

Overview

HPE ProLiant DL110 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. Select HPE NEBS-compliant FIO Trigger System Setting (P40010-B21) for factory integration.

Please refer to the HPE DL110 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 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.
- Some options may not be integrated at the factory. Contact your local sales representative for additional information.

Step 1: Base Configuration

CTO Server	HPE ProLiant DL110 Gen11 Front Cabled Configure-to-order Server
SKU Number	P54277-B21
Processor	Not included as standard; 1 supported
Heatsink	Included
DIMM Slots	8-DIMM slots
Storage Controller	Embedded SW RAID with Intel VROC SATA for HPE, choice of Intel VROC NVMe for HPE
PCIe	X16/x16 FHHL riser included
Fans	7- dual rotor hot plug
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advanced and OneView (optional)
USB	iLO Front Service Port
Mounting	Default: "L" shaped bracket ears- recommended for 2-post rack mounting (includes cage nuts for mounting in square-hole rack Optional: Short Friction Rail Kit- recommended for 4-post rack mounting

Step 2: Choose Required Options

Step 2a: Choose Processors

Please select one processor required below.

Notes: Processors with 185W TDP or higher will require the DIMM Blank kit (P43725-B21) to be selected when all DIMM slots are not fully populated

Processor Options

4th Generation Intel Xeon-Gold

Notes: All SKUs below ship with processor only. Fans and heatsink are included in the CTO server.

Intel Xeon-Gold 5412U 2.1GHz 24-core 185W Processor for HPE	P49618-B21
Intel Xeon-Gold 5415+ 2.9GHz 8-core 150W Processor for HPE	P49597-B21
Intel Xeon-Gold 6426Y 2.5GHz 16-core 185W Processor for HPE	P49598-B21
Intel Xeon-Gold 6434 3.7GHz 8-core 195W Processor for HPE	P49601-B21
Intel Xeon-Gold 5420+ 2.0GHz 28-core 205W Processor for HPE	P49613-B21
Intel Xeon-Gold 6438Y+ 2.0GHz 32-core 205W Processor for HPE	P49615-B21
Intel Xeon-Gold 6438N 2.0GHz 32-core 205W Processor for HPE	P49638-B21
Intel Xeon-Gold 5411N 1.9GHz 24-core 165W Processor for HPE	P49639-B21
Intel Xeon-Gold 5418N 1.8GHz 24-core 165W Processor for HPE	P49640-B21
Intel Xeon-Gold 6421N 1.8GHz 32-core 185W Processor for HPE	P49641-B21
Intel Xeon-Gold 5423N 2.1GHz 20-core 145W Processor for HPE	P66247-B21
Intel Xeon-Gold 6403N 1.9GHz 24-core 185W Processor for HPE	P66243-B21
Intel Xeon-Gold 6423N 2.0GHz 28-core 195W Processor for HPE	P66239-B21
Intel Xeon-Gold 6443N 2.0GHz 32-core 195W Processor for HPE	P66231-B21

Notes: If 5423N Processor is selected then secondary riser cannot be selected



Configuration Information

4th Generation Intel Xeon-Silver

Notes: All SKUs below ship with processor only. Fans and heatsink are included in the CTO server.

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

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:

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

Registered DIMMs (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
HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P43334-B21

Step 2c: Choose Power Supplies

Select one or two power supplies from below.

HPE Flex Slot Power Supplies

HPE ProLiant DL110 700W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	P43150-B21
HPE ProLiant DL110 700W Flex Slot Platinum Hot Plug Low Halogen AC Power Supply Kit	P44975-B21
HPE ProLiant DL110 900W-1000W Titanium Hot Plug Low Halogen AC Power Supply Kit	P54290-B21

Step 2d: Choose Accelerator Options

HPE ProLiant DL110 Gen11 1-port/3-port Auxiliary Power Cable Kit	P64070-B21
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Step 3: Choose Additional Options

Rail/Ear Kits

HPE 1U Short Friction Rail Kit	775612-B21
HPE ProLiant DL110 Gen11 Rail Compatible Ear Kit	P58197-B21

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



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

Risers

HPE ProLiant DL110 Gen11 x16 FHHL PCIe Secondary Riser Kit P54288-B21

DDR4 DIMM Blank

HPE ProLiant DL110 Gen10 Plus DDR4 DIMM FIO Blank Kit P43725-B21

Notes: Required when processor with 185W or greater TDP is selected, and all DIMM slots are not fully populated. DIMM blank kit cannot be selected if Qty=8 of memory is selected.

HPE Solid State Drives

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

Read Intensive - 6G SATA - M.2 - Solid State Media (2280 type)

HPE 480GB SATA 6G Read Intensive M.2 Multi Vendor SSD P47818-B21

Read Intensive-PCIe/NVMe-M.2- Solid State Media (22110 and 2280 type)

HPE 480GB NVMe Gen3 Mainstream Performance Read Intensive M.2 Multi Vendor SSD P40513-B21

HPE 960GB NVMe Gen3 Mainstream Performance Read Intensive M.2 Multi Vendor SSD P40514-B21

HPE 1.92TB NVMe Gen3 Mainstream Performance Read Intensive M.2 Multi Vendor SSD P40515-B21

Factory Configuration Setting

NEBS-Compliant Setting

HPE NEBS-compliant FIO Trigger System Setting P40010-B21

iLO Common Password

HPE iLO Common Password FIO Setting P08040-B21

Notes:

- Replaces iLO default randomized password by an HPE defined common password. HPE highly recommends changing this password immediately after the initial onboarding process.
- Customers who want to choose their own custom iLO default password should use the HPE Factory Express Integration Services

HPE Networking

Notes: The DL110 Gen11 CTO chassis does not come with embedded networking. A PCIe or OCP networking adapter must be selected.

1 Gigabit Ethernet Adapters

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

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T Adapter for HPE P51178-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



Core Options

10/25 Gigabit Ethernet Adapters

Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P42044-B21
Intel E810-XXVDA4T Ethernet 10/25Gb 4-port SFP28 MCLK Adapter for HPE	P41636-B21
Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P26264-B21

Notes: Includes GNSS module which provides 1pps signal without the need for an external GNSS appliance. Integrated support for frequency, phase, and time-of-day synchronization with Global Navigation Satellite Systems, including GPS, Galileo, GLONASS, BeiDou, and QZSS.

Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P08458-B21
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P08443-B21
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26262-B21

Notes: BCM 57414 10/25GbE 2p SFP28 Adapter cannot be installed in Slot 1, Consider this restriction during the total selection of PCIe Cards.

100 Gigabit Ethernet Adapters

Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE	P41611-B21
Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE	P21112-B21
Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	P25960-B21

200 Gigabit Ethernet Adapters

Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE	P10180-B21
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Notes: If 200GbE Networking adapter is selected, then customer must select one more networking adapter or OCP adapter that is below 200GbE.

1 Gigabit Ethernet OCP Adapters

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

10 Gigabit Ethernet OCP Adapters

Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T OCP3 Adapter for HPE	P10097-B21
Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ OCP3 Adapter for HPE	P26256-B21

10/25 Gigabit Ethernet OCP Adapters

Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10106-B21
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE	P41614-B21
Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P42041-B21
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P10115-B21
Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE	P26269-B21

100 Gigabit Ethernet OCP Adapters

Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE	P22767-B21
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Notes:

- Max=1 OCP card can be selected. This is inclusive of all OCP categories and sub-categories.
- Does not consume PCIe slot



Summary of Changes

Date	Version History	Action	Description of Change
03-Sep-2024	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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