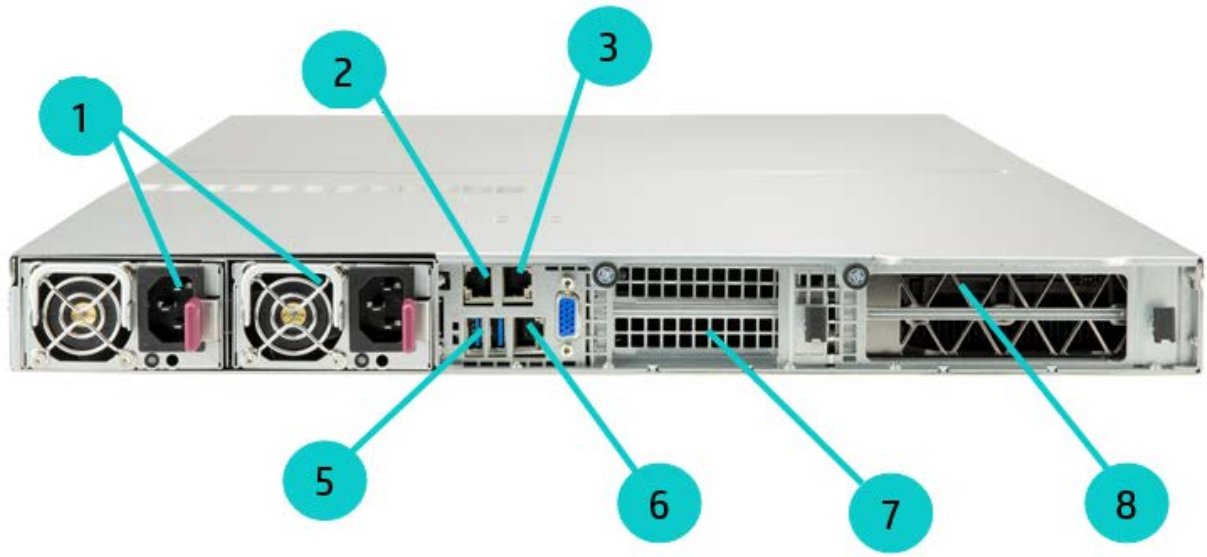
Overview

HPE Apollo pc40 Server

The HPE Apollo pc40 Server features up to four NVIDIA Tesla PCIe graphic processing units (GPUs) to accelerate mixed-application, GPU-accelerated HPC workloads. The PCIe form factor can allow for a greater selection of accelerators and GPUs than alternate form factors.

Optimize the server for required workloads by choosing from the available CPUs in the Intel Xeon Processor Scalable Family, up to twelve 2666MHz DDR4 DIMMs, optional network adapters, and up to two SFF hard drives or solid state drives.

Fully integrated and factory tested clusters are delivered with a complete cluster management software stack to simplify deployment and management, and can be custom configured for perfect right-sizing.

