Shape the Future of QuickSpecs - Your Input Matters

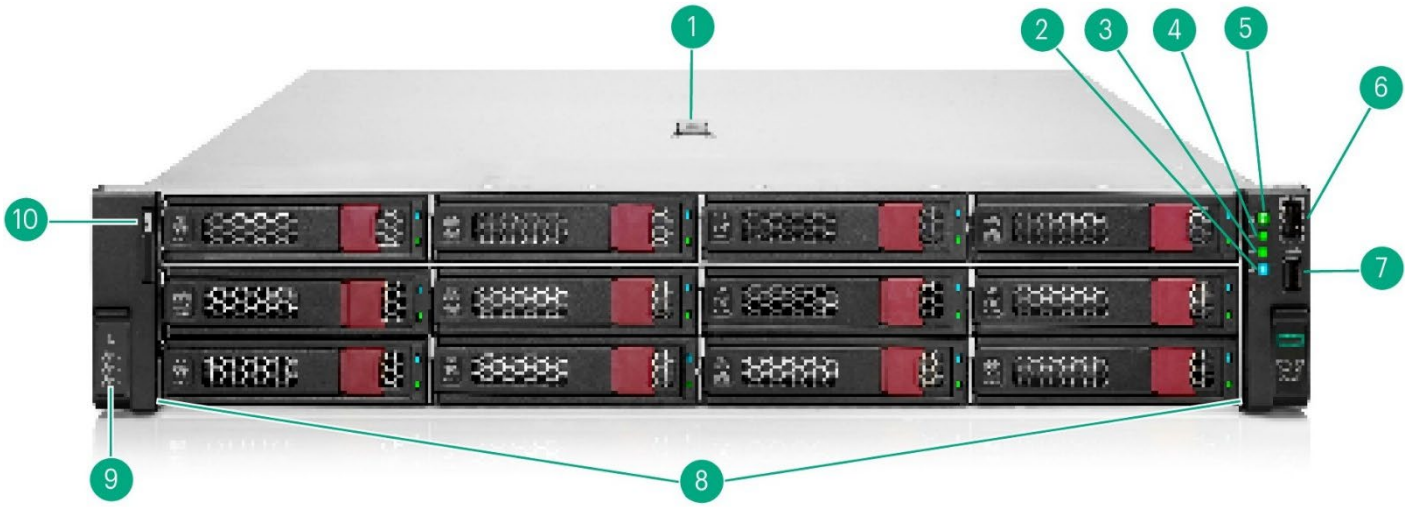
HPE ProLiant DX385 Gen11 QuickSpecs

Engineered for Speed, Built for Acceleration

The HPE ProLiant DX385 Gen11 is a 2U, dual-processor, accelerator-optimized server designed to deliver outstanding compute performance, enhanced high-speed data transfer, and increased memory capacity. It is powered by 4th Generation AMD EPYC™ 9004 Series processors offering up to 96 cores, expanded memory bandwidth (up to 6TB), and high-speed PCIe Gen5 connectivity. The platform is now also available in an All-NVMe configuration, enabling faster data throughput and lower latency.

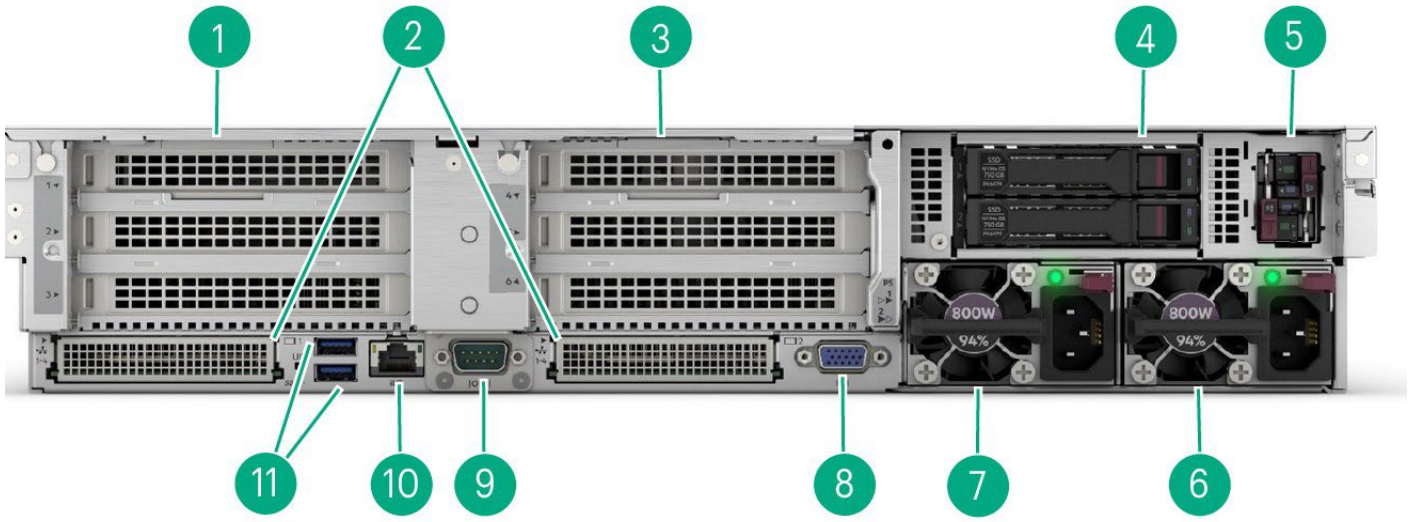
HPE ProLiant DX385 Gen11

The new HPE ProLiant DX385 Gen11 server is an accelerator-optimized 2U 2P solution that delivers exceptional compute performance, upgraded high-speed data transfer rate and memory depth at 2P compute capability. Powered by 4th Generation AMD EPYC™ 9004 Series Processors with up to 96 cores, increased memory bandwidth (up to 6TB) and high-speed PCIe Gen5 I/O. Now available as an All NVMe platform providing faster data rate transfers and lower latency.



