QuickSpecs
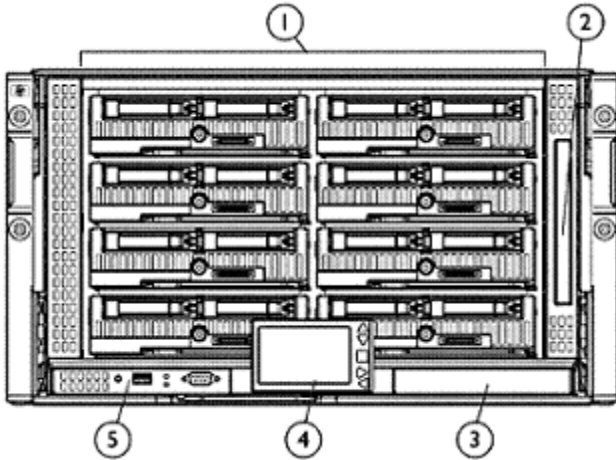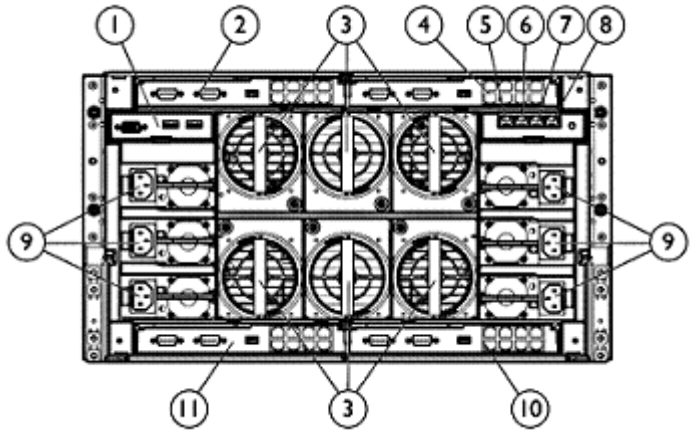
Overview

HPE BladeSystem c3000 Enclosure

HPE BladeSystem c3000 Enclosure - Front View

1. Device Bays 1 thru 8
2. Enclosure DVD Drive
3. Standby Onboard Administrator
4. Insight Display
5. Active Onboard Administrator

HPE BladeSystem c3000 Enclosure - Rear View

1. Local KVM interface
2. Interconnect Bay 1
3. Active Cool 100 Fans and Fan Bays
4. Interconnect Bay 2
5. Enclosure Up-link and Service Port
6. Enclosure Down-link
7. iLO/Onboard Administrator Port
8. iLO/Onboard Administrator Port 2
9. Power Supplies
10. Interconnect Bay 4
11. Interconnect Bay 3

Overview

HPE BladeSystem c-Class c3000 Enclosure

A HPE BladeSystem solutions start with an either a c7000 or c3000 enclosure. For the c3000 enclosure, key enclosure components include hot-plug power supplies, hot-plug HPE Active Cool 100 Fans, and an optional redundant BladeSystem Onboard Administrator module. Once the enclosure and its key components have been selected, the following components can be added: interconnect modules, HPE ProLiant and Integrity server blades, expansion blades, and optional HPE Insight Control for BladeSystem management software.

NOTE: HPE BladeSystem c3000 and c7000 Enclosures support G1 through Gen9 ProLiant and Integrity server blades, subject to support requirements of the Onboard Administrator. Certain HPE ProLiant server blades and options may require a specific version of the Onboard Administrator firmware. This firmware release may also require other subsystem firmware upgrades. For further information, please see the **HPE Service Pack for ProLiant (SPP) website** and the HPE Support Center document "**HPE ProLiant Server Blades - Compatibility with HPE BladeSystem c7000 and c3000 Enclosures and Firmware**".

A BladeSystem c3000 Enclosure holds up to 8 server blades and up to 4 expansion blades (not exceeding 8 total blades) plus redundant network and storage interconnects. It includes a shared, multi-terabit high-speed midplane for wire-once connectivity of server blades to network and shared storage. Power is delivered through a pooled power backplane that ensures the full capacity of the power supplies is available to all blades.

Each c3000 enclosure is built with the following functions:
- Up to 8 half-height server blades, 4 full-height server blades, and/or 4 expansion blades per enclosure (not exceeding 8 total blades).
  NOTE: For information on mixing half-height server blades, full-height server blades, and expansion blades, please see the section titled "Server Blade, Expansion Blade, and Fan Population Guidelines" later in this document.
- Up to 2 redundant I/O interconnect fabrics (Ethernet, Fibre Channel, iSCSI, SAS, etc.) supported simultaneously within the enclosure.
- A single-phase power subsystem for flexibility in connecting to datacenter power, UPSs, or low-line (100VAC to 110VAC) wall outlets.
  CAUTION: when connecting directly to wall outlets, customers should determine the maximum amperage of the wall outlet circuit to prevent power overload.
- Choice of AC power supplies.
- PARSEC enclosure design - Parallel, redundant and scalable cooling and airflow design.
- Up to six (6) hot-plug HPE Active Cool 100 Fans.
- Redundant hot-plug cooling, redundant hot-plug power supplies, redundant connections, redundant interconnect modules, and optional redundant BladeSystem Onboard Administrator management module.

An Onboard Administrator management module is built in to the enclosure with the following functions:
- Robust, multiple enclosure setup and control.
- Reports asset and inventory information for the devices in the enclosure.
- Reports thermal and power information, including real-time actual power usage per server and per enclosure.
- Front-mounted Insight Display for easy management at the deployment site.
- Integrated access to all server blade iLOs from a single cable.
- Provides integrated access to interconnect bay device management ports from the single Onboard Administrator cable.
- Single sign-on capability for all devices in the enclosure.
- Role-based security locally and/or with LDAP directory services.
- Provides a wizard-based initial setup process for easy configuration.
- An optional DVD drive for local software deployment, and HPE SmartStart deployment
- An optional local KVM interface for connection to KVM switches.

A BladeSystem c3000 enclosure provides the following benefits:
- With local and remote hardware management integrated across the solution, one full enclosure can be

Overview

managed as easily as one server.
- Management and network interconnects extend scalability beyond a single enclosure, allowing resources to be pooled and shared across multiple enclosures.
- Accommodates multiple server and network designs in one enclosure.
- Lower costs per server in comparison to rack-mounted servers
- Lower power consumption in comparison to rack-mounted servers.
- Reduced and simplified cabling in comparison to rack-mounted servers.
- Investment protection supporting G1 through Gen9 server blades.

HPE ProLiant & Integrity Server Blades

Delivering best-in-class performance, choice and reliability on AMD Opteron™, Intel® Xeon® and Intel® Itanium® processors for Windows, Linux, Solaris, OpenVMS, or HP-UX based servers; the HPE portfolio of server blades supports a variety of application requirements for scale-out architectures. Hewlett Packard Enterprise offers one-, two-, four- and eight -processor server blades, with the widest range of performance, and form factors. For information please visit: **https://www.hpe.com/us/en/integrated-systems/bladesystem.html**.

HPE D2200sb Storage Blade

Direct attached storage
The D2220sb Storage Blade delivers direct attached storage for c-Class Gen8 and greater server blades, with support for up to twelve hot plug small form factor (SFF) SAS or SATA Midline hard disk drives or SAS/SATA SSDs. The enclosure backplane provides a PCI Express connection to an adjacent c-Class server blade and enables high performance storage access without any additional cables. The D2220sb Storage Blade features an onboard Smart Array P420i controller with 2GB flash-backed write cache, for increased performance and data protection. Up to four D2220sb storage devices can be supported in a single BladeSystem c3000 Enclosure for up to 57.6 TB of capacity.

Two ways to create shared storage with the D2220sb
Use HPE StoreVirtual VSA software to turn the D2220sb into an iSCSI SAN for use by all servers in the enclosure and any server on the network. HPE VSA software is installed in a virtual machine on a VMware ESX host server adjacent to the D2220sb. HPE StoreVirtual VSA turns the D2220sb into a scalable and robust iSCSI SAN, featuring storage clustering for scalability, network RAID for storage failover, thin provisioning, snapshots, remote replication, and cloning. Expand capacity within the same enclosure or to other BladeSystem enclosures by adding additional D2220sb Storage Blades and HPE VSA licenses. A cost effective bundle of the D2220sb Storage Blade and a HPE StoreVirtual VSA license makes purchasing convenient. If storage needs increase, add HPE P4300 or P4500 systems externally and manage everything via a single pane of glass.

The HPE StoreEasy 3830 and 3840 Gateway Storage Blades are flexible storage server solutions for BladeSystem environments. Combine the StoreEasy 3830 or 3840 with the D2220sb Storage Blade to enable file serving and iSCSI shared storage inside the BladeSystem enclosure.
NOTE: The D2220sb requires a c3000 enclosure configuration with 6 fans

For more information, please visit:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111399

HPE Ultrium Tape Blades

Tape blades are ideal for HPE BladeSystem c-Class customers who need a data protection solution but are not connected into a storage area network (SAN). They provide direct attach data protection for the adjacent server and network backup protection for all other data within the enclosure. The HPE tape blades are the industry's first bladed tape drives and are developed exclusively for the BladeSystem c-Class enclosures.

