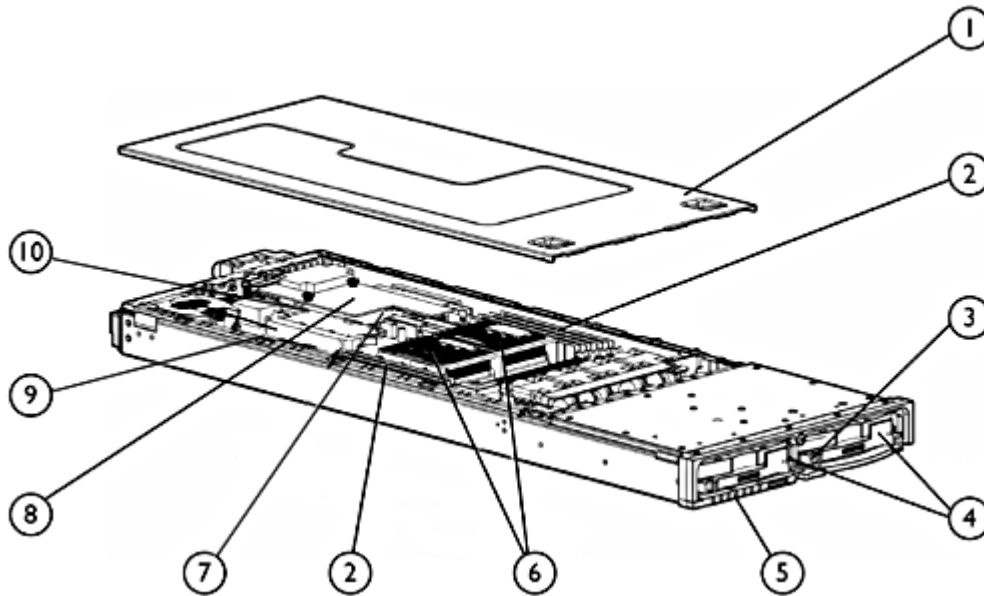


### Overview



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 the latest Dual-Core AMD Opteron™ 200 series processor technology
  - Up to two Dual-Core AMD Opteron™ processors Model 285 (2.6GHz)
  - 1MB L2 cache per core/2MB L2 cache total
  - 1 GHz HyperTransport
- Support for HP Control Tower BladeSystem p-class Management Software

### Overview

#### At A Glance

This QuickSpecs provides information for the HP ProLiant BL25p server blade only. For more information on HP BladeSystem 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](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](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), 252 (2.6 GHz), and 250 (2.4 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 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 1" 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 (Server Blade)

<b>Processors</b>	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) Single-Core AMD Opteron™ processor Model 250 (2.4 GHz/1MB L2 cache/800 MHz 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)	
<b>Upgradeability</b>	Upgradeable to dual processing.	
<b>Cache Memory</b>	1MB Level 2 Cache per core (2MB total for Dual-Core models)	
<b>Chipset</b>	AMD 8131 and 8111 chipsets	
<b>Memory</b>	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)
	<b>NOTE:</b> Memory must be installed in pairs. <b>NOTE:</b> PC2700 and PC3200 memory should not be mixed within the server blade and is not an HP supported configuration.	
<b>Network Adapter</b>	Five network ports total: Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual NC7782 One 10/100 iLO NIC dedicated to management <b>NOTE:</b> Must use a HP BladeSystem p-class server blade enclosure with enhanced backplane to utilize all four NIC's (281404-B22, 243564-B22 or 380625-B22).	

### Standard Features (Server Blade)

**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, 1" 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, HP ProLiant BL30p, HP ProLiant BL35p or HP ProLiant BL40p 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 25p/30/35/45p Dual Port Fibre Channel HBA (P/N 394588-B21) is compatible with the HP ProLiant BL25p, 30p, 35p, and 45p server blades. It cannot be used with an HP ProLiant BL20p or BL40p server blade.
  - 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, 30p, 35p, and 45p server blades. It cannot be used with an HP ProLiant BL20p, HP ProLiant BL35p SAS model, or HP ProLiant BL40p server blade as these devices take a different Emulex card.
  - 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

### Standard Features (Server Blade)

Channel connection to each server blade.

