QuickSpecs

Overview

HPE ProLiant XL750f Server

For ground-breaking research in science and engineering workloads such as climate modeling or manufacturing simulations, the HPE ProLiant XL750f Server advances the science of supercomputing. The ProLiant XL750f Server in the HPE Apollo 8000 System reaches new heights of performance density.

The ProLiant XL750f Server has a single 2P node per tray with two GPUs. Each node delivers performance density with Intel® Xeon® processors and NVIDIA® Tesla® GPUs, providing the processing power needed to handle a variety of demanding workloads. Supports up to 256Gb memory/node, with an optional SSD. One high performance FDR InfiniBand port per server and 1Gb NIC per server enhance connectivity and data availability.

The all new ProLiant XL750f Server with HPE ProActive Insight architecture delivers even greater levels of configurability for Supercomputing environments that require the highest possible performance density and cooling efficiency, with an eye toward energy recycling. Dry disconnect server trays provide liquid cooling via sealed copper tubes, with heat exchange via thermal bus bars in the rack. Delivering on the promise of server lifecycle automation, the ProLiant XL750f Server features the exclusive HPE Active Heath System and provides continuous, proactive, monitoring for over 1600 system parameters with zero impact to application performance.
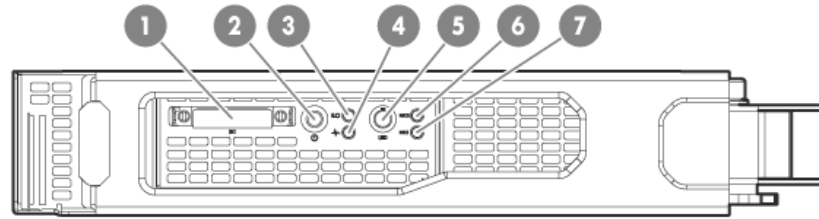
The HPE Apollo 8000 System Solution is comprised of the following components:

- One or more Apollo f8000 Racks with HPE ProLiant XL730f, XL740f and XL750f Gen9 Servers, one or more HPE Apollo 8000 iCDU Racks, and their associated onboard CDU control system.

- Primary plumbing interface assembly kit that connects the individual Apollo 8000 iCDUs Racks to the facility water system.

- Secondary plumbing system that connects the individual the Apollo f8000 Racks to the HPE Apollo 8000 iCDU Racks. This secondary closed loop system provides cooling for the Apollo f8000 Rack and isolates it from untreated, potentially incompatible primary water.

- High-speed (FDR) InfiniBand networking built into the Apollo f8000 Rack.

- Integrated 1GbE Ethernet switch built into the utility section of Apollo f8000 Rack.
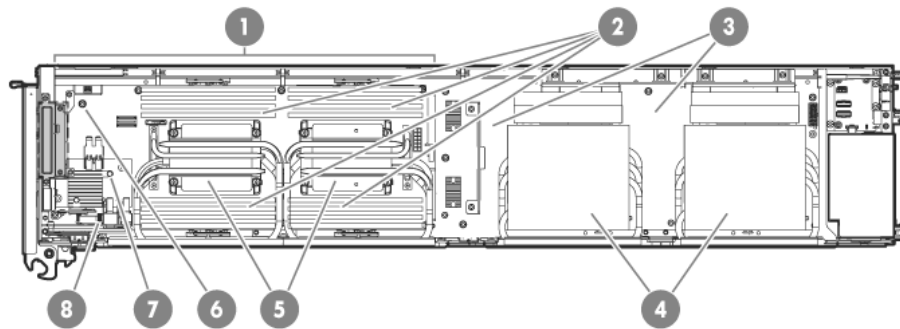
Overview

Front view of the ProLiant XL750f Server

Item Description

1. SUV (serial, USB, video) port
2. Power Switch
3. iLO LED
4. Health LED
5. UID LED
6. NIC2
7. NIC1

Item Description

1. Front Server
2. Sixteen (16) DDR4 DIMM slots per server
3. Riser for accelerator card
4. Two NVIDIA® Tesla® K40 XL GPUs
5. Two Intel® Xeon® E5-2600 processors
6. One optional (1) SSD
7. IB Adapter Kit
8. 1Gb Ethernet Adapter

Standard Features

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

Processor **One of the following**	**E5-2600v4 series Processors**

Performance Processors
NOTE: All support up to 2400MHz DDR4 memory speeds.

Intel® Xeon® E5-2667 v4 (3.2GHz/8-core/20MB/9.6GT-s QPI/135W, DDR4-2400, HT)
Intel® Xeon® E5-2680 v4 (2.4GHz/14-core/35MB/9.6GT-s QPI/120W, DDR4-2400, HT)
Intel® Xeon® E5-2683 v4 (2.1GHz/16-core/40MB/9.6GT-s QPI/120W, DDR4-2400, HT)
Intel® Xeon® E5-2690 v4 (2.6GHz/14-core/35MB/9.6GT-s QPI/135W, DDR4-2400, HT)
Intel® Xeon® E5-2695 v4 (2.1GHz/18-core/45MB/9.6GT-s QPI/120W, DDR4-2400, HT)
Intel® Xeon® E5-2697 v4 (2.3GHz/18-core/45MB/9.6GT-s QPI/145W, DDR4-2400, HT)
Intel® Xeon® E5-2697A v4 (2.6GHz/16-core/40MB/9.6GT-s QPI/145W, DDR4-2400, HT)
Intel® Xeon® E5-2698 v4 (2.2GHz/20-core/50MB/9.6GT-s QPI/135W, DDR4-2400, HT)
Intel® Xeon® E5-2699 v4 (2.2GHz/22-core/55MB/9.6GT-s QPI/145W, DDR4-2400, HT)

E5-2600v3 series Processors

Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/9.6GT-s QPI/105W, DDR4-2133, HT)
Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/9.6GT-s QPI/135W, DDR4-2133, HT)
Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/9.6GT-s QPI/120W, DDR4-2133, HT)
Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/9.6GT-s QPI/120W, DDR4-2133, HT)
Intel® Xeon® E5-2683v3 (2.0GHz/14-core/35MB/9.6GT-s QPI/120W, DDR4-2133, HT)
Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/9.6GT-s QPI/135W, DDR4-2133, HT)
Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/9.6GT-s QPI/120W, DDR4-2133, HT)
Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/9.6GT-s QPI/145W, DDR4-2133, HT)
Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/9.6GT-s QPI/135W, DDR4-2133, HT)
Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/9.6GT-s QPI/145W, DDR4-2133, HT)

NOTE: The processor specifications are the Intel values given at time of publication and are subject to change based on Intel information.