For more information, please visit:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154444

HPE BladeSystem c-Class Interconnect

Hewlett Packard Enterprise offers one of the broadest selections of interconnect fabric options in the industry to provide network, SAN/network attached storage (NAS), and cluster connectivity. HPE BladeSystem interconnects provide:

Overview

Options
- HPE Virtual Connect devices, designed to reduce networking costs and simplify network configuration and provisioning.
- Seamless integration of Ethernet, FC, iSCSI, and SAS fabrics: Standard-based switch options include Cisco, Brocade, and Hewlett Packard Enterprise products that integrate within your existing standards.
- Built-in redundancy: rear-mounting interconnect modules designed for redundant interconnections between server blades and switches.
- Cable reduction: Interconnect switches provide up to 32-to-1 network cable reductions per server blade enclosure

HPE BladeSystem c-Class Interconnect and Mezzanine Components:
https://www.hpe.com/h20195/v2/getpdf.aspx/c04284204.pdf?ver=10

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: HPE Integrity, HPE ProLiant & HPE ProLiant & Integrity Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative or go to: **http://www.hpe.com/info/factoryexpress**

HPE Simple Configurator

One Config Simple (OCS) is a guided self-service tool to help sales and non-technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help, or use in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in OCS, please contact the HPE Customer Business Center or an Authorized Partner for assistance. **https://h22174.www2.hpe.com/SimplifiedConfig/Welcome**

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 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.hpe.com/info/servermanagement

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 Matrix Operating Environment

Overview

Customers will receive an Insight Control or Matrix Operating Environment 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: **https://www.hpe.com/us/en/software/servers-insight-control.html**

Insight Software Media Kit (DVDs)
Physical media (DVDs) are also available for purchase from Hewlett Packard Enterprise or from your authorized reseller (PN 436222-B21)

Service Pack for ProLiant (SPP)	Customers should use the HPE Service Pack for ProLiant to update firmware, drivers, and related utilities: **https://www.hpe.com/servers/spp/**
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 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.hpe.com/info/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, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. For more information, see **http://www.hpe.com/info/servermanagement** 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, please visit: **http://www.hpe.com/info/servermanagement**
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). For more information, see **http://www.hpe.com/info/matrixoe**.

HPE Power Advisor	The HPE Power Advisor is a tool provided by Hewlett Packard Enterprise to assist in the estimation of power consumption and proper selection of components including power supplies at a system, rack, and multi-rack level. A variety of additional features are also provided including a condensed bill of materials, a cost of owner

Overview

ship calculator, and a power report. The HPE Power Advisor allows for the mixing of rack, blade, and other products in a single environment.

Hewlett Packard Enterprise highly recommends using the HPE Power Advisor tool to ensure the number of power supply options you have selected can fully support your BladeSystem configuration and to review maximum system power ratings for facilities planning purposes.

HPE Power Advisor is available at: **http://www.hpe.com/info/hppoweradvisor**

Warranty   **Warranty** - This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Additional support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HPE Care Pack services or customized service agreements.

- Enclosure: Three-year parts and labor, on-site limited global warranty. Certain restrictions and exclusions apply
- Enclosure options: Fans, Power Supplies, BladeSystem Onboard Administrator, 1 Year parts only or enclosure warranty
- HPE BladeSystem Interconnects: 1 Year parts and labor, on-site regardless of the warranty period for the system in which they are installed
- HPE Storage Fibre Channel switches have a maximum warranty period of one (1) year regardless of the warranty period for the system in which they are installed
- Hard drives have either a one year or three year warranty; refer to specific hard drive QuickSpecs for details.

Service and Support

Service and Support	**HPE Technology Services for Industry Standard Servers and BladeSystem** Capitalizing on HPE ProLiant server and HPE BladeSystem capabilities requires a service partner who understands your increasingly complex business technology environment. That's why it makes sense to team up with the people who know Hewlett Packard Enterprise infrastructure hardware and software best - the experienced professionals at HPE Services.

Protect your business beyond warranty with HPE Care Pack Services
HPE Care Pack services offer complete care and support expertise with committed response choices designed to meet your IT and business needs.

HPE Foundation Care services offer scalable reactive support-packages for Hewlett Packard Enterprise servers and software. You can choose the type and level of service that is most suitable for your IT and business needs. HPE Proactive Care delivers high levels of system availability through proactive service management and advanced technical response. HPE Datacenter Care provides highly flexible environmental support to address unique customer business needs.

Choose recommended services for your c3000 BladeSystem enclosure or contact your Hewlett Packard Enterprise sales representative or authorized HPE ServiceOne partner for additional HPE Care Pack services information

Recommended HPE Care Pack Services for your HPE product

Optimized Care	**3-Year HPE 6 hour Call to Repair Response, Proactive Care** Combined reactive and proactive support for hardware and software helping optimize your systems and delivering high levels of availability through proactive service management and advanced technical response. Hardware problem resolution to return the hardware in operating condition within 6 hours of the initial service request. A Technical Account Manager, as your single point of contact, will own your call or issue end to end until resolved. **https://www.hpe.com/h20195/v2/getpdf.aspx/4aa3-8855eee.pdf**

HPE Installation and Startup Service for HPE BladeSystem c-Class Infrastructure for c3000 enclosure
Provides for hardware installation (c-Class ProLiant and Integrity server blades, storage blades, Ethernet Interconnects and Virtual Connect) and software installation and startup of a BladeSystem c3000 Infrastructure in a single enclosure including deployment of OS on all blades or deployment of OS (two blades) and HPE Insight Control, plus Server Deployment (formerly RDP).
https://www.hpe.com/h20195/v2/getpdf.aspx/4aa0-5964enw.pdf

HPE Installation and Startup Service for HPE BladeSystem c-Class Enhanced Network
Provides for the configuration and testing of BladeSystem Ethernet interconnect switches and Virtual Connect to facilitate proper implementation of network protocols and access to advanced features.
https://www.hpe.com/h20195/v2/getpdf.aspx/4aa0-5969enw.pdf

Standard Care	**3-Year HPE 24x7 4 hour response, Proactive Care Service** This service gives you combined reactive and proactive support including rapid access to our Advanced Solution Center to manage and prevent problems and a Technical Support Specialist with a broad level of technical knowledge that will engage with additional technical expertise as needed from the Hewlett Packard Enterprise vast global resources. **https://www.hpe.com/h20195/v2/getpdf.aspx/4aa3-8855eee.pdf**

HPE Installation and Startup Service for HPE BladeSystem c-Class Infrastructure for c3000 enclosure
Provides for hardware installation (c-Class ProLiant and Integrity server blades, storage blades, Ethernet Interconnects and Virtual Connect) and software installation and startup of a BladeSystem c3000 Infrastructure in a single enclosure including deployment of OS on all blades or deployment of OS on two blades and HPE

Service and Support

Insight Control, plus Server Deployment (formerly RDP).
https://www.hpe.com/h20195/v2/getpdf.aspx/4aa0-5964enw.pdf

HPE Installation and Startup Service for HPE BladeSystem c-Class Enhanced Network
Hewlett Packard Enterprise provides for the configuration and testing of BladeSystem Ethernet interconnect switches to facilitate proper implementation of network protocols and access to advanced features.
https://www.hpe.com/h20195/v2/getpdf.aspx/4aa0-5964enw.pdf

Related Services

HPE Proactive Care Personalized Support - Environmental Option
The Personalized Support option provides an assigned Account Support Manager who can bring best practices from across the industry plus extra technical skills to your IT team. This option is only available as an add-on to HPE Proactive Care Support.

HPE Proactive Select Service
Provides a flexible way to purchase HPE best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months. **https://www.hpe.com/h20195/V2/GetPDF.aspx/4AA2-3842ENW.pdf**

Additional Packaged Support Services (formerly Care Pack) can be found at:
https://www.hpe.com/us/en/services/it-support.html

Insight Online/Insight Remote Support

HPE Insight Remote Support provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. This comes at no additional cost with your HPE solution. Learn more about **Insight Remote Support** (**https://www.hpe.com/info/insightremotesupport/docs**)and Insight Online (**https://www.hpe.com/h20195/v2/getpdf.aspx/c04123234.pdf**)
NOTE: Insight Remote Support is a prerequisite for Proactive Care. All blades within a single HPE BladeSystem enclosure must be at the same service level.

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 HPE experts, access support resources or collaborate with peers. Learn more **https://www.hpe.com/us/en/support.html**

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 QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction

For more information

To learn more on HPE ProLiant servers and HPE BladeSystem servers, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized ServiceOne partner. Or visit:
https://www.hpe.com/us/en/integrated-systems/bladesystem.html

Pre-Configured Models

HPE BladeSystem   **NOTE:** Hewlett Packard Enterprise does not allow factory integration of options into pre-configured models.
c-Class Server   Any additional options purchased will be shipped separately.
Blade Enclosures **NOTE:** If you desire a custom configuration, please see the "Configuration Information - Factory Integrated
Models" section of this QuickSpecs.

HPE BLc3000 Platinum Enclosure with 4 AC Power Supplies 6 Fans ROHS 8 Insight Control Licenses	696908-B21

NOTE: Includes 4 1200W AC Common Slot Platinum Plus Hot Plug Power Supplies, 6 Active Cool 100 Fans, DVD drive, Rail Kit, Onboard Administrator DDR2 module, 4 6ft C13 to C14 PDU power cords, 7 bay blanks, and 8 Insight Control Licenses.

