

Overview

HPE ProLiant DL380 Gen11 - 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
- GR-3108-CORE Outside Plant
- 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, the system maintenance switch #10 must be turned to the "ON" position to enable the expanded operating temperature range and hardware from the following kits MUST be installed:
 - o HPE ProLiant DL380/DL560 Gen11 High Performance 2U Heat Sink Kit (P48818-B21)
 - o HPE ProLiant DL380/DL560 Gen11 2U High Performance Fan Kit (P48820-B21)
 - o HPE ProLiant DL380 Gen11 2U Primary/Secondary NEBS-compliant Riser Kit (P48805-B21)
 - o HPE ProLiant DL380 Gen11 2U Secondary/Tertiary NEBS-compliant Riser Kit (P48806-B21)

Please refer to the HPE DL380 Gen11 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 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.
Some options may not be integrated at the factory. Contact your local sales representative for additional information

Step 1: Base Configuration

The below CTO server model, denoted with “NC” in the SKU description, provides flexibility in the networking choice and require a network adapter from the “HPE Networking” section be selected.

Networking Choice CTO Server Models	HPE ProLiant DL380 Gen11 - Carrier Grade Supplement 8SFF NC CTO Server
SKU Number	P52534-B21
TAA SKU*	P52534-B21#GTA
HPE Trusted Supply Chain	P36394-B21 – Optional
Processor	Not included as standard
DIMM Slots	32-DIMM slots
Storage Controller	Embedded SW RAID with 14 SATA ports (12-ports accessible), optional choice of HPE modular MegaRAID controller.
Drive Cage - available	8 SFF (8SFF U.3 x1)
Network Controller	Choice of either OCP 3.0 or select stand-up network adapters for primary networking selection plus additional/optional stand-up network adapters. Notes: No embedded networking
Fans	4-Standard
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advanced and OneView (optional)
USB	4x 3.0 standard plus iLO front service port

Step 2: Choose Required Options

Please select up to two processors required below.

Step 2a: Choose Processors

Processor Option Kits

4th Generation Intel Xeon-Platinum

Intel Xeon-Platinum 9462 2.7GHz 32-core 350W Processor for HPE	P49645-B21
Intel Xeon-Platinum 8458P 2.7GHz 44-core 350W Processor for HPE	P49632-B21
Intel Xeon-Platinum 8460Y+ 2.0GHz 40-core 300W Processor for HPE	P49604-B21
Intel Xeon-Platinum 8452Y 2.0GHz 36-core 300W Processor for HPE	P49616-B21

4th Generation Intel Xeon-Gold

Intel Xeon-Gold 6448H 2.4GHz 32-core 250W Processor for HPE	P49622-B21
Intel Xeon-Gold 6448Y 2.1GHz 32-core 225W Processor for HPE	P49600-B21
Intel Xeon-Gold 6442Y 2.6GHz 24-core 225W Processor for HPE	P49599-B21
Intel Xeon-Gold 6438N 2.0GHz 32-core 205W Processor for HPE	P49638-B21
Intel Xeon-Gold 6438Y+ 2.0GHz 32-core 205W Processor for HPE	P49615-B21
Intel Xeon-Gold 6430 2.1GHz 32-core 270W Processor for HPE	P49614-B21
Intel Xeon-Gold 6426Y 2.5GHz 16-core 185W Processor for HPE	P49598-B21



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Intel Xeon-Gold 6454S 2.2GHz 32-core 270W Processor for HPE	P49654-B21
Intel Xeon-Gold 6421N 1.8GHz 32-core 185W Processor for HPE	P49641-B21

Notes: This is a single socket CPU, max allowed = 1

Intel Xeon-Gold 6418H 2.1GHz 24-core 185W Processor for HPE	P49621-B21
Intel Xeon-Gold 6416H 2.2GHz 18-core 165W Processor for HPE	P49620-B21
Intel Xeon-Gold 6414U 2.0GHz 32-core 250W Processor for HPE	P49619-B21