- Supports up to 2 Gb/s Fibre Channel equipment

### 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>

### Standard Features

#### ProLiant Essentials Foundation Pack Software for the ProLiant BL Server Blades

HP Systems Insight Manager

HP Systems Insight Manager (HP SIM) help maximize system uptime and performance and reduce system maintenance costs by providing proactive notification of problems before those problems result in unplanned downtime or reduced productivity. HP SIM is easy to set up to work with the Insight Management Agents, integrated Light-Out and Remote Insight Light-Out Edition, and Version Control Agents to deliver robust fault, configuration, and asset management as well as remote administration. With HP Systems Insight Manager customers will also be able to take advantage of role-based security; the ability to manage ProLiant, Integrity, and HP9000 systems; and plug-ins for storage, client, printer, and power management as well as server rapid deployment, performance management, and workload management. For more details on HP Systems Insight Manager visit <http://www.hp.com/go/hpsim>.

ProLiant Essentials Rapid Deployment Pack

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

Management Agents

The Management Agents form the foundation for HP's Intelligent Manageability strategy. They provide direct, browser-based access to in-depth instrumentation built into HP servers, workstations, desktops, and portables, and send alerts to HP Systems Insight Manager and other enterprise management applications in case of subsystem or environmental failures. For additional information about the Management Agents and other management products from HP, please visit the management Web site at <http://www.hp.com/servers/manage>.

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.

ROMPaq, support software, and configuration utilities

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>.

Insight Diagnostics Online Edition

The most advanced configuration analysis, reporting and troubleshooting utilities used by HP and at your fingertips, available in SmartStart.

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

### Standard Features

**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.
- 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.
- 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.

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### 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

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### OS Support: Single-Core

2.4 GHz, 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 3  
Red Hat Enterprise Linux 4  
SuSE Linux Enterprise Server 8  
SuSE Linux Enterprise Server 9  
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>.

### Standard Features

<b>OS Support:</b>	Microsoft Windows 2000 Server (licensed by core)
<b>Dual-Core</b>	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 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](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, HP ProLiant 40p 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 BL30p and HP ProLiant 35p 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 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.

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

### Standard Features

- 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 mins 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 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.

**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>

### Models

#### Dual-Core Models

<b>ProLiant BL25p 0285</b> <b>2.6GHz-1MB,DC 2GB</b> <b>(2P)</b> 406425-xx1	<b>Processor(s)</b> <b>Cache Memory</b> <b>Memory</b>  <b>Network Adapter</b>  <b>Storage Controller</b> <b>Hard Drives</b> <b>Internal Storage</b> <b>Optical Drive</b> <b>Form Factor</b>	(2) Dual-Core AMD Opteron™ processors Model 285, 2.6 GHz standard (up to 2 supported) 1MB Level 2 cache per core/2-MB total 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 Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual NC7782 One additional 10/100 NIC dedicated to iLO Management Smart Array 6i Controller (integrated on system board) None ship standard Up to 600-GB maximum (with optional, U320 hard disk drives) None Plugs vertically into HP BladeSystem p-Class Server Blade Enclosure
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<b>ProLiant BL25p 0280</b> <b>2.4GHz-1MB,DC 2GB</b> <b>(2P)</b> 399598-xx1	<b>Processor(s)</b> <b>Cache Memory</b> <b>Memory</b>  <b>Network Adapter</b>  <b>Storage Controller</b> <b>Hard Drives</b> <b>Internal Storage</b> <b>Optical Drive</b> <b>Form Factor</b>	(2) Dual-Core AMD Opteron™ processors Model 280, 2.4 GHz standard (up to 2 supported) 1MB Level 2 cache per core/2-MB total 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 Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual NC7782 One additional 10/100 NIC dedicated to iLO Management Smart Array 6i Controller (integrated on system board) None ship standard Up to 600-GB maximum (with optional, U320 hard disk drives) None Plugs vertically into HP BladeSystem p-Class Server Blade Enclosure
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### Models