HPE BLc3000 Platinum Enclosure with 4 AC Power Supplies 6 Fans ROHS Trial Insight Control License	696909-B21

NOTE: Includes 4 1200W AC Common Slot Platinum Plus Hot Plug Power Supplies, 6 Active Cool 100 Fans, DVD drive, Rail Kit, Onboard Administrator DDR2 module, 4 6ft C13 to C14 PDU power cords, 7 bay blanks, and 8 Insight Control Trial Licenses.

Configuration Information Factory Integrated Models

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 contacting your local sales representative for information on Factory Integrated Model product offerings and requirements.
For a configuration of the HPE BladeSystem, please do the following:

Step 1: Select desired model, configuration, and quantity of HPE ProLiant server and expansion blades per enclosure (required)

NOTE: Each HPE BladeSystem c-Class Server Blade Enclosure holds up to 8 half-height server blades, 4 full-height server blades, and/or 4 expansion blades per enclosure (not exceeding 8 total blades).

NOTE: HPE BladeSystem c3000 and c7000 Enclosures support G1 through Gen9 ProLiant and Integrity server blades and Integrity server blades in the same enclosure, subject to support requirements of the Onboard Administrator. Certain HPE ProLiant server blades and options may require a specific version of the Onboard Administrator firmware. This firmware release may also require other subsystem firmware upgrades. For further information, please see the **HPE Service Pack for ProLiant (SPP) website** and the HPE Support Center document "**HPE ProLiant Server Blades - Compatibility with HPE BladeSystem c7000 and c3000 Enclosures and Firmware**".

NOTE: For server and expansion blade (storage, tape, and PCI Expansion) information, please visit: **https://www.hpe.com/us/en/integrated-systems/bladesystem.htm**.

Step 2: Determine the HPE BladeSystem c3000 Enclosure(s) and choose required options (One of the following from each list unless otherwise noted)

Select the base server blade enclosure configuration

HPE BladeSystem c3000 c-Class Server Blade Enclosures

NOTE: The enclosures listed below include 6 HPE Active Cool 100 Fans, a DVD drive, rack rails, and a single DDR2 Onboard Administrator module.

NOTE: The power supply kits, power cables, interconnects, etc. are added per the steps below.

NOTE: The enclosures listed below include the required blanking panels (device bay, interconnect module, fan, power, and redundant OA module blanking panels) as required per the ordered configuration. If the configuration is modified at a later date, additional blanking panels (ordered separately) may be required.

NOTE: All c-Class enclosures support HPE ProLiant, Integrity and blades in either mixed or homogenous configurations, subject to support requirements of the Onboard Administrator. The AH257C enclosure is suggested for configurations primarily used with Integrity blades.

HPE BLc3000 Platinum Configure-to-order Enclosure with 6 Fans ROHS Trial IC Lic	696910-B21
HPE Integrity BLc3000 CTO Enclosure	AH257C

Select the type and quantity of power supply kits

HPE c3000 Enclosure Power Supplies

NOTE: Each enclosure must include only one type of power supply. Mixing of power supplies is not supported, except during hot swaps to different level or higher efficient power supplies. The Onboard Administrator will exhibit a mismatch error due to mixed power supplies until all power supplies are matched.

NOTE: The HPE AC Common Slot Platinum Plus Power Suppl y PN 656364-B21meets the 80 PLUS Platinum power 94% efficiency requirement. The 80 PLUS program is a unique forum that unites electric utilities, the computer industry, and consumers in an effort to bring energy efficient technology solutions to the marketplace. 80 PLUS independently tests power supply efficiency and publically posts the results on 80Plus.org

NOTE: HPE highly recommends using the HPE Power Advisor tool to ensure the number of power supply options you have selected can fully support your BladeSystem configuration and to review maximum system power ratings for facilities planning purposes. HPE Power Advisor is available at: **http://www.hpe.com/info/hppoweradvisor**.

NOTE: For a full enclosure, you can either order 4 or more power supplies to support an

Configuration Information Factory Integrated Models

N+1 redundant configuration or 6 power supplies to support a N+N redundant configuration.

HPE 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit 656364-B21

NOTE: Platinum power supplies are required to enable power discovery services.

NOTE: Includes a 6ft C13 to C14 PDU power cord.

Step 3: Select optional enclosure options

HPE Redundant Onboard Administrator	HPE BLc3000 Dual DDR2 Onboard Administrator	488100-B21
	NOTE: Certain HPE ProLiant server blades and options require the latest version of the Onboard Administrator firmware. This firmware release may also require other subsystem firmware upgrades. For information on the latest firmware versions, please see the Blades Firmware Maintenance website at: **https://www.hpe.com/us/en/product.../pip.hpe-onboard-administrator.3188465.html**	
HPE c3000 KVM Modules and Adapters	HPE BLc3000 KVM Option	437575-B21
	NOTE: For use with in-rack KVM switches.	
HPE Optional Power Cords	HPE C20 - C13 WW 250V 15Amp 2.0m Jumper Cord	AF590A
	NOTE: For use with PDUs accepting C20 power cords.	
	NOTE: Order 1 for each power supply.	
	HPE C13 - Nema 6-15P US 250V 15A JP 3.6m Power Cord	A0N33A

Step 4: Select one to four interconnects.

The following is a list of various HPE BladeSystem c-Class interconnect modules (Virtual Connect, Ethernet, Fibre Channel, and SAS interconnects). A pair of interconnects must be ordered if redundancy is required. For detailed interconnect options consult the specific interconnect QuickSpecs: **https://www.hpe.com/h20195/v2/getpdf.aspx/c04284204.pdf?ver=10**.

NOTE: Options for specific c-Class interconnects are NOT included in the list below. Consult the individual interconnect QuickSpecs to obtain part numbers for interconnect options such as cables, SFPs, etc.

NOTE: Interconnect Bay 1 must contain one of the "Ethernet" interconnect modules.

HPE BladeSystem c-Class Ethernet Interconnects	HPE Virtual Connect Flex-10/10D Module for c-Class BladeSystem	638526-B21
	HPE 6125G/XG Ethernet Blade Switch	658250-B21
	HPE 6125G Ethernet Blade Switch	658247-B21
	HPE 1GB Ethernet Pass-Thru Module for c-Class BladeSystem	406740-B21
	HPE 10GbE Ethernet Pass-Thru Module for c-Class BladeSystem	538113-B21
	HPE 10GbE Ethernet Pass-Thru TAA-compliant Module II for c-Class BladeSystem	854194-B22
	HP Cisco B22HP Fabric Extender for BladeSystem c-Class	641146-B21
	HP Cisco B22HP Fabric Extender with 16 FET for BladeSystem c-Class	657787-B21
	NOTE: The Cisco Fabric Extender for HPE BladeSystem with 16 FET - (PN 657787-B21), comes packaged with 16 Cisco Fabric Extender Transceivers. These Cisco transceivers can be used to connect the Fabric Extender with a parent Nexus 5000 over optical cable up to 100 meters using OM3 grade fiber.	
	NOTE: HPE Virtual Connect FlexFabric 10Gb/24-port Module for c-Class BladeSystem (P/N 571956-B21) is not compatible with the c3000 enclosure	
HPE SAS Switch	HPE 6Gb SAS Switch Single Pack for HPE BladeSystem c-Class	BK763A
	HPE 6Gb SAS Switch Dual Pack for HPE BladeSystem c-Class	BK764A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information	

Configuration Information Factory Integrated Models

at: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123176**

NOTE: Please see the QuickSpecs for Technical Specifications and additional information

at: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04293370**

HPE BladeSystem c-Class FC SAN Interconnects	HPE Virtual Connect 8Gb 24-port Fibre Channel Module for c-Class BladeSystem	466482-B21
	HPE Virtual Connect 8Gb 20-port Fibre Channel Module for c-Class BladeSystem	572018-B21
	HPE 4GB Fibre Channel Pass-thru Module for c-Class BladeSystem	403626-B21
	Brocade 8/12c SAN Switch for BladeSystem c-Class	AJ820C
	Brocade 8/24c SAN Switch for BladeSystem c-Class	AJ821C
	Brocade 8/24c Power Pack+ SAN Switch for BladeSystem c-Class	AJ822C
	HPE MDS 8/12c Fabric Switch 12-port Upgrade LTU	TA804A
	NOTE: Licensed per switch.	
	HP StoreFabric Data Center Network Manager BladeSystem LTU	TC367A
	NOTE: Installed on DCNM Server, each license can be assigned to only one switch.	

Step 5: Select rack power distribution for installing the enclosure into a rack.

NOTE: A pair of PDUs must be ordered for AC Feed redundancy. If AC redundancy is not required, a single PDU or UPS may be acceptable.

NOTE: Select HPE PDUs and UPSs are listed later in this document. For additional HPE PDUs and UPSs, please see **http://www.hpe.com/info/rackandpower**.

Step 6: Select wall outlet power cords (For connection to standard wall outlets)

NOTE: Select one wall outlet power cord for each power supply when plugging the power supplies into a wall outlet.

NOTE: Wall Outlet power cords should only be used with low-line (100VAC to 110VAC) power sources. If high-line power outlets are required, safety regulations require the use of a PDU or a UPS between the c3000 enclosures power supplies and wall outlets.

NOTE: A standard 6ft PDU power cord (C13 to C14) is included with each AC power supply, so these wall outlet power cords are not required if you plan to plug the power supplies into a PDU or UPS.

NOTE: Order the appropriate power cord for your countries standard electrical outlets.