NOTE: HT indicates that the processor model supports Intel® Hyper-Threading Technology.

NOTE: DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

NOTE: Up to 2 processors supported. Mixing different processor models is not supported.

NOTE: For the Intel® C610 Chipset E5-2600 v4 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 2600x, 2 = number of CPUs in a Node, 6 is socket/segment designation, 00 = Processor SKU, and x = v4.

Cache Memory (One of the following depending on Model)	55MB (1x55MB) Level 3 **NOTE:** For Twenty-two-core processors.

55MB (1x55MB) Level 3
NOTE: For Twenty-two-core processors.
50MB (1x50MB) Level 3
NOTE: For Twenty-core processors.
45MB (1x45MB) Level 3
NOTE: For Eighteen-core processors.
40MB (1x40MB) Level 3
NOTE: For Sixteen-core processors.
35MB (1x35MB) Level 3
NOTE: For Fourteen-core processors.

Standard Features

	20MB (1x20MB) Level 3
	NOTE: For Eight-core processors.

Computational Accelerators	Each ProLiant XL750f server includes two NVIDIA® Tesla® K40 XL GPUs. Each GPU has 2880 CUDA cores, a maximum boost frequency of 928 MHz with peak performance of 1.78 double precision Tflops and 5.34 single precision Tflops, and 12 GB of GDDR5 memory. The maximum memory bandwidth is 288 GB/s and the card connects to the server through PCIe Gen3.

Chipset	Intel® C610 Series Chipset
	Intel® E5-2600 v4 Processor Family
	Intel® E5-2600 v3 Processor Family
	NOTE: For more information regarding Intel® chipsets, please see the following URL: **http://www.intel.com/products/server/chipsets/.**

HPE Server UEFI ROM The HPE ProLiant System BIOS is an EDK2 UEFI solution, and adheres to the latest revisions of UEFI Class 2 specifications, which supports both UEFI Boot Mode and Legacy BIOS Boot Mode. The HPE ProLiant XL750f Server defaults to UEFI Boot Mode and can be factory or field configured for Legacy BIOS Boot Mode if required.

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

To modify the server configuration ROM default settings, press F9 in the HPE ProLiant POST screen to enter the HPE UEFI System Utilities screen. By default, the System Utilities menus are in the English language.

NOTE: UEFI System Utilities support Legacy BIOS Boot Mode like HPE ROM-Based Setup Utility (RBSU). For more information, please visit **http://www.hpe.com/go/proliantuefi/docs**

UEFI enables numerous new capabilities, including both industry standard functionality and features specific to HPE ProLiant servers. The following are some of the features that UEFI enables and that the HPE ProLiant XL750f Server can support when configured for UEFI Boot Mode:

- Secure Boot - A new feature in which the system firmware, option card firmware, operating systems, and software collaborate to greatly enhance platform security.
- Support for > 2.2 TB (using GPT) boot drives - Such drives could previously only be used for boot drives when using RAID solutions such as HPE Smart Array.
- UEFI Shell - Provides a pre-boot environment for running scripts and tools. The HPE ProLiant UEFI Shell provides both standard capabilities as well as numerous enhancements.
- PXE boot support for IPv6 networks.
- PXE Multicast Boot allowing for faster PXE deployments for large numbers of servers.
- Boot support for option cards that only support a UEFI option ROM.

On System Management Processor	HPE iLO (Firmware: HPE iLO 4 v2.0)
	NOTE: For more information, visit: **http://www.hp.com/go/ilo**

Memory Protection	Advanced ECC (multi-bit error protection)
	Memory Online Spare Mode
	Memory Lock Step Mode
	Memory Mirroring Mode

Memory	Type	HPE SmartMemory
		DDR4 Registered (RDIMM)
	DIMM Slots Available	16 DIMM Slots available per server and 32 slots available per tray
	Maximum (RDIMM) (per server)	256GB (16 x16GB) Registered memory configurations

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. For additional information, please see the HPE SmartMemory QuickSpecs at:
http://h18000.www1.hpe.com/products/QuickSpecs/14225_div/14225_div.html

Standard Features

Network Controller	HPE Ethernet 1Gb 2-port 363i Adapter	
	HPE InfiniBand FDR/Ethernet 10/40Gb 2-port 544+A8L Adapter	
	NOTE: One 1GbE port and one port of FDR InfiniBand per server	
	NOTE: Each adapter interoperates with the corresponding Ethernet switch and InfiniBand switch via the HPE Apollo f8000 Rack infrastructure.	
Storage Controller	1x SATA 3 port from Embedded C610 Chipset controller for the embedded SSD.	
Internal Storage Devices	Diskette Drives	Via USB through the SUV port, external support only
	Optical Drives	Via USB through the SUV port, external support only
	Solid State Drives	One SSD per server
Maximum Internal Storage	SATA SFF SSD	960 GB	1x960 GB
	SATA SFF SSD	480 GB	1x480 GB
	SATA SFF SSD	240 GB	1x240 GB
	SATA SFF SSD	120 GB	1x120 GB
Interfaces **Server is the SUV port**	**Base Network**	Two 1GbE NIC ports per XL750f tray (one 1GbE NIC port per server)
	InfiniBand Interface	The ProLiant XL750f Server offers InfiniBand Adapter Kit.
	KVM	Serial USB Video Port (SUV)
	Micro SD	1 (internal)
	USB Ports	1 (internal)
	HPE iLO Remote Management Network Port	1 GbE dedicated internal port
	iLO LED	2 front
	Health LED	2 front
	Power	2 front
	UID	2 front
	Network LED	2 front

