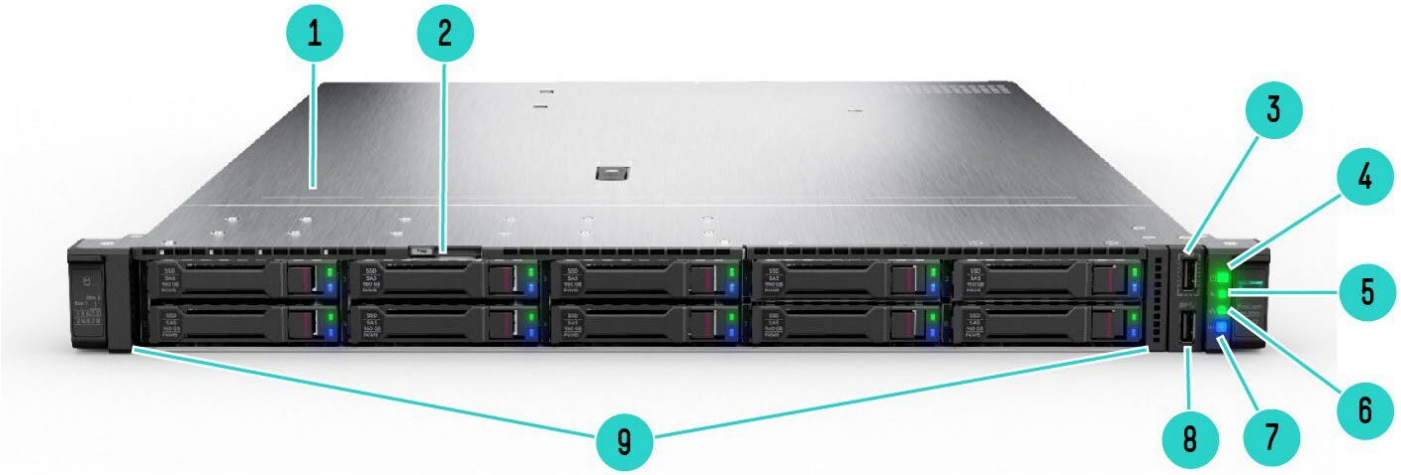
Overview

HPE ProLiant RL300 Gen11

The HPE ProLiant RL300 Gen11 is a single socket server optimized for the next generation of cloud-native compute, which supports a wide range of evolving applications and use cases for service providers and digital-first enterprises.

Built on the legendary HPE ProLiant foundation and powered by Ampere® Altra® and Ampere® Altra® Max processors, the HPE ProLiant RL300 Gen11 offers high core density, power efficiency, and workload performance for the rapidly expanding cloud-native development and application sphere.

This 1P, 1U server delivers more cores for less wattage, with an industry-leading core count of up to 128 cores. Get the most out of your scale-out, cloud-native applications with this efficient server.