NOTE: For additional power cable information, please visit: **http://www.hpe.com/info/rackandpower**

HPE Power Cords	HPE C13 - Nema 5-15P US/CA 110V 10Amp 1.83m Power Cord	AF556A
	NOTE: HPE Power cord (6 ft) 1.83 meter 10A C-13-UL domestic power cord, for grounded USA 110V wall outlets.	
	HPE C13 - JIS C8303 JP 100V 12Amp 2.0m Power Cord	AF572A
	NOTE: HPE Power cord 2 meter C13 Japan low-line power cord, for Japanese 100V wall outlets.	
	HPE C20 - C13 WW 250V 15Amp 2.0m Jumper Cord	AF590A
	NOTE: For use with PDUs accepting C20 power cords.	

Related Options

HPE c3000 Enclosure Options	HPE c-Class BladeSystem Miscellaneous Blanks Option Kit	412148-B21
	NOTE: Contains 1 each of c3000/c7000 Active Cool Fan blank, c3000/c7000 interconnect module blank, c7000 Onboard Administrator blank, c3000 local KVM blank, c3000 power supply blank, c7000 power supply blank, c3000 DVD blank, and a c3000 mini-divider.	
	NOTE: This kit should only be ordered to replace lost or damaged blanks.	
	HPE c-Class BladeSystem Bay Blank with Coupler Option	412150-B21
	NOTE: This is option contains one half-height device blank and a coupler that can be used for the c3000 and c7000 enclosures.	
	NOTE: Order quantity of one 412150-B21 for filling a half-height bay; the coupler is not used.	
	NOTE: Order quantity of two 412150-B21 for filling a full-height bay. One coupler is installed between the two half-height blanks to be connected together to create a full-height blank.	
	NOTE: This kit should only be ordered to replace lost or damaged blanks.	
HPE c3000 Rack Brackets	HPE BLc3000 10000 Series Rack Shipping Bracket Option	461384-B21
	NOTE: Required when shipping a c3000 enclosure in a HPE 10000 series rack. Please order 1 kit per enclosure.	
HPE Onboard Administrator	HPE BLc3000 Dual DDR2 Onboard Administrator	488100-B21
	NOTE: Second Onboard Administrator Module for the DDR2 OA module.	
	NOTE: Support for second Order Administrator Module for c3000 Enclosure.	
	NOTE: This module fits into an HPE c3000 DDR2 Onboard Administrator.	
HPE c-Class Power Supply	**NOTE:** Each enclosure must include only one type of power supply. Mixing of power supplies is not supported, except during hot swaps to different level or higher efficient power supplies. The Onboard Administrator will exhibit a mismatch error due to mixed power supplies until all power supplies are matched.	
	NOTE: The HPE AC Common Slot Platinum Plus Power Supply PN 656364-B21 meets the 80 PLUS Platinum power 94% efficiency requirement. The 80 PLUS program is a unique forum that unites electric utilities, the computer industry, and consumers in an effort to bring energy efficient technology solutions to the marketplace. 80 PLUS independently tests power supply efficiency and publically posts the results on 80Plus.org.	
	NOTE: HPE highly recommends using the HPE Power Advisor tool to ensure the number of power supply options you have selected can fully support your BladeSystem configuration and to review maximum system power ratings for facilities planning purposes. HPE Power Advisor is available at: **http://www.hpe.com/info/hppoweradvisor**.	
	NOTE: For a full enclosure, you can either order 4 or more power supplies to support an N+1 redundant configuration or 6 power supplies to support an N+N redundant configuration.	
	HPE 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit	656364-B21
	NOTE: Platinum power supplies are required to enable power discovery services	
	NOTE: Includes a 6ft C13 to C14 PDU power cord.	
HPE c3000 KVM Module and Adapters	HPE BLc3000 KVM Option	437575-B21
	NOTE: For use with in-rack KVM switches	

Related Options

HPE BladeSystem c-Class Network Interconnects	**NOTE:** For detailed interconnect options, consult the specific interconnect QuickSpecs: **https://www.hpe.com/h20195/v2/getpdf.aspx/c04284204.pdf?ver=10** **NOTE:** Options to specific c-Class interconnects are NOT included in the list below. Consult the individual interconnect QuickSpecs to obtain part numbers for interconnect options such as cables, SFPs, etc. **NOTE:** Interconnect Bay 1 must contain one of the Ethernet capable interconnect modules. **NOTE:** The HPE BladeSystem c-Class interconnects ship as single units unless otherwise noted. Interconnects must be ordered in quantities of two for redundancy support.	
	HPE 6125G Ethernet Blade Switch	658247-B21
	HPE 6125G/XG Ethernet Blade Switch	658250-B21
	HPE 1GB Ethernet Pass-Thru Module for c-Class BladeSystem	406740-B21
	NOTE: The Ethernet Pass-Thru Module is shipped as a single unit and should be ordered in quantities of two.	
HPE BladeSystem c-Class FC SAN Interconnects	**NOTE:** For detailed interconnect options, consult the specific interconnect QuickSpecs: **https://www.hpe.com/h20195/v2/getpdf.aspx/c04284204.pdf?ver=10**. **NOTE:** Options to specific c-Class interconnects are NOT included in the list below. Consult the individual interconnect QuickSpecs to obtain part numbers for interconnect options such as cables, SFPs, etc. **NOTE:** Interconnect Bay 1 must contain one of the Ethernet capable interconnect modules. **NOTE:** The HPE BladeSystem c-Class interconnects ship as single units unless otherwise noted. Interconnects must be ordered in quantities of two for redundancy support.	
	HPE Virtual Connect 8Gb 24-port Fibre Channel Module for c-Class BladeSystem	466482-B21
	HPE Virtual Connect 8Gb 20-port Fibre Channel Module for c-Class BladeSystem	572018-B21
	HPE 4GB Fibre Channel Pass-thru Module for c-Class BladeSystem	403626-B21
	Brocade 8/12c SAN Switch for BladeSystem c-Class	AJ820C
	Brocade 8/24c SAN Switch for BladeSystem c-Class	AJ821C
	Brocade 8/24c Power Pack+ SAN Switch for BladeSystem c-Class	AJ822C
	Brocade 8/16Gb Embedded FC Switch 12-port Upgrade LTU	T5517A
	Cisco MDS 9124e Switch for BladeSystem c-Class 12-port Upgrade LTU	T5169A
Cisco MDS Fabric Switch for HPE BladeSystem c-Class	Brocade 8/16Gb Embedded FC Switch 12-port Upgrade LTU	T5517A
	Cisco MDS 9124e Switch for BladeSystem c-Class 12-port Upgrade LTU	T5169A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information at: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04164463**	
HPE Insight Software	**HPE Insight Control**	
	HPE Insight Management Media Kit	C6N31A
	NOTE: HPE Insight Management Media Kit contains DVDs without licenses. Contains HPE Systems Insight Manager, HPE Insight Control, HPE Matrix Operating Environment, and Virtual Connect Enterprise Manager software. Uses an integrated installer to perform quick and accurate software installation and updates	
	NOTE: Licenses ship without media. The Insight Control Media Kit can be ordered separately, or can be downloaded. See **https://www.hpe.com/us/en/product-catalog/detail/pip.3312156.html**	
	NOTE: The "for bundling with an enclosure" license kits can only be ordered together with a BladeSystem c3000 or c7000 enclosure on the same order.	

Related Options

NOTE: Customer will receive a license entitlement certificate, which must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HPE Software Technical Support Service.
NOTE: For additional License Kits, please see the QuickSpecs at:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123391

HPE iLO Advanced for BladeSystem License	HPE iLO Advanced for BladeSystem including 1yr 24x7 Support 8-server LTU	512489-B21

HPE Virtual Connect Enterprise Manager

HPE Virtual Connect Enterprise Manager including 1yr 24x7 Support Single c3000 Enclosure LTU   459867-B21

NOTE: This license allows 1 BL-c3000 enclosure to be managed with VCEM. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax to obtain the license activation key(s). Includes one year of 24 x 7 HPE Software Technical Support and Update Service.
NOTE: For additional License Kits, please visit:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154443

HPE c-Class Storage Blades

NOTE: Please see the HPE D2200sb Storage Blade QuickSpecs for technical specifications and additional information at:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111597

	HPE D2220sb Build-to-order Storage Blade	QW917A

NOTE: Includes 3yr NBD Parts-Only Warranty Service

	HPE D2220sb Configure-to-order Storage Blade	QW918A

NOTE: Includes 3yr NBD Parts-Only Warranty Service
NOTE: The D2220sb requires a c7000 Enclosure configuration with 10 fans.
NOTE: Please see the HPE D2220sb Storage Blade QuickSpecs for technical specifications and additional information at:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111399.

	HPE 10GbE Pass-Thru Module	854194-B21

HPE Expansion Blade

HPE BLc PCI Expansion Blade   448018-B21
NOTE: Please see the QuickSpecs for Technical Specifications and additional information at: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04128342**

HPE Power Distribution Units

NOTE: A pair of PDUs must be ordered for AC feed redundancy.
NOTE: Additional HPE Power Distribution Units are available than those listed below. For a complete list of all HPE PDUs and additional information please visit:
http://www.hpe.com/info/rackandpower.

