Shape the Future of QuickSpecs - Your Input Matters

# HPE ProLiant MicroServer Gen11 QuickSpecs

HPE ProLiant MicroServer Gen11 delivers an affordable compact yet powerful entry-level server that you can customize for on-premises, edge, hybrid cloud, or even workloads demanding datacenter performance.

It has the ultra mini tower form factor and can be placed flat or vertically or wall-mounted depending on the customer environment. The latest Intel® Xeon® 6300-series Processors, Intel® Xeon® E-2400 and Pentium® supported processors deliver compute performance as well as security and remote management into the server with HPE iLO silicon root of trust. Along with other enhancements such as 4 DIMM slots for DDR5 memory and 2 PCIe slots, whether you need a general-purpose server, a NAS solution, or a virtualization server, this compact and affordable system delivers exceptional performance.

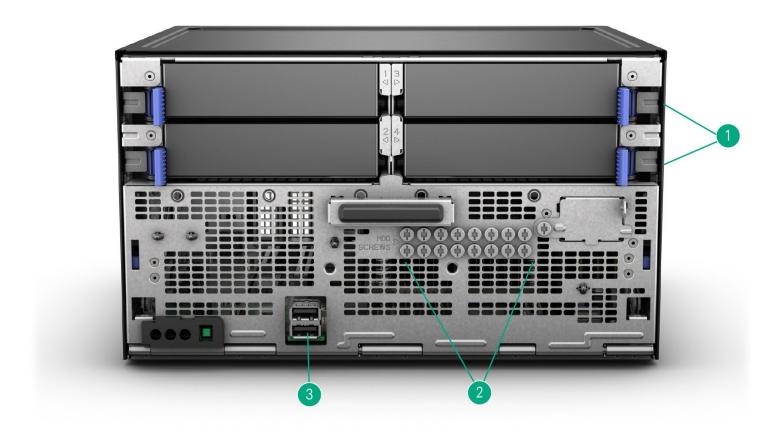
# **HPE ProLiant MicroServer Gen11**



# Front View (External)

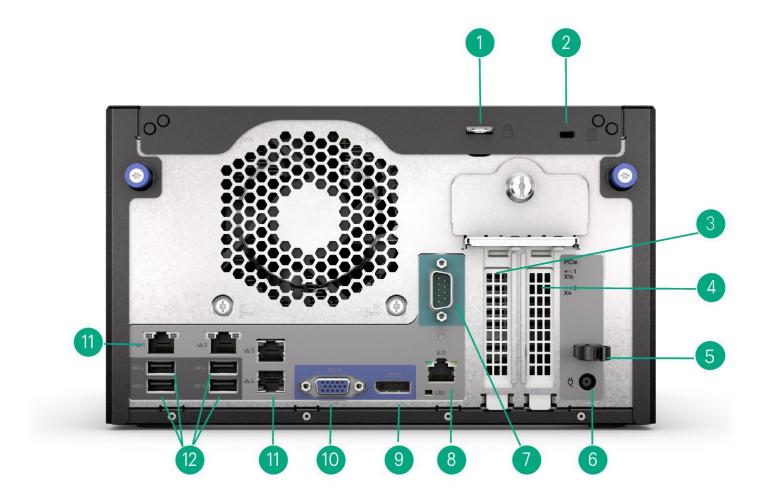
Item	Description
1.	Drive activity LED
2.	NIC status LED <sup>1</sup>
3.	Health LED
4.	Power on/Standby button and system power LED
5.	USB 3.2 Gen2 Type-A ports

**Notes:** <sup>1</sup>Front NIC LED display does not support NIC LED ACT/LINK indication from the optional PCIe networking add-on cards.

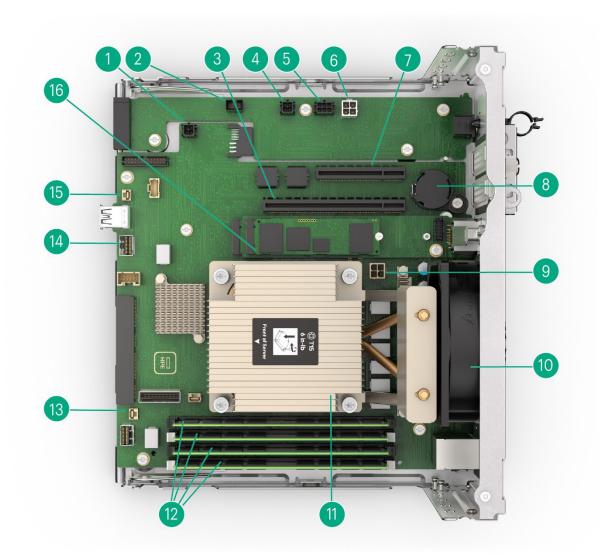


Front View (Internal) – without front bezel

Item	Description
1.	Four (4) LFF NHP SATA HDD cage
2.	Hard drive screws
3.	USB 3.2 Gen2 Type-A ports



	Rear View							
Item	Description	Item	Description					
1.	Padlock eye	7.	Serial port (optional, enabled by the dedicated iLO/M.2/serial port kit)					
2.	Kensington security slot	8.	iLO dedicated NIC port (optional, enabled by the dedicated iLO/M.2/serial port kit)					
3.	(1) PCIe Gen5 low-profile slot (PCIe5 x16)	9.	DisplayPort 1.1a					
4.	(1) PCIe Gen4 low-profile slot (PCIe4 x8)	10.	VGA Port					
5.	Power clip hole (for the power cord clip to firmly secure the power adapter cord)	11.	Four (4) NIC ports (NIC1-4 from left, where NIC port #1 supports shared iLO port)					
6.	Power jack	12.	Four (4) USB 3.2 Gen1 Type-A ports					



#### Mainboard View (Internal)

	Mainboard view (internal)						
Item	Description	Item	Description				
1.	System board: System power connector	9.	System board: 4-pin processor power connector				
2.	Fan connector	10.	System fan				
3.	Slot 1 PCle5 x16	11.	One (1) processor and heatsink				
4.	PDB: System power connector	12.	Four (4) DDR5 UDIMM slots				
5.	Drive power connector	13.	Ambient temperature sensor connector				
6.	PDB: 4-pin processor power connector	14.	SlimSAS x4 port				
7.	Slot 2 PCle4 x8	15.	Storage controller backup power connector				
8.	Coin battery	16	M.2 slot (optional, enabled by the dedicated iLO/M.2/serial port kit)				

#### What's New

- Supports the latest Intel® Xeon® 6300-series Processors now up to 8-core/95 W, Intel® Xeon® E-2400 and Pentium® processors
- Supports 4 DIMM slots for the New HPE DDR5 Standard Memory (UDIMM), 4400 MT/s maximum speed offering in 16 GB and 32 GB. Max 128 GB system memory capacity (4 x 32 GB)
- Two PCle expansion slots including one that supports PCle 5.0
- HPE iLO 6 support
- Embedded TPM 2.0 support
- Supports one internal M.2 slot and one serial port enabled by the optional Gen11 dedicated iLO/M.2/serial port
   kit
- Supports CTO capability
- Supports Wall Mount Kit
- The HPE iLO remote server management support is now enabled through the shared iLO port default on-board.
   Customers can access HPE iLO from their browser, command line, or API without the need of the additional module/or activation key. For more information, please contact HPE local customer support.

