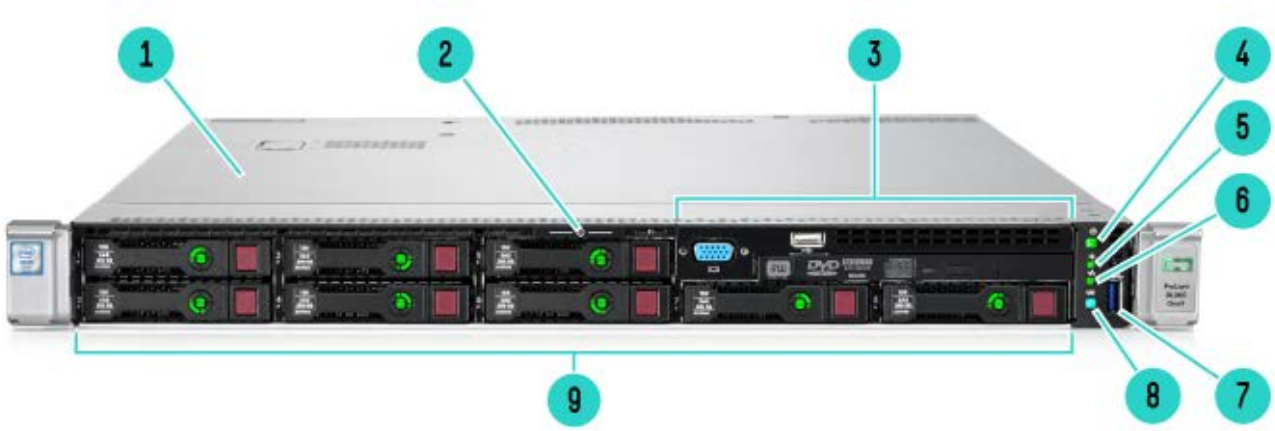
RETIRED: This document has been officially retired, and the base products listed herein are now considered obsolete and are no longer available for sale. Consequently, the information contained within may no longer be current. This document is provided exclusively for reference and informational purposes.

Overview

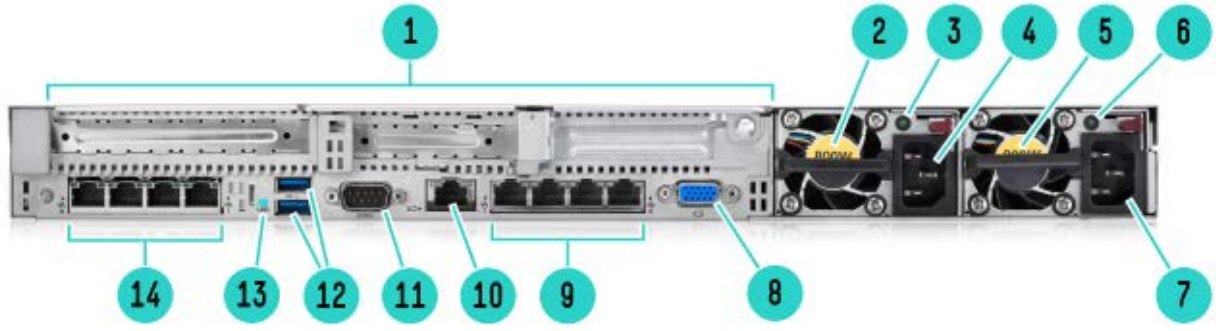
HPE ProLiant DL360 Generation9 (Gen9)
NEBS Level 3 and ETSI certified

HPE's leading server for dense general-purpose computing, the HPE ProLiant DL360 Gen9 Server delivers increased performance with the best memory and I/O expandability packed in a 1U dense rack design. Reliability, serviceability and always on availability, backed by a comprehensive warranty, make it ideal for the most space constrained server workloads.



Front View

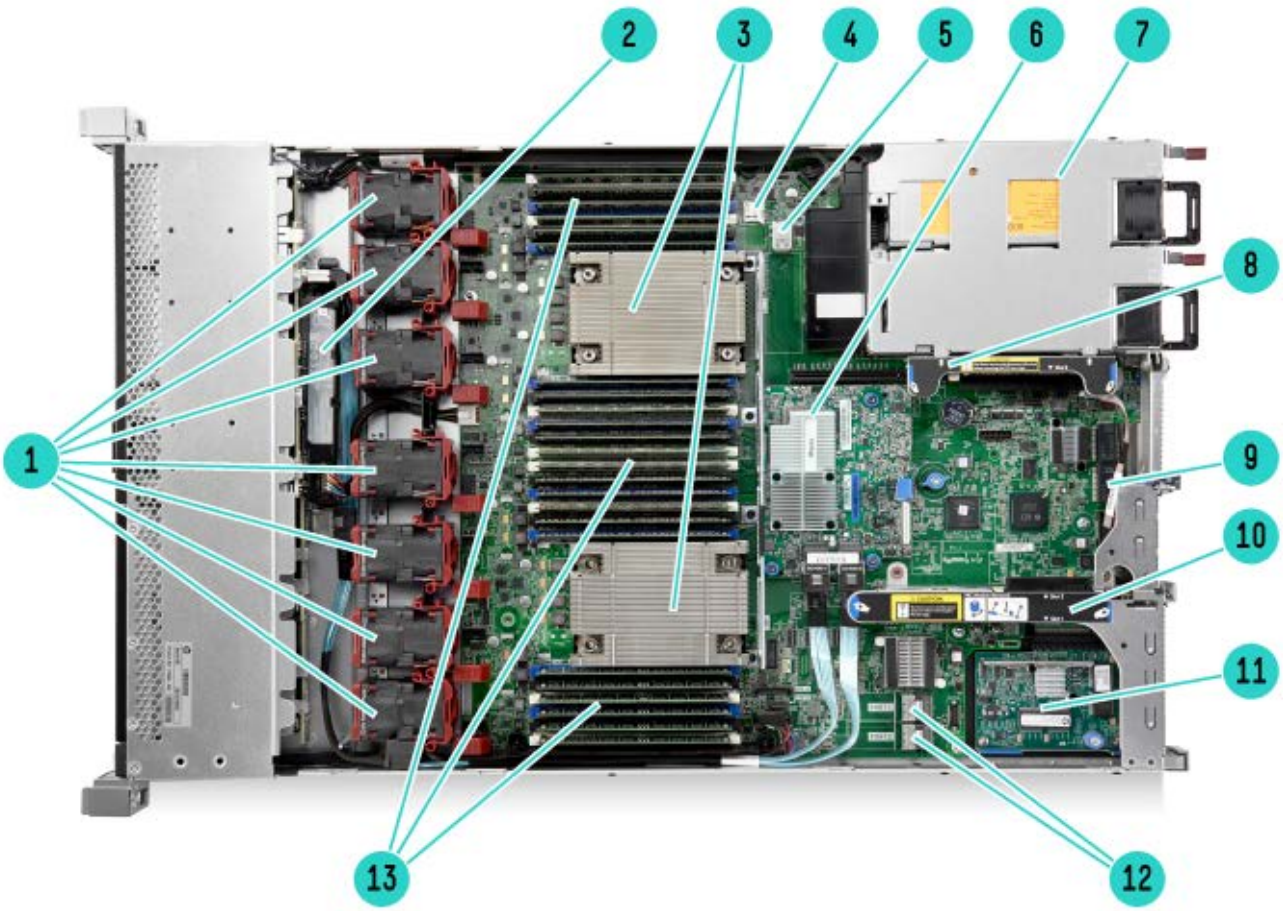
1. Access Panel
2. Serial Label Pull Tab
3. HPE Universal Media Bay
   NOTE: Shown w/VGA, USB 2.0 and DVD-ROM or DVD-RW option. Alternative options 2 SFF HDDs or VGA and USB 2.0.
4. Power On/Standby button and system power LED button
5. Health LED
6. NIC Status LED
7. USB 3.0 Connector
8. Unit Identification Button & LED
9. SAS/SATA/SSD Drive Bays