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

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

### Models

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

### Single-Core Models

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

### Models

<b>ProLiant BL25p</b> <b>2.6Ghz-1MB, SC 2GB</b> <b>(2P)</b> 374799-B21	<b>Processor(s)</b>	(2) Single-Core AMD Opteron™ processors Model 252, 2.6 GHz standard (up to 2 supported)
	<b>Cache Memory</b>	1MB Level 2 cache per core
	<b>Memory</b>	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
	<b>Network Adapter</b>	Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual NC7782 One additional 10/100 NIC dedicated to iLO Management
	<b>Storage Controller</b>	Smart Array 6i Controller (integrated on system board)
	<b>Hard Drives</b>	None ship standard
	<b>Internal Storage</b>	Up to 600-GB maximum (with optional, U320 hard disk drives)
	<b>Optical Drive</b>	None
	<b>Form Factor</b>	Plugs vertically into HP BladeSystem p-Class Server Blade Enclosure

<b>ProLiant BL25p</b> <b>2.6GHz-1MB, 1GB (1P)</b> 374798-xx1	<b>Processor(s)</b>	(1) Single-Core AMD Opteron™ processor Model 252, 2.6 GHz standard (up to 2 supported)
	<b>Cache Memory</b>	1MB Level 2 cache per core
	<b>Memory</b>	1024 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
	<b>Network Adapter</b>	Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual NC7782 One additional 10/100 NIC dedicated to iLO Management
	<b>Storage Controller</b>	Smart Array 6i Controller (integrated on system board)
	<b>Hard Drives</b>	None ship standard
	<b>Internal Storage</b>	Up to 600-GB maximum (with optional, U320 hard disk drives)
	<b>Optical Drive</b>	None
	<b>Form Factor</b>	Plugs vertically into HP BladeSystem p-Class Server Blade Enclosure

### Models

<b>ProLiant BL25p</b> <b>2.4GHz-1MB, 1GB (1P)</b> 374797-B21	<b>Processor(s)</b>	(1) Single-Core AMD Opteron™ processor Model 250, 2.4 GHz standard (up to 2 supported)
	<b>Cache Memory</b>	1MB Level 2 cache per core
	<b>Memory</b>	1024 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
	<b>Network Adapter</b>	Four (4) PCI-X Gigabit embedded ports consisting of two (2) NC7781 and one (1) dual NC7782 One additional 10/100 NIC dedicated to iLO Management
	<b>Storage Controller</b>	Smart Array 6i Controller (integrated on system board)
	<b>Hard Drives</b>	None ship standard
	<b>Internal Storage</b>	Up to 600-GB maximum (with optional, U320 hard disk drives)
	<b>Optical Drive</b>	None
	<b>Form Factor</b>	Plugs vertically into HP BladeSystem p-Class Server Blade Enclosure

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<b>Country Code Key</b>	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.

### Step 1: Base Server Blade Configuration

<b>Models</b>	HP ProLiant BL25p CTO Blade (North America)	382731-405
	<b>Configurable Model ships with:</b>	
	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)

<b>Processors</b>	HP BL25p O285 2.6 GHz DC FIO Base	406426-L21
	<b>NOTE:</b> If 2 processors are desired, select one 406426-L21 and one 406426-B21	
	HP BL25p O280 2.4 GHz DC FIO Base	399599-L21
	<b>NOTE:</b> If only one processor is desired, must also order the Single Processor Enabler Board, P/N 384662-B21.	
	<b>NOTE:</b> If 2 processors are desired, select one 399599-L21 and one 399599-B21	
	HP BL25p 0265 1.8 GHz DC FIO Base	392444-L21
	<b>NOTE:</b> If only one processor is desired, must also order the Single Processor Enabler Board, P/N 384662-B21.	
	<b>NOTE:</b> If 2 processors are desired, select one 392444-L21 and one 392444-B21	
	HP BL25p 0270 2.0 GHz DC FIO Base	392442-L21
	<b>NOTE:</b> If only one processor is desired, must also order the Single Processor Enabler Board, P/N 384662-B21.	
	<b>NOTE:</b> If 2 processors are desired, select one 392442-L21 and one 392442-B21	
	HP BL25p 0275 2.2 GHz DC FIO Base	392440-L21
	<b>NOTE:</b> If only one processor is desired, must also order the Single Processor Enabler Board, P/N 384662-B21.	
	<b>NOTE:</b> If 2 processors are desired, select one 392440-L21 and one 392440-B21	
	HP BL25p O254 2.8 GHz SC FIO Base	397819-L21
	<b>NOTE:</b> If only one processor is desired, must also order the Single Processor Enabler Board, P/N 384662-B21.	
	<b>NOTE:</b> If 2 processors are desired, select one 397819-L21 and one 397819-B21	
	HP BL25p O252 2.6 GHz SC FIO Base	381588-L21
	<b>NOTE:</b> If only one processor is desired, must also order the Single Processor Enabler Board, P/N 384662-B21.	
	<b>NOTE:</b> If 2 processors are desired, select one 381588-L21 and one 351588-B21	
	HP BL25p O250 2.4 GHz SC FIO Base	381587-L21
	<b>NOTE:</b> If only one processor is desired, must also order the Single Processor Enabler Board, P/N 384662-B21.	
	<b>NOTE:</b> If 2 processors are desired, select one 381587-L21 and one 351587-B21	
<b>Memory</b>	<b>NOTE:</b> 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
	<b>NOTE:</b> Must install in pairs	



