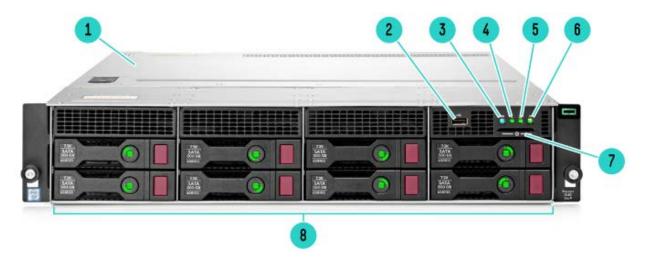# QuickSpecs

Overview

HPE ProLiant DL80 Generation9 (Gen9)

The HPE ProLiant DL80 Gen9 Server is designed with affordable storage, networking and processor scalability, and manageability in a 2U server for cost conscious service provider and SMBs. Apart from basic IT infrastructure workloads this server is ideal for running storage capacity intensive applications like cold storage, back-up due to compelling cost/GB that it offers.
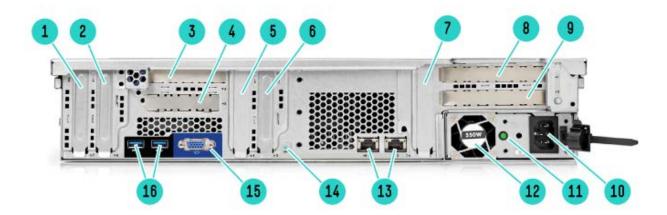

Front View

1. Access Panel (Top Cover)
2. USB 2.0 connector
3. UID button/LED
4. Health LED
5. NIC status LED
6. Power On/Standby button and system power LED
7. Serial label pull tab
8. 8-bay LFF drive cage bay

Overview
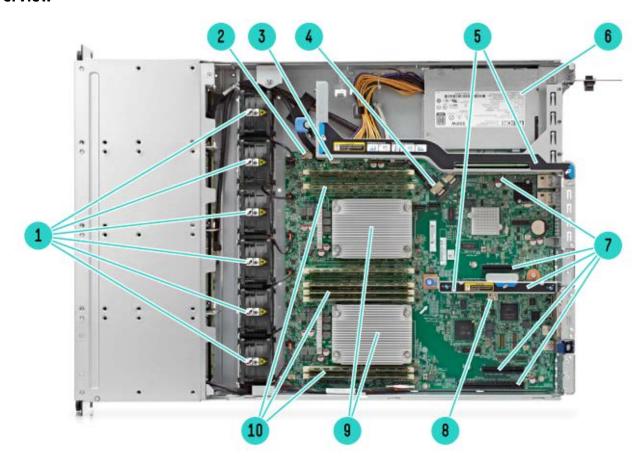
Rear View

1. Slot 7 PCIe3 x16 low-profile, standup
2. Slot 6 PCIe3 x8 low-profile, standup
3. Slot 4 PCIe3 x8 low-profile, riser (optional)
4. Slot 5 PCIe3 x8 FlexibleLOM riser (optional)
5. Slot 4 PCIe3 x16 low-profile, standup
6. Slot 3 PCIe3 x8 low-profile, standup
7. Slot 1 PCIe3 x16 low-profile, standup
8. Slot 1 PCIe3 x16 full-height, full-length GPU riser (optional) or Slot 1 PCIe3 x8 (8, 4, 1) full-height, half-length riser (optional)
9. Slot 2 PCIe3 x8 full-height half-length riser (optional)
11. Power supply status LED
13. Embedded 2x1GbE network adapter
10. Power supply power connection
15. Video connector
12. Non-hot-plug power supply
14. UID LED
16. USB 3.0 connectors

Overview

Internal View

1. Fans shown with 6 Hot-swap fans
2. HPE Smart Storage Battery connector (optional)
3. Internal USB 3.0 connector
4. Embedded HPE Smart Array B140i Controller
5. PCIe riser kits
6. (Under) Non-Hot Plug HPE Power supply
7. PCIe 3.0 slots
8. MicroSD card slot
9. 2 Processors, heatsink showing, with HPE Smart Socket Guide
10. HPE DDR4 SmartMemory DIMM slots. Shown fully populated in 8 slots (4 per processor)

What's New

- Support for ClearOS – an easy to use OS with its own application marketplace

Standard Features

Processor
One of the following
depending on model

Model	CPU frequency	Cores	L3 Cache	Power	QPI	DDR4 Hz
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
E5-2623v3	3.0GHz	4	10MB	105W	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
E5-2660v4	2.0GHz	14	35MB	105W	9.6GT/s	2400
E5-2650v4	2.2GHz	12	30MB	105W	9.6GT/s	2400
E5-2650Lv4	1.7GHz	14	35MB	65W	9.6GT/s	2400
E5-2640v4	2.4GHz	10	25MB	90W	8.0GT/s	2133
E5-2630v4	2.2GHz	10	25MB	85W	8.0GT/s	2133
E5-2630Lv4	1.8GHz	10	25MB	55W	8.0GT/s	2133
E5-2623v4	2.6GHz	4	10MB	85W	8.0GT/s	2133
E5-2620v4	2.1GHz	8	20MB	85W	8.0GT/s	2133
E5-2609v4	1.7GHz	8	20MB	85W	6.4GT/s	1866
E5-2603v4	1.7GHz	6	15MB	85W	6.4GT/s	1866

Chipset
One of the following
depending on model

Intel® C610 Series Chipset

Intel® E5-2600v3 Processor Family

Intel® E5-2600v4 Processor Family

On System Management Chipset

HPE iLO (Firmware HPE iLO4 2.0 or later) 2GB NAND
NOTE: Read and learn more in the **iLO QuickSpecs**.

Memory
One of the following
depending on model

Type:

HPE SmartMemory and Standard Memory

DDR4 Registered (RDIMM) or Load Reduced (LRDIMM)

DIMM Slots Available	8	(4 DIMM slots per processor, 4 channels per processor, 1 DIMMs per channel)
Maximum Capacity (LRDIMM)	256GB	(8 x 32GB LRDIMM @2400MHz)
Maximum Capacity (RDIMM)	256GB	(8 x 32GB LRDIMM @2400MHz)

Memory Protection   Advanced ECC   Advanced ECC uses single device data correction to detect and correct single and

Standard Features

One of the following depending on model		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.
	Mirroring mode	Memory mirroring inter-socket stores a copy of memory with dynamic failover in case of failure. Once a DIMM in a mirrored set is detected as failed, the mirror failover uses its mirrored DIMM.

Expansion Slots

Motherboard slots (Standard)

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
1	PCIe 3.0	x16	x16		Low profile	CPU 1 slots
3	PCIe 3.0	x8	x8		Low profile	CPU 1 slots
4	PCIe 3.0	x16	x16		Low profile	CPU 1 slots
6	PCIe 3.0	x8	x8		Low profile	CPU 2 slots
7	PCIe 3.0	x16	x16		Low profile	CPU 2 slots

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

Primary Riser (Optional)

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
1	PCIe 3.0	x8	x8		Full-height, half-length slot	CPU 1 slots
2	PCIe 3.0	x8	x8		Full-height, half-length slot	CPU 1 slots

Flexible LOM Riser (Optional)

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
4	PCIe 3.0	x8	x8		Low profile	CPU 1 slots
5	PCIe 3.0	x8	x8		Flexible LOM	CPU 1 slots

NOTE: This riser is mandatory for installing FlexibleLOMs.

GPU riser (Optional)

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
1	PCIe 3.0	x16	x16			Full-height, full-length slot

NOTE: When populating slots on second riser, a second processor must be installed.

Storage Controller

One of the following depending on model

Entry Models	HPE Dynamic Smart Array B140i Controller

NOTE: Provides support for up to 10 SATA drives and data transmission speeds up to 6Gb/s and supports RAID 0, 1 & 5.

Base Models	HPE H240 FIO Smart Host Bus Adapter

NOTE: H240 Provides support for up to 8 SAS/SATA drives, data transmission speeds up to 12Gb/s and supports RAID 0, 1 & 5.

Internal Storage Devices

One of the following depending on model

Optical Drive	Via USB only
Hard Drives	None ship standard
Hard Drive Bays	12 LFF drive bays total without Optical Bay
	8 LFF drive bays total without Optical Bay

Standard Features

Maximum Internal Storage		CAPACITY	CONFIGURATION
One of the following depending on model	Hot Plug LFF SAS	96.0TB	12 x 8TB (with 12LFF drive cage)
	Hot Plug LFF SATA	96.0TB	12 x 8TB (with 12LFF drive cage)
	Hot Plug LFF SATA SSD	46.08TB	12 x 3.84TB (with 12LFF drive cage)
	Non Hot Plug LFF SATA	32TB	8 x 4TB (with 8LFF drive cage)

Power Supply
One of the following depending on model

HPE 550W FIO Power Supply

HPE 900W AC 240V DC Redundant Power Supply

Looking for high-efficiency power solutions at an entry-level price for your ProLiant Gen9 Essential Server? HPE Entry-Level Power Supplies offer an optimized set of features with options for both redundant and non-redundant power configurations.

The HPE 550W FIO Power Supply offers Silver-certified 80 Plus power efficiency (up to 89%) with an optimized set of features for non-redundant power configurations.

The HPE 900W AC 240VDC Power Input Module with Power Backplane can be configured to support power redundancy in ProLiant servers that offer only a single power supply bay, providing additional protection against power loss. With an 80 Plus Gold power efficiency rating (up to 92%), this power option helps to reduce operating expenses while protecting against trapped power capacity in the data center. Hot-plug AC power input modules allow for better serviceability with fast and easy deployment and replacement.

System Fans
One of the following depending on model

	Non-redundant	**Redundant**
1P model	2 fans	4 fans

NOTE: Redundant and non-redundant fan counts vary with riser selection. 1P configurations either one of primary and secondary risers need 3 fans in non-redundant configuration.

	Non-redundant	**Redundant**
2P model	4 fans	5 fans

NOTE: Customers may separately purchase redundant fans with the 765516-B21 option kit. Additional fans (two) are also included in -B21 processor option kits when upgrading from one processor to two processors.
NOTE: All the riser option kits ship with necessary fan option kits.