Overview

Rear view

1. PCIe 3.0 Slots 1-3
   NOTE: Slot 1 and 2 Riser Ships Standard, only certified with standard riser
2. HPE Flexible Slot Power Supply Bay 2
3. Power Supply 2 Status LED
4. Power Supply 2 C13 Connection
5. HPE Flexible Slot Power Supply Bay 1
6. Power Supply 1 Status LED
7. Power Supply 1 C13 Connection
8. Video Connector
9. Embedded 4x1GbE Network Adapter
10. Dedicated iLO 4 connector
11. Serial Port Connector (Optional)
12. USB 3.0 Connectors (2)
13. Unit Identification LED
14. FlexibleLOM bay (Optional)
    NOTE: Shown: 4x1Gbe.



Internal View

1. 5 Standard Fans Ship for 1P and 7 Standard Fans Ship for 2P

Overview

NOTE: High Performance Fans required for NEBS certification

2. 2 Processors with HPE Smart Socket Guide
3. HPE Smart Storage Battery (Optional)
4. 24 DDR4 DIMM slots (12 per processor)
5. MicroSD card slot
   NOTE: Optional Dual Micro-SD option.
6. Dual Internal USB 3.0 connector
7. HPE Flexible Smart Array or Smart HBA (Optional)
   NOTE: H240ar shown and P440ar available.
8. 2 HPE Flexible Slot Power supplies
9. Secondary PCIe 3.0 riser for PCIe slot 3 (requires CPU 2)
10. Embedded 4x1Gbe NIC
11. Primary PCIe 3.0 riser for PCIe slots 1 & 2
12. FlexibleLOM Bay (Optional)
13. Embedded SATA Controller ports

What's New

- New DVD Universal Media Bay option
- New larger capacity HDDs
- New higher capacity memory (64GB), NEBS capacity = XX GB
- New Networking options
- NEBS Level 3 (GR-63-CORE and GR-1089-CORE) certified

Standard Features

NOTE: For more information regarding Intel Xeon processors, please see the following **http://www.intel.com/xeon**.

Processor

Model	CPU frequency	Cores	L3 Cache	Power	QPI	DDR4 Hz
E5-2680v3	2.5GHz	12	30MB	120W	9.6GT/s	2133
E5-2670v3	2.3GHz	12	30MB	120W	9.6GT/s	2133
E5-2660v3	2.6GHz	10	25MB	105W	9.6GT/s	2133
E5-2650v3	2.3GHz	10	25MB	105W	9.6GT/s	2133
E5-2650Lv3	1.8GHz	12	30MB	65W	9.6GT/s	2133
E5-2640v3	2.6GHz	8	20MB	90W	8.0GT/s	1866
E5-2630v3	2.4Ghz	8	20MB	85W	8.0GT/s	1866
E5-2630Lv3	1.8GHz	8	20MB	55W	8.0GT/s	1866
E5-2620v3	2.4GHz	6	15MB	85W	8.0GT/s	1866
E5-2609v3	1.9GHz	6	15MB	85W	6.4GT/s	1600
E5-2603v3	1.6GHz	6	15MB	85W	6.4GT/s	1600
E5-2697v4	2.3GHz	18	45MB	145W	9.6GT/s	2400
E5-2695v4	2.1GHz	18	45MB	120W	9.6GT/s	2400
E5-2683v4	2.1GHz	16	40MB	120W	9.6GT/s	2400
E5-2620v4	2.1GHz	8	20MB	85W	8.0GT/s	2133

Chipset

Intel® C610 Series Chipset
Intel® E5-2600v3 Processor Family
NOTE: For more information regarding Intel® chipsets, please see the following URL: **http://www.intel.com/products/server/chipsets/**.

On System Management Chipset

HPE iLO (Firmware HPE iLO4 2.0) 4GB NAND
NOTE: 1GB USB user space configurable via UEFI and accessible via iLO. Read and learn more in the **iLO QuickSpecs**.

Memory

One of the following depending on model

Type:
HPE SmartMemory
DDR4 Registered (RDIMM) or Load Reduced (LRDIMM)

DIMM Slots Available	24	(12 DIMM slots per processor, 4 channels per processor, 3 DIMMs per channel)
Maximum Capacity (RDIMM)	768GB	(24 x 32GB LRDIMM @2133MHz)

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.
Online spare	Memory online spare mode detects a rank that is degrading and switches operation to the spare rank.

Expansion Slots

Primary Riser

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes

Standard Features

	1	PCIe 3.0	x16	x16	Full-height, ¾ length (up to 9.5") Slot	Processor 1
	2	PCIe 3.0	x8	x8	Low profile slot	Processor 1

NOTE: Bus Width indicates the number of physical electrical lanes running to the connector.