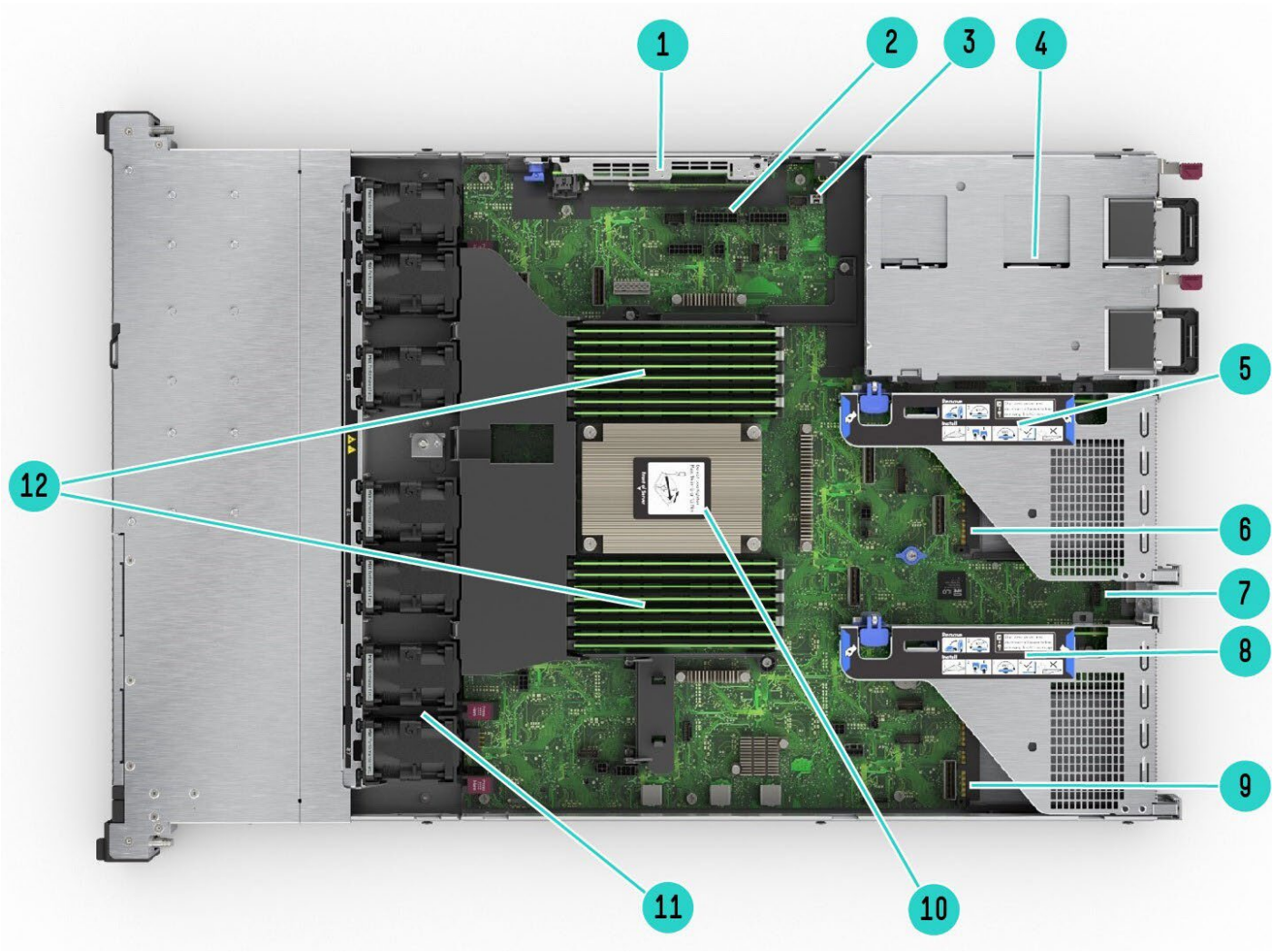


10SFF Front View

1. Quick removal access panel
2. Serial no. label pull tab
3. iLO Service Port
4. Power On/Standby button and system power LED
5. Health LED
6. NIC status LED
7. UID button/LED
8. USB 3.2 gen 1 port
9. 10 NVMe Hot Plug Drive Bays

Notes: Optional: +2 M.2 NVMe drives

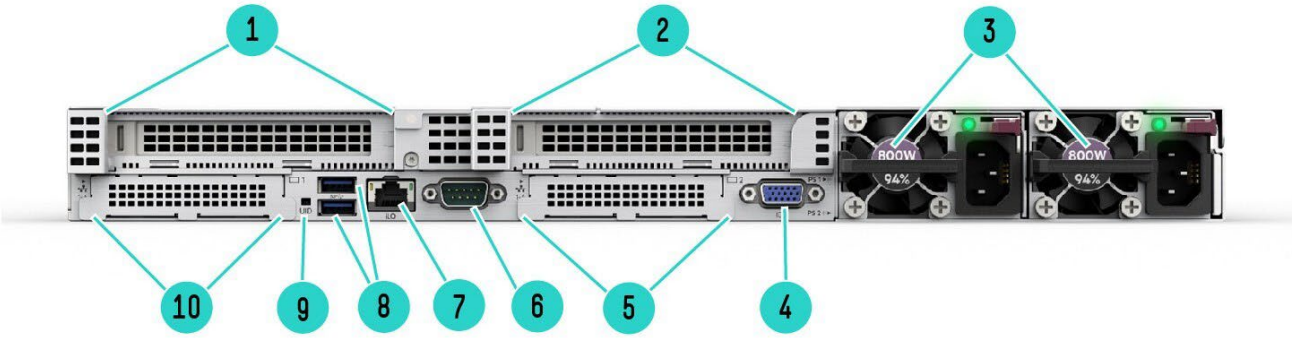
Overview



Internal View Chassis

1. M.2 Enablement Assembly
2. Hard drive backplane power connector
3. Chassis intrusion detection connector
4. Hot Plug redundant HPE Flexible Slot Power supplies
5. Secondary PCIe Riser, standard
6. OCP 3.0 Slot 2
7. Serial Port Connector
8. Primary PCIe riser, standard
9. OCP 3.0 Slot 1
10. Processor (heatsink shown)
11. Fan cage shown with 7 performance Hot-swappable fans
12. DDR4 DIMM slots.