Interfaces

Video	1 (Vaux Support)
LOM Network Ports	2 x 1GbE ports
Micro SD Slot	1 Micro SD

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	Up to 4 USB ports (standard);
	Front: 1xUSB 2.0 std; (1xUSB2.0 optional upgrade with quick release ears)
	Rear: 2xUSB 3.0
	Internal: 1x USB 3.0

Operating Systems and Virtualization Software Support for ProLiant Servers

Microsoft Windows Server

Red Hat Enterprise Linux (RHEL)

SUSE Linux Enterprise Server (SLES)

VMware

ClearOS

NOTE: ClearOS allows you to build a fully functional server that is just right for you at no upfront cost. It is available via CTO preload, Intelligent Provisioning or via download. For more information on

Standard Features

ClearOS, please visit **http://www.hpe.com/servers/clearos**.

NOTE: 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, please visit our Support Matrix at: **http://www.hpe.com/info/ossupport** and our **driver download page**.

Upgradeability One of the following depending on model	Upgradeable to 2 processors (28 cores) **NOTE:** Processor upgrade from E5-2600v3 to E5-2600v4 is supported. Please refer to DL80 Gen9 User Guide for more details. Up to 8 DIMM slots **NOTE:** To take advantage of DIMMs 5-8, a second processor must be installed. FlexibleLOM slot for 1GbE or 10GbE or QDR/FDR InfiniBand Networking Options **NOTE:** To take advantage of the additional 2 PCI slot upgrade, a second processor must be installed. Redundant Power Supply Redundant Fan
Industry Standard Compliance	ACPI 2.0b Compliant PCIe 3.0 Compliant PXE Support WOL Support Microsoft® Logo certifications USB 3.0 Support ASHRAE A3 **NOTE:** Supports A3 extended ambient temperature. **NOTE:** Refer to technical specifications section for more details.
Graphics	Integrated Matrox G200eH2 video standard • 1280 x 1024 (32 bpp) • 1920 x 1200 (16 bpp)
HPE Server UEFI/Legacy 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 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.hpe.com/servers/uefi**.

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 RESTful API for iLO 4

- PXE boot support for IPv6 networks

- Boot support for option cards that only support a UEFI option ROM

Standard Features

- Network Stack configurations

NOTE: For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.
NOTE: UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen9 Server.

Form Factor One of the following depending on model	2U Rack form factor All models ship with Easy Install rails (Cable management arm optional). 8 LFF Drive Bay Version: 3.44 (8.75cm) Height x 17.54" (44.55 cm) Width x 23.9" (60.70 cm) Length 12 LFF Drive Bay Version: 3.44 (8.75cm) Height x 17.54" (44.55 cm) Width x 23.9" (60.70 cm) Length
Embedded Management	**HPE Integrated Lights-Out (HPE iLO)**	Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at **http://www.hpe.com/info/ilo**.
	UEFI	Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at **http://www.hpe.com/servers/uefi**.
	RESTful API	RESTful API for iLO 4 is Redfish 1.0 conformance for simplified server management such as configuration and maintenance tasks based on modern industry standards. Learn more at **http://www.hpe.com/info/restfulapi**.
	Intelligent Provisioning	Hassle free server and OS provisioning for 1 or few servers with Intelligent Provisioning. Learn more at **http://www.hpe.com/servers/intelligentprovisioning**.
	Embedded Remote Support	The Hewlett Packard Enterprise embedded remote support, when used with Insight Online direct connect or HPE Insight Remote Support, allows HPE ProLiant servers to transmit hardware events directly to Hewlett Packard Enterprise or a Hewlett Packard Enterprise Authorized Partner for automated phone home support. Learn more at **http://www.hpe.com/info/insightonline/explore**.
Server utilities	**Smart Update**	Optimize firmware and driver updates with Smart Update solutions including Smart Update Manager (SUM) and Service Pack for ProLiant (SPP). Learn more at **http://www.hpe.com/servers/smartupdatemanager**.
	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-HPE servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless firmware updates. Learn more at **http://www.hpe.com/servers/hpsim**.
	Scripting Tool Kit and Windows PowerShell	Provision 1 to many servers using your own scripts to discover and deploy them with Scripting Tool Kit (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at **http://www.hpe.com/servers/proliant/stk** or **http://www.hpe.com/servers/powershell**.
	RESTful Interface Tool	RESTful Interface tool is a scripting tool to provision using RESTful API for iLO 4 to discover and deploy servers at scale. Learn more at **http://www.hpe.com/info/resttool**.

Standard Features

	HPE iLO Mobile Application	Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: **http://www.hpe.com/info/ilo/mobileapp**.
	HPE Insight Online	HPE Insight Online, available at no additional cost as part of your Hewlett Packard Enterprise warranty or contractual support agreement with Hewlett Packard Enterprise, is a personalized dashboard for simplified tracking of IT operations and support information from anywhere, anytime. Learn more at **http://www.hpe.com/info/insightonline/explore**.

Security

Power-on password

Serial interface control

Administrator's password

TPM 1.2

TPM 2.0

NOTE: TPM 2.0 works only in UEFI Mode.

UEFI

Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of HPE Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE 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.

NOTE: Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at: **http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/**.

Optional Features

Embedded Management	**iLO Essentials**	HPE iLO Essentials is the preferred license for small and medium business that offers full remote server management capabilities for small and medium business via the Integrated Remote Console (IRC), virtual media, and e-mail based alerts. Learn more about HPE iLO Essentials at **http://www.hpe.com/servers/iLO/essentials**.
	iLO Scale-Out	HPE iLO Scale-Out is the preferred license built for web hosting, cloud service providers, and high performance computing data centers, managing massive scale out environments for the DL 100 and 10 series servers, not available for ML servers. This license offers sophisticated scripting tools that provides remote access through Text Console via SSH, Dynamic power capping, Email-based Alerting and proactive notifications. For more information, visit **http://www.hpe.com/servers/iLO/scale-out**.
	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. Learn more about HPE iLO Advanced at **http://www.hpe.com/servers/iloadvanced**.
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.hpe.com/info/insightcontrol**.
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 Cluster Platforms are specifically engineered, factory-integrated large-scale ProLiant clusters optimized for High Performance Computing, with a choice of servers, networks and software. Operating system options include specially priced offerings for Red Hat Enterprise Linux and SUSE Linux Enterprise Server, as well as Microsoft Windows HPEC Server. A Cluster Platform Configurator simplifies ordering. **https://www.hpe.com/us/en/solutions/hpc-high-performance-computing/hpc-software.html**.
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 Hewlett Packard Enterprise 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 HPEC Clusters with InfiniBand Interconnects: **https://www.hpe.com/info/hpc/solutions**.
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 Hewlett Packard Enterprise 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**

Optional Features

Whether you're a large enterprise or a smaller business, Hewlett Packard Enterprise data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity.

- **Data Archive and Migration Software**

  Hewlett Packard Enterprise 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.

- **Storage Resource Management Software (SRM)**

  Hewlett Packard Enterprise 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 Hewlett Packard Enterprise 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.hpe.com/info/vsa1TB**.

NOTE: For more information about Storage Software including QuickSpecs, please see: **https://www.hpe.com/us/en/storage/software-defined.html**.

ClearOS	HPE and ClearCenter will help you lower the cost of building on-premise solutions without sacrificing security and ease of use. HPE ProLiant servers with ClearOS give you a simple, secure, and affordable operating system with an intuitive web based graphical user interface that provides a cloud-like experience on- premise, and an Application Marketplace with over 100 apps and growing. Whether you're starting out or scaling, you decide what applications you need and pay as you grow.
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. **http://ocs.ext.hpe.com/**.

Service and Support

HPE Support Services	HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to Hewlett Packard Enterprise to help prevent problems and solve issues faster. HPE Support Services enable you to choose the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement to the support for need for your IT and business.
Connect your devices	Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Achieve up to 77%[1] reduction in down time, near 100%[2] diagnostic accuracy and a single consolidated view of your environment. By connecting, you will receive 24x7monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to Hewlett Packard Enterprise support. **1- IDC 2 – HP CSC reports 2014 - 2015**
Recommended Support	**Basic: HPE Foundation Care NBD, three-year Support Service** HPE Foundation Care Next Business Day connects you to Hewlett Packard Enterprise during business hours for assistance on resolving issues – This service features need based next business day hardware onsite response and software call back within two hours. In addition, Collaborative software support and provides troubleshooting assistance on industry leading software running on your HPE server. Simplify your support experience and make Hewlett Packard Enterprise your first call to help resolve hardware or software problems. **https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en** **Standard: HPE Foundation Care 24x7, three-year Support Service** HPE Foundation Care 24x7 gives you access to Hewlett Packard Enterprise 24 hours a day, seven days a week for assistance on resolving issues. This service includes need based Hardware onsite response within four hours. In addition, collaborative software support is included in this service that provides troubleshooting assistance on industry leading software running on your HPE server. Simplify your support experience and make Hewlett Packard Enterprise your first call to help resolve hardware or software problems. **https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en** **Optimized: HPE Proactive Care* with 24x7 coverage, three year Support Service** HPE Proactive Care gives customers an enhanced call experience. When your products are connected to Hewlett Packard Enterprise, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This service combines three years proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers.
Parts and Materials	Hewlett Packard Enterprise will provide Hewlett Packard Enterprise-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. The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.
Related Services	**HPE Server Hardware Installation** Provides for the basic hardware installation of Hewlett Packard Enterprise branded servers, storage devices

Service and Support

and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.
https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf

HPE Installation and Startup Service
Provides for the installation and startup of Hewlett Packard Enterprise technology including BladeSystems, C-Class enclosure, HPE ProLiant c-Class and Integrity server blades, storage blades, SAN switch blades, HPE Virtual Connect modules (Ethernet and Fibre Channel), Ethernet network interconnects, and InfiniBand, as well as the installation of one supported operating system type (Windows® or Linux).

HPE Technology Services Support Credits
Offer flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

HPE Education Services	Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment. **http://www.hpe.com/ww/learn**
HPE Support Center	The HPE Support Center is a personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers.

Learn more **http://www.hpe.com/support/hpesc**

The Hewlett Packard Enterprise Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.
HPE Insight Remote Support and HPE Support Center are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE Support Service or Hewlett Packard Enterprise contractual support agreement.

