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Date: 07-11-2017

Notice for extension of Chhattisgarh Rate Contract RFP PHQ & Corrigendum

With reference to the Rate contract RFP No. ICT/TS/ CCTNS/PM/179/2017 dt 09-10-2017. This is to inform all bidders that following corrigendum is being issued and last date of submission of bid is extended till 17th November 2017 before 5 PM.

Assistant Inspector General of Police
(Technical Services)
Chhattisgarh Police

Sl. No.	Item	Page No.	RFP Clause	Query	Corrigendum
1	Data Sheet	12	The bidder should be either be OEM/ manufacturer or authorized representative of a manufacturer/whole sale dealer and should be in business of manufacture and/or supply and maintenance of the offered items for a minimum period of 3 years in Chhattisgarh as on bid calling date.	The bidder should be either be OEM/ manufacturer or authorized representative of a manufacturer/whole sale dealer and should be in business of manufacture and/or supply and maintenance of the offered items for a minimum period of 3 years in as on bid calling date.	The bidder should be either be OEM/ manufacturer or authorized representative of a manufacturer/whole sale dealer and should be in business of manufacture and/or supply and maintenance of the offered items for a minimum period of 3 years in India as on bid calling date & should submit proof of local presence in Chhattisgarh. Proof of Local presence: Bidder should submit self-declaration by the authorized signatory on its company letter head on regarding local office or for arranging the same within 30 days from issuance of LOI
2	Data Sheet	12	The bidder/OEM should have at least two (2) service centers in different locations of Chhattisgarh with minimum (4) services personnel at each service center as on bid calling date. To provide details in the proforma Form P-4.	The bidder/OEM should have at least two (2) service centers in different locations of India with minimum (4) services personnel at each service center as on bid calling date. To provide details in the proforma Form P-4.	As per RFP
3	EMD	-		EMD Exemption for NSIC registered vendors	No such provision exists as per Chhattisgarh State Procurement Rules 2004.
4	S-01 Blade Servers	58	Latest Generation (not older than 12 months) x86-64 Bit Minimum eight- Core Processor, Multi-Core physical CPUs and 24 MB L3 Cache or higher	Here, eight core processor asked, but later E5-2650v3 or higher with minimum 2.6Ghz clock speed mentioned as well. 2650v3 is 10 core processor where as 2650v4 is 12 core. Hence, Request	Latest Generation x86-64 Bit Minimum eight- Core Processor, Multi-Core physical CPUs and 20 MB L3 Cache or higher
5	S-01 Blade Servers	58	Dual socket blade with Intel Xeon Processor E5-2650 v3 series or higher, Minimum 2.6 Ghz Clock Speed	mention the number of cores as well as minimum clock rate as required for the E5-2600v4 series processors.	Dual socket blade with Intel Xeon Processor E5-2600 v4 family series or better with minimum 2.6 Ghz Clock Speed
6	S-01 Blade Servers	59	Form Factor : Blade c7000	We understand the asked blades will be installed onto an existing c7000 Blade Chassis. Kindly confirm and request mention the brief configuration of thhe existing blade chassis.	Enclosed below
7	S-01 Blade Servers	59			Following noted is added over and above the specs:- Bidder must provide all necessary connectors, mounting accessories, modules and cables for utilization of server functionalities from day 1.

8	S-02 Rack Mount Servers	59	Latest Generation (not older than 12 months) x86-64 Bit Server with Minimum 2*4 Core with Intel Xeon Processor, Minimum 2.6 Ghz Clock Speed and 24 MB L3 Cache or higher	Kindly revise the asked L3 cache to 10MB as none of the 4 core Intel E5-2600v4 series processors have higher than 10MB L3 cache.	Latest Generation x86-64 Bit Server with Minimum 2*4 Core with Intel Xeon Processor E5-2600 v4 family series or better, Minimum 2.6 Ghz Clock Speed and 10 MB L3 Cache or higher
9	S-02 Rack Mount Servers	61	Form factor : 2U/4U Rack mount	Desired configuration can be met with today's dense form factor 1U rack servers as well. Kindly revise as minimum 1U or higher to allow optimal configuration delivery against the asked specifications. This will also reduce power and cooling requirements for the desired infrastructure.	Form factor : Rack mount : 4U or smaller
10	S-02 Rack Mount Servers	61			Following noted is added over and above the specs:- Bidder must provide all necessary connectors, mounting accessories, modules and cables for utilization of server functionalities from day 1.
11	SC-02a 8 Port Unmanaged Switch	73	The switch should have minimum 8 x 10/100 Ports	100Mbps fast ethernet switch asked. Kindly consider Gigabit switches minimum.	As per RFP
12	SC-02b 16 Port Unmanaged Switch	74	The switch should have minimum 16 x 10/100 Ports	100Mbps fast ethernet switch asked. Kindly consider Gigabit switches minimum.	As per RFP
13	SC-02c 24 Port Unmanaged Switch	75	The switch should have minimum 24 x 10/100 Ports	100Mbps fast ethernet switch asked. Kindly consider Gigabit switches minimum.	As per RFP
14	Unmanaged Switches			Switches as asked in 8/16/24 port categories are asked as unmanaged switches and in today's intelligent world, unmanaged switches would not provide any features for management and/or control. Request consider minimum manageability features for such switches. Few of such features are mentioned below as a quick reference: 802.1Q VLAN, SNMP, Static routing, Access Control List, RSTP, MSTP, Minimum 8K MAC address, RMON, RADIUS, Web/GUI Management	As per RFP
15	Unmanaged Switches (16 and 24 port)			No uplink SFP Fiber ports asked for these switches. Kindly consider minimum 2 gigabit SFP uplink ports for the 16-port and 24-port switch configurations as desired.	As per RFP
16	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Memory 4 GB DDR4 RAM expandable to 64GB; Four DIMM slots; Non-ECC dual-channel upto 2400 MT/s DDR4 SDRAM	S.No 9 on page 62 & 64 revised as: Minimum 4GB DDR4 DIMM RAM @1600 or higher Mhz with minimum 4 slots and expandable upto 32 GB or more

17	Desktop-01 & Desktop-02	61-65	Spec Suggestion	<p>Ports Front I/O (2) USB 2.0 ports,including 1 fast charging, (2) USB 3.0 Ports 1 USB Type C 3.5mm headphone output and microphone jack Rear I/O (2) USB 2.0 ports, (4) USB 3.0 Ports (1) VGA video port; (2) DisplayPort/DVI-D Port (1) RJ-45 network connector (1) RS-232 serial port 3.5mm audio in/out jacks</p>	<p>S.No 7 on page 62 & 64 revised as: Ports & Slots 8 Nos or higher no of USB Ports with atleast 4 USB 3.0 Ports (minimum 4 USB port in front) Atleast 1 HDMI, 1 VGA Port and 1 RJ45 network interface. 3.5 mm audio in/out jack both in front and rear side. Slots: Minimum 2 low profile PCI/PCIe Slots</p>
18	Desktop-01 & Desktop-02	61-65	Spec Suggestion	<p>Slots Minimum 2 low profile PCI/PCIe Slots (2 x PCIe16) 2x (M.2 PCIe)</p>	
19	Desktop-01 & Desktop-02	61-65	Spec Suggestion	<p>Power Supply 180 W active PFC Power Supply 80 PLUS Platinum 93% efficiency</p>	<p>S.No 16 on page 62 & 64 revised as: System with Power Management features & Desktop Management Interface implementation with 90% energy efficiency or higher. Certification to be enclosed</p>
20	Desktop-01 & Desktop-02	61-65	Spec Suggestion	<p>Keyboard/Mouse USB 104 keys keyboard (Same make as PC) USB 2 Button Scroll Mouse (Same make as PC)</p>	<p>S.No 13 &14 on page 62 & 64 added with following point: Should be of same make as PC</p>
21	Desktop-01 & Desktop-02	61-65	Spec Suggestion	<p>Monitor 19.5" or higher IPS Panel LED backlit with TCO 7.0</p>	<p>S.No 12 on page 62 & 64 revised as: 18.5" or higher (4:3 aspect ratio) IPS panel LED backlit with TCO 6.0 or higher certified. Should be of same make as PC</p>
22	Desktop-01 & Desktop-02	61-65	Spec Suggestion	<p>Processor Intel® 7th Generation Core Intel® Core™ i3-7100 with Intel HD Graphics 630 (3.9 GHz, 3 MB cache, 2 cores)</p>	<p>As per RFP</p>
23	Desktop-01 & Desktop-02	61-65	Spec Suggestion	<p>Chipset Intel Q270 chipset or higher</p>	<p>As per RFP</p>
24	Desktop-01 & Desktop-02	61-65	Spec Suggestion	<p>Motherboard OEM Motherboard with OEM logo embossed on the motherboard (No Sticker)</p>	<p>As per RFP</p>