#### **Processor**

Intel® Xeon® 6300-series and Xeon® E Processor is designed to deliver the best combination of performance, built-in capabilities, and cost-effectiveness. This server also supports Intel® Pentium® processor.

Choose one of the following processors based on the model:

Intel® Xeon® 6300 Series						
Model	CPU Base Frequency	Cores	Threads	Smart Cache	Power	DDR5
Xeon® 6369P	3.3 GHz	8	16	24 MB	95 W	4400 MT/s
Xeon® 6357P	3.0 GHz	8	16	24 MB	80 W	4400 MT/s
Xeon® 6353P	2.7 GHz	8	16	24 MB	65 W	4400 MT/s
Xeon® 6349P	3.6 GHz	6	12	18 MB	95 W	4400 MT/s
Xeon® 6337P	3.5 GHz	6	12	18 MB	80 W	4400 MT/s
Xeon® 6333P	3.1 GHz	6	12	18 MB	65 W	4400 MT/s
Xeon® 6325P	3.5 GHz	4	8	12 MB	55 W	4400 MT/s
Xeon® 6315P	2.8 GHz	4	8	12 MB	55 W	4400 MT/s

Intel® Xeon® E-2400 Series / Pentium® Gold						
Model	CPU Base	Cores	Threads	Smart	Power	DDR5
	Frequency			Cache		
Xeon® E-2434	3.4 GHz	4	8	12 MB	55W	4400 MT/s
Xeon® E-2414	2.6 GHz	4	4	12 MB	55W	4400 MT/s
Pentium® G7400	3.7 GHz	2	4	6 MB	46W	4400 MT/s

#### Notes:

- Pentium® G7400 does not comply with Energy Star 4.0
- For more information regarding Intel® Xeon® processors, please see the following <a href="http://www.intel.com/xeon">http://www.intel.com/xeon</a>

# Chipset

Intel® C262 Chipset

For more information regarding Intel® chipsets, please see the following URL:

http://www.intel.com/products/server/chipsets/

# On System Management Chipset

HPE ILO 6 ASIC

#### Notes:

The HPE iLO remote server management support is now enabled through the shared iLO port default on-board. Customers can access HPE iLO from their browser, command line, or API without the need of the additional module/or activation key. For more information, please contact HPE local customer support. Read and learn more in the HPE iLO QuickSpecs.

Memory	
Туре	HPE Standard Memory DDR5 Unbuffered (UDIMM)
DIMM Slots Available	4
Maximum Capacity	128GB (4 x 32GB UDIMM @4400 MT/s)  Notes: The maximum memory speed is a function of the memory type, memory configuration, and processor model. For details on the HPE Server Memory speed, visit: <a href="https://www.hpe.com/psnow/doc/a50010188enw">https://www.hpe.com/psnow/doc/a50010188enw</a>

#### **Memory Protection**

- ECC

#### **Network Controller**

Embedded Broadcom BCM5719 Ethernet 1GbE 4-port BASE-T Adapter for HPE

The HPE ProLiant MicroServer Gen11 server offers the customer a 4-port NIC standard with the option to upgrade with a variety of networking options.

**Notes:** Support document and downloads including firmware and drivers for the Broadcom BCM5719 Ethernet 1GbE 4-port BASE-T LOM Adapter can be downloaded from the supplier's support and services webpage.

# **Expansion Slots**

Expansion Slot #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	PCle 5.0	x16	x16	Low Profile	
2	PCIe 4.0	x4	x8	Low Profile	

# Storage Controller

Intel® VROC SATA Hybrid RAID

**Notes:** The embedded Intel® Virtual RAID on CPU (Intel® VROC) is the SATA Hybrid RAID controller supported in this server.

- All models feature an embedded storage controller Intel® VROC SATA. Quick Install Guide
- BIOS Default is SATA AHCI. Embedded Intel® SATA VROC is disabled by default. Embedded Intel® SATA VROC can be enabled in BIOS/Platform Configuration (RBSU) for Hybrid RAID features.
- For Linux users, HPE offers a solution that uses in-distro open-source software to create a two-disk RAID 1 boot volume.
- For more information visit: <a href="https://downloads.linux.hpe.com/SDR/project/lsrrb/">https://downloads.linux.hpe.com/SDR/project/lsrrb/</a>
- RAID support 0/1/5/10.
- Intel® VROC SATA does not support RAID volume creation with different form factors of drives
- Intel® VROC SATA RAID supports Windows Server and Linux but does not support VMware.
- Intel® VROC SATA will operate in UEFI mode, Windows OS environment, and Linux OS environment.
- Required to install AMS tools in OS for supporting drives thermal sensor reading for thermal fan control, otherwise may experience acoustic noise impact. Download AMS from the following link.

https://support.hpe.com/hpesc/public/docDisplay?docId=sd00002007en\_us&page=GUID-268BA5BF-9524-4D6E-85A5-A7A058A46342.html

- Both Intel® Xeon® E processors and Intel® Pentium® processors support Intel® VROC SATA RAID.
- See HPE Support Center for additional information regarding installation of Intel® VROC (SATA RAID): Enabling Intel® VROC (SATA RAID) for SATA or SATA on BIOS/Platform configuration (RBSU)
  - Windows Edition
  - Linux Edition
- Intel® VROC requires the server boot mode to be set to UEFI Mode.
- Obtain the Intel® VROC downloads (drivers, GUI) specific for your system OS. For direct download links, see the OS-specific
- VROC guide:

https://support.hpe.com/connect/s/product?language=en\_US&cep=on&kmpmoid=1013158021&tab=manuals

- Intel® VROC supports RAID management though the following tools:
  - non-OS specific: UEFI System Utilities
  - Windows: Intel® VROC GUI, Intel® VROC CLI.

#### **Essential RAID Controller**

HPE Smart Array E208e-p SR Gen10 Controller

#### Performance RAID Controller

HPE MR408i-p Gen11 SPDM Storage Controller

HPE MR216i-p Gen11 SPDM Storage Controller

Notes: For additional details, please visit:

- HPE Compute MR Gen11 Controllers QuickSpecs
- HPE Compute <u>SR Gen11 Controllers QuickSpecs</u>

**Notes:** MicroServer Gen11 supports NHP (non-hot-plug) operations only and hence some of the storage controller functionality may not be supported.

# **Internal Storage Devices**

- Hard Drives

None shipped as standard

Solid State Drives

None shipped as standard

# Maximum Internal Storage

Non-hot plug SATA

16 TB (4 x 4 TB) 3.5" SATA HDD 3.84 TB (4x 960 GB) 2.5" SATA SSD

**Notes:** The maximum storage indicated is aligned with the current HDD & SSD option list supported. Maximum internal storage supported would change with the server's option support plan.

