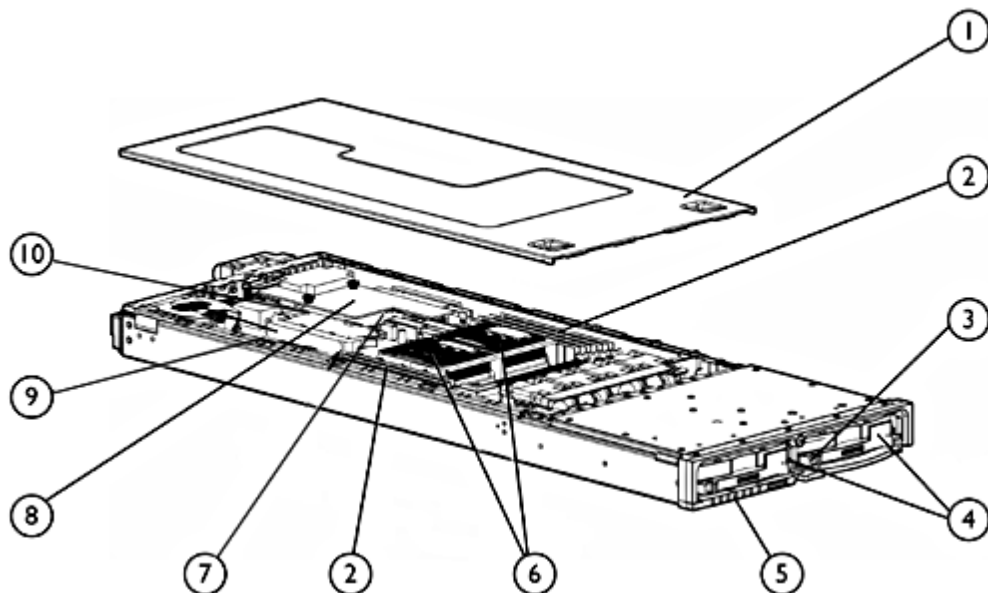


Overview



1. Access Panel

2. Memory banks 1 and 2 (4 DIMM slots per bank, 8 total DIMM slots)

3. Power On/Standby Button

4. Up to two Ultra320 hot-plug hard disk drives (optional)

5. Front panel LEDs

6. Up to two single- or dual-core AMD Opteron™ 200 series processors

7. PCI-X Gigabit NIC Mezzanine Card (contains two NC7781 single port Gigabit NICs)

8. Dual port Fibre Channel Adapter (optional)

9. Smart Array 6i Controller

10. Smart Array 6i Battery-Backed Write Cache Enabler (optional)

What's New

- Support for ProLiant Essentials Rapid Deployment Pack, Flatpack - single server license
- Support for HP 1x4 Server Console Switch

Overview

At A Glance

This QuickSpecs provides information for the HP ProLiant BL25p server blade only. For more information on HP BladeSystems p-Class Infrastructure and HP BladeSystem p-Class Interconnect Components, please see the following QuickSpecs:

HP BladeSystem p-Class Infrastructure QuickSpecs:

http://h18000.www1.hp.com/products/quickspecs/12330_div/12330_div.HTML and HP BladeSystem p-Class Interconnect

Components QuickSpecs: http://h18000.www1.hp.com/products/quickspecs/12331_div/12331_div.HTML

- Performance dual processor server blade designed with enterprise availability and scalability to run existing 32-bit applications, while providing a simplified migration path to 64-bit computing.
- AMD Opteron™ 200 series single-core and dual-core processors (dual capability)
 - Dual-Core: Models 285 (2.6 GHz), 280 (2.4 GHz), 275 (2.2 GHz), 270 (2.0 GHz), and 265 (1.8 GHz)
 - Single-Core: Models 254 (2.8 GHz) and 252 (2.6 GHz)
- HP ProLiant BL25p Dual Port Fibre Channel Adapter (2-Gb) options for SAN connectivity
- AMD 8131 and 8111 Chipsets
- 1024 MB or 2048 MB PC3200 Registered ECC 400MHz DDR memory, 2 x 1 Interleaved Memory, 8 DIMM slots, expandable to 16 GB (using optional PC3200 DDR) or 32 GB max (using optional PC2700 DDR)
- Five total network ports:
 - Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual port NC7782
 - One additional 10/100 NIC dedicated to Integrated Lights-Out (iLO) Management
- HP Smart Array 6i - Integrated (on system board) RAID controller with optional battery-backed write cache
- Ultra320 SCSI Drive Cage (standard) supports up to two Ultra320 hot-plug hard disk drives
- Integrated Lights-Out (iLO) Advanced Management (ASIC on system board)
- Plugs vertically into 6U enclosure, 8 BL25p server blades per enclosure
- Integrated Access Tool for server blade management and enhanced server blade documentation including Best Practices and Common Procedures guides
- Protected by HP Services and a worldwide network of resellers and service providers. Three-year Next Business Day, on-site limited global warranty. Certain restrictions and exclusions apply. Pre-Failure Notification on processors, memory, and SCSI hard drives.

Standard Features

Processors	Single-Core AMD Opteron™ processor Model 254 (2.8 GHz/1MB L2 cache/1 GHz HyperTransport) Single-Core AMD Opteron™ processor Model 252 (2.6 GHz/1MB L2 cache/1 GHz HyperTransport) Dual-Core AMD Opteron™ processor Model 285 (2.6 GHz/1MB L2 cache per core for 2MB total/1 GHz HyperTransport) Dual-Core AMD Opteron™ processor Model 280 (2.4 GHz/1MB L2 cache per core for 2MB total/1 GHz HyperTransport) Dual-Core AMD Opteron™ processor Model 275 (2.2 GHz/1MB L2 cache per core for 2MB total/1 GHz HyperTransport) Dual-Core AMD Opteron™ processor Model 270 (2.0 GHz/1MB L2 cache per core for 2MB total/1 GHz HyperTransport) Dual-Core AMD Opteron™ processor Model 265 (1.8 GHz/1MB L2 cache per core for 2MB total/1 GHz HyperTransport)	
Upgradeability	Upgradeable to dual processing.	
Cache Memory	1 MB Level 2 Cache per core (2MB total for Dual-Core models)	
Chipset	AMD 8131 and 8111 chipsets	
Memory	Type	2-way interleaved PC3200 DDR SDRAM running at 400 MHz or PC2700 DDR SDRAM running at 333 MHz
	Standard	1024 MB 400-MHz PC3200 (depending on model) 2048 MB 400-MHz PC3200 (depending on model)
	Maximum	32 GB max (using optional 333 MHz PC2700 DDR) 16 GB max (using optional 400 MHz PC3200 DDR)
	NOTE: Memory must be installed in pairs. NOTE: PC2700 and PC3200 memory should not be mixed within the server blade and is not an HP supported configuration.	
Network Adapter	Five network ports total: Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual port NC7782 One 10/100 iLO NIC dedicated to management NOTE: Must use a HP BladeSystem p-class server blade enclosure with enhanced backplane to utilize all four NIC ports (HP P/N's 281404-B22, 243564-B22 or 380625-B22).	