25	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Hard Disk Drive 500 GB HDD, 7200 RPM, SATA III 6 Gbps, SMART IV	As per RFP
26	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Optical Drive SuperMulti DVD Writer	As per RFP
27	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Graphics Integrated Graphics	As per RFP
28	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Audio High Definition Integrated Audio with Internal Speaker	As per RFP
29	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Ethernet Integrated Gigabit (10/100/1000 NIC) LAN	As per RFP
30	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Bays Minimum 4 bays with atleast (1) 3.5" Drive bays & (1) 2.5" drive bay (1) ODD bay	As per RFP
31	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Form Factor SFF (Small Form Factor)	As per RFP
32	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Operating System Genuine Microsoft Windows 10 Pro 64-bit	As per RFP
33	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Diagnostic Tool Inbuilt Pre-Boot BIOS Diagnostics	As per RFP
34	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Security TPM 2.0 Security Chip SATA 0,1 port disablement (via BIOS) Serial, USB enable/disable (via BIOS) Solenoid Lock / Hood Sensor Support for chassis padlocks and cable lock devices Drive Lock Boot Sectors Protection Drive Protection System Power On Authentication	As per RFP
35	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Compliance And Certification Energy Star ver 6 EPEAT Certified for India for the quoted form factor and monitor Green Peace rating of 5.5 and above	As per RFP
36	Desktop-01 & Desktop-02	61-65	Spec Suggestion	System Weight / Volume Weight should be no more than 4.6 KG and volume no more than 7.8 L	As per RFP
37	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Information Accessibility Product details, specifications and brochure to be available in public domain	As per RFP
38	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Support Drivers should be available for download from OEM site for at least 3 years from the date of purchase order	As per RFP
39	Desktop-01 & Desktop-02	61-65	Spec Suggestion	Market Credibility The OEM vendor should be of positive net worth for the last three years	As per RFP

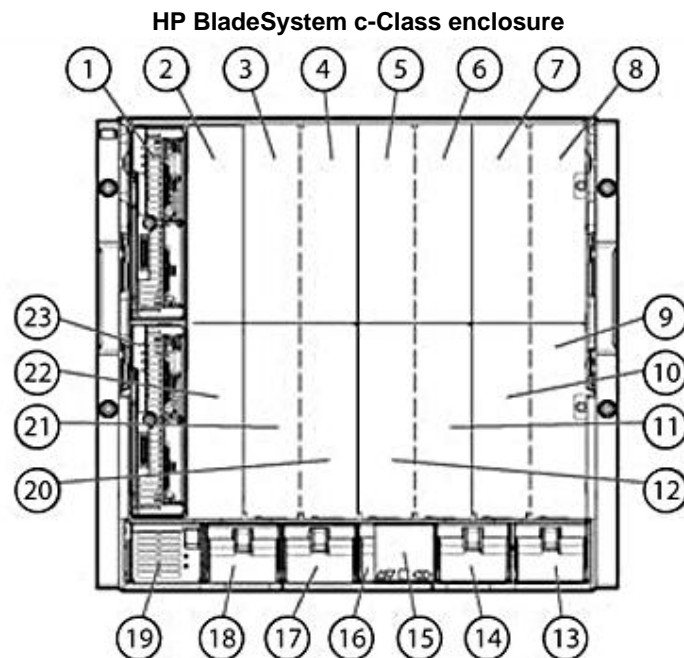
		HP Blade Enclosure C7000
S. No	Parameter	Specifications Provided by Bidder
1	Blade Chassis	Solution to house the required number of blade servers in smallest number of enclosures, occupying a max of 9U/10 U rack height per enclosure
		Benchmark document enclosed for the offered server model.
		Redundant Management module
		C7000 enclosure provides high reliability and high performance with complete redundancy with passive back plane architecture
		C7000 supports AMD Opteron™, Intel® Xeon® and Intel® Itanium 2®
		processors for Windows, Linux, Solaris or HP-UX based servers
		The c7000 enclosure includes an ethernet management network to aggregate all ProLiant Onboard Administrator (iLO 2 or iLO 3) management communications across the entire enclosure
2	LAN Interconnect	Refer enclosed datasheet
3	Fibre Channel Interconnects	Refer enclosed datasheet
4	MAC Address & WWN Management	The C7000 blade enclosure supports Virtual Connect Module which provide the same feature and also advanced features for optimization of Storage & network connections and reduction of cables
5	Power Supply	C7000 enclosure facilitates both N+N and N+1 power modes
6	Cooling	Redundant hot-plug cooling
7	Redundancy	HP provides high reliability and high performance with complete redundant power supply.
8	System Software	Management/Cooling software are from HP
9	Remote Management	A serial port on each BladeSystem Onboard Administrator module provides full out-of-band CLI access to the BladeSystem Onboard Administrator. Also ILO is integrated which doesn't require any third party software for the management purpose.
		HP iLO provides you instant access to the virtual KVM console, multi-user
		collaboration, console record and replay, and 24-hour
		power measurement and single server Dynamic Power
		Capping
	Power Management	ILO/ICE feature of the management part.

contents

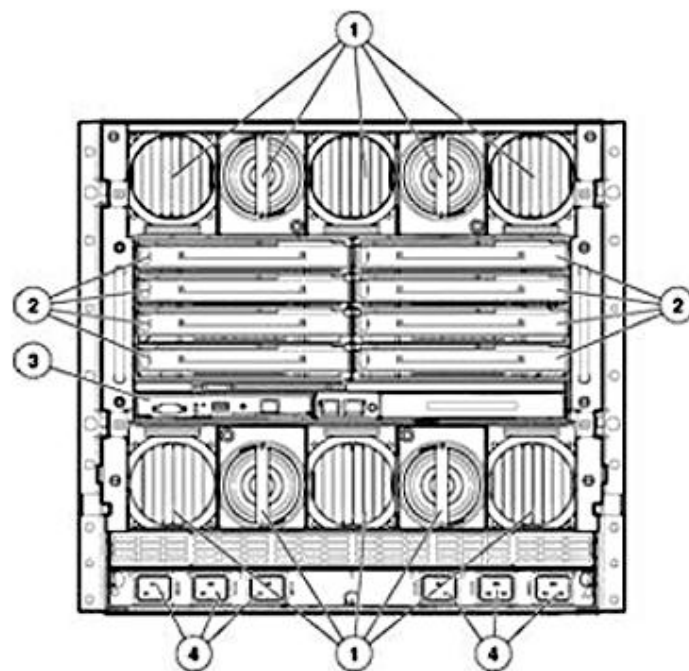
[Overview](#) [HP BladeSystem c-Class Overview](#) [Configuration Information](#) [Factory Integrated Models](#) [Related Options](#)
[Technical Specifications](#) [Power Specifications](#)

Overview

HP BladeSystem c-Class Infrastructure



- | | |
|-------------------|------------------------|
| 1. Device Bay 1 | 13. Power Supply Bay 6 |
| 2. Device Bay 2 | 14. Power Supply Bay 5 |
| 3. Device Bay 3 | 15. insight Display |
| 4. Device Bay 4 | 16. Power Supply Bay 4 |
| 5. Device Bay 5 | 17. Power Supply Bay 3 |
| 6. Device Bay 6 | 18. Power Supply Bay 2 |
| 7. Device Bay 7 | 19. Power Supply Bay 1 |
| 8. Device Bay 8 | 20. Device Bay 12 |
| 9. Device Bay 16 | 21. Device Bay 11 |
| 10. Device Bay 15 | 22. Device Bay 9 |
| 11. Device Bay 14 | 23. Device Bay 9 |
| 12. Device Bay 13 | |



