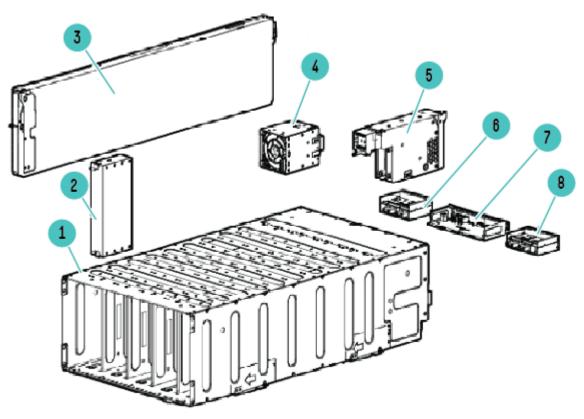
Overview

HPE Apollo 6000 Chassis

Is it time for a real workhorse server solution to take your business to the next level?

The HPE Apollo a6000 Chassis is designed with density optimization in mind to help you manage and scale to your business computing demands. The new modular HPE Apollo a6000 Chassis was designed to hold various compute servers and/or accelerator trays to fit your specific workload. Each chassis can hold up to 10 single slot XL230a servers or 5 XL250a servers.

Cooling concerns are reduced by five dual rotor fans that shares a cooling zone and as an additional feature, power can be managed by an HPE Advanced Power Manager (APM) option at the server, chassis or power shelf level. Together they provide the performance you need at the price you can afford.



HPE Apollo a6000 Chassis

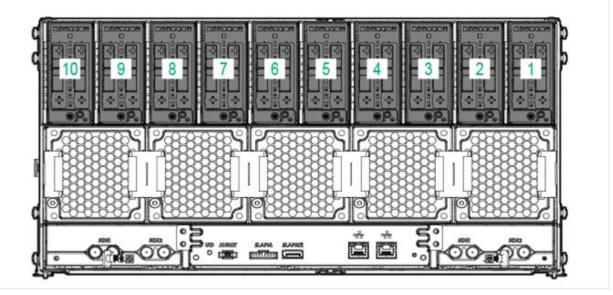
- 1. HPE Apollo a6000 Chassis
- 2. Server tray blank
- 3. Server tray
- 4. Dual Rotor Fan Assembly

- 5. I/O module
- 6. Power cage 2
- 7. Management module
- 8. Power cage 1

Overview

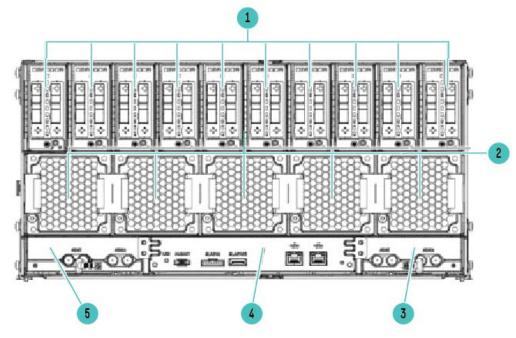


Server tray bay numbering (1-10) - Front View Populate trays from right (Bay 10)-> left (Bay 1)



Server tray bay- Rear View (mirror image)

Overview



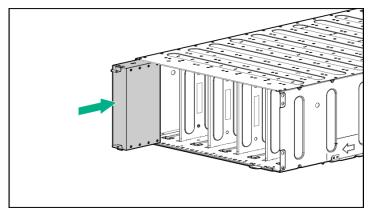
Rear panel components

- 1. I/O modules (10)
- 2. Fans (5)
- 3. Power cage 2
- 4. Management module
- 5. Power cage 1

Standard Features

Chassis	Each HPE Apollo a6000 Chassis is built with the following: Up to 10 single slot server trays per chassis. Up to 10 network I/O module slots per chassis Up to four (4) 12V DC input cables providing up to 5760 W of power for the chassis (a power supplies). HPE Thermal Logic technology for lower power consumption and airflow. Five (5) dual rotor fan assemblies as standard for redundancy and improved power co acoustics.	
System Fans	The Chassis includes 5 dual rotor fan modules as standard	
Server Blank Kit	HPE Apollo a6000 Server Blank Kit Use this Server Blank tray kit in the absence of a server tray in one of the assigned server slots to maintain the airflow in the chassis to meet thermal requirements during operation.	766779-B21
Service Tray Kit	HPE Apollo a6000 Service Tray Kit Service events may disrupt tray population order and best practices. Correct tray population order is required to maintain recommended thermals. This full length service tray can be used during service events to prevent improper thermals caused by removal of server trays.	823271-B21
Rack Airflow Requirements	 HPE Apollo a6000 Chassis The increasing power of new high-performance processor technology requires increass efficiency for rack-mounted servers. For maximum cooling, HPE racks are recommender racks to be fully loaded with servers using the latest processors. CAUTION: If a third-party rack is used, observe the following additional requirement adequate airflow and to prevent damage to the equipment: CAUTION: Always use blanking panels to fill all remaining empty front panel U-space. This arrangement ensures proper airflow. Using a rack without blanking panels will remain improper cooling that can lead to thermal damage. CAUTION: To prevent improper cooling and thermal damage, operate servers only uside of the server is enclosed by either another server, a divider, or the chassis wall. I servers from right to left in all instances. CAUTION: To prevent improper cooling and thermal damage, do not operate the chasys are populated with a component or a blank. Install the component as indicated server. 	ed to allow these ts to ensure tes in the rack. tesult in when the open Populate the assis unless all