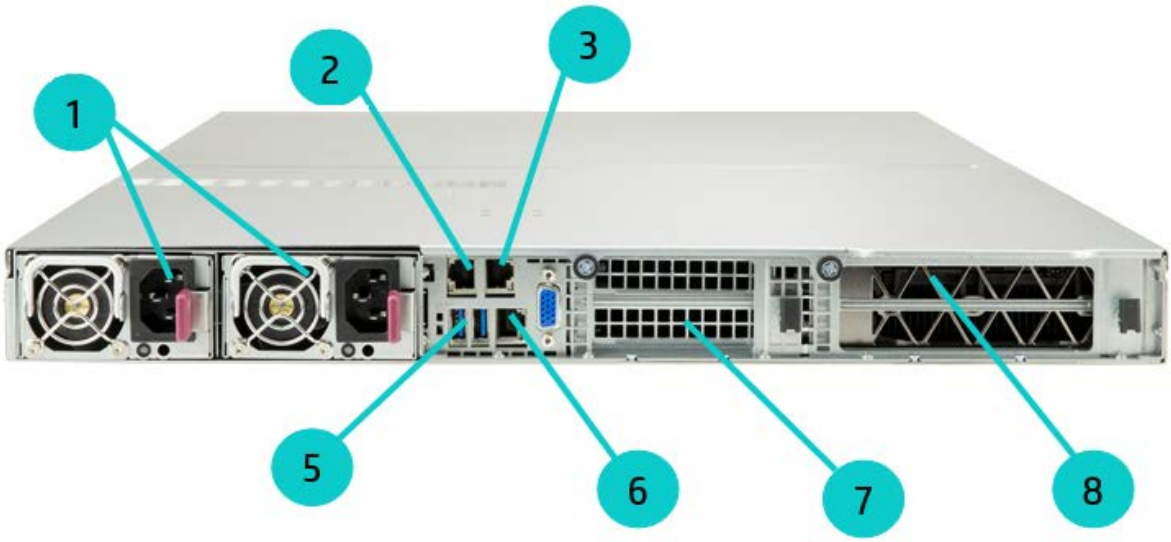


Front View

Item Description

1.- HPE Apollo pc40 Chassis (1U)
2.- 2 SFF Hot-swap SATA Drive Bays
3.- Internal Fans
4.- Unit Identification (UID) LED/button
5.- Power Button
6.- Status LEDs

Overview

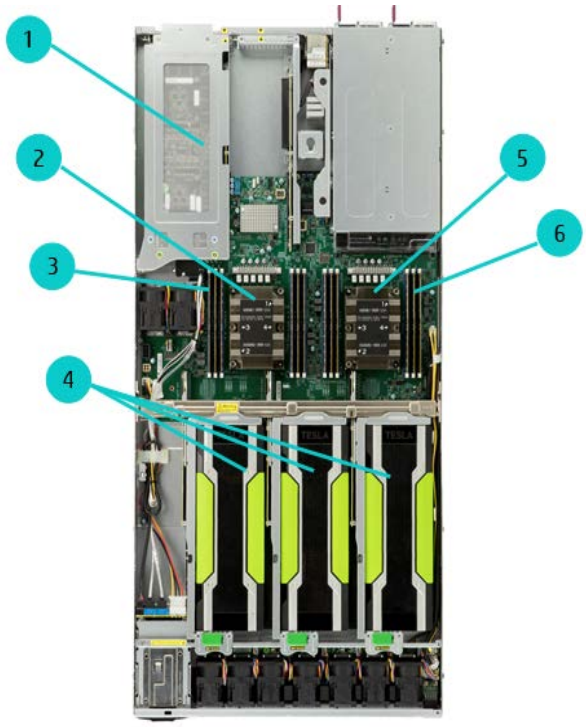


Rear View

Item Description

1.- Two 2000W titanium level power Supplies
2.- Embedded 1Gb NIC 1
3.- Embedded 1Gb NIC 2
4.- Full height PCIe Gen3 x16 slot
5.- Two USB 3.0 Connectors
6.- Dedicated IPMI LAN port
7.- Full height PCIe Gen3 x16 slot
8.- Full height PCIe Gen3 x16 slot

Overview



Top View

Item Description

1.- FHFL PCIe Gen3 x16 slot

2.- Processor 1

3.- DIMMs for processor 1

4.- FHFL PCIe 3 x16 slots for GPUs

5.- Processor 2

6.- DIMMs for processor 2

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

Standard Features

Intel® Xeon® Processor Scalable Family Processors (Please follow product offering to fill out processor SKU)

Model	CPU frequency	Cores	L3 Cache	Power	UPI	DDR4 Hz
Intel® Xeon® Processor Scalable Family 8176	2.1GHz	28	38.5	165W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 8170	2.1GHz	26	35.75	165W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 8164	2.0GHz	26	35.75	150W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 8160	2.1GHz	24	33	150W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 8153	2.0GHz	16	22	125W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 8158	3.0GHz	12	16.5	150W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 8156	3.6GHz	4	5.5	105W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6152	2.1GHz	22	30.25	140W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6150	2.7GHz	18	24.75	165W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6148	2.4GHz	20	27.5	105W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6142	2.6GHz	16	22	105W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6140	2.3GHz	18	24.75	65W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6138	2.0GHz	20	27.5	135W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6136	3.0GHz	12	16.5	90W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6134	3.2GHz	8	11	135W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6132	2.6Ghz	14	19.25	85W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6130	2.1GHz	16	22	85W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6128	3.4GHz	6	8.25	85W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 6126	2.6GHz	12	16.5	85W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 5120	2.2GHz	14	19.25	85W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 5118	2.3GHz	12	16.5	85W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 5122	3.6GHz	4	5.5	85W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 5115	2.4GHz	10	13.75	85W	10.4GT/s	2666
Intel® Xeon® Processor Scalable Family 4116	2.1GHz	12	16.5	55W	9.6GT/s	2666
Intel® Xeon® Processor Scalable Family	2.2GHz	10	13.75	85W	9.6GT/s	2666