HP BladeSystem c7000 Enclosure - Rear View

- | | |
|--------------------------------|--|
| 1. Active Cool Fans & fan bays | 3. Onboard Administrator |
| 2. Interconnect Bays | 4. Power Inputs (single phase model shown) |

At A Glance

This document covers the HP BladeSystem c-Class Infrastructure only. For more information on HP ProLiant Server Blades and HP BladeSystem c-Class Interconnect Components please see the following QuickSpecs:

HP ProLiant Server Blades: http://h18000.www1.hp.com/products/quickspecs/North_America/11070.html

HP BladeSystem c-Class Interconnect QuickSpecs: http://h18000.www1.hp.com/products/quickspecs/12524_na/12524_na.HTML

HP BladeSystem solutions start with a c7000 Enclosure, with optional c7000 power supplies, c7000 Fans, and an optional redundant Onboard Administrator module. Once the enclosure has been selected, the following components can be added: networking interconnect modules, HP ProLiant and Integrity Server Blades, and Insight Control management tools. Reference the QuickSpecs listed above.

• HP BladeSystem c7000 Enclosures:

- Server blades, storage blades, interconnect modules, power supplies, fans, and redundant Onboard Administrator modules are designed to fit into the c7000 enclosure.
- Three types of HP BladeSystem c7000 enclosures are available, depending on type of datacenter power infrastructure:
 - (1) Single-phase enclosure available worldwide for use with in-rack PDUs which accept C19 - C20 power cords;
 - (2) Three-Phase enclosure with a pair of US/Japan power cords with NEMA L15-30P power connectors
 - (3) Three-phase enclosure with a pair of International power cords with IEC309, 5-Pin, 16A power connectors
- Optional c7000 power supplies (up to 6 total)
- Optional c7000 Active Cool fans (between 4 and 10 total, sized to the mix and type of blades).
- The c7000 enclosure is 10U and holds up to 16 HP c-Class server blades:
 - Up to 16 half-height server blades (HP ProLiant BL460c Server Blade)
 - Up to 8 full-height server blades (HP ProLiant BL480c Server Blade)
 - Up to 15 HP Storage blades, coming soon.
 - Or combinations of the above.
 - For additional server blade information, please visit: http://h18000.www1.hp.com/products/quickspecs/North_America/12534.html
- Types of interconnect modules available: (up to 8 per enclosure)
 - Ethernet Interconnect Switches from Cisco & Blade Network Technologies (BNT)
 - Ethernet Pass-Thru modules.
 - Fibre Channel Interconnect Switches from Brocade
 - Fibre Channel Pass-Thru modules.
 - Infiniband Switch modules
 - For additional HP BladeSystem c-Class Interconnect Component information, please visit: http://h18000.www1.hp.com/products/quickspecs/12524_na/12524_na.HTML

- HP BladeSystem Insight Control management software (Choice of either a trial use DVD, or a 16 blade fully licensed DVD).
 - Combinations of Insight Control management tools for HP BladeSystem at an affordable bundled price
 - Insight Control Datacenter Edition contains the following fully licensed components.
 - HP Systems Insight Manager (HP SIM)
 - HP ProLiant Essentials Rapid Deployment Pack (RDP)
 - HP ProLiant Essentials Performance Management Pack (PMP)
 - HP ProLiant Essentials Vulnerability and Patch Management Pack (VPM)
 - Optional install with separate purchasable licenses
 - HP ProLiant Essentials Virtualization Management Software (VMS)
 - One subscription covers all blades in the HP BladeSystem Enclosure with no need to buy separate management and/or provisioning tools.
 - Blades can be added or moved among different server blades and are supported as long as the enclosure has an active subscription.
 - Choice of Insight Control Datacenter Edition, or Insight Control Linux Edition.

For additional information please visit: <http://h18004.www1.hp.com/products/blades/components/components.html>

Protected by HP Services and a worldwide network of resellers and service providers. Three-year, on-site limited global warranty. Certain restrictions and exclusions apply. Pre-Failure Notification on processors, memory, and SCSI hard drives.

contents

[Overview](#) [HP BladeSystem c-Class Overview](#) [Configuration Information](#) [Factory Integrated Models](#) [Related Options](#)
[Technical Specifications](#) [Power Specifications](#)

HP BladeSystem c-Class Overview

HP BladeSystem Overview

As server, storage and network technologies have changed; traditional rack-mounted infrastructure solutions have generated increased complexity of both infrastructure management and physical datacenter deployment.

HP BladeSystem is the evolution of the entire rack-mounted infrastructure. A BladeSystem aims to reduce costs and simplify the management, building, and maintenance of the infrastructure behind your multi-server environment. It consolidates and repackages all the supporting infrastructure elements—compute, storage, network, and power into a single platform that can accelerate the integration and optimization of your data center.

With the flexibility to scale from a single enclosure holding up to 16 blades, to a rack containing 4 enclosures holding up to 64 blades, the c-Class infrastructure is designed to meet the needs of today's businesses.

An HP BladeSystem c-Class infrastructure is made up of several components:

- ProLiant and Integrity Server blades for Windows, Linux, and HP UX.
- Choice of Intel processors, including the latest dual-core processors for 32-bit and 64-bit applications.
- HP BladeSystem c-Class enclosure that provides connectivity, power, and cooling options. The c-Class enclosure is designed for full redundancy and high availability. Redundant power, cooling, enclosure management, and interconnect modules are part of the standard enclosure design.
- Onboard Administrator module which provides a single point of control for intelligent management of the entire enclosure.
- Insight Display powered by the Onboard Administrator provides local management through an LCD display conveniently sited on the front of the system.
- Ethernet, Fibre Channel, Infiniband, iSCSI, and other interconnect choices
- A power subsystem that provides redundant power modes and Dynamic Power Saving mode, which uses up to 22% less power than traditional rack-mounted servers.
- PARSEC (Parallel, Redundant, Scaleable, Enclosure Cooling) architecture: for maximum cooling that consumes less power and reduces datacenter noise.
- Future choice of Storage Blades: either direct-attach storage blades, or shared storage blades, which provide block-based shared storage capacity for the server blades in the enclosure.

HP ProLiant & Integrity Server Blades Delivering best-in-class performance, choice and reliability on Intel® Xeon™, Intel® Itanium 2™ and processors for Windows, Linux, or HP-UX based servers, the HP portfolio of server blades

supports a variety of application requirements for scale-out architectures. HP offers one-, two-, and four-processor (dual-core) server blades, including the widest range of performance, and form factors, and the most processing density and performance of any other portfolio. This portfolio of servers is designed for 32-bit and 64-bit applications.

For more information please see: <http://h18000.www1.hp.com/products/quickspecs/Division/12534.html>

HP BladeSystem c-Class c7000 Enclosure

A BladeSystem c7000 enclosure holds up to 16 server and/or storage blades plus redundant network and storage switches. It includes a shared, multi-terabit high-speed mid-plane 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 c7000 enclosure is built with the following functions:

- Up to 16 half-height and/or up to 8 full-height server blades and/or storage blades per enclosure.
- Up to 4 different interconnect fabrics (Ethernet, FC, IB, iSCSI, SAS, etc.) supported simultaneously within the enclosure.
- Choice of a single-phase or a three-phase power subsystem - for flexibility in connecting to datacenter power.
- PARSEC enclosure design - Parallel, redundant and scalable cooling and airflow design
- Four (4) or Six (6) Active Cool fans as standard. For redundancy and improved power consumption and acoustics; additional Active Cool Fan kits can be added for a maximum of 10 fans
- Fully redundant design - no single point of failure; redundant interconnections between servers and interconnect modules; a mid-plane with no active components; redundant cooling using Active Cool fans; all devices are hot-pluggable and customer replaceable.
- Best performance per watt - lower wattage per server blade, in comparison to rack-mounted servers
- Full AC redundancy - with no power zones.
- Redundant Onboard Administrator management modules (optional active-standby design)

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 within the datacenter.
- 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.