Modular PDUs
NOTE: Please see the following QuickSpecs for additional options including shorter jumper cables and country specific power cords:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04128395

HPE Two C13 PDU Extension Bar   AF500A
NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
http://www.hp.com/go/pdu
NOTE: Please see the UPS and PDU cable matrix's on the HPE Power Protection and Management page. Under Power Cords, click on the "HPE Power Cord Matrix" link. That

Related Options

link will list cable descriptions, requirements, and specifications for UPS and PDU units.
Please see the following link: **http://www.hpe.com/info/rackandpowerl**

HPE Intelligent Power Distribution Units (iPDU)		
	NOTE: A pair of PDUs must be ordered for AC feed redundancy.	
	NOTE: Additional HPE Power Distribution Units are available than those listed below. For a complete list of all HPE PDUs and additional information please visit: **http://www.hpe.com/info/rackandpower**	

iPDU Core Units

HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF520A
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF522A

iPDU Extension Bars

HPE 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A
HPE 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04128194

HPE Uninterruptible Power Systems	
	NOTE: A pair of PDUs must be ordered for AC feed redundancy.
	NOTE: Additional HPE Power Distribution Units are available than those listed below. For a complete list of all HPE PDUs and additional information please visit: **http://www.hpe.com/info/rackandpower**

R5000 Uninterruptible Power System (UPS)

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

NOTE: Please see the QuickSpecs for Technical Specifications and additional information at: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154372**

R7000 Uninterruptible Power System (UPS)

HPE R7000 4U 50A High Voltage NA/JP Uninterruptible Power System	AF462A
HPE R5KVA and R7KVA 3U Extended Runtime Module	AF464A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information at: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154371**

HPE Basic Power Distribution Units	
	NOTE: Additional HPE Power Distribution Units are available than those listed below. For a complete list of all HPE PDUs and additional information please visit: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123329**.

HPE 1.9kVA 120 Volt 12 Outlet NA/JP Basic Power Distribution Unit

HPE Basic 1.9kVA/L5-20P 16A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU	H5M54A
HPE Basic 2.8kVA/L5-30P 24A/120V Outlets (18) 5-20R/Vertical NA/JP PDU	H5M55A
HPE Basic 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU	H5M56A
HPE Basic 4.9kVA/60320 C20 Detachable 16A/230V Outlets (20) C13/Vertical WW PDU	H5M57A
HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (20) C13/Vertical NA/JP PDU	H5M58A
HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP PDU	H5M59A
HPE Basic 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (6) C19/Vertical NA PDU	H5M60A
HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13/Vertical NA/JP PDU	H5M61A
HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP PDU	H5M62A

Related Options

HPE Basic 3Ph 5.7kVA/ L21-20P 16A/120-208V Outlets (24) C13 (3) 5-20R/Vertical NA/JP PDU	H5M63A
HPE Basic 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (24) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU	H5M64A
HPE Basic 3Ph 11kVA/60309 16A/240V Outlets (36) C13 (6) C19/Vertical NA PDU	H5M67A
HPE Basic 7.3kVA/60309 5-wire 32A/230V Outlets (20) C13/Vertical INTL PDU	H5M68A
HPE Basic 7.3kVA/60309 3-wire 32A/230V Outlets (24) C13 (6) C19/Vertical INTL PDU	H5M70A
HPE Basic 11kVA/60309 63A 3-wire 48A/230V Outlets (30) C13 (6) C19/Vertical INTL PDU	H5M71A
HPE Basic 3Ph 11kVA/60309 5-wire 16A/230V Outlets (24) C13 (6) C19/Vertical INTL PDU	H5M72A
HPE Basic 3Ph 11kVA/60309 5-wire 16A/230V Outlets (36) C13 (6) C19/Vertical INTL PDU	H5M73A
HPE Basic 9.2kVA/50A Terminal Block 40A/230V Outlets (30) C13 (6) C19/Vertical WW PDU	H5M75A

HPE 277 Volt options for H3X07A and H3X08A

HPE 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111250
NOTE: Additional HPE Power Distribution Units are available. For a complete list of all HPE PDUs and additional information please visit:
http://www.hp.com/go/rackandpower.

HPE Power Cords

HPE C20 - C13 WW 250V 15Amp 2.0m Jumper Cord	AF590A

NOTE: For use with PDUs that accept C20 power cords.
NOTE: For additional power cable information, please visit:
http://www.hpe.com/info/rackandpower

HPE Rack Series
(Graphite Metallic)

HPE Intelligent Series Rack

HPE 42U 600mm x 1075mm Enterprise Pallet Rack	BW903A
HP 42U 600mm x 1075mm Enterprise Shock Rack	BW904A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information at: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04128240**
NOTE: For additional information regarding Rack Cabinets, please see the following URL:
http://www.hpe.com/info/rackandpower

HPE Rack Options

Keyboards and Monitors

HPE USB US Keyboard/Mouse Kit	631341-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04168349
NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04155352
NOTE: For additional information regarding Rack Options, please see the following URL:
http://www.hp.com/go/rackandpower

HPE Server Console Switch G2 with Virtual Media & CAC

HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software	AF618A
HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software	AF619A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

Related Options

https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04231090

HPE IP Console Switch G2 with Virtual Media & CAC

HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software	AF620A
HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software	AF621A
HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software	AF622A
KVM USB Cnsl Itfc Adapter 1PK ALL	336047-B21

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04230853

HPE KVM Switches

HP BladeSystem c-Class KVM Interface Adapter	AF605A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04128391

HP 1x4 USB/PS2 KVM Console Switch	AF611A
HP 1x4 KVM Console 6ft USB Cable	AF613A

NOTE: required for supporting USB peripherals.

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04164460

NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04164460

Rack Options

HP 11K G2 Rack Tie Down Kit	AF076A

NOTE: For additional information regarding Rack Options, please see the following URL:
http://www.hpe.com/info/rackandpower

HPE Care Pack Services

NOTE: Some options, such as Fibre Channel switches for the HPE c-Class BladeSystem, are not covered under the c3000 enclosure Care Packs and carry separate Care Packs. Care Pack service level support for these options should always be uplifted to match existing storage or server service level.
Please view the option QuickSpecs or contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized ServiceOne partner for Care Pack information.

Proactive Care Services

HPE 3 year Proactive Care 24x7 c3000 Enclosure Service	U3C42E
HPE 3 year Proactive Care Call to Repair c3000 Enclosure Service	U3C45E
HPE 3 year Proactive Care 24x7 c3000 Enclosure with Insight Control Service	U3P19E
HPE 3 year Proactive Care Call to Repair c3000 Enclosure with Insight Control Service	U3P22E

Installation & Start-up Services

HPE Installation c3000 Enclosure and Server Blade Service	UH749E
HPE BladeSystem c3000 Infrastructure Startup Service	UF817E
HPE BladeSystem c3000 + OS Startup Service	UF818E
HPE BladSys c3000 Encd Network Startup Service	UF814E
HPE Hardware Install c-Class Enclosure and Server Blade Service	UE494E

Additional HPE Care Pack services can be found at:
https://www.hpe.com/us/en/services/it-support.html

Power Specifications

HPE 1200W Common Slot Platinum Hot Plug Power Supply Kit

Part Number	656364-B21						
Input Voltage Range (V rms)	100-240						
Frequency Range (Nominal) (Hz)	50 / 60						
Nominal Input Voltage (Vrms)	**100**	**120**	**200**	**208**	**220**	**230**	**240**
Maximum Rated Output Wattage	800	900	1200	1200	1200	1200	1200
Nominal Input Current (A rms)	9.1	8.4	6.7	6.4	6.1	5.8	5.5
Maximum Rated Input Wattage Rating (Watts)	897	999	1321	1319	1317	1315	1314
Maximum Rated VA (Volt-Amp)	909	1012	1338	1337	1334	1332	1331
Efficiency (%)	89.2	90.1	90.9	91.0	91.1	91.2	91.3
Power Factor	0.998						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	3061	3408	4506	4501	4493	4487	4483

HPE 1200W Common Slot Silver Hot Plug Power Supply Kit

Part Number	500172-B21						
Input Voltage Range (V rms)	100-240						
Frequency Range (Nominal) (Hz)	50 / 60						
Nominal Input Voltage (Vrms)	**100**	**120**	**200**	**208**	**220**	**230**	**240**
Maximum Rated Output Wattage	800	900	1200	1200	1200	1200	1200
Nominal Input Current (A rms)	9.7	9.0	7.0	6.8	6.4	6.1	5.9
Maximum Rated Input Wattage Rating (Watts)	930	1034	1348	1348	1348	1348	1348
Maximum Rated VA (Volt-Amp)	970	1079	1406	1406	1406	1406	1406
Efficiency (%)	86	87	89	89	89	89	89
Power Factor	0.97						
Leakage Current (mA)	0.42	0.50	0.83	0.87	0.92	0.96	1.00
Maximum Inrush Current (A peak)	30						
Maximum Inrush Current duration (mS)	20						
Maximum British Thermal Unit Rating (BTU-Hr)	3174	3530	4600	4600	4600	4600	4600