## **Graphics**

Integrated Video Standard

- 1) Video modes up to 1920 x 1200 @85Hz (16 bpp)
- 2) 16 MB Video Memory

HPE iLO 6 On System Management Memory

- 3) 32 MB Flash
- 4) 8 Gbit DDR 4

Interfaces	
Video	1 Rear VGA port 1 Rear DisplayPort 1.1a
USB 3.2 Gen 1 Type-A Ports	4 total (4 rear)
USB 3.2 Gen 2 Type-A Ports	2 total (2 front)
Network RJ-45 (Ethernet)	4

**Notes:** If you connect two display devices to the VGA port and DisplayPort, the same image is shown on both devices-screen mirroring mode. The embedded video controller in the iLO 6 chipset does not support dual display or screen extension mode.

# **Power Supply**

One (1) 180 Watts, non-redundant External Power Adapter; or one (1) 330 Watts, non-redundant External Power Adapter.

#### **Server Power Cords**

All pre-configured or CTO server models ship standard with one or more country-specific 6 ft./1.83m C5 (supported with the 180W external power adapter) or C13 (supported with the 330W external power adapter) power cords depending on models. Additional power cords are available to be ordered. If a different power cord is required, please check the <a href="https://example.com/heres/

Notes: 1C5 power cords are not included in the standard HPE Power Cords and Cables specs.

#### Form Factor

Ultra Micro Tower

# **System Fans**

- One (1) non-redundant system fan shipped standard

# **Industry Standard Compliance**

- ACPI V6.3 Compliant
- PCle 5.0 and 4.0 Compliant

- PXE Support
- WOL Support
- EMC Class B
- Microsoft® Logo certifications
- VGA Port
- DP 1.1a
- SMBIOS 3.2
- UEFI 2.9
- Redfish API
- IPMI 2.0
- TPM 2.0 Gen11 support

Notes: Enabling TPM 2.0 no longer requires TPM module option kit for Gen11. It is an embedded feature.

- 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)
- Active Directory v1.0
- ASHRAE A3/A4

**Notes:** For additional technical, thermal details regarding ambient temperature, humidity, and feature support, please visit MicroServer Gen11 Extended Ambient Temperature Guidelines

- UEFI (Unified Extensible Firmware Interface Forum)
- USB 3.2 Compliant
- SATA 6 Gb/s

**Notes:** For additional technical thermal details regarding ambient temperatures, humidity and features support please visit URL: <a href="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a> for ASHRAE A3/A4 feature.

# Operating Systems and Virtualization Software Support for ProLiant Servers

- Microsoft Windows Server
- VMware ESXi

**Notes:** VMware supported only with Intel® Xeon® E processors, not supported with Intel® Pentium® processors. No Legacy Mode. Support on VMware. <a href="https://kb.vmware.com/s/article/84233">https://kb.vmware.com/s/article/84233</a>

- Red Hat Enterprise Linux (RHEL)
- Canonical Ubuntu
- XenServer

**Notes:** For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server.

https://www.hpe.com/us/en/servers/server-operating-systems.html

#### **HPE Server UEFI ROM**

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 to support UEFI mode.

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

#### 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 larger than 2.2 TB (using GPT) boot drives
- USB 3.0 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

Notes: Enabling TPM 2.0 no longer requires TPM module option kit for Gen11. It is an embedded feature.

- 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.

# **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 <a href="http://www.hpe.com/info/ilo">http://www.hpe.com/info/ilo</a>

#### Notes:

The HPE iLO remote server management support is now enabled through the shared iLO port default on-board. Customers can access HPE iLO from their browser, command line, or API without the need of the additional module/or activation key. For more information, please contact HPE local customer support.

#### UEFI

Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at <a href="http://www.hpe.com/servers/uefi">http://www.hpe.com/servers/uefi</a>.

#### **Intelligent Provisioning**

Hassle-free server and OS provisioning for 1 or few servers with Intelligent Provisioning. Learn more at <a href="http://www.hpe.com/servers/intelligentprovisioning">http://www.hpe.com/servers/intelligentprovisioning</a>.

#### **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 <a href="http://www.hpe.com/info/restfulapi">http://www.hpe.com/info/restfulapi</a>

#### 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 <a href="http://www.hpe.com/servers/ahs">http://www.hpe.com/servers/ahs</a>.

#### **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: <a href="http://www.hpe.com/servers/ahsv">http://www.hpe.com/servers/ahsv</a>.

#### **Smart Update**

Keep your servers 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 <a href="http://www.hpe.com/info/smartupdate">http://www.hpe.com/info/smartupdate</a>.

#### **iLO Amplifier Pack**

Designed for large enterprise and service provider environments with hundreds of HPE servers, the iLO Amplifier Pack is a free, downloadable open virtual application (OVA) that delivers the power to discover, inventory and update Gen8, Gen9 and Gen10 HPE servers at unmatched speed and scale. Use with an iLO Advanced License to unlock full capabilities.

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

#### RESTful Interface Tool

RESTful Interface tool is a scripting tool to provision using RESTful API for iLO 6 to discover and deploy servers at scale. Learn more at <a href="http://www.hpe.com/info/resttool">http://www.hpe.com/info/resttool</a>.

#### **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 <a href="http://www.hpe.com/servers/powershell">http://www.hpe.com/servers/powershell</a>.

#### **HPE OneView Standard**

HPE OneView is an on premises, multi-generational server monitoring and management solution. HPE OneView Standard can be used for inventory, health monitoring, alerting, and reporting without additional fees. Customers can upgrade their management experience with an HPE OneView Advanced license, all provided by the same tool. Learn more at

http://www.hpe.com/info/oneview.

#### **HPE Compute Ops Management**

Transform compute lifecycle management with a cloud experience that delivers greater simplicity, agility, and speed across your entire server environment, wherever it lives. This software-as-a-service tool provides a dashboard with global visibility and intuitive management of server health, security and compliance status to help you easily identify areas that need immediate attention. Users can update tens to thousands of servers faster through intelligent delta-based firmware downloads and on-demand HPE iLO firmware updates.

HPE Compute Ops Management is cloud-native software that is continually updated with new services, features, patches, and firmware packs. The management application resides in HPE GreenLake cloud (access via <a href="https://common.cloud.hpe.com">https://common.cloud.hpe.com</a>) and leverages the HPE GreenLake architecture, security, and unified operations. A 3-year subscription to HPE Compute Ops Management is added by default when ordering an HPE ProLiant Gen11 rack, tower, or micro server.

For more information, visit the HPE Compute Ops Management QuickSpecs: https://www.hpe.com/psnow/doc/a50004263enw

# Security

- UEFI Secure Boot and Secure Start support
- Immutable Silicon Root of Trust
- FIPS 140-2 validation
- Common Criteria certification
- Configurable for PCI DSS compliance
- Ability to roll back firmware
- Secure erase of NAND/User data
- TPM (Trusted Platform Module) 2.0 Gen 11

Notes: Enabling TPM 2.0 no longer requires TPM module option kit for Gen11. It is an embedded feature.

- Front bezel lock feature, standard
- Padlock slot, standard
- Kensington Lock slot, standard
- Power cord clip, standard

# 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 one year 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:** MicroServer Gen11 Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. Warranty repairs may be accomplished by 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. Non-CSR parts must be serviced by a trained authorized service engineer. Additional information regarding worldwide limited warranty and technical support is available at: https://www.hpe.com/support/ProLiantServers-Warranties

**Optional Features** 

## Server Management

**Notes:** The HPE iLO remote server management support is now enabled through the shared iLO port default onboard (NIC port#1). Customers can access HPE iLO from their browser, command line, or API without the need of the additional module/or activation key. This is made standard across HPE ProLiant Gen11 Xeon®-E servers. The HPE ML30 Gen11 iLO/NIC/M.2/COM Port Kit (P65741-B21) is now only needed when customers require a dedicated iLO port or if there is the need for additional M.2 slot or the serial port. For more information, please contact HPE local customer support.