A BladeSystem c7000 enclosure provides the following benefits:

- With local and remote hardware management integrated across the solution, one full enclosure can be managed as easily as one server.
- Scalable: Management and network interconnects extend scalability beyond a single enclosure, allowing resources to be pooled and shared across multiple enclosures.
- Investment protection: 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.
- Service and management: Allows multiple administrators to remotely access and maintain multiple servers & interconnect devices simultaneously.

HP BladeSystem c-Class Interconnect Options

HP also offers one of the broadest selections of interconnect fabric options in the industry to provide network, SAN/network attached storage (NAS), and cluster connectivity.

HP BladeSystem interconnects provide:

- Seamless integration of Ethernet, FC, InfiniBand, iSCSI, and SAS fabrics: Standard-based switch options include Cisco, Brocade, and HP (BNT) 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

For more information HP BladeSystem c-Class Interconnect Components, please visit:
http://h18000.www1.hp.com/products/quickspecs/12524_na/12524_na.HTML

Factory Express Portfolio for Servers and Storage

HP Factory Express offers configuration, customization, integration and deployment services for HP 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. HP products supported through Factory Express include: a wide array of servers and storage: HP Integrity, HP ProLiant & HP ProLiant & Integrity Server Blades, HP BladeSystem, HP 9000 servers as well as the MSA1000, 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.hp.com/go/factory-express>

Insight Control Data Center Edition

Insight Control Data Center Edition delivers foundation management for HP BladeSystem lifecycles, including hardware resource deployment, health monitoring, software version control, performance monitoring, vulnerability scanning and patch management.

Installs the following components by default using the wizard-based integrated installer:

- HP Systems Insight Manager
- Rapid Deployment Pack
- Performance Management Pack
- Vulnerability and Patch Management Pack

Additional ProLiant Essentials software and management tools included on the Insight Control Data Center Edition DVD can be installed manually.

- Virtualization Management Suite
- Workload Management Pack
- HP Open Service Event Manager
- HP Instant Support Enterprise Edition

NOTE: For Licensing and Packaging Options please see the options section of this QuickSpecs.
NOTE: Insight Control Data Center Edition is delivered with HP BladeSystem c-Class enclosures with either 16-server licenses or 8-server evaluation licenses (30-days). For additional information on HP c-Class Infrastructure please visit the related options section of this QuickSpecs.

NOTE: For additional product and licensing information about Insight Control Data Center Edition, HP Systems Insight Manager and Essentials software refer to <http://www.hp.com/servers/proliantessentials>.

Unified Core Services and Flexible Software Extensions

HP Systems Insight Manager	HP Systems Insight Manager (HP SIM) provides a unified, secure and extensible standards-based environment to centrally manage servers, storage and other infrastructure devices, (both HP and non-HP) across multiple operating system platforms.
ProLiant Essentials Rapid Deployment Pack	Rapid Deployment Pack (RDP) extends HP Systems Insight Manager with a complete deployment solution for HP ProLiant blade servers. RDP provides a central location to configure server hardware, deploy Windows, Linux and VMware ESX operating environments and install HP ProLiant Support Pack drivers using images and scripted profiles.
ProLiant Essentials Performance Management Pack	ProLiant Essentials Performance Management Pack detects, analyzes, and explains hardware bottlenecks on HP ProLiant servers, HP Integrity servers and shared storage.

The Vulnerability and Patch Management Pack	The Vulnerability and Patch Management Pack integrates and simplifies the assessment and remediation of operating system vulnerabilities into HP Systems Insight Manager for Windows and Linux platforms.
Insight Management Agents	<p>The Insight Management Agents should be installed on all HP servers to present system instrumentation, health and configuration information into HP Systems Insight Manager and the HP System Management Homepage. The HP System Management Homepage aggregates systems data from Insight Management Agents and other HP management tools, providing a consolidated browser-based interface for managing individual servers.</p> <p>Insight Management Agents and The HP System Management Homepage are included on ProLiant Support Packs, and can also be installed using the server profiles provided with the ProLiant Essentials Rapid Deployment Pack</p> <p>For additional information about the Management Agents and the HP System Management Homepage please visit the management Web site at http://www.hp.com/servers/manage.</p>
Subscriber's Choice	Subscriber's Choice Driver and Support Alerts/Notifications is a web-based email subscription service that provides software and driver change notifications for ProLiant products. Sign up at http://www.hp.com/go/subscriberschoice and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.
ProLiant Support Packs and ROMPaq, software	The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options, available through ProLiant Support Packs the ProLiant Essentials Rapid Deployment Pack, SmartStart or downloaded from Software and Drivers download pages website at http://www.hp.com/go/support .

Optional ProLiant Essentials Value Packs

Optional software offerings that selectively extend the functionality of an Adaptive Infrastructure to address specific business problems and needs:

- Integrated Lights-Out Select Pack - upgrades the Integrated Lights-Out processor with scripted and command line virtual media, Power Regulator reporting and enterprise security
- Intelligent Networking Pack - detects and analyzes network bottlenecks or broken network linkages and steers traffic to the optimum route based on network conditions, plus it provides an extra layer of protection. The virus throttle feature of the solution slows the propagation of fast spreading virus.
- Virtualization Management Software - Get the most out of server virtualization by unifying the management of physical and virtual servers in HP Systems Insight Manager. The Virtual Machine Management Pack plug-in provides central management and control of VMware and Microsoft virtual machines and provides physical host to virtual machine association. The Server Migration Pack plug-in automates the manual task of migrating servers between physical or virtual platforms.
- Workload Management Pack - provides easier management of complex environments, improving overall server utilization and enabling Windows® 2000 customers for the first time to confidently deploy multiple applications on a single multiprocessor ProLiant Server.

NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to <http://www.hp.com/servers/proliantessentials> or the various ProLiant Essentials Value Pack product QuickSpecs for more information.

Service and Support

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of resellers and service providers. 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 HP Care Pack services or customized service agreements.

NOTE: Server Blade Limited Warranty includes 3 year Parts, 3 year Labor, 3-year on-site support. This warranty supports the HP ProLiant BL460c and BL480c Server Blades.

NOTE: Server Blade Enclosure Limited Warranty includes 3 year Parts, 3 year Labor, 3-year

on-site support.

NOTE: Server Blade Interconnect Limited Warranty includes 1 year Parts, 1 year Labor, 1-year on-site support

Care Pack services provide a range of life cycle support options that let you choose the service levels that meet your business requirements, from basic to mission-critical.

A full range of HP Care Pack hardware and software services are available including:

- Installation and start up
- Education courses
- Extended onsite hardware coverage hours from same business day 13 hours, 5 day to 24 hours, 7 days call window with options including 4-hour response or 6-hour Call To Repair
- Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials and VMware-based IT solutions helping to deliver high level of application availability. Response times range from 30 minute for critical problems to 2 hours.
- System Management, Performance Services and Mission Critical Support Solution

HP has introduced a new building block approach which allows customers to purchase the right coverage at the right time whether purchasing an initial server blade plus enclosure or purchasing additional ProLiant server blades over time. HP will offer two sets of Care Pack services, one designed to support the server blade and one designed to support the enclosure.

HP Care Pack services for HP ProLiant Server Blades cover the server blade and all HP branded hardware options qualified for the server, purchased at the same time or afterwards, internal to the server.

HP Care Pack services for the c7000 Enclosure cover the enclosure, power supplies and fans. HP qualified rack options are covered by these services when installed within the same rack. HP Supported Ethernet devices covered include the Ethernet Pass-Through Module, Fibre Channel Pass-Through Module, Cisco Catalyst 3020 Blade Switch and GbE2c Ethernet Blade Switch.