Standard Features

Expansion Slots No PCI slots; all features are integrated
I/O cable connectors:
(2) USB 1.1 ports, (1) video port, (1) iLO port and (1) kernel debug port
(2) I/O cables ship with every server blade enclosure
Tested USB devices (keyboard, mouse, floppy) are listed in the "Options" section of this QuickSpecs

Integrated Manageability Integrated Lights-Out (iLO) Management Advanced (ASIC on the System Board)

Internal Storage Hard Drives None ship standard
Maximum Internal Storage 600-GB (internal drive cage) 2 x 300-GB Ultra320, drive

Graphics Integrated ATI Rage XL Video Controller with 8-MB SDRAM Video Memory

Graphics Resolution Supported Resolution Color Depths Depths 1280 x 1024, 64k, 256, 16
1024 x 768, 16.7M, 64k, 256, 16
800 x 600, 16.7M, 64k, 256, 16
640 x 480, 16.7M, 64k, 256, 16

Fiber Channel on the HP ProLiant BL25p server blade Two optional fiber channel adapters are supported by the HP ProLiant BL25p. Both adapters are mezzanine circuit boards which connect to the top of a standard NIC adapter board, which in turn, connects directly to the server blade system board. These optional fiber channel adapters are available via option kits and must be ordered separately.

- QLogic-based
 - Utilizes a QLogic chipset
 - The HP ProLiant BL25/45p dual-port Fibre Channel Adapter (P/N 381881-B21) is compatible with the HP ProLiant BL25p and BL45p server blades. It cannot be used with HP ProLiant BL20p or HP ProLiant BL35p server blade.
 - Includes two small form factor pluggable transceivers with LC connectors for installation into the Patch Panel 2, CGESM or GbE2 Interconnect Switch (with the Storage Connectivity Kit.)
- Emulex-based
 - Utilizes an Emulex Thor chipset
 - The Emulex-based FC Mezzanine for HP p-Class BladeSystem dual port Fibre Channel HBA (P/N 394588-B21) is compatible with the HP ProLiant BL25p, 35p SATA model, and 45p server blades. It cannot be used with an HP ProLiant BL20p or HP ProLiant BL35p SAS model server blade.
 - There are no SFP's included in the Emulex mezzanine kit for use with ProLiant BL p-Class Fibre Channel pass-through interconnects. If you require SFPs for use with an Emulex mezzanine and a FC pass through interconnect please order an SFP option kit (P/N 397577-B21) which will provide 2 FC SFPs per option kit.
- Two ports on each Dual-port Fibre Channel Mezzanine Card provide a redundant Fibre Channel connection to each server blade.
- Supports up to 2 Gb/s Fibre Channel equipment.

Standard Features

Compatible SAN

HP ProLiant BL25p server blades are optimized for StorageWorks arrays:

- HSG80 (MA8000, EMA12000, EMA16000); EVA5000; EVA3000; XP48, XP128, XP512, XP1024; HP StorageWorks Modular Smart Array 1000 and 1500
- HP ProLiant BL25p server blades are compatible with select 3rd party SANs (please see server blade storage page for more details:
<http://h18000.www1.hp.com/products/servers/proliant-bl/p-class/storage.html>

ProLiant Essentials Foundation Pack Software for the ProLiant BL Server Blades

HP Systems Insight Manager

HP Systems Insight Manager (HP SIM) provides a unified, secure and extensible environment to centrally manage servers, storage and other infrastructure devices across multiple operating system platforms.

Through a single management view, HP SIM provides core management services that include device discovery and identification, event views, health monitoring, inventory data collection, software version control and reporting. HP SIM is built on industry standards and is extensible with value-added ProLiant Essentials, Integrity Essentials and Storage Essentials software to meet individual management needs. For more details on HP SIM visit <http://www.hp.com/go/hpsim>.

HP SIM provides organizations with the following benefits:

- Simplifies and consolidates infrastructure lifecycle management using task and query based functionality
- Provides the foundation for infrastructure automation and virtualization
- Enables IT management based on business processes not hardware platforms
- Lowers infrastructure maintenance cost and frees resources for innovation
- Maximizes resource utilization with virtualization technologies
- Provides a central point of integration between infrastructure and Enterprise management tools such as HP OpenView

ProLiant Essentials Rapid Deployment Pack

Rapid Deployment Pack (RDP) is an automated deployment and provisioning solution for all ProLiant servers. RDP includes the ProLiant Integration Module featuring ProLiant server pre-configured events for OS installation, and optimized software drivers, firmware and management agents. Every RDP disc includes 10-node trial licenses for evaluation purposes. RDP requires a license for each server deployed and is available for purchase with HP servers. For more information, visit: <http://www.hp.com/servers/rdp>.

Standard Features

Insight Management Agents	<p>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. 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	<p>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.</p>
ROMPaq, support software, and configuration utilities	<p>The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options, available in the RDP CD, SmartStart or downloadable from Software and Drivers download pages, linked from the SmartStart website at http://www.hp.com/go/support.</p>
Insight Diagnostics	<p>The most advanced configuration analysis, reporting and troubleshooting utilities used by HP and at your fingertips, available in SmartStart.</p>

NOTE: For more information regarding ProLiant Essentials Software, please see the following URL: <http://www.hp.com/servers/proliantessentials>

Optional ProLiant Essentials Value Packs

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

- 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.
- Performance Management Pack - a performance management solution that identifies and explains hardware performance bottlenecks on ProLiant servers and attached options enabling users to better utilize their valuable resources.
- Rapid Deployment Pack (RDP) is an automated deployment and provisioning solution for all ProLiant servers. RDP includes the ProLiant Integration Module featuring ProLiant server pre-configured events for OS installation, and optimized software drivers, firmware and management agents. Every RDP disc includes 10-node trial licenses for evaluation purposes. RDP requires a license for each server deployed and is available for purchase with HP servers. For more information, visit: <http://www.hp.com/servers/rdp>
- Server Migration Pack - P2P Edition: Upgrading or replacing your existing server? Effortlessly transition to new servers with automated, accurate and affordable migration of OS, application and data.
- 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

Standard Features

Pack plug-in automates the manual task of migrating servers between physical or virtual platforms.

- Vulnerability and Patch management Pack - identifies and remediates software security vulnerabilities due to missing patches as well operating system configurations that can be exploited by viruses, worms and other blended threats.
- 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.

