LTU	E5Y35AAE
HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU	P8B24A
HPE OneView w/o iLO including 3yr 24x7 Support Track 1-server LTU	P8B25A
HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU	P8B26AAE
NOTE: Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be download	ded.

#### HPE PCIe Workload Accelerator Options

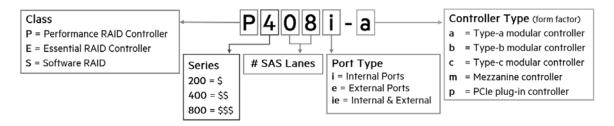
HPE 1.6TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	877825-B21
HPE 3.2TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	877827-B21
HPE 6.4TB PCIe x8 Lanes Mixed Use HHHL 3yr Wty Digitally Signed Firmware Card	877829-B21
HPE 4TB PCIe x4 Lanes Read Intensive HHHL 3yr Wty Digitally Signed Firmware Card	877831-B21
HPE 750GB PCIe x4 Lanes Write Intensive HHHL 3yr Wty Digitally Signed Firmware Card	878038-B21
NOTE: Please see the HPE PCIe Workload Accelerators for ProLiant Servers QuickSpecs for Technical	
Specifications and additional information.	

HPE Security	
HPE Gen10 2U Bezel Kit	867809-B21
HPE Bezel Lock Kit	875519-B21
HPE Gen10 Chassis Intrusion Detection Kit	867824-B21
<b>NOTE:</b> This provides a physical connection from the chassis board and hood and detects any physical intrusion into the chassis, providing security during the entire supply chain process of shipping, receiving, distribution, and operation.	
HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21
<b>NOTE:</b> 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. <b>NOTE:</b> 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

HPE Flexible Smart Array Controllers		
<b>NOTE:</b> All performance RAID controllers are suppo supports multiple devices and is sold separately.	rted by the HPE Smart Storage Battery (P01366-B21), which	
<b>NOTE:</b> Flexible Smart Array controllers do not con	sume a PCIe slot.	
	anes/4GB Cache/SmartCache) 12G SAS Modular Controller	804338-B21
NOTE: Does not occupy a PCIe expansion slot and		
<b>NOTE:</b> The P816i-a cable ships in the 12LFF chase	sis only (868705-B21).	
HPE Smart Array P408i-a SR Gen10 (8 Internal Lar	nes/2GB Cache) 12G SAS Modular Controller	804331-B21
HPE Flexible Smart Array Controllers		
HPE Smart Array E208i-a SR Gen10 (8 Internal Lar	nes/No Cache) 12G SAS Modular Controller	804326-B21
Performance RAID Controllers		
	orted by the HPE Smart Storage Battery (P01366-B21),	
which supports multiple devices and is sold separa	tely.	
HPE Smart Array P408i-p SR Gen10 (8 Internal Lar	nes/2GB Cache) 12G SAS PCIe Plug-in Controller	830824-B21
HPE Smart Array P408e-p SR Gen10 (8 External La	anes/4GB Cache) 12G SAS PCIe Plug-in Controller	804405-B21
HPE Smart Array P824i-p MR Gen10 (24 Internal L	anes/4GB Cache/CacheCade) 12G SAS PCIe Controller	870658-B21
Essential RAID Controllers		
HPE Smart Array E208i-p SR Gen10 (8 Internal Lar	nes/No Cache) 12G SAS PCIe Plug-in Controller	804394-B21
HPE Smart Array E208e-p SR Gen10 (8 External La	anes/No Cache) 12G SAS PCIe Plug-in Controller	804398-B21
HPE Cable Options		
HPE DL380 SFF Smart Array HBA H200/P400 Ser	ies SAS Cable Kit	786092-B21

HPE DL38X Gen10 2 Drive NVMe Slim SAS Cable Kit HPE DL380 Gen10 Mini SAS 3POS Cable Kit <b>NOTE:</b> For details on cabling options, additional information available	871827-B21 826709-B21
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
HPE DL38X/560/580/ML350 Gen10 P824i-p Cable Kit	P00614-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: <u>https://www.hpe.com/us/en/storage/storeever-tape-storage.html</u>. For hardware and software compatibility of Hewlett Packard Enterprise tape backup products <u>http://www.hpe.com/storage/BURAcompatibility</u>.

