

### Overview

#### HPE ProLiant DL385 Gen10 Carrier Grade Supplement

##### NEBS Level 3 and ETSI Certified

This section lists some of the steps required to configure a Factory Integrated Model compliant with typically requested telecom carrier NEBS and ETSI requirements. In addition to the worldwide compliance criteria applied to the commercial version of the product, all components listed in this document have been evaluated to the following criteria:

- SR-3580, Level 3, "NEBS Criteria Levels"
- GR-1089-CORE, "EMC & Electrical Safety"
- GR-63-CORE, "Physical Protections"
- ETSI EN 300 386, Class A, "EMC"
- ETSI EN 300 019-2-1, Class 1.2, "Storage"
- ETSI EN 300 019-2-2, Class 2.3, "Transportation"
- ETSI EN 300 019-2-3, Class 3.1 & 3.1E, Stationary Use at Weather protected locations"
- ETSI 300 132, "Power Supply Interface to Telecom Equipment, -48VDC"
- ETSI ETS 300 753, "Acoustic Noise"

To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

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

**Notes:** To yield a carrier grade server that is compliant with all the required technical criteria, the product content is limited to what is listed in this document. In addition to this, system maintenance switch #10 must be turned on to enable the expanded operating temperature range and the hardware from the following kits must be installed:

- HPE DL38X Gen10 High Performance Temperature Fan Kit- 867810-B21
- All installed PCI risers must be NEBS certified versions:
  - HPE DL38X Gen10 x8/16/8 NEBS Riser Kit - 873209-B21
  - HPE DL38XGen10 x8/16/8 M.2 NEBS Riser Kit - 826701-B21
  - HPE DL38X Gen10 x16 Tertiary NEBS Riser Kit - 826702-B21

Please refer to the HPE ProLiant DL385 Gen10 Carrier Grade Conversion documentation on the HPE web site:

<http://www.hpe.com/services/hpsc>

## Configuration Information

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

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

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

<b>CTO Server</b>	HPE ProLiant DL385 Gen10 8 SFF CTO Server
<b>SKU Number</b>	878612-B21
<b>TAA SKU</b>	878616-B21
<b>Processor</b>	Not included as standard
<b>DIMM Slots</b>	32-DIMM slots
<b>Storage Controller</b>	Embedded s100i SW RAID for 2 x M.2 SATA support, choice of HPE modular Smart Array and PCIe plug-in controller
<b>PCIe</b>	Three standard in primary riser
<b>Drive Cage - included</b>	8 SFF
<b>Network Controller</b>	HPE 1Gb Ethernet 4-Port 331i Adapter plus optional HPE FlexibleLOM or stand up card
<b>Fans</b>	4-Standard
<b>Management</b>	HPE iLO with Intelligent Provisioning (standard), iLO Advances and OneView (optional)
<b>USB</b>	1x 3.0 standard plus iLo front service port

#### Notes:

- 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).
- TAA chassis are only orderable in North America and Canada.
- All CTO servers are Energy Star 2.1 compliant.

<b>CTO Server</b>	8 SFF CTO Chassis
<b>Included Drive Cage</b>	8 SFF SAS/SATA
<b>Universal Media Bay</b>	1 Optional
<b>ODD</b>	1 Optional with UMB
<b>8 SFF Drive Cage</b>	Up to 2 Optional
<b>8 NVME/SAS Bay</b>	Up to 3 Optional
<b>8 NVME Cage</b>	Up to 3 Optional
<b>2 SFF SAS/SATA (Front)</b>	1 Optional with UMB
<b>2 SFF SAS/SATA (Rear)</b>	1 Optional
<b>2 NVMe (Front)</b>	1 Optional with UMB
<b>4 LFF Mid-plane</b>	Not available
<b>3 LFF Rear</b>	Not available



## Configuration Information

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

Please select one –L21 processor required below.

For second processor, please select the same processor model with –B21 from Core Options – HPE Processors section.

For example: first processor, select 874752-L21 then for second processor, select 874752-B21.

#### Notes:

- 8SFF CTO 1P models ship with 4 standard fans. The second processor option kit contains 2 additional fans. 12 LFF and 24 SFF CTO Servers ship with 6 High performance fans included; 8LFF CTO Servers ship with 6 Standard fans included. High performance fan kit is available to meet ambient temperature environments are required for rear drives or NVMe configurations. NVMe is limited to front install only.
- Mixing of 2 different processor models are NOT allowed.
- DDR4 memory speed will depend on the quantity and type of DIMMs installed.
- Processors with greater than 170W will ship with the High Performance heatsink.
- Processors with greater than 170W will require the High Performance fan kit.