*HPE Support Center Mobile App is subject to local availability.

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

Pre-configured Models

For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

1. Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.

2. Hewlett Packard Enterprise does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.

3. If you desire a custom configuration please see "Configuration Information - Factory Integrated Models" section of this QuickSpecs.

NOTE: All Pre-configured Models come populated with some hard drive blanks installed. Should the customer need additional hard drive blanks, they can order more using HPE LFF Hard Drive Blank Kit (666986-B21).

NOTE: All pre-configured servers ship with a standard 6-foot IEC C-13/C-14 jumper cord (A0K02A). This jumper cord is also included with each standard AC power supply option kit. If a different power cord is required, please check the **ProLiant Power Cables** web page.

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.

	Entry Models	**Base Models**
[SKU Number]	830013-B21	833869-B21
Model Name	HPE ProLiant DL80 Gen9 E5-2603v4 4GB-R B140i 4LFF Non-hot Plug 550W PS Entry Server	HPE ProLiant DL80 Gen9 E5-2609v4 8GB-R H240 8LFF 550W PS Base Server
Processor	Intel® Xeon® E5-2603v4	Intel® Xeon® E5-2609v4
Number of Processors	One	
Memory	8GB (1x8GB Registered DIMMs STND, 2400 MHz) **NOTE:** Due to processor limitation, these DDR4 DIMMs will operate at 1833 MHz in this model.	8GB (1x8GB Registered DIMMs, 2400 MHz) **NOTE:** Due to processor limitation, these DDR4 DIMMs will operate at 1833 MHz in this model.
Network Controller	HPE Embedded Dual Port 361i Adapter Network Interface	
Storage Controller	HPE Dynamic Smart Array B140i	HPE H240 Smart Host Bus Adapter
Hard Drive	None ship standard	
Internal Storage	4 LFF HDD Bays (Non Hot Plug)	8 LFF HDD Bays
Optical Drive Bay	Not Available	
Optical Drive	Optional via HPE Mobile USB DVDRW Drive (701498-B21)	
PCI-Express Slots	3 PCIe 3.0 slots (Without risers)	
Power Supply	(1) HPE 550W FIO Power Supply	
Fans	2 hot swap fans, non-redundant	4 hot plug fans, redundant
Management	iLO Management (standard), Intelligent Provisioning (standard), iLO Essentials (optional), iLO Scale-out (optional only for DL), iLO Advanced (optional)	
Form Factor	Rack (2U), HPE Easy Install Rails	
Warranty	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response	

Smart Buy Models

[SKU Number]	840616-S01
Model Name	HPE ProLiant DL80 Gen9 E5-2620v4 2.1GHz 8-core 8GB-R 8LFF 900W PS US Server/S-Buy
Processor	Intel® Xeon® E5-2620v4
Number of Processors	One
Memory	8GB (1x8GB Registered DIMMs, 2400 MHz) **NOTE:** Due to processor limitation, these DDR4 DIMMs will operate at 2133 MHz in this model.
Network Controller	HPE Embedded Dual Port 361i Adapter Network Interface
Storage Controller	HPE Smart Array P440/2G + Smart Storage Battery
Hard Drive	None ship standard
Internal Storage	8 LFF HDD Bays
Optical Drive Bay	Not Available
Optical Drive	Optional via HPE Mobile USB DVDRW Drive (701498-B21)
PCI-Express Slots	3 PCIe 3.0 slots (Without risers)
Power Supply	(1) HPE 900W Redundant Capable Power Supply Kit
Fans	2 hot swap fans, non-redundant
Management	Standard: iLO Management Optional: iLO Essentials, iLO Advanced, Insight Control
Form Factor	Rack (2U), HPE Easy Install Rails without Cable Management Arms
Warranty	1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response

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 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 (choose one of the following configurable models)

CTO Server	HP ProLiant DL80 Gen9 Non-hot Plug 4LFF Configure-to-order Server	HP ProLiant DL80 Gen9 8LFF Configure-to-order Server	HP ProLiant DL80 Gen9 12LFF Configure-to-order Server
SKU Number	778686-B21	778685-B21	787217-B21
Processor	2 (optional) x HPE Smart Socket Guide		
DIMM Slots	8 DIMM slots for RDIMM, LRDIMM DDR4 Memory		
Storage Controller	HPE Dynamic Smart Array B140i		
PCIe	5 Low Profile PCIe 3.0 slots		
Drive Cage	4LFF Non Hot Plug	8LFF Hot Plug	12LFF Hot Plug
Network Controller	HPE Embedded Dual Port 361i Adapter Network Interface		
Fans	2 hot swap fans, non-redundant		
Management	iLO Management (standard), Intelligent Provisioning (standard)		
USB	1 front, 1 internal, 2 rear		

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

HPE Processors   **E5-2600v4 series Processors**

HPE DL80 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) FIO Processor Kit   803079-L21

HPE DL80 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) FIO Processor Kit   803081-L21

HPE DL80 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) FIO Processor Kit   803083-L21

HPE DL80 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) FIO Processor Kit   803085-L21

HPE DL80 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) FIO Processor Kit   803087-L21

HPE DL80 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) FIO Processor Kit   803089-L21

HPE DL80 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) FIO Processor Kit   803091-L21

HPE DL80 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) FIO Processor Kit   803093-L21

HPE DL80 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-core/25MB/55W) FIO Processor Kit   803097-L21

HPE DL80 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) FIO Processor Kit   803095-L21

NOTE: If two processors are desired, select one xxxxxx-L21 and one corresponding xxxxxx-B21

NOTE: Up to two processors supported. Mixing different processor models is not supported.

NOTE: DDR speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

NOTE: When v4 Processor is selected, then only PC4-2400T Memory Kit can be selected.

NOTE: 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.

Configuration Information - Factory Integrated Models

HPE Memory

NOTE: Select one or more memory from section below. A minimum of two memory kits are required if server is configured with two processors.

NOTE: LRDIMM and RDIMM are distinct memory technologies and cannot be mixed within a server. The majority of ProLiant Gen9 servers support LRDIMM and RDIMM.

NOTE: 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.

NOTE: 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

NOTE: Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: **http://www.hpe.com/go/proliant-energy-efficient**

NOTE: Depending on the memory configuration and processor model, the memory speed may run at 2400MHz, 2133MHz, 1866MHz, 1600MHz or 1333MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: **http://www.hpe.com/go/ddr4config**

Registered DIMMs (RDIMMs) for E5-2600v4 Series

HPE 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805347-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805349-B21
HPE 16GB (1x8GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	836220-B21
HPE 32GB (1x8GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805351-B21

Load Reduced DIMMs (LRDIMMs) for E5-2600v4 Series

HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Load Registered Memory Kit	805353-B21
HP 64GB (1x64GB) Quad Rank x4 DDR4-2400 CAS-17-17-17 Load Registered Memory Kit	805358-B21

HPE Standard Memory for E5-2600v4 Series

HPE 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Standard Memory Kit	851353-B21

NOTE: HPE Standard Memory DIMMs have no SmartMemory features.

HPE Power Supplies

NOTE: 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.

NOTE: Prior to selecting a power supply option, it is highly recommended that your 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.hpe.com/go/hppoweradvisor** .

HPE Entry-Level Power Supplies

HP 550W FIO Power Supply Kit	730941-B21

NOTE: The above power supply opton is 80Plus Silver-certified with an efficiency rating of up to 89%. Power specifications and technical content for all HP Server power supplies can be found at: **http://www.hpe.com/go/proliant/powersupply**

HPE 900W AC 240VDC Power Input FIO Module	828734-B21

NOTE: HP Server RPS FIO Backplane Kit (828735-B21) is required for this power supply.
NOTE: Up to two of these option kits can be installed in one system.

HPE 900W AC 240VDC Power Backplane FIO Kit	828735-B21

NOTE: One is required when one or two HPE 900W AC 240VDC Power Input FIO Modules (828734-B21) are ordered.

HPE Storage Controllers

NOTE: If not using the embedded B140i controller, must select one of the following HPE storage controllers below depending the CTO Server model selected in Step 1 above.

HPE Smart Array Controllers

HP Smart Array P440/4GB FBWC 12Gb 1-port Int FIO SAS Controller	761872-B21

NOTE: Includes the HP Smart Storage Battery.

Configuration Information - Factory Integrated Models

NOTE: May be selected if HP ProLiant DL80 Gen9 8LFF CTO Server (778685-B21) is selected in Step 1 above.

HP Smart Array P840/4GB FBWC 12Gb 2-ports Int FIO SAS Controller	761874-B21

NOTE: Includes the HP Smart Storage Battery.

NOTE: May be selected if HP ProLiant DL80 Gen9 12LFF CTO Server (787217-B21) is selected in Step 1 above.

HPE Smart Host Bus Adapters

HP H240 12Gb 2-ports Int FIO Smart Host Bus Adapter	761873-B21

NOTE: May be selected if HP ProLiant DL80 Gen9 8LFF CTO Server (778685-B21) or HP ProLiant DL80 Gen9 NHP 4LFF CTO Server (778686-B21) is selected in Step 1 above.

HPE Cable Options

HP DL60/80/120 Gen9 4LFF Cable FIO Kit	777331-B21

NOTE: If embedded B140i controller is used with the HP ProLiant DL80 Gen9 8LFF CTO Server (778685-B21) selected in Step 1 above, order two of 777331-B21

HP DL80 Gen9 LFF Smart Array P440/840 SAS Cable Kit	779619-B21

NOTE: If HP ProLiant DL80 Gen9 8LFF CTO Server (778685-B21) selected in Step 1 above and HP Smart Array P440/4GB FBWC 12Gb 1-port Int FIO SAS Controller (761872-B21) is selected, order one 779619-B21

NOTE: If HP ProLiant DL80 Gen9 12LFF CTO Server (787217-B21) selected in Step 1 above and HP Smart Array P840/4GB FBWC 12Gb 2-ports Int FIO SAS Controller (761874-B21) is selected, order two 779619-B21

HP DL80 Gen9 Lff Smart Array H240 SAS Cable Kit	779622-B21

NOTE: If HP ProLiant DL80 Gen9 8LFF CTO Server (778685-B21) selected in Step 1 above and HP H240 12Gb 2-ports Int FIO Smart Host Bus Adapter is selected, order one 779622-B21.