Standard Features

4114						
Intel® Xeon® Processor Scalable Family 4112	2.6GHz	4	5.5	90W	9.6GT/s	2666
Intel® Xeon® Processor Scalable Family 4110	2.1GHz	8	11	135W	9.6GT/s	2666
Intel® Xeon® Processor Scalable Family 4108	1.8GHz	8	11	65W	9.6GT/s	2666
Intel® Xeon® Processor Scalable Family 3106	1.7GHz	8	11	105W	9.6GT/s	2666
Intel® Xeon® Processor Scalable Family 3104	1.7GHz	6	8.25	105W	9.6GT/s	2666

Chipset

Intel® C620 Series Chipset

NOTE: For more information regarding Intel® chipsets, please see the following URL: **http://www.intel.com/products/server/chipsets/**.

Memory

Type	DDR4 Load Reduced (LRDIMM), or Registered (RDIMM)
DIMM Slots Available	12 DIMM Slots available
Maximum (LRDIMM)	1.5TB (12 x 128GB)

NOTE: LRDIMM and RDIMM are distinct memory technologies and cannot be mixed within a server.
NOTE: Fully populate 6 memory channels per processor at 1 DIMM per channel.

Network Controller

Ethernet Options
HPE Ethernet 10Gb 2-port 535T Adapter
HPE Ethernet 10Gb 2P 571SFP+ Adptr
HPE Ethernet 10Gb 2P 561T Adptr
InfiniBand Options
HPE IB EDR/EN 100Gb 1P 840QSFP28 Adptr
HPE IB EDR/EN 100Gb 2P 840QSFP28 Adptr
HPE 100Gb 1p OP101 QSFP28 x16 OPA Adptr

Maximum Internal Storage

HPE 1TB SATA 7.2K SFF ST 512n DS HDD	2 x 1TB
HPE 2TB SATA 7.2K SFF ST 512e DS HDD	2 x 2TB
HPE 240GB SATA RI SFF ST DS SSD	2 x 240GB
HPE 480GB SATA RI SFF ST DS SSD	2 x 480GB
HPE 960GB SATA RI SFF ST DS SSD	2 x 960GB
HPE 1.92TB SATA RI SFF ST DS SSD	2 x 1.92TB
HPE 3.84TB SATA RI SFF ST DS SSD	2 x 3.8TB

Interfaces

USB Ports	2 USB 3.0 (external)
Remote Management Port	Dedicated IMPI port
Status LED	1
Power	1
UID	1

Industry Standard Compliance

ACPI 2.0b Compliant
PCIe 3.0 Compliant
PXE Support
USB 1.1,2.0 and 3.0 Compliant

Power Specifications

To review typical system power ratings use the HPE Power Advisor which is available via the online tool located at URL: **http://www.hp.com/go/hppoweradvisor.**

Standard Features

NOTE: Power Specification and Technical Content for supported power supplies can be found at **http://www8.hp.com/h20195/v2/gethtml.aspx?docname=c04111541**

Operating Systems and Virtualization Software Support for HPE Apollo Servers	Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) CentOS	
Graphics	Integrated Matrox G200 video standard • 1280 x 1024 (32 bpp) • 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 Apollo pc40 is a 1U server	
Embedded Management	UEFI	Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at http://www.hp.com/go/ProLiant/uefi.
	Intelligent Provisioning	Provision servers by discovering and deploying 1 to few servers with Intelligent Provisioning. Learn more at **http://www.hp.com/go/intelligentprovisioning**.
Security	Power-on password Keyboard password Serial interface control Administrator's password	

