# QuickSpecs

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 trays or up to 20 servers (i.e. XL220a which contains two 1P servers in a single slot tray).

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.
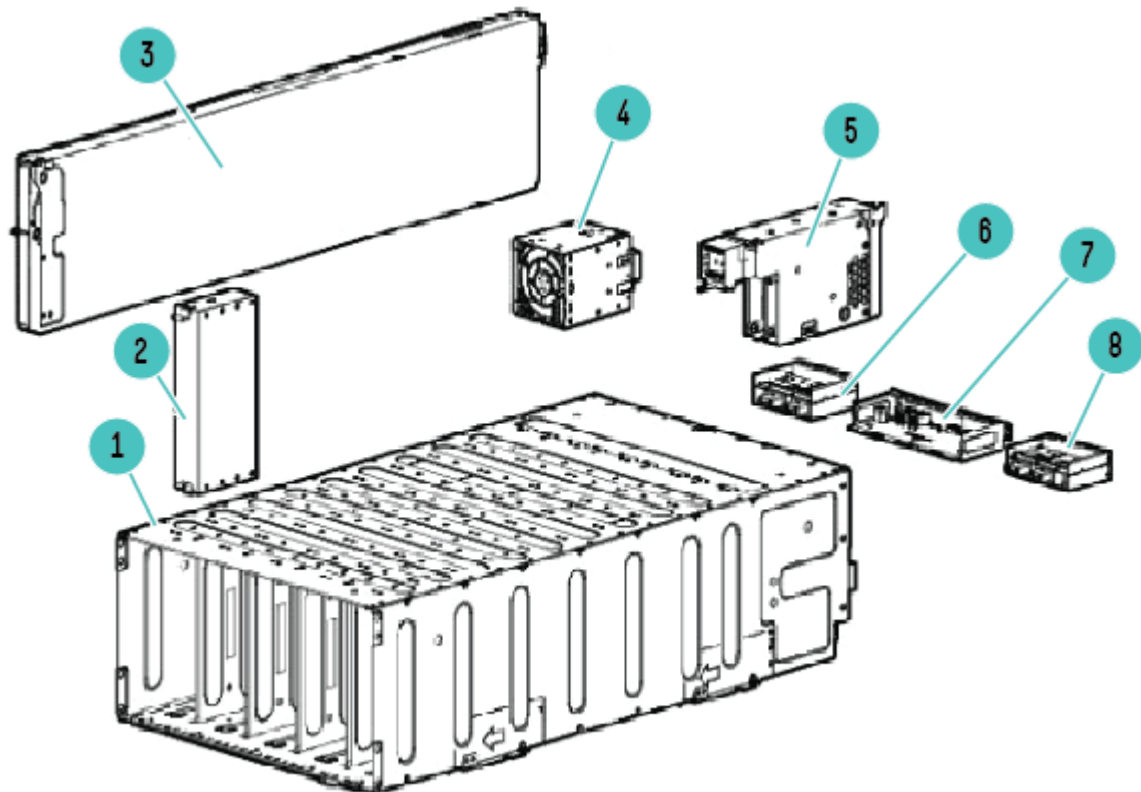
HPE Apollo a6000 Chassis

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
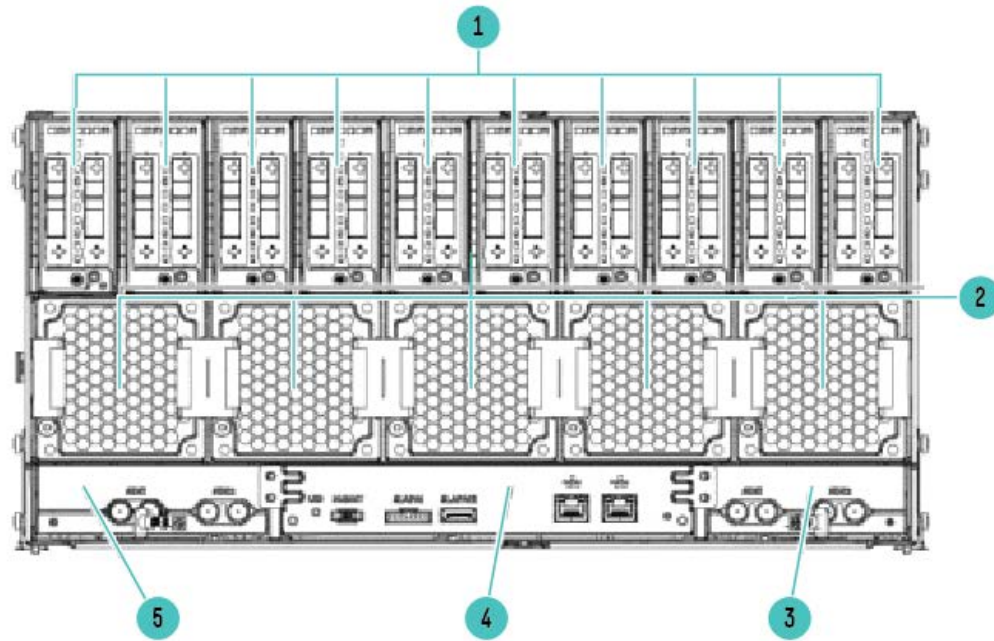7. Management module
8. Power cage 1