HPE Security Kits	**NOTE:** One Quick Release Ear FIO Kit or one Thumbscrew Ear FIO Kit is required	
	HP DL80 Gen9 Quick Release Ear FIO Kit	778109-B21
	HP DL80 Gen9 Thumbscrew Ear FIO Kit	787211-B21

NOTE: This part is not allowed with HP ProLiant DL80 Gen9 12LFF CTO Server (787217-B21)

HPE Riser Cards	HP DL80 Gen9 FlexibleLOM Riser Kit	765514-B21

NOTE: This part is required if HP ProLiant DL80 Gen9 12LFF CTO Server (787217-B21) is selected in Step 1 above.

Step 3: Choose Additional Factory Integratable Options (only one of the following from each list unless otherwise noted)

BIOS Mode	HP Legacy FIO Mode Setting	758959-B22

NOTE: If B140i is the only primary controller, then this option cannot be selected.

NOTE: Selecting this option will change the default UEFI BIOS setting into Legacy BIOS setting.

Controller State	HP Mfg FIO Enable HBA Mode Setting	792962-B21

NOTE: Can only be selected with H240 FIO Smart Host Bus Adapter.

NOTE: If H240 is the primary controller then RAID is not allowed with this selection.

	HP AHCI-Enable FIO Setting	801845-B21

NOTE: If B140i is the only primary controller then RAID is not allowed with this selection.

HPE Insight Software	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License	C6N36A
HPE Converged Infrastructure	**HPE OneView with iLO Advanced**	
	HP OneView for ProLiant DL Server incl 3yr 24x7 Supp FIO Bundle Physical 1 Svr Lic	E5Y43A

Configuration Information - Factory Integrated Models

Management Software	**HPE OneView without iLO Advanced**

HP OneView w/o iLO including 3yr 24x7 Support FIO 1 Server LTU	P8B31A

Step 4: Choose Additional Options for Factory Integration from Core and Additional Options Sections below

> **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 an HPE approved configurator. Contact your local sales representative for additional information.

HPE Unique Options	HP DL80 Gen9 8LFF Non-hot Plug Enablement Kit	788355-B21
	NOTE: Required to upgrade from 4LFF NHP to 8LFF NHP models.	
	HP DL80 Gen9 Full Height Half Length Riser Kit	765515-B21
	NOTE: Includes two FHHL PCIe 3.0 slots and one fan.	
	HP DL80 Gen9 GPU Enablement Kit	765518-B21
	NOTE: Includes 1 FHFL slot, one fan and power cable required to enable GPU support. Either one of FHHL or FlexibleLOM riser or GPU riser can be selected.	
	HP DL80 Gen9 FlexibleLOM Riser Kit	765514-B21
	NOTE: Includes one FlexibleLOM slot, one Low Profile slot and one fan.	

HPE Processors	**E5-2600v4 series Processors**	
	HPE DL80 Gen9 Intel® Xeon® E5-2609v4 (1.7GHz/8-core/20MB/85W) Processor Kit	803091-B21
	HPE DL80 Gen9 Intel® Xeon® E5-2603v4 (1.7GHz/6-core/15MB/85W) Processor Kit	803093-B21
	HPE DL80 Gen9 Intel® Xeon® E5-2650Lv4 (1.7GHz/14-core/35MB/65W) Processor Kit	803095-B21
	HPE DL80 Gen9 Intel® Xeon® E5-2630Lv4 (1.8GHz/10-core/25MB/55W) Processor Kit	803097-B21
	HPE DL80 Gen9 Intel® Xeon® E5-2620v4 (2.1GHz/8-core/20MB/85W) Processor Kit	803087-B21
	HPE DL80 Gen9 Intel® Xeon® E5-2623v4 (2.6GHz/4-core/10MB/85W) Processor Kit	803089-B21
	HPE DL80 Gen9 Intel® Xeon® E5-2660v4 (2.0GHz/14-core/35MB/105W) Processor Kit	803079-B21
	HPE DL80 Gen9 Intel® Xeon® E5-2650v4 (2.2GHz/12-core/30MB/105W) Processor Kit	803081-B21
	HPE DL80 Gen9 Intel® Xeon® E5-2640v4 (2.4GHz/10-core/25MB/90W) Processor Kit	803083-B21
	HPE DL80 Gen9 Intel® Xeon® E5-2630v4 (2.2GHz/10-core/25MB/85W) Processor Kit	803085-B21
	E5-2600v3 series Processors	
	HP DL80 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor Kit	765521-B21
	HP DL80 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor Kit	765523-B21
	HP DL80 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) Processor Kit	765525-B21
	HP DL80 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) Processor Kit	765526-B21
	HP DL80 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) Processor Kit	765530-B21
	HP DL80 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) Processor Kit	765531-B21
	HP DL80 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) Processor Kit	780100-B21
	HP DL80 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) Processor Kit	765528-B21
	HP DL80 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) Processor Kit	765529-B21
	HP DL80 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) Processor Kit	765532-B21
	NOTE: Processor upgrade from E5-2600v3 to E5-2600v4 is supported. Please refer to DL80 Gen9 User Guide for more details.	

HPE Memory	**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

Core Options

HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	836220-B21
HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805351-B21

NOTE: These DIMMs are supported only with E5-2600v4 processors.

Registered DIMMs (RDIMMs) for E5-2600v3 Series

HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726717-B21
HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726718-B21
HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	759934-B21
HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726719-B21
HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	728629-B21

NOTE: These DIMMs are supported only with E5-2600v3 processors.

Load Reduced DIMMs (LRDIMMs) for E5-2600v4 Series

HPE 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Load Reduced Memory Kit	805353-B21

NOTE: These DIMMs are supported only with E5-2600v4 processors.

Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series

HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726720-B21
HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726722-B21

NOTE: These DIMMs are supported only with E5-2600v3 processors.

HPE Standard Memory for E5-2600v4 Series

HPE 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Standard Memory Kit	851353-B21

NOTE: These DIMMs are supported only with E5-2600v4 processors.

HPE Standard Memory for E5-2600v3 Series

HPE 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Standard Memory Kit	803026-B21
HPE 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Standard Memory Kit	803028-B21

NOTE: These DIMMs are supported only with E5-2600v3 processors.

HPE Optical Drives	HPE Mobile USB Non Leaded System DVD RW Drive	701498-B21

HPE Drives	**SATA Non-Hot Plug LFF (3.5-inch) Midline (MDL) Drives**	
	HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	801888-B21
	HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	801884-B21
	HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	801882-B21
	SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
	HPE 10TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857648-B21
	HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	819203-B21
	HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	861594-B21
	HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861750-B21
	HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846510-B21
	HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872491-B21

Core Options

HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861752-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861678-B21
HPE 3TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	861693-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872489-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861676-B21
HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861691-B21

6G SATA SC Hot Plug LFF 7.2K (3.5-inch) Standard Drives

HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	858596-B21
HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	858594-B21

SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives

HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857644-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	861590-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	819201-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861754-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846514-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872487-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861756-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	818367-B21
HPE 3TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846528-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872485-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	818365-B21
HPE 1TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	846524-B21

SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives

HPE 600GB SAS 12G Enterprise 15K LFF (3.5in) SC 3yr Wty HDD	765424-B21
HPE 450GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty HDD	737394-B21
HPE 300GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty HDD	737261-B21

12G SAS Hot Plug LFF (3.5-inch) SC Mixed Use Solid State Drives

HPE 800GB SAS 12G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872378-B21

6G SATA Hot Plug LFF (3.5-inch) Write Intensive Solid State Drives

HPE 1.6TB SATA 6G WI LFF SCC DS SSD	872365-B21
HPE 800GB SATA 6G WI LFF SCC DS SSD	872361-B21
HPE 400GB SATA 6G WI LFF SCC DS SSD	872357-B21

6G SATA Hot Plug LFF (3.5-inch) Mixed Use Solid State Drives

HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877790-B21
HPE 1.6TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD	804634-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877784-B21
HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	875476-B21
HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	875472-B21

6G SATA Hot Plug LFF (3.5-inch) Read Intensive Solid State Drives

Core Options

HPE 1.92TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877760-B21
HPE 1.6TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	869388-B21
HPE 960GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877754-B21
HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	877748-B21
HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	869380-B21

6G SATA Hot Plug LFF (3.5-inch) MU-3 SCC SSD

HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872350-B21
HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD	872346-B21

Hard Drive Blank Kits

HPE Large Form Factor Hard Drive Blank Kit	666986-B21

Hard Drive Kits

HP DL80 Gen9 8LFF Non-hot Plug Enablement Kit	788355-B21

NOTE: Required to move from 4LFF NHPE model to 8 LFF NHPE model.

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
	HPE Ethernet 1Gb 4-port 366T Adapter	811546-B21
	10 Gigabit Ethernet adapters	
	HPE Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
	HPE Ethernet 10Gb 2-port 530T Adapter	656596-B21
	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	779793-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

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.

25 Gigabit Ethernet adapters

HPE Ethernet 4x25Gb 1-port 620QSFP28 Adapter	817762-B21

FlexibleLOM Adapters

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 4-port 536FLR-T Adapter	764302-B21
HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	779799-B21
HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	665243-B21

Core Options

	HPE Ethernet 10Gb 2-port 561FLR-T Adapter	700699-B21
	HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21

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

HPE InfiniBand	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21

NOTE: Please see the **HPE InfiniBand Options for HP ProLiant and Integrity Servers QuickSpecs** for additional information.

HPE I/O Expansion Options	HP DL80 Gen9 FlexibleLOM Riser Kit	765514-B21

NOTE: Includes one FlexibleLOM slot, one Low Profile slot and one fan.

	HP DL80 Gen9 Full Height Half Length Riser Kit	765515-B21

NOTE: Includes two FLFH PCIe 3.0 slots and one fan.

	HP DL80 Gen9 GPU Enablement Kit	765518-B21

NOTE: Includes 1 FHFL slot, one fan and power cable required to enable GPU support. Either one of FHHL or FlexibleLOM riser or GPU riser can be selected.

HPE Power Supplies	**HPE Entry-Level Power Supplies**	
	HPE 900W Standard AC 240VDC Power Input Module	775595-B21

NOTE: This part number can only be bought standalone and is for field integration only.
NOTE: RPS Backplane is mandatorily needed with this power input module.