NOTE: The only interface that is front pluggable on the ProLiant XL750f

Industry Standard Compliance	ACPI 2.0b Compliant
	WOL Support
	PXE Support
	USB 1.1 and 2.0 Compliant
	SMBIOS 2.7.0
Tray Power Supply	Each ProLiant XL750f Server Tray comes equipped with a High Voltage to 12V Power converter to supply each server in the tray.
	Each power supply embedded on the ProLiant XL750f Server Tray is capable of providing 1200 W total and 600 W per server node.
Operating Systems	Red Hat Enterprise Linux (RHEL) **https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA5-1382ENW&cc=us&lc=en** SUSE Linux Enterprise Server (SLES) **http://h18004.www1.hpe.com/products/servers/linux/hplinuxcert.html**
	NOTE: Only 64-bit versions of these operating systems are supported.
	NOTE: For more information on the HPE Certified and Supported ProLiant Servers for OS and latest listing of software drivers available for your server including how to purchase from Hewlett Packard Enterprise, please visit our OS Support Site at: **http://www.hpe.com/go/ossupport** and our driver download page: **http://www.hpe.com/go/ProLiant/uefi**
Graphics	Integrated Matrox G200 video standard

- 1280 x 1024 (32 bpp)

Standard Features

- 1920 x 1200 (16 bpp)

HPE iLO 4 On System Management Memory

- 16 MB Flash
- 256 MB DDR 3 with ECC (112 MB after ECC and video)

Form Factor	The ProLiant XL750f Server is 1U, half-width.
Embedded Management	The ProLiant XL750f Server has a comprehensive set of embedded management features supporting the complete lifecycle of the server, from initial deployment, through ongoing management, to service alerting and remote support. These features come standard on all HPE ProLiant Gen9 servers. The HPE iLO Management Engine portfolio includes:

- HPE iLO: Monitor your servers for ongoing management, service alerting, reporting and remote management with iLO. Learn more at **http://www.hp.com/go/ilo**
- UEFI: Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at **http://www.hpe.com/go/ProLiant/uefi**
- Intelligent Provisioning: Provision servers by discovering and deploying one to few servers with Intelligent Provisioning. Learn more at **http://www.hp.com/go/intelligentprovisioning**
- Embedded Remote Support: HPE's embedded remote support, Insight Online direct connect or HPE Insight Remote Support, enables HPE ProLiant systems to directly link to phone home support without additional software or hardware and user's monitor their IT environment anywhere, anytime. Learn more at **http://www.hpe.com/go/insightonline/info**

HPE Server Utilities and Tools	HPE Smart Updates	Optimize firmware and driver updates with HPE Smart Update solutions. **http://www.hp.com/go/smartupdate**
	HPE Systems Insight Manager (HPE SIM)	HPE SIM allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers, and also provides you with basic support for non-Hewlett Packard Enterprise servers. Learn more at **http://www.hp.com/go/sim**
	Scripting Toolkits	Provision servers using your own scripts to discover and deploy servers at scale. Learn more at **http://www.hp.com/go/ProLiantSTK**
	HPE iLO Mobile Application	Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: **http://www.hp.com/go/ilo/mobileapp**
Security	Power-on password	
	Keyboard password	
	QuickLock, Network Server Mode	
	Serial interface control	
	Administrator's password	
	iLO 4 (Integrated Lights-Out 4) has 12 customizable user accounts and SSL encryption	
	iLO 4 can be disabled via a Global Setting	
	iLO Advanced supports directory services integration	
Warranty	This product is covered by a global limited warranty and supported by Hewlett Packard Enterprise Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners. Hardware diagnostic support and repair is available for one year from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Pointnext operational services or customized service agreements. Hard drives have either a one year or three year warranty.	

NOTE: Server Warranty includes 3 year Parts, 3 year Labor, 3-year on-site 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.

Standard Features

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://h18004.www1.hpe.com/products/servers/platforms/warranty/index.html**

Optional Features

Server & Infrastructure Management	**HPE iLO Advanced**	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. Learn more about HPE iLO Advanced at **http://www.hp.com/go/iloadvanced**
	HPE iLO Scale-Out	The license includes advanced power management, fast access through scripting tools and lower operational cost, in massive scale out environments, for maximum data center efficiency. Learn more about HPE iLO Scale-Out **http://www.hpe.com/go/ilo/scale-out**
	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/go/insightcontrol**
High Performance Clusters	**HPE Cluster Platforms**	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 HPC Server. A Cluster Platform Configurator simplifies ordering. **http://www.hpe.com/go/clusters**
	HPE HPC Interconnects	High Performance Computing (HPC) interconnect technologies are available for this server as part of the HPE Cluster Platform portfolio. These high-speed InfiniBand and Gigabit interconnects are fully supported by Hewlett Packard Enterprise when integrated within an HPE cluster. Flexible, validated solutions can be defined with the help of configuration tools. **http://www.hpe.com/techservers/clusters/ucp/index.html**
	HPE Insight Cluster Management Utility	HPE Insight Cluster Management Utility is a Hyperscale cluster management framework and suite of tools for large Linux clusters such as those found in High Performance Computing (HPC) environments. Learn more at **http://www.hp.com/go/cmu**
HPE Insight Online		HPE Insight Online is a new addition to the HPE Support Center for one stop, secure access to product and HPE support information personalized to your IT environment. Insight Online can automatically display devices remotely monitored by HPE Insight Remote Support. With Insight Online's easy navigation you can efficiently track your IT support contracts and device status from anywhere and at anytime. **http://www.hpe.com/go/insightonline/info**
Factory Express Portfolio for Servers and Storage		HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed. Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. Hewlett Packard Enterprise products supported through Factory Express include a wide array of servers and storage and HPE networking products. For more information on Factory Express services for the Apollo 8000 System model please contact your sales representative or go to: **http://www.hpe.com/go/factory-express**