Overview



Rear View

1. Slot 1 PCIe 4.0
2. Slot 2 PCIe 4.0
3. Hot Plug Power Supply 1 and 2 (Optional)
4. VGA port
5. Optional: OCP 3.0 Slot
6. Serial Port (Optional)
7. iLO Management Port
8. USB 3.2 Gen1 Ports (2)
9. UID LED
10. Optional: OCP 3.0 Slot

What's New

- The new HPE ProLiant RL300 Gen11 server is the first in a series of HPE ProLiant RL servers that deliver next-generation compute performance with high power efficiency
- Powered by Ampere® Altra® and Ampere® Altra® Max processors
- Dual OCP 3.0 Slots
- Support for up to 10 SFF NVMe drives

Platform Information

Form Factor

- 1U rack

Chassis Types

- 8 SFF NVMe U.2/U.3
- 10 SFF NVMe U.2/U.3

Notes: Backplane supports both U.2 and U.3 "dynamic" SFF drives. U.3 "static" drives (denoted by U.3ST) are not supported.

System Fans

- The HPE ProLiant RL300 Gen11 ships standard with high performance fans.

Standard Features

Processors – One of the following depending on model.
Notes: For more information regarding Ampere® Altra® and Ampere® Altra® Max processors, please see the following:
https://amperecomputing.com/processors/ampere-altra/

Ampere® Altra® and Altra® Max Processors	Cores	Max/Nominal Frequency	Max Memory	Est. Usage Power*	TDP	Cache	Memory
M128-30	128	3.0 GHz	4TB	178W	250W	64 KB L1 I-cache, 64 KB L1 D-cache per core 1 MB L2 cache per core 16 MB System Level Cache (SLC)	3200MT/s
Q80-30	80	3.0 GHz	4TB	161W	210W	64 KB L1 I-cache, 64 KB L1 D-cache per core 1 MB L2 cache per core 32 MB System Level Cache (SLC)	3200MT/s

Notes:
- Processors that begin with a "Q" (e.g. Q80-30) are Ampere® Altra® Processors
- Processors that begin with an "M" (e.g. M128-30) are Ampere® Altra® Max Processors
- Ampere® Altra® and Ampere® Altra® Max processors, being single threaded, deliver consistent frequency denoted by the Max Frequency irrespective of the number of cores operational.
- *Estimated usage power is provided to guide selections based on estimated power consumption. The estimated power usage has been provided by Ampere® where usage power data is based on estimated SPECrate® 2017_int_base (GCC10) and is subject to change based on system configuration and other factors. Ampere® defines Usage Power as average power consumed over time by a given workload.

On System Management Chipset
HPE iLO 6 ASIC
Notes: Read and learn more in the **iLO QuickSpecs**.

Memory
One of the following depending on model

Type	HPE DDR4 Smart Memory	Registered (RDIMM), Load Reduced (LRDIMM)
DIMM Slots Available	16	16 DIMM slots per processor, 8 channels per processor, 2 DIMMs per channel
Maximum capacity (RDIMM)	1.0 TB	16 x 64 GB RDIMM @ 3200 MT/S at 1 or 2 DPC
Maximum capacity (LRDIMM)	4.0 TB	16 x 256 GB LRDIMM @ 3200 MT/s at 1 or 2 DPC

Notes: The maximum memory speed is dependent on the DIMM selection.

Standard Features

Memory Protection

Advanced ECC
Advanced ECC uses single device data correction to detect and correct single and multibit error that occurs within a single DRAM chip.