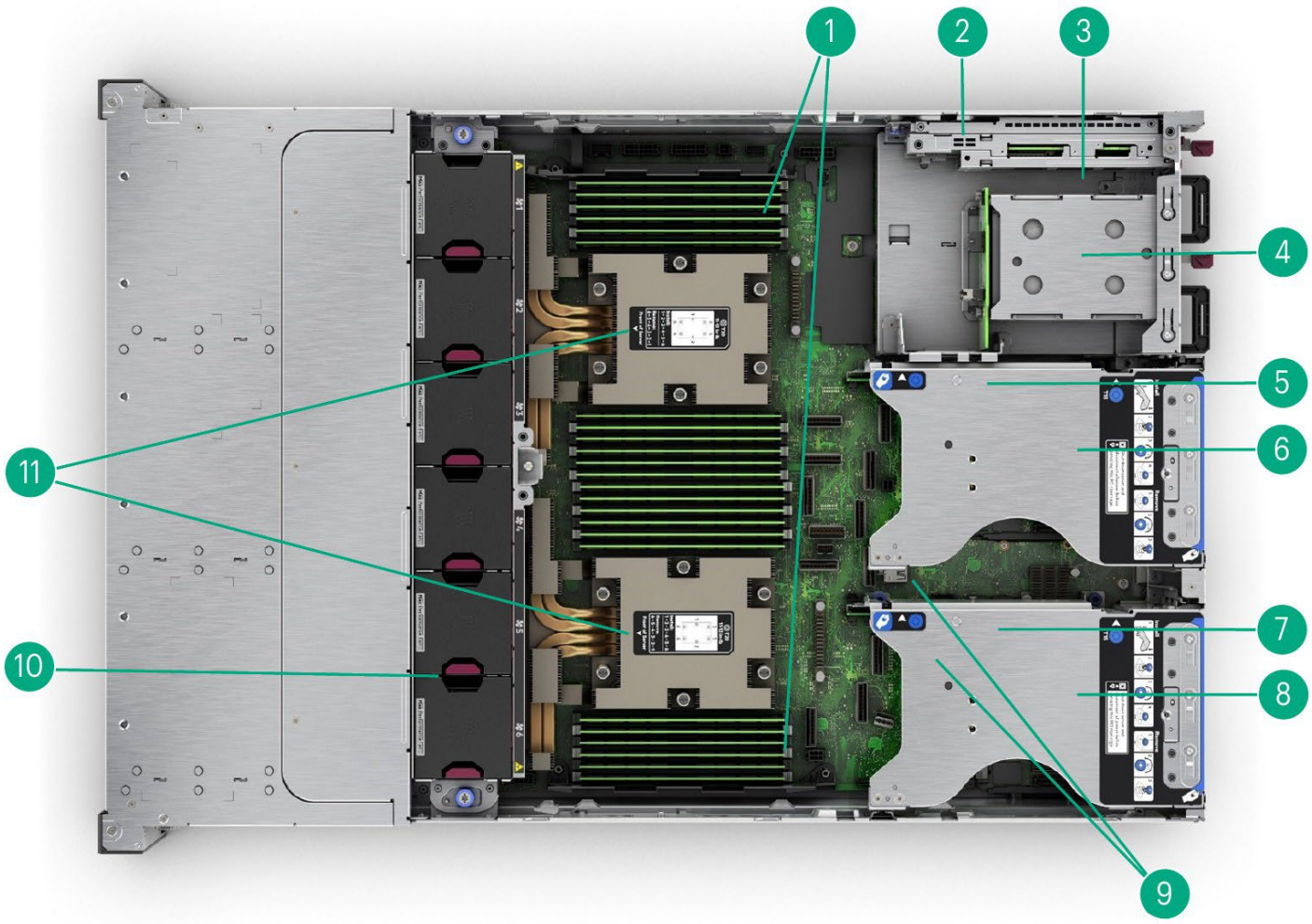
HPE ProLiant DX385 Gen12 LFF Server- Front View

Item	Description	Item	Description
1.	Quick removal access panel	6.	iLO Service Port
2.	UID Button/LED	7.	USB 3.0
3.	NIC Status	8.	12 x LFF Media
4.	Health LED	9.	Drive support label
5.	Power On/Standby button and system power LED button	10.	Serial Number Label Pull Tab



HPE ProLiant DX385 Gen11 - Rear View

Item	Description	Item	Description
1.	Primary Riser: PCI Slots (Slots 1–3 top to bottom)	7.	HPE Flexible Slot Power Supply bay 2
2.	OCP 3.0 Slot	8.	VGA connector
3.	Secondary Riser: PCI Slots (Slots 4–6 top to bottom)	9.	Serial port (optional)
4.	Tertiary Riser: (Slots 7–8 top to bottom, not shown). cancel callout	10.	Dedicated iLO management port
5.	Hot pluggable M.2 Boot Device (standard)	11.	USB 3.2 Gen1 ports
6.	HPE Flexible Slot power supply bay 1		



HPE ProLiant DX385 Gen11 - Internal View

Item	Description	Item	Description
1.	DDR5 DIMM slots. Shown populated in 24 slots	7.	Primary PCIe riser cage
2.	Hot Pluggable M.2 Boot Device bracket	8.	(Under) OCP 3.0 Slot 1
3.	(Under) Up to 2 Hot Plug redundant HPE Flexible Slot Power supplies	9.	2x USB 3.2 Gen1 ports (one under primary riser cage)
4.	cancel callout	10.	Fan cage shown with 6 Performance Hot-plug fans
5.	Secondary PCIe riser cage	11.	2 Processors (heatsinks shown)
6.	(Under) OCP 3.0 Slot 2		

What's New

- New DX385 Gen11 Platform (All NVMe, Direct Attached)
- DX385 GPU Gen11 Platform (4 DW GPU)
- DX385 12LFF Gen11 Platform
- Qualified platforms / configs recognized by both HPE & Nutanix
- Factory tuned & optimized HW settings for Nutanix environments
- Factory pre-installed Nutanix AHV & AOS
- Supports the 4th Generation AMD EPYC™ Series Processors that supports up to 96 cores, 400W, and 384MB of L3 Cache.
- 12 DIMM channels per processor for up to 6TB total DDR5 memory[1]
- Advanced data transfer rate and higher network speed from the PCIe Gen5 serial expansion bus
- New HPE Integrated Lights-Out 6 (iLO 6) server management software
- NVMe Dual Boot Device Standard.

Platform Information

Form Factor

- 2U rack

Chassis Types

- All NVMe
- 8SFF NVMe GPU
- 12 LFF

System Fans

Standard – fan types included

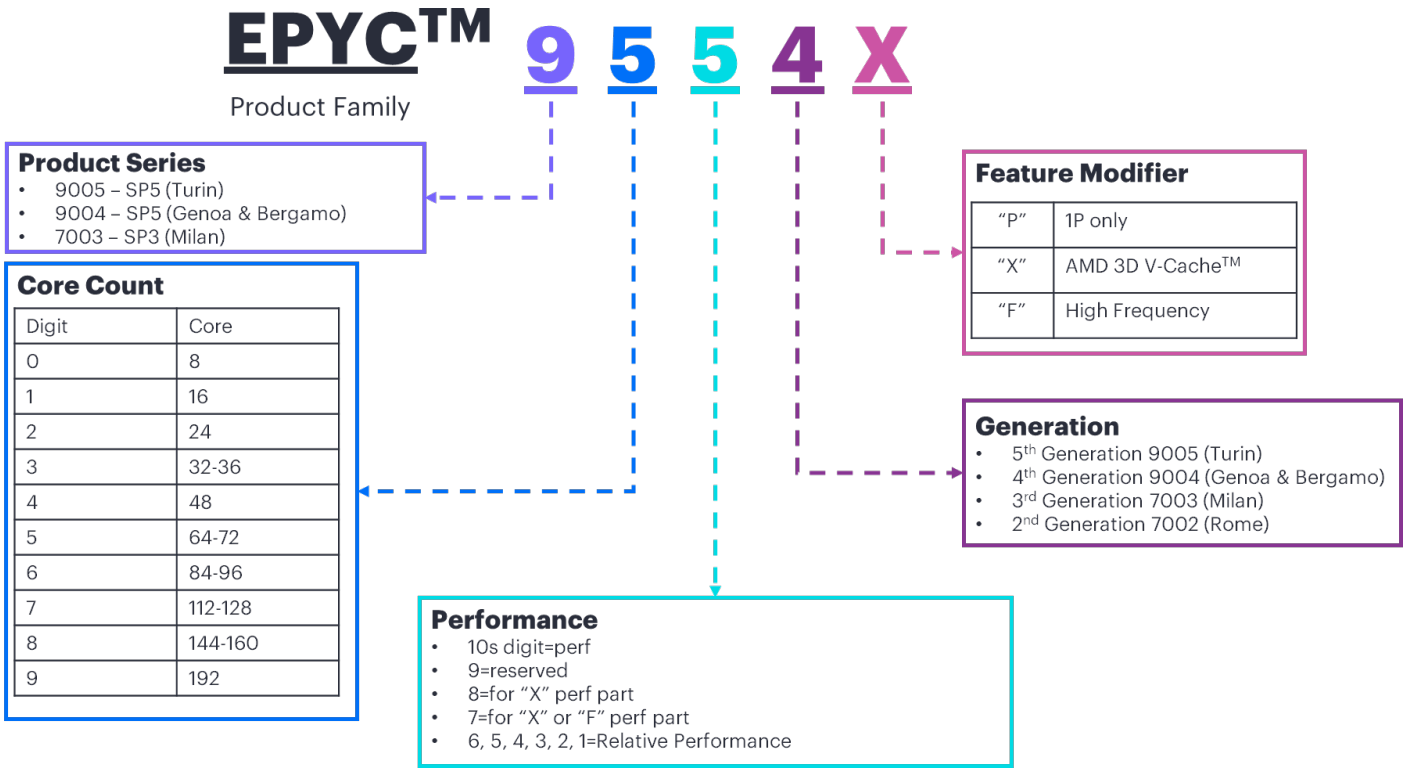
- Performance Fan Kit included with HPE ProLiant DX385 Gen11.