SmartStart

SmartStart is a tool that simplifies single server setup, providing a rapid way to deploy reliable and consistent server configurations. SmartStart 7.30 and later can now deploy all HP ProLiant BL25p server blades, using the I/O port with an attached USB CD-ROM device. To obtain a copy of SmartStart for your blade server, redeem the coupon that is included with your Blade server or order your copy from the SmartStart web site. For more information, please visit the SmartStart Web site at <http://www.hp.com/servers/smartstart>.
SmartStart version supported (minimum): SmartStart 7.20

OS Support: Single-Core

2.6 GHz and 2.8 GHz
models

Microsoft Windows 2000 Server
Microsoft Windows 2000 Advanced Server
Windows Server 2003, Standard Edition
Windows Server 2003, Enterprise Edition
Windows Server 2003, Web Edition
Red Hat Enterprise Linux
SUSE Linux Enterprise Server
Solaris 10 32/64-bit

NOTE: For a complete and up-to-date listing of supported OSs and versions, please visit our OS Support Matrix at: <http://www.hp.com/go/supportos>.

NOTE: For an up-to-date listing of the latest drivers available for the HP ProLiant BL p-Class, please see: <http://h18004.www1.hp.com/support/files/server/us/family/model/5342.html>.

NOTE: For a more complete and up-to-date information on Linux support, please visit HP Linux Web site at: <http://h18000.www1.hp.com/products/servers/linux/hpLinuxcert.html>.

NOTE: For more Linux OS support & certification information, please visit our the ProLiant & Bladesystem Server Linux matrix <http://h18004.www1.hp.com/products/servers/linux/hpLinuxcert.html>

Standard Features

OS Support:	Microsoft Windows 2000 Server (licensed by core)
Dual-Core	Microsoft Windows 2000 Advanced Server (licensed by core)
	Windows Server 2003, Standard Edition (licensed by processor socket)
1.8 GHz, 2.0 GHz, 2.2 GHz, 2.4 GHz and 2.6 GHz models	Windows Server 2003, Enterprise Edition (licensed by processor socket)
	Windows Server 2003, Web Edition (licensed by processor socket)
	Red Hat Enterprise Linux 3 Update 5 (or greater)
	Red Hat Enterprise Linux 4 Update 2 (or greater)
	SuSE Linux Enterprise Server 9 SP1 (or greater)
	Solaris 10 32/64-bit

NOTE: For a complete and up-to-date listing of supported OSs and versions, please visit our OS Support Matrix at: <http://www.hp.com/go/supportos>.

NOTE: For an up-to-date listing of the latest drivers available for the HP ProLiant BL p-Class, please see: <http://h18004.www1.hp.com/support/files/server/us/family/model/5342.html>.

NOTE: For a more complete and up-to-date information on Linux support, please visit HP Linux Web site at: <http://h18000.www1.hp.com/products/servers/linux/hpLinuxcert.html>.

Supported Software Options

VMware Virtualization Software
Red Hat Enterprise Linux and management bundle for HP BladeSystems

NOTE: For more information on HP's Certified and Supported HP ProLiant Servers, please visit the VMware Server Support Matrix at:

<http://h18004.www1.hp.com/products/servers/software/vmware/hpvmwarecert.html>

NOTE: For a more complete and up-to-date information on Linux for HP BladeSystems support, please visit HP Linux website at:

http://h18000.www1.hp.com/products/quickspecs/12321_div/12321_div.HTML

Intelligent Manageability

Integrated Lights-Out Advanced (iLO)
Virtual Text and Graphical Remote Console*
Virtual CD-ROM*
Virtual Floppy*
Virtual Power Button Control
Dedicated LAN Connectivity
Automatic IP Configuration via DHCP/DNS/WINS
Industry Standard 128-bit Secure Sockets Layer (SSL) Security
IML and iLO Event Logging
Support for 12 user accounts with customizable access privileges
Automatic Server Recovery-2 (ASR-2)
Insight Manager 7
HP Systems Insight Manager
Redundant ROM
Remote Flash ROM
ROM Based Setup Utility (RBSU)
Advanced Configuration and Power Interface Specification Ready (ACPI)
Server and Interconnect Switch Health Logs
Redundant Power Supply Utility
Pre-Failure Warranty (covers processors, as well as hard drives and memory)
Integrated Management Log (IML)
Dynamic sector repairing and drive parameter tracking (with Smart Array controllers)
Network adapter teaming set-up utility

***NOTE:** Advanced features such as Graphical Remote Console and Virtual Floppy are included with the BL p-Class server.

Standard Features

Availability

- Dual-Port Fibre Channel Mezzanine Card for redundant SAN connection
- Two hot-plug Ultra320 SCSI hard drive bays and integrated, hardware RAID (Smart Array 6i) on every server blade (battery-backed write cache is optional.)
- Redundant ROM on each server blade
- ECC Memory
- Network adapter teaming (network fault tolerance, transmit load balancing, switch-assisted load balancing)

Security

- Power-on password
- Administrator's password
- Integrated Lights-Out has 12 customizable user accounts and SSL encryption
- Integrated Lights-Out can be disabled via a Global Setting

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 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>.

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 BL20p, HP ProLiant 25p, and HP ProLiant 45p Server Blades.

NOTE: Server Blade Limited Warranty includes 3 year Parts, 1 year Labor, 1-year on-site support. This warranty supports the HP ProLiant 35p Server Blade.

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 3 year Parts, 3 year Labor, 3-year on-site support

NOTE: The p-Class SAN switch limited warranty is unique to the SAN switch which includes 1 year warranty that is upgradeable to 3 years via Care Pack.

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

The HP Care Pack service part numbers below for ProLiant BL p-Class server blades, cover the server blade and all HP branded hardware options qualified for the server, purchased at the same time or

Standard Features

afterwards, internal to the server.

HP Care Pack services for HP BladeSystem p-Class server blade enclosure covers the enclosure including patch panels, HP supported Ethernet interconnects, power enclosure with power supplies and power distribution.

HP services provide continuous care and support expertise with committed response designed to meet your IT and business needs.

To fully capitalizing on your HP BladeSystem servers' capabilities requires a service partner who thoroughly understands your server technology and systems environment. HP Services, an industry leader in provision of multi vender support solutions provides a range of support services designed to meet the varying needs of business. Whether an SMB or large global corporation HP has a HP BladeSystem server support offer to help you speedily deploy and maximize system uptime.

Enhanced Care - Minimum recommended service support offer designed to ensure customers have access to expert assistance, whenever they need it.

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years.

Continuance Care - Recommended service delivering cost-effective support options designed to extend HP Services committed response and guaranteed fix times, designed to speed problem identification and resolution.

4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years.

Total Care - Highest HP Support service level recommend to help increase IT performance and availability with comprehensive, integrated hardware and software services.

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.

Deployment Services - HP Installation and Start Up services designed to take time, risk, and worry out of the deployment of HP BladeSystem servers - and free customers IT support staff to focus on what they do best, their business.