Secondary Riser

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Device Number	Form Factor	Notes
3	PCIe 3.0	x16	x16			Low profile	Processor 2
3	PCIe 3.0	x16	x16			Full-height, ¾ length (up to 9.5") Slot	Processor 2*

*PCI-E Slot 2 cannot be used in conjunction with the FH/¾ Length option kit (744644-B21)

Storage Controller
One of the following depending on model

Entry Models	HPE Dynamic Smart Array B140i Controller
Base Models	HPE H240ar Smart Host Bus Adapter
Performance Models	HPE Flexible Smart Array P440ar/2GB

Internal Storage Devices
One of the following depending on model

Optical Drives	8 SFF with optional Universal Media bay **NOTE:** Option Kit 764632-B21 VGA, USB 2.0, and DVD-RW kit.
Hard Drives	None ship standard
Hard Drive Bays	8 SFF with optional Universal Media bay

Maximum Internal Storage (NEBS Limit)

	CAPACITY	CONFIGURATION
Hot Plug SFF SAS SSD	6.4TB	8x800GB
Hot Plug SFF SAS	9.6TB	8x1.2TB

Power Supply
One of the following depending on model

HPE 800W Flex Slot Platinum Hot Plug Power Supply
NOTE: Available in 94% and 96% efficiency
HPE 800W Flex Slot -48VDC Hot Plug Power Supply Kit
NOTE: Flex Slot -48VDC power supplies support power efficiency of up to 94%.

System Fans
One of the following depending on model

	Non-redundant	Redundant
1P model	N/A	5 fans
	Non-redundant	**Redundant**
2P model	N/A	7 fans

NOTE: The second processor option kit contains two fans.
NOTE: High Performance Fan Kit, 766201-B21, is required for NEBS certification and to meet some extended ambient operating temperatures above 35° C. Qualifications for extended ambient configurations are detailed at: **https://www.hp.com/servers/ashrae**.

Interfaces

Serial	1
NOTE: Optional kit: 764646-B21.	
Video	1 rear (Standard) 1 front (Optional)

NOTE: Front VGA options available for 8SFF and 4LFF models as detailed in the core options section of this QuickSpecs.

Standard Features

Network RJ-45 (Ethernet)	Both the SFF and LFF Chassis have an embedded 4x1GB NIC and a FlexibleLOM bay. (See HPE Networking section below for more details and options).
HPE iLO Remote Management Network Port	1Gb Dedicated
SD Connector	1 micro SD Internal

NOTE: The SD slot is not a hot-pluggable device. Customers should not attempt to plug an SD card into the SD slot while the server is powered.

USB 3.0	5 total: 2 rear, 1 front, 2 internal

Operating Systems and Virtualization Software Support for ProLiant Servers

Microsoft Windows Server
Canonical Ubuntu
Red Hat Enterprise Linux (RHEL)
SUSE Linux Enterprise Server (SLES)
Oracle Solaris
VMware
Citrix XenServer

NOTE: For more information on HPE's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server including how to purchase from HPE, please visit our OS Support Site at: **http://www.hp.com/go/ossupport** and our driver download page.

Upgradeability

Upgradeable to two processors (36 Cores)
Up to 24 DIMM slots available for higher Memory capacity
FlexibleLOM slot for 1Gigabit or 10 Gigabit Ethernet or QDR/FDR InfiniBand networking options
3 PCIe 3.0 I/O slots for additional communications and storage expansion
NOTE: Slot 1 and 2 Riser Shipped Standard, Slot 3 Optional 1 FH / ¾ length and two Low Profile slots available (shown) or two FH/ ¾ length slots.
Redundant Power Supplies
Optical Drive supported via Universal Media Bay
NOTE: 8SFF Chassis via VGA, USB 2.0 and DVD-RW Option kit: 764732-B21; 4LFF Chassis via DVD-RW 726537-B21, DVD 726536-B21 and the Optical Cable: 766203-B21.

Industry Standard Compliance

ACPI 2.0b Compliant
PCIe 3.0 Compliant
PXE Support
WOL Support
Microsoft® Logo certifications
USB 3.0 Support
Energy Star
ASHRAE A3/A4
NOTE: The DL360 Gen9 is now one of the first HPE ProLiant Gen9 Servers with Extended Ambient Support up to 45 C for data center infrastructures designed for better energy efficiency such as but not limited to fresh air cooling.
For additional technical thermal details regarding ambient temperatures, humidity and features support please visit **https://www.hp.com/servers/ashrae**.

Graphics

Integrated Matrox G200 video standard
- 1280 x 1024 (32 bpp)

Standard Features

- 1920 x 1200 (16 bpp)

HPE Server UEFI/Legacy ROM

HPE Server UEFI /Legacy ROM

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration while interacting with your server at boot time. HPE ProLiant Gen9 platform defaults to UEFI and can be factory or field configured for Legacy BIOS Boot Mode.

NOTE: The UEFI System Utilities function is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit **http://www.hp.com/go/proliantuefi/docs**.

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

- Secure Boot
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.0 Stack
- Embedded UEFI Shell
- Mass Configuration Deployment Tool using HPE RESTful API.
- PXE boot support for IPv6 networks
- Boot support for option cards that only support a UEFI option ROM

For more information please visit **http://www.hp.com/go/proliant/uefi**.

NOTE: For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.

NOTE: HPE Legacy FIO Mode Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory.

Form Factor

One of the following depending on model

1U Rack form factor
8 SFF Drive Bay Version:
1.7" (4.32cm) Height x 17.11" (43.47cm) Width x 27.5" (69.85cm) Length

Embedded Management

HPE Integrated Lights-Out (HPE iLO)	Monitor your servers for ongoing management, service alerting, reporting and remote management with iLO. Learn more at **http://www.hp.com/go/ilo**.
UEFI	Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at **http://www.hp.com/go/ProLiant/uefi**.
HPE RESTful API	RESTful API is an application programming interface. RESTful Web Service API served by iLO's web server. Learn more at **http://www.hp.com/go/restfulapi**.
Intelligent Provisioning	Provision servers by discovering and deploying 1 to few servers with Intelligent Provisioning. Learn more at **http://www.hp.com/go/intelligentprovisioning**.
Embedded Remote Support	HPE's embedded remote support, used with Insight Online direct connect or HPE Insight Remote Support, allows HPE ProLiant servers to transmit hardware events directly to HPE or a Hewlett Packard Enterprise Authorized Partner for automated phone home support. Learn more at **http://www.hp.com/go/insightonline/info**.