Notes:

- The DX385 Gen11 supports up to 6 fans with fan redundancy built in. One fan rotor failure will place server in degraded mode but fully functional. Two fan rotor failures could provide warning and imminent server shutdown.
- Each Fan kits are designated to operate under different configuration. For more information, please refer to the Cooling option message in the Unique option section.

Processors Up to 2 of the following depending on model.

Notes: For more information regarding AMD EPYC processors, please see the following:
https://www.amd.com/en/products/processors/server/epyc.html



AMD EPYC Processor	Cores	Base Frequency	Max Frequency	Max Memory	Wattage	Cache	Memory
EPYC 9124	16	3.0 GHz	3.7 GHz	3TB	200W	64MB	4800MT/s
EPYC 9174F	16	4.1 GHz	4.4 GHz	3TB	320W	256MB	4800MT/s
EPYC 9224	24	2.5 GHz	3.7 GHz	3TB	200W	64MB	4800MT/s
EPYC 9254	24	3.9 GHz	4.15 GHz	3TB	200W	128MB	4800MT/s
EPYC 9274F	24	4.05 GHz	4.3 GHz	3TB	320W	256MB	4800MT/s
EPYC 9334	32	2.7 GHz	3.9 GHz	3TB	210W	128MB	4800MT/s
EPYC 9354	32	3.25 GHz	3.8 GHz	3TB	280W	256MB	4800MT/s
EPYC 9374F	32	3.85 GHz	4.3 GHz	3TB	320W	256MB	4800MT/s
EPYC 9454	48	2.75 GHz	3.8 GHz	3TB	290W	256MB	4800MT/s
EPYC 9554	64	3.1 GHz	3.75 GHz	3TB	360W	256MB	4800MT/s
EPYC 9474F	48	3.6 GHz	4.1 GHz	3TB	360W	256MB	4800MT/s
EPYC 9534	64	2.45 GHz	3.7 GHz	3TB	280W	256MB	4800MT/s
EPYC 9554	64	3.1 GHz	3.75 GHz	3TB	360W	256MB	4800MT/s
EPYC 9634	84	2.25 GHz	3.7 GHz	3TB	290W	384MB	4800MT/s
EPYC 9654	96	2.4 GHz	3.7 GHz	3TB	360W	384MB	4800MT/s
EPYC 9184X	16	3.55 GHz	4.2 GHz	3TB	320W	768MB	4800MT/s
EPYC 9384X	32	3.1 GHz	3.9 GHz	3TB	320W	768MB	4800MT/s
EPYC 9684X	96	2.55 GHz	3.7 GHz	3TB	400W	1150MB	4800MT/s
EPYC 9734	112	2.2 GHz	3.0 GHz	3TB	340W	256MB	4800MT/s
EPYC 9754	128	2.25 GHz	3.1 GHz	3TB	360W	256MB	4800MT/s

Notes:

- All AMD EPYC processors can support up to 3TB of memory each under 1DPC, 12 channel per processor. 6TB of memory per two processors.
- 160 PCIe 5.0 lanes support with two sockets. Motherboard supports 3XGMI two-processor interconnect by default.
- The wattage information indicates the default cTDP (Configurable TDP) of the processor.

Chipset

No chipset – System on Chip (SoC) design.

On System Management Chipset

HPE iLO 6 ASIC

Read and learn more in the iLO QuickSpecs.

Memory	
Type	HPE DDR5 Smart Memory, Registered (RDIMM)
DIMM Slots Available	24 12 DIMM slots per processor, 12 channels per processor, 1 DIMM per channel
Maximum capacity (RDIMM)	6.0TB 24 x 256 GB RDIMM* @ 4800 MT/s at 1 DPC

Notes:

- *6.0 TB maximum and 256 GB RDIMM support will be available by Q1 2023. Subject to change.
- All processors support up to 6TB memory per server when 2 processors are supported.
- LRDIMM and Persistent Memory are not supported.
- For additional information, please see the HPE DDR5 Smart Memory QuickSpecs.
- For General Server Memory Population Rules and Guidelines for Gen11 see details here: http://www.hpe.com/docs/memory-population-rules

Memory Protection

Advanced ECC

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

Expansion Slots

Primary Riser

Notes:

- Bus width indicates the number of physical electrical lanes running to the connector.
- There are three Primary riser configurations:
  - Default 1 slot only (1x16 on Slot3)
  - Default Slot3 + Slot1 & 2 with HPE DX385 G11 2x16 Prim FIO Upg Rsr Kit (P57890-B21)
- OCP Slot21 (OCP1) are supported, Slot1 & Slot21 (OCP1) combined can only support up to 112GB/s bandwidth due to processor limitation

Primary Riser configDefault					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1	PCIe 5.0	X16	X16	Full-height, half-length slot	Proc 1. Supported with P57890-B21
2	PCIe 5.0	X16	X16	Full-height, half-length slot	Proc 1. Supported with P57890-B21
3	PCIe 5.0	X16	X16	Full-height, half-length slot	Proc 1

Secondary Riser

Notes:

- Bus width indicates the number of physical electrical lanes running to the connector.
- When both Secondary Slot6 & Tertiary Slot7 are supported, Slot6 & Slot7 combined can only support up to 112GB/s bandwidth due to processor limitation

Secondary Riser config#1					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
4	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A
6	PCIe 5.0	X16	X16	Full-height, half-length slot	Proc 2

Secondary Riser config#2					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
4	PCIe 5.0	X16	X16	Full-height, half-length slot	Proc 2
5	PCIe 5.0	X16	X16	Full-height, half-length slot	Proc 2
6	PCIe 5.0	X16	X16	Full-height, half-length slot	Proc 2

Storage Controllers

The Gen11 controller naming framework has been updated to simplify identification as depicted below. For a more detailed breakout of the available Gen11 Smart Array controllers visit the controller data sheet

NVMe Boot Device

HPE DX NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device (Standard)

Notes:

- NS204i-u does not occupy a PCIe slot and is externally accessible.
- 2pcs of 480GB M.2 NVMe SSD are included in the NS204i-u Hot Plug Boot Device
- Location where NS204i-u Hot Plug Boot Device is supported:
  - Tertiary location above power supplies
- For NVMe Server, if Sec NS204i-u Enable Kit is selected then Secondary riser (HPE DX385 G11 x16 Slot1 Sec FIO Rsr Kit) must be selected.

– For NVMe CTO server, if this Networking option is selected then Secondary riser (HPE DX385 G11 x16 Slot1 Sec FIO Rsr Kit) must be selected.