### Configuration Information Factory Integrated Models (North America only)

	2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB) <b>NOTE:</b> Must install in pairs	376639-B21
	4 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB) <b>NOTE:</b> Must install in pairs	379300-B21
	8 GB PC2700 DDR SDRAM DIMM Memory Kit (2 x 4 GB) <b>NOTE:</b> Must install in pairs	395409-B21
<b>Communications</b>	<b>NOTE:</b> 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.	
	HP ProLiant BL25/35/45p NIC Mezz FIO Base <b>NOTE:</b> HP ProLiant BL25p/35/45p NIC Mezz contains two (2) NC7781 single port Gigabit NICs.	382850-B21
	Or upgrade to:	
	HP ProLiant BL25p/35p/45p Dual NC370i Multifunction Network Adapter <b>NOTE:</b> Accelerated iSCSI is not yet supported for Linux environments, and RDMA is not yet supported for Windows or Linux environments. Future support is planned for both. <b>NOTE:</b> 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

### Step 3: Choose Additional Factory Integratable Options

<b>Fibre Channel Options</b>	HP ProLiant BL25/45p dual-port Fibre Channel Adapter <b>NOTE:</b> The BL25p/45p FC adapter is Qlogic based.	381881-B21
	Emulex-based 25p/30/35/45p Dual Port Fibre Channel HBA <b>NOTE:</b> 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.	394588-B21
	HP 2-2Gb SFP for Fibre Channel pass through kit <b>NOTE:</b> 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).	397577-B21

### 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

<b>ProLiant Essentials Value Pack Software</b>	<p><b>ProLiant Essentials Intelligent Networking Pack Window Edition and Linux Edition</b></p> <p>ProLiant Essentials Intelligent Networking Pack Windows Edition, Single Server License 372906-B21</p> <p><b>NOTE:</b> For use with a single server. Contains one license with a unique license activation key and documentation.</p> <p>ProLiant Essentials Intelligent Networking Pack Linux Edition, Single Server License 397004-B21</p> <p><b>NOTE:</b> For use with a single server. Contains one license with a unique license activation key and documentation.</p> <p><b>NOTE:</b> For additional ProLiant Intelligent Networking Pack License Kits please see the QuickSpecs at:  <a href="http://h18000.www1.hp.com/products/quickspecs/12062_div/12062_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12062_div/12062_div.HTML</a>  <a href="http://h18000.www1.hp.com/products/quickspecs/12327_div/12327_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12327_div/12327_div.HTML</a></p> <p><b>ProLiant Essentials Performance Management Pack</b></p> <p>ProLiant Essentials Performance Management Pack, Single-Server License 306696-B21</p> <p><b>NOTE:</b> For use with a single server. Contains one license with a unique license activation key, HP Management CD and documentation.</p> <p><b>NOTE:</b> The most recent version of the software can always be downloaded at <a href="http://www.hp.com/products/pmp">http://www.hp.com/products/pmp</a>.</p> <p><b>NOTE:</b> For additional ProLiant Performance Management Pack License Kits please see the QuickSpecs at:  <a href="http://h18000.www1.hp.com/products/quickspecs/11925_div/11925_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11925_div/11925_div.HTML</a></p> <p><b>ProLiant Essentials Rapid Deployment Pack Windows Edition and Linux Edition Release</b></p> <p>Rapid Deployment Pack, Single-Server License 267196-B21</p> <p><b>NOTE:</b> This license allows 1 server to be deployed and managed via RDP.</p> <p>Rapid Deployment Pack, Single-Server License (Japan) 267196-291</p> <p><b>NOTE:</b> This license allows 1 server to be deployed and managed via RDP.</p> <p><b>NOTE:</b> For additional ProLiant Essentials Rapid Deployment Pack License Kits please see the QuickSpecs at:  <a href="http://h18000.www1.hp.com/products/quickspecs/11053_div/11053_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11053_div/11053_div.HTML</a>  <a href="http://h18000.www1.hp.com/products/quickspecs/11713_div/11713_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11713_div/11713_div.HTML</a></p> <p><b>ProLiant Essentials Server Migration Pack</b></p> <p>ProLiant Essentials Server Migration Pack, Single-Migration License 375345-B21</p> <p><b>NOTE:</b> Contains one license, enabling 1 server migration, with a unique license activation key and documentation.</p> <p><b>NOTE:</b> 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.</p> <p><b>NOTE:</b> For additional ProLiant Server Migration Pack License Kits please see the QuickSpecs at:  <a href="http://h18000.www1.hp.com/products/quickspecs/12328_div/12328_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12328_div/12328_div.HTML</a></p> <p><b>ProLiant Essentials Workload Management Pack</b></p> <p>ProLiant Essentials Workload Management Pack, Single Server License 303284-B21</p> <p><b>NOTE:</b> For additional ProLiant Workload Management Pack License Kits please see the QuickSpecs at:  <a href="http://h18000.www1.hp.com/products/quickspecs/11452_div/11452_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11452_div/11452_div.HTML</a></p> <p><b>ProLiant Essentials Virtual Machine Management Pack</b></p>
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### Options