Service and Support

Service and Support	**HPE Technology Services for Industry Standard Servers** 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. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time. Protect your business beyond warranty with HPE Pointnext operational services HPE Pointnext operational services enable you to order the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement for the term you select.
Optimized Services recommendation	**Optimized recommendation: Supports maintaining servers at optimum performance availability** Foundation Care 24x7, three-year Care Pack Service HPE Foundation Care 24x7 connects you to Hewlett Packard Enterprise 24 hours a day, seven days a week for assistance on resolving issues. Hardware onsite response within four hours if needed; collaborative software included in this Care Pack service provides troubleshooting assistance on industry leading software running on your HPE server. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions. **http://h20195.www2.hpe.com/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en**
Basic Support recommendation	**Basic support services: minimum support services recommendation** Foundation Care NBD, three-year Care Pack Service HPE Foundation Care Next Business Day connects you to Hewlett Packard Enterprise during business hours for assistance on resolving issues – features next business day hardware onsite response if needed and software call back within two hours. Collaborative software support is included and provides troubleshooting assistance on industry leading software running on your server. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions. **http://h20195.www2.hpe.com/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en**
Related Services	**HPE ProLiant Server Hardware Installation** Provides for the basic hardware installation of Hewlett Packard Enterprise branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner. **http://h20195.www2.hpe.com/V2/GetPDF.aspx/5981-9356EN.pdf** Factory Express for Servers and storage HP Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed. For more information on Factory Express services for your specific server model please contact your sales representative or go to: **http://www.hpe.com/go/factory-express**
Get connected to Hewlett Packard Enterprise to improve your support experience	Prevent problems with innovative, automated monitoring tools and proactive services. Combining Proactive Care Services with our remote support technology such as Insight Online provides you with expert advice and personalized, cloud-based automated IT support, helping to prevent unplanned down time and solve problems quickly. For more information, visit: **http://www.hp.com/go/proactiveinsightexperience**

Service and Support

HPE Support Center	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/go/hpsc** The HPE 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 Care Pack or Hewlett Packard Enterprise contractual support agreement **NOTE:** HPE Support Center Mobile App is subject to local availability
Parts and Materials	Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements. Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services. The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.
For more information	To learn more on HPE Apollo 8000 System, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit: **http://www.hpe.com/services/proliant**

Configuration Information - Factory Integrated Models

NOTE: The HPE Apollo 8000 System ships as a Configured-To-Order (CTO) product only.
The Apollo 8000 System consists of up to seventy-two (72) HPE ProLiant XL750f Gen9 Server Trays in a single HPE Apollo f8000 Rack, cooled by a single HPE Apollo 8000 iCDU Rack. The Apollo 8000 System is only sold as a Factory Integrated Model. To ensure only valid configurations are ordered, the sales system acts as a configurator. Contact your local sales representative for information on configurable product offerings and requirements. This section lists some of the steps required to configure a Factory Integrated Model of the Apollo 8000 System
NOTE: The Configure-To-Order Apollo 8000 System must include an Apollo f8000 Rack, an Apollo 8000 iCDU Rack, at least seventy-two (72) ProLiant XL750f Gen9 Server Trays and eight (8) HPE InfiniBand Switches for Apollo 8000.
NOTE: Configure-To-Order Apollo 8000 Systems start with the 144 ProLiant Servers part of 72 HPE ProLiant XL750f Gen9 Server Trays.
NOTE: FIO indicates that this option is only available as a factory installable option.

HPE ProLiant XL750f Server

Step 1. Choose a minimum of 72 HPE ProLiant XL750f CTO Servers or a combination of XL730f, XL740f, or XL750f Nodes per Apollo 8000 Rack Solution

HP ProLiant XL750f Gen9 1x Configure-to-order Server with 2x NVIDIA K40 XL GPU   778745-B21

NOTE: For more details on configuration of XL730f and XL740f, see respective QuickSpecs documentation.

Step 2. One xxxxxx-L21 and one corresponding xxxxxx-B21 processor kit for each CTO server node is required.