Expansion Slots

Default Risers					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1 (Primary Riser)	PCIe 4.0	X16	X16	Full-height, Full-length slot	Proc 1
2 (Secondary Riser)	PCIe 4.0	X16	X16	Full-height, Half-length slot	Proc 1

OCP Expansion Slots		
Chassis configuration	**OCP Slot 1 Bus Width**	**OCP Slot 2 Bus Width**
10SFF CTO Server	Standard: x8 Upgrade: NA*	Standard: x8 Upgrade: x16**
8SFF CTO Server	Standard: x8 Upgrade: x16*	Standard: x8 Upgrade: x16**

Notes:
- Bus width indicated the number of electrical lanes running to the connector.
- Both the primary and secondary riser are included by default for all HPE ProLiant RL300 Gen11 servers.
- *OCP Slot 1 can be upgraded from X8 to X16 only when the 8SFF CTO server chassis is selected with the HPE ProLiant RL300 Gen11 OCP1 Upgrade Cable Kit (P58922-B21). OCP Slot 1 cannot be upgraded to X16 when the 10SFF CTO server chassis is selected.
- **OCP Slot 2 can be upgraded from X8 to X16 with the HPE ProLiant RL300 Gen11 OCP2 Upgrade Cable Kit (P58924-B21). OCP Slot 2 can be upgraded when either the 8SFF CTO server chassis or the 10SFF CTO server chassis is selected.

Internal Storage Devices
One of the following depending on model

Hard Drives
- None ship standard

Maximum Internal Storage		
	Capacity	**Configuration**
Hot Plug SFF NVMe PCIe U.3 SSD	153.6 TB	10 x 15.36 TB

Interfaces

Serial	Optional, rear
Video Port	1 Rear VGA Port - Standard
HPE iLO Remote Management Network Port	1 Gb Dedicated
Front iLO Service Port	1 standard
USB 3.2 Gen1	Up to 3 total: 1 front, 2 rear

Standard Features

European Union (EU) Lot 9 regulation

Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, or Switzerland must include more efficient AC power supplies: 94% for multi-output and 96% for single-output. HPE Flexible Slot power supplies are single-output, and part numbers 865438-B21, P03178-B21, and P44712-B21 are 96% efficient, thus meeting requirements.

HPE is on target to fulfil compliant systems ahead of time and will begin enforcing these requirements in advance to satisfy requests with the current power supplies by the set deadline. For more information regarding HPE Lot 9 conformance, please visit: **https://www.hpe.com/us/en/about/environment/msds-specs-more.html**

Power Supply

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

Notes:

- Flex Slot Titanium power supplies support power efficiency of up to 96% and include a standard C-14 power inlet connector.
- 800W Flex Slot Titanium Plus power supplies must be used with high-line input (200V-240V AC).

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 Gen11 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.

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

Operating Systems Support for the RL300 ProLiant Server

Please see **HPE Servers Support & Certification Matrices** for versioning details via hyperlinks provided below:

- **Canonical Ubuntu**
- **Oracle Linux - Oracle Linux 8**
- **Red Hat Enterprise Linux (RHEL)**
- **SUSE Linux Enterprise Server** (SLES)

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 **http://www.hpe.com/info/ilo**.

UEFI

Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI).

iLO RESTful API

iLO RESTful API is Redfish API conformance and offer simplified server management automation such as configuration and maintenance tasks based on modern industry standards. Learn more at **http://www.hpe.com/info/restfulapi**.

Standard Features

OpenBMC Support
OpenBMC Capable through iLO6 Transfer of Ownership Process.
Learn more at **OpenBMC Support**

HPE Server UEFI
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 Gen11 servers have a UEFI Class 3 implementation.

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 3.2 Gen1 Stack
- Embedded UEFI Shell
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- PXE boot support for IPv6 networks
- UEFI Boot Mode only
- NVMe Boot Support
- iSCSI Software Initiator Support.
- HTTP/HTTPs Boot support as a PXE alternative.
- Boot support for option cards that only support a UEFI option ROM

Notes: No support for Legacy mode

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: **http://www.hpe.com/servers/ahsv**.

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 **http://www.hpe.com/info/resttool**.

Scripting Tools
Provision one to many servers using your own scripts to discover and deploy with Scripting Tool (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at **http://www.hpe.com/servers/powershell**.

Standard Features

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 Services 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.

Notes: 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:
https://www.hpe.com/support/ProLiantServers-Warranties

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. All HPE ProLiant RL300 Gen11 servers have all iLO Advanced features supported by the server enabled by default.