#### 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.

#### **HPE OneView Advanced**

HPE OneView Advanced offers a sophisticated level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It builds upon the base features of HPE OpenView Standard, provides full-featured licenses which can be purchased for managing multiple HPE server generations. To learn more visit <a href="https://www.hpe.com/info/oneview">https://www.hpe.com/info/oneview</a>.

### 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. <a href="https://h22174.www2.hpe.com/SimplifiedConfig/Welcome">https://h22174.www2.hpe.com/SimplifiedConfig/Welcome</a>

#### **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 Al-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, considering 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, considering 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: <a href="https://www.hpe.com/services/lifecycle">https://www.hpe.com/services/lifecycle</a>

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 <a href="https://ssc.hpe.com/portal/site/ssc/">https://ssc.hpe.com/portal/site/ssc/</a>

#### 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.

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#### **Consume IT On Your Terms**

<u>HPE GreenLake</u> 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" <a href="https://www.hpe.com/us/en/contact-hpe.html">https://www.hpe.com/us/en/contact-hpe.html</a>

For more information, refer to: <a href="http://www.hpe.com/services">http://www.hpe.com/services</a>

# **HPE Smart Choice Purchase Program**

The HPE Smart Choice purchase program features popular fully configured products that can be quoted in minutes and shipped quickly through HPE Authorized Partners. Products are configured and tested in an HPE factory and stocked at HPE Authorized Distributors and Partners. The products arrive in a single box, making onsite integration easier and more efficient for partners and customers. Additionally, there are aggressively priced HPE Tech Care Services available only through the HPE Smart Choice program when you purchase an HPE Smart Choice product.

For HPE Smart Choice configuration and product details, please visit the Smart Choice Supplemental QuickSpecs: <a href="https://www.hpe.com/psnow/doc/a50009219enw">https://www.hpe.com/psnow/doc/a50009219enw</a>

# Pre-Configured models ship with the configurations below.

- Options can be selected from the Core or Additional options section of this QuickSpecs.
- Hewlett Packard Enterprise does not allow factory integration of options into pre-configured models. Any additional options purchased will not be shipped inside the server.
- Network Choice models do not include embedded LOM.

Entry Models	
	P68819-001 (AMS)
	P68819-291 (Japan)
SKU Number	P68819-371 (APAC)
	P68819-421 (EMEA)
	P68819-AA1 (PRC)
Model Name	HPE ProLiant MicroServer Gen11 G7400 2-core VROC 4LFF-NHP 180W External PS Compute Module Server
Processor	G7400 (2 core, 3.7 GHz, 46W)
Number of Processors	One
Memory	16 GB (1x 16 GB, 4400 MT/s)
Network Controller	4x1 GbE embedded
	Embedded Intel® VROC SATA Hybrid RAID
Storage Controller	<b>Notes:</b> Required to install AMS tools in OS for supporting drives thermal sensor reading for thermal fan control, otherwise may experience acoustic noise impact. Download AMS from the following link. <a href="https://support.hpe.com/hpesc/public/docDisplay?docId=sd00002007en">https://support.hpe.com/hpesc/public/docDisplay?docId=sd00002007en</a> us&page=GUI
	<u>D-268BA5BF-9524-4D6E-85A5-A7A058A46342.html</u>
Included Hard Drives	None shipped standard
Internal Storage	Up to 4 LFF NHP HDD or 4 SFF NHP SSD (requiring the optional LFF-to-SFF converter kit, 870213-B21 to be installed. One kit per one drive.)
Optical Drive Bay	Optional ODD Bay Kit, none included
Optical Drive	Optional ODD Bay Kit, none included

<b>Expansion Slots</b>	(1) PCle 5.0 slot, (1) PCle 4.0 slot
Power Supply	1x 180W External Power Adapter, Non-Redundant Power Supply
Fans	1x non-redundant system fan ships standard
Management	Notes: The HPE iLO remote server management support is now enabled through the shared iLO port default on-board (NIC port#1). Customers can access HPE iLO from their browser, command line, or API without the need of the additional module/or activation key.  The HPE ML30 Gen11 iLO/NIC/M.2/COM Port Kit (P65741-B21) shared between ML30 and MicroServer is now only needed when customers require a dedicated iLO port or if there is the need for additional M.2 slot or the serial port.  For more information, please contact HPE local customer support.
Security	Embedded TPM (Trusted Platform Module) 2.0 support
Form Factor	Ultra Micro Tower
Warranty	Server warranty includes 1-year parts, 1-year labor, and 1-year onsite support with next business day response. Warranty repairs may be accomplished using 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. 3) A trained, authorized service engineer must service non-CSR parts. For more information, visit <a href="https://www.hpe.com/support">https://www.hpe.com/support</a> .

# **Country Code Key**

- 001 = Americas
- -291 = Japan
- -371 = Asia Pacific
- -421 = Europe, the Middle East and Africa
- -AA1 = China

Performance Model						
	Performance 1	Perform	ance 2			
SKU Number	P68820-001 (AMS) P68820-291 (Japan) P68820-371 (APAC) P68820-421 (EMEA)	P68821-001 (AMS) P68821-421 (EMEA)	P68822-001 (Argentina only)			
Model Name	HPE ProLiant MicroServer Gen11 E-2414 2.6GHz 4-core 1P 16GB-U VROC 4LFF-NHP 180W External PS Server	VROC 4LFF-NHP LTB 180 W External PS Server				
Processor	E-2414 (4 core, 2.8 GHz, 55W)	E-2434 (4 core,	3.4 GHz, 55W)			
Number of Processors		One				
Memory	1	6 GB (1x 16 GB, 4400 MT/s)				
Network Controller		4x1GbE embedded				
Storage Controller	Embedded Intel® VROC SATA Hybrid RAID  Notes: Required to install AMS tools in OS for supporting drives thermal sensor reading for thermal fan control, otherwise may experience acoustic noise impact. Download AMS from the following link.  https://support.hpe.com/hpesc/public/docDisplay?docId=sd00002007en us&page=GUI D-268BA5BF-9524-4D6E-85A5-A7A058A46342.html					
Included Hard Drives	None shipped standard	1x 1 TB SATA 6G Business (	Critical 7.2K LFF RW HDD			
Internal Storage optional LFF-to-SFF converter additional 1 TB		1 TB SATA HDD default, upgradeable up to 4TB when additional 1 TB HDDs (HPE 1 TB SATA 7.2K LFF RW MV HDD, 801882-B21) are added.				
Optical Drive Bay	Optional ODD Bay Kit, none included					
Optical Drive	Optional ODD Bay Kit, none included					
Expansion Slots	(1) PCIe 5.0 slot, (1) PCIe 4.0 slot					
Power Supply	1x 180W External Power Adapter, Non-Redundant Power Supply					
Fans	Fans 1x non-redundant system fan ships standard					

	HPE iLO 6		
Management	Notes: The HPE iLO remote server management support is now enabled through the shared iLO port default on-board (NIC port#1). Customers can access HPE iLO from their browser, command line, or API without the need of the additional module/or activation key.  The HPE ML30 Gen11 iLO/NIC/M.2/COM Port Kit (P65741-B21) shared between ML30 and MicroServer is now only needed when customers require a dedicated iLO port or if there is the need for additional M.2 slot or the serial port.  For more information, please contact HPE local customer support.		
Security	Embedded TPM (Trusted Platform Module) 2.0 support		
Form Factor	Ultra Micro Tower		
Warranty	Server warranty includes 1-year parts, 1-year labor, and 1-year onsite support with next business day response. Warranty repairs may be accomplished using 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. 3) A trained, authorized service engineer must service non-CSR parts. For more information, visit <a href="https://www.hpe.com/support">https://www.hpe.com/support</a>		

# **Configuration Information**

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

representative for information on configurable product offerings and requirements.