E5-2600v4 series Processors

Intel® Xeon® E5-2667 v4 (3.2GHz/8-core/20MB/9.6GT-s QPI/135W, DDR4-2400, HT) FIO Processor Kit	832739-L21
Intel® Xeon® E5-2667 v4 (3.2GHz/8-core/20MB/9.6GT-s QPI/135W, DDR4-2400, HT) Processor Kit	832739-B21
Intel® Xeon® E5-2680 v4 (2.4GHz/14-core/35MB/9.6GT-s QPI/120W, DDR4-2400, HT) FIO Processor Kit	832747-L21
Intel® Xeon® E5-2680 v4 (2.4GHz/14-core/35MB/9.6GT-s QPI/120W, DDR4-2400, HT) Processor Kit	832747-B21
Intel® Xeon® E5-2683 v4 (2.1GHz/16-core/40MB/9.6GT-s QPI/120W, DDR4-2400, HT) FIO Processor Kit	832728-L21
Intel® Xeon® E5-2683 v4 (2.1GHz/16-core/40MB/9.6GT-s QPI/120W, DDR4-2400, HT) Processor Kit	832728-B21
Intel® Xeon® E5-2690 v4 (2.6GHz/14-core/35MB/9.6GT-s QPI/135W, DDR4-2400, HT) FIO Processor Kit	832742-L21
Intel® Xeon® E5-2690 v4 (2.6GHz/14-core/35MB/9.6GT-s QPI/135W, DDR4-2400, HT) Processor Kit	832742-B21
Intel® Xeon® E5-2695 v4 (2.1GHz/18-core/45MB/9.6GT-s QPI/120W, DDR4-2400, HT) FIO Processor Kit	832725-L21
Intel® Xeon® E5-2695 v4 (2.1GHz/18-core/45MB/9.6GT-s QPI/120W, DDR4-2400, HT) Processor Kit	832725-B21
Intel® Xeon® E5-2697 v4 (2.3GHz/18-core/45MB/9.6GT-s QPI/145W, DDR4-2400, HT) FIO Processor Kit	832717-L21
Intel® Xeon® E5-2697 v4 (2.3GHz/18-core/45MB/9.6GT-s QPI/145W, DDR4-2400, HT) Processor Kit	832717-B21
Intel® Xeon® E5-2697A v4 (2.6GHz/16-core/40MB/9.6GT-s QPI/145W, DDR4-2400, HT) FIO Processor Kit	867764-L21
Intel® Xeon® E5-2697A v4 (2.6GHz/16-core/40MB/9.6GT-s QPI/145W, DDR4-2400, HT) Processor Kit	867764-B21
Intel® Xeon® E5-2698 v4 (2.2GHz/20-core/50MB/9.6GT-s QPI/135W, DDR4-2400, HT) FIO Processor Kit	832714-L21
Intel® Xeon® E5-2698 v4 (2.2GHz/20-core/50MB/9.6GT-s QPI/135W, DDR4-2400, HT) Processor Kit	832714-B21
Intel® Xeon® E5-2699 v4 (2.2GHz/22-core/55MB/9.6GT-s QPI/145W, DDR4-2400, HT) FIO Processor Kit	832711-L21
Intel® Xeon® E5-2699 v4 (2.2GHz/22-core/55MB/9.6GT-s QPI/145W, DDR4-2400, HT) Processor Kit	832711-B21

E5-2600v3 series Processors

Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/9.6GT-s QPI/135W, DDR4-2133, HT) FIO Processor Kit	800826-L21
Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/9.6GT-s QPI/135W, DDR4-2133, HT) Processor Kit	800826-B21
Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/9.6GT-s QPI/105W, DDR4-2133, HT) FIO Processor Kit	795572-L21
Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/9.6GT-s QPI/105W, DDR4-2133, HT) Processor Kit	795572-B21

Configuration Information - Factory Integrated Models

Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/9.6GT-s QPI/145W, DDR4-2133, HT) FIO Processor Kit	795560-L21
Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/9.6GT-s QPI/145W, DDR4-2133, HT) Processor Kit	795560-B21
Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/9.6GT-s QPI/135W, DDR4-2133, HT) FIO Processor Kit	795559-L21
Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/9.6GT-s QPI/135W, DDR4-2133, HT) Processor Kit	795559-B21
Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/9.6GT-s QPI/145W, DDR4-2133, HT) FIO Processor Kit	795558-L21
Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/9.6GT-s QPI/145W, DDR4-2133, HT) Processor Kit	795558-B21
Intel® Xeon® E5-2683v3 (2.0GHz/14-core/35MB/9.6GT-s QPI/120W, DDR4-2133, HT) FIO Processor Kit	795557-L21
Intel® Xeon® E5-2683v3 (2.0GHz/14-core/35MB/9.6GT-s QPI/120W, DDR4-2133, HT) Processor Kit	795557-B21
Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/9.6GT-s QPI/120W, DDR4-2133, HT) FIO Processor Kit	775162-L21
Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/9.6GT-s QPI/120W, DDR4-2133, HT) Processor Kit	775162-B21
Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/9.6GT-s QPI/135W, DDR4-2133, HT) FIO Processor Kit	775161-L21
Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/9.6GT-s QPI/135W, DDR4-2133, HT) Processor Kit	775161-B21
Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/9.6GT-s QPI/120W, DDR4-2133, HT) FIO Processor Kit	775160-L21
Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/9.6GT-s QPI/120W, DDR4-2133, HT) Processor Kit	775160-B21
Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/9.6GT-s QPI/120W, DDR4-2133, HT) FIO Processor Kit	775159-L21
Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/9.6GT-s QPI/120W, DDR4-2133, HT) Processor Kit	775159-B21

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.

Step 3. Must choose memory for each ProLiant XL750f Server Tray.

NOTE: Choose a minimum of 4 kits per server tray or a maximum of 16 kits per server tray. Choose in multiples of 4.

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

Registered DIMMs (RDIMMs) for E5-2600v3 Series

HPE 8GB (1x8GB) Single Rank x4 PC4-17000P (DDR4-2133) Registered Heat Spreader Memory Kit	778267-B21
HPE 16GB (1x16GB) Dual Rank x4 PC4-17000P (DDR4-2133) Registered Heat Spreader Memory Kit	778268-B21

Step 4. Must choose two Graphics Kits per XL750f Gen9 Server

HP NVIDIA Tesla K40 XL GPU FIO Kit	778025-B21

Step 5. Choose the SFF SSD for the server tray if desired.

NOTE: Choose a minimum of 0 kits or a maximum of 2 kits per server tray, must be ordered in pairs.
NOTE: If you choose to have SSDs in the server tray, both SSDs must be the same size.

HP SAS Special Hard Drive	745794-B21
HP 80GB 6G SATA 2.5in VE Non Hot-plug Solid State Drive	744683-B21

Step 6. Choose a hard drive enablement kit for the SSD.