Warranty

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 (may vary by region). 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 Care Pack 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. 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** **NOTE:** In Asia Pacific, Japan and China, Server Warranty includes 3 years Parts, 3 year Labor, 3-year Onsite support with next business day response
HPE Insight management software	HPE Insight Control	HPE Insight Control, a product option, delivers essential infrastructure management that can help save time and money by making it easy to 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** HPE Insight Control includes one year of 24 x 7 HPE Software Technical Support and Update Service ensuring rapid access to Hewlett Packard Enterprise support staff and proactive delivery of software updates. For more information about this service, see: **http://www.hpe.com/services/insight**.
High Performance Clusters	HPE Cluster Platforms	HPE Cluster Platforms are specifically engineered, factory-integrated large-scale 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 a Hewlett Packard Enterprise 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 (CMU) is a Hewlett Packard Enterprise-licensed and Hewlett Packard Enterprise-supported suite of tools that are used for lifecycle management of hyperscale clusters of Linux systems. CMU includes software for the centralized provisioning, management and monitoring of nodes. CMU makes the administration of clusters user friendly, efficient, and effective. **http://www.hpe.com/go/cmu**

Service & Support

Service and Support **Protect your business beyond warranty with HPE Support Services**

HPE Pointnext provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation. From the onset of your transformation journey, Advisory and Transformational Services focus on designing the transformation and creating a solution roadmap. Professional Services specializes in creative configurations with flawless and on-time implementation, and on-budget execution. Finally, operational services provides innovative new approaches like Flexible Capacity and Datacenter Care, to keep your business at peak performance. HPE is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make the complex simple.

Optimized Recommendation

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 HPE, 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.

https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf

NOTE: *HPE Proactive Care and HPE Proactive Care Advanced require that the customer connect their devices to make the most of these services and receive all the deliverables.

Standard Recommendation

HPE Foundation Care 24x7, three-year Support Service

HPE Foundation Care 24x7 gives you access to HPE 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 HPE 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

Basic Recommendation

HPE Foundation Care NBD, three-year Support Service

HPE Foundation Care Next Business Day connects you to HPE 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 HPE 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

Other Related Services

HPE Server Hardware Installation

Provides for the basic hardware installation of HPE branded servers, storage devices 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 of your HPE hardware according to product specifications including options. The HPE service delivery technician will connect the product to a LAN as appropriate and enable remote support to allow for automatic case creation for hardware failures. Installation and start up services also includes the installation of one supported operating system type (Windows® or Linux).

HPE Factory Express for Servers and storage

HPE Factory Express offers configuration, customization, integration and deployment services for HPE 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. HPE products supported through Factory Express include a wide array of servers and storage: HPE

Service & Support

Integrity, HPE ProLiant, HPE Apollo, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx3PAR suite, XP, rackable tape libraries and configurable network switches.

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 Datacenter Care service

HPE Datacenter Care helps improve IT stability and security, increase the value of IT, and enable agility and innovation. It is a structured framework of repeatable, tested, and globally available services "building blocks." You can deploy, operate, and evolve your datacenter wherever you are on your IT journey. With HPE Datacenter Care, you benefit from a personalized relationship with HPE via a single point of accountability for HPE and others' products. For more information, visit **http://www.hpe.com/services/datacentercare**

HPE Flexibly Capacity

With Flexible Capacity, you get the speed, scalability, and economics of the public cloud in the privacy of your data center. Gain the advantages of the public cloud—consumption-based payment, rapid scalability without worrying about capacity constraints. Reduce the "heavy lifting" needed to operate a data center. And retain the advantages that IT provides the business (i.e., control, security). Deliver the right user experience, choose the right technology for the business, manage privacy and compliance, and manage the cost of IT. And, you have the option to use the public cloud when needed.

DC for Hyperscale

Datacenter Care for Hyperscale is available for Service Providers and HPC customers who use a scale out approach to computing with a high volume homogenous infrastructure and resilient architecture can take advantage of this environment support tailored to their operating model.

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 HPE business products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers.

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

HPE's 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 personalize IT support anywhere, anytime.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE warranty, HPE Support Service or HPE contractual support agreement.