Rack and Power Infrastructure

The story may end with servers, but it starts with the foundation that makes compute go – and business grow. We've reinvented our entire portfolio of rack and power products to make IT infrastructure more secure, more practical, and more efficient. In other words, we've created a stronger, smarter, and simpler infrastructure to help you get the most out of your IT equipment. As an industry leader, Hewlett Packard Enterprise is uniquely positioned to address the key concerns of power, cooling, cable management and system access.
HPE G2 Advanced and Enterprise Racks are perfect for the server room or today's modern data center with enhanced airflow and thermal management, flexible cable management, and a 10 year Warranty to support higher density computing.

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

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

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

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

Service and Support

HPE Services

No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.

https://www.hpe.com/services

Consulting Services

No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.

https://www.hpe.com/services/consulting

HPE Managed Services

HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

HPE Managed Services | HPE

Operational services

Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.

https://www.hpe.com/services/operational

HPE Complete Care Service

HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:

- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare

HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.

https://www.hpe.com/services/techcare

Service and Support

HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Notes: To review the list of Lifecycle Services available for your product go to:
https://www.hpe.com/services/lifecycle

For a list of the most frequently purchased services using service credits, see the **HPE Service Credits Menu**

Other Related Services from HPE Services:

HPE Education Services

Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.
https://www.hpe.com/services/training

Defective Media Retention

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

Parts and Materials

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

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

How to Purchase Services

Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at **https://ssc.hpe.com/portal/site/ssc/**

Service and Support

AI Powered and Digitally Enabled Support Experience

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.
https://support.hpe.com/hpesc/public/home/signin

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE"
https://www.hpe.com/us/en/contact-hpe.html

For more information
http://www.hpe.com/services

Configuration Information

Mainstream SKUs

HPE launched the Mainstream SKU initiative as a market-driven approach to Demand Steering. It is a simplified portfolio of our top selling options that meet the current and future market trends. HPE has committed to provide a more predictable and faster experience for these options. Mainstream SKUs enjoy higher safety stock levels and have higher fulfilment service levels than non-Mainstream SKUs. Mainstream orders are fulfilled +30% faster than non-Mainstream orders, have fewer shortages and better recovery dates. This platform has Mainstream SKUs in the options portfolio, and is eligible for the improved Mainstream experience. Mainstream SKUs are designated with a Mainstream symbol in our configurators.

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)

CTO Server	HPE ProLiant RL300 Gen11 M128-30 10SFF CTO Server	HPE ProLiant RL300 Gen11 Q80-30 10SFF CTO Server	HPE ProLiant RL300 Gen11 M128-30 8SFF CTO Server	HPE ProLiant RL300 Gen11 Q80-30 8SFF CTO Server
SKU Number	P59867-B21	P59868-B21	P59869-B21	P59870-B21
Processor	M128-30	Q80-30	M128-30	Q80-30
DIMM Slots	16-DIMM slots			
Storage Controller	Storage controllers not supported			
PCIe	Two standard in primary riser in addition to two OCP3.0 Slots			
Drive Cage - included	10 SFF	10 SFF	8 SFF	8 SFF
Additional Network Controllers	Two OCP 3.0 PCIe Gen4 slots available			
Fans	The HPE ProLiant RL300 Gen11 ships standard with high performance fans			
Management	HPE iLO for HPE ProLiant RL ships standard and enabled by default			
USB	Front: 1 USB 3.2 Gen1 + iLO service port Rear: 2 USB 3.2 Gen1			

Notes: CTO servers do not ship with rail kits, they need to be ordered separately

Configuration Information

CTO Server	8 FF CTO Chassis	10SFF CTO Chassis
Included Drive Cage	8 SFF	10 SFF
Universal Media Bay	Not Available	Not Available

Notes: This applies to CTO configurations, field upgrades may differ depending field configuration.