### Step 2a: 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: <http://www.hpe.com/docs/amd-population-rules>

For Gen10 memory speed table, please go to: <http://www.hpe.com/docs/amd-speed-tables>

#### Notes:

- Memory DIMM availability with a server platform is dependent upon completion of certification testing.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.

HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	838079-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	838081-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	838089-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	838083-B21

### Step 2b: Choose Power Supplies

Select one or two power supplies from below.

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

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

#### Notes:

- Select one or more power supplies.
- Prior to making a power supply selection it is highly recommended that the HPE Power Advisor is run to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: <http://www.hpe.com/info/hppoweradvisor>.
- All power supplies in a server should match. Mixing Power Supplies is not supported.
- HPE ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). Visit [HPE power cords](#) for a full list of optional power cords.

## 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 Unique Options

**Notes:** DL385 has support for NMVE drives when the second CPU is selected. NVME cable 871827-B21 is required and supports 2 drives each.



## Configuration Information

HPE DL Gen10 x16/x16 NEBS Riser Kit

P01011-B21

**Notes:**

- Primary Riser, Connector in slot 2 & 3 for GPU support.
- Supports Full Height and Full length cards.
- Bus width x16, x16, Connector Width x16, x16.

HPE DL380 Gen10 x8/x16/x8 M.2 NEBS Riser Kit

826701-B21

**Notes:**

- Primary Riser Slot 1.
- Supports Full Height and Full length cards.
- Bus width x16, x16, Connector Width x16, x16.

HPE DL38X Gen10 x8/x16/x8 PCIe NEBS Riser Kit

873209-B21

**Notes:**

- Secondary Riser, Connector in slot 2 & 3 for GPU support.
- Supports Full Height and Full length cards.
- Bus width x16, x16, Connector Width x16, x16.

HPE DL380X/Apollo 6500 Gen10 6+2 NVMe FIO Option

878192-B21

**Notes:**

- This is a factory integrated only option.
- Indicates the cage will also have an NVMe connection.
- When NVMe is selected, the SAS/SATA will no longer function unless the controller selection supports it, or the 3POS cable is selected for S100i connection.

HPE DL38X Gen10 8 SFF Front Cage Removal FIO Option

873763-B21

**Notes:**

- This is a factory integrated only option.
- Will remove the Primary 8SFF cage in Box 3 of the 8SFF and replace with a Box blank.

HPE DL38X Gen10 Primary Riser Removal FIO Option

873766-B21

**Notes:**

- This is a factory integrated only option.
- Will remove the Primary shipping PCIe riser.

HPE Legacy FIO Mode Setting

758959-B22

**Notes:** 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

**Notes:** 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.

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

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## Core Options

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

### HPE Unique Options

HPE DL385 Gen10 Universal Media Bay

882097-B21

#### Notes:

- The HPE ProLiant DL385 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 and NVMe riser required see note below) and ODD support (Not included); and can only be located in Box1 in either an 8 SFF or 8+8 SFF model.
- This is a SFF model option only.
- 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) for 1P configurations.
- For 2P configurations the HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser (867808-B21) is needed or the NVMe cable(871827-B21) with the on board NVMe connections may be used.

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

826690-B21

#### Notes:

- 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.
- With NVMe drives a specific riser is required for 1P. 2P enables the on board NVMe connection with the NVMe cable 871827-B21 or this can be enabled with NVMe risers.
- When adding to Box 1 the addition of the High Performance Fan kit (867810-B21) is required.
- 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.
- With NVMe drives a specific riser is required for 1P only. 2P enables on board NVMe connections.
- When adding to Box 1 the addition of the High Performance Fan kit (867810-B21) is required. **Notes:** 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.
- With NVMe drives a specific riser is required for 1P. 2P enables the on board NVMe connection with the NVMe cable 871827-B21 or this can be enabled with NVMe risers.
- When adding to Box 1 the addition of the High Performance Fan kit (867810-B21) is required.
- 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.
- With NVMe drives a specific riser is required for 1P only. 2P enables on board NVMe connections.
- When adding to Box 1 the addition of the High Performance Fan kit (867810-B21) is required.

HPE DL385 Gen10 High Performance Heatsink Kit

882098-B21

#### Notes:

- Required for GPU installations.
- Processor kits above 170W include a High Performance Heatsink.