<p>ProLiant Essentials Virtual Machine Management Pack, Single-Server License  <b>NOTE:</b> For use with a single server. Contains one license with a unique license activation key and documentation.  <b>NOTE:</b> For additional ProLiant Virtual Machine Management Pack License Kits please see the QuickSpecs at:  <a href="http://h18000.www1.hp.com/products/quickspecs/12328_div/12328_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12328_div/12328_div.HTML</a></p> <p><b>ProLiant Essentials Vulnerability and Patch Management Pack</b></p> <p>ProLiant Essentials Vulnerability and Patch Management Pack, Single-Server License  <b>NOTE:</b> For use with a single server. Contains one license with a unique license activation key and documentation.  <b>NOTE:</b> For additional ProLiant Vulnerability and Patch Management Pack License Kits, please see the QuickSpecs at:  <a href="http://h18000.www1.hp.com/products/quickspecs/12111_div/12111_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12111_div/12111_div.HTML</a>  <b>NOTE:</b> Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to <a href="http://www.hp.com/servers/proliantessentials">http://www.hp.com/servers/proliantessentials</a> or the various ProLiant Essentials Value Pack product QuickSpecs for more information.  <b>NOTE:</b> For more information regarding ProLiant Essentials Software, please see the following URL: <a href="http://www.hp.com/servers/proliantessentials">http://www.hp.com/servers/proliantessentials</a>.</p>	<p>372214-B21</p> <p>371645-B21</p>
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<p><b>HP Control Tower BladeSystem p-class Management Software</b></p> <p>HP Control Tower for HP BladeSystem, Single Server License. No media included.  <b>NOTE:</b> For use with a single blade server. Contains one license with a single unique license activation key.</p> <p>HP Control Tower for HP BladeSystem, Eight-pack (8-pack) Server License. No media included.  <b>NOTE:</b> For use with eight (8) blade servers. Contains eight (8) licenses with a single unique license activation key.</p> <p>HP Control Tower for HP BladeSystem, Flexible License. No media included.  <b>NOTE:</b> 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.</p>	<p>412957-B21</p> <p>412958-B21</p> <p>412959-B21</p>
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<p><b>Processor</b></p> <p>HP BL25p Opteron™ 2.6 GHz-1M DC Processor Option Kit          HP BL25p Opteron™ 2.4 GHz-1M DC Processor Option Kit          HP BL25p Opteron™ 2.2 GHz-1M DC Processor Option Kit          HP BL25p Opteron™ 2.0 GHz-1M DC Processor Option Kit          HP BL25p Opteron™ 1.8 GHz-1M DC Processor Option Kit          HP BL25p Opteron™ 2.8 GHz-1M SC Processor Option Kit          HP BL25p Opteron™ 2.6 GHz-1M SC Processor Option Kit          HP BL25p Opteron™ 2.4 GHz-1M SC Processor Option Kit</p>	<p>406426-B21</p> <p>399599-B21</p> <p>392440-B21</p> <p>392442-B21</p> <p>392444-B21</p> <p>397819-B21</p> <p>381588-B21</p> <p>381587-B21</p>
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### Options