Configuration Information

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

Step 2a: Choose Memory Options

Please select one or more memory from below.
Memory population rules can be found at: **https://www.hpe.com/docs/server-memory**

Notes:

- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- Quantity of memory DIMMs selected must be 1,2,4,8 or 16
- Memory compatibility may vary or be limited within a specific server family depending upon the specific configuration being requested. Because each server environment and requirements can vary, memory compatibility is based not only upon the server family, but may also be affected by the amount and type of additional hardware options installed within a specific server configuration. For this reason, some HPE memory DIMMs may be qualified for a server model or family and yet occasionally not be supported with limited configurations within that server family. 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 (RDIMMs)

HPE 16GB (1x16GB) Single Rank x4 DDR4-3200 CAS-22-22-22 Registered Memory Kit	P56425-B21
HPE 32GB (1x32GB) Single Rank x4 DDR4-3200 CAS-22-22-22 Registered Memory Kit	P56427-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Memory Kit	P56429-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR4-3200 CAS-22-22-22 Registered Memory Kit	P56431-B21

Load Reduced DIMMs (LRDIMMs)

HPE 256GB (1x256GB) Octal Rank x4 DDR4-3200 CAS-26-22-22 Load Reduced 3DS Memory Kit	P56435-B21

Notes:

- 16GB~256GB memory SKUs can run the transfer rate of 3200 MT/s at both 1 DIMM and 2 DIMM per channel
- Only homogenous configurations are supported. Mixing of DIMM capacities is not allowed

Step 2b: Choose Power Supplies

Select one or two power supplies from below.

HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21

Notes: All power supplies in a server should match. Mixing Power Supplies is not supported.

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

HPE DL38X Gen10 Plus Rear Serial Cable Kit P14606-B21

Notes:

- Field-upgradable serial connector upgrade where the serial connector is attached to the cable.
- The connector is mounted to the server chassis and the cable is plugged into system board

HPE ProLiant RL300 Gen11 OCP1 Upgrade Cable Kit P58922-B21

Notes:

- Used to upgrade OCP slot 1 from X8 to X16. OCP Slot 1 can be upgraded from X8 to X16 only when the 8SFF CTO server chassis is selected.
- OCP Slot 1 cannot be upgraded to X16 when the 10SFF CTO server chassis is selected.

Configuration Information

HPE ProLiant RL300 Gen11 OCP2 Upgrade Cable Kit P58924-B21

Notes:

- Used to upgrade OCP slot 2 from X8 to X16. OCP Slot 2 can be upgraded from X8 to X16.
- OCP Slot 2 can be upgraded when either the 8SFF CTO server chassis or the 10SFF CTO server chassis is selected.

BIOS Mode

UEFI is the default, legacy mode is not supported

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

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.

Core Options

SSD Selection

To streamline the configuration process for HPE ProLiant Gen11 servers and to provide the best product availability, HPE recommends SSDs from the list located here: **http://www.hpe.com/products/recommend**.

Read Intensive - NVMe - SFF - Solid State Drives

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
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50216-B21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50219-B21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50222-B21
HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50224-B21

Notes: Additional drive capacity options to be released incrementally following launch

Internal Dual M.2 Kit

HPE ProLiant RL300 Gen11 M.2 Enablement Kit	P58621-B21

Notes: Enables M.2 drives for the HPE ProLiant RL300 Gen11

Read Intensive - M.2 - Solid State Drives

HPE 480GB NVMe Gen3 Mainstream Performance Read Intensive M.2 Multi Vendor SSD	P40513-B21
HPE 480GB NVMe Gen4 Mainstream Performance Read Intensive M.2 PM9A3 SSD	P69543-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

Hard Drive Blank Kits

HPE Small Form Factor Hard Drive Blank Kit	666987-B21

HPE Networking

PCIe Adapters

10/25 Gigabit Ethernet adapters

Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P42044-B21

100/200 Gigabit Ethernet adapters

Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	P25960-B21

OCP Adapter

Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P42041-B21

Notes: 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: **https://www.hpe.com/psnow/doc/A00002507ENW.pdf?jumpid=in_lit-psnow-getpdf**

Core Options

HPE Power Supplies

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 Plus 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.

HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit 865438-B21

Notes:

- Flex Slot Titanium power supplies support power efficiency of up to 96% and include a standard C-14 power inlet connector.
- Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, or Switzerland must include more efficient AC power supplies: 94% for multi-output and 96% for single-output. HPE Flexible Slot power supplies are single-output, and part numbers 865438-B21, P03178-B21, and P44712-B21 are 96% efficient, thus meeting requirements. HPE is on target to fulfil compliant systems ahead of time and will begin enforcing these requirements in advance to satisfy requests with the current power supplies by the set deadline.

Additional Options

Embedded Management

HPE iLO Advanced

Notes: All HPE ProLiant RL300 Gen11 servers have all iLO Advanced features supported by the server enabled by default.