Installation & Start-Up service for HP BladeSystem Infrastructure plus HP BladeSystem Enhanced Network Installation and Start-UP as per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays

For a complete listing of service offerings and information visit:

<http://www.hp.com/services/ bladesystems services>

<http://www.hp.com/go/proliant/carepack>

Models

Dual-Core Models

ProLiant BL25p 0285 2.6GHz-1MB,DC 2GB (2P) 406425-xx1	Processor(s)	(2) Dual-Core AMD Opteron™ processors Model 285, 2.6 GHz standard (up to 2 supported)
	Cache Memory	1MB Level 2 cache per core/2-MB total
	Memory	2048 MB (Standard) of PC3200 DDR SDRAM 400 MHz 16 GB (Maximum) of PC3200 DDR SDRAM 400 MHz 32 GB (Maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 8 DIMM slots
	Network Adapter	Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual port NC7782 One additional 10/100 NIC dedicated to iLO Management
	Storage Controller	Smart Array 6i Controller (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	Up to 600-GB maximum (with optional, U320 hard disk drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Server Blade Enclosure

ProLiant BL25p 0280 2.4GHz-1MB,DC 2GB (2P) 399598-xx1	Processor(s)	(2) Dual-Core AMD Opteron™ processors Model 280, 2.4 GHz standard (up to 2 supported)
	Cache Memory	1MB Level 2 cache per core/2-MB total
	Memory	2048 MB (Standard) of PC3200 DDR SDRAM 400 MHz 16 GB (Maximum) of PC3200 DDR SDRAM 400 MHz 32 GB (Maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 8 DIMM slots
	Network Adapter	Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual port NC7782 One additional 10/100 NIC dedicated to iLO Management
	Storage Controller	Smart Array 6i Controller (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	Up to 600-GB maximum (with optional, U320 hard disk drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Server Blade Enclosure

Models

ProLiant BL25p 2.2GHz-1MB, DC 2GB (2P) 392439-B21	Processor(s)	(2) Dual-Core AMD Opteron™ processors Model 275, 2.2 GHz standard (up to 2 supported)
	Cache Memory	1MB Level 2 cache per core/2-MB total
	Memory	2048 MB (Standard) of PC3200 DDR SDRAM 400 MHz 16 GB (Maximum) of PC3200 DDR SDRAM 400 MHz 32 GB (Maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 8 DIMM slots
	Network Adapter	Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual port NC7782 One additional 10/100 NIC dedicated to iLO Management
	Storage Controller	Smart Array 6i Controller (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	Up to 600-GB maximum (with optional, U320 hard disk drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Server Blade Enclosure

ProLiant BL25p 2.0GHz-1MB, DC 2GB (2P) 392441-xx1	Processor(s)	(2) Dual-Core AMD Opteron™ processors Model 270, 2.0 GHz standard (up to 2 supported)
	Cache Memory	1MB Level 2 cache per core/2-MB total
	Memory	2048 MB (Standard) of PC3200 DDR SDRAM 400 MHz 16 GB (Maximum) of PC3200 DDR SDRAM 400 MHz 32 GB (Maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 8 DIMM slots
	Network Adapter	Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual port NC7782 One additional 10/100 NIC dedicated to iLO Management
	Storage Controller	Smart Array 6i Controller (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	Up to 600-GB maximum (with optional, U320 hard disk drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Server Blade Enclosure

Models

ProLiant BL25p 1.8GHz-1MB,DC 1GB (1P) 392443-B21	Processor(s)	(1) Dual-Core AMD Opteron™ processor Model 265, 1.8 GHz standard (up to 2 supported)
	Cache Memory	1MB Level 2 cache per core (2-MB total)
	Memory	1024 MB (Standard), 2-way interleaved, 8 DIMM slots 16 GB (Maximum) of PC3200 DDR SDRAM 400 MHz 32 GB (Maximum) of PC2700 DDR SDRAM 333 MHz
	Network Adapter	Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual port NC7782 One additional 10/100 NIC dedicated to iLO Management Four Gigabit NICs (embedded) with WOL and PXE One additional 10/100 NIC dedicated to iLO Management
	Storage Controller	Smart Array 6i Controller (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	Up to 600-GB maximum (with optional, U320 hard disk drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Server Blade Enclosure

Single-Core Models

ProLiant BL25p O254 2.8GHz-1MB,SC 2GB (2P) 397817-B21	Processor(s)	(2) Single-Core AMD Opteron™ processors Model 254, 2.8 GHz standard (up to 2 supported)
	Cache Memory	1MB Level 2 cache per core
	Memory	2048 MB (Standard) of PC3200 DDR SDRAM 400 MHz 16 GB (Maximum) of PC3200 DDR SDRAM 400 MHz 32 GB (Maximum) of PC2700 DDR SDRAM 333 MHz 2-way interleaved, 8 DIMM slots
	Network Adapter	Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual port NC7782 One additional 10/100 NIC dedicated to iLO Management
	Storage Controller	Smart Array 6i Controller (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	Up to 600-GB maximum (with optional, U320 hard disk drives)
	Optical Drive	None
	Form Factor	Plugs vertically into HP BladeSystem p-Class Server Blade Enclosure

Country Code Key	xx = B2	Worldwide
	xx = 20	Brazil only

Configuration Information Factory Integrated Models (North America only)

NOTE: For Configure to Order requirements within EMEA region, please consult local Sales Contact.

NOTE: HP does not allow factory integration of options into standard models listed above.

Configure-to-order servers must start with a CTO Chassis.

NOTE: This product offering does not support HP Factory Express Server Configuration Level 1.

NOTE: FIO indicates that this option only available as a Factory Installable Option.

Step 1: Base Server Blade Configuration

Models	HP ProLiant BL25p CTO Blade (North America)	382731-405
	Configurable Model ships with:	
	Two (2) PCI-X Gigabit embedded ports consisting of one (1) NC7782 Gigabit Dual Port PCI-X LOM	
	One additional 10/100 NIC dedicated to iLO Management	
	Smart Array 6i Controller (integrated on system board)	

Step 2: Choose Required Options (one of the following from each list unless otherwise noted)