NOTE: For more information regarding the Blade service portfolio visit our worldwide web site on the internet at: <http://h20219.www2.hp.com/services/cache/81725-0-0-225-121.html>

NOTE: For more information on HP Care Pack services, contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: <http://www.hp.com/hps/carepack>

NOTE: For more complete information on HP Services offerings, customers and resellers, please visit us at: <http://www.hp.com/hps>

NOTE: Additional information regarding worldwide limited warranty and technical support is available at: <http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>

contents

[Overview](#) [HP BladeSystem c-Class Overview](#) [Configuration Information Factory Integrated Models](#) [Related Options](#)
[Technical Specifications](#) [Power Specifications](#)

Configuration Information Factory Integrated Models

For a complete configuration of the HP BladeSystem, please do the following:

Step 1: Select desired model, configuration and quantity of HP ProLiant server blades

NOTE: For server blade information, please visit: http://h18000.www1.hp.com/products/quickspecs/North_America/12534.html

Step 2: Determine quantity of HP BladeSystem c-Class Enclosures to purchase and choose Required Options (One of the following from each list unless otherwise noted):

NOTE: Each HP BladeSystem c-Class Server Blade Enclosure holds up to 16 HP ProLiant server blades.

Base Server Blade Enclosure Configuration

HP BladeSystem	HP BLc7000 Enclosure Model X	412152-B21
BLc7000 c-Class Server Blade Enclosures	NOTE: CTO model includes 1x Onboard Administrator, 0x Active Cool Fans and 0x power supplies.	
c-Class Power Modules (1 per enclosure)	HP BLc7000 Single Phase Power Module, FIO	413379-B21
	HP BLc7000 Three Phase Power Module, FIO	413380-B21

c-Class Power Supply	HP c7000 Enclosure Power Supply Option Kit (supplied with IEC C20 - C19 jumper cord)	412138-B21
c-Class Active Cool Fan	HP Active Cool Fan Option Kit NOTE: A minimum 4 Active Cool fans is required, 8 Active Cool fans can support a full blade enclosure, 10 Active Cool fans should be ordered for reduced power consumption and noise reduction. NOTE: Single-Phase models may require additional power supplies. Fans should be added to provide redundancy, reduce power consumption and reduce noise.	412140-B21

Step 2A: Select enclosure options:

Enclosure Options	HP BLc7000 Insight Control 16 License, FIO	417688-B21
	HP Redundant Onboard Administrator Option	412142-B21

Step 3: Select an interconnect kit.

A pair of interconnects must be order if redundancy is required. For additional information on Interconnect Options, please visit:

HP BladeSystem c-Class Network Interconnects	Ethernet Pass-Through Module for HP BladeSystem	406740-B21
	Cisco Catalyst Blade Switch 3020 for HP c-Class BladeSystem	410916-B21
	GbE2c Ethernet Blade Switch for HP c-Class BladeSystem	410917-B21
	NOTE: The HP BladeSystem c-Class Network Interconnects ship as single units. The above interconnects must be ordered in quantities of two for redundancy support.	
HP BladeSystem c-Class SAN Interconnects	16 port FC Pass-thru Module for c-Class BladeSystem	403626-B21
	HP Brocade 4/12 SAN Switch	AE370A
	HP Brocade 4/24 SAN Switch Power Pack	AE371A
	HP Brocade 4/24 SAN Switch	AE372A
	HP Brocade 4/12 SAN Switch Upgrade LTU	AE373A

Step 4: Select rack power distribution for single-phase models

NOTE: A pair of PDUs must be ordered for AC Feed redundancy.

HP Monitored Power Distribution Unit	HP 17.3 kVA S348 Monitored PDU- single input, 3-phase, 60A	AF916A
HP Modular PDU	HP Modular Distribution Unit 40 Amp**	252663-D75
	HP Modular Distribution Unit 24 Amp**	252663-D74
	HP Two C-13 PDU Extension Bars	AF500A
	**NOTE: The Modular Distribution Unit Kits excludes the extension bars as they are not required with the HP BladeSystem	
	NOTE: Each extension bar has a C19 input and 7 C13 receptacles. The option is ideal for AF916A, model S348, and AF917A, model S332, which both have only C19 outlets (12).	

contents

[Overview](#) [HP BladeSystem c-Class Overview](#) [Configuration Information Factory Integrated Models](#) [Related Options](#)
[Technical Specifications](#) [Power Specifications](#)

Related Options

HP BladeSystem c-Class Server Blade Enclosures	HP c7000 Single-Phase Enclosure with 2 Power Supplies and 4 Fans with 16 Insight Control Data Center Edition Licenses	403321-B21
	HP c7000 Three-Phase Enclosure with 6 Power Supplies and 6 Fans with 16 Insight Control Data Center Edition Licenses	412136-B21
	HP c7000 Single-Phase Enclosure with 2 Power Supplies and 4 Fans with 8 Insight Control Trial Licenses	403320-B21

	HP c7000 Three-Phase Enclosure with 6 Power Supplies and 6 Fans with 8 Insight Control Trial Licenses	412133-B21
c7000 Enclosure Options	HP Redundant Onboard Administrator Option	412142-B21
	HP c7000 Enclosure 10K Rack Ship Bracket Option Kit NOTE: The shipping bracket is required when shipping a c7000 enclosure when installed in a rack. It is not required for normal operation.	433718-B21
	HP c7000 Enclosure Miscellaneous Blanks kit (contains 1 each of Power Supply Blank, Interconnect Module Blank, Onboard Administrator Blank, Active Cool Fan Blank)	412148-B21
	HP c-Class Server Blank and Coupler Option Kit (contains 1 x half-height server blank with coupler) NOTE: The coupler allows half-height server blanks to be coupled together to create a full-height server blank.	412150-B21
c-Class Power Supply	HP c7000 Enclosure Power Supply Option Kit (supplied with IEC C20 - C19 jumper cord)	412138-B21
c-Class Active Cool Fan	HP Active Cool Fan Option Kit NOTE: A minimum 4 Active Cool fans is required, 8 Active Cool fans can support a full blade enclosure, 10 Active Cool fans should be ordered for reduced power consumption and noise reduction.	412140-B21
HP BladeSystem c-Class Network Interconnects	Ethernet Pass-Through Module for HP BladeSystem NOTE: The Ethernet Pass-Thru Module is shipped as a single unit and should be ordered in quantities of two.	406740-B21
	Cisco Catalyst Blade Switch 3020 for HP c-Class BladeSystem	410916-B21
HP BladeSystem c-Class SAN Interconnects	GbE2c Ethernet Blade Switch for HP c-Class BladeSystem	410917-B21
	16 port FC Pass-thru Module for c-Class BladeSystem	403626-B21
	HP Brocade 4/12 SAN Switch	AE370A
	HP Brocade 4/24 SAN Switch Power Pack	AE371A
	HP Brocade 4/24 SAN Switch	AE372A
	HP Brocade 4/12 SAN Switch Upgrade LTU	AE373A
Red Hat Enterprise Linux 4 and management bundle	Red Hat Enterprise Linux 4 (AS), Update 1, 1 YR RHN, 1YR 24x7, 10 Incident Support NOTE: Only supported when installed on HP BladeSystem. NOTE: Provides 1 Year access to Red Hat Network, 1 Year 24x7, 10 Incidents within 1 year of purchase.	404042-B21
	Red Hat Enterprise Linux 4 (AS), Update 1, 3 YR RHN, 1YR 24x7, 10 Incident Support NOTE: Only supported when installed on HP BladeSystem. NOTE: Provides 3 Year access to Red Hat Network, 1 Year 24x7, 10 Incidents within 1 year of purchase.	404042-B22
	Red Hat Enterprise Server 4 (ES), Update 1, 1 YR RHN, 1YR 9x5, 10 Incident Support NOTE: Only supported when installed on HP BladeSystem NOTE: Provides 1 Year access to Red Hat Network, 1 Year 9x5, 10 Incidents within 1 year of purchase.	404042-B23
	Red Hat Enterprise Server 4 (ES) Update 1, 3 YR RHN, 1YR 9x5, 10 Incident Support NOTE: Only supported when installed on HP BladeSystem NOTE: Provides 3 Year access to Red Hat Network, 1 Year 9x5, 10 Incidents within 1 year of purchase.	404042-B24
	Red Hat Enterprise Server 4 (AS) , Update I, 1 YR RHN NOTE: Only supported when installed on HP BladeSystem NOTE: Provides 1 Year access to Red Hat Network	399058-B21
	Red Hat Enterprise Server 4 (AS) , Update 1, 3 YR RHN NOTE: Only supported when installed on HP BladeSystem NOTE: Provides 3 Year access to Red Hat Network	399059-B21
	Red Hat Enterprise Server 4 (ES) , Update I, 1 YR RHN NOTE: Only supported when installed on HP BladeSystem NOTE: Provides 1 Year access to Red Hat Network	399060-B21