	HPE 900W Standard AC 240VDC RPS Power Backplane	814835-B21

NOTE: This part number can only be bought standalone and is for field integration only.
NOTE: This RPS backplane is mandatorily needed with 900W RPS input module.

	HPE 900W Standard AC 240VDC Redundant Power Supply Kit	820792-B21

NOTE: This Redundant Power supply kit includes 2 power supply input module and 1 backplane kit.
NOTE: This part number is both factory installed option and field integrable option.
NOTE: This Power supply supports both 100-240V AC and 240V DC.
NOTE: Supports Gold-level efficiency (92%) with a standard C14 inlet connector. No support for HPE Power Discovery Services. Only compatible with select HPE ProLiant Gen9 Essential servers.
NOTE: HPE 900W Gold (Redundant) AC 240VDC Power Input Module (775595-B21) must be used with Power Backplane (814835-B21).
NOTE: Each Redundant Power Supply Backplane can support up to two (2) power input modules.
NOTE: Redundant AC Power Input Modules do not share power. Redundant AC Power Input Module #1 is the primary AC Power Input Module. Redundant AC Power Input Module #2 is the backup AC Power Input Module.

NOTE: 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.
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.hpe.com/info/hppoweradvisor**.

HPE Cooling	HP DL80 Gen9 Redundant Fan Kit	765516-B21

Core Options

Options   **NOTE:** Includes two fans and is required to move from non-redundant to redundant fan configurations. Since each riser includes a fan as well, please refer to user-guide for exact fan requirements to enable fan redundancy.

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 an HPE 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 1-server LTU	C6N27A
	HPE Insight Control including 1yr 24x7 TSU E-LTU	C6N28ABE
	HPE Insight Control Upgrade from iLO Advanced including 1yr 24x7 Support E-LTU	C6N38ABE

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: **https://www.hpe.com/info/insightmanagement**.

NOTE: For additional license options please see the **HPE Insight Control QuickSpecs**.

Embedded Management	**HPE iLO Advanced**	
	HPE iLO Advanced including 1yr 24x7 Technical Support and Updates 1-server LTU	512485-B21
	HPE iLO Advanced including 3yr 24x7 Tech Support and Updates 1-server LTU	BD505A
	HPE iLO Advanced including 1yr 24x7 Technical Support and Updates E-LTU	E6U59ABE
	HPE iLO Advanced including 3yr 24x7 Technical Support and Updates E-LTU	E6U64ABE
	HPE iLO Essentials	
	HPE iLO Essentials including 3yr 24x7 Technical Support and Updates E-LTU	E6U61ABE
	HPE iLO Essentials including 3yr 24x7 Tech Support and Updates 1-server LTU	BD774A
	HPE iLO Essentials including 1yr 24x7 Tech Support and Updates 1-server LTU	BD775A
	HPE iLO Essentials including 1yr 24x7 Technical Support and Updates E-LTU	E6U62ABE
	HPE iLO Scale-out	
	HPE iLO Scale-Out 3yr 24x7 Tech Support and Updates Flexible Quantity LTU	BD776A
	HPE iLO Scale-Out 1yr 24x7 Tech Support and Updates Flexible Quantity LTU	BD778A
	HPE iLO Scale-Out including 3yr 24x7 Tech Support and Updates Flex Qty E-LTU	BD776AAE
	HPE iLO Scale-Out including 3yr 24x7 Tech Support and Updates Tracking LTU	BD777A
	HPE iLO Scale-Out including 1yr 24x7 Tech Support and Updates Flex Qty E-LTU	BD778AAE
	HPE iLO Scale-Out including 1yr 24x7 Tech Support and Updates Tracking LTU	BD779A

HPE Converged Infrastructure Management Software	**HPE OneView Advanced (with HPE iLO Advanced)**	
	HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A
	HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE
	HPE OneView Advanced (without HPE iLO Advanced)	
	HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU	P8B24A
	HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU	P8B26AAE
	HPE OneView w/o iLO including 3yr 24x7 Support Track 1-server LTU	P8B25A
	HPE OneView Physical Media Kit LTU	E5Y37A

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

Additional Options

as part of HPE OneView Advanced and provides multi-server OS and 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.hpe.com/info/hpeoneview**.
NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.

HPE Security	HPE Trusted Platform Module 2.0 Kit	745823-B21
	HPE Trusted Platform Module Option	488069-B21
	HPE 2U Security Bezel Kit	666988-B21
	NOTE: Quick Release Ear FIO kit (778109-B21) is required for installing security bezel.	

HPE Storage Controllers

SAS Controllers

HPE Smart Array Controllers

HPE Smart Array P440/2GB FBWC 12Gb 1-port Int SAS Controller	820834-B21
NOTE: Includes the HPE Smart Storage Battery.	
HPE Smart Array P840/4GB FBWC 12Gb 2-ports Int SAS Controller	726897-B21
HPE Smart Array P841/4GB FBWC 12Gb 4-ports Ext SAS Controller	726903-B21
HPE Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller	726821-B21
HPE Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller	726825-B21

HPE Smart Host Bus Adapters

HPE H240 12Gb 2-ports Int Smart Host Bus Adapter	726907-B21
HPE H241 12Gb 2-ports Ext Smart Host Bus Adapter	726911-B21

HPE Cable Options

HP DL80 Gen9 LFF Smart Array P440/P840 SAS Cable Kit	779619-B21

NOTE: One cable kit must be selected with P440 controller.
NOTE: Two of these cable kits must be selected with P840 controller.

HP DL80 Gen9 LFF Smart HBA H240 SAS Cable Kit	779622-B21

NOTE: Two cable Kits must be selected with H240.

NOTE: One of the above cables is required to be selected depending on the combination of server model and storage controller. Cable option kit descriptions include the right server model and storage controller names.
NOTE: NHP server model includes SATA cables required to connect drives to embedded B140i SATA controller.

Optional Software

HPE Smart Array SR SmartCache (Single Key/Single Server) LTU	D7S26A
HPE Smart Array SR SmartCache (Single Key/Multiple Servers) LTU	D7S27A
HPE Smart Array SR SmartCache (Single Key/Multiple Servers) E-LTU	D7S27AAE

NOTE: HPE SmartCache is supported when one of the supported Smart Array Controllers is installed in the server.
NOTE: HPE SmartCache comes standard (no licensing is required) if the HPE Smart Array P840 Controller is installed in the server.

HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU	Q2F26AAE

Optional Upgrades

Additional Options

HP 96W Smart Storage Battery with 145mm Cable for DL/ML/SL Servers	727258-B21

NOTE: This option is mandatorily required with HPE Smart Array controllers. One server can accommodate only 1 Smart Storage Battery that would suffice the requirement of all HPE Smart Array controllers.

HPE Tape Backup

NOTE: For the complete range of tape drives, autoloaders, libraries and media see: **http://www.hpe.com/storage/storeever**. For hardware and software compatibility of HPE tape backup products see: **http://www.hpe.com/storage/spock**.

NOTE: For Internal drives to be connected to DL servers please make sure that you order rack mount kit as well.

Tape Drives

HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A
HPE StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A
HPE StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive	EH958B
HPE StoreEver LTO-4 Ultrium 1760 SAS External Tape Drive	EH920B

SAS Rack-Mount Tape Solutions

HPE StoreEver MSL LTO-7 Ultrium 15000 SAS Drive Upgrade Kit	N7P37A
HPE StoreEver MSL LTO-7 Ultrium 15000 FC Drive Upgrade Kit	N7P36A
HPE StoreEver LTO-6 Ultrium 6250 Tape Drive in a 1U Rack Mount Kit	C0L99A
HPE StoreEver MSL LTO-6 Ultrium 6250 SAS Drive Upgrade Kit	C0H27A
HPE StoreEver MSL LTO-6 Ultrium 6250 Fibre Channel Drive Upgrade Kit	C0H28A
HPE StoreEver LTO-5 Ultrium 3000 SAS Tape Drive in a 1U Rack Mount Kit	EJ014B
HPE StoreEver MSL LTO-5 Ultrium 3000 SAS Drive Upgrade Kit	BL540B
HPE StoreEver LTO-4 Ultrium 1760 SAS (1) in a 1U Rack Mount Kit	EH946C
HPE StoreEver 1U SAS Rack Mount Kit	AE459B

HPE DAT Autoloader

HPE StoreEver 1/8 G2 LTO-7 Ultrium 15000 SAS Tape Autoloader	N7P35A
HPE StoreEver 1/8 G2 LTO-7 Ultrium 15000 FC Tape Autoloader	N7P34A
HPE StoreEver 1/8 G2 LTO-6 Ultrium 6250 Fibre Channel Tape Autoloader	C0H19A
HPE StoreEver 1/8 G2 LTO-5 Ultrium 3000 SAS Tape Autoloader	BL536B

HPE MSL2024 Tape Library

HPE StoreEver MSL2024 0-drive Tape Library	AK379A

HPE MSL4048 Tape Library

HPE StoreEver MSL4048 0-drive Tape Library	AK381A

HPE StoreEver MSL6480

HPE StoreEver MSL6480 Scaleable Expansion Module	QU626A
HPE StoreEver MSL6480 Scalable Base Module	QU625A

HPE Disk Backup

HPE RDX Removable Disk Backup System

HP RDX+ 1TB External Backup System	B7B69B
HP RDX+ 500GB External Backup System	B7B66B
HPE RDX 2TB USB3.0 External Disk Backup System	E7X53B
HPE RDX+ 3TB USB 3.0 External Disk Backup System	P9L72A
HPE RDX 3TB USB 3.0 Internal Disk Backup System	P9L71A
HPE RDX 4TB USB 3.0 External Disk Backup System	Q2R33A
HPE D3700 Enclosure	QW967A

Additional Options

HPE D3600 Enclosure	QW968A
HPE RDX+ External Docking System	C8S07B

NOTE: For the complete range of RDX drives and media see: **https://www.hpe.com/us/en/product-catalog/storage/disk-based-backup-systems.html**, For hardware and software compatibility of HPE disk backup products see: **http://www.hpe.com/storage/spock**.

NOTE: Please see the **HPE RDX Removable Disk Backup System QuickSpecs** for additional part numbers, technical specifications, and additional information.