Processors	HP BL25p O285 2.6 GHz DC FIO Base	406426-L21
	NOTE: If 2 processors are desired, select one 406426-L21 and one 406426-B21	
	HP BL25p O280 2.4 GHz DC FIO Base	399599-L21
	NOTE: If 2 processors are desired, select one 399599-L21 and one 399599-B21	
	HP BL25p O265 1.8 GHz DC FIO Base	392444-L21
	NOTE: If 2 processors are desired, select one 392444-L21 and one 392444-B21	
	HP BL25p O270 2.0 GHz DC FIO Base	392442-L21
	NOTE: If 2 processors are desired, select one 392442-L21 and one 392442-B21	
Memory	HP BL25p O275 2.2 GHz DC FIO Base	392440-L21
	NOTE: If 2 processors are desired, select one 392440-L21 and one 392440-B21	
	HP BL25p O254 2.8 GHz SC FIO Base	397819-L21
	NOTE: If 2 processors are desired, select one 397819-L21 and one 397819-B21	
	HP BL25p O252 2.6 GHz SC FIO Base	381588-L21
	NOTE: If 2 processors are desired, select one 381588-L21 and one 351588-B21	
	NOTE: Two-way memory interleaving is enabled when an identical pair of DIMMs is installed.	
	1 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 512 MB)	376638-B21
NOTE: Must install in pairs		
2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB)	376639-B21	
NOTE: Must install in pairs		
4 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB)	379300-B21	
NOTE: Must install in pairs		
8 GB PC2700 DDR SDRAM DIMM Memory Kit (2 x 4 GB)	395409-B21	
NOTE: Must install in pairs		

Configuration Information Factory Integrated Models (North America only)

Communications	<p>NOTE: Must select one communications adapter, either the HP ProLiant BL25p/35/45p NIC Mezzanine or the HP ProLiant BL25p/35p/45p Dual NC370i Multifunction Network Adapter.</p> <p>HP ProLiant BL25/35/45p NIC Mezz FIO Base 382850-B21</p> <p>NOTE: HP ProLiant BL25p/35/45p NIC Mezz contains two (2) NC7781 single port Gigabit NICs.</p> <p>Or upgrade to:</p> <p>HP ProLiant BL25p/35p/45p Dual NC370i Multifunction Network Adapter 384043-B21</p> <p>NOTE: Accelerated iSCSI is not yet supported for Linux environments; RDMA and iSCSI boot is not yet supported for Windows or Linux environments. Future support is planned for all of these features.</p> <p>NOTE: A minimum of 1 GB of memory per port is required for NC370x adapters, with a maximum of two NC370x ports permitted in a server.</p>
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Step 3: Choose Additional Factory Integratable Options

Fibre Channel Options	<p>HP ProLiant BL25/45p dual-port Fibre Channel Adapter 381881-B21</p> <p>NOTE: The BL25p/45p FC adapter is Qlogic-based.</p> <p>Emulex-based 25p/35/45p Dual Port Fibre Channel HBA 394588-B21</p> <p>NOTE: SFPs for use with pass through SAN switches not included with the Emulex based Fibre Channel Mezzanine card. If SFPs required please order the SFP option kit (P/N 397577-B21) which includes 2 2Gb SFPs per option kit.</p> <p>HP 2-2Gb SFP for Fibre Channel pass through kit 397577-B21</p> <p>NOTE: Must select if SFP for use with pass through SAN switches is required when ordering Emulex based Fibre Channel Mezzanine card for HP p-Class BladeSystem (P/N 394757-B21).</p>
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Step 4: Choose Additional Options for Factory Integration

NOTE: For additional options, including server blade enclosure with enhanced backplanes, interconnect options and power subsystem options, please refer to the "Options" section below.

Options

ProLiant Essentials Value Pack Software

ProLiant Essentials Intelligent Networking Pack Window Edition and Linux Edition		
ProLiant Essentials Intelligent Networking Pack Windows Edition, Single Server License		372906-B21
NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.		
ProLiant Essentials Intelligent Networking Pack Linux Edition, Single Server License		397004-B21
NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.		
NOTE: For additional ProLiant Intelligent Networking Pack License Kits please see the QuickSpecs at:		
http://h18000.www1.hp.com/products/quickspecs/12062_div/12062_div.HTML		
http://h18000.www1.hp.com/products/quickspecs/12327_div/12327_div.HTML		
ProLiant Essentials Performance Management Pack		
ProLiant Essentials Performance Management Pack, Single-Server License		306696-B21
NOTE: For use with a single server. Contains one license with a unique license activation key, HP Management CD and documentation.		
NOTE: The most recent version of the software can always be downloaded at http://www.hp.com/products/pmp .		
NOTE: For additional ProLiant Performance Management Pack License Kits please see the QuickSpecs at:		
http://h18000.www1.hp.com/products/quickspecs/11925_div/11925_div.HTML		
ProLiant Essentials Rapid Deployment Pack Windows		
ProLiant Essentials Rapid Deployment Pack, Flatpack - single server license		434560-B21
NOTE: This license allows 1 server to be deployed and managed via RDP.		
Rapid Deployment Pack, Single-Server License		267196-B21
NOTE: This license allows 1 server to be deployed and managed via RDP.		
Rapid Deployment Pack, Single-Server License (Japan)		267196-291
NOTE: This license allows 1 server to be deployed and managed via RDP.		
NOTE: For additional ProLiant Essentials Rapid Deployment Pack License Kits please see the QuickSpecs at:		
http://h18000.www1.hp.com/products/quickspecs/11053_div/11053_div.HTML		
ProLiant Essentials Server Migration Pack		
ProLiant Essentials Server Migration Pack, Single-Migration License		375345-B21
NOTE: Contains one license, enabling 1 server migration, with a unique license activation key and documentation.		
NOTE: This license allows 1 server to be migrated from a physical server to a virtual machine. Or this license can be used to migrate a virtual machine from one virtualization layer i.e. VMware GSX to a different virtualization layer such as VMware ESX or Microsoft Virtual Server 2005.		
NOTE: For additional ProLiant Server Migration Pack License Kits please see the QuickSpecs at:		
http://h18000.www1.hp.com/products/quickspecs/12328_div/12328_div.HTML		
ProLiant Essentials Server Migration Pack - Physical to ProLiant Edition		
HP ProLiant Essentials Server Migration Pack - Physical to ProLiant Edition. 1 Year Unlimited Migration License		412982-B21
ProLiant Essentials Server Migration Pack - Physical to ProLiant Edition, Single-Migration License		412978-B21

Options

NOTE: For additional ProLiant Server Migration Pack License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/12467_div/12467_div.HTML

ProLiant Essentials Server Migration Pack - Physical to ProLiant Edition

ProLiant Essentials Server Migration Pack - Physical to ProLiant Edition, Single-Migration License 412978-B21

NOTE: For additional ProLiant Server Migration Pack License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/12467_div/12467_div.HTML

ProLiant Essentials Workload Management Pack

ProLiant Essentials Workload Management Pack, Single Server License 303284-B21

NOTE: For additional ProLiant Workload Management Pack License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/11452_div/11452_div.HTML

ProLiant Essentials Virtual Machine Management Pack

ProLiant Essentials Virtual Machine Management Pack, Single-Server License 372214-B21

NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.