NOTE: Choose an enablement kit if you have selected to have a drive from Step 4 above.

HP XL7x0f Solid State Drive Enablement Kit	777899-B21

Step 7. Choose the required network solution.

NOTE: Each ProLiant XL750f Server Tray must ship with a network adapter.

HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+A8L Adapter	778509-B21

Configuration Information - Factory Integrated Models

HPE Apollo f8000 RackChoose the Apollo f8000 Racks.

For 1-72 Server Trays, a single Apollo f8000 Rack is required. For more information, please see the HPE Apollo f8000 Rack QuickSpecs.

Step 8. Choose one of each of the following.

NOTE: Choose a minimum of 2 kits or a maximum of 2 kits per top or bottom of each Apollo f8000 Rack, must be ordered in pairs.

HPE Special Delivery Request/Equipment	774057-B21
HPE XL7x0f IB FDR Switch FIO Tray	774059-B21

Step 9. Choose the infrastructure kits to support the Apollo f8000 Rack.

NOTE: Choose a minimum of 2 kits or a maximum of 2 kits per top or bottom of each Apollo f8000 Rack, must be ordered in pairs.

HPE Special Delivery Request/Equipment	774057-B21
HPE XL7x0f IB FDR Switch FIO Tray	774059-B21

Step 10. Choose the rack plumbing kit for each Apollo f8000 Rack.

NOTE: This item ships separately and is not factory integrated.

HP Apollo f8000 Rack Plumbing Kit	J1P10A

Step 11. Choose a power meter for each Apollo f8000 Rack, one per rack.

HP 480VAC Watertight FIO Power Meter	779240-B21
HP 415VAC FIO Power Meter Kit	779245-B21

HPE Apollo 8000 iCDU Rack

This cooling rack requires special site considerations, which can be understood with the *HPE Apollo 8000 System Site Preparation Guide* available from your HPE advisor. A single Apollo iCDU Rack can support up to four Apollo f8000 Racks. Please see the Apollo 8000 iCDU Rack QuickSpecs for additional information.

Choose the Apollo 8000 iCDU Racks. For 1-4 Apollo f8000 Racks an Apollo 8000 iCDU Rack is required.

Step 12. Choose one of each of the rack bottoms.

NOTE: The Top and Bottom Rack must be ordered together.

HP Apollo 8000 iCDU Top Rack	J1P09A

HP Apollo 8000 iCDU Top Rack (J1P09A) is included as default with the Bottom iCDU Rack selection

HP Apollo 8000 iCDU Bottom Rack	J1P08A
HP Apollo 8000 iCDU International Bottom Rack	J1P08B

Step 13. Choose the plumbing kits required.

NOTE: Plumbing kits ship separately and are not factory integrated

HP Apollo 8000 iCDU Rack Plumbing Kit	J1P12A

NOTE: This Kit is required for each rack.

HP Apollo 8000 Secondary Plumbing Kit	J1P14A

Configuration Information - Factory Integrated Models

NOTE: One Apollo 8000 Secondary Plumbing Kit can support up to 3 full racks of any combination: an Apollo 8000 iCDU (Top and Bottom) or an Apollo f8000 (Top and Bottom) Rack.. A maximum of two can be ordered

HP Apollo 8000 End Assembly Kit	J1P15A

NOTE: One Apollo 8000 end plumbing kit maximum per rack.

Step 14. Choose a power meter for the Apollo 8000 iCDU Rack.

HP 480VAC Watertight FIO Power Meter	779240-B21
HP 415VAC FIO Power Meter Kit	779245-B21

Step 15. Choose other rack options.

HP Apollo Rack Ramps Packaging Kit	778975-B21

NOTE: One HPE rack ramps kit per site needed for deployment as determined by Site Analysis.

HPE FlexFabric 5900AF 48XG 4QSFP+ Switch	JC772A

NOTE: A minimum of 0 and a maximum of 6 per Bottom iCDU Rack and a minimum of 0 and a maximum of 22 per Top iCDU Rack.

HPE 58x0AF 650W AC Power Supply	JC680A

NOTE: One for every switch ordered above.

HPE A58x0AF Back (power side) to Front (port side) Airflow Fan Tray	JC682A

NOTE: Two for every switch ordered above.

Core Options

HPE Memory	**HPE SmartMemory**	
	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
	HP 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	805351-B21
	HPE 16GB (1x16GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit	836220-B21
	Registered DIMMs (RDIMMs) for E5-2600v3 Series	
	HP 8GB (1x8GB) Single Rank x4 PC4-17000P (DDR4-2133) Registered Heat Spreader Memory Kit	778267-B21
	HP 16GB (1x16GB) Dual Rank x4 PC4-17000P (DDR4-2133) Registered Heat Spreader Memory Kit	778268-B21

NOTE:NOTE: For additional information, please see the HPE SmartMemory QuickSpecs at: http://h18000.www1.hpe.com/products/QuickSpecs/14225_div/14225_div.html

NOTE: HPE certified SmartMemory must be used.

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

NOTE: The Apollo System requires heat spreaders on the DIMMs for the ProLiant XL750f Servers. These are installed directly on the DIMM itself. These DIMMs are specifically for the ProLiant XL750f Servers and should not be used in any other server.

HPE Hard Drives	**NOTE:** The components of a storage subsystem (e.g., the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.	
	HP SAS Special Hard Drive	745794-B21
	HP 80GB 6G SATA 2.5in VE Non Hot-plug Solid State Drive	744683-B21
HPE InfiniBand	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+A8L Adapter	778509-B21

NOTE: Dual port ConnectX-3 FDR/QDR IB or 40/10GbE. No IB Enablement Kit required.