Software RAID – NO Software RAID is support on AMD Gen11 servers

Smart Array Controller

– HPE MR216i-o Gen11 x16 Lanes without Cache OCP SPDM Storage Controller

Notes: For additional details, please visit:
HPE Compute MR Gen11 Controllers QuickSpecs

Internal Storage Devices

Hard Drives

– None are shipped as standard

Graphics

Integrated Video Standard

– Video modes up to 1920 x 1200@60Hz (32 bpp)
– 16MB Video Memory

HPE iLO 6 on system management memory

– 64 MB Flash
– 8 Gbit DDR4 with ECC protection

Maximum Internal Storage

Drive	Capacity	Configuration
Hot Plug LFF SAS HDD	240 TB	12 x20 TB
Hot Plug SFF All NVMe SSD	307 TB	20 x15.36 TB
Hot Plug LFF SAS SSD	92.16 TB	12 x7.68 TB
Hot Plug SFF NVMe SSD	122.88 TB	8 x15.36 TB

Power Supply

- HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  Notes: Available in 94%. Power Efficiency.
- HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  Notes:
  - Available in 94% Power Efficiency.
  - 200-240VAC power input only.
- HPE 1600W ~48VDC Power Supply Kit
  Notes:
  - Available in 94% Power Efficiency.
  - 200-240VAC power input only.

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 Performance Servers. Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.
All pre-configured servers ship with a standard 6-foot IEC C-13/C-14 jumper cord (A0K02A). This jumper cord is also included with each standard AC power supply option kit. If a different power cord is required, please check the ProLiant Power Cables web page.

To review the power requirements for your selected system, please use the HPE Power Advisor Tool.

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

Interfaces	
Serial	Optional, rear
VGA Port	1 VGA Port standard at rear
Network Ports	None. Choice of OCP or stand up card
HPE iLO Remote Management Network Port	1 Gb Dedicated
Front iLO Service Port	1 standard
USB 3.2 Gen1	5 standard on all models: 1 front, 2 rear, 2 internal

UEFI

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

Learn more at http://www.hpe.com/servers/uefi.

Operating Systems and Virtualization Software Support for HPE Servers

HPE servers are designed for seamless integration with partner Operating Systems and Virtualization Software. By collaborating closely with our partners, we ensure that their products are optimized, certified, and fully supported within your HPE server environment.

Access the certified and supported servers for each of the OS and Virtualization software: HPE Servers Support & Certification Matrices

- Nutanix Acropolis: (AHV)
- Nutanix AHV

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 2 implementation.

Notes: The UEFI System Utilities tool is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit http://www.hpe.com/servers/uefi.

UEFI enables numerous new capabilities specific to HPE ProLiant servers such as

- Secure Boot and Secure Start enabled 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
- Workload Profiles for simple performance optimization

UEFI Boot Mode only

- TPM 2.0 Support
- 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: For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.

Industry Standard Compliance

- ACPI 6.1 Compliant
- PCIe 4.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- Support for Microsoft Secure Code
- PXE Support
- VGA/DisplayPort
  Notes: This support is on the optional Universal Media Bay.
- USB 3.1 Gen1 Compliant (internal)
- USB 2.0 Compliant (external ports)
  Notes: This support is on the optional Universal Media Bay.
- USB NIC Driver in UEFI for Factory
- OCP 3.0 SFF NIC Support
- OCP 3.0 SFF Storage Support
- Embedded TPM Support
- SMBIOS 3.1
- UEFI 2.9
- Redfish API
- IPMI 2.0
- Secure Digital 2.0
- Advanced Encryption Standard (AES)
- Triple Data Encryption Standard (3DES)
- SNMP v3
- TLS 1.2
- DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP)
- DMTF Redfish support for SecureBoot Key Management
- ACPI DSM Drive LED Management
- Memory Page Retire Support
- Retire old VMware Secure Boot Key
- MCTP over PCIe multi-segment (EDKII for GenoaPI 0.0.9.0, HPE under verifying0)
- Synergy: I3C Engine
- APML 1.0
- One Button Secure Erase Enhancements
- Active Directory v1.0
- European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 servers are compliant with Lot9 requirements. For more information regarding HPE Lot 9 conformance, please visit:
  https://www.hpe.com/us/en/about/environment/msds-specs-more.html
- ASHRAE A3/A4
  Notes: For additional technical thermal details regarding ambient temperatures, humidity and features support please visit: http://www.hpe.com/servers/ashrae.
- UEFI Class 3 (Unified Extensible Firmware Interface Forum)

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 server(s) securely with industry standard Unified Extensible Firmware Interface (UEFI).

Intelligent Provisioning

Hassle free server and OS provisioning for 1 or more servers with Intelligent Provisioning.

Learn more at http://www.hpe.com/servers/intelligentprovisioning.

iLO RESTful API

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

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

The Active System Health Viewer (AHSV) was deprecated as of March 2022. Users are now recommended to use the InfoSight (https://www.hpe.com/us/en/solutions/infosight.html) for Servers Portal for AHS viewing capabilities. In InfoSight for Servers portal, users will also be able to view hardware configuration details, firmware and driver information, warranty and support status of a server, wellness alerts, and create support cases for servers under a valid warranty or support contract.

HPE InfoSight provides the same security assurances as that of AHSV. Furthermore, InfoSight can be used as an AHSV replacement even if customers do not want to share AHSV logs and telemetry data on an ongoing basis.

Smart Update

Keep your server(s) up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP). Learn more at https://www.hpe.com/us/en/servers/smart-update.html

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.

Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise 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

Security

- UEFI Secure Boot and Secure Start support
- Immutable Silicon Root of Trust
- FIPS 140-3 validation (iLO 6 certification in progress)
- Common Criteria certification (iLO 6 certification in progress)
- Configurable for PCI DSS compliance
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
- Support for Commercial National Security Algorithms (CNSA)
- Tamper-free updates – components digitally signed and verified
- Secure Recovery – recover critical firmware to known good state on detection of compromised firmware
- Ability to rollback firmware
- Secure erase of NAND/User data
- TPM (Trusted Platform Module) 2.0
- Chassis Intrusion detection option

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.

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 have 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 your 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.

One Config Simple (SCE)

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

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, 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
- 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

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 service 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/

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

GreenLake is the cloud delivering a unified platform experience that allows enterprises to simplify IT, reduce costs, and transform faster.

- 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 refer to: http://www.hpe.com/services

European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 servers are compliant with Lot9 requirements.

For more information regarding HPE Lot 9 conformance, please visit:
https://www.hpe.com/us/en/about/environment/msds-specs-more.html

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 DX385 Gen11 12LFF CTO Server	HPE ProLiant DX385 Gen11 GPU CTO Server	HPE ProLiant DX385 Gen11 All NVMe CTO Server
SKU Number	P60292-B21	P66344-B21	P74612-B21
Processor	Not included as standard	Not included as standard	Not included as standard
DIMM Slots	24-DIMM slots	24-DIMM slots	24-DIMM slots
Storage Controller	HPE OCP Smart Array controller defaulted	N/A	N/A
PCIe	One standard in primary riser, up to Eight slots with 2 processors	One standard in primary riser, up to Eight slots with 2 processors	One standard in primary riser, up to Eight slots with 2 processors
Drive Cage - included	12 LFF	8SFF NVMe	24SFF NVMe (20 Drives Maximum at this time)
Network Controller	OCP standard	OCP standard	OCP standard
Fans	High Performance included as standard	High Performance included as standard	High Performance included as standard
Management	Default: HPE iLO Standard included.	Default: HPE iLO Standard included.	Default: HPE iLO Standard included.
USB	Front: 1 USB 3.1 Gen1 + iLO service port Rear: 2 USB 3.1 Gen1 Internal: 2 USB 3.1 Gen1	Front: 1 USB 3.1 Gen1 + iLO service port Rear: 2 USB 3.1 Gen1 Internal: 2 USB 3.1 Gen1	Front: 1 USB 3.1 Gen1 + iLO service port Rear: 2 USB 3.1 Gen1 Internal: 2 USB 3.1 Gen1

Notes:

- HPE DX ProLiant platforms are a Server Appliance: and Energy Star except.
- Server Appliance:
- A computer server that is bundled with a pre-installed OS and application software that is used to perform a dedicated function or set of tightly coupled functions.
- Server appliances deliver services through one or more networks (e.g., IP or SAN), and are typically managed through a web or command line interface. Server appliance hardware and software configurations are customized by the vendor to perform a specific task (e.g., name services, firewall services, authentication services, encryption services, and voice-over-IP (VoIP) services), and are not intended to execute user-supplied software.