HPE DL38X Gen10 High Performance Temperature Fan Kit

867810-B21

#### Notes:

- This kit is also required to support GPUs configurations.
- This is required for NVMe configurations.
- This kit provides maximum cooling for your Server.
- This kit is required when Box 1, 2 and 3 are populated.

HPE DL3XX Gen10 Rear Serial Cable and Enablement Kit

873770-B21

HPE DL385 Gen10 System Insight Display Kit

882099-B21

**Notes:** Systems Insight Display no longer ships as standard but is available as a Factory Integrated or field upgrade option.



## Core Options

### HPE Processors

#### Processor Option Kits

AMD EPYC 7601 (2.2GHz/32-core/180W) Processor Kit for HPE ProLiant DL385 Gen10 881162-B21

**Notes:** Ships with Performance Heatsink.

AMD EPYC 7551 (2.0GHz/32-core/180W) Processor Kit for HPE ProLiant DL385 Gen10 881163-B21

**Notes:** Ships with Performance Heatsink.

AMD EPYC 7501 (2GHz/32-core/155-170W) Processor Kit for HPE ProLiant DL385 Gen10 881164-B21

**Notes:** Ships with Standard Heatsink.

AMD EPYC 7401 (2GHz/24-core/155-170W) Processor Kit for HPE ProLiant DL385 Gen10 881166-B21

**Notes:** Ships with Standard Heatsink.

AMD EPYC 7301 (2.2GHz/16-core/155-170W) Processor Kit for HPE ProLiant DL385 Gen10 881170-B21

**Notes:** Ships with Standard Heatsink.

AMD EPYC 7281 (2.1GHz/16-core/155-170W) Processor Kit for HPE ProLiant DL385 Gen10 P00645-B21

**Notes:** Ships with Standard Heatsink.

AMD EPYC 7251 (2.1GHz/8-core/120W) Processor Kit for HPE ProLiant DL385 Gen10 881171-B21

**Notes:**

- Ships with Standard Heatsink.
- DDR4 memory speed will depend on the quantity and type of DIMMs installed.
- The xxxxxx-L21 is the first processor shipped, the xxxxxx-B21 is the 2nd processor and ships with 2 additional fans for factory or field installation.
- Processors above 170W use a High Performance Heatsink and the high performance fan kit (867810-B21).
- Processors with greater than 170W do not include the fans as the selection of processors above 170W requires the High Performance fan kit that comes with 6 fans.

### 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: <http://www.hpe.com/products/recommend>. Best product availability is limited to US, Canada, and Latin America at this time.

#### HPE Memory

HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit 838079-B21

HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit 838081-B21

HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit 838089-B21

HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit 838083-B21

**Notes:**

- Memory DIMM availability with a server platform is dependent upon completion of certification testing.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.

### HPE Optical Drives

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

**Notes:**

- HPE ProLiant DL385 Gen10 Universal Media Bay Kit (882097-B21) is required for this option on a SFF model. No support in 12 LFF or 24 SFF models.
- Not supported anytime the 3 POS cable (882100-B21) is selected.



## Core Options

### 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 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 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	765466-B21

### SSD Selection

To streamline the configuration process for HPE ProLiant Gen10 servers and to provide the best product availability, HPE recommends SSDs from the list located here: <http://www.hpe.com/products/recommend>.

#### Hard Drive Blank Kits

HPE Small Form Factor Hard Drive Blank Kit	666987-B21
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#### Hard Drive Kits

HPE DL38X Gen10 Premium 6 SFF SAS/SATA + 2 NVMe or 8 SFF SAS/SATA Bay Kit	826690-B21
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#### Notes:

- This option provides supports for up to 8 SAS/SATA SFF drives or a combination of 6 SATA/SATA and 2 NVMe drives in the same cage, and can be populated in all Boxes in the SFF model.
- 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) for 1P configurations.
- For 2P configurations the HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser (867808-B21) or the NVMe cable (871827-B21) with the on board NVMe connections me be used.
- NVMe drives require the addition of the High Performance Fan kit (867810-B21).
- This option provides supports for up to 8 SAS/SATA SFF drives or a combination of 6 SATA/SATA and 2 NVMe drives in the same cage, and can be populated in all Boxes in the SFF model.
- 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) for 1P configurations.
- For 2P configurations the HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser (867808-B21) or the NVMe cable (871827-B21) with the on board NVMe connections me be used.
- NVMe drives require the addition of the High Performance Fan kit (867810-B21).

HPE DL38X Gen10 SFF Box1/2 Cage/Backplane Kit	826691-B21
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**Notes:** Supports 8 SAS/SAFA SFF drives in Box 1 or 2 to a max of 24 SFF SAS/SATA front.