HPE StoreOnce Backup systems

HPE StoreOnce 3100 8TB System	BB913A
HPE StoreOnce 3540 24TB System	BB914A
HPE StoreOnce 5100 48TB System	BB915A
HPE StoreOnce 3520 12TB System	BB922A

HPE Storage Options	**Emulex Fibre Channel HBAs**	
	HPE 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AJ762B
	HPE 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ763B
	HPE StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	C8R38A
	HPE StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	C8R39A
	QLogic Fibre Channel HBAs	
	HPE 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AK344A
	HPE 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ764A
	HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter	QW971A
	HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter	QW972A
	Converged Network Adapter	
	HPE StoreFabric CN1100R Dual Port Converged Network Adapter	QW990A
	HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter	N3U52A
	HPE StoreFabric CN1200E 10Gb Converged Network Adapter	E7Y06A
	HPE StoreFabric CN1200E 10GBASE-T Dual Port Converged Network Adapter	N3U51A

HPE Data Center Racks	**HPE Advanced Series Racks**	
	HPE 48U 600mm x 1075mm Advanced Pallet Rack	H6J87A
	HPE 48U 600mm x 1075mm Advanced Shock Rack	H6J88A
	HPE 42U 600mm x 1075mm Advanced Pallet Rack	H6J65A
	HPE 42U 600mm x 1075mm Advanced Shock Rack	H6J66A
	HPE 42U 600mm x 1200mm Advanced Pallet Rack	H6J67A
	HPE 42U 600mm x 1200mm Advanced Shock Rack	H6J68A
	HPE 36U 600mm x 1075mm Advanced Pallet Rack	H6J77A
	HPE 36U 600mm x 1075mm Advanced Shock Rack	H6J78A
	HPE 22U 600mm x 1075mm Advanced Pallet Rack	H6J83A
	HPE 22U 600mm x 1075mm Advanced Shock Rack	H6J84A
	HPE 14U 600mm x 1075mm Advanced Shock Rack	H6J82A

NOTE: Please see the **HPE Advanced Series Racks QuickSpecs** for information on additional racks options and rack specifications.

Additional Options

HPE Enterprise Series Racks		
HP 47U 600mm x 1075mm Enterprise Pallet Rack		BW911A
HP 47U 600mm x 1075mm Enterprise Shock Rack		BW912A
HP 47U 600mm x 1200mm Enterprise Pallet Rack		BW913A
HP 47U 600mm x 1200mm Enterprise Shock Rack		BW914A
HPE 42U 600mm x 1075mm Enterprise Pallet Rack		BW903A
HP 42U 600mm x 1075mm Enterprise Shock Rack		BW904A
HP 42U 600mm x 1200mm Enterprise Pallet Rack		BW907A
HP 42U 600mm x 1200mm Enterprise Shock Rack		BW908A
HP 42U 800mm x 1075mm Enterprise Pallet Rack		BW917A
HP 42U 800mm x 1075mm Enterprise Shock Rack		BW918A

NOTE: Please see the **HPE Enterprise Series Racks QuickSpecs** for information on additional racks options and rack specifications.

HPE Power Distribution Units (PDUs)	**HPE Basic Power Distribution Units (PDU)**	
	HPE 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A

NOTE: Please see the **HPE Basic Power Distribution Units (PDU) QuickSpecs** for information on additional options and product specifications.

HPE Metered Power Distribution Units (PDU)

HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Horizontal NA/JP PDU	D9N44A
HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (16) C13/Vertical WW PDU	D9N45A
HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU	D9N47A
HPE Metered 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (3) C19/Vertical NA/JP PDU	D9N51A
HPE Metered 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (18) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU	D9N53A
HPE Metered 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N58A
HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (30) C13 (3) C19/Vertical NA/JP PDU	D9N61A
HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N62A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (24) C13 (3) C19/Vertical NA/JP PDU	D9N54A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N59A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	G9Z07A
HPE Metered 3Ph 19.9kVA/L22-30P 24A/277V Outlets (30) RF-203P-HP/Vertical NA PDU	D9N63A
HP Environmental Sensor for Remote Monitored and Managed PDUs	E2D53A

NOTE: Please see the **HPE Metered Power Distribution Units (PDU) QuickSpecs** for information on additional options and product specifications.

HPE Intelligent Power Distribution Unit (PDU)

HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (6) C19/Horizontal NA/JP	AF520A

Additional Options

PDU	
HPE Intelligent Modular 8.3kVA/CS8265C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF521A
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF522A
HPE Intelligent Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V (6) C19/Horizontal NA/JP PDU	AF523A
HPE Intelligent Modular 3Ph 17.3kVA/60309 30A 5-wire 24A/240V (6) C19/Horizontal NA/JP PDU	AF901A
HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 60A 4-wire 48A/208V (12) C19/Horizontal NA/JP PDU	AF535A
HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU	AF531A
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU	AF532A
HPE Intelligent Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF533A
HPE 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A
HPE 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A

NOTE: Please see the **HPE Intelligent Power Distribution Unit (PDU) QuickSpecs** for information on additional options and product specifications.

HPE Metered and Switched Power Distribution Units (PDU)

HPE Metered Switched 2.8kVA/L5-30P 24A/120V Outlets (24) 5-20R /Vertical NA/JP PDU	H8B48A
HPE Metered Switched 3.6kVA/60320 C20 Detachable 16A/230V Outlets (7) C13 (1) C19/Vertical WW PDU	H8B49A
HPE Metered Switched 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU	H8B50A
HPE Metered Switched 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (6) C19/Vertical NA/JP PDU	H8B52A
HPE Metered Switched 3Ph 8.6kVA/L21-30P 24A/208V Outlets (20)C13 (3)C19 (1)5-20R/Vertical NA/JP PDU	H8B53A
HPE Metered Switched 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	H8B55A
HPE Metered Switched 3Ph 17.3kVA/60309 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	H8B56A

NOTE: Please see the **HPE Metered and Switched Power Distribution Units (PDU) QuickSpecs** for information on additional options and product specifications.

NOTE: To learn more, please visit the **HPE Uninterruptible Power Systems (UPS) web page**.

HPE Rack Mount Consoles, KVM Switches, and Keyboards	**HPE Location Discovery Services**	
	HPE Location Discovery Services LCD8500 Kit	TL052A
	NOTE: Please see the **HPE Location Discovery Services QuickSpecs** for information on additional options and product specifications.	
	HPE Rack Mount Consoles	
	HP LCD8500 1U US Rackmount Console Kit	AF630A
	HP LCD8500 1U US TAA Rackmount Console Kit	AF645A
	HPE KVM Switches	

Additional Options

HP 0x1x8 G3 KVM Console Switch	AF651A
HP 0x2x16 G3 KVM Console Switch	AF652A
HP TAA 0x2x16 G3 KVM Console Switch	AF653A
HP USB Remote Access Key for G3 KVM Console Switches	AF650A
HPE KVM Console USB/Display Port Interface Adapter	AF654A
HPE KVM Console USB 8-pack Interface Adapter	AF655A
HP KVM Console USB Interface Adapter	AF628A
HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software	AF618A
HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software	AF619A
HP KVM Console USB 2.0 Virtual Media CAC Interface Adapter	AF629A
HP 1x4 USB/PS2 KVM Console Switch	AF611A
HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software	AF620A
HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software	AF621A
HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software	AF622A

NOTE: To learn more, please visit the **HPE KVM Switches web page**.

HPE USB Keyboard and Mouse

HPE USB US Keyboard/Mouse Kit	631341-B21

NOTE: Please see the **HPE USB Keyboard and Mouse QuickSpecs** for information on additional options and product specifications.

Rail Kits

HP 2U Small Form Factor Easy Install Rail Kit	733660-B21
HP 2U Cable Management Arm for Easy Install Rail Kit	733664-B21

HPE Other Options

HPE Rack LED Light Kit	BW939A
HP Kit LCD 1.83m Latch Display Port Cable	G7T29A

HPE Uninterruptible Power Systems (UPS)	**HPE DirectFlow Three Phase UPS**	
	Power Unit (1U UPS)	
	HPE R12000 DirectFlow - 1U Rackmount Uninterruptible Power System	G9Y75A
	HPE R12000 DirectFlow - POD 1U Rackmount Uninterruptible Power System	AF478A
	Input/Output Module Options for 1U UPS	
	HPE 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS IEC309 Input/Output Module	AF489A
	HPE 30A 480 Volt Three Phase NA R12000 DirectFlow UPS L22-30 Input/Output Module	AF491A
	HPE 30A 480 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	AF492A
	HPE 30A 400-415 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	G9Y76A
	Power Unit (2U UPS)	
	HPE R18000 DirectFlow - 2U Rackmount Uninterruptible Power System	AF479A
	Input/Output Module Options for 2U UPS	
	HPE 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF486A
	HPE 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF487A

Additional Options
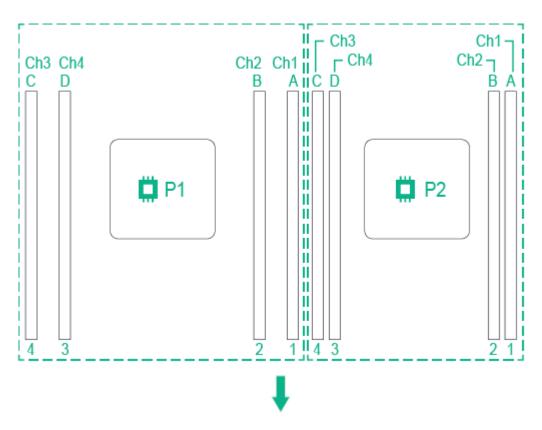
HPE 30A 400 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	D9Q02A
HPE 30A 400-415V Three Phase NA R18000 DirectFlow UPS 1:1 IEC309 Input/Output Module	AF484A

NOTE: All Input/Output Modules support dual output outlets except the AF484A.

HPE DirectFlow UPS Management Card	AF493A

Battery Pack Options

HPE DirectFlow UPS - 1U Rackmount Lithium-ion Battery Pack	AF480A
HPE DirectFlow UPS - 3U Rackmount VRLA Battery Pack	AF482A
HPE WW DirectFlow Secondary Battery Cable	AF497A

NOTE: Please see the **HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs** for information on additional options and product specifications.