Standard Features



CAUTION: To prevent improper cooling and thermal damage, operate servers only when the open side of the server is enclosed by either another server, a divider, or the chassis wall.

When installing servers in the chassis, observe the following guidelines to ensure proper air flow:

- Always populate the enclosure from right to left, beginning with bay 10.
- Operate servers only when the open side of the server is enclosed by either another server, a divider, or the chassis wall.

Optional Features

HPE Insight Management software	Insight Management	Managing the growing number of servers can be complex and expensive for your organization. IT managers need to address changing business needs with tools that meet the challenges of managing today's complex Datacenters.
		HPE Insight Management lowers the cost of running your HPE ProLiant servers by providing you with best-in-class management tools, including HPE Insight Control, HPE Virtual Connect Enterprise Manager (VCEM), and HPE Insight Dynamics/Matrix Operating Environment. Insight Management increases your productivity and reduces your operating costs to get you higher value from your HPE ProLiant servers.
		Electronic download of Insight Management Media Insight Management software media is available for free download (not including license entitlement certificates) at this website: <u>http://www.hp.com/go/insightupdates.</u> Software media available for download includes:
		HPE Insight Control HPE Insight Control for Microsoft® System Center HPE Insight Control for VMware vCenter Server HPE Virtual Connect Enterprise Manager (VCEM) HPE Insight Dynamics / Matrix Operating Environment
		Customers will receive an Insight Control or Insight Dynamics license entitlement certificate via physical shipment or email. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s).
		One year of 24x7 Software Technical Support and Updates are included with your purchased licenses.
		Hewlett Packard Enterprise provides a complete range of installation and support services to
		ensure the successful deployment and operations of your server infrastructure. For more information about support services and licensing options, see the following website:
		http://www.hp.com/go/insightsoftware Insight Software Media Kit (DVDs) Physical media (DVDs) are also available for purchase from Hewlett Packard Enterprise or from your authorized reseller
	Service Pack for ProLiant	Customers should use the HPE Service Pack for ProLiant (SPP) to perform firmware, driver, and related software updates. SPP main webpage: http://www.hp.com/go/spp SPP downloads webpage: http://www.hp.com/go/spp/download
	HPE Integrated Lights- Out (iLO)	HPE Integrated Lights-Out (iLO) simplifies server setup, health monitoring, power and thermal control, and lights-out remote administration of ProLiant SL, XL, ML, DL, and BL servers. HPE iLO functions without additional software and can be accessed from any location via a web browser. HPE iLO works hand-in-hand with HPE Systems Insight Manager, Insight Control and Insight Dynamics for ProLiant, helping customers unleash the value of the ProLiant platform and deliver the highest possible quality of IT service. For more information, visit:

Optional Features

		http://www.hp.com/go/iLO.
	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, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. For more information, see http://www.hp.com/go/insightcontrol. HPE Insight Control includes one year of 24 x 7 HPE Software Technical Support and Update Service ensuring rapid access Hewlett Packard Enterprise support staff and proactive delivery of software updates. For more information about this service, please visit: http://www.hp.com/services/insight.
	HPE Matrix Operating Environment	The HPE Matrix Operating Environment (Matrix OE) for ProLiant and Integrity servers is an integrated command center that helps you instantly adjust to dynamic business demands. This advanced infrastructure management software lets you reduce the cost of common data center tasks by up to 40 percent while keeping pace with your changing business. The HPE Matrix OE includes the automated provisioning, optimization, and recovery management capabilities for HPE CloudSystem Matrix, the ideal platform for private cloud and Infrastructure as a Service (IaaS). NOTE: For more information, visit: http://www.hp.com/go/matrixoe.
HPE Advanced Power Manager	The HPE Advanced Power Manager (HPE APM) is an optional rack level solution. HPE APM will automatically discover hardware components and enable server level power on and off, server metering, aggregate dynamic power capping, configurable power-up dependencies and sequencing, consolidated Ethernet access to all resident iLOs, and asset management capabilities. HPE APM features rack level event logging, RADIUS authentication, integrated serial concentrator, up to 11 local user accounts, read only service port, and supports SNMP, SSH, Syslogd, telnet.	