HPE Racks

- Please see the HPE Advanced Series Racks QuickSpecs for information on additional racks options and rack specifications. **HPE G2 Advanced Series Racks**
- Please see the HPE Enterprise Series Racks QuickSpecs for information on additional racks options and rack specifications. **HPE G2 Enterprise Series Racks**

HPE Power Distribution Units (PDUs)

- Please see the **HPE Basic Power Distribution Units (PDU) QuickSpecs** for information on these products and their specifications.
- Please see the **HPE Metered Power Distribution Units (PDU) QuickSpecs** for information on these products and their specifications.
- Please see the **HPE Intelligent Power Distribution Unit (PDU) QuickSpecs** for information on these products and their specifications.
- 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)

- To learn more, please visit the **HPE Uninterruptible Power Systems (UPS) web page**.
- Please see the **HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs** for information on these products and their specifications.
- Please see the **HPE Line Interactive Single Phase UPS QuickSpecs** for information on these products and their specifications.

HPE Rack Options

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

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 (695539-001).

Notes:

- CTO servers do not ship with rail kits ,they need to be ordered seperately
- 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 DL3XX Gen11 Easy Install Rail 2 Kit	P52351-B21
HPE ProLiant DL300 Gen10 Plus 1U Cable Management Arm for Rail Kit	P26489-B21

Additional Options

HPE Support Services

Tech Care

HPE 3 Year Tech Care Basic RL300 Gen11 HW Service	H36SDE
HPE 3 Year Tech Care Basic wDMR RL300 Gen11 HW Service	H36SFE
HPE 3 Year Tech Care Basic wCDMR RL300 Gen11 HW Service	H36SGE
HPE 5 Year Tech Care Essential RL300 Gen11 HW Service	H36TPE
HPE 5 Year Tech Care Essential wDMR RL300 Gen11 HW Service	H36TQE
HPE 5 Year Tech Care Critical for RL300 Gen11 HW Service	H36TSE
HPE 5 Year Tech Care Critical wDMR RL300 Gen11 HW Service	H36TTE
HPE 5 Year Tech Care Critical wCDMR RL300 Gen11 HW Service	H36TVE

Notes: For a full listing of support services available for this server, please visit **http://www.hpe.com/services**.

Technical Specifications

System Unit

- **Dimensions** (Height x Width x Depth)
  - 4.29 x 43.46 x 64.69 cm / 1.69 x 17.11 x 25.57 in
- **Weight** (approximate)
  - Chassis with CPU/CPU heatsink installed: 12.27kgs (27.06lbs)
  - Drive: 0.2kgs (0.44lbs)
  - Memory: 0.02kgs (0.04lbs)
  - Power Supply: 0.87kgs (1.92lbs)
  - Maximum weight with 16 DIMMS, 10 HDDs, 2 Power Supplies: 15.85kgs (35.94lbs)

Input Requirements(per power supply)

Rated Line Voltage

- 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

Power Supply Output(per power supply)

- **Rated Steady-State Power**
  - For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VAC) input for China only
- **Maximum Peak Power**
  - For 800W Power Supply: 800W (at 100 to 127 VAC), 800W (at 200 to 240 1VAC), 800W (at 240 VAC) input for China only

System Inlet Temperature

- **Standard Operating 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 Ambient Operating Temperature**
  - 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: **http://www.hpe.com/servers/ashrae**

  System performance may be reduced if operating in the extended ambient operating range or with a fan fault.
- **Non-operating**
  - -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).

Technical Specifications

Relative Humidity(non-condensing)

- **Operating**
  - 8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, 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).

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

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.

Summary of Changes

Date	Version History	Action	Description of Change
04-Mar-2024	Version 6	Changed	Core Options section was updated
04-Dec-2023	Version 5	Changed	HPE Services Rebranding
19-Oct-2023	Version 4	Changed	Standard Features section was updated
05-Sep-2023	Version 3	Changed	Standard Features and Core Options sections were updated
17-Apr-2023	Version 2	Changed	Correction of errors and addition of new drive and networking options Overview, Standard Features and Core Options sections were updated.
12-Sep-2022	Version 1	New	New QuickSpecs.

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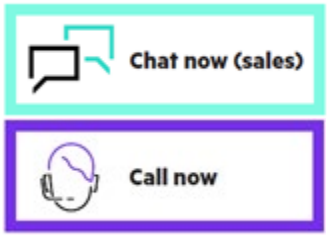

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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less

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