#### Media Bay Kits

HPE DL385 Gen10 Universal Media Bay	882097-B21
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#### Notes:

- The HPE ProLiant DL385 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 and NVMe riser required see notes below)and ODD support (Not included); and can only be located in Box1 in either an 8 SFF or 8+8 SFF model.
- This is a SFF model option only.
- 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) for 1P configurations.
- For 2P configurations the HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser (867808-B21) is needed or the NVMe cable (871827-B21) with the on board NVMe connections may be used.



## Core Options

### HPE Networking

#### 1 Gigabit Ethernet adapters

HPE Ethernet 1Gb 4-port BASE-T BCM5719 Adapter	647594-B21
HPE Ethernet 1Gb 4-port BASE-T I350-T4V2 Adapter	811546-B21
HPE Ethernet 1Gb 2-port BASE-T BCM5720 Adapter	615732-B21
HPE Ethernet 1Gb 2-port BASE-T I350-T2V2 Adapter	652497-B21

#### 10 Gigabit Ethernet adapters

HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter	727055-B21
HPE Ethernet 10Gb 2-port BASE-T X550-AT2 Adapter	817738-B21
HPE Ethernet 10Gb 2-port FLR-T X550-AT2 Adapter	817745-B21
HPE Ethernet 10Gb 4-port SFP+ X710-DA4 Adapter	869585-B21

#### 25 Gigabit Ethernet adapters

HPE Ethernet 10/25Gb 2-port SFP28 QL41401-A2G Adapter	867328-B21
HPE Ethernet 10/25Gb 2-port SFP28 BCM957414 Adapter	817718-B21
HPE Ethernet 10/25Gb 2-port SFP28 CX4121B Adapter	817753-B21

#### Notes:

- The DL385 Gen10 ships with 4x 1 Gb Embedded.
- A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.
- 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 FLR-SFP+ BCM5719 Adapter	629135-B22
HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter	665240-B21
HPE Ethernet 10Gb 2-port FLR-SFP+ X710-DA2 Adapter	727054-B21
HPE Ethernet 10/25Gb 2-port FLR-SFP28 BCM957414 Adapter	817709-B21
HPE Ethernet 10/25Gb 2-port FLR-SFP28 CX4 Adapter	817749-B21

#### Notes:

- The DL385 Gen10 chassis ships with 4x 1 Gb embedded.
- 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.
- 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 EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	825111-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	872726-B21





## Core Options

### HPE I/O Expansion Options

#### Notes:

- For additional details on ProLiant DL Gen10 server risers please visit: <https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00043229enw>
- The Primary Riser shipping default in the chassis is a x8 FH, FL, x16 FH, FL and x8 FH, HL.
- For a Secondary/Tertiary riser the second processor is required.

HPE DL380 Gen10 x8/x16/x8 M.2 NEBS Riser Kit

826701-B21

#### Notes:

- Slot 1 or 2 in Primary or Secondary location.
- Supports Full Height and Full length cards.
- Bus width x16, x16, Connector Width x16, x16.

HPE DL38X Gen10 x8/x16/x8 PCIe NEBS Riser Kit

873209-B21

#### Notes:

- No M.2 support on this riser.
- Supports Full Height, Half- length cards; Full Height, Full-length cards and Full Height, Half- length cards.
- Bus width x8, x16, x8, Connector Width x8, x16, x8.

HPE DL Gen10 x16/x16 NEBS Riser Kit

P01011-B21

#### Notes:

- Primary or Secondary Riser, Connector in slot 2 & 3 for GPU support.
- Supports Full Height and Full length cards.
- Bus width x16, x16, Connector Width x16, x16.

HPE DL380 Gen10 x16 Tertiary NEBS Riser

826702-B21

#### Notes:

- Supports 1x 16 slot in the Tertiary location.
- Supports Full Height and full-length card.
- Bus width x16 Connector Width x16.
- For additional details on ProLiant DL Gen10 server risers please visit: <https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00043229enw>

### Riser Information

Commercial Part number	NEBS Part Number	Description	Riser position			Bus width (Gen3 lanes)		
			Primary	Secondary	Tertiary	Top slot	Middle Slot	Bottom slot
826701-B21	826701-B21	HPE DL380 Gen 10x8/16/8 M.2 NEBS Riser						
870548-B21	873209-B21	HPE DL Gen10 x8/x16/x8 no M.2 NEBS Riser Kit	D	O	N	x8	x16	x8
826704-B21	P01011-B21	HPE DL Gen10 x16/x16 NEBS GPU S2/3	O	O	N	0	x16	x16
826700-B21	826702-B21	HPE DL38X Gen10 x16 Tertiary NEBS Riser Kit	N	N	O	X16	0	0