NOTE: *HPE Support Center Mobile App is subject to local availability

Parts and Materials

Parts and Materials

HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product 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 HPE due to malfunction.

Options

NOTE: Included options are covered under the HPE Service Contract applied to the HPE Server. No separate HPE support services need to be purchased.

- Warranty and Support Services will extend to include HPE options configured with your server or storage device. The price of support service is not impacted by configuration details. HPE

Service & Support

sourced options that are compatible with your product will be covered under your server support at the same level of coverage allowing you to upgrade freely. Installation for HPE options is available as needed. To keep support costs low for everyone, some high value options will require additional support. Additional support is only required on select high value workload accelerators, fibre switches, InfiniBand and UPS batteries over 12KVA. See the specific high value options that require additional support **HERE**

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

Configuration Information

Step 1: Base Configuration (Choose one of the CTO Models below)

HPE CTO Model	HPE Apollo pc40 2SFF 4GPU Configure-to-order Server	Q5S68A

Step 2: Choose Required Options (only one from each category unless otherwise noted)

	HPE Apollo 40 Intel Xeon-Platinum 8176 (2.1GHz/28-core/165W) Processor Kit	Q5S81A
	HPE Apollo 40 Intel Xeon-Platinum 8170 (2.1GHz/26-core/165W) Processor Kit	Q5S82A
	HPE Apollo 40 Intel Xeon-Platinum 8164 (2.0GHz/26-core/150W) Processor Kit	Q5S83A
	HPE Apollo 40 Intel Xeon-Platinum 8160 (2.1GHz/24-core/150W) Processor Kit	Q5S84A
	HPE Apollo 40 Intel Xeon-Platinum 8153 (2.0GHz/16-core/125W) Processor Kit	Q5S85A
	HPE Apollo 40 Intel Xeon-Platinum 8158 (3.0GHz/12-core/150W) Processor Kit	Q5S86A
	HPE Apollo 40 Intel Xeon-Platinum 8156 (3.6GHz/4-core/105W) Processor Kit	Q5S87A
	HPE Apollo 40 Intel Xeon-Gold 6152 (2.1GHz/22-core/140W) Processor Kit	Q5S88A
	HPE Apollo 40 Intel Xeon-Gold 6150 (2.7GHz/18-core/165W) Processor Kit	Q5S89A
	HPE Apollo 40 Intel Xeon-Gold 6148 (2.4GHz/20-core/150W) Processor Kit	Q5S90A
	HPE Apollo 40 Intel Xeon-Gold 6142 (2.6GHz/16-core/150W) Processor Kit	Q5S91A
	HPE Apollo 40 Intel Xeon-Gold 6140 (2.3GHz/18-core/140W) Processor Kit	Q5S92A
	HPE Apollo 40 Intel Xeon-Gold 6138 (2.0GHz/20-core/125W) Processor Kit	Q5S93A
	HPE Apollo 40 Intel Xeon-Gold 6136 (3.0GHz/12-core/150W) Processor Kit	Q5S94A
	HPE Apollo 40 Intel Xeon-Gold 6134 (3.2GHz/8-core/130W) Processor Kit	Q5S95A
	HPE Apollo 40 Intel Xeon-Gold 6132 (2.6GHz/14-core/140W) Processor Kit	Q5S96A
	HPE Apollo 40 Intel Xeon-Gold 6130 (2.1GHz/16-core/125W) Processor Kit	Q5S97A
	HPE Apollo 40 Intel Xeon-Gold 6128 (3.4GHz/6-core/115W) Processor Kit	Q5S98A
	HPE Apollo 40 Intel Xeon-Gold 6126 (2.6GHz/12-core/125W) Processor Kit	Q5S99A
	HPE Apollo 40 Intel Xeon-Gold 5120 (2.2GHz/14-core/105W) Processor Kit	Q5T00A
	HPE Apollo 40 Intel Xeon-Gold 5118 (2.3GHz/12-core/105W) Processor Kit	Q5T01A
	HPE Apollo 40 Intel Xeon-Gold 5122 (3.6GHz/4-core/105W) Processor Kit	Q5T02A
	HPE Apollo 40 Intel Xeon-Gold 5115 (2.4GHz/10-core/85W) Processor Kit	Q5T03A
	HPE Apollo 40 Intel Xeon-Silver 4116 (2.1GHz/12-core/85W) Processor Kit	Q5T04A
	HPE Apollo 40 Intel Xeon-Silver 4114 (2.2GHz/10-core/85W) Processor Kit	Q5T05A
	HPE Apollo 40 Intel Xeon-Silver 4112 (2.6GHz/4-core/85W) Processor Kit	Q5T06A
	HPE Apollo 40 Intel Xeon-Silver 4110 (2.1GHz/8-core/85W) Processor Kit	Q5T07A
	HPE Apollo 40 Intel Xeon-Silver 4108 (1.8GHz/8-core/85W) Processor Kit	Q5T08A
	HPE Apollo 40 Intel Xeon-Bronze 3106 (1.7GHz/8-core/85W) Processor Kit	Q5T09A