NOTE: For additional ProLiant Virtual Machine Management Pack License Kits please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/12328_div/12328_div.HTML

ProLiant Essentials Vulnerability and Patch Management Pack

ProLiant Essentials Vulnerability and Patch Management Pack, Single-Server License 371645-B21

NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.

NOTE: For additional ProLiant Vulnerability and Patch Management Pack License Kits, please see the QuickSpecs at:

http://h18000.www1.hp.com/products/quickspecs/12111_div/12111_div.HTML

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.

NOTE: For more information regarding ProLiant Essentials Software, please see the following URL: <http://www.hp.com/servers/proliantessentials>.

HP Control Tower BladeSystem p-class Management Software

HP Control Tower for HP BladeSystem, Single Server License. No media included. 412957-B21

NOTE: For use with a single blade server. Contains one license with a single unique license activation key.

HP Control Tower for HP BladeSystem, Eight-pack (8-pack) Server License. No media included. 412958-B21

NOTE: For use with eight (8) blade servers. Contains eight (8) licenses with a single unique license activation key.

HP Control Tower for HP BladeSystem, Flexible License. No media included. 412959-B21

NOTE: For use with multiple servers (minimum of 5). This part number can be used to purchase multiple licenses with a single activation key. The quantity ordered for this part number will be the quantity of licenses included in the kit in the form of a corresponding activation key. Use the same key to activate all licenses in the actual quantity ordered. For a given order, one kit will be delivered with the activation key.

Options

Processor	HP BL25p Opteron™ 2.6 GHz-1M DC Processor Option Kit	406426-B21
	HP BL25p Opteron™ 2.4 GHz-1M DC Processor Option Kit	399599-B21
	HP BL25p Opteron™ 2.2 GHz-1M DC Processor Option Kit	392440-B21
	HP BL25p Opteron™ 2.0 GHz-1M DC Processor Option Kit	392442-B21
	HP BL25p Opteron™ 1.8 GHz-1M DC Processor Option Kit	392444-B21
	HP BL25p Opteron™ 2.8 GHz-1M SC Processor Option Kit	397819-B21
	HP BL25p Opteron™ 2.6 GHz-1M SC Processor Option Kit	381588-B21
Memory (SDRAM DIMMs)	1 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 512 MB) NOTE: Must install in pairs	376638-B21
	2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB) NOTE: Must install in pairs	376639-B21
	4 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB) NOTE: Must install in pairs	379300-B21
	8 GB PC2700 DDR SDRAM DIMM Memory Kit (2 x 4 GB) NOTE: Must install in pairs	395409-B21
Hard Drives	Ultra320 SCSI – Universal Hot Plug	
	HP 300GB U320 10K Universal HDD	350964-B22
	HP 146GB U320 10K Universal HDD	286716-B22
	HP 72GB U320 10K Universal HDD	286714-B22
	HP 300GB U320 15K Universal HDD	411089-B22
	HP 146GB U320 15K Universal HDD	347708-B22
	HP 72GB U320 15K Universal HDD	286778-B22
HP 36GB U320 15K Universal HDD	286776-B22	
Communications	HP ProLiant BL25p/35p/45p Dual NC370i Multifunction Network Adapter NOTE: Accelerated iSCSI is not yet supported for Linux environments; RDMA and iSCSI boot is not yet supported for Windows or Linux environments. Future support is planned for all of these features. NOTE: A minimum of 1 GB of memory per port is required for NC370x adapters, with a maximum of two NC370x ports permitted in a server.	384043-B21
Storage Controllers	128MB Battery-Backed Write Cache with Battery Housing NOTE: Please see the following Controller QuickSpecs for Technical Specifications such as PCI Bus, PCI Peak Data Transfer Rate, SCSI Protocols supported, SCSI Peak Data Transfer Rate, Channels, SCSI Ports, Drives supported, Cache, RAID support, and additional information: http://h18000.www1.hp.com/products/quickspecs/12030_div/12030_div.HTML (Smart Array 6i)	346914-B21

Options

ProLiant BL25 Fibre Channel Adapter	<p>Emulex based 25p/35/45p Dual Port Fibre Channel HBA</p> <p>Dual port Fibre Channel Adapter (2-Gb) for HP ProLiant BL25p/45p server blade (shared with the HP ProLiant BL45p server blade)</p> <p>NOTE: When using this card, the Patch Panel 2, CGESM, or GbE2 Interconnect Switch (with Storage Connectivity Kit) must be used to provide the Fibre Channel pass through.</p> <p>NOTE: For more information on HP BladeSystem p-Class Interconnect Components please visit: http://h18000.www1.hp.com/products/quickspecs/12331_div/12331_div.HTML</p> <p>NOTE: The BL35p and BL20p dual-port Fibre Channel adapters are not compatible with the HP ProLiant BL25p server blade.</p>	<p>394588-B21</p> <p>381881-B21</p>
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HP BladeSystem p-Class Other Options	<p>HP BladeSystem p-Class Diagnostic Station</p> <p>NOTE: The Diagnostic Station allows access to the HP ProLiant p-Class server blades and the BL p-Class interconnect switch outside of the server blade enclosure. The option provides power and a data interface so that "offline" upgrade and diagnostic functions may be performed.</p>	<p>230743-B21</p>
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Tape Libraries	<p>HP StorageWorks MSL6000 Tape Library</p> <p>Ultrium 960 technology</p> <p>HP StorageWorks MSL6030 1 Ultrium 960 Dr LVDS Library</p> <p>HP StorageWorks MSL6030 1 Ultrium 960 Dr FC Library</p> <p>HP StorageWorks MSL6030 2 Ultrium 960 Dr LVDS Library</p> <p>HP StorageWorks MSL6030 2 Ultrium 960 Dr FC Library</p> <p>Ultrium 460 technology</p> <p>HP StorageWorks MSL6030 1 Ultrium 460 Dr LVDS Library</p> <p>HP StorageWorks MSL6030 1 Ultrium 460 Dr FC Library</p> <p>HP StorageWorks MSL6030 2 Ultrium 460 Dr FC Library</p> <p>NOTE: Please reference the MSL6000 Tape Library QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution; reference current compatibility information at http://www.hp.com/go/ebs</p> <p>HP StorageWorks Virtual Library Systems</p> <p>HP StorageWorks 6105 Virtual Library System</p> <p>HP StorageWorks 6510 Virtual Library System</p> <p>HP StorageWorks 6840 Virtual Library System</p> <p>HP StorageWorks 6109 Virtual Library System</p> <p>HP StorageWorks 6518 Virtual Library System</p> <p>HP StorageWorks 6870 Virtual Library System</p> <p>NOTE: Please reference the Virtual Library Systems QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution. Reference current compatibility information at http://www.hp.com/go/ebs</p>	<p>AD606B</p> <p>AD608B</p> <p>AD607B</p> <p>AD609B</p> <p>AD598B</p> <p>AD600B</p> <p>AD601B</p> <p>AF728A</p> <p>AF729A</p> <p>AG051A</p> <p>AG167A</p> <p>AG168A</p> <p>AG169A</p>
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Options