Server Blade, Expansion Blade, and Fan Population Guidelines

Fan & power supply bay numbering
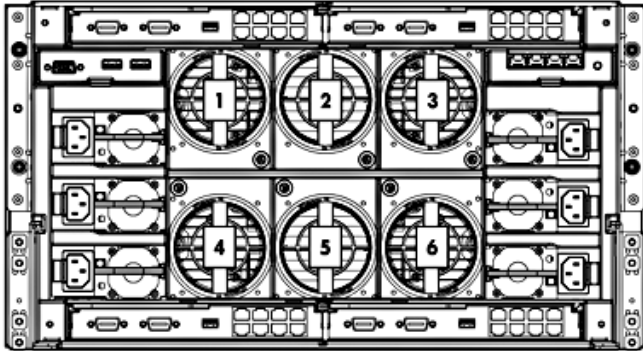
Rack power supply bay numbering   **Fan bay numbering**
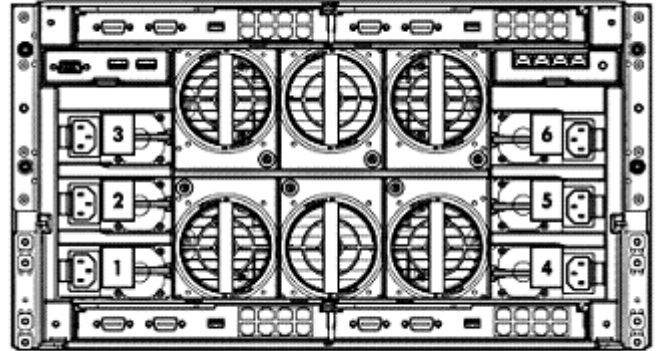
Power supplies and fans must be placed in the following bays

Number of Fans	Fan Bays Used
4	2, 4, 5, 6
6	All bays filled

Number of Power Supplies (for PS Redundant or non-redundant mode)	Power Supply Bays Used
2	1 & 2
3	1, 2, & 3
4	1, 2, 3, & 4
5	1 through 5
6	All bays

Number of Power Supplies (for AC Redundant mode)	Place Power Supplies in Bays:
2	1 & 4
4	1, 2, 4, & 5
6	All bays filled

NOTE: With four fans, the enclosure will support only 4 half-height server blades in the bottom half of the enclosure device bays. With six fans, all 8 server bays may be filled.

NOTE: For correct operation, fans and server blades must be installed in the correct bays. The Onboard Administrator will ensure that fans and blades are correctly placed before allowing the system to power on.

The c3000 enclosure is divided into 2 zones by the horizontal support metalwork. The lower zone (zone 1) includes bays 1, 2, 5, and 6. The upper zone (zone 2) contains bays 3, 4, 7, and 8. Within each zone a removable bay divider is used to support half-height devices. To install a full-height blade in either zone this bay divider must be removed.

NOTE: Please read the RTF card (included with each c3000 enclosure) and the "HPE BladeSystem c3000 Setup and Installation Guide" for more information on the use, installation, and removal of bay dividers.

Server Blade, Expansion Blade, and Fan Population Guidelines

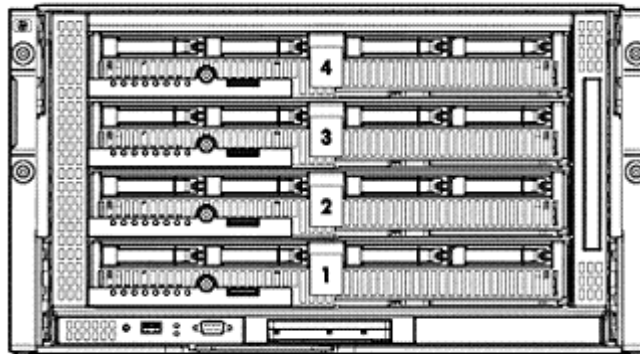**Half-height server blade bay numbering**
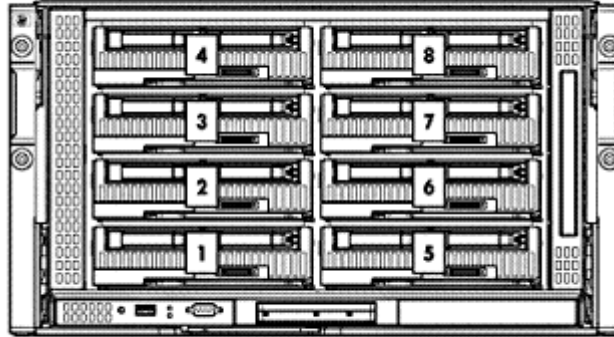
HPE BladeSystem c3000 Enclosure – Racks

1. Device Bay 1
2. Device Bay 2
3. Device Bay 3
4. Device Bay 4
5. Device Bay 5
6. Device Bay 6
7. Device Bay 7
8. Device Bay 8

NOTE: Half-height server blades should be populated from the bottom half of the enclosure, in the following order (bays 1, 5, 2, 6, 3, 7, 4, & 8)

Full-height server blade bay numbering

HPE BladeSystem c3000 Enclosure – Racks

1. Device Bay 1
2. Device Bay 2
3. Device Bay 3
4. Device Bay 4

NOTE: Full-height servers should be populated from the bottom to the top (bays 1 through 4). With four fans, only the bottom 2 bays can be used. With six fans, all bays can be used.

Server Blade, Expansion Blade, and Fan Population Guidelines

Full-height and half-height server blade mixed configurations

Each enclosure zone can support up to 1 full-height, double wide server blade, up to 2 full-height, single-wide server blades, or up to 4 half-height server blades. Additionally, zone 2 supports a mix of 1 full-height, single-wide server blade and up to 2 half-height server blades. A mixture of blades sizes is not supported in zone 1.

An overview of the mixed server blade population rule best practices are summarized below. For detailed expansion blade rules and guidelines, please see the documentation that ships with the enclosure and server blade.
1. One full-height, single-wide server and up two half-height servers may be mixed in zone 2 (the upper zone); mixing is not allowed in zone 1 (the lower zone).
2. The full-height, single wide server must be installed in the lower bays 3 and 7 and half-height server(s) directly above in bays 4 and 8.
3. Half-height server blades should be installed in the order of bays 4 then 8.
4. Before installing any full-height server blades, remove the bay divider that is used to support half-height devices.
5. A mini-divider is installed between bays 4 and 8. A mini-divider is shipped with each c3000 enclosure.

NOTE: Please read the RTF card (included with each c3000 enclosure) and the "HPE BladeSystem c3000 Setup and Installation Guide" for more information on the use, installation, and removal of bay dividers and the mini-divider for mixed configurations.
NOTE: Expansion blades can be installed in zone 2 along with both full-height, single-wide and half-height blades. For more information, please see the "Expansion blades" section later in this document.

Expansion blades

Expansion blades consist of storage blades, tape blades, and the PCI Expansion Blade. Up to 4 expansion blades are supported per HPE BladeSystem c-Class c3000 Enclosure. Expansion blades may be installed in the same zone as half-height and full-height, single-wide server blades. Expansion blades are not supported with full-height, double-wide server blades. An expansion blade is installed directly above a server blade, also known as a partner server blade. An overview of the expansion blade population rule best practices are summarized below. For detailed expansion blade rules and guidelines, please see the documentation that ships with the enclosure and expansion blade.

Expansion blade population best practices for half-height server blades:
1. One half-height partner server blade supports one expansion blade.
2. Identify the partner server blade to be installed with the expansion blade. The two blades always occupy a pair of slots as follows: 1 & 2, 3 & 4, 5 & 6, and 7 & 8.
3. Each c3000 zone contains a removable divider (also known as a device bay shelf) that is used to support half-height devices. This divider is remains installed whether the half-height devices are server or expansion blades.

Expansion blade population best practices for full-height, single-wide server blades:
1. A full-height, single-wide server blade may be mixed with half-height expansion blades in zone 2 (the upper zone) of the c3000 enclosure; mixing is not allowed in zone 1 (the lower zone).
2. The full-height, single-wide partner server blade must be installed in the lower bays 3 and 7 and half-height devices directly above in bays 4 and 8.
3. The full-height, single-wide server partner blade supports one or two expansion blades in bays 4 and 8.
4. Before installing any full-height, single-wide server blades, remove the bay divider that is used to support half-height devices.
5. A mini-divider is installed between bays 4 and 8. A mini-divider is shipped with each c3000 enclosure.
6. If installing only one expansion blade, install the expansion blade in bay 8. The remaining half-height bay (bay 4) may be populated with either a half-height device bay blank of a half-height server blade; the half-height server blade may not be partnered with the expansion blade.
7. If installing two expansion blades, the expansion blades may be two storage blades, two tape blades, two PCI Expansion Blades, or a mixture of any two.
8. Expansion blades are not supported with full-height, double-wide server blades.

NOTE: Please read the RTF card (included with each c3000 enclosure) and the "HPE BladeSystem c3000 Setup and Installation Guide" for more information on using bay dividers and the mini-divider for mixed configurations.
NOTE: For detailed expansion blade rules and guidelines, please see the documentation that ships with the enclosure and expansion blade.