#### **HPE Storage Options Emulex Fibre Channel HBAs** HPE StoreFabric SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter QOL13A HPE StoreFabric SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter QOL14A HPE StoreFabric SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter QOL11A HPE StoreFabric SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter Q0I 12A **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 N3U52A HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter E7Y06A HPE StoreFabric CN1200E 10Gb Converged Network Adapter HPE StoreFabric CN1200E 10GBASE-T Dual Port Converged Network Adapter N3U51A Q0F26A HPE StoreFabric CN1200R 10GBASE-T Converged Network Adapter Q0F09A HPE StoreFabric CN1300R 10/25Gb Dual Port Converged Network Adapter NOTE: For the complete listing of Fibre Channel Host Bus Adapters for Windows 2000, Windows Server 2003 and Linux, please

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

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

#### HPE Power Distribution Units (PDUs)

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

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

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

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

#### 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 <u>HPE KVM Switches web page</u> 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.

HPE 2U Small Form Factor Easy Install Rail Kit	733660-B21
NOTE: Does not include CMA (733664-B21).	
HPE 2U Large Form Factor Easy Install Rail Kit	733662-B21
NOTE: Does not include CMA (733664-B21).	
HPE 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 USB and SD Options**

#### HPE Enterprise Mainstream Flash Media Kits for Memory Cards

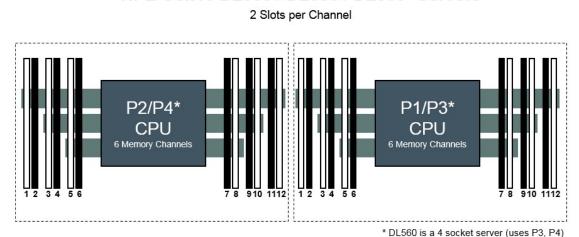
HPE 32GB microSD Flash Memory Card

LIDE Support Services	
HPE 8GB Dual microSD Flash USB Drive	741279-B21
HPE 8GB microSD Flash USB Drive	737953-B21
HPE 8GB microSD Flash Memory Card	726116-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
NOTE: For a full listing of support services available for this server, please visit https://ssc.hpe.com/	

**Memory Population guidelines** 



HPE Gen10 DL360 / DL380 / DL560\* Servers

Front of Server

HPE	HPE ProLiant Gen10 12 slot per CPU											
		DIMI	MP	ορι	ılat	on	Ord	ler				
1 DIMM								8				
2 DIMMs								8		10		
3 DIM M s								8		10		12
4 DIMMs			3		5			8		10		
5 DIM M s *			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 DIM M s *	1		3	4	5	6	7	8	9	10		12
11 DIM M s *	1		3	4	5	6	7	8	9	10	11	12
12 DIMMs	1	2	3	4	5	6	7	8	9	10	11	12
* Unbalanced, not recommended												

#### General Memory Population Rules and Guidelines:

Install DIMMs only if the corresponding processor is installed.

If only one processor is installed in a two-processor system, only half of the DIMM slots are available.

To maximize performance, it is recommended to balance the total memory capacity between all installed processors.

When two processors are installed, balance the DIMMs across the two processors.

White DIMM slots denote the first slot to be populated in a channel.

Mixing of DIMM types (UDIMM, RDIMM, and LRDIMM) is not supported.

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

The maximum memory capacity is a function of the number of DIMM slots on the platform, the largest DIMM capacity qualified on the platform, the number and model of installed processors qualified on the platform.

For details on the HPE Server Memory Options Population Rules, visit: http://www.hpe.com/docs/memory-population-rules

To realize the performance memory capabilities listed in this document, HPE DDR4 SmartMemory is required. For additional information, please see the **HPE DDR4 SmartMemory QuickSpecs**.