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

# **Step 1: Base Configuration**

CTO Server	HPE ProLiant MicroServer Gen11	
SKU Number	4LFF Non-hot Plug Configure-to-order Server P71850-B21	
TAA compatible	Yes	
Processor Socket	1	
DIMM Slots	4	
Storage Controller	Embedded Intel® VROC SATA Hybrid RAID; choice of optional PCIe storage controllers.	
PCIe expansion slots	2 slots standard: (1) PCIe 5.0 slot, (1) PCIe 4.0 slot	
Drive Cage	4 LFF NHP HDD default, choice of optional SFF converter kits to accommodate SFF NHP SSD in LFF drive bays.	
Network Controller	HPE embedded 1GbE 4-port BCM5719 network adapter, choice of optional PCIe standup cards	
Fan	1 non-hot plug, non-redundant system fan	
Management  iLO 6  Notes: The HPE iLO remote server management support is now enabled through the shared iLO port default on-board (NIC port#1). Customers of access HPE iLO from their browser, command line, or API without the number the additional module/or activation key.  The HPE ML30 Gen11 iLO/NIC/M.2/COM Port Kit (P65741-B21) shared be ML30 and MicroServer is now only needed when customers require a dedicated iLO port or if there is the need for additional M.2 slot or the sport. For more information, please contact HPE local customer support		
USB	6 standard: (2) front (4) rear	
Security	Embedded TPM 2.0	

# **Step 2: Choose Required Options**

Please select one processor required below.

#### **Notes:**

- Only one processor is supported.
- DDR5 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

#### Step 2a: Choose Processors

#### Intel® Xeon® 6300 Series

Intel® Xeon® 6369P 3.3GHz 8-core 95W FIO Processor for HPE	P77162-B21
Intel® Xeon® 6357P 3.0GHz 8-core 80W FIO Processor for HPE	P77163-B21
Intel® Xeon® 6353P 2.7GHz 8-core 65W FIO Processor for HPE	P77164-B21
Intel® Xeon® 6349P 3.6GHz 6-core 95W FIO Processor for HPE	P77165-B21
Intel® Xeon® 6337P 3.5GHz 6-core 80W FIO Processor for HPE	P77166-B21
Intel® Xeon® 6333P 3.1GHz 6-core 65W FIO Processor for HPE	P77167-B21
Intel® Xeon® 6325P 3.5GHz 4-core 55W FIO Processor for HPE	P77168-B21
Intel® Xeon® 6315P 2.8GHz 4-core 55W FIO Processor for HPE	P77169-B21
Intel® Xeon® E-2400 Series	
Intel® Xeon® E-2434 3.4GHz 4-core 55W FIO Processor for HPE	P65224-B21
Intel® Xeon® E-2414 2.6GHz 4-core 55W FIO Processor for HPE	P65225-B21
Intel® Pentium® Processor G Series	

Intel® Pentium® G7400 3.7GHz 2-core 46W FIO Processor for HPE P65226-B21

#### Notes:

- Pentium® G7400 does not comply with Energy Star 4.0
- For processors above 65W, the HPE MicroServer Gen11 330W External Power Adapter (P77924-B21) must be selected.

#### **Step 2b: Choose Memory Options**

Please select one or more memory from below.

#### Notes:

- HPE memory from previous generation servers is not qualified or warranted with this HPE ProLiant Server.
- HPE Standard Memory (UDIMM) is required to realize the memory performance improvements and enhanced functionality listed in this document for this HPE ProLiant Server.
- The maximum speed capability of the memory system is governed by the combination of the CPU and any other DIMMs installed in the server. If higher speed DIMMs are installed with a CPU that only supports a lower memory speed, the DIMMs will only run at the (lower) memory speed supported by the processor. Likewise, if memory DIMMs are mixed with slower DIMMs within a server, all DIMMs will run at the slower memory speed. For further information please refer to the Memory Population Rules for your specific server.
- With one processor installed, four DIMMs slots are available, two slots per channel. Each channel can be populated with one DIMM (1DPC) or two DIMMs (2DPC).
- The quantity of memory DIMMs selected is recommended to be 1, 2 or 4 for balanced performance.
- Symmetric configurations are required within each channel (e.g., 1R/1R, 2R/2R), meaning the same DIMM capacity (16GB or 32GB) is required when populating within each channel.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- For Server Memory Population Rules for HPE ProLiant Gen11 Servers with Intel® Xeon® 6300-series
   Processors or Intel® Xeon® E-2400 Processors see details here: <a href="http://www.hpe.com/docs/server-memory">http://www.hpe.com/docs/server-memory</a>

#### Memory

HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 Unbuffered Standard Memory Kit HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 Unbuffered Standard Memory Kit

P64336-B21 P64339-B21

#### Notes:

- Running at up to 4400 MT/s with Intel® Xeon® processors when two dual-rank DIMMs are installed in different channels.
- HPE Server Memory compatibility for a specific server platform may vary or be limited within a server platform 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 an HPE server model or family and yet occasionally not be supported with some configurations within that server family.

# **Step 2c: Choose Power Supplies**

Select one power adapter from below.

Notes: To review the power requirements for your selected configuration, please use the HPE Power Advisor Tool at <a href="https://poweradvisorext.it.hpe.com/?Page=Index">https://poweradvisorext.it.hpe.com/?Page=Index</a>

HPE MicroServer Gen11 180W External Power Adapter

HPE MicroServer Gen11 330W External Power Adapter

P77924-B21

P74395-B21

Notes: This larger watt power adapter is designed to support configurations which contain higher power options, for example, processors above 65W.

# Step 3: Choose additional options for Factory Integration from Additional Options sections below.

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

# **HPE Unique Options**

HPE ProLiant ML30 Gen11 iLO/NIC/M.2/COM Port Kit

P65741-B21

**Notes:** Install the multifunction dedicated iLO-M.2-serial module shared between ML30 Gen11 and MicroServer Gen11 servers to get the following:

- Dedicated iLO port
- M.2 Slot for M.2 SSD support.
- Serial Port

Notes: This kit does not contain the M.2 SSD. It must be ordered separately

HPE ProLiant MicroServer Gen11 Controller Cable Kit

P68413-B21

**Notes:** This kit works with HPE internal storage controller. It must be selected if MR216i-p or MR408i-p is in the configuration.