Technical Specifications

Enclosure Unit	**Dimensions** (H x W x D) (with bezel)		10.4 x 19.1 x 32.977 in (265 x 485 x 835 mm)
	Weight (approximate)	Maximum (one enclosure with 8 blades and 4 interconnects installed)	300 lb (136 kg)
		Minimum (one enclosure without blades and interconnects)	130 lb (59 kg)
	Input Requirements (per AC power supply)	Rated Line Voltage	90 – 132 VAC 180 – 264 VAC
		Rated Input Current	9.3 A (at 100 VAC) 9.7 A (at 120VAC) 7.8 A (at 200 VAC) 7.2 A (at 208 VAC) 6.8 A (at 220 VAC) 6.2 A (at 240 VAC)
		Rated Input Frequency	47 to 63 Hz
	BTU Rating	Maximum per power supply	2728 BTU/hr (at 100 VAC) 3069 BTU/hr (at 120VAC) 4092 BTU/hr (at 200 to 240 VAC)
	Power Specifications		To review typical system power ratings use the Power Calculator which is available via the online tool located at URL: **https://paonline56.itcs.hpe.com/?Page=Index**
	Power Supply Output (per power supply)	Rated Steady-State Power	800 W (at 100 VAC) 900 W (at 120 VAC) 1200 W (at 200 to 240 VAC)
		Maximum Peak Power	880 W (at 100 VAC) 990 W (at 120 VAC) 1350 W (at 200 to 240 VAC)
	System Inlet Temperature	Operating	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 10°C/hr (18°F/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 30°C (86°F).
		Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Relative Humidity (non-condensing)	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.
	Altitude	Operating	3050 m (10,000 ft). This value may be limited by the

Technical Specifications

		type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Acoustic Noise	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).

Idle	depends on server configuration & mix of server blades
Operating	varies by CPU utilization, server configuration, and mix of server blades

Option Kits	**Power Supply Dimensions**	Size	Height: 1.515 in (38.48 mm)
			Width: 3.4 in (86.36 mm)
			Depth: 7.5 in (190.5 mm)
		Weight	2.5 lbs (1.13 kg)
	Fan Option Shipping Dimensions	Size	Height: 8.75 in (223 mm)
			Width: 9.75 in (248 mm)
			Depth: 15.88 in (403 mm)
		Weight	4.0 lbs (1.8 kg)

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.hpe.com/info/recycle**. To recycle your product, please go to: **http://www.hpe.com/info/recycle** 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.hpe.com/info/recycle**. 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
12-Jun-2017	From Version 67 to 68	Added	SKU added in Configuration Information Factory Integrated Models section: 854194-B22
		Removed	Obsolete SKUs were deleted: C6N32ABE, C6N33ABE.
03-Apr-2017	From Version 66 to 67	Changed	URLs in document were updated.
		Removed	Obsolete SKUs were deleted: 590863-B21, 431643-B21.
13-Feb-2017	From Version 65 to 66	Changed	Configuration Information Factory Integrated Models and Related Options sections were updated.
		Added	SKU added: 854194-B21
		Removed	Obsolete SKUs were deleted: 516733-B21, AW563A, AW564A, 516733-B21, AJ820B, AJ821B, AJ822B, AW563A, AW564A, AW563A, AW564A, BD883A, BS580B.
10-June 2016	From Version 64 to 65	Changed	Overview, Configuration Information Factory Integrated Models, Related Options, and Power Specifications sections were updated.
		Removed	Smartbuys and discontinued -48VDC product and notes were deleted from QuickSpecs: 437573-B21.
25-Mar-2016	From Version 63 to 64	Changed	SKUs updated in Configuration Information Factory Integrated Models, from: AJ820B, AJ821B, AJ822B; to: AJ820C, AJ821C, AJ822C.
15-Jan-2016	From Version 62 to 63	Changed	Overview and Smartbuy sections were updated.
		Removed	Obsolete SKUs were deleted: 451439-B21, 451438-B21, TC317A, AP880A, AF470A, AF471A, AF466A, AF467A, AF468A, H3X07A, H3X08A, AZ870A, AZ871A, AZ872A, AZ873A, AZ874A, AZ875A, AZ876A, AZ877A, AZ878A, AZ879A, AZ880A, AZ881A, AZ882A, AZ883A, AZ884A, AZ885A, AF616A, AF617A, AF626A, U6W98E, UF540E
20-Jan-2015	From Version 61 to 62	Changed	Overview and Related Options sections were updated
		Removed	Deleted SKU AF500A Obsolete SKUs Deleted: B7E01A, AF506A, AF914A
07-Nov-2014	From Version 60 to 61	Changed	Overview, Pre-configured Models and Configuration Information Factory Integrated Models sections were updated Smart Buy SKU updated
09-Sep-2014	From Version 59 to 60	Changed	What's new, Configuration Information Factory Integrated Models, Related Options sections were updated
		Added	SKU Added: 696910-B21
		Removed	Obsolete SKUs were removed: AF603A, TC318A, AF508A, 498358-B21
01-Aug-2014	From Version 58 to 59	Changed	Changes were made in Smart Buy section (Enclosure and Warranty). Sub-sections were added in Smart Buy (Physical Size, Enclosure Management and Software).
11-Jul-2014	From Version 57 to 58	Changed	Smart Buys were added.
10-Jun-2014	From Version 56 to 57	Changed	Changes made throughout the QuickSpecs.
18-Feb-2014	From Version 55 to 56	Changed	Configuration Information and Related Options were revised.
10-Dec-2013	From Version 54 to 55	Changed	Changes were made throughout the QuickSpecs.
22-Nov-2013	From Version 53 to 54	Removed	Removed the What's New Section Removed part number from the Related Options/ HPE c Class Power

Summary of Changes

			Supply Section
13-Sep-2013	From Version 52 to 53	Changed	Configuration Information Factory Integrated Models and Related Options were revised.
15-Mar-2013	From Version 51 to 52	Changed	Overview: Updated What's New section Models: Updated HPE BladeSystem c-Class Server Blade Enclosures HPE BladeSystem c-Class Overview: Updated HPE ProLiant & Integity Server Blades and HPE D2200sb Storage Blade. Configuration Information Factory Integrated Models: Updated Step 2. Related Options: Updated HPE Onboard Administrator, HPE c-class Power Supply, HPE Insight Software and HPE Storage Blade. Power Specifications: HPE 1200W Common Slot Platinum Hot Plug Power Supply Kit and Note to section.
		Removed	Removed "Platinum" reference throughout QS. Removed NOTE from Technical Specifications section.
01-Mar-2013	From Version 50 to 51	Removed	Related Options: Removed TC276AAE and TC277AAE from HPE Insight Software section.
19-Feb-2013	From Version 49 to 50	Changed	Changes made throughout the QS to reflect the title changes to HPE BladeSystem c3000 Platinum Enclosure. Models section was updated. Service and Support section was completely revised. Other changes made in the Configuration Information and Related Options.
14-Dec-2012	From Version 48 to 49	Added	Configuration Information Factory Integrated Models: added models Related Options: added parts in HPE Rack Series
24-Sep-2012	From Version 47 to 48	Changed	Changes made throughout the QuickSpecs.
31-Aug-2012	From Version 46 to 47	Changed	Changes made throughout the QuickSpecs.
14-May-2010	From Version 45 to 46	Changed	Changes made in the Related Options section.
26-Mar-2012	From Version 44 to 45	Changed	Changes made throughout the QuickSpecs.
06-Mar-2012	From Version 42 to 44	Added	Added a reference to Gen8.
14-Nov-2011	From Version 41 to 42	Changed	HPE Insight management software, Optimized, Standard and Basic Care Packages and HPE c-Class Power Supply were revised.
29-Sep-2011	From Version 40 to 41	Changed	Revisions made in the Configuration Information and Related Options sections.
26-Sep-2011	From Version 39 to 40	Changed	Power Supplies, HPE BladeSystem c-Class Interconnects, HPE Ultrium Tape Blades and HPE Care Pack Services were revised What's New was added to the Overview
30-Aug-2011	From Version 38 to 39	Changed	Standard and Basic Care Packages were updated in Service and Support Changes were made throughout Configuration Information Factory Integrated Models and Related Options
12-Aug-2011	From Version 37 to 38	Changed	Link corrections were made in the Related Options section.
24-Jun-2011	From Version 36 to 37	Changed	Changes made throughout the QuickSpecs. Including the removal of ProCurve & StorageWorks.
03-Jun-2011	From Version 35 to 36	Changed	Changes made to North America and Canada only.
29-Apr-2011	From Version 34 to 35	Changed	The Service and Support section was completely revised and other changes made throughout the QuickSpecs.
11-Feb-2011	From Version 33 to 34	Changed	Mixed Configuration - Full Height and Half Height Population was revised HPE R5500 UPS Tower Conversion Kit was removed from HPE Uninterruptible Power Systems - Rack HPE c3000 Enclosure Options was removed from Related Options
14-Jan-2011	From Version 32 to 33	Changed	HPE BladeSystem c-Class Interconnect and Mezzanine Components URLs were modified in HPE BladeSystem c-Class Interconnects Options HPE Uninterruptible Power Systems product descriptions were revised