NOTE: Minimum 12 DIMMs are required if two processors are installed.
NOTE: LRDIMM and RDIMM are distinct memory technologies and cannot be mixed within a server.

HPE Memory	HPE SGI 8GB Single Rank x4 DDR4-2666 Registered Memory Kit	Q7D79A
	HPE SGI 8GB Dual Rank x8 DDR4-2666 Registered Memory Kit	Q7D81A
	HPE SGI 16GB Dual Rank x4 DDR4-2666 Registered Memory Kit	Q2D31A
	HPE SGI 32GB Dual Rank x4 DDR4-2666 Registered Memory Kit	Q2D32A
	HPE SGI 64GB Quad Rank x4 DDR4-2666 Load-Reduced Memory Kit	Q2D33A
	HPE SGI 128GB Eight Rank x4 DDR4-2666 Load-Reduced Memory Kit	Q7D83A
HPE Networking	Ethernet Options	
	HPE Ethernet 10Gb 2-port 535T Adapter	813661-B21

Configuration Information

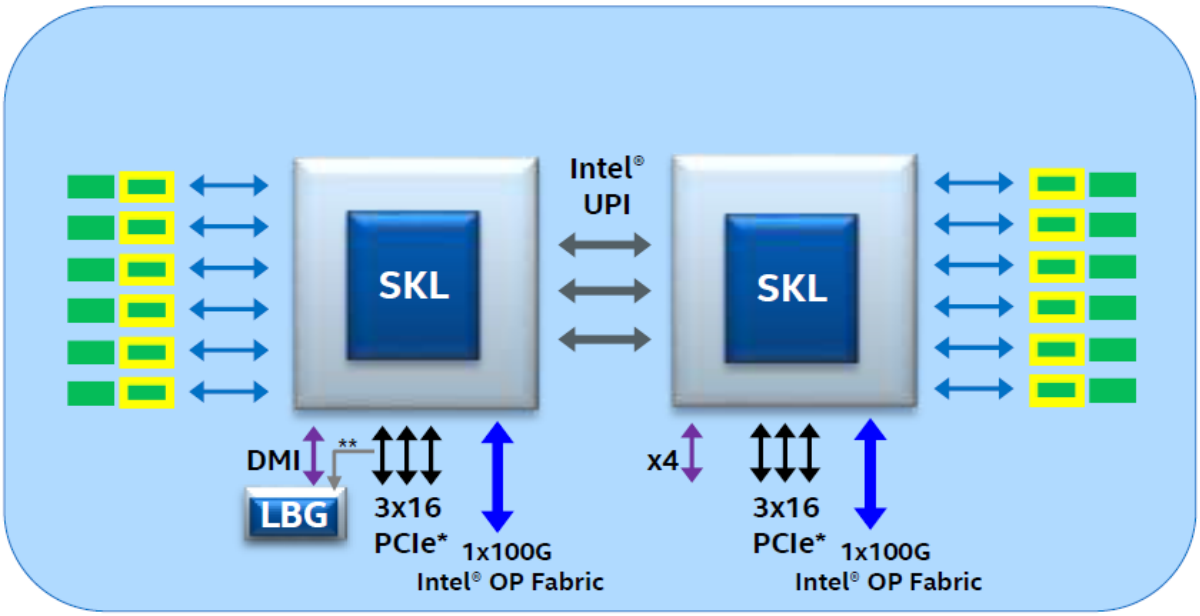
	HPE Ethernet 10Gb 2P 571SFP+ Adptr	728987-B21
	HPE Ethernet 10Gb 2P 561T Adptr	716591-B21
	InfiniBand Options	
	HPE IB EDR/EN 100Gb 1P 840QSFP28 Adptr	825110-B21
	HPE IB EDR/EN 100Gb 2P 840QSFP28 Adptr	825111-B21
	HPE 100Gb 1p OP101 QSFP28 x16 OPA Adptr	829335-B21
HPE Hard Drives	Hot Swap SFF drives	
	HPE 1TB SATA 7.2K SFF ST 512n DS HDD	Q5T11A
	HPE 2TB SATA 7.2K SFF ST 512e DS HDD	Q5T12A
	HPE 240GB SATA RI SFF ST DS SSD	Q5T13A
	HPE 480GB SATA RI SFF ST DS SSD	Q5T14A
	HPE 960GB SATA RI SFF ST DS SSD	Q5T15A
	HPE 1.92TB SATA RI SFF ST DS SSD	Q5T16A
	HPE 3.84TB SATA RI SFF ST DS SSD	Q5T17A
	HPE 1TB SATA 7.2K SFF ST 512n DS HDD	Q5T11A
HPE GPUs	HPE NVIDIA Tesla P100 PCIe 12GB Module	Q2S42A
	HPE NVIDIA Tesla P100 PCIe 16GB Module	Q0E21A
	HPE NVIDIA Tesla P40 24GB Module	Q0V80A