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. 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 1 year Parts, 1 year Labor, 1-year on-site support with next business day response. In Asia Pacific, Japan and China, 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.hp.com/products/servers/platforms/warranty/index.html

Service and Support

Service and Support	 The support of HPE Apollo 6000 is at a chassis level. Support purchased for the chassis covers trays, power shelf and any other option part of this system 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
Recommended HPE	Pointnext operational services for your HPE Apollo 6000
Optimized recommendation	Foundation Care 24x7, three-year Care Pack Service Supports maintaining servers at optimum performance availability 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 Hewlett Packard Enterprise server. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions. https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en
Basic 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. https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en
Related Services	HPE Datacenter Care service HPE Datacenter Care helps you 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 Hewlett Packard Enterprise via a single point of accountability for Hewlett Packard Enterprise and others' products. For more information, visit <u>http://www.hp.com/services/datacentercare</u>
	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. https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf
	Factory Express 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. For more information on Factory Express services for your specific server model please contact your sales representative or go to: http://www.hp.com/go/factory-express Data Privacy Services Dretect your data through better media management. UPE Data privacy convises help manage and

Protect your data through better media management. HPE Data privacy services help manage and protect sensitive data to reduce the risk of unauthorized access to private information and help meet compliance requirements. Our retention services allow you to keep drives and other devices upon

Service and Suppor	t
	failure, our removal services provide convenient data sanitization and our recovery services allow you to safely retire IT assets and capture any remaining value from the hardware. <u>http://www.hp.com/services/dataprivacy</u> Additional HPE Pointnext operational services can be found at: <u>http://www.hp.com/go/cpc</u>
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: <u>http://www.hp.com/go/proactiveinsightexperience</u>
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.hp.com/go/hpsc. The HPE Support Center Mobile App allows you to resolve issues yourself or quickly connect to an agent for live support. Get access to personalized IT support anywhere, anytime. These tools are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE Care Pack Service 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.
Data Privacy	Let HPE Data Privacy Services help you control access to data and maintain compliance. We offer retention services called Defective Media Retention (DMR) and Comprehensive Defective Material Retention (CDMR) as part of Foundation Care and Proactive Care that allow you to keep failed drives or other memory-retentive components to protect data that may reside. Our sanitization services should be used as part of tech refresh to help ensure no data lingers once the systems are taken out of service or repurposed. Our asset recovery service helps you responsibly retire IT assets. 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 services for Hewlett Packard Enterprise Apollo please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit: http://www.hp.com/services/bladesystem.

Core Options

NOTE: This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an Hewlett Packard Enterprise approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

Step 1: Choose a	Chassis Configuration			
HPE Chassis	HP Apollo a6000 1.0m Chassis	736428-B21		
	NOTE: Each chassis comes with 5 double rotor fans as standard			
HPE Rail Kits	HP Apollo a6000 Chassis Rail Kit	757400-B21		
	NOTE: This kit only supports HPE racks.			
	HP Apollo a6000 Third Party Option Chassis Rail Kit	766749-B21		
	NOTE: This kit supports some HPE Pods and some 3rd Party racks. NOTE: Hewlett Packard Enterprise recommends that a minimum of two people are requinstallations. Please refer to your installation instructions for proper tools and number of for any installation.			
HPE Chassis Handles	HP s6500 Chassis Handles Kit	608477-B21		
	NOTE: Chassis handles are not included as part of the chassis. It is highly recommended handles if the Chassis is not being installed in a Rack.	d to have		
HPE Cooling Options	HPE Apollo a6000 Server Tray Blank Kit	766779-B21		
	NOTE: Required for any non-populated slots in the chassis to prevent thermal related issues.			
	HPE Apollo a6000 Service Tray Kit	823271-B21		
Step 2: Choose a I	Power Shelf Configuration			
Power Shelf	NOTE: For full power shelf configuration options and details, please see HPE Apollo 600 QuikSpec.	00 Power Shelf		
	NOTE: A Power Shelf is required for all HPE Apollo 6000 configurations. Depending on which trays are populated in the HPE Apollo a6000 chassis, the ratio of power shelf to chassis varies.			
	HP Apollo 6000 Standard Power Shelf	735131-B21		
	NOTE: To determine how many power shelves are needed at a rack level (based on service) configuration, please use the HPE Power Advisor as a guidance (power values may vary			
Step 3: Choose a	Compute Server or Accelerator Tray			
Server Trays	NOTE: For full server configuration options and details, please see HPE ProLiant XL230 ProLiant XL250a QuickSpecs.	Da and HPE		
	HP ProLiant XL220a Gen8 v2 Single-wide 2x1P 1.0m Rear-cabled Compute Tray	753173-B21		
	NOTE: This is single slot server tray which contains two independent 1P servers. Each a6000 Chassis can fit up to 10 trays or 20 single socket servers	HPE Apollo		
	HPE ProLiant XL230a Gen9 Single-width 2P 1.0m Rear-cabled Hot Plug Drives 12G Compute Tray	789917-B21		
	NOTE: This is a single slot 2P server tray which supports 12G Hot Plug drives.			
	HP ProLiant XL230a Gen9 Single-wide 2P 1.0m Rear-cabled Non-hot Plug Drives Compute Tray	785695-B21		
		Page 11		