Standard Features

Server utilities

HPE Smart Update	Optimize firmware and driver updates with HPE Smart Update solutions. Learn more at **http://www.hp.com/go/smartupdate**.
HPE Systems Insight Manager (HPE SIM)	HPE SIM allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers, and also provides you with basic support for non-Hewlett Packard Enterprise servers. HPE SIM also integrates with HPE SUM to provide quick and seamless firmware updates. Learn more at **http://www.hp.com/go/sim**.
HPE OneView Standard	HPE OneView Standard can inventory, monitor, alert, and report on your G6, G7, Gen8, and Gen9 servers, while using the HPE OneView user interface. Annual support is optionally available. Learn more at **http://www.hp.com/go/oneview**.
Scripting Tool Kit and Windows PowerShell	Provision 1 to many servers using your own scripts to discover and deploy them with HPE Scripting Tool Kit for Windows and Linux or HPE Scripting Tools for Windows PowerShell. Learn more at **http://www.hp.com/go/ProLiantSTK** or **http://www.hp.com/go/powershell**.
HPE RESTful Interface Tool	HPE RESTful Interface tool is a scripting tool to provision servers using RESTful API Interface to discover and deploy servers at scale. Learn more at **http://www.hp.com/go/restfulapi**.
HPE iLO Mobile Application	Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: **http://www.hp.com/go/ilo/mobileapp**.
HPE Insight Online	HPE Insight Online, available at no additional cost as part of your HPE warranty, Care Pack or contractual support agreement with HPE, is a personalized dashboard for simplified tracking of IT operations and support information from anywhere, anytime. Learn more at **http://www.hp.com/go/insightonline/info**.

Security

Power-on password
Keyboard password
QuickLock, Network Server Mode
Serial interface control
Administrator's password
iLO 4 (Integrated Lights-Out 4) has 12 customizable user accounts and SSL encryption
iLO 4 can be disabled via a Global Setting
iLO Advanced supports directory services integration
TPM 1.2
UEFI

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 Pointnext 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.

Optional Features

Server Management	**HPE Insight Control**	HPE Insight Control, lets you deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. For more information, see **http://www.hp.com/go/insightcontrol**.
	HPE OneView Advanced	HPE OneView Advanced is converged management that eliminates infrastructure complexity with automation simplicity. This modern architecture is designed to accelerate your IT operations across servers, storage, and network resources using software-defined approaches and automation, see **http://www.hp.com/go/oneview**.
	HPE Insight Cluster Management Utility (CMU)	HPE Insight Cluster Management Utility is a hyperscale-optimized management framework that includes software for the provisioning, control, performance management and monitoring of groups of nodes and infrastructure. Learn more at **http://www.hp.com/go/cmu**.
Rack and Power Infrastructure	HPE Rack and Power Infrastructure products and services create highly efficient and intelligent solutions for existing or new IT data centers. HPE Rack and Power infrastructure solutions – rack infrastructure, power protection and management, performance optimized data centers (PODs) – are the foundation you are looking for to help secure your long-term IT success. These products are designed to help you react to changes in the industry. They deliver efficient, easy-to-use capabilities to manage, monitor, deploy and provision infrastructure from entry to enterprise. As an industry leader, Hewlett Packard Enterprise is uniquely positioned to address the key concerns of power, cooling, cable management and system access. Learn more at **HPE Rack and Power Infrastructure**.	
High Performance Clusters	**HPE Insight Cluster Management Utility (CMU)**	HPE Insight Cluster Management Utility is a Hyperscale management framework that includes software for the centralized provisioning, management and monitoring of nodes and infrastructure. Learn more at **http://www.hp.com/go/cmu**.
HPC Interconnects	**NOTE:** High Performance Computing (HPC) interconnect technologies are available for this server under the HPE Cluster Platform product portfolio. These high-speed interconnects are fully supported by HPE when they are part of these configure to order clusters. Solutions can be defined with a lot of flexibility with the help of configuration tools. Please visit the following URL to configure HPC Clusters with InfiniBand Interconnects: **http://www.hp.com/techservers/clusters/ucp/index.html**.	
Storage Software	Whether you need to solve a specific data protection, archiving, or storage command and control challenge, or deliver on strategic consolidation, compliance, or continuity initiatives, look no further than HPE storage software. Our storage software helps you reduce costs, simplify storage infrastructure, protect vital assets and respond faster to business opportunities. Storage software that gets the job done: • **Data Protection and Recovery Software** Whether you're a large enterprise or a smaller business, HPE data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity. • **Data Archive and Migration Software** HPE's storage software enables you to comply with data retention and retrieval requirements, improve application performance, and reduce costs by efficiently migrating infrequently accessed or less valuable data to lower cost storage.	

Optional Features

- **Storage Resource Management Software (SRM)**
  HPE's storage resource management software reduces operational costs and provides the command and control foundation you need to efficiently manage and visualize your physical and virtual environments.
- **Data Replication Software**
  Hewlett Packard Enterprise offers array-based and host-based replication software for use in disaster recovery, testing, application development and reporting.
- **Storage Device Management Software**
  Maximize your investment in HPE storage and networking with software that enables hardware-specific configuration, performance tuning and connectivity management.
- **HPE StoreVirtual VSA**
  With HPE StoreVirtual VSA you can use the power of virtualization to create a virtual array within your host server. Manage it as a single pool of shared storage capacity, and scale it to match your evolving needs. HPE ProLiant Gen9 servers include a 3-year limited license for HPE StoreVirtual VSA software with 1TB of capacity at no extra cost. Simply select to install HPE StoreVirtual VSA software during server setup within Intelligent Provisioning. More information, instructional videos, and free console management software are available at **http://www.hp.com/go/vsa1TB**.

NOTE: For more information about Storage Software including QuickSpecs, please see: **http://www.hp.com/go/storage/software**.

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 HPE's Customer Business Center or an Authorized Partner for assistance. **http://www.hp.com/products/configurator**.

Service and Support

HPE Technology Services	HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to HPE to help prevent problems and solve issues faster. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time.
Protect your business beyond warranty with HPE Pointnext operational services	HPE Pointnext operational services enable you to order the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement for the term you select.
Optimized Support recommendation	**HPE Proactive Care - Call to Repair commitment, 24x7 coverage, three year Care Pack Service** Prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to HPE. Includes enhanced escalation management and the industry's highest level of hardware support commitment – hardware will be returned to operating conditions within six (6) hours after you open your case. Comes with collaborative software call management with two hour call back to reduce troubleshooting. As a leading global support provider for Microsoft, Red Hat, VMware, SUSE and other operating systems, Hewlett Packard Enterprise is able to simplify and shorten your time to resolution with one call for hardware or software questions. **https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf** **HPE ProLiant Server Hardware Installation** Help ensure your new HPE ProLiant hardware is installed smoothly, efficiently and with minimal disruption to your IT and business operations. **https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf**
Standard Support recommendation	**HPE Proactive Care** - 24x7 coverage, three year Care Pack Service This service helps prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to HPE. Includes four hour response for hardware, and collaborative call management for software with a two hour callback. **https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf** **HPE ProLiant Hardware Installation** Help ensure your new HPE ProLiant hardware is installed smoothly, efficiently and with minimal disruption to your IT and business operations. **https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf**
Related Services	**Data Center Platform Consulting Services** These services help modernize key systems and leverage new technology to support a changing business climate and prepare you for the new style of IT. Hewlett Packard Enterprise understands the needs of the data center of the future and will serve as your guide for the journey. **http://www.hp.com/services/consulting** **Data Privacy Services** Protect your data through better media management. HPE Data privacy services help manage and protect sensitive data. **http://www.hp.com/services/dataprivacy** **Factory Express for Servers and storage** HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett

Service and Support

Packard Enterprise servers and storage products. Choose how your factory solutions are built, tested, integrated, shipped and deployed. **http://www.hp.com/go/factory-express**

HPE Foundation Care
Hardware and software support services provide easy connection to HPE to resolve support issues quickly. Includes collaborative call management for industry leading software; full software support may also be purchased, giving you one place to call for help. **http://www.hp.com/services/foundationcare**

Additional HPE Pointnext operational services can be found at: **http://www.hp.com/go/cpc**

Parts and Materials Hewlett Packard Enterprise 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 quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

Configuration Information - Factory Integrated Models

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 a Hewlett Packard Enterprise 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.

IMPORTANT: To yield a carrier grade server that is compliant with all the required technical criteria, the product content is limited to what is listed in this document. In addition to this, system maintenance switch #10 must be turned on to enable the expanded operating temperature range and the hardware from the following kits must be installed:
HPE DL360 Gen9 High Performance Fan Kit
HPE DL360 Gen9 Airflow Label (Optional - Based on customer-specific needs.)
Please refer to the HPE DL360 Gen9 Carrier Grade Conversion documentation on the Hewlett Packard Enterprise web site: **http://www.hp.com/go/hpsc**

Step 1: Base Configuration (choose one of the following configurable models)

[Chassis]	HPE ProLiant DL360 Gen9 8SFF Configure-to-order Server	
SKU Number	755258-B21	
Processor	2 (optional) x HPE Smart Socket Guide	
DIMM Slots	24 DIMM slots for RDIMM, LRDIMM DDR4 Memory	
Storage Controller	HPE Dynamic Smart Array B140i	
PCIe	2 PCIe 3.0 Slots: Slot 1, FH / ¾ Length; Slot 2, Low Profile	
Drive Cage	8SFF Hot Plug	
Network Controller	HPE Embedded 1Gb Ethernet 4-port 331i Adapter	
Fans	5 Standard hot plug fans, redundant	
Management	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Control (optional), HPE OneView (optional)	
USB	1 front, 2 internal, 2 rear	
Ears	HPE Quick Release Ears	

NOTE: 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 a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.
NOTE: Factory Integrated Models must start with a CTO Server.
NOTE: FIO indicates that this option is only available as a factory installable option.
NOTE: All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.
NOTE: 8SFF CTO Chassis includes two 4 x Mini-SAS Cables, option kit: 766209-B21, which attaches to an optional HPE Smart HBA H240ar or HPE Smart Array P440ar controller.

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

HPE Processors Select one or two processors from Core options-Processor section below.

Configuration Information - Factory Integrated Models

- If one processor is desired, select one xxxxxx-L21
- If two processors are desired, select one xxxxxx-L21 and one xxxxxx-B21.
- Up to 2 processors supported. Mixing different processor models is not supported.
- DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

For the Intel® C600 Chipset E5-2600 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 2600x v#, 2 = number of CPUs in a Node, 6 is socket/segment designation, 00 = Processor SKU, x = L for low power SKUs and v# (not yet designated) = version number.

HPE Memory Select one or more memory from Core options-Memory section below.

- LRDIMM, RDIMM are all distinct memory technologies and cannot be mixed within a server. The majority of ProLiant Gen9 servers support LRDIMM and RDIMM.
- HPE memory from previous generation servers are not qualified or warranted with this HPE ProLiant Server. HPE SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen9.
- If only one processor is installed, only half of the total DIMM slots are available. When populating with two processors all DIMM slots are available.
- Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: **http://www.hp.com/go/proliant-energy-efficient**.
- Depending on the memory configuration and processor model, the memory speed may run at 2133MHz, 1866MHz, or 1600MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: **http://www.hp.com/go/ddr4config**.

HPE Power Supplies Select one or more power supplies from Core Options-Power Supplies section below.

- Prior to selecting a power supply option, it is highly recommended that you review your server configuration in the HPE Power Advisor tool to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: **http://www.hp.com/go/hppoweradvisor**.
- Mixing of power supplies in the same server is not supported. All power supplies must be of the same input voltage, output rating, and efficiency rating. If non-matching power supplies are installed, you may receive an error message and/or experience operational issues with your server.

Step 3: Choose Additional Factory Integratable Options

HPE Unique Options Select one or more Unique options from Core options section below.

- This section may contain FIO options, please see the Unique Options section below.
- FIO indicates that this option is only available as a factory installable option.

HPE Drives Select one or more drives from Core options-HPE Drives section below.

- The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.
- Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

Configuration Information - Factory Integrated Models

- The HPE ProLiant Gen9 Smart Storage solutions are equipped with re-designed Small Form Factor (SFF 2.5 in) hot plug carriers for HPE Qualified Hard Drives and Solid State Drives. These new carriers provide status and activity indicators as well as caution indicators for "Do Not Remove".

HPE Flexible LOM Select a FlexibleLOM from Core options-Networking section below.

- Only one FlexibleLOM can be added to the server. These options are upgradeable and can be changed from the original configuration after the server is shipped.
- For 10Gb adapters, a minimum of two Gigabytes (2 GB) of server memory is required per each adapter.
- Please see the QuickSpecs for Technical Specifications and additional information: **http://www.hp.com/go/ProLiantNICs**.

HPE Networking Select a standup NIC adapter from Core options-Networking section below.

- Please see the QuickSpecs for Technical Specifications and additional information: **http://www.hp.com/go/ProLiantNICs**.
- These options are upgradeable and can be changed from the original configuration after the server is shipped.
- For 10Gb adapters, a minimum of two Gigabytes (2 GB) of server memory is required per each adapter.

HPE Storage Controllers Select one or more Storage options from Additional options section below.

- The embedded B140i controller will operate in UEFI only mode. For legacy support an additional controller will be needed, and for CTO orders please also select the Legacy mode settings part, 758959-B22
- This section may contain FIO options, please see HPE Storage Controllers section below.
- FIO indicates that this option is only available as a factory installable option.

HPE Graphics Options Select one or more graphics adapter from Additional options section below.

- Please see the HPE Power Advisor for estimated power consumption of your individual system configuration prior to installing GPUs. The HPE Power Advisor is located at: **http://www.hp.com/go/hppoweradvisor**.
- This section may contain FIO options, please see HPE Computation & Graphics Accelerators section below.