HPE MicroServer Gen10 SFF-NHP Converter Kit

870213-B21

Notes: This kit works to accommodate the SFF NHP SSD into the LFF NHP drive bay.

HPE MicroServer Gen11 Wall Mount Kit

P69315-B21

Notes: This kit works to mount the server on a brick/concrete wall or wooden wall. The option kit does not support mounting on a drywall. Also, the mounting surface MUST support at least five times the combined weight of the server and the wall mounting hardware. \*IMPORTANT: DO NOT install the wall mount where this weight cannot be supported. Make sure you read the usage information to find out more if this kit works in your environment. For more detail, refer to <a href="https://support.hpe.com/hpesc/public/home/signin">https://support.hpe.com/hpesc/public/home/signin</a> or <a href="https://support.hpe.com/hpesc/public/docDisplay?docId=sd00003930en\_us&page=GUID-ECB17AD0-D417-4423-8953-388D17BBFB94.html&docLocale=en\_US.">https://support.hpe.com/hpesc/public/docDisplay?docId=sd00003930en\_us&page=GUID-ECB17AD0-D417-4423-8953-388D17BBFB94.html&docLocale=en\_US.</a>

To select this kit on OCA, please add the part number via Ad Hoc when configuring a CTO server.

#### **HPE Hard Disk Drives**

#### Business Critical (Entry) 6G SATA - LFF NHP/Raw Drives

HPE 1 TB SATA 6G Business Critical 7.2K LFF RW 1-year Warranty Multi Vendor HDD

801882-B21

HPE 4 TB SATA 6G Business Critical 7.2K LFF RW 1-year Warranty Multi Vendor HDD

801888-B21

Notes: Please see the HPE Hard Drives QuickSpecs for Technical Specifications and additional information.

#### **HPF Solid State Drives**

Notes: To accommodate an SSD, HPE MicroServer Gen10 NHP SFF Converter Kit (870213-B21) must be selected.

HPE 480 GB SATA 6G Read Intensive SFF RW Multi Vendor SSD

P65272-B21

HPE 240 GB SATA 6G Read Intensive SFF BC Multi Vendor SSD

P40496-B21

HPE 960 GB SATA 6G Read Intensive SFF BC Multi Vendor SSD

P40498-B21

**Notes:** To accommodate an SSD, HPE MicroServer Gen10 NHP SFF Converter Kit (870213-B21) must be used/selected. If the new SFF drive has its own carrier (for instance, in P40496-B21 and P40498-B21 where HPE Basic Carrier, shown as "BC" in the product description, is included), remove the carrier before installing it in the converter kit.

**Notes:** P40496-B21 and P40498-B21 are supported as customer upgradeable options in MicroServer Gen11. They are NOT to be selected in a CTO configuration.

#### **HPE M.2 Drives**

HPE 480 GB NVMe Gen4 Mainstream Performance Read Intensive M.2 PM9A3 SSD

P69543-B21

**Notes:** To support this low power NVMe M.2 drive, the HPE ML30 Gen11 iLO/NIC/M.2/COM Port Kit (P65741-B21) must be installed.

# **HPE Networking**

#### 10 Gigabit Ethernet Adapter

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

#### 1 Gigabit Ethernet Adapter

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

P51178-B21

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

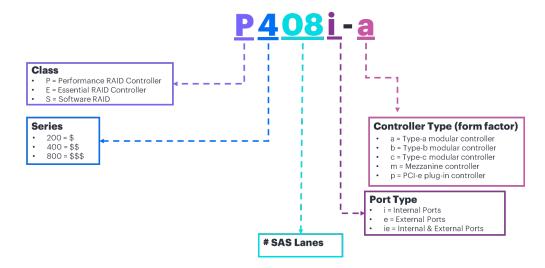
P21106-B21

**Notes:** If Customer uses the OS RHEL 8.4 on Broadcom adapter (P26259-B21) they will need to download the driver from the following links.

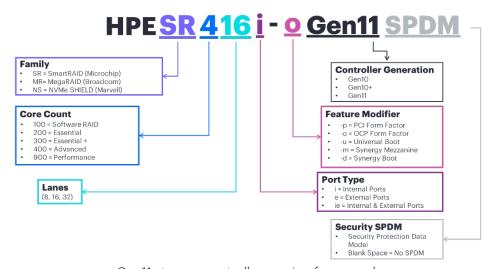
- https://support.hpe.com/connect/s/softwaredetails?language=en\_US&softwareId=MTX\_91bef687f7694f3aa51a\_ 5e6277
- https://support.hpe.com/connect/s/softwaredetails?language=en\_US&softwareId=MTX\_579d5cde4cef4d108f2\_4a326ff

# **HPE Storage Controllers**

The HPE Gen10 and Gen11 storage controller naming framework is shown as depicted below:



Gen10 storage controller naming framework



Gen11 storage controller naming framework

The Gen11 storage controller portfolio has been updated to include new technology. For a more detailed breakout of the available

Gen11 controllers visit the storage controllers QuickSpecs sites:

- HPE Compute MR Gen11 Controllers QuickSpecs
- HPE Compute SR Gen11 Controllers QuickSpecs

**Notes:** MicroServer Gen11 supports NHP (non-hot-plug) operations only and hence some of the storage controller functionality may not be supported.

#### **Essential RAID Controllers**

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

804398-B21

#### **HPE Tri-Mode Controllers**

HPE MR216i-p Gen11 x16 Lanes without Cache PCI SPDM Plug-in Storage Controller

P47785-B21

**Notes:** When this storage controller is in the configuration, HPE MicroServer Gen11 Controller Cable Kit (P68413-B21) must be selected.

HPE MR408i-p Gen11 SPDM Storage Controller

P74775-B21

#### Notes:

- When this storage controller is in the configuration, HPE MicroServer Gen11 Controller Cable Kit (P68413-B21) must be selected.
- When MR408i-p controller is selected, then HPE 96W Smart Storage Battery 260mm Cable (P01367-B21) or must be selected.

#### **HPE Energy Packs**

HPE 96W Smart Storage Lithium-ion Battery with 260mm Cable Kit

PO1367-B21

#### Notes:

- Provides backup power for HPE Smart Array controllers. Required when MR408i-p is selected,
   which is a performance RAID controller.
- As max storage battery quantity to be one per MicroServer Gen11 server, HPE 96W Smart Storage Battery 260mm Cable (P01367-B21) must be selected. They cannot be selected together.

# **Embedded Management**

#### **HPE iLO Advanced**

HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	512485-B21
HPE iLO Advanced AKA Tracking License with 1yr Support on iLO Licensed Features	512487-B21
HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features	E6U59ABE
HPE iLO Advanced Electronic License with 3yr Support on iLO Licensed Features	E6U64ABE
HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A
HPE iLO Advanced AKA Tracking License with 3yr Support on iLO Licensed Features	BD507A

# Software as a Service Management

#### **HPE Compute Ops Management**

HPE Compute Ops Management Advanced 1-year Upfront ProLiant SaaS	S5E58AAE
HPE Compute Ops Management Advanced 3-year Upfront ProLiant SaaS	S5E59AAE
HPE Compute Ops Management Advanced 5-year Upfront ProLiant SaaS	S5E60AAE
HPE Compute Ops Management Advanced 7-year Upfront ProLiant SaaS	S5E61AAE
HPE Compute Ops Management Standard 7-year Upfront ProLiant SaaS	S2E10AAE
HPE Compute Ops Management Advanced Flex with ProLiant Enablement	S6C28AAE

# **HPE Security**

HPE ProLiant MicroServer Gen11 Server ships with embedded Trusted Platform Module (TPM) 2.0 enabled by default.