<b>Memory</b> (SDRAM DIMMs)	1 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 512 MB) <b>NOTE:</b> Must install in pairs	376638-B21
	2 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 1 GB) <b>NOTE:</b> Must install in pairs	376639-B21
	4 GB PC3200 DDR SDRAM DIMM Memory Kit (2 x 2 GB) <b>NOTE:</b> Must install in pairs	379300-B21
	8 GB PC2700 DDR SDRAM DIMM Memory Kit (2 x 4 GB) <b>NOTE:</b> Must install in pairs	395409-B21
<b>Hard Drives</b>	<b>Ultra320 SCSI – Universal Hot Plug</b>	
	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 72GB U320 15K Universal HDD	286778-B22
	HP 146GB U320 15K Universal HDD	347708-B22
	HP 36GB U320 15K Universal HDD	286776-B22
<b>Communications</b>	HP ProLiant BL25p/35p/45p Dual NC370i Multifunction Network Adapter <b>NOTE:</b> Accelerated iSCSI is not yet supported for Linux environments, and RDMA is not yet supported for Windows or Linux environments. Future support is planned for both. <b>NOTE:</b> 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
<b>Storage Controllers</b>	128MB Battery Backed Write Cache Enabler Option Kit <b>NOTE:</b> 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: <a href="http://h18000.www1.hp.com/products/quickspecs/12030_div/12030_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12030_div/12030_div.HTML</a> (Smart Array 6i)	346914-B21
<b>ProLiant BL25/45p Fibre Channel Adapter</b>	Emulex based 25p/30/35/45p Dual Port Fibre Channel HBA	394588-B21
	Dual port Fibre Channel Adapter (2-Gb) for HP ProLiant BL25p/45p server blade (shared with the HP ProLiant BL45p server blade) <b>NOTE:</b> 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. <b>NOTE:</b> For more information on HP BladeSystem p-Class Interconnect Components please visit: <a href="http://h18000.www1.hp.com/products/quickspecs/12331_div/12331_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12331_div/12331_div.HTML</a> <b>NOTE:</b> The BL30p/35p and BL20p dual-port Fibre Channel adapters are not compatible with the HP ProLiant BL25p server blade.	381881-B21