HPE I/O Expansion Options Select one or more Riser Kit options from Core options section below.

- To take advantage of the additional PCI slot upgrade, the second processor must be installed.
- This section may contain FIO options, please see HPE I/O Expansion Options section below.
- FIO indicates that this option is only available as a factory installable option.

HPE Cooling Options Select one or more Fan Kits from Core options section below.

- This section may contain FIO options, please see HPE Cooling Options section below.
- FIO indicates that this option is only available as a factory installable option.

HPE Rail Kits Select one type of rail kit from Additional options section below.

Configuration Information - Factory Integrated Models

- Please take a moment to review the installation documentation that comes with the server to help you with the installation of your Gen9 server.
- To assist in the installation of the server into the rack, an optional installation tool is available by contacting your local services representative (p/n 695539-001).
- See HPE Rack Options in Additional Options section of this QuickSpecs for more rack kit choices.

CAUTION: 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.

Core Options

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

HPE Unique Options	HPE DL360 Gen9 SFF DVD-RW/USB Universal Media Bay Kit **NOTE:** DVD RW (Drive Included), USB 2.0, and VGA; when this option kit is installed it cannot be used in conjunction with the 2 SFF SAS/SATA option kit.	764632-B21
	HPE DL360 Gen9 Rear Serial Port and Enablement Kit	764646-B21
	HPE DL360 Gen9 SFF Systems Insight Display Kit **NOTE:** For the 8SFF model, adds a System Insight Display for improved diagnosis capabilities.	764636-B21
	HPE DL360 Gen9 High Performance Heat Sink Kit **NOTE:** These are included in some higher Watt processors (see processor section), but may be added to lower power processors to reduce fan power consumption.	795235-B21
HPE Processors	**Entry Processors - E5-2600v3 series Processors**	
	HPE DL360 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	755374-L21/B21
	HPE DL360 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	755378-L21/B21
	Base Processors - E5-2600v3 series Processors	
	HPE DL360 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	755382-L21/B21
	HPE DL360 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	755384-L21/B21
	HPE DL360 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	755386-L21/B21
	HPE DL360 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	764097-L21/B21
	Performance Processors - E5-2600v3 series Processors	
	HPE DL360 Gen9 Intel® Xeon® E5-2680v3 (2.3GHz/10-core/25MB/105W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	755394-L21/B21

Core Options

	HPE DL360 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	755388-L21/B21
	HPE DL360 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	755390-L21/B21
	HPE DL360 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	755392-L21/B21
	Performance Processors - E5-2600v4 series Processors	
	HPE DL360 Gen9 Intel® Xeon® E5-2697v4 (2.3GHz/18-core/45MB/145W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	818202-L21/B21
	HPE DL360 Gen9 Intel® Xeon® E5-2695v4 (2.1GHz/18-core/45MB/120W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	818200-L21/B21
	HPE DL360 Gen9 Intel® Xeon® E5-2683v4 (2.1GHz/16-core/40MB/120W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	818198-L21/B21
	HPE DL360 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) FIO Processor Kit **NOTE:** Ships with a standard Heatsink. A Performance Heatsink can be added to help reduce power consumption (795235-B21).	818872-L21/B21
HPE Memory	**Registered DIMMs (RDIMMs) for E5-2600v3 Series**	
	HPE 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726718-B21
	Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series	
	HPE 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726722-B21
	NOTE: Memory speeds will vary by processor model, please see memory section of QuickSpecs.	
	Registered DIMMs (RDIMMs) for E5-2600v4 Series	
	HP 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805347-B21
	HP 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805349-B21
	NOTE: Memory speeds will vary by processor model, please see memory section of QuickSpecs.	
HPE Optical Drives	HPE 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive **NOTE:** Supported only with the 4LFF Models & requires cable kit 766203-B21.	726536-B21
	HPE 9.5mm SATA DVD-RW JackBlack G9 Optical Drive **NOTE:** Supported only with the 4LFF Models & requires cable kit 766203-B21.	726537-B21
	HPE DL360 Gen9 SFF DVD-RW/USB Universal Media Bay Kit **NOTE:** Front DVD-RW, USB 2.0 and VGA, and optical cable.	764632-B21

Core Options

HPE Drives	**SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives**	
	HPE 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive	718162-B21
	HPE 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652589-B21
	HPE 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759212-B21
	HPE 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652583-B21
	HPE 450GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759210-B21
	HPE 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652572-B21
	HPE 300GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759208-B21
	HPE 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652564-B21
	12G SAS Hot Plug SFF (2.5-inch) Enterprise Performance Solid State Drives	
	HPE 800GB 12G SAS High Endurance SFF 2.5-in SC Enterprise Performance 3yr Wty Solid State Drive	741159-B21
	HPE 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Wty Hard Drive	785069-B21
	HPE 600GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Wty Hard Drive	781516-B21
	HPE 300GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3ry Wty Hard Drive	785067-B21
	12G SAS Hot Plug SFF (2.5-inch) SC Mixed Use Solid State Drives	
	HPE 1.6TB 12G SAS Mixed Use-1 SFF (2.5in) SC 3yr Wty Solid State Drive	846436-B21
	HPE 800GB 12G SAS Mixed Use-1 SFF (2.5in) SC 3yr Wty Solid State Drive	846434-B21
	6G SATA Hot Plug SFF (2.5-inch) SC Write Intensive Solid State Drives	
	HP 200GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804639-B21
	Hard Drive Blank Kits	
	HPE Small Form Factor Hard Drive Blank Kit	666987-B21
HPE Storage Controllers	HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int SAS Controller **NOTE:** Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.	726736-B21
	HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller **NOTE:** Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.	749974-B21
	HP DL360 Gen9 Smart Array P840 SAS Card with Cable Kit **NOTE:** Includes the P840 Smart Array controller with 4GB integrated cache, HPE Smart Storage Battery, and associated cabling to attach it to a 10SFF chassis configuration.	766205-B21
HPE Networking	**1 Gigabit Ethernet adapters**	
	HPE Ethernet 1Gb 4-port 331T Adapter	647594-B21
	HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
	HPE Ethernet 1Gb 2-port 361T Adapter	652497-B21

Core Options

10 Gigabit Ethernet adapters

HPE Ethernet 10Gb 2-port 530T Adapter	656596-B21
HPE Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
HPE Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
HPE Ethernet 10Gb 2-port 561T Adapter	716591-B21
HPE Ethernet 10Gb 2-port 562SFP+ Adapter	727055-B21
HPE Ethernet 10Gb 2-port 557SFP+ Adapter	788985-B21

25 Gigabit Ethernet adapters

HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter	817753-B21

NOTE: A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.

NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. See cables/options below.

FlexibleLOM Adapters

HPE Ethernet 1Gb 4-port 331FLR Adapter	629135-B22
HPE Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HPE FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HPE FlexFabric 10Gb 2-port 561FLR-T Adapter	857163-B21
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21

NOTE: For the following FlexibleLOM Network Adapters, only 1 FlexibleLOM can be added to the server, which is selected in Step 2 of the "Configuration Information - Factory Integrated Models" section. These options are for upgrade or change from original configuration after the server is shipped.

NOTE: Please see the QuickSpecs for Technical Specifications and additional information: **http://www.hp.com/go/ProLiantNICs**.

HPE Power Supplies

HPE Flex Slot Platinum Hot-plug Power supplies

HPE 800W Flex Slot Platinum Hot Plug Power Supply Kit	720479-B21

NOTE: Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard C-14 power inlet connector.

HPE 800W Flex Slot -48VDC Hot Plug Power Supply Kit	720480-B21

NOTE: Flex Slot -48VDC power supplies support power efficiency of up to 94%.

HPE 500W Flex Slot Platinum Hot Plug Power Supply Kit	720478-B21

NOTE: Flex Slot Platinum power supplies support power efficiency of up to 94%. Includes a C-14 power inlet connector.

NOTE: All power supplies must be of the same input voltage, output rating, and efficiency rating. If non-matching power supplies are installed, you may receive an error message and/or experience operational issues with your server.

NOTE: Mixing different power supplies in the same server may limit or disable some power supply features including support for power redundancy. To ensure access to all available features, all power supplies within the same server should have the same output and efficiency ratings.

NOTE: Prior to selecting a power supply option, it is highly recommended that you review your server configuration in the HPE Power Advisor tool to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: **http://www.hp.com/go/hppoweradvisor**.

Core Options

NOTE: Support for HPE Power Discovery Services is included with the 1400W Flex Slot option. Power specifications and technical content for all HPE Server power supplies can be found at **http://www.hp.com/go/proliant/powersupply**.
NOTE: Maximum of 2 Flex Slot PS per platform.

HPE Cooling Options	HPE DL360 Gen9 High Performance Fan Kit **NOTE:** Required for NEBS Compliance. **NOTE:** High Performance Fan Kit, is available to meet some extended ambient operating temperatures above 35° C. Qualifications for extended ambient configurations are detailed at: **https://www.hp.com/servers/ashrae**.	766201-B21
	HPE DL360 Gen9 NEBS Airflow Label **NOTE:** Optional for NEBS Compliance. **NOTE:** Installation of this label is not generally required. The intent of the label is to cover the row of air holes on the top front of the server when the end customer requires this to be technically compliant with NEBS airflow requirements. The product complies with the NEBS expanded operating temperature range with or without the label installed. **NOTE:** This label ships without documentation. For installation instructions, please refer to the HPE DL360 Gen9 Carrier Grade Conversion documentation on the Hewlett Packard Enterprise web site: **http://www.hp.com/go/hpsc**.	826086-001

Additional Options

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

HPE Insight Software	**HPE Insight Control**	
	HPE Insight Control including 1yr 24x7 Technical Support and Updates Single Server License	C6N27A
	HPE Insight Control including 1yr 24x7 Technical Support and Updates Electronic License	C6N28ABE
	HPE Insight Control Server Provisioning Media Kit	BD883A
	HPE Insight Management Media Kit	C6N31A
	NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key. **NOTE:** Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24x7 HPE Software Technical Support and Update Service. **NOTE:** Licenses ship without media. The HPE Insight Control Media Kit can be ordered separately, or can be downloaded at: **http://www.hp.com/go/insightupdates**. **NOTE:** For additional license options please see the QuickSpecs at: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123391**.	
Embedded Management	**HPE iLO Advanced**	
	HPE iLO Advanced including 3yr 24x7 Technical Support and Updates E-LTU	E6U64ABE
	HPE iLO Advanced 1 Server License with 3yr 24x7 Tech Support and Updates	BD505A
	HPE iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License	512485-B21
	HPE Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License	C6N36A
	HPE Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle FIO Electronic License	C6N36ABE
	HPE iLO Advanced including 1yr 24x7 Technical Support and Updates E-LTU	E6U59ABE
HPE Converged Infrastructure Management Software	**HPE OneView Advanced (with HPE iLO Advanced)**	
	HPE OneView incl 3yr 24x7 Supp Phys 1 Svr Lic	E5Y34A
	HPE OneView incl 3yr 24x7 Supp Flex Qty E-LTU	E5Y35AAE
	HPE OneView for ProLiant DL Server incl 3yr 24x7 Supp FIO Bundle Physical 1 Svr Lic	E5Y43A
	HPE OneView Advanced (without HPE iLO Advanced)	
	HPE OneView w/o iLO Adv incl 3yr 24x7 Supp Phys 1 Svr Lic	E5Y38A
	HPE OneView w/o iLO Adv inc 3yr 24x7 Supp Flex Qty E-LTU	E5Y39AAE
	HPE OneView Media Kit Phys No Lic	E5Y37A
	HPE Operations Analytics for HPE OneView LTU	K8G29A
	HPE Operations Analytics for HPE OneView E-LTU	K8G29AAE
	NOTE: Full licenses of HPE OneView Advanced also provide the right-to-use HPE Insight Control without additional charge. **NOTE:** Server provisioning (via 'HPE Insight Control server provisioning') is licensed as part of HPE OneView Advanced and provides multi-server OS and	

Additional Options

	driver provisioning. Media kit #BD883A can be ordered for a physical copy of this software (USB flash drive). **NOTE:** Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be downloaded at: **http://www.hp.com/go/oneview**. **NOTE:** Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.	
High Performance Clusters	**HPE Cluster Management Utility**	
	HPE Insight Cluster Management Utility 1yr 24x7 Flexible License	QL803B
	HPE Insight Cluster Management Utility 3yr 24x7 Flexible License **NOTE:** These part numbers can be used to purchase one certificate for multiple licenses and support with a single activation key. Each license is for one node (server). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key. Customer also will receive a support agreement.	BD476A
	HPE Insight Cluster Management Utility Media **NOTE:** For additional license kits please see the QuickSpecs at **http://h18004.www1.hp.com/products/QuickSpecs/12612_div/12612_div.html**.	BD477A
HPE Security	HPE Trusted Platform Module Option **NOTE:** The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: **http://www.hp.com/go/TPM**. **NOTE:** ProLiant OS pre-installed units will come with the partition required for TPM deployment. **NOTE:** The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.	488069-B21
HPE Storage Controllers	**SAS Controllers** **HPE Smart Array Controllers**	
	HPE Smart Array P440ar/2GB FBWC 12Gb 2-ports Int SAS Controller **NOTE:** Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot. **NOTE:** When ordering controllers, please reference the HPE Cable Options below for the required cable. **NOTE:** FIO indicates factory integrated option via CTO.	726736-B21
	HPE Smart Host Bus Adapters	
	HPE H240ar 12Gb 2-ports Int Smart Host Bus Adapter **NOTE:** Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.	726757-B21
	HPE H241 12Gb 2-ports Ext Smart Host Bus Adapter **NOTE:** FIO indicates factory integrated option via CTO.	726911-B21