HPE Tower UPS

HPE T750 G4 UPS Models

HPE T750 G4 NA/JP Uninterruptible Power System	J2P85A

HPE T1000 G4 UPS Models

HPE T1000 G4 NA/JP Uninterruptible Power System	J2P86A

HPE T1500 G4 UPS Models

HPE T1500 G4 NA/JP Uninterruptible Power System	J2P87A

HPE Rack-mountable UPS

HPE R/T2200 G4 UPS Models

HPE R/T2200 G4 NA/JP Uninterruptible Power System	J2R00A

HPE R/T3000 G4 UPS Models

HPE R/T3000 G4 Low Voltage NA/JP Uninterruptible Power System	J2R01A
HPE R/T3000 G4 High Voltage NA/JP Uninterruptible Power System	J2R02A

R1500 G4 Models

HPE R1500 G4 NA Uninterruptible Power System	J2Q99A

R7000 Uninterruptible Power System (UPS)

HPE R7000 4U 50A High Voltage NA/JP Uninterruptible Power System	AF462A

R5000 Uninterruptible Power System (UPS)

HPE R5000 3U L630 High Voltage NA/JP Uninterruptible Power System	AF460A

NOTE: Please see the **HPE Line Interactive Single Phase UPS QuickSpecs** for information on additional options and product specifications.

HPE UPS Options

HPE R/T2200 G4 Extended Runtime Module	J2R09A
HPE R/T3000 G4 Extended Runtime Module	J2R10A
HPE 2U Rack/Tower UPS Shipping Kit	L4Q11A

NOTE: To learn more, please visit the **HPE Uninterruptible Power Systems (UPS) web page**.

HPE USB and SD Options	**HPE Enterprise Mainstream Flash Media Kits for Memory Cards**	
	HPE 32GB microSD Mainstream Flash Media Kit	700139-B21
	HPE 8GB microSD Enterprise Mainstream Flash Media Kit	726116-B21
	HPE 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	737953-B21
	HPE Dual 8GB microSD Enterprise Midline USB Kit	741279-B21

Additional Options

HPE Support Services

Installation & Start-up Services

HPE Installation ML/DL Series 10 Service	U7WZ5E
HPE Startup ML/DL Series 10 Service	U7WZ7E

Foundation Care

HPE 3 year Foundation Care Next business day DL80 Gen9 Service	U7WG1E
HPE 3 year Foundation Care Next business day with DMR DL80 Gen9 Service	U7WG2E
HPE 3 year Foundation Care Next business day with CDMR DL80 Gen9 Service	U7WG3E
HPE 3 year Foundation Care 24x7 DL80 Gen9 Service	U7WG4E
HPE 3 year Foundation Care 24x7 wDMR DL80 Gen9 Service	U7WG5E
HPE 3 year Foundation Care 24x7 wCDMR DL80 Gen9 Service	U7WG6E

Proactive Care

HPE 3 year Proactive Care 24x7 DL80 Gen9 Service	U7WK1E
HPE 3 year Proactive Care 24x7 with DMR DL80 Gen9 Service	U7WK2E
HPE 3 year Proactive Care 24x7 with CDMR DL80 Gen9 Service	U7WK3E

Memory

Memory Population guidelines

General Memory Population Rules and Guidelines:

. Install DIMMs only if the corresponding processor is installed.

. If only one processor is installed in a two processor system, only half of the DIMM slots are available.

. To maximize performance, it is recommended to balance the total memory capacity between all installed processors and to load the channels similarly whenever possible.

. When two processors are installed, balance the DIMMs across the two processors.

. White DIMM slots denote the first slot to be populated in a channel.

. Do not mix RDIMMs or LRDIMMs.

. Quad rank RDIMMs are not supported in HPE ProLiant DL80 Gen9 servers.

. DIMMs of different speeds may be mixed in any order; the server will select a common optimal speed.

. The maximum memory speed is a function of the memory type, memory configuration, and processor model.

. The maximum memory capacity is a function of the memory type and number of installed processors.

. To realize the performance memory capabilities listed in this document, HPE SmartMemory is required.

Memory

Intel Gen9 Supported Memory Bandwidth for HPE ProLiant Gen9 Intel® Xeon® E5-2600v4 Series Processor Family

Memory Bandwidth and Capacity					
[DIMM Type]	**Registered DIMMs (RDIMMs)**				**Load Reduced (LRDIMMs)**
HPE SKU P/N	805347-B21	805349-B21	836220-B21	805351-B21	805353-B21
DIMM Rank	Single Rank	Single Rank	Dual Rank	Dual Rank	Dual Rank
DIMM Capacity	8GB	16GB	16GB	32GB	32GB
Voltage	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V
DRAM Depth [bit]	1G	2G	1G	2G	2G
DRAM Width [bit]	x8	x4	x4	x4	x4
DRAM Density	8Gb	8Gb	4Gb	8Gb	8Gb
CAS Latency	17-17-17	17-17-17	17-17-17	17-17-17	17-17-17
DIMM Native Speed (MT/s)	2400	2400	2400	2400	2400
SLOTS THAT CAN BE POPULATED					
8 slot servers	8	8	8	8	8
MAXIMUM CAPACITY (GB)					
	64	128	128	256	256
POPULATED DIMM SPEED (MT/s)					
1 DIMM Per Channel	2400	2400	2400	2400	2400
2 DIMM Per Channel	n/a	n/a	n/a	n/a	n/a
3 DIMM Per Channel	n/a	n/a	n/a	n/a	n/a

NOTE: DL80 has 1 DIMM per channel and hence 2 DIMMs and 3 DIMMs per channel memory speeds are not applicable on DL80.

Intel Gen9 Supported Memory Bandwidth for HPE ProLiant Gen9 Intel® Xeon® E5-2600v3 Series Processor Family

Memory Bandwidth and Capacity							
[DIMM Type]	**Registered DIMMs (RDIMMs)**					**Load Reduced (LRDIMMs)**	
HPE SKU P/N	726717-B21	726718-B21	759934-B21	726719-B21	728629-B21	726720-B21	726722-B21
DIMM Rank	Single Rank	Single Rank	Dual Rank	Dual Rank	Dual Rank	Dual Rank	Quad Rank
DIMM Capacity	4GB	8GB	8GB	16GB	32GB	16GB	32GB
Voltage	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V
DRAM Depth [bit]	512M	1G	512M	1G	1G	2G	2G

Memory

DRAM Width [bit]	x8	x4	x8	x4	x4	x4	x4
DRAM Density	4Gb	4Gb	4Gb	4Gb	4Gb	8Gb	8Gb
CAS Latency	15-15-15	15-15-15	15-15-15	15-15-15	15-15-15	15-15-15	15-15-15
DIMM Native Speed (MT/s)	2133	2133	2133	2133	2133	2133	2133
SLOTS THAT CAN BE POPULATED							
8 slot servers	8	8	8	8	8	8	8
MAXIMUM CAPACITY (GB)							
	32	64	64	128	256	128	256
POPULATED DIMM SPEED (MT/s)							
1 DIMM Per Channel	2133	2133	2133	2133	2133	2133	2133
2 DIMM Per Channel	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3 DIMM Per Channel	n/a	n/a	n/a	n/a	n/a	n/a	n/a

NOTE: DL80 has 1 DIMM per channel and hence 2 DIMMs and 3 DIMMs per channel memory speeds are not applicable on DL80.

DIMM slot and configuration diagram	**DIMM slot and configuration diagrams**

Basic memory slot & population diagram

- Population order; start with "A" first, "B" second, "C" third, etc.
- When one processor is installed, install DIMMs in sequential alphabetic order: A, B, C, D, E, F.
- When two processors are installed, install DIMMs in sequential alphabetic order: CPU1-A, CPU2-A,CPU1-B,CPU2-B,CPU1-C, CP2-C.

CPU #1 IS PROCESSOR ON LEFT - LOOKING FROM FRONT OF SERVER

	CPU 1			CPU 2	
	Slot #	Population order		Slot #	Population order
Chnl 1	1	A1		1	A1

	CPU 1			CPU 2	
	Slot #	Population order		Slot #	Population order
Chnl 2	2	B2		2	B2

	CPU 1			CPU 2	
	Slot #	Population order		Slot #	Population order
Chnl 4	3	D3		3	D3

	CPU 1			CPU 2	
	Slot #	Population order		Slot #	Population order
Chnl 3	4	C4		4	C4

Memory

Memory Speed by Processor Model	Processor Models	Supported Memory Speeds
	E5-2603v3, E5-2609v3	1600MT/s
	E5-2620v3, E5-2630v3, E5-2630Lv3, E5-2640v3, E5-2623v3	1866MT/s
	E5-2650v3, E5-2660v3, E5-2650Lv3	2133MT/s
	E5-2609v4, E5-2603v4	1866MT/s
	E5-2630Lv4, E5-2620v4, E5-2623v4, E5-2640v4, E5-2630v4	2133MT/s
	E5-2650Lv4, E5-2660v4, E5-2650v4	2400MT/s
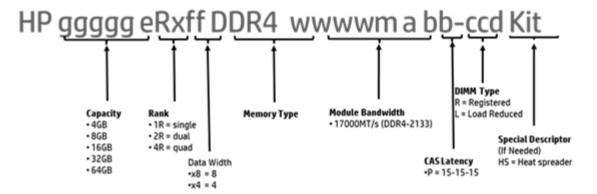
Standard and Maximum Memory Capacity (Pre-configured Models)	Pre-Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
	E5-2609v4, E5-2609v3, E5-2603v4	8GB (1x8GB)	232GB (7x32GB, 1x8GB)	256GB (8x32GB)
	E5-2603v3	4GB (1x4GB)	228GB (7x32GB, 1x4GB)	256GB (8x32GB)

DDR4 memory options part number decoder
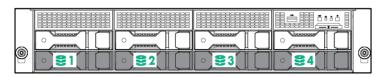
NOTE: Capacity references are rounded to the common gigabyte (GB) values:

- 2GB = 2,048MB
- 4GB = 4,096MB
- 8GB = 8,192MB
- 16GB = 16,384MB
- 32GB = 32,768MB
- 64GB = 65,536MB

HP ggggg eRxff DDR4 wwwwm a bb-ccd Kit

Capacity
- 4GB
- 8GB
- 16GB
- 32GB
- 64GB

Rank
- 1R = single
- 2R = dual
- 4R = quad

Data Width
- x8 = 8
- x4 = 4

Memory Type

Module Bandwidth
- 17000MT/s (DDR4-2133)