DIMM Type		Registered DII	MM (RDIMM)	
HPE SKU P/N	815097-B21	815098-B21	835955-B21	815100-B21
	HPE 8GB (1x8GB)	HPE 16GB (1x16GB)	HPE 16GB (1x16GB)	HPE 32GB (1x32GB)
	Single Rank x8 DDR4-	Single Rank x4 DDR4-	Dual Rank x8 DDR4-	Dual Rank x4 DDR4
	2666 CAS-19-19-19	2666 CAS-19-19-19	2666 CAS-19-19-19	2666 CAS-19-19-19
	Registered Smart	Registered Smart	Registered Smart	Registered Smart
SKU Description	Memory Kit	Memory Kit	Memory Kit	Memory Kit
DIMM Capacity	8GB	16GB	16GB	32GB
DIMM Rank	Single Rank (1R)	Single Rank (1R)	Dual Rank (2R)	Dual Rank (2R)
Voltage	1.2 V	1.2 V	1.2 V	1.2 V
DRAM Depth [bit]	1G	2G	1G	2G
DRAM Width [bit]	x8	x4	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	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
Processors Officially Supp	oorted Memory Speed:			
Intel Xeon®Platinum/Gold	81xx/61xx			
1 RDIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
2 RDIMMs Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
Intel Xeon®Gold/Silver 51	xx/41xx	·	-	
1 RDIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s
2 RDIMMs Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s
Intel Xeon®Bronze 31xx				·
1 RDIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s
2 RDIMMs Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s
HPE Server Memory Spee	d: Intel Xeon® Platinum/Go	d 81xx/61xx Processors	*	1
1 RDIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
2 RDIMMs Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
HPE Server Memory Spee	d: Intel Xeon® Gold/Silver 5	1xx/41xx Processors *	I	1
1 RDIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s
2 RDIMMs Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s
HPE Server Memory Spee	d: Intel Xeon® Bronze 31xx	Processors *	1	
1 RDIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s
2 RDIMMs Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s
	mory speed is a function of	1		

DIMM Type	Load Reduced DIMM (LRDIMM)				
HPE SKU P/N	815101-B21	815102-B21			
	HPE 64GB (1x64GB) Quad Rank x4	HPE 128GB (1x128GB) Octal Rank x4			
	DDR4-2666 CAS-19-19-19 Load	DDR4-2666 CAS-22-19-19 3DS Load			
SKU Description	Reduced Smart Memory Kit	Reduced Memory Kit			
DIMM Capacity	64GB	128GB			
DIMM Rank	Quad Rank (4R)	Octal Rank (8R)			
Voltage	1.2 V	1.2 V			
DRAM Depth [bit]	2G	2G			
DRAM Width [bit]	×4	x4			
DRAM Density	8Gb	8Gb			
CAS Latency	19-19-19	22-19-19			
DIMM Native Speed	2666 MT/s	2666 MT/s			
Processors Officially Supported Memo	ry Speed:				
Intel Xeon® Platinum/Gold 81xx/61xx					
1 LRDIMM Per Channel	2666 MT/s	2666 MT/s			
2 LRDIMMs Per Channel	2666 MT/s	2666 MT/s			
Intel Xeon® Gold/Silver 51xx/41xx					
1 LRDIMM Per Channel	2400 MT/s	2400 MT/s			
2 LRDIMMs Per Channel	2400 MT/s	2400 MT/s			
Intel Xeon® Bronze 31xx	·				
1 LRDIMM Per Channel	2133 MT/s	2133 MT/s			
2 LRDIMMs Per Channel	2133 MT/s	2133 MT/s			
HPE Server Memory Speed: Intel Xeon	Platinum/Gold 81xx/61xx Processors *				
1 LRDIMM Per Channel	2666 MT/s	2666 MT/s			
2 LRDIMMs Per Channel	2666 MT/s	2666 MT/s			
HPE Server Memory Speed: Intel Xeon	© Gold/Silver 51xx/41xx Processors *				
1 LRDIMM Per Channel	2400 MT/s	2400 MT/s			
2 LRDIMMs Per Channel	2400 MT/s	2400 MT/s			
HPE Server Memory Speed: Intel Xeon	<sup>®</sup> Bronze 31xx Processors *	1			
1 LRDIMM Per Channel	2133 MT/s	2133 MT/s			
	2133 MT/s	2133 MT/s			

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

Pre Configured Models	Standard Memory	Standard Memory Maximum Memory Plus 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 2	2H 2017.		