HP StorageWorks Modular Smart Array 1000	<p>HP StorageWorks Modular Smart Array 1000</p> <p>NOTE: Please see the StorageWorks Modular Smart Array 1000 QuickSpecs for additional options and configuration information at: http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML (Worldwide)</p>	201723-B22
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HP StorageWorks Modular Smart Array 1500 cs	<p>HP StorageWorks Modular Smart Array 1500</p> <p>NOTE: Please see the StorageWorks Modular Smart Array 1500 cs QuickSpecs for additional options and configuration information at: http://www.hp.com/go/MSA1500cs</p>	AA986A
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HP StorageWorks Options	<p>HP StorageWorks Fibre Channel Mezzanine Host Bus Adapter</p> <p>NOTE: Support HP ProLiant BL25p/45p Server Blades</p>	394588-B21
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Cluster Options	<p>NOTE: For configuration/certification options for the HP Parallel Database Cluster for Oracle RAC please go to: http://www.hp.com/solutions/highavailability/oracle</p>	
	HP Serviceguard for Linux and Red Hat Global File System - 1 year subscription	T2798AA#001
	HP Serviceguard for Linux and Red Hat Global File System - 3 years subscription	T2798AA#003
	HP Serviceguard for Linux, A.11.16 for SUSE SLES 9 & 10 and Red Hat 3 & 4 (single license version)	307754-B26
	HP Serviceguard for Linux ProLiant Cluster, A.11.16 (for SUSE SLES 9 & 10 and Red Hat EL 3 & 4 (2 node cluster kit))	305199-B26
	<p>NOTE: For additional information regarding the HP Serviceguard for Linux License, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11518_div/11518_div.html (Worldwide)</p>	

USB Options	HP USB 1.44-MB External Diskette Drive (Carbonite)	DC141B
	HP USB 2-Button Optical Mouse (Carbonite/Silver)	DC172B
	HP USB 04 Standard Keyboard	DT528A#xxx
	USB 2.0 4-port HUB	DG954A
	HP 1GB Drive Key II- USB 2.0 Flash Drive	AG382AA
	HP 512MB DriveKey II- USB Flash Drive	ED516AA
	USB Optical Scroll Mouse (Carbonite)	DD441B
	256MB HP Drive Key II (USB 2.0)	PH657A

HP Rack 5000 Series (Graphite Metallic)	<p>HP 5642 Rack - Unassembled</p> <p>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_div/12074_div.HTML (Worldwide)</p> <p>NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower.</p>	358254-B21
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Options

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
	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
	10622 G2 (22U) Rack Cabinet - Pallet	AF021A
	10622 G2 (22U) Rack Cabinet - Shock Pallet	AF022A
	10842 G2 (42U) 800mm Wide Rack Cabinet - Pallet	AF041A
	10842 G2 (42U) 800mm Wide Rack Cabinet - Shock Pallet	AF042A
	10647 G2 (47U) Rack Cabinet - Pallet	AF031A

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_div/12402_div.HTML
(Worldwide)

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

HP Rack 10000 Series (Graphite Metallic)	10642 (42U) Infrastructure Rack (Low Voltage)	379006-001
	10642 (42U) Infrastructure Rack (High Voltage)	379005-001
	HP S10614 (14U) Rack Cabinet - Shock Pallet	292302-B22
	HP 10647 (47U) Rack Cabinet - Shock Pallet	245160-B23
	HP 10622 (22U) Rack Cabinet - Crated	245163-B23

NOTE: xxxxx-B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels). xxxxx-B23 (crated) used for air shipments of empty racks.

NOTE: It is mandatory to use a shock pallet in order to ship racks with equipment installed.

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

http://h18000.www1.hp.com/products/quickspecs/10995_div/10995_div.HTML
(Worldwide)

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

Options

Monitors and Keyboards	TFT7210R Rack Mounted 17" Monitor	348373-B21
	TFT7600 Rackmount Keyboard Monitor US	AG052A
	TFT7600 Rackmount Keyboard Monitor UK	AG053A
	TFT7600 Rackmount Keyboard Monitor GR	AG054A
	TFT7600 Rackmount Keyboard Monitor FR	AG055A
	TFT7600 Rackmount Keyboard Monitor IT	AG056A
	TFT7600 Rackmount Keyboard Monitor SP	AG057A
	TFT7600 Rackmount Keyboard Monitor DEN	AG058A
	TFT7600 Rackmount Keyboard Monitor NOR	AG059A
	TFT7600 Rackmount Keyboard Monitor SE/FI	AG060A
	TFT7600 Rackmount Keyboard Monitor SWI	AG061A
	TFT7600 Rackmount Keyboard Monitor PORT	AG062A
	TFT7600 Rackmount Keyboard Monitor BEL	AG063A
	TFT7600 Rackmount Keyboard Monitor JPN2	AG064A
	TFT7600 Rackmount Keyboard Monitor RUS	AG065A
	TFT7600 Rackmount Keyboard Monitor INTL	AG066A
	1U Rackmount Keyboard with USB, US	AG072A
	1U Rackmount Keyboard with USB, UK	AG073A
	1U Rackmount Keyboard with USB, GR	AG074A
	1U Rackmount Keyboard with USB, FR	AG075A
	1U Rackmount Keyboard with USB, ITL	AG076A
	1U Rackmount Keyboard with USB, SP	AG077A
	1U Rackmount Keyboard with USB, DEN	AG078A
	1U Rackmount Keyboard with USB, NOR	AG079A
	1U Rackmount Keyboard with USB, SE/FI	AG080A
	1U Rackmount Keyboard with USB, SWI	AG081A
	1U Rackmount Keyboard with USB, PORT	AG082A
	1U Rackmount Keyboard with USB, BEL	AG083A
	1U Rackmount Keyboard with USB, JPN2	AG084A
	1U Rackmount Keyboard with USB, RUS	AG085A
	1U Rackmount Keyboard with USB, INTL	AG086A

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

Options

HP KVM Switch Options	Server Console Switch (KVM), 0 x 1 x 8 port	336044-B21
	Server Console Switch (KVM), 0 x 2 x 16 port	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	373035-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 Server Console Switch	AF611A
HP PS2 Server Console Cable, 6 foot, 2-Pack	AF612A
HP USB Server Console Cable, 6 foot, 2-Pack	AF613A

NOTE: required for supporting USB peripherals.

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 (worldwide)	AF101A
	HP 48 Port Serial Console Server (worldwide)	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>.