	Red Hat Enterprise Server 4 (ES), Update 1, 3 YR RHN NOTE: Only supported when installed on HP BladeSystem. NOTE: Provides 3 Year access to Red Hat Network	399061-B21
Red Hat Enterprise Linux 4 and management bundle Service and Support	Red Hat Enterprise Server 4 (AS) Update1, 24x7, 10 Incidents within 1 year, Software support for HP Server Blades NOTE: Only supported when installed on HP BladeSystem.	HC326E
	Red Hat Enterprise Server 4 (ES), Update 1 9x5, 10 Incidents within 1 year, Software support for HP Server Blades NOTE: Only supported when installed on HP BladeSystem.	HC328E
Insight Control Data Center Edition	Insight Control Data Center Edition - 8 Server License NOTE: For use with up to 8 server blades. Contains Insight Control Data Center Edition DVD, 8 Insight Control licenses with one unique activation key, an 8-server RDP license file and documentation.	412808-B21
	Insight Control Data Center Edition - Flexible Quantity License NOTE: For use with multiple server blades. This part number can be used to purchase multiple licenses (minimum quantity of 5). The quantity ordered of this part number will be the quantity of licenses included in the kit in the form of a corresponding Insight Control activation key, RDP license file and documentation.	412809-B21
	Insight Control Data Center Edition - 8 Server License RDP Upgrade NOTE: For use with up to 8 servers in environments where the ProLiant Essentials Rapid Deployment Pack is already installed and licensed for deploying servers. The quantity ordered of this part number will be the quantity of licenses included in the kit in the form of a corresponding Insight Control activation key and documentation. NOTE: This option does not include an RDP license and activation file.	412812-B21
	Insight Control Data Center Edition - Flexible Quantity License RDP Upgrade NOTE: For use with multiple server blades in environments where the ProLiant Essentials Rapid Deployment Pack is already installed and licensed for deploying servers. This part number can be used to purchase multiple licenses (minimum quantity of 5). The quantity ordered of this part number will be the quantity of licenses included in the kit in the form of a corresponding Insight Control activation key and documentation. NOTE: This option does not include an RDP license and activation file.	412813-B21
HP Rack 5000 Series (Metallic Carbonite)	HP 5642 Rack - Unassembled NOTE: Please see the HP Rack 5642 QuickSpecs for additional part numbers and Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/12074_na/12074_na.HTML NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower	358254-B21
HP Rack 10000 G2 Series (Graphite Metallic)	10642 G2 (42U) Rack Cabinet - Pallet	AF001A
	10642 G2 (42U) Rack Cabinet - Shock Pallet	AF002A
	10642 G2 (42U) Rack Cabinet - Crated	AF003A
	10642 G2 (42U) Rack Cabinet, with Extension - Shock Pallet	AF004A
	10642 G2 (42U) Rack Cabinet, without door - Shock Pallet	AF005A
	10642 G2 (42U) Rack Cabinet, with Extension, without door - Shock Pallet	AF006A
	10642 G2 (42U) Rack Shock Pallet- for field racking (NA only)	AF007A
	10636 G2 (36U) Rack Cabinet - Shock Pallet	AF011A
	10636 G2 (36U) Rack Cabinet - Crated	AF012A
	10636 G2 (36U) Rack Cabinet , with Extension - Shock Pallet	AF013A
	10636 G2 (36U) Rack Cabinet, without door - Shock Pallet	AF014A
	10636 G2 (36U) Rack Cabinet, with Extension, without door - Shock Pallet	AF015A
	10642 G2 (42U) Rack Cabinet - Pallet	AF016A

NOTE: Please see the Rack 10000 G2 QuickSpecs for additional part numbers and Technical Specifications such as height, width, depth, weight, and color:

http://h18000.www1.hp.com/products/quickspecs/12402_na/12402_na.HTML

NOTE: For additional information regarding Rack Cabinets, please see the following URL: <http://www.hp.com/go/rackandpower>.

Rack Options for Rack 10000 G2 Series	HP 10642 G2 Front Door ALL	AF009A
	HP 10636 G2 Front Door ALL	AF019A
	10642 G2 (42U) Side Panels (set of two) (Graphite Metallic)	AF054A
	10636 G2 (36U) Side Panels (set of two) (Graphite Metallic)	AF056A
	10636 G2 Rear Extension Kit	AF060A
	600mm G2 Stabilizer Option Kit (Graphite)	AF062A
	600mm G2, Heavy Duty Stabilizer Option Kit (Graphite)	AF064A
	800mm G2 Stabilizer Option Kit (Graphite)	AF066A
	800mm G2, Heavy Duty Stabilizer Option Kit (Graphite)	AF068A
	NOTE: Supports 10000 G2 Series only.	
	HP 10000 G2 Rack Grounding Kit	AF074A
	600W 10K G2 Rack Tie Down	AF076A
	NOTE: For additional information regarding Rack Options, please see the following URL: http://www.hp.com/go/rackandpower .	

HP Rack 10000 Series (Graphite Metallic)	Rack, HP Infrastructure 42U (LV)	379006-001
	Rack, HP Infrastructure 42U (HV)	379005-001
	HP S10614 (14U) Rack Cabinet - Shock Pallet	292302-B22
	HP Rack 10842 (42U) - Pallet	257415-B21
	HP Rack 10842 (42U) - Shock Pallet	257415-B22
	HP Rack 10647 (47U) Cabinet - Pallet	245160-B21
	HP Rack 10647 (47U) Cabinet - Crated	245160-B23
	HP 10642 (42U) Rack Cabinet - Pallet	245161-B21
	HP 10642 (42U) Rack Cabinet - Shock Pallet	245161-B22
	HP 10642 (42U) Rack Cabinet - Crated	245161-B23
	HP 10636 (36U) Rack Cabinet - Pallet	245162-B21
	HP 10636 (36U) Rack Cabinet - Shock Pallet	245162-B22
	HP 10636 (36U) Rack Cabinet - Crated	245162-B23
	HP Rack 10622 (22U) Cabinet - Pallet	245163-B21
	HP Rack 10622 (22U) Cabinet - Shock Pallet	245163-B22
	HP Rack 10622 (22U) Cabinet - Crated	245163-B23

Monitors and Keyboards	TFT7210R Rack Mounted 17" Monitor	348373-B21
	NOTE: For a complete list of Monitors please view the following URL: http://www.hp.com/go/kvm .	
	TFT7600 Rackmount Keyboard Monitor	AG052A
	1U Rackmount Keyboard with USB	AG072A
	NOTE: For additional information regarding Rack Options, please see the following URL: http://www.hp.com/go/rackandpower	

HP KVM Switch Options	2x1x16 IP Console Switch with Virtual Media	AF601A
	4x1x16 IP Console Switch with Virtual Media	AF602A
	2x16 Server Console Switch with Virtual Media	AF600A
	PS/2 Virtual Media Interface Adapter, 1 pack	AF604A
	NOTE: Requires PS/2 and one USB port on server.	
	HP 1x8 Server Console Switch	336044-B21
	HP 2x16 Server Console Switch	336045-B21
	PS/2 Interface Adapter, 1-pack	262588-B21
PS/2 Interface Adapter, 8-pack	262587-B21	

USB Interface Adapter, 1-pack	336047-B21
Serial Interface Adapter, 1-pack with power supply	373045-B21
NOTE: Cat5e cables are required to connect Interface Adapters to Consoles Switches. Cat52 cables can be found at the following URL: http://www.hp.com/go/kvm	
HP 1x4 USB/PS2 KVM Switch, TT	371301-D71
HP PS2 KVM Cable with audio, 6'-2-pack	371730-B21
HP USB KVM Cable with audio, 6'-2-pack	371729-B21
NOTE For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm	

HP Serial Console Server Options

HP 16 Port Serial Console Server	AF101A
HP 48 Port Serial Console Server	AF102A
Serial Adapter, RJ45-DB9 DCE Female, 1 Pack	AF103A
Serial Adapter, RJ45-DB9 DCE Female, 8 Pack	AF110A
NOTE: Cat5e cables are required to connect Serial Adapters to Serial Console Servers. Additional Serial Adapters and Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm .	
NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm .	