# **HPE USB Options**

#### **HPE Optical Drives**

HPE Mobile USB DVD-RW Optical Drive

701498-B21

#### **HPE Power Cords**

#### **C5 Power Cords**

HPE C5 125V 7Amp Black 1.83m US/CA Power Cord	P86414-B21
HPE C5 250V 2.5Amp Black 1.8m UK/HK/SG/MY Power Cord	P86430-B21
HPE C5 250V 2.5Amp Black 1.83m AU/NZ Power Cord	P86415-B21
HPE C5 250V 2.5Amp Black 1.8m EU/RU/KR Power Cord	P86416-B21
HPE C5 250V 2.5Amp Black 1.8m IN Power Cord	P86417-B21
HPE C5 110V 7Amp Black 1.83m JP Power Cord	P86418-B21
HPE C5 250V 2.5Amp Black 1.8m CN Power Cord	P86419-B21
HPE C5 125V 2.5Amp Black 1.8m TW Power Cord	P86420-B21
HPE C5 250V 2.5Amp Black 1.83m TH/PH Power Cord	P86421-B21
HPE C5 250V 2.5Amp Black 1.83m AR Power Cord	P86422-B21
HPE C5 250V 2.5Amp Black 1.83m BR Power Cord	P86423-B21
HPE C5 250V 2.5Amp Black 1.83m IT/CH Power Cord	P86424-B21
HPE C5 250V 2.5Amp Black 1.83m DK Power Cord	P86425-B21
HPE C5 250V 2.5Amp Black 1.83m CH Power Cord	P86426-B21
HPE C5 250V 2.5Amp Black 1.83m KR Power Cord	P86427-B21
HPE C5 250V 2.5Amp Black 1.8m ZA Power Cord	P86428-B21
HPE C5 250V 2.5Amp Black 1.8m IL Power Cord	P86429-B21

#### Notes:

- At least 1 Region-specific power cord is included by default with the server configuration to meet standard deployment requirements. The power cords listed here are additional optional accessories, intended to provide flexibility for specialized use cases or customer-specific preferences.
- This C5 optional power cord is supported only with the 180W External Power Adapter
- Maximum of five power cords

Memory

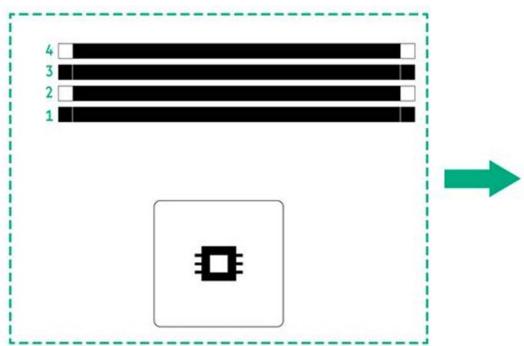
# **HPE Standard Memory**

HPE Standard Memory offers the best combination of pricing, quality, reliability and compatibility for HPE ProLiant servers; designed to help your business achieve powerful results with right-sized affordable solutions. It delivers the ideal value that small businesses require to smoothly run a small network server environment and provides entry-level businesses while being affordable.

HPE Standard Memory UDIMMs has passed the rigorous Hewlett Packard Enterprise qualification and testing processes. The memory subsystem in this server supports UDIMMs. The server supports single-rank and dual-rank DDR5 UDIMMs operating at up to 4400 MT/s DIMM speeds

#### **Memory Population Guidelines**

The server supports two channels per processor with two DIMMs per channel for a total of four DIMMs per MicroServer Gen11 Server.



CPU1			
	Slot #	Population Order	
Channel 2	4	В	
	3	D	
Channel 1	2	А	
	1	С	

# **General Memory Population Rules and Guidelines:**

- The HPE ProLiant MicroServer Gen11 Server has four memory slots.
- Only ECC UDIMMs are supported on MicroServer Gen11. No support for non-ECC UDIMMs.
- Memory speed support depends on the type of processor installed. For more information, see the technical specification of the installed processor.

#### Memory

- The server supports up to 4400 MT/s ECC UDIMMs (Unbuffered DIMMs).
- The server supports up to 128GB (4 x 32 GB) UDIMMs.
- Population order; start with "A" first, "B" second, "C" third, etc.
- The server does not support Non-ECC UDIMMs, RDIMMs, and LRDIMMs
- Mixing memory DIMMs of different capacities in the server is not recommended.
- Always use HPE qualified DIMMs.
- For Server Memory Population Rules for HPE ProLiant Servers with Intel® Xeon® 6300-series Processors or Intel® Xeon® E-2400 Processors see details here: <a href="http://www.hpe.com/docs/server-memory">http://www.hpe.com/docs/server-memory</a>
- For details on the HPE Server Memory Options Population Rules, visit: <a href="http://www.hpe.com/docs/memory-population-rules">http://www.hpe.com/docs/memory-population-rules</a>
- 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.

#### Notes:

- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- For details on the HPE Server Memory speed, visit: <a href="https://www.hpe.com/docs/server-memory">https://www.hpe.com/docs/server-memory</a>
- HPE Server Memory compatibility for a specific server platform may vary or be limited within a server platform 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 an HPE server model or family and yet occasionally not be supported with some configurations within that server family.

DIMM Type	Unbuffered with ECC DIMMs (UDIM	Ms)		
HPE SKU P/N	P64336-B21	P64339-B21		
SKU Description	HPE 16 GB (1x16 GB) Single Rank x8	HPE 32 GB (1x32 GB) Dual Rank x8		
	DDR5-4800 CAS-40-39-39	DDR5-4800 CAS-40-39-39		
	Unbuffered Standard Memory Kit	Unbuffered Standard Memory Kit		
DIMM Rank	Single Rank (1R)	Dual Rank (2R)		
DIMM Capacity	16 GB	32 GB		
Voltage	Standard Voltage 1.1 V VDDQ, 1.8 V	Standard Voltage 1.1 V VDDQ, 1.8 V		
	VPP	VPP		
CAS Latency	36-36-36	36-36-36		
DIMM Native Speed (MT/s)	5600 MT/s	5600 MT/s		
Slots That Can Be Populated	4	4		
Maximum Capacity (Gb)	64 GB (4x16 GB)	128 GB (4x32 GB)		
HPE Server Memory Speed: Intel® Xeon® E processors				
1 DIMM Per Channel	4400 MT/s	4400 MT/s		
2 DIMM Per Channel	4000 MT/s	3600 MT/s		
HPE Server Memory Speed: Intel® Pentium® G7400 processor				
1 DIMM Per Channel	4400 MT/s	4400 MT/s		
2 DIMM Per Channel	4000 MT/s	3600 MT/s		