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

Please select one –B21 processor required below.

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

Notes: Mixing of 2 different processor models are NOT allowed.

Step 2a: Choose Processors

Processor Option Kits

AMD EPYC 9124 2.7GHz 16-core 240W FIO Processor for HPE DX	P60040-B21
AMD EPYC 9224 2.5GHz 24-core 200W FIO Processor for HPE DX	P60048-B21
AMD EPYC 9354 3.25GHz 32-core 280W FIO Processor for HPE DX	P60039-B21
AMD EPYC 9554 3.1GHz 64-core 360W FIO Processor for HPE DX	P60038-B21
Notes: For 12LFF CTO Server and NVMe CTO Server, if processor wattage is above 300W then 256GB DIMM Qty Max=8.	
AMD EPYC 9654 2.4GHz 96-core 360W FIO Processor for HPE DX	P60035-B21
Notes: For 12LFF CTO Server and NVMe CTO Server, if processor wattage is above 300W then 256GB DIMM Qty Max=8.	
AMD EPYC 9174F 4.1GHz 16-core 320W FIO Processor for HPE DX	P60036-B21
Notes: For 12LFF CTO Server and NVMe CTO Server, if processor wattage is above 300W then 256GB DIMM Qty Max=8.	
AMD EPYC 9374F 3.85GHz 32-core 320W FIO Processor for HPE DX	P60045-B21
Notes: For 12LFF CTO Server and NVMe CTO Server, if processor wattage is above 300W then 256GB DIMM Qty Max=8.	
AMD EPYC 9534 2.45GHz 64-core 280W FIO Processor for HPE DX	P60037-B21
AMD EPYC 9634 2.25GHz 84-core 290W FIO Processor for HPE DX	P60041-B21
AMD EPYC 9474F 3.6GHz 48-core 360W FIO Processor for HPE DX	P60042-B21
Notes: For 12LFF CTO Server and NVMe CTO Server, if processor wattage is above 300W then 256GB DIMM Qty Max=8.	
AMD EPYC 9254 2.9GHz 24-core 200W FIO Processor for HPE DX	P60043-B21
AMD EPYC 9454 2.75GHz 48-core 290W FIO Processor for HPE DX	P60044-B21
AMD EPYC 9274F 4.05GHz 24-core 320W FIO Processor for HPE	P60046-B21
Notes: For 12LFF CTO Server and NVMe CTO Server, if processor wattage is above 300W then 256GB DIMM Qty Max=8.	

AMD EPYC 9334 2.7GHz 32-core 210W FIO Processor for HPE DX	P60047-B21
AMD EPYC 9184X 3.55GHz 16-core 320W Processor for HPE	P63491-B21
AMD EPYC 9384X 3.1GHz 32-core 320W Processor for HPE	P63492-B21
AMD EPYC 9684X 2.55GHz 96-core 400W Processor for HPE	P63493-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/amd-population-rules-Gen10Plus

For additional information, please see the HPE DDR5 Smart Memory QuickSpecs.

For Gen11 memory speed table, please go to: Server memory population rules for HPE ProLiant Gen11 servers with AMD EPYC 8004/9004 series processors

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.
- System may throttle if ambient temp. is over 30C.
- 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 DX 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart FIO Memory Kit	P60327-B21
HPE DX 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart FIO Memory Kit	P60329-B21
HPE DX 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart FIO Memory Kit	P60330-B21
HPE DX 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart FIO Memory Kit	P60331-B21
HPE DX 256GB (1x256GB) Octal Rank x4 DDR5-4800 Registered 3DS FIO Memory Kit for AMD CPU	P60332-B21

Notes: For 12LFF CTO Server and NVMe CTO Server, if processor wattage is above 300W then 256GB DIMM Qty Max=8.

HPE 96GB (1x96GB) Dual Rank x4 DDR5-4800 CAS-46-45-45 EC8 Registered Smart Memory Kit	P66676-B21

Notes:

- Mixing of x4 & x8 memory is not allowed
- For more detailed information regarding memory population rules, please visit https://www.hpe.com/docs/server-memory

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 DX 1600W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit	P18222-B21
HPE DX 1600W Flex Slot -48VDC Hot Plug FIO Power Supply Kit	P60246-B21

Notes: If 1600W DC Power supply is selected, then either "HPE DX 1600W DC PSU Pwr Lug Opt Kit" or "HPE DX 1600W DC PSU power cable kit" must be selected and Vice Versa. Quantity of Power supply and Power cord/Power Lug option must match.

HPE DX 800W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit	P18223-B21

Notes:

- Mixing of different Power Supply SKU is not allowed
- 1600W -48VDC PSU requires 1x HPE 1600W DC PSU power lug option kit or HPE 1600W DC PSU Power Cable Kit
- 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/poweradvisor.
- 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.

HPE Unique Options

Riser Kits

The CTO server has 1x Primary riser (slot3) by default. Here are additional risers available to select

HPE ProLiant DX385 Gen11 2x16 Primary FIO Upgrade Riser Kit P60293-B21

Notes:

- This provides Slot1 and Slot2 in the Primary position
- Cannot be selected if 4LFF rear cage is selected
- Cannot be selected with NVMe CTO server

HPE ProLiant DX385 Gen11 x16 Slot 1 Secondary FIO Riser Kit P60294-B21

Notes:

- This provides Slot6 in the Secondary position
- This requires the 2nd processor
- This riser kit is required to select the 2x16 Secondary Riser Upgrade Kit
- For NVMe CTO server, if this riser is selected then total PCIe slots will increase from 1 to 2
- For NVMe Server, if Sec NS204i-u Enable Kit is selected then Secondary riser (HPE DX385 G11 x16 Slot1 Sec FIO Rsr Kit) must be selected
- For NVMe CTO server, if this Networking option is selected then Secondary riser (HPE DX385 G11 x16 Slot1 Sec FIO Rsr Kit) must be selected

HPE ProLiant DX385 Gen11 2x16 Secondary FIO Upgrade Riser Kit P60295-B21

Notes:

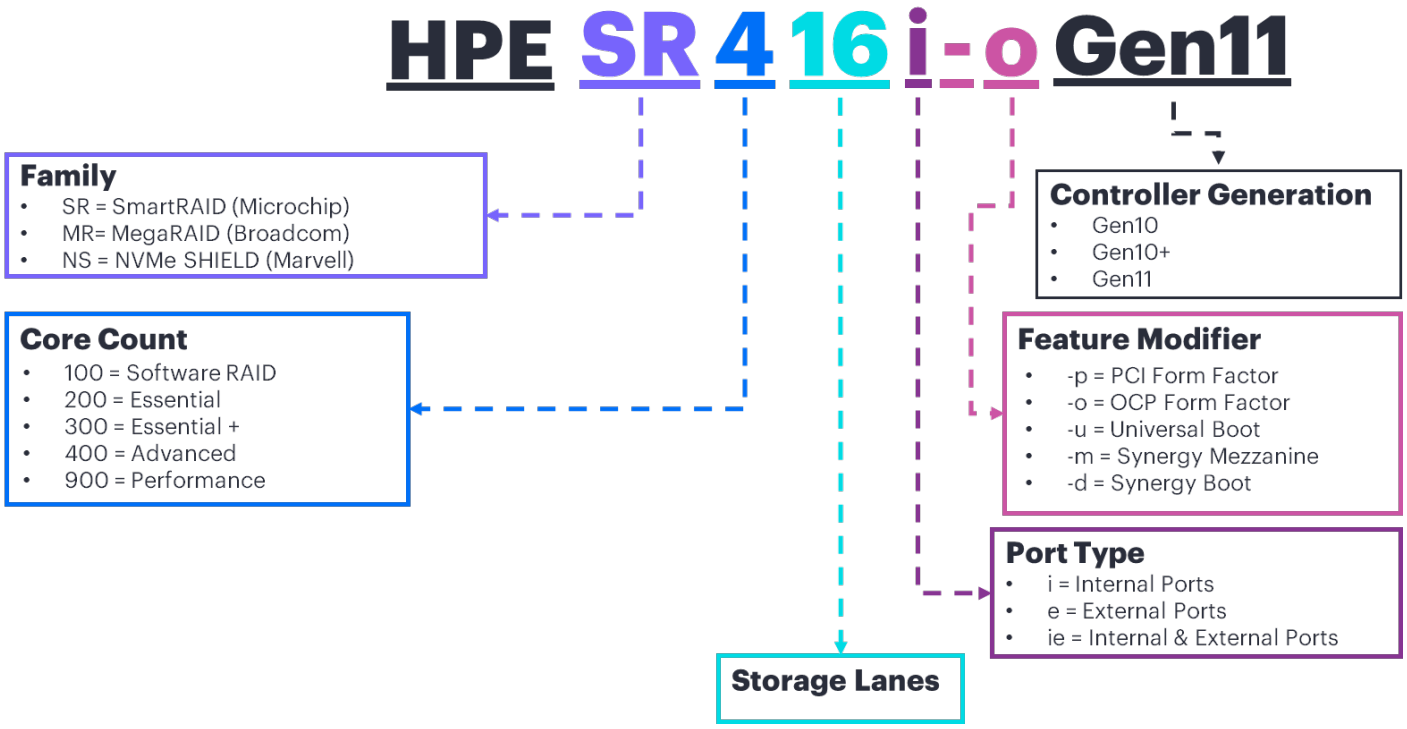
- This provides Slot4 and Slot5 in the Secondary position
- This requires the 2nd processor
- To select this kit, the 1x16 Secondary Riser Kit is required
- Cannot be selected with NVMe CTO server

HPE Boot Controllers

HPE DX NS204i-u Gen11 NVMe Hot Plug Boot Optimized FIO Storage Device P60454-B21

Notes: NS204i-u is the HPE Gen11 Hot Pluggable M.2 NVMe RAIDed Boot Device

HPE Smart Array Controllers



Notes:

- When selecting SR RAID controllers for external storage (E208e, 804398-B21) and MR RAID controllers for
- Not supporting mixing of MR (MegaRAID) series internal controllers and SR (SmartRAID) series internal controllers
- MR (MegaRAID) series controllers are not supported with Intelligent Provisioning feature
- For more information on the HPE Gen11 Storage Controller, please refer to: HPE Compute MR Gen11 Controllers QuickSpecs

Tri-mode RAID Controllers

HPE ProLiant DX MR216i-o Gen11 x16 Lanes without Cache OCP SPDM FIO Storage Controller	P60334-B21

Notes: This is an OROC type controller which takes up an OCP slot

HPE Drives

Midline - 12G SAS - LFF Drives

HPE DX 12TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty HE 512e Digitally Signed Firmware FIO HDD	P17966-B21
HPE DX 8TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware FIO HDD	P17965-B21
HPE DX 4TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware FIO HDD	P17963-B21
HPE DX 16TB SAS 12G Business Critical 7.2K LFF (3.5in) LP 1yr Wty 512e ISE FIO HDD	P35152-B21
HPE DX 20TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e ISE FIO HDD	P60324-B21

SSD Selection

Mixed Use SAS– LFF- Solid State Drives

HPE DX 3.2TB SAS 24G Mixed Use LFF LPC Multi Vendor FIO SSD	P57597-B21
HPE DX 6.4TB SAS 24G Mixed Use LFF LPC Multi Vendor FIO SSD	P57609-B21

Read Intensive SAS– LFF- Solid State Drives

HPE DX 3.84TB SAS 24G Read Intensive LFF LPC PM1653 FIO SSD	P56762-B21
HPE DX 7.68TB SAS 24G Read Intensive LFF LPC Multi Vendor FIO SSD	P56766-B21
HPE DX 15.36TB SAS 24G Read Intensive LFF LPC Multi Vendor FIO SSD	P56768-B21
HPE DX 3.84TB SAS Read Intensive LFF LPC Multi Vendor SSD	P75479-B21
HPE DX 3.84TB SAS Read Intensive LFF LPC Multi Vendor FIO SSD	P75476-B21

Mixed Use - 6G SATA - LFF - Solid State Drives

HPE DX 1.92TB SATA 6G Mixed Use LFF LPC PM897 FIO SSD	P56734-B21
HPE DX 1.92TB SATA 6G Mixed Use LFF LPC S4620 FIO SSD	P56738-B21
HPE DX 1.92TB SATA 6G Mixed Use LFF LPC Samsung PM897a FIO SSD	P75495-B21
HPE DX 1.92TB SATA 6G Mixed Use LFF LPC Samsung PM897a SSD	P75497-B21

Read Intensive – 6G SATA - LFF – Solid State Drives

HPE DX 1.9TB SATA 6G Read Intensive LFF LPC PM893 FIO SSD	P56742-B21
HPE DX 1.92TB SATA 6G Read Intensive LFF LPC S4520 FIO SSD	P56752-B21
HPE DX 3.84TB SATA 6G Read Intensive LFF LPC S4520 FIO SSD	P56756-B21
HPE DX 1.92TB SATA Read Intensive LFF LPC PM893a SSD	P75494-B21
HPE DX 3.84TB SATA Read Intensive LFF LPC PM893a SSD	P75485-B21

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

HPE DX 3.84TB SATA Read Intensive LFF LPC PM893a FIO SSD	P75483-B21
HPE DX 1.92TB SATA Read Intensive LFF LPC PM893a FIO SSD	P75492-B21

NVMe – Read Intensive SFF – Solid State Drives

HPE DX 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM9A3 FIO SSD P71210-B21

Notes: Standalone: P71217-B21

HPE DX 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM9A3 FIO SSD P71213-B21

Notes: Standalone: P71218-B21

HPE DX 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM9A3 FIO SSD P71215-B21

Notes: Standalone: P71219-B21

HPE DX 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a FIO SSD P57771-B21

NVMe – MU SFF – Solid State Drives

HPE DX 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a FIO SSD P57762-B21

Notes: Standalone: P50230-B21

HPE DX 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a FIO SSD P57764-B21

Notes: Standalone: P50233-B21

HPE Networking

10 Gigabit Ethernet adapters

Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T FIO Adapter for HPE DX P43271-B21

10/25 Gigabit Ethernet adapters

Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE DX P53862-B21

Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 FIO Adapter for HPE DX P60340-B21

Notes:

- For NVMe CTO server, if this Networking option is selected then Secondary riser (HPE DX385 G11 x16 Slot1 Sec FIO Rsr Kit) must be selected.
- For NVMe CTO Server, Max 1 Qty of anyone of the below options can be selected –
  - MLX MCX623106A 100G 2p QSFP56 FIO Adp DX
  - MLX MCX631102 25G 2p SFP28 FIO Adptr DX
  - INT E810 10/25GbE 4p SFP28 FIO Adptr DX
- For 12LFF Server, Maximum = 4 qty can be selected from among the below listed options:
  - MLX MCX623106A 100G 2p QSFP56 FIO Adp DX
  - MLX MCX631102 25G 2p SFP28 FIO Adptr DX
  - INT E810 10/25GbE 4p SFP28 FIO Adptr DX

Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 FIO Adapter for HPE DX P60341-B21

Notes:

- For NVMe CTO server, if this Networking option is selected then Secondary riser (HPE DX385 G11 x16 Slot1 Sec FIO Rsr Kit) must be selected.
- For NVMe CTO Server, Max 1 Qty of anyone of the below options can be selected –
  - MLX MCX623106A 100G 2p QSFP56 FIO Adp DX
  - MLX MCX631102 25G 2p SFP28 FIO Adptr DX
  - INT E810 10/25GbE 4p SFP28 FIO Adptr DX
- For 12LFF Server, Maximum = 4 qty can be selected from among the below listed options:
  - MLX MCX623106A 100G 2p QSFP56 FIO Adp DX
  - MLX MCX631102 25G 2p SFP28 FIO Adptr DX
  - INT E810 10/25GbE 4p SFP28 FIO Adptr DX

100 Gigabit Ethernet adapters

Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 FIO Adapter for HPE DX P43273-B21

Notes:

- For NVMe CTO server, if this Networking option is selected then Secondary riser (HPE DX385 G11 x16 Slot1 Sec FIO Rsr Kit) must be selected.
- For NVMe CTO Server, Max 1 Qty of anyone of the below options can be selected –
  - MLX MCX623106A 100G 2p QSFP56 FIO Adp DX
  - MLX MCX631102 25G 2p SFP28 FIO Adptr DX
  - INT E810 10/25GbE 4p SFP28 FIO Adptr DX
- For 12LFF Server, Maximum = 4 qty can be selected from among the below listed options:
  - MLX MCX623106A 100G 2p QSFP56 FIO Adp DX
  - MLX MCX631102 25G 2p SFP28 FIO Adptr DX
  - INT E810 10/25GbE 4p SFP28 FIO Adptr DX

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://h20195.www2.hpe.com/v2/getpdf.aspx/A00002507ENW.pdf

Recommended System Ambient Temperature			
System Config	**CPU cTDP**	**P60341-B21**	**P43273-B21**
12 LFF	< or = 240W	30C	30C
12 LFF		25C	25C

Notes: Other Restrictions

1. Only supported on 1/4/5/6/7 PCIe slots
2. This recommended system ambient temperature is based on HPE AOC (Active Optical Cables)

OCP Adapter

10 Gigabit Ethernet OCP Adapters

Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T OCP3 FIO Adapter for HPE DX P43272-B21

10/25 Gigabit Ethernet OCP adapters

Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE DX P53861-B21

Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 FIO Adapter for HPE DX P60339-B21

HPE Computation and Graphics Accelerator and related option kits

DX NVIDIA A16 64GB PCIe NonCEC FIO Accel P61596-B21

Notes:

- Double wide GPUs can only be supported with the GPU CTO chassis
- Mixing different types of GPU is not supportable
- Double wide GPUs require selection of 4DW GPU FIO enablement kit
- If A16 64GB GPU is selected without the PDB kit then CPU 8pin GPU Power Cable Kit to MB must be selected (P57851-B21)
- If A16 64GB GPU is selected with the PDB kit then CPU 8p GPU Power Cable Kit to PDB must be selected (P57858-B21)

NVIDIA L40 48GB PCIe Accelerator for HPE P61598-B21

Notes:

- Double wide GPUs can only be supported with the GPU CTO chassis
- Mixing different types of GPU is not supportable
- Double wide GPUs require selection of 4DW GPU FIO enablement kit
- When this GPU is selected, the GPU 16pin GPU Power Cable Kit to PDB must be selected (P57866-B21)

DX NVIDIA L4 SW PCIe FIO Accelerator P65461-B21

Notes:

- Single wide GPUs can only be supported with the GPU CTO chassis
- Mixing different types of GPU is not supportable
- This GPU is now supportable with 8SW GPU FIO enablement kit
- This GPU is supportable with 4DW GPU FIO enablement kit
- Maximum supported quantity is 8 when supported with the 8SW GPU FIO enablement kit
- Maximum supported quantity is 4 when supported with the 4DW GPU FIO enablement kit
- This GPU doesn't require a GPU power cable kit

NVIDIA L40S 48GB PCIe FIO Accelerator for HPE ProLiant DX P68953-B21

Notes:

- Double wide GPUs can only be supported with the GPU CTO chassis
- Mixing different types of GPU is not supportable
- Double wide GPUs require selection of 4DW GPU FIO enablement kit
- When this GPU is selected, the PDB kit must be selected
- When this GPU is selected, the CPU 16pin GPU Power Cable Kit to PDB must be selected (P57866-B21)

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.

Notes:

- 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: **https://poweradvisorext.it.hpe.com/?Page=Index**
- HPE ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). Visit HPE Power Cords and Cables for a full list of optional power cords.

HPE DX 800W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit P18223-B21

Notes: 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).

HPE DX 1600W Flex Slot -48VDC Hot Plug FIO Power Supply Kit P60246-B21

Notes:

- Flex Slot universal power supplies support power efficiency of up to 94% and support both 277VAC/380VDC power inputs.

- HPE 1600W DC PSU Power Lug Option Kit (P36877-B21) must be selected along with this power supplies.
- If 1600W DC Power supply is selected, then either "HPE DX 1600W DC PSU Pwr Lug Opt Kit" or "HPE DX 1600W DC PSU power cable kit" must be selected and Vice Versa. Quantity of Power supply and Power cord/Power Lug option must match.

HPE DX 1600W Flex Slot Platinum Hot Plug Low Halogen FIO Power Supply Kit P18222-B21

Notes:

- 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).
- The power supply selected only supports high line voltage (200VAC to 240VAC)

HPE DX 1600W -48VDC Power Lug Option Kit P60247-B21

Notes:

- Must be selected along with HPE 1600W Flex Slot -48VDC Hot Plug Power Supply Kit
- If 1600W DC Power supply is selected, then either "HPE DX 1600W DC PSU Pwr Lug Opt Kit" or "HPE DX 1600W DC PSU power cable kit" must be selected and Vice Versa. Quantity of Power supply and Power cord/Power Lug option must match.

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 ProLiant DX380a Gen11 Intrusion FIO Cable Kit P60300-B21

HPE Cable Options

HPE ProLiant DL3X5 Gen11 XGMI Interconnection Cable Kit P57880-B21

Notes: This option kit is current unavailable and can't be ordered on HPE configurator/ordering tool. It will be available soon by Q1'2023

HPE ProLiant DL385 Gen11 8LFF OROC x1 SAS/SATA Cable Kit P57870-B21

Notes: If Front 8SFF Drive cage is selected Qty above one then SFF Backplane Power Cable Kit must be selected

HPE ProLiant DL36X Gen11 Rear Serial Port Cable Kit P59431-B21

Rail Kits

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.
- CTO Models do not ship with rail kits, they need to be ordered separately
- 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.