Overview
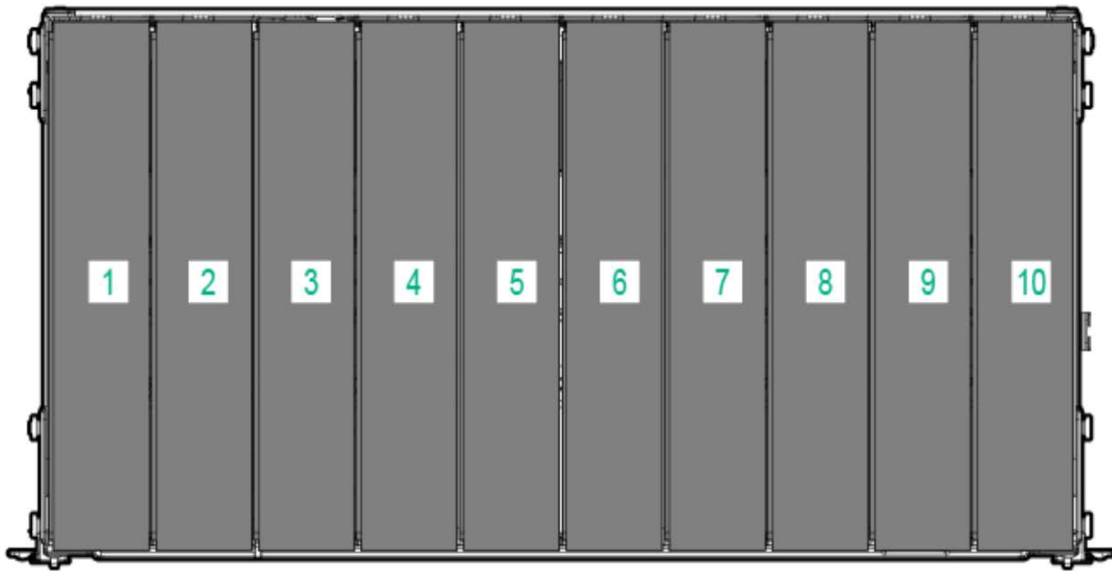
Server tray bay numbering (1-10) - Front View
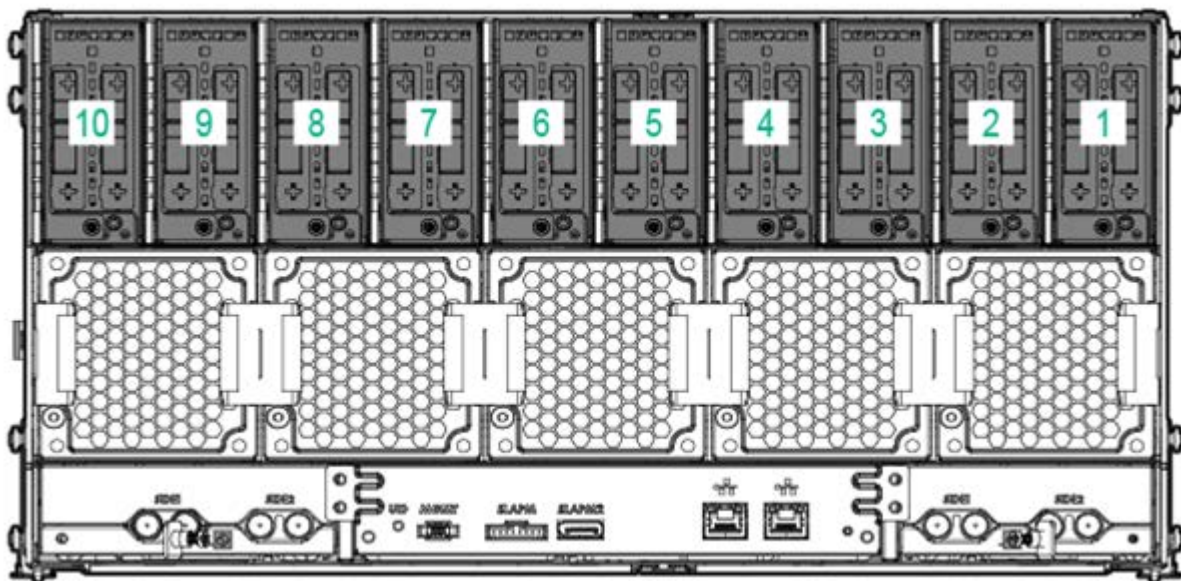
Server tray bay- Rear View (mirror image)