#### DDR4 memory options part number decoder

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

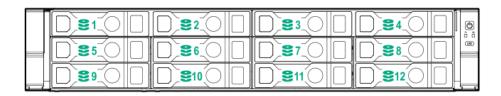
- 8GB = 8,192 MB
- 16GB = 16,384 MB
- 32GB = 32,768 MB
- 64GB = 65,536 MB

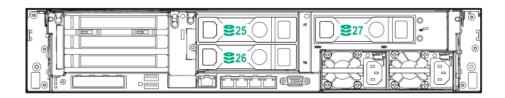
For more information on memory, please see the Memory Quickspecs: HPE DDR4 SmartMemory

### Storage

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

#### 12 LFF + 3 rear LFF drives



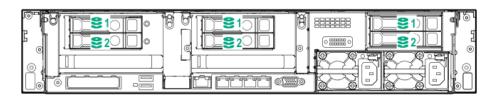


#### 12 LFF + 2 rear SFF drives

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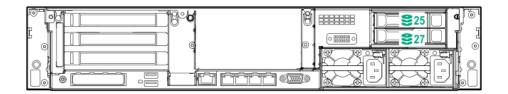
### Storage

#### 6 rear SFF drives



24 SFF + rear 2 SFF drives





# **Technical Specifications**

#### System Unit

System Office			
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	/-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 Peak 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 Te		For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: http://www.hpe.com/servers/ashrae
			For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above

		900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: <b>http://www.hpe.com/servers/ashrae</b>
		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 sou environment. Noise emis in accordance with ISO configurations. Addition	A-Weighted sound power levels ( $L_{WAd}$ ) and declared average bystander and pressure levels ( $L_{pAm}$ ) when the product is operating in a 23°C ambient sions were measured in accordance with ISO 7779 (ECMA 74) and declared 9296 (ECMA 109). The listed sound levels apply to standard shipping nal options may result in increased sound levels. Please have your HPE information from the HPE EMESC website for further technical details ions listed below.
	Idle	
	LWAd	4.8 B Entry
		4.4 B Base
		4.6 B Perf
	LpAm	37 dBA Entry
		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
	levels will vary depend notification and are for r <b>NOTE:</b> Product conform	presented here are generated by the test configuration only. Acoustics ding on system configuration. Values are subject to change without reference only. nance to cited product specifications is based on sample (type) testing, ent. This product or family of products is eligible to bear the appropriate

compliance logos and statements. **NOTE:** The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

Emissions Classification (EMC) – Regulatory Information To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center:

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

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

#### Environment-friendly Products and Approach End-of-life Management and Recycling

Hewlett Packard Enterprise offers **<u>end-of-life product return, trade-in, and recycling programs</u>, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.** 

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

## Summary of Changes

Date	Version History	Action	Description of Change
15-Oct-2018	Version 18	Changed	Configuration Information, Core Options and Additional Options sections were updated
01-Oct-2018	Version 17	Changed	Overview, Standard Features, Preconfigured Models, Configuration Information, Core Options, Additional Options, and Memory sections were updated. SKU descriptions were updated. Obsolete SKUs were removed.
13-Aug-2018	Version 16	Changed	Core Options and Additional Options were revised.
06-Aug-2018	Version 15	Added	Added new Solid State Drives offering, Added new GPU option.
		Changed	Configuration Information - Factory Integrated Models, Core Options, and Additional Options were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
11-Jun-2018	Version 14	Changed	Smart Buy Models section for the NA version was revised.
04-Jun-2018	Version 13	Added	Added new SSDs offering to the HPE Drives section.
		Changed	Core Options, Additional Options, and Memory were updated.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
07-May-2018	Version 12	Added	New SMB Models offering was added.
		Changed	Riser Information was revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
02-Apr-2018	Version 11	Changed	SKUs description were updated.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
05-Mar-2018	Version 10	Removed	Obsolete SKUs were removed from the QuickSpecs.
05-Feb-2018	Version 9	Added	Added new SATA SSDs, NVMe drives, and PCIe accelerator cards.
18-Dec-2017	Version 8	Changed	Weight specifications were revised.
04-Dec-2017	Version 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	Version 6	Changed	Memory speed table was updated to display the 61XX processors running at 2666MT/s.
16-Oct-2017	Version 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	Version 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	Version 3	Changed	Smart Buy models section was revised (NA version only).

### **Summary of Changes**

7-Aug-2017	Version 2	Added	Added new Solid State Drives offering to the HPE Drives section.
			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.



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

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