Additional Options

HPE Storage Options	Fibre Channel HBA **NOTE:** The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see: **http://h18006.www1.hp.com/storage/saninfrastructure/hba.html**.	
	QLogic Fibre Channel HBAs	
	HPE 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ764A
	HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter	QW972A
HPE Rack Mount Rail Kits	**Rail Kits**	
	HPE 1U Small Form Factor Ball Bearing Rail Kit	663201-B21
HPE Care Pack Services	**Installation & Start-up Services**	
	HPE Install ProLiant DL36x(p) Service	U4506E
	HPE Startup ProLiant DL36x(p) Service	U4507E
	Proactive Care	
	HPE 3 year 24x7 DL360 Gen9 w/IC Proactive Care Service	U5HM4E
	HPE 3 year 24x7 with Defective Media Retention DL360 Gen9 w/IC Proactive Care Service	U5HM5E
	HPE 3 year 24x7 w/Comprehensive Defective Material Retention DL360 Gen9 w/IC Proactive Care Service	U5HM6E
	HPE 3 year Call to Repair DL360 Gen9 w/IC Proactive Care Service	U5HN3E
	HPE 3 year Call to Repair with Defective Media Retention DL360 Gen9 w/IC Proactive Care Service	U5HN4E
	HPE 3 year CTR with Comprehensive Defective Material Retention DL360 Gen9 w/IC Proactive Care Service	U5HN5E
	HPE 3 year 24x7 DL360 Gen9 Proactive Care Service	U7AM2E
	HPE 3 year 24x7 with Defective Media Retention DL360 Gen9 Proactive Care Service	U7AM3E
	HPE 3 year 24x7 with Comprehensive Defective Material Retention DL360 Gen9 Proactive Care Service	U7AM4E
	HPE 3 year Call to Repair DL360 Gen9 Proactive Care Service	U7AM8E
	HPE 3 year Call to Repair with Defective Media Retention DL360 Gen9 Proactive Care Service	U7AM9E
	HPE 3 year CTR with Comprehensive Defective Material Retention DL360 Gen9 Proactive Care Service	U7AN0E

Storage



1-8 8 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays

Technical Specifications

System Unit	**Dimensions** (H x W x D)	8 SFF	1.7 x 17.1 x 27.5 inches (4.32 x 43.47 x 69.85 cm)
	Weight (approximate)	Maximum: (all hard drives, power supply, and processor installed)	8 SFF Chassis 33.3 lb. (15.31 kg) **NOTE:** Includes 2 SFF Option for a total of 10 SFF HDD.
		Minimum: (one hard drive, power supply, and processor installed)	8SFF Chassis 27 lb. (12.25 kg)
	Input Requirements (per power supply)	Range Line Voltage	100 to 120 VAC 200 to 240 VAC -40 to -72 VDC
	BTU Rating	Maximum	For 800W AC Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VAC) for China Only For 800W DC Power Supply: 3008 BTU/hr (at -40 VDC), 2971 BTU/hr (at -48 VDC), 2929 BTU/hr (at -72 VDC) For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VAC) for China Only
	Power Supply Output (per power supply)	Rated Steady-State Power	For 800W AC Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VAC) input for China only For 800W DC Power Supply: 800W (at -40 VDC), 800W (at -48 VDC), 800W (at -72 VDC) For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VAC) input for China only
		Maximum Peak Power	For 800W AC Power Supply: 800W (at 100 to 127 VAC), 800W (at 200 to 240 1VAC), 800W (at 240 VAC) input for China only For 800W DC Power Supply: 800W (at -40 VDC), 800W (at -48 VDC), 800W (at -72 VDC) For 500W Power Supply: 500W (at 100 to 127 VAC), 500W (at 200 to 240 VAC), 500W (at 240 VAC) input for China only
	System Inlet Temperature	Extended Ambient Operating Support	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.hp.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

Technical Specifications

		(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.hp.com/servers/Ashrae** System performance may be reduced if operating in the extended ambient operating range or with a fan fault.
	Operating	GR-63-CORE, Section 4.1.2: Shelf Level Operating Temperature and Humidity ETSI EN 300 019-2-3: Stationary Use at Weather Protected Locations, Class 3.1E
	Non-operating	GR-63-CORE, Section 4.1.1, Transportation and Storage Environment ETSI EN 300 019-2-1: Storage, Class 1.2 ETSI EN 300 019-2-2: Transportation, Class 2.3
Relative Humidity	Operating	GR-63-CORE, Section 4.1.2: Shelf Level Operating Temperature and Humidity ETSI EN 300 019-2-3: Stationary Use at Weather Protected Locations, Class 3.1E
(non-condensing)	Non-operating	GR-63-CORE, Section 4.1.1: Transportation and Storage Environment ETSI EN 300 019-2-1:Storage, Class 1.2
Altitude	Operating	GR-63-CORE, Section 4.1.3: Shelf Level Altitude
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Emissions Classification (EMC)	FCC Rating	Class A
	Telecom	GR-1089-CORE, Section 3: Electromagnetic Interference ETSI EN 300 386: Electromagnetic Compatibility
	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1

NOTE: 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.

NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

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. **http://www8.hp.com/us/en/hpe/hp-information/livingprogress/environmentalprogress/product-recycling.html#.V-lPA_krKiM** 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

Technical Specifications

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.

http://www8.hp.com/us/en/hpe/hp-information/livingprogress/environmentalprogress/product-recycling.html#.V-lPA_krKiM

Summary of Changes

Date	Version History	Action	Description of Change
23-Oct-2017	From Version 3 to 4	Changed	Care Pack naming and Service and Support- Parts and Materials updated.
06-Jan-2017	From Version 2 to 3	Changed	HPE Processors, HPE Drives, HPE Networking, HPE Power Supplies, and Technical Specifications were revised.
15-Apr-2016	From Version 1 to 2	Added	HPE Storage Controllers section was added to Core Options.
		Changed	HPE Processors, HPE Memory, HPE Drives, and HPE Networking sections were revised.

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

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