CAS Latency
- P = 15-15-15

DIMM Type
R = Registered
L = Load Reduced

Special Descriptor
(If Needed)
HS = Heat spreader

Storage

4-bay LFF non-hot-plug drive model

1-4   4 x LFF SATA Non-Hot Pluggable Hard Drive
             Bays

8-bay LFF non-hot plug drive model

1-8   8 x LFF SATA Non- Hot Pluggable Hard Drive
             Bays

8-bay LFF hot-plug drive model

1-8   8 x LFF SATA/SAS/SDD Hot Pluggable Hard Drive
             Bays

12-bay LFF hot-plug drive model

1-12   12 x LFF SATA/SAS/SDD Hot Pluggable Hard
             drive bays

Technical Specifications

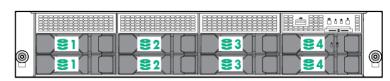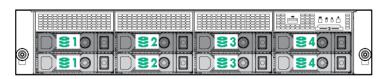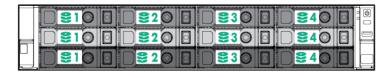| System Unit	Dimensions (with bezel)		3.45 x 18.98 x 24.97 in (8.75 x 44.55 x 60.7 cm)
	Weight (approximate)	Maximum:	47.6 lb (21.59 kg)
		Minimum:	36.58 lb (16.59 kg)
	Input Requirements (for Standard 460W PSU, see power specifications tables for detail on 460W, 750W and 1200W power supplies)	Rated Line Voltage	100 to 240 VAC
		Rated Input Current	For 550W Power Supply: 6.7 A (at 100 VAC) 3.3 A (at 100 VAC)
		Rated Input Frequency	47 to 63 Hz
		Rated Input Power	For 550 W Power Supply: < 670 W (at 100 VAC) < 660 W (at 200 VAC)
	BTU Rating	Maximum	For 550 W Power Supply: 2201 BTU/hr (at 100 VAC) 2153 BTU/hr (at 200 VAC)
	Power Specifications		To review typical system power ratings use the Power Advisor which is available via the online tool located at: **http://www.hpe.com/info/hppoweradvisor** - Click on the system of interest. Example: DL80 Gen9- Follow the instructions of the next screens.
	Power Supply Output	Rated Steady-State Power	For 550 W Power Supply: 550 W (at 100 VAC) 550 W (at 200 VAC)
		Maximum Peak Power	For 550 W Power Supply: 550 W (at 100 VAC) 550 W (at 200 VAC)
	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 with a fan fault or above 30°C (86°F).
		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.hpe.com/servers/ashrae**. System performance may be reduced if operating

Technical Specifications

		in the extended ambient operating range or with a fan fault.
		NOTE: Supports A3 extended ambient.
	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
Relative Humidity	Operating	Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity.
(non-condensing)	Non-operating	5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
Altitude	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457.2 m/min (1500 ft/min).

Acoustic Noise

Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) 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).

Idle

LWAd	Entry: 4.8 B
	Base: 4.7 B
LpAm	Entry: 34 dBA
	Base: 33 dBA

Operating

LWAd	Entry: 4.9 B
	Base: 4.9 B
LpAm	Entry: 34 dBA
	Base: 36 dBA

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

Emissions Classification (EMC)	FCC Rating	Class A
	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS14336-1; CNS13438; GB4943; GB9254; 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.

HPE Dynamic Smart	**Number of PCI links**	Four

Technical Specifications

Array B140i Controller	**PCI link rate**	4Gb/s	
	Storage protocol support	SATA	
	SAS/SATA peak data transfer rate	6Gb/s	
	Number of SAS/SATA links	10 links	
	SAS/SATA connectivity	2x4 connectors; 2x1 connectors	
	Expander support	No	
	Drives supported (max)	Up to 10 Internal Drives	
	RAID support	0, 1, 10, 5 SATA	
	Software management	HPE SSA, SMH, SIM	
	Warranty	Server warranty	
	HPE Secure Encryption license	Not Supported	
	HPE SmartCache License	Not Supported	
	HPE Smart Storage Administrator	Supported	

HPE Embedded Dual Port 361i Adapter	**Network Interface**	10Base-T/100Base-TX/1000Base-TX	
	Compatibility	IEEE 802.3 10Base-T	
		IEEE 802.3ab 1000Base-T	
		IEEE 802.3u 100Base-TX	
		IEEE 1588, IEEE 802.1AS	
		IEEE 802.3az - Energy Efficient Ethernet (EEE)	
	Data Transfer Method	PCI Express v 2.0, 5.0 GT/s, two lanes (x2)	
	Controller	Intel I350 Powerville	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s per port, 40 Mb/s combined
		10Base-T (Full-Duplex)	20 Mb/s per port, 80 Mb/s combined
		100Base-TX (Half-Duplex)	100 Mb/s per port, 400 Mb/s combined
		100Base-TX (Full-Duplex)	200 Mb/s per port, 800 Mb/s combined
		1000Base-TX (Half and Full-Duplex)	1000 Mb/s per port, 4000 Mb/s combined
	Connector	Two RJ-45	
	Cable Support	10 Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		10/100/1000 Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)

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://www.hpe.com/recycle
		The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard

Technical Specifications

Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

http://www.hpe.com/recycle

Summary of Changes

Date	Version History	Action	Description of Change
25-Sep-2017	From Version 24 to 25	Added	Added new SSD offering. Added new Storage options.
		Changed	Core Options and Additional Options were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
11-Jul-2017	From Version 23 to 24	Changed	Operating Systems and Virtualization Software Support for ProLiant Servers section was revised.
5-Jun-2017	From Version 22 to 23	Added	Added new Solid State Drive option.
8-May-2017	From Version 21 to 22	Added	Added support for ClearOS.
		Changed	Operating Systems and Virtualization Software Support for ProLiant Servers and HPE Drives were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
27-Mar-2017	From Version 20 to 21	Added	Added new Hard Drives.
17-Feb-2017	From Version 19 to 20	Changed	HPE Storage Options section was revised.
13-Feb-2017	From Version 18 to 19	Added	Added new HDD and SSD offering to the HPE Drives section.
		Changed	HPE Converged Infrastructure Management Software and HPE Drives were revised.
		Removed	SKUs 778640-B21 and 778641-B21 were removed from the Pre-configured Models section. Obsolete SKUs were removed from the HPE Processors section.
28-Nov-2016	From Version 17 to 18	Added	Added new Hard Drives offering.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
28-Oct-2016	From Version 16 to 17	Removed	Obsolete Hard Drives were removed from the QuickSpecs.
26-Sep-2016	From Version 15 to 16	Added	Added new 10TB SATA Hot Plug LFF drives offering and new 900W AC/ 240VDC power supply.
		Changed	HPE Power Supplies section was revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Jun-2016	From Version 14 to 15	Added	Power supply information was added to the Configuration Information - Factory Integrated Models section.
6-Jun-2016	From Version 13 to 14	Added	Added new HDD offering to the HPE Drives section.
		Changed	New options added to the HPE Disk Backup and HPE Storage Options.
8-Apr-2016	From Version 12 to 13	Changed	HPE Processors section was revised.
31-Mar-2016	From Version 11 to 12	Added	Added new HPE Smart Memory 2400 MHz memory, Intel Xeon E5-2600v4 processor support, new HPE Trusted Platform Module (TPM) 2.0, new 900W AC/ 240VDC power supply, new SATA Hot Plug Standard drives.
		Changed	Power Supply, Upgradeability, Embedded Management, Service and Support, Pre-configured Models, HPE Security, and Memory sections were

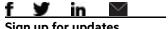## Summary of Changes

			revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
16-Feb-2016	From Version 10 to 11	Added	New HDD offering was added to HPE Drives.
		Changed	HPE Power Supplies, HPE Computation and Graphics Accelerators, HPE Data Center Racks, and HPE Power Distribution Units (PDUs) were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Dec-2015	From Version 9 to 10	Added	Smart Buy models were added to the NA version.
1-Dec-2015	From Version 8 to 9	Added	New options added to HPE Disk Backup, HPE Disk Storage Systems, and HPE Power Distribution Units (PDUs).
		Changed	On System Management Chipset, Maximum Internal Storage, Embedded Management, and Server utilities were revised. Product images were updated.
		Removed	Obsolete SKUs were removed from QuickSpecs.
28-Sep-2015	From Version 7 to 8	Added	Added new 6Gb SATA Solid State Drives. Added new HPE OneView management software.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Aug-2015	From Version 6 to 7	Added	New Solid State Drives offering was added to Core Options.
		Changed	Maximum Internal Storage was revised.
		Removed	Obsolete SKUs were removed from QuickSpecs.
10-Jun-2015	From Version 5 to 6	Added	Added new HPE Drives: HPE 8TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive HPE 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive HPE 8TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive HPE 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive
1-Jun-2015	From Version 4 to 5	Added	New Hard Drives were added to Core Options. Added new HPE Power Supplies options. Added new HPE OneView LTUs to HPE Converged Infrastructure Management Software. New RDX+ backup external backup options added to HPE Disk Backup.
		Changed	Core Options and Additional Options were revised.
		Removed	Obsolete SKUs were removed from QuickSpecs.
24-Apr-2015	From Version 3 to 4	Added	Added 813534-B21 and 813535-B21 to HPE Power Supplies.
30-Mar-2015	From Version 2 to 3	Added	New Hard Drives offering.

Summary of Changes

			Optional Software added to HPE Storage Controllers.
		Changed	HPE Memory, HPE Disk Storage Systems, HPE USB and SD Options, HPE Storage Controllers, and HPE Disk Storage Systems were updated.
9-Feb-2015	From Version 1 to 2	Added	Added HP Insight Software. Added new G4 UPS models.
		Changed	HPE Memory, HPE Tape Backup, HPE Disk Backup, HPE Rack Mount Consoles, KVM Switches, and Keyboards, and HPE Uninterruptible Power Systems (UPS) sections were revised.

hpe.com/qref/dl80gen9

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