Core Options

NOTE: This is a single slot 2P server tray which supports 12G Hot Plug drives. 768535-B21 HP ProLiant XL250a Gen9 Double-width 2P 1.0m Rear-cabled Hot Plug Drives 12G Accelerator Tray **NOTE:** This is a single slot 2P server tray which supports 12G Hot Plug drives. **Step 4: Choose Additional Options** HPE Advanced Power HP Advanced Power Manager Kit 741192-B21 Manager **NOTE:** Each HPE APM can connect up to 10 chassis via consolidated chassis management cable. HP 4M 20 Pin Consolidated Management Cable 762048-B21 **NOTE:** 1 cable per chassis HP 3M MicroDB9 to MicroDB9 Cable 762049-B21 **NOTE:** This cable is required for connectivity to DC Power shelf. **HPE Pointnext Foundation Care** operational services **NOTE:** 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 Hewlett Packard Enterprise server. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions HPE 3 year Foundation Care 24x7 Apollo a6000 Service U6UR3E HPE 3 year Foundation Care 24x7 wDMR Apollo a6000 Service U6UR4E HPE 3 year Foundation Care 24x7 wCDMR Apollo a6000 Service U6UR5E Installation Services **NOTE:** Reduce the time required to get your system up and running and help minimize disruptions to your business. HPE Installation Apollo a6000 Service U5V60E HPE Installation Non Standard Hours Apollo a6000 Service U5V61E HPE Installation and Startup Apollo a6000 Service U5V62E HPE Installation and Startup Non Standard Hours Apollo a6000 Service U5V63E

Technical Specifications

HDE Apollo 26000	Dimensions	Height	8.67 in (22.02 cm)
HPE Apollo a6000	Dimensions	-	
Chassis		Width	17.64 in (44.81 cm)
		Depth	33.95 in (86.23 cm)
	Shipping Dimensions	Height	18 in (45.7 cm)
		Width	23.6 in (60.0 cm)
		Depth	42.8 in (108.7 cm)
	Chassis Weight	Empty	57 lb (25.85 kg)
	Max Enclosure Weight	Approximate	216 lb (97.98 kg)
	Temperature Range	Operating	50° to 95° F (10° to 35° C)
		Non-Operating	-22° to 140° F (-30° to 60° C)
	Relative Humidity	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
		Non-Operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
	NOTE: Operating temperature has an altitude derating of 1.8° F (1° C) per 1,000 ft (304.8 m). No direct sunlight. Upper operating limit is 10,000 ft (3,048 m) or 70Kpa/10.1 psia. Upper non-operating limit is 30,000 ft (9,144 m) or 30.3 KPa/4.4 psia. Storage maximum humidity of 95% is		

based on a maximum temperature of 113° F (45° C). Altitude maximum for storage is 70 KPa.

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) d doclarad in accordar HILLO 020/ (ECNAA 100)

		and declared in accordance with ISO 9296 (ECMA 109).	
			Idle
		LWAd	7.1 Bels
		LpAm	54 dBA
		Ope	erating
		LWAd	7.2 Bels
		LpAm	54 dBA
Environmental-friendly Products and Approach	End-of-life Management and Recycling		

Summary of Changes

Date	Version History	Action	Description of Change
23-Oct-2017	Version 12	Changed	Care Pack naming and Service and Support- Parts and
		-	Materials updated.
5-Jun-2017	From version 10 to 11	Updated	Update the configuration section
27-Mar-2016	From version 9 to 10	Updated	Updates made troughout the document
15-Aug-2016	From version 8 to 9	Updated	Update the information of core features
22-Jan-2016	From version 7 to 8	Changed	Change the Sever tray arrangement to correct an error.
11-Dec-2015	From version 6 to 7	Updated	Remove obsolete SKU and update throughout the QS
17-Aug-2015	From version 5 to 6	Updated	Update the server tray SKU
29-Apr-2015	From version 4 to 5	Changed	Update overall QuickSpecs
03-Dec-2014	From version 3 to 4	Changed	Update Care Packs and support info.
1-Aug-2014	From version 2 to 3	Changed	Update the configuration section
13-Jun-2014	From Version 1 to 2	Changed	Service and Support were revised.



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

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