2x1x16 IP Console Switch with Virtual Media	AF601A
4x1x16 IP Console Switch with Virtual Media	AF602A
2x16 Server Console Switch with Virtual Media	AF600A
USB Virtual Media Interface Adapter	AF603A
PS/2 Virtual Media Interface Adapter, 1 pack	AF604A

NOTE: Requires PS/2 and one USB port on server.

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>.

Options

Service and Support Offerings (HP Care Pack Services)

NOTE: The HP Care Pack service part numbers below for HP BladeSystem p-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	UD187E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UD188E
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	UD189E

NOTE: The HP Care Pack service part numbers below for HP BladeSystem p-Class server blade enclosure covers the enclosure including patch panels, HP supported Ethernet interconnects, power enclosure with power supplies and power distribution.

Hardware Services On-site Service

4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	HC031E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	HC032E
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	HC033E

NOTE: The HP Care Pack service part numbers below covers the HP BladeSystem Brocade and McData SAN Switches.

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

Installation & Start-up Services

HP Installation & Startup Service for HP BladeSystem Infrastructure, Electronic	UC905E
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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 Systems Insight Manager (SIM), HP Rapid Deployment Pack (RDP), and deploy up to two operating system editions of either Windows or Linux, using scripted operating system installation software.

ProLiant BL p-Class Blade Server Hardware Installation, Electronic	UA219E
ProLiant BL p-Class Enclosure and Server Blade Hardware Installation, Electronic	UA4971E
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
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Options

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 (Electronic)	UA040E
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, 8x5, 1 year, 3 incident (Electronic)	U8222E
NOTE: For more information, customer/resellers can contact http://www.hp.com/hps/carepack/services/	

Memory

HP ProLiant BL25p Server Blade (2P Models)

DIMM Installation Rules:

1. All DIMMs must be either PC3200 DDR 400 MHz SDRAM DIMMS or PC2700 DDR 333 MHz SDRAM DIMMS.
2. Both DIMM slots in a memory bank must be populated.
3. Both DIMM slots in a memory bank must be identical.
4. Processor 1 memory bank 1 must always be populated.
5. Populate DIMMS beginning with the farthest slots from the processor, starting with the SMALLEST DIMM's first, moving in towards the processor.
6. If only installing 1 GB DIMMs, ensure that the Dual Rank DIMMs are installed closest to the processor. Dual Rank can be determined by looking for the "2R" or "2Rx8" wording on the label of the DIMM.
7. For optimal performance in most applications, populate memory bank 1 for every populated processor socket.
8. DIMM banks are active only when the corresponding processor socket is populated.

Standard Memory

2048 MB PC3200 Registered DDR SDRAM DIMM installed (4 x 512 MB SDRAM DIMM)

Standard Memory Plus Optional Memory

Up to 10240 MB of PC3200 DDR SDRAM DIMM memory is available with the installation of optional PC3200 DDR SDRAM DIMM memory expansion kits.

Standard Memory Replaced with Optional Memory

Up to 16384 MB of PC3200 DDR SDRAM DIMM memory is available with the removal of standard memory and the installation of optional PC3200 SDRAM DDR DIMM memory expansion kits.

Up to 32768 MB of PC2700 DDR SDRAM DIMM memory is available with the removal of standard memory and the installation of optional PC2700SDRAM DDR DIMM memory expansion kits.

Memory		Slot							
		1	2	3	4	5	6	7	8
Standard	2048 MB	512 MB	512 MB	Empty	Empty	512 MB	512 MB	Empty	Empty
Optional	10240 MB	512 MB	512 MB	2048 MB	2048 MB	512 MB	512 MB	2048 MB	2048 MB
16 GB PC3200 Maximum	16384 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB
32 GB PC2700 Maximum	32768 MB	4096 MB	4096 MB	4096 MB	4096 MB	4096 MB	4096 MB	4096 MB	4096 MB

Following are memory options available from HP:

- 1 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 512 MB) 376638-B21
- 2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB) 376639-B21
- 4 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB) 379300-B21
- 8 GB PC2700 DDR SDRAM DIMM Memory Kit (2 x 4 GB) 395409-B21

Memory

HP ProLiant BL25p Server Blade (1P Model)

Standard Memory

1024 MB PC3200 400 MHz Registered DDR SDRAM DIMM installed

Standard Memory Plus Optional Memory

Up to 5120 MB of PC3200 DDR SDRAM DIMM memory is available with the installation of optional PC3200 DDR SDRAM DIMM memory expansion kits.

Standard Memory Replaced with Optional Memory

Up to 8192 MB of PC3200 DDR SDRAM DIMM memory is available with the removal of standard memory and the installation of optional PC3200 DDR SDRAM DIMM memory expansion kits.

Up to 16384 MB of PC2700 DDR SDRAM DIMM memory is available with the removal of standard memory and the installation of optional PC2700 DDR SDRAM DIMM memory expansion kits.

Memory		Slot							
		1	2	3	4	5	6	7	8
Standard	1024 MB	512 MB	512 MB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	5120 MB	512 MB	512 MB	2048 MB	2048 MB	Empty	Empty	Empty	Empty
8 GB PC3200 Maximum	8192 MB	2048 MB	2048 MB	2048 MB	2048 MB	Empty	Empty	Empty	Empty
16 GB PC2700 Maximum	16384 MB	4096 MB	4096 MB	4096 MB	4096 MB	Empty	Empty	Empty	Empty

Following are memory options available from HP:

- 1 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 512 MB) 376638-B21
- 2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB) 376639-B21
- 4 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB) 379300-B21
- 8 GB PC2700 DDR SDRAM DIMM Memory Kit (2 x 4 GB) 395409-B21

Technical Specifications

System Unit	Dimensions (HxWxD)	1.69 in (4.29 cm) x 10.29 in (26.14 cm) x 28.00 in (71.1 cm)		
	Weight (maximum)	20.8 lb (9.43 kg)		
	Temperature Range*	Operating	50° to 95° F (10° to 35° C)	
		Shipping	-40° to 140° F (-40° to 60° C)	
		Storage	-4 to 140° F (-20° to 60° C)	
	Relative Humidity** (non-condensing)	Operating	10% to 90%	
		Shipping	10% to 90%	
		Storage	10% to 95%	
	Wet Bulb Temperature	Maximum	86° F (30° C)	

*NOTE: All temperature ratings shown are for sea level. An altitude derating of 1° C per 304.8 m (1.8° F per 1,000 ft) to 3048 m (10,000 ft) is applicable. No direct sunlight allowed. Upper operating limit is 3,048m (10,000 ft) or 70 Kpa/10.1 psia. Upper non-operating limit is 9,144 m (30,000 ft) or 30.3 KPa/4.4 psia.

**NOTE: Storage maximum humidity of 95% is based on a maximum temperature of 45° C (113° F). Altitude maximum for storage corresponds to a pressure minimum of 70 KPa.

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