NOTE: Please see the QuickSpecs for additional information: **http://h18000.www1.hpe.com/products/QuickSpecs/13078_div/13078_div.html**

NOTE: Please see the QuickSpecs for additional information: **http://h18000.www1.hpe.com/products/QuickSpecs/13078_div/13078_div.html**

Additional Options

HPE Insight Software	HPE Insight Control	
	HPE Insight Cluster Management Utility 1yr 24x7 Flexible LTU	QL803B
	HPE Insight Cluster Management Utility Media	BD477A
	Integrated Lights-Out (iLO)	
	HPE iLO Scale Out	
	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 1yr 24x7 Tech Support and Updates Flexible Quantity LTU	BD778A
	HPE iLO Scale-Out including 1yr 24x7 Tech Support and Updates Tracking LTU	BD779A
	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
	HP iLO Advanced 1 Server with 3yr 24x7 Technical Support and Updates LTU	G6F49A

NOTE: Licenses ship without media. The Media Kit for Insight Control for Linux can be ordered separately, or can be downloaded at: **http://www.hpe.com/go/ic-linux** (click on Download button).

NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single set of activation keys.

NOTE: For additional license options please see the QuickSpecs at: **http://h18000.www1.hpe.com/products/QuickSpecs/13019_div/13019_div.html**

	HPE Integrated Lights-Out (iLO) Advanced for ProLiant	
	HPE iLO Advanced including 1yr 24x7 Technical Support and Updates 1-server LTU	512485-B21
	HPE iLO Advanced including 1yr 24x7 Technical Support and Updates Flexible Quantity LTU	512486-B21
	HPE iLO Advanced including 1yr 24x7 Technical Support and Updates Tracking LTU	512487-B21
	HP iLO Advanced including 1yr 24x7 Technical Support and Updates Electronic License	TA850AAE
	HPE iLO Advanced including 3yr 24x7 Tech Support and Updates 1-server LTU	BD505A
	HPE iLO Advanced including 3yr 24x7 Tech Support and Updates Flexible Quantity LTU	BD506A
	HP iLO Advanced Electronic License with 3yr 24x7 Tech Support and Updates	BD506AAE
	HPE iLO Advanced including 3yr 24x7 Tech Support and Updates Tracking LTU	BD507A

NOTE: For additional license options please see the QuickSpecs at: **http://h18004.www1.hpe.com/products/QuickSpecs/14276_div/14276_div.html**

Additional Options

High Performance Clusters	HPE Cluster Management Utility	
	HPE Insight Cluster Management Utility 1yr 24x7 Flexible LTU	QL803B
	HPE Insight Cluster Management Utility 3yr 24x7 Flexible LTU	BD476A

NOTE:NOTE: These part numbers can be used to purchase one certificate for multiple licenses and support with a single activation key. Each license is for one node (server). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key. Customer also will receive a support agreement.

	HPE Insight Cluster Management Utility Media	BD477A

HPE USB and SD Options	HPE Flash Media Kits for USB Drives	
	HP 2GB USB Flash Media Drive Key Kit	608447-B21
	HPE 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	737953-B21
	HPE Enterprise Mainstream Flash Media Kits for Memory Cards	
	HPE 8GB microSD Enterprise Mainstream Flash Media Kit	726116-B21
	HPE 32GB microSD Mainstream Flash Media Kit	700139-B21

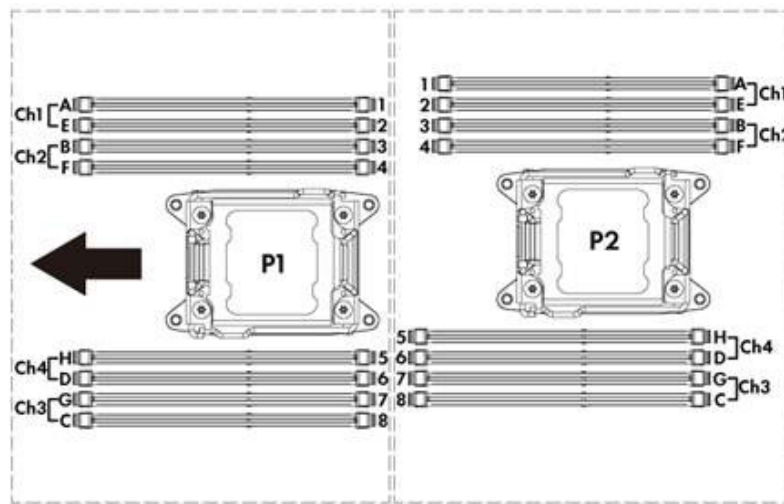|		
	Other USB and SD Options	
	HPE 36pin Serial/USB/VGA Dongle Cord Kit	676277-B21

Memory

HPE ProLiant XL750f Server
DDR4 memory population guidelines
For detailed memory configuration rules and guidelines, please use the Online DDR4 Memory Configuration Tool:
http://www.hp.com/go/ddr4config

Each Intel® Xeon® E5-2600 family processor socket contains four memory channels that support two DIMMs each for a total of eight (8) DIMM per installed processor or a grand total of sixteen (16) DIMMs for the server. Up to 16GB capacity DIMMs are supported for 256GB of memory (16 DIMM slots x 16GB per DIMM).