Memory

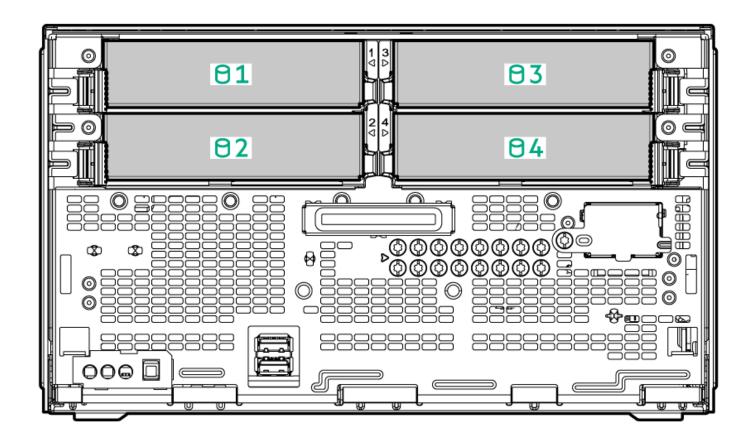
# DDR5 memory options part number decoder

Capacity references are rounded to the common gigabyte (GB) values.

- 16 GB = 16,384 MB
- 32 GB = 32,768 MB
- 64 GB = 65,536 MB
- 128 GB = 131,072 MB

For more information on memory, please visit the <u>HPE DDR5 Standard Memory web site.</u>

# Storage



1-4 Four (4) non-hot plug drive bays

Drive Support			
Drive	<b>Quantity Supported</b>	<b>Position Supported</b>	Controller
NHP SATA SSD	4	1-4	VROC SR
NHP SATA HDD	4	1-4	VROC SR

# **System Unit**

#### **Dimensions**

(H x W x D) (with feet)

6.06 x 10.28 x 9.82 in (15.4 x 26.1 x 24.9 cm)

#### Weight (approximate)

- Maximum (Four drives, four DIMMs, expansion board + iLO Enablement Kit)
   19.07 lb. (8.65 kg)
- Minimum (One DIMM installed, one drive, expansion board, iLO Enablement Kit)
   18.78 lb. (8.52 kg)

# Input Requirements (per power supply)

Rated Line Voltage

100 VAC to 240 VAC

Rated Input Current

2.5 A (at 90 VAC)

Rated Input Frequency

50 to 60 Hz

- Rated Input Power

180 W Power Supply

# **Power Specifications**

To review typical system power ratings, use the Power Advisor which is available via the online tool located at URL: https://www.hpe.com/us/en/integrated-systems/rack-power-cooling.html

### Power Supply Output (per power supply)

Rated Steady-State Power

180 W Power Supply

180 W (at 100 VAC)

180 W (at 200 VAC)

Maximum Peak Power

180 W Power Supply

180 W (at 100 VAC)

180 W (at 200 VAC)

# 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. The 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).

# **System Inlet Temperature**

# Standard Operating Support

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 above 30°C (86°F).

#### Extended Ambient Operating Support

For approved hardware configurations, the supported system inlet range is 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: <a href="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a>

For approved hardware configurations, the supported system inlet range is 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: <a href="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a>

System performance may be reduced if operating in the ambient operating range.

#### Non-operating

-30°C to 60°C (-22°F to 140°F) Maximum rate of change is 20°C/hr. (36°F/hr.).

#### Acoustic Noise

Listed are the declared A-Weighted sound power levels (LWA,m), 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	3.4 Bels (Entry)		
	3.4 Bels (Performance 1)		
	3.4 Bels (Performance 2)		
LpAm	24 dBA (Entry)		
	24 dBA (Performance 1)		
	24 dBA (Performance 2)		
Kv	O.4 Bels (Entry)		
	0.4 Bels (Performance 1)		
	0.4 Bels (Performance 2)		
Operating			
LWAd	3.4 Bels (Entry)		
	3.4 Bels (Performance 1)		
	3.4 Bels (Performance 2)		
LpAm	24 dBA (Entry)		
	24 dBA (Performance 1)		
	24 dBA (Performance 2)		
Kv	0.4 Bels (Entry)		
	0.4 Bels (Performance 1)		
	0.4 Bels (Performance 2)		

#### 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.
- The listed sound levels apply to standard shipping configurations defined as per the legacy WW BTO model plan. Additional options may result in increased sound levels, for example, higher power processors (>65W), additional graphic processing units (GPU), SSDs or NVMe M.2.
- For more information, please refer to <u>Acoustics Guidelines for HPE ProLiant MicroServer Gen11 Server</u> or at https://support.hpe.com/hpesc/docDisplay?docId=dp00005840en us

# **Emissions Classification (EMC)**

- FCC Rating

Class B

Normative Standards

CISPR32, EN55032, EN55024 FCC CFR 47, Pt15; ICES-003; CNS13438; GB9254 K32; K24; EN61000-3-2; EN61000-3-3;

**Notes:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

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

Hewlett Packard Enterprise offers <u>end-of-life product return, trade-in, and recycling programs</u>, 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 European Union Waste Electrical and Electronic Equipment Directive [EU WEEE] (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
08-Dec-2025	Version 13	Changed	Additional Options section was updated.
		Added	HPE Power Cords SKUs were added.
02-Sep-2025	Version 12	Changed	Standard Features section was updated.
		Added	Quick Install Guide was added.
28-Jul-2025	Version 11	Changed	Updated survey link.
05-May-2025	Version 10	Changed	Overview, Standard Features, Configuration Information, Additional Options and Technical Specifications sections were updated. Added: Software as a Service Management Enablement SKU (COM Option), Power Cord, Storage Controller and System Acoustics Specs.
07-Apr-2025	Version 9	Changed	Overview, Standard Features, Configuration Information and Additional Options sections were updated. Added: Storage Controller SKU, Power Adapter SKU, COM Advanced SKUs and QuickSpecs Survey. Removed: HPE RDX SKUs.
24-Feb-2025	Version 8	Changed	Overview, Standard Features, Configuration Information and Additional Options sections were updated. (Intel® Xeon® 6300 processors added, service/warranty updated to one-year, Intel® VROC Software RAID naming changed to Hybrid RAID)
10-Dec-2024	Version 7	Changed	Overview, Standard Features, Optional Features, Pre-Configured Models, Configuration Information, and Technical Specifications sections were updated. (iLO support updated – remote sever mgmt. is now enabled thru the on-board shared iLO port without the need of the additional module.  Operating Systems matrix updated)
02-Dec-2024	Version 6	Changed	Overview, Pre-Configured Models and Additional Options sections were updated. (New storage controller added, BTO SKU list revised. KB/M section removed)
21-Oct-2024	Version 5	Changed	Additional Options section was updated. (Revised the remark to BC SSDs and the wall mount kit.)
16-Sep-2024	Version 4	Changed	Overview, Pre-Configured Models and Configuration Information Sections were updated.
03-Sep-2024	Version 3	Changed	Overview, Standard Features (Operating Systems and Virtualization Software Support for HPE Servers), Pre-Configured Models (TPM and Smart Choice) and Configuration Information sections were updated.
05-Aug-2024	Version 2	Changed	Pre-Configured Models section was updated. (TPM China).
3-Jun-2024	Version 1	New	New QuickSpecs.

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