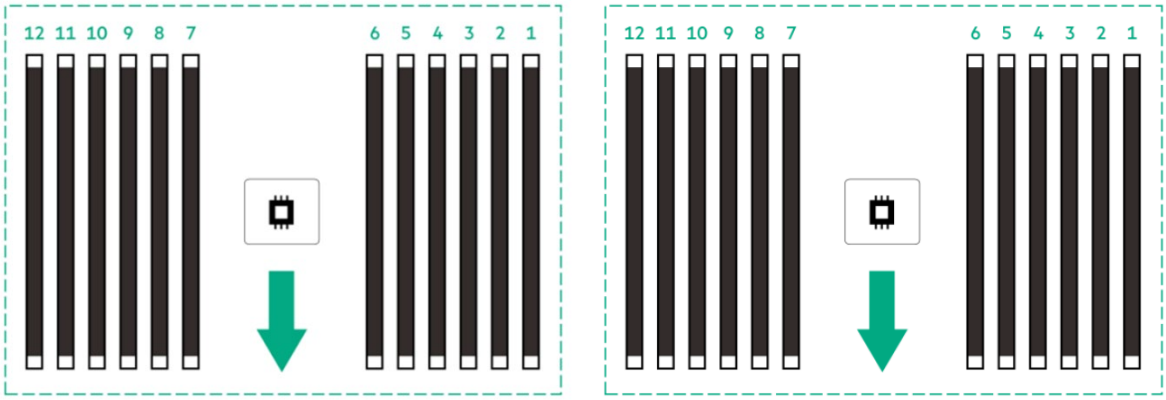
HPE ProLiant DX3XX Gen11 Easy Install FIO Rail 2 Kit P60221-B21

Notes: Supported on both SFF and LFF Models

HPE ProLiant DX300 Gen11 2U FIO Cable Management Arm for Rail Kit P60222-B21

Notes:

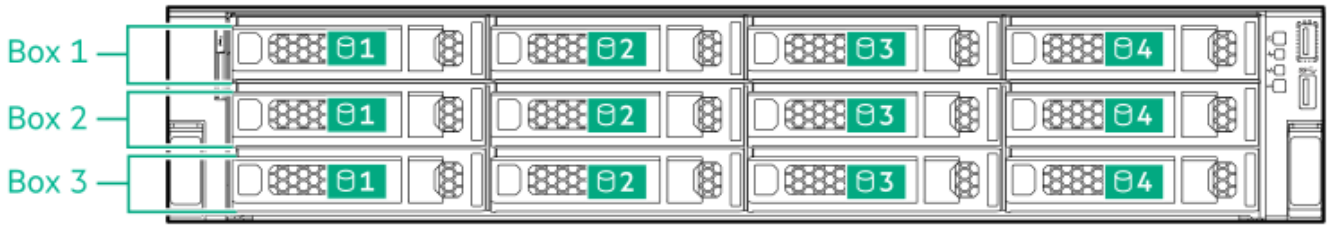
- Supportable when rail kit is selected
- If HPE DX300 Gen11 2U FIO CMA for Rail Kit is selected, then HPE DX3XX Gen11 EI FIO Rail 2 Kit must be selected



-------- Front side of the server --------

General Memory Population Rules and Guidelines

- Install DIMMs only if the corresponding processor is installed.
- If only one processor is installed in a two-processor system, only half of the DIMM slots are available.
- To maximize performance, it is recommended to balance the total memory capacity between all installed processors.
- When two processors are installed, balance the DIMMs across the two processors.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the number of DIMM slots on the platform, the largest DIMM capacity qualified on the platform, the number and model of installed processors qualified on the platform.
- To realize the performance memory capabilities listed in this document, HPE DDR5 Smart Memory is required. For additional information, please see the: HPE DDR5 Smart Memory QuickSpecs
- For General Server Memory and Persistent Memory Population Rules and Guidelines, see details here: http://www.hpe.com/docs/memory-population-rules
- For details on the HPE Server Memory speed, visit: http://www.hpe.com/docs/amd-speed-tables



12LFF Front Panel

System Unit

Dimensions

- **LFF Drives**
  8.75 x 43.47 x 66.3 cm; 3.44 x 17.11 x 26.1 in
- **Packaging**
  91.8 x 60 x 27 cm; 36.13 x 23.63 x10.63 in

Weight (approximate)

- **LFF configuration**
  - **Maximum** 36.72 kg / 80.78 lbs with 12x LFF hard drives (no rear drives), 2x processors, 2x power supplies, 1x Smart Array, 2x Risers installed)
    Packaged weight: 42.82 kg
  - **Minimum** 18.24 kg / 40.13 lbs with 1x LFF hard drive and 7 HDD blanks
    Packaged weight: 28.42 kg

Input Requirements (per power supply)

Rated Line Voltage

- 100 to 120 VAC
- 200 to 240 VAC

BTU Rating

Maximum

- For 1600W Power Supply: 5918 BTU/hr (at 200 VAC), 5884 BTU/hr (at 240 VAC) for China
- 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 1400W Power Supply: 1400W (at 240 VAC), 1400W (at 240 VAC)
- For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VAC) input for China only

Maximum Peak Power

- For 1400W Power Supply: 1400W (at 200 to 240 1VAC), 1400W (at 240 VAC) input for China only
- For 800W Power Supply: 800W (at 100 to 127 VAC), 800W (at 200 to 240 1VAC), 800W (at 240 VAC) input for China only

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).

Relative Humidity

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

RTC Accuracy

- 50 ppm

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

Acoustic Noise

Listed are the declared mean A-Weighted sound power levels (LwAm), declared average bystander position A-Weighted sound pressure levels (LpAm) and the statistical adder for verification, Kv, is a quantity to be added to the declared mean A-weighted sound power level, LwA,m when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. Please have your HPE representative provide information from the HPE EMESC website for further technical details regarding the configurations listed below.

Idle	
LWAd	5.0 B Base
LpAm	36 dBA Base
Operating	
LWAd	5.5 B Base
LpAm	37 dBA Base

Notes:

- The declared mean A-weighted sound power level, LWA,m, is computed as the arithmetic average of the measured.
- A-weighted sound power levels for a randomly selected sample, rounded to the nearest 0,1 B.
- The declared mean A-weighted emission sound pressure level, LpA,m, is computed as the arithmetic average of the measured A-weighted emission sound pressure levels at the bystander positions for a randomly selected sample, rounded to the nearest 1 dB.
- The statistical adder for verification, Kv, is a quantity to be added to the declared mean A-weighted sound power level, LWA,m, such that there will be a 95 % probability of acceptance, when using the verification procedures of ISO 9296, if no more than 6,5 % of the batch of new equipment, has A-weighted sound power levels greater than (LWA,m + Kv).
- The quantity, LWA,c (formerly called LWAd), can be computed from the sum of LWA,m and Kv.
- All measurements made to conform to ISO 7779 / ECMA-74 and declared to conform to ISO 9296 / ECMA-109.
- B, dB, abbreviations for bels and decibels, respectively, where 1 B = 10 dB.
- The results in this declaration apply only to the model numbers listed above when operating and tested according to the indicated modes and standards. A system with additional configuration components or increased operating functionality may increase the noise emission values.

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
09-Feb-2026	Version 9	Changed	Configuration Information section was updated.
27-May-2025	Version 8	Changed	Standard Features section was updated. AMD EPYC processors were updated.
21-Oct-2024	Version 7	Changed	Configuration Information and Core Options sections were updated. (New SSDs SKUs were added and new power supply configuration information).
03-Sep-2024	Version 6	Changed	Overview, Standard Features (Operating Systems and Virtualization Software Support for HPE Servers) and Configuration Information sections were updated.
05-Aug-2024	Version 5	Changed	Core Options section was updated.
01-Jul-2024	Version 4	Changed	Core Options section was updated.
18-Mar-2024	Version 3	Changed	Standard Features and additional Features sections were updated.
05-Feb-2024	Version 2	Changed	Overview, Standard Features, Configuration Information and
05-Jun-2023	Version 1	New	New QuickSpecs

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