## Core Options

### HPE Power Supplies

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

865414-B21

**Notes:** 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

**Notes:**

- Flex Slot -48VDC power supplies support power efficiency of up to 94%.
- 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).
- Prior to making a power supply selection it is highly recommended that the HPE Power Advisor is run to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: <http://www.hpe.com/info/hppoweradvisor>.
- All power supplies in a server should match. Mixing Power Supplies is not supported.
- Visit [HPE power cords](#) for a full list of optional HPE power cords.

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### HPE Cooling Options

HPE DL38X Gen10 High Performance Temperature Fan Kit

867810-B21

**Notes:**

- This kit is required for specific **Ambient temperature environments**, coming in 2H2017.
  - 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.
  - For elevated ambient temperature support please see: <http://www.hpe.com/servers/ashrae>.
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## Additional Options

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

### HPE Security

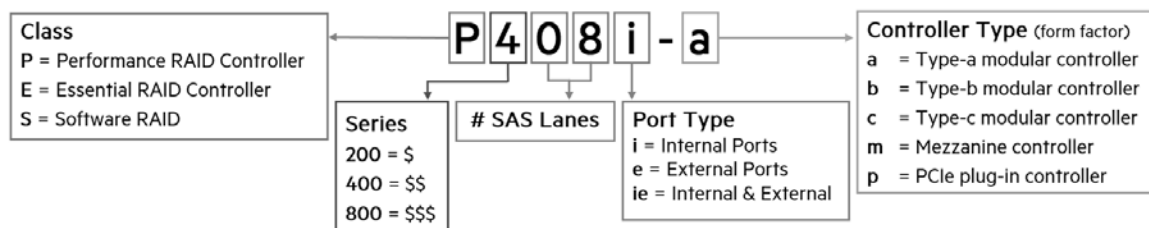
HPE Gen10 2U Bezel Kit	867809-B21
HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21
HPE 2U Bezel Air Filter NEBS-compliant Kit	P05420-B21

#### Notes:

- 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.
- HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.
- There is a FIO setting to allow this TPM module to operate in a TPM 1.2 mode (872108-B21).

### 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](#).



### Performance RAID Controllers

**Notes:** All performance RAID controllers are supported by the HPE Smart Storage Battery (P01366-B21), which supports multiple devices and is sold separately.

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

- Does not occupy a PCIe expansion slot and includes SmartCache license.
- The P816i-a cable ships in the 12LFF chassis only.

HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller	804331-B21
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**Notes:** Does not occupy a PCIe expansion slot.

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

**Notes:** Does not occupy a PCIe expansion slot.

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

### Optional Upgrades

HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21
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**Notes:** Provides backup power for multiple HPE Smart Array controllers or other devices. Is required with performance RAID controllers.



Additional Options

QLogic Fibre Channel HBAs

HPE SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
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Converged Network Adapters

HPE CN1100R Dual Port Converged Network Adapter	QW990A
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HPE Rack Options

Rail Kits

Notes:

<ul style="list-style-type: none"><li>– Ball bearing and Easy Install rail kits contain telescoping rails which allow for in-rack serviceability.</li><li>– 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.</li></ul>	
HPE 2U Small Form Factor Ball Bearing Rail Kit	720863-B21
<b>Notes:</b> Does not include CMA (720865-B21).	
HPE 2U Cable Management Arm for Ball Bearing Rail Kit	720865-B21



## Technical Specifications

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

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

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

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### 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 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 Hewlett Packard Enterprise due to malfunction.

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## Summary of Changes

Date	Version History	Action	Description of Change
03-Aug-2020	Version 6	Changed	Core Options Section was updated. Obsolete SKUs were removed.
04-Feb-2019	Version 5	Changed	Obsolete SKUs were removed from the QuickSpecs. Fibre Channel Host Bus Adapters note has been removed
05-Nov-2018	Version 4	Changed	SKUs were Added and deleted in Configuratio Information and Core Options Sections
15-Oct-2018	Version 3	Changed	Additional Options were revised.
01-Oct-2018	Version 2	Changed	Configuration Information – Factory Integrated Models, Core Options and Additional Options were revised.
06-Aug-2018	Version 1	New	New QuickSpecs.



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