Memory

DDR4 Memory POR

Type	Ranks Per DIMM and Data Width	DIMM Capacity (GB)		Speed (MT/s); Voltage (V); Slots per Channel (SPC) & DIMMs per Channel (DPC)		
				1 Slot per Channel	2 Slots per Channel	
		DRAM Density		1DPC	1DPC	2DPC
		4Gb	8Gb	1.2V	1.2V	1.2V
RDIMM	SRx4	8GB	16GB	2666	2666	2666
RDIMM	SRx8	4GB	8GB			
RDIMM	DRx8	8GB	16GB			
RDIMM	DRx4	16GB	32GB			
RDIMM 3DS	QRx4	N/A	2H-64GB			
	8Rx4	N/A	4H-128GB			
LRDIMM	QRx4	32GB	64GB			
LRDIMM 3DS	QRx4	N/A	2H-64GB			
	8Rx4	N/A	4H-128GB			

Typical 2S-3UPI Configuration



Technical Specifications

System Unit	**Server Dimensions (L x W x D)**	1.7 x 17.2 x 35.2 in (4.3 x 43.7 x 89.4 cm)	
	Weight (approximate)	Maximum (four hard drives and two processors installed)	58 lb (21.8 kg)
	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.
		Extended Ambient Operating Support	System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F). For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: http://www.hp.com/servers/ASHRAE For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: http://www.hp.com/servers/ASHRAE System performance may be reduced if operating in the extended ambient operating range or with a fan fault.
		Non-operatingt	-30° o 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Relative Humidity (non-condensing)	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-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
	Altitude	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Technical Specifications

Acoustic Noise

Listed are the declared A-Weighted sound power levels (LWAd) and measured 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). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

Configuration SKU	Entry	Base	Performance
Idle			
LWAd	6.9 B	6.9 B	6.9 B
LpAm	51 dBA	51 dBA	51 dBA
Operating			
LWAd	8.0 B	8.3 B	8.7 B
LpAm	62 dBA	66 dBA	72 dBA

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.

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.hpe.com/go/green**
To recycle your product, please go to: **http://www.hpe.com/go/green** or contact your nearest Hewlett Packard Enterprise
Enterprise sales office. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of
in a responsible manner. He 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 at:
http://www.hpe.com/go/green These instructions may be used by recyclers and other
WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

Date	Version History	Action	Description of Change
11-Jul-2017	Version 1	Created	Create QuickSpecs for HPE Apollo sx40 Server

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