Memory Population Rules and Guidelines:

- White DIMM slots denote the first slot of a channel. For 1 DPC (DIMM per channel) populate white slots only.
- 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.
- Populate DIMMs from heaviest load (quad-rank) to lightest load (single-rank) within a channel.
- Heaviest load (DIMM with most ranks) within a channel goes furthest from the processor.
- RDIMMs operating at either 1.35V or 1.5V may be mixed in any order, but the system will power them at the higher voltage.
- 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.
- HPE memory from previous generation servers is not qualified on the ProLiant XL750f Server. Certain HPE SmartMemory features such as memory authentication and enhanced performance may not be supported.
- To realize the performance memory capabilities listed in this document, HPE SmartMemory is required. For additional information, please see the HPE SmartMemory QuickSpecs at:
  http://h18000.www1.hpe.com/products/QuickSpecs/14225_div/14225_div.html

For memory population rules and additional memory guidelines, please see the ProLiant XL750f User Guide at
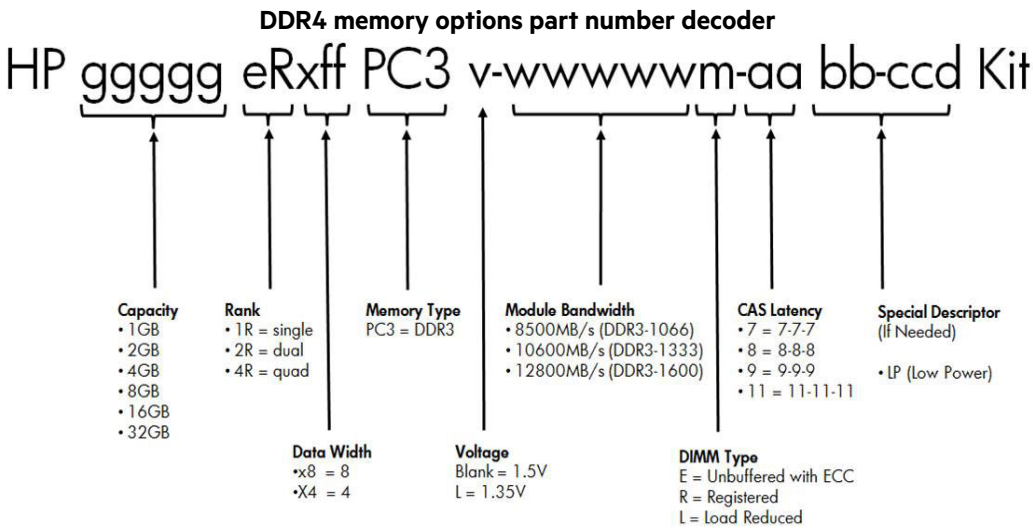**http://www.hpe.com/support.**

Additional Options

HPE ProLiant XL750f Server

NOTE: Capacity references are rounded to the common Gigabyte values:

- 8GB = 8192MB
- 16GB = 16384MB

DDR4 memory options part number decoder

HP ggggg eRxff PC3 v-wwwwwm-aa bb-ccd Kit

Capacity
- 1GB
- 2GB
- 4GB
- 8GB
- 16GB
- 32GB

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

Data Width
- x8 = 8
- X4 = 4

Memory Type
PC3 = DDR3

Module Bandwidth
- 8500MB/s (DDR3-1066)
- 10600MB/s (DDR3-1333)
- 12800MB/s (DDR3-1600)

Voltage
Blank = 1.5V
L = 1.35V

CAS Latency
- 7 = 7-7-7
- 8 = 8-8-8
- 9 = 9-9-9
- 11 = 11-11-11

DIMM Type
E = Unbuffered with ECC
R = Registered
L = Load Reduced

Special Descriptor
(If Needed)

- LP (Low Power)

Technical Specifications

Server Tray	Tray Dimensions (H x Wx D)	1.69 x 8.15 x 39.02 in (42.93 x 207.01 x 991.10 mm)	
	Weight (approximate)	Maximum	24.72 lb (11.21 kg)
	Input Requirements (per power supply)	Power input provided by HPE Apollo f8000 Rack	
	Power Supply Output (per power supply)	Rated Steady-State Power	600W per server
	System Inlet Temperature	Operating	50° to 95° F (10° to 35° C) at sea level with an altitude derating of 1.8°F per every 1000 ft (1.0°C per every 304.8 m) above sea level to a maximum of 10,000 ft (3048 m), no direct sustained sunlight. Maximum rate of change is 18°F/hr (10°C/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 86°F (30°C).
		Non-operating	-22° to 140° F (-30° to 60° C) Maximum rate of change is 36°F/hr (20°C/hr).
	Altitude	Operating	10,000 ft (3048 m). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 1500 ft/min (457 m/min).
		Non-operating	30,000 ft (9144 m). Maximum allowable altitude change rate is 1500 ft/min (457 m/min).
	Emissions Classification (EMC)	FCC Rating	Class A
		Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1

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

HPE Inifiniband FDR/Ethernet 10Gb/40Gb 2 port 544 AL Adapter	Network Interface	InfiniBand QDR, FDR10, and FDR; Ethernet 10 or 40 Gb/sec	
	Compatibility	IEEE 802.1AS IEEE1588	
		IEEE 802.3az	
	Data Transfer Method	PCI Express v 3 x8 adapter	
	Controller	Mellanox Connect X-3 Pro	
Environment-friendly Products and Approach	End-of-life Management and Recycling	Hewlett Packard Enterprise offers end-of-life Hewlett Packard Enterprise product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to **http://www.hp.com/go/green**recycle your product, please go to: **http://www.hp.com/go/green** or contact your nearest Hewlett Packard Enterprise sales office. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner. The EU	

Technical Specifications

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 at: **http://www.hp.com/go/green** To These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

Date	Version History	Action	Description of Change
23-Oct-2017	Version 7	Changed	Care Pack naming and Service and Support- Parts and Materials updated.
12-May-2017	From version 5 to 6	Updated	Update the memory and the Standard Features
17-Feb-2017	From version 4 to 5	Updated	Update information on technical specifications
15-Aug-2016	From version 3 to 4	Changed	Updated Broadwell processors
17-Aug-2015	From version 2 to 3	Changed	Change broken link from the memory-configuration
03-Mar-2014	From version 1 to 2	Changed	Updates throughout the QuickSpecs
01-Dec-2014	Version 1	Created	Created the QuickSpecs for HPE ProLiant XL750f Gen9

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

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