Summary of Changes

			These fans are for the HPE BladeSystem c3000 CTO Enclosure note was removed from HPE c-Class Active Cool Fan in Step 2 HPE PCI Express Mezzanine pass-thru card for HPE BladeSystem was removed from HPE c-Class Storage Blades
10-Jan-2011	From Version 31 to 32	Changed	HPE StorageWorks D2200sb Storage Blade was added and HPE StorageWorks SB40c Storage Blade was removed HPE Insight Control for BladeSystem Licenses, HPE Uninterruptible Power Systems - Rack, HPE Insight Software and HPE Virtual Connect Enterprise Manager product descriptions were revised HPE Virtual Connect FlexFabric 10Gb/24-port Module for c-Class BladeSystem is not compatible with the c3000 enclosure note was added to HPE BladeSystem c-Class Ethernet Interconnects
15-Nov-2010	From Version 30 to 31	Changed	Product descriptions were revised throughout, Brocade SAN Switch for HPE BladeSystem c-Class was added and HPE StorageWorks Network Storage Servers was removed.
08-Oct-2010	From Version 29 to 30	Changed	HPE Tape Backup and HPE Care Pack Services were revised Service and Support was added HPE TFT7600 G2 KVM Console Rackmount Keyboard Monitors were added to Keyboards and Monitors
		Removed	HPE BladeSystem c3000 Enclosure Tower was removed What's New was removed from the Overview HPE c3000 Enclosure DVD Drive was removed HPE 4Gb Virtual Connect Fibre Channel Module for c-Class BladeSystem was removed from Step 3 HPE Insight Control, Single-Server License including 1 year of 24x7 Technical Support and Update was removed from HPE Insight Software HPE Disk Backup was removed from Related Options
02-Jul-2010	From Version 28 to 29	Added	Mixing of the Active Cool 100 and Active Cool 200 in a c3000 enclosure is not supported note was added to HPE c-Class Active Cool Fans.
		Removed	Part numbers 508669-B21, AF600A and AF602A were removed and 2x16 Console Switch with Virtual Media was removed from HPE KVM Switch Options.
21-Jun-2010	From Version 27 to 28	Changed	HPE Rack 10000 G2 Series and HPE Rack Options were completely revised HPE Insight Control for Linux was added to HPE Insight Software
		Removed	HPE 1Gb Virtual Connect Ethernet Module for c-Class BladeSystem, HPE 10Gb Ethernet BL-c Switch and 10GbE Dual Port Mezzanine Adapter for HPE BladeSystem c-Class were removed from HPE BladeSystem c-Class Ethernet Interconnects HPE Brocade 4/12 SAN Switch, HPE Brocade 4/24 SAN Switch Power Pack and HPE Brocade 4/24 SAN Switch were removed from HPE BladeSystem c-Class FC SAN Interconnects 4x1x16 IP Console Switch with Virtual Media and HPE USB KVM Cable with audio, 6-2-pack were removed from HPE KVM Switch Options
28-Apr-2010	From Version 26 to 27	Removed	Removed part number AH351B from a Note in Step 2A of the Configuration Information section.
12-Mar-2010	From Version 25 to 26	Changed	NOTE was added to HPE 1200W -48V DC Common Slot Power Supply and all references to 2 x 1 x 16 IP Console Switch with Virtual Media, part number AF601A, were removed.
16-Feb-2010	From Version 24 to 25	Changed	Changes were made throughout the Configuration Information Factory Integrated Models and Related Options sections.
25-Nov-2009	From Version 23 to 24	Changed	Minor edits were made within the QuickSpecs.
16-Nov-2009	From Version 22 to 23	Changed	Changes were made throughout the QuickSpecs.

Summary of Changes

02-Oct-2009	From Version 21 to 22	Changed	Changes made throughout the QuickSpecs except for the Models and Technical Specifications sections.
25-Sep-2009	From Version 20 to 21	Changed	Changes made to the North America and Canada versions only.
28-Aug-2009	From Version 19 to 20	Changed	Changes made to the North America and Canada versions only.
17-Jul-2009	From Version 18 to 19	Changed	Revisions were made in the HPE BladeSystem c-Class Overview and Related Options sections.
12-Jun-2009	From Version 17 to 18	Added	Rack Rails to NOTE for HPE BladeSystem c3000 CTO Enclosure-Rack in Step 2 of the Configuration Information - Factory Integrated Models section HPE StorageWorks D2D2504i Backup System to Data Protection in the Related Options section
		Changed	Updated the Keyboards and Monitors in the Related Options section HPE BLc3000 Rack Rails was removed from Other Enclosure Options in Step 2A of the Configuration Information - Factory Integrated Models section
27-Apr-2009	From Version 16 to 17	Added	HPE ProLiant Onboard Administrator to the HPE BladeSystem c-Class Overview section Active Cool 100 Fan throughout the QuickSpecs
		Changed	NOTE for HPE iLO Advanced Pack for BladeSystem or iLO Advanced and purchase information NOTE for HPE Insight Control Suite (ICE) in the HPE BladeSystem c-Class Overview section and a NOTE was added to HPE Insight Control suite in the Related Options section Replaced "ProLiant" with "Insight" for HPE Insight Essentials Foundation Pack in Core Infrastructure Management in the HPE BladeSystem c-Class Overview section Revised Onboard Administrator for Tower Model and removed Power Supplies from Step 2 of the Configuration Information Factory Integrated Models section Revised Additional c3000 Power Supplies and HPE Insight Control suite for BladeSystem Licenses and added Redundant Onboard Administrator to Step 2a of the Configuration Information Factory Integrated Models section Updates were made throughout the Models section and to the NOTES section of the Configuration Information Factory Integrated Models section Completely revised HPE StorageWorks Ultrium Tape Blades, HPE Insight Control suite (ICE) and Server Management Stand Alone Software Products in the HPE BladeSystem c-Class Overview and Related Options sections and Data Protection in the Related Options section Revisions were made throughout Step 2 and Step 2A in the Configuration Information Factory Integrated Models section and to Service and Support Offerings in the Related Options section Removed 10642 G2 (42U) Rack Cabinet from HPE Rack 10000 G2 Series, 10642 Rear Extension Kit from Rack Options for Rack 10000 G2 Series and HPE Modular Cooling from the Related Options section
26-Jan-2009	From Version 15 to 16	Changed	Changes made throughout the entire QuickSpecs.
17-Nov-2008	From Version 14 to 15	Changed	Changes were made to the following sections: Overview What's New At A Glance HPE BladeSystem c-Class Overview HPE BladeSystem Overview HPE SB40c Storage Blade HPE StorageWorks Tape Blades HPE BladeSystem c-Class Interconnect Enclosure

Summary of Changes

			HPE Insight Control Environment for BladeSystem Management Suite Server Management Stand Alone Software HPE Enterprise Configurator Configuration Information Factory Integrated Models Step 2A: Select additional optional enclosure options Step 3: Select additional (one to four) interconnects Related Options Other c3000 enclosure options HPE BladeSystem c-Class Ethernet Interconnects HPE BladeSystem c-Class FC SAN Interconnects
30-Oct-2008	From Version 13 to 14	Removed	Removed model number 409513-B22 from the Related Options section.
15-Sep-2008	From Version 12 to 13	Changed	Changes were made to the following sections: Overview What's New At A Glance HPE BladeSystem c-Class Overview HPE BladeSystem Overview HPE BladeSystem c-Class c3000 Enclosure HPE Insight Control Environment for BladeSystem Management Suite Configuration Information Factory Integrated Models Step 2: Determine quantity of HPE BladeSystem c-3000 Enclosures to purchase and choose Required Options Step 2A: Select additional optional enclosure options Step 3: Select additional (one to four) interconnects Step 4: Select rack power distribution for installing the enclosure into a rack. Related Options c3000 Enclosure Options HPE BladeSystem c-Class c3000 Enclosure Other c3000 enclosure options HPE BladeSystem c-Class FC SAN Interconnects HPE Monitored Power Distribution Unit
14-Jul-2008	From Version 11 to 12	Added	Additions made to the Overview, HPE BladeSystem c-Class Overview, Configuration Information and Related Options sections: HPE 8/12 and 8/24 SAN Switch c-Class BladeSystem Power Cord, C20 C13, 15A, Universal Jumper, 2m HPE D2D Backup Systems
		Changed	Change was made to MSA1000 in Factory Express Portfolio in the HPE BladeSystem c-Class Overview section and to Data Protection in the Related Options section HPE Insight Control Environment for BladeSystem Management Suite Server Management Stand Alone Software Product NOTES section for HPE NC512m Dual Port 10GbE Multifunction BL-c Adapter in HPE BladeSystem c-Class Ethernet Connects Headings for HPE Modular Power Distribution Unit and Uninterruptible Power System in Step 4 of the Configuration Information Factory Integrated Models section Monitors and Keyboards and HPE KVM Switch Options in the Related Options section
11-Apr-2008	From Version 10 to 11	Changed	Changes made to the North America and Canada QuickSpecs only.
31-Mar-2008	From Version 9 to 10	Added	Cisco Catalyst Blade Switch 3120X, Part #451439-B21 and Cisco Catalyst Blade Switch 3120G, Part #451438-B21, were added to the Configuration Information and Related Options sections and BL460c Smart Buy Server Blade, Part #461273-001, was added to the Smart Buys section.

Summary of Changes

		Changed	Changes were made in the Overview, HPE BladeSystem c-Class Overview, Configuration Information and Related Options sections.
14-Mar-2008	From Version 8 to 9	Changed	Changes made to the North America and Canada QuickSpecs only.
03-Mar-2008	From Version 7 to 8	Changed	Changes made to the North America and Canada QuickSpecs only.
11-Feb-2008	From Version 6 to 7	Changed	Changes were made throughout the QuickSpecs.
18-Jan-2007	From Version 5 to 6	Changed	Changes made to the North America and Canada QuickSpecs only.
14-Jan-2008	From Version 4 to 5	Added	The HPE BladeSystem c3000 Enclosure - Tower Model option was added.
		Changed	Changes were made throughout the QuickSpecs to reflect the addition of the tower option.
02-Nov-2007	From Version 3 to 4	Changed	Changes made to the At A Glance section.
05-Oct-2007	From Version 2 to 3	Changed	Changes made to the Service and Support Offerings section of Related Options.
01-Oct-2007	From Version 1 to 2	Changed	Changes made to the North America and Canada QuickSpecs only.

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