Overview

Rear panel components

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

Core 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/0 module slots per chassis
- Up to four (4) 12V DC input cables providing up to 5760 W of power for the chassis (depending on 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 consumption and acoustics.

System Fans	The Chassis includes 5 dual rotor fan modules as standard

Server Blank Kit	HPE Apollo a6000 Server Blank Kit	766779-B21
	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.	
Service Tray Kit	HPE Apollo a6000 Service Tray Kit	
	823271-B21	
	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.	

Rack Airflow Requirements

HPE Apollo a6000 Chassis

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. For maximum cooling, HPE racks are recommended to allow these racks to be fully loaded with servers using the latest processors.

CAUTION: If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment:

CAUTION: Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels will result in improper cooling that can lead to thermal damage.

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:
http://www.hp.com/go/insightupdates.

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.

Optional Features

- 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: **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

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 Care Pack 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

Optional Features

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 Care Pack Services HPE Care Pack 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 Care Pack Services for your HPE Apollo 6000

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 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 **http://www.hp.com/services/datacentercare** **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**

Service and Support

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

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 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.

http://www.hp.com/services/dataprivacy

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

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

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

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

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

Step 1: Choose a Chassis Configuration

HPE Chassis	HPE Apollo a6000 1.0m Chassis	736428-B21
	NOTE: Each chassis comes with 5 double rotor fans as standard	

HPE Rail Kits	HPE Apollo a6000 Chassis Rail Kit	757400-B21
	NOTE: This kit only supports HPE racks.	
	HPE Apollo a6000 3PO 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 require for all rack installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.	
HPE Chassis Handles	HPE s6500 Chassis Handles Kit	608477-B21
	NOTE: Chassis handles are not included as part of the chassis. It is highly recommended to have handles if the Chassis is not being installed in a Rack.	
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 Power Shelf Configuration

Power Shelf	**NOTE:** For full power shelf configuration options and details, please see HPE Apollo 6000 Power Shelf QuikSpec.	
	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.	
	HPE Apollo 6000 Standard Power Shelf	735131-B21
	NOTE: To determine how many power shelves are needed at a rack level (based on server and chassis configuration, please use the HPE Power Advisor as a guidance (power values may vary up to 15%).	

Step 3: Choose a Compute Server or Accelerator Tray

Server Trays	**NOTE:** For full server configuration options and details, please see HPE ProLiant XL230a and HPE ProLiant XL250a QuickSpecs.	
	HPE 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 HPE Apollo a6000 Chassis can fit up to 10 trays or 20 single socket servers.	
	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.	
	HPE ProLiant XL230a Gen9 Single-wide 2P 1.0m Rear-cabled Non-hot Plug Drives Compute Tray	785695-B21

Core Options

NOTE: This is a single slot 2P server tray which supports 12G Hot Plug drives.

HPE ProLiant XL250a Gen9 Double-width 2P 1.0m Rear-cabled Hot Plug Drives 12G Accelerator Tray   768535-B21

NOTE: This is a single slot 2P server tray which supports 12G Hot Plug drives.

Step 4: Choose Additional Options

HPE Advanced Power Manager	HPE Advanced Power Manager Kit	741192-B21
	NOTE: Each HPE APM can connect up to 10 chassis via consolidated chassis management cable.	
	HPE 4M 20 Pin Consolidated Management Cable	762048-B21
	NOTE: 1 cable per chassis.	
	HPE 3M MicroDB9 to MicroDB9 Cable	762049-B21
	NOTE: This cable is required for connectivity to DC Power shelf.	

HPE Care Pack Services	**Foundation Care**	
	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

HPE Apollo a6000 Chassis	**Dimensions**	Height	8.67 in (22.02 cm)
		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) and declared in accordance with ISO 9296 (ECMA 109).

	Idle
LWAd	7.1 Bels
LpAm	54 dBA
	Operating
LWAd	7.2 Bels
LpAm	54 dBA

Environmental-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**. To 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 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**.

Technical Specifications

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
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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