Notes: This is a single socket CPU, max allowed = 1

Intel Xeon-Gold 5416S 2.0GHz 16-core 150W Processor for HPE	P49653-B21
Intel Xeon-Gold 5418N 1.8GHz 24-core 165W Processor for HPE	P49640-B21
Intel Xeon-Gold 5418Y 2.0GHz 24-core 185W Processor for HPE	P49612-B21
Intel Xeon-Gold 5420+ 2.0GHz 28-core 205W Processor for HPE	P49613-B21
Intel Xeon-Gold 5411N 1.9GHz 24-core 165W Processor for HPE	P49639-B21

Notes: This is a single socket CPU, max allowed = 1

4th Generation Intel Xeon-Silver

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

4th Generation Intel Xeon-Bronze

Intel Xeon-Bronze 3408U 1.8GHz 8-core 125W Processor for HPE	P49617-B21
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Notes: This is a single socket CPU, max allowed = 1

Step 2b: Choose Memory Options

Please select one or more memory from below.

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

HPE Memory Population Rules

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

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

Notes: Please consult with the HPE server QuickSpecs or your HPE representative if you have any questions regarding memory compatibility with a specific HPE server configuration.

Registered DIMMs DDR5 (RDIMMs)

HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43322-B21
HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43328-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P43331-B21

Notes: Mixing of x4 and x8 memory is not allowed.

Memory Blank Kit

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

Step 2c: Choose Power Supplies

Select one or two power supplies from below.

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

HPE Flex Slot Power Supplies

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



Configuration Information

HPE 1600W -48VDC Power Cable Lug Kit

P36877-B21

Notes:

- Select a minimum (1), maximum (2) 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>.
 - Mixing Power Supplies is not supported.
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Additional Options

HPE Unique Options

HPE ProLiant DL380/DL560 Gen11 2U Rear Serial Port Cable Kit	P48824-B21
HPE ProLiant DL380 Gen11 System Insight Display Kit	P48819-B21

HPE Optical Drives

HPE 9.5mm SATA DVD-ROM Optical Drive	726536-B21
HPE 9.5mm SATA DVD-RW Optical Drive	726537-B21

Media Bay Kits

HPE ProLiant DL380 Gen11 SFF Universal Media Bay Kit	P50728-B21
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Notes: The HPE DL380 Gen11 Universal Media bay provides front Display Port and 2xUSB 2.0

HPE Hard Disk Drives

HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD	P28352-B21
HPE 1.8TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD	P53562-B21
HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P28586-B21
HPE 900GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD	P40432-B21
HPE 600GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD	P53560-B21
HPE 600GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P53561-B21
HPE 300GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD	P28028-B21
HPE 300GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P40430-B21

Midline - 12G SAS - SFF Drives

HPE 2TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD	P28505-B21
HPE 1TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty HDD	P53563-B21

Midline - 6G SATA - SFF Drives

HPE 1TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty HDD	P28610-B21
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SSD Selection

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

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

HPE 3.84TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49035-B21
HPE 1.92TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49031-B21
HPE 960GB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49029-B21

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

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

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

HPE 3.2TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49053-B21
HPE 1.6TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49049-B21
HPE 800GB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49047-B21

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

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

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

HPE 7.68TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40501-B21
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Additional Options

HPE 3.84TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40500-B21
HPE 1.92TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40499-B21
HPE 480GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40497-B21
HPE 960GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40498-B21
HPE 240GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40496-B21
Mixed Use - 6G SATA - SFF - Solid State Drives	
HPE 3.84TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40505-B21
HPE 1.92TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40504-B21
HPE 960GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40503-B21
HPE 480GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40502-B21
Read Intensive - NVMe - SFF - Solid State Drives	
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50219-B21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50216-B21
Mixed Use - NVMe - SFF	
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50227-B21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50230-B21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50233-B21

Hard Drive Blank Kits

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

HPE ProLiant DL380 Gen11 2U 8SFF x1 Tri-Mode U.3 Drive Cage Kit	P48813-B21
HPE ProLiant DL380 Gen11 8SFF U.3 Premium Drive Cage Kit	P48814-B21
HPE ProLiant DL380 Gen11 SFF Universal Media Bay Kit	P50728-B21

HPE Networking

1 Gigabit Ethernet adapters

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

10 Gigabit Ethernet adapters

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

25 Gigabit Ethernet adapters

Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P26264-B21
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26262-B21
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P08443-B21
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P08458-B21
Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P42044-B21

100 Gigabit Ethernet Adapters

Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	P25960-B21
Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE	P21112-B21