Service and Support Offerings (HP Care Pack Services)

NOTE: The HP Care Pack service part numbers below for ProLiant BL c-Class server blades, cover the server blade and all HP branded hardware options qualified for the server, purchased at the same time or afterwards, internal to the server.

Hardware Services On-site Service

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	UE458E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UE459E
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UE460E

Support Plus 24

Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic	UE473E
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NOTE: HP Care Pack services for the c7000 Enclosure cover the enclosure, power supplies and fans. HP qualified rack options are covered by these services when installed within the same rack. HP Supported Ethernet devices covered include the Ethernet Pass-Through Module, Fibre Channel Pass-Through Module and GbE2c Ethernet Blade Switch. **NOTE:** The Cisco Catalyst 3020 Blade Switch is not covered by Care Pack services.

Hardware Services On-site Service

Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years, Electronic	UE477E
4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	UE478E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UE479E
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UE480E
Hardware Installation, Electronic	U5988E

NOTE: The HP Care Pack service part numbers below covers the Brocade 4/12 SAN Switch and Brocade 4/12 SAN Switch 12-port Upgrade LTU.

Hardware Services On-site Service

Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years, Electronic	UC007E
4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	UC008E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UC009E

6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UC023E
Hardware Installation, Electronic	U5988E
NOTE: The HP Care Pack service part numbers below covers the Brocade 4/24 SAN Switch.	
Hardware Services On-site Service	
Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years, Electronic	UE436E
4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	UE437E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UE438E
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UE439E
Hardware Installation, Electronic	U5988E
NOTE: The HP Care Pack service part numbers below covers the Brocade 4/24 SAN Switch Power Pack.	
Hardware Services On-site Service	
Support Plus	
Onsite HW support, 8am-9pm, M-F, 4hr response and SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays, Electronic	UE728E
Support Plus 24	
Onsite HW support 24x7, 4hr response and SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic	UE729E
Installation & Start-up Services	
HP Installation & Startup Service for HP BladeSystem Infrastructure, Electronic	UE602E
NOTE: Provides for an integrated hardware and software implementation that includes remote service planning, onsite deployment of hardware and software, installation verification testing and customer orientation. Hardware deployment covers the installation of a single BladeSystem enclosure that include server blades (up to 16), Ethernet network interconnect, and power options. Software deployment covers the installation and configuration of HP BladeSystem Essential Insight Control Datacenter Edition which includes Systems Insight Manager (SIM), HP Rapid Deployment Pack (RDP), Vulnerability and Patch Management Pack (VPM) and Performance Management Pack (PMP) and deploy up to two editions of either Windows or Linux, using scripted operating system installation software.	
ProLiant BL c-Class Blade Server Hardware Installation, Electronic	UE493E
ProLiant BL c-Class Enclosure and Server Blade Hardware Installation, Electronic	UE494E
Provides for the Installation and Start-up of ProLiant Essentials Rapid Deployment Pack, Electronic	U5683E
NOTE: Provides installation on a Customer supplied server designated as a Deployment Server. Includes the deployment of a single server. This new server will be deployed using either one of the pre-configured scripts or an image. In addition, the service will provide for the capture and storage of the configuration of the newly deployed server and orientation on product usage. To be delivered during standard office hours, standard office days.	
Provides for the Installation and Start-up of Rapid Deployment Pack Implementation of Rapid Deployment Pack (Basic) (Electronic)	UA042E
HP ProLiant Essentials Vulnerability and Patch Management Pack Installation and Startup Service, Electronic	UC929E
NOTE: Service coverage: onsite installation of the Vulnerability and Patch Management (VPM) software on a customer designated server, configuration of the VPM software to acquire security patches, enabling the VPM software to scan up to five (5) systems, applying the security patches to the designated servers, generating a report from VPM that shows the vulnerability assessment results, and providing customer with an orientation to the software.	
Provides for the Installation and Start-up of System Insight Manager (Electronic)	UA041E
Provides for the Installation and Start-up of System Insight Manager Agents (Electronic)	UA040E

NOTE: For more information, customer/resellers can contact <http://www.hp.com/hps/carepack/services/>

Software Operating Environment Care Packs

Microsoft Software Operating Environment Software Telephone 9x5 - 3 incident (Electronic)	U8169E
Red Hat Software Operating Environment Software Telephone 9x5 - 10 incident (Electronic)	U3402E
SUSE Software Operating Environment Software Telephone 9x5 - 3 incident (Electronic)	U9615E
ProLiant Essentials Operating Environment, - 5 Day, 9x5,1 year, 3 incident (Electronic)	U8222E
ProLiant Essentials Operating Environment, - 5 Day, 24x7,1 year, 3 incident (Electronic)	U8301E
ProLiant Essentials Operating Environment, - 5 Day, 9x5,1 year, 10 incident	UE006E
ProLiant Essentials Operating Environment, - 5 Day, 24x7,1 year, 10 incident	UE116E
ProLiant Essentials Operating Environment, - 5 Day, 9x5,1 year, 25 incident	UE117E
ProLiant Essentials Operating Environment, - 5 Day, 24x7,1 year, 25 incident	UE118E
ProLiant Essentials Operating Environment, - 5 Day, 9x5,1 year, 50 incident	UE119E
ProLiant Essentials Operating Environment, - 5 Day, 24x7,1 year,50 incident	UE120E
ProLiant Essentials Operating Environment, - 5 Day, 9x5,1 year, unlimited SW Tech Support	UE121E
ProLiant Essentials Operating Environment, - 5 Day, 24x7,1 year, unlimited SW Tech Support	UE452E
ProLiant Essentials Operating Environment, - 5 Day, 9x5, 3 year, unlimited SW Tech Support	UE453E
ProLiant Essentials Operating Environment, - 5 Day, 24x7, 3 year, unlimited SW Tech Support	UE454E

NOTE: For more information, customer/resellers can contact <http://www.hp.com/hps/carepack/services/>

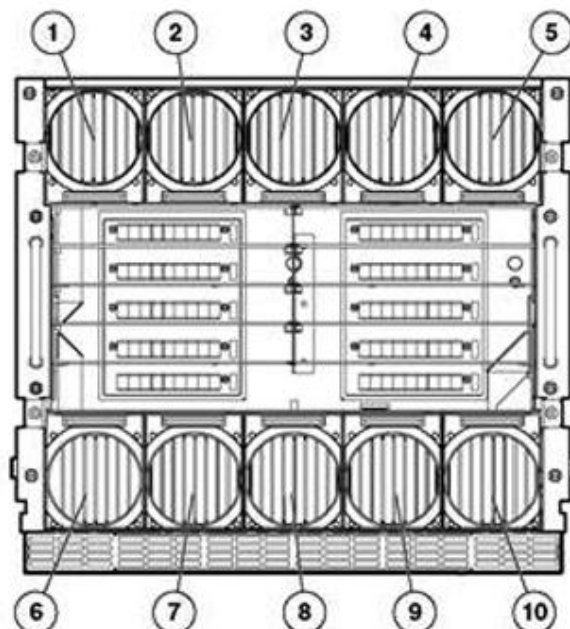
contents

[Overview](#) [HP BladeSystem c-Class Overview](#) [Configuration Information](#) [Factory Integrated Models](#) [Related Options](#)
[Technical Specifications](#) [Power Specifications](#)

Technical Specifications

Server Blade and Fan Population Guidelines

Fan bay numbering

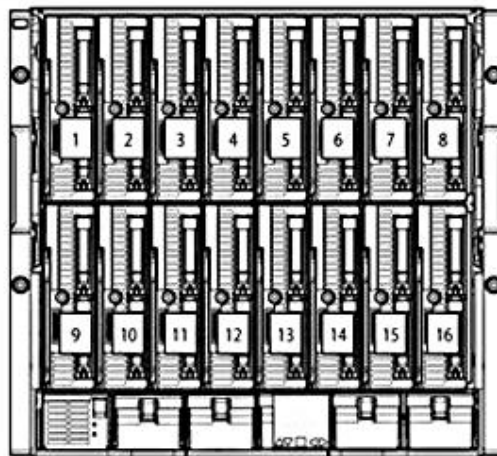


Fans must be placed in the following bays

Number of Fans	Fan Bays Used
4	4, 5, 9, 10
6	3, 4, 5, 8, 9, 10
8	1, 2, 4, 5, 6, 7, 9, 10
10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

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 systems to power on.