200 Gigabit Ethernet Adapters

Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE	P10180-B21
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OCP 3.0 Adapters

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P51181-B21
Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P08449-B21
Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T OCP3 Adapter for HPE	P10097-B21



Additional Options

Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10106-B21
Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P42041-B21
Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE	P22767-B21

OCP 3.0 Enablement

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

HPE InfiniBand

HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 MCX653105A-HDAT Adapter	P23664-B21
HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter	P31324-B21
HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter	P23665-B21
HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653106A-ECAT Adapter	P23666-B21

HPE I/O Expansion Options

HPE ProLiant DL380 Gen11 2U Primary/Secondary NEBS-compliant Riser Kit	P48805-B21
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Notes:

- This riser kit can be used as the Primary riser or the Secondary riser.
- Slot 1 or slot 4 - PCIe 5.0 x8 Full Height and Full Length
- Slot 2 or slot 5 - PCIe 5.0 x16 Full Height and Full Length
- Slot 3 or slot 6 - PCIe 5.0 x8 Full Height and Half Length
- When this riser is selected it replaces the default Primary Riser.
- When Primary and Secondary NEBS risers are selected the Tertiary Riser cannot be selected.
- NEBS risers cannot be mixed with other non-NEBS risers.

HPE ProLiant DL380 Gen11 2U Secondary/Tertiary NEBS-compliant Riser Kit	P48806-B21
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Notes:

- This riser kit includes the secondary riser and the tertiary riser.
- Slot 4 - PCIe 5.0 x8 Full Height and Full Length
- Slot 5 - PCIe 5.0 x16 Full Height and Full Length
- Slot 6 - PCIe 5.0 x8 Full Height and Half Length
- Slot 7 - PCIe 5.0 x16 Full Height and Full Length
- Slot 8 - PCIe 5.0 x16 Full Height and Full Length
- This riser requires selection of a second processor.
- When Primary and Secondary NEBS risers are selected the Tertiary Riser cannot be selected.
- NEBS risers cannot be mixed with other non-NEBS risers.

HPE Cooling Options

HPE ProLiant DL380/DL560 Gen11 2U High Performance Fan Kit	P48820-B21
HPE ProLiant DL380/DL560 Gen11 High Performance 2U Heat Sink Kit	P48818-B21



Additional Options

HPE Security

HPE Gen11 2U Bezel Kit

P050400-B21

HPE Storage Controllers

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

HPE MegaRAID Storage Controllers

HPE Tri-Mode Controllers

HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller	P47777-B21
HPE MR416i-o Gen11 x16 Lanes 8GB Cache OCP SPDM Storage Controller	P47781-B21
HPE MR216i-p Gen11 x16 Lanes without Cache PCI SPDM Plug-in Storage Controller	P47785-B21
HPE MR216i-o Gen11 x16 Lanes without Cache OCP SPDM Storage Controller	P47789-B21
HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller	P58335-B21
HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage Controller	P47184-B21

Notes: Requires x16 riser slot

Essential RAID Controllers

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

HPE ProLiant DL360 Gen11 Storage Controller Enablement Cable Kit	P48918-B21
HPE ProLiant DL380 Gen11 8SFF OROC1/2 x2 Cable Kit	P48829-B21
HPE ProLiant DL380 Gen11 Tri-Mode Splitter Cable Kit	P48832-B21

Optional Upgrades

HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21
HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit	P02377-B21

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

Easy Install Rail Kits

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

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

Notes:

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

HPE ProLiant DL3XX Gen11 Easy Install Rail 3 Kit	P52341-B21
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Notes: Does not include Cable Management Arm (CMA) (P22020-B21).

HPE DL38X Gen10 Plus 2U Cable Management Arm for Rail Kit	P22020-B21
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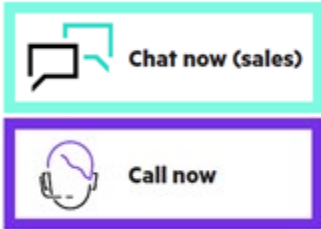
Summary of Changes

Date	Version History	Action	Description of Change
06-May-2024	Version 3	Changed	Additional Options section was updated
04-Mar-2024	Version 2	Changed	Configuration Information and Additional Options sections were updated
06-Nov-2023	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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