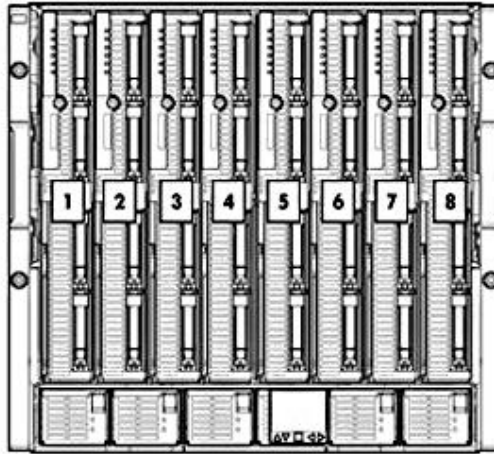
Half-height server blade bay numbering



- | | |
|-----------------|-------------------|
| 1. Device Bay 1 | 9. Device Bay 9 |
| 2. Device Bay 2 | 10. Device Bay 10 |
| 3. Device Bay 3 | 11. Device Bay 11 |
| 4. Device Bay 4 | 12. Device Bay 12 |
| 5. Device Bay 5 | 13. Device Bay 13 |
| 6. Device Bay 6 | 14. Device Bay 14 |
| 7. Device Bay 7 | 15. Device Bay 15 |
| 8. Device Bay 8 | 16. Device Bay 16 |

NOTE: Half-height servers should be populated from top and bottom from left to right from the front of the enclosure. So the first two half-height servers would be placed in bays 1 & 9 the second two half-height servers would be placed in bays 2 & 10 and so on until the enclosure is full.

Full-height server blade bay numbering

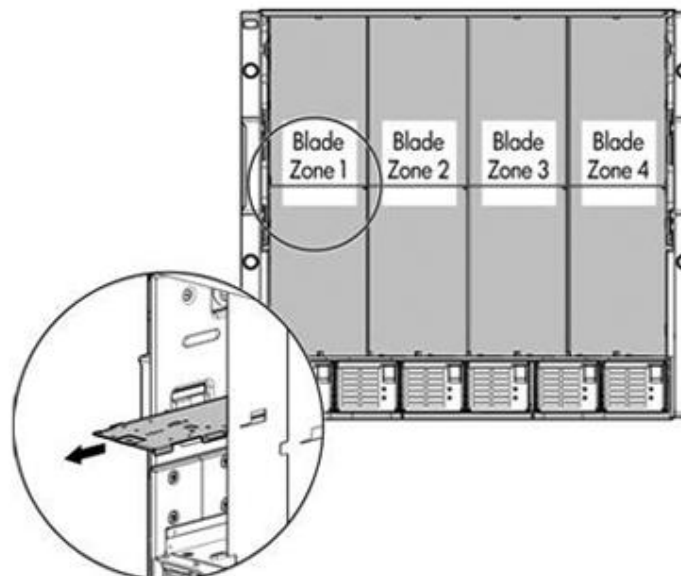


1. Device Bay 1
2. Device Bay 2
3. Device Bay 3
4. Device Bay 4

5. Device Bay 5
6. Device Bay 6
7. Device Bay 7
8. Device Bay 8

NOTE: Full-height servers should be populated from left to right.

Mixed Configuration - Full Height and Half-Height Population rules



The c7000 enclosure is divided into 4 zones or quadrants by the vertical support metalwork. Within each zone a removable divider is used to support half height devices. To install a full-height blade in any zone this divider must be removed. As a consequence a zone can only contain either full-height server blades or half-height server blades.

NOTE: Storage blades can be installed in the same zone as both full-height and half-height blades

HP BladeSystem c7000 Server Blade Enclosure	Dimensions	Height	17.4in (442 mm)
		Width	17.5in (445 mm)
		Depth	32in (813 mm)
	Shipping Dimensions	Height	29.88in (759 mm)
		Width	23.88in (607 mm)
		Depth	39.88in (1013 mm)
	Single Phase Enclosure Weight	Unboxed	121 lb (54.9 Kg)
		Shipping	164 lb (74.4 Kg)
	Three -Phase Enclosure Weight	Unboxed	150 lb (68 Kg)
		Shipping	193 lb (87.5 Kg)
	Max Enclosure Weight	Unboxed	450 lb (204 Kg)
		Shipping	493 lb (223.6 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	20% to 80%	

(non-condensing)	Non-Operating	5% to 95%
Wet Bulb Temperature	Operating	82.4° F (28° C)
	Non-Operating	101.7° F (38.7° C)

NOTE: Operating temperature has an altitude derating of 34° 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.

Power	Input Requirements - Single Phase Model	Rated input voltage	200 to 240 VAC
		Rated input frequency	50 to 60 Hz
		Rated input current per power supply	12.6 A at 208 VAC 11.9 A at 220 VAC 13.1 A at 200 VAC
		Rated input power per power supply	2612 VA Max
	Input Requirements - Three Phase Model	Rated input voltage	200 to 208 VAC Line to Line 115 to 120 V Line to Neutral 3-Phase Delta
		Rated input frequency	50 to 60 Hz
		Max input current per line cord	22.6A at 200 VAC 21.8A at 208 VAC 20.6A at 220 VAC
		Max input power per line cord	7836VA Max
	Power Cords	Single Phase	IEC-320 C19-C20 1.22m (4 ft)
		3-Phase	2 x NEMA L15-30p 2.44m(10 ft)
Output Specifications	Per Power Supply	2250 W	

Option Kits	Power Supply Option Shipping Dimensions	Height	8.75 in (223 mm)
		Width	8.63 in (219 mm)
		Depth	35.13 in (892 mm)
		Weight	8.5 lbs (3.85 Kg)
	Fan Option Shipping Dimensions	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)
	Onboard Administrator Option Shipping Dimensions	Height	2.50 in (63.5 mm)
		Width	9.88 in (251 mm)
		Depth	13.50 in (343 mm)
		Weight	4.0 lbs (1.8 Kg)

Rack Airflow Requirements

Rack 10000 series cabinets

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 Series Racks provide enhanced airflow for maximum cooling, allowing 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:

- Front and rear doors: If your 42U server rack includes closing front and rear doors, you must allow 830 square inches (5,350 sq cm) of hole evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation).
- The clearance from face of rack to inside of the front door needs to be 1.75" minimum.
- Side: The clearance between the installed rack component and the side panels of the rack must be a minimum of 2.75 inches (7 cm).
- Depth: Minimum 39.4 inches (1000mm)

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 results in improper cooling that can lead to thermal damage.

contents

[Overview](#) [HP BladeSystem c-Class Overview](#) [Configuration Information](#) [Factory Integrated Models](#) [Related Options](#)
[Technical Specifications](#) [Power Specifications](#)

Power Specifications

NOTE:

To review maximum system power ratings for facilities planning purposes use the Active Answers Power Calculator which is available via the online tool located at URL: <http://www.hp.com/go/bladeSystem/powercalculator>

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