### Options

<b>HP BladeSystem p-Class Other Options</b>	<p>HP BladeSystem p-Class Diagnostic Station <span style="float: right;">230743-B21</span></p> <p><b>NOTE:</b> 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>
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<b>Tape Libraries</b>	<p><b>HP StorageWorks MSL6000 Tape Library</b></p> <p><b>Ultrium 960 technology</b></p> <p>HP StorageWorks MSL6030 1 Ultrium 960 Dr LVDS Library <span style="float: right;">AD606A</span></p> <p>HP StorageWorks MSL6030 1 Ultrium 960 Dr FC Library <span style="float: right;">AD608A</span></p> <p>HP StorageWorks MSL6030 2 Ultrium 960 Dr LVDS Library <span style="float: right;">AD607A</span></p> <p>HP StorageWorks MSL6030 2 Ultrium 960 Dr FC Library <span style="float: right;">AD609A</span></p> <p><b>Ultrium 460 technology</b></p> <p>HP StorageWorks MSL6030 1 Ultrium 460 Dr LVDS Library <span style="float: right;">AD598A</span></p> <p>HP StorageWorks MSL6030 1 Ultrium 460 Dr FC Library <span style="float: right;">AD600A</span></p> <p>HP StorageWorks MSL6030 2 Ultrium 460 Dr FC Library <span style="float: right;">AD601A</span></p> <p><b>NOTE:</b> Please reference the MSL6000 Tape Library QuickSpecs at <a href="http://www.hp.com/go/automation">http://www.hp.com/go/automation</a> for additional information needed to create a complete solution; reference current compatibility information at <a href="http://www.hp.com/go/ebs">http://www.hp.com/go/ebs</a></p> <p><b>HP StorageWorks Virtual Library Systems</b></p> <p>HP StorageWorks 6105 Virtual Library System <span style="float: right;">AF728A</span></p> <p>HP StorageWorks 6510 Virtual Library System <span style="float: right;">AF729A</span></p> <p>HP StorageWorks 6840 Virtual Library System <span style="float: right;">AG051A</span></p> <p>HP StorageWorks 6109 Virtual Library System <span style="float: right;">AG167A</span></p> <p>HP StorageWorks 6518 Virtual Library System <span style="float: right;">AG168A</span></p> <p>HP StorageWorks 6870 Virtual Library System <span style="float: right;">AG169A</span></p> <p><b>NOTE:</b> Please reference the Virtual Library Systems QuickSpecs at <a href="http://www.hp.com/go/automation">http://www.hp.com/go/automation</a> for additional information needed to create a complete solution. Reference current compatibility information at <a href="http://www.hp.com/go/ebs">http://www.hp.com/go/ebs</a></p>
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<b>Magneto-Optical Jukeboxes</b>	<p><b>HP StorageWorks 9.1 GB Optical Jukeboxes</b></p> <p>600mx, 4 drive, 64 slot jukebox <span style="float: right;">C1160M</span></p> <p>1200mx, 4 drive, up to 128 slots <span style="float: right;">C1104M</span></p> <p>2200mx, 6 drive, up to 238 slots <span style="float: right;">C1107M</span></p> <p><b>NOTE:</b> Please see the HP StorageWorks Magneto-Optical Products data sheet for a complete listing of available jukeboxes at: <a href="http://www.hp.com/products1/storage/products/archivalprod/brochures/MO_family_pb.pdf">http://www.hp.com/products1/storage/products/archivalprod/brochures/MO_family_pb.pdf</a></p> <p><b>NOTE:</b> Please reference the Magneto-Optical Jukebox data sheets at <a href="http://www.hp.com/go/optical">http://www.hp.com/go/optical</a> for additional information needed to create a complete solution.</p>
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### Options

<b>Ultra Density Optical Jukeboxes</b>	1900ux, 4 drive, 64 slot jukebox	AA966A
	3800ux, 4 drive, 128 slot jukebox	AA969A
	7100ux, 6 drive, 238 slot jukebox	AA971A
	<p><b>NOTE:</b> Please see the <a href="http://www.hp.com/go/optical">HP StorageWorks Ultra Density Optical Jukeboxes QuickSpecs</a> for a complete listing of available jukeboxes at:  <a href="http://h18006.www1.hp.com/products/quickspecs/11944_div/11944_div.html">http://h18006.www1.hp.com/products/quickspecs/11944_div/11944_div.html</a></p> <p><b>NOTE:</b> Please reference the <a href="http://www.hp.com/go/optical">Ultra Density Optical Jukebox QuickSpecs</a> at <a href="http://www.hp.com/go/optical">http://www.hp.com/go/optical</a> for additional information needed to create a complete solution</p>	
<b>HP StorageWorks Modular Smart Array 1000</b>	HP StorageWorks Modular Smart Array 1000 <b>NOTE:</b> Please see the <a href="http://www.hp.com/go/MSA1000">StorageWorks Modular Smart Array 1000 QuickSpecs</a> for additional options and configuration information at: <a href="http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML</a> (Worldwide)	201723-B22
<b>HP StorageWorks Modular Smart Array 1500 cs</b>	HP StorageWorks Modular Smart Array 1500 <b>NOTE:</b> Please see the <a href="http://www.hp.com/go/MSA1500cs">StorageWorks Modular Smart Array 1500 cs QuickSpecs</a> for additional options and configuration information at: <a href="http://www.hp.com/go/MSA1500cs">http://www.hp.com/go/MSA1500cs</a>	AA986A
<b>HP StorageWorks Options</b>	HP StorageWorks Fibre Channel Mezzanine Host Bus Adapter <b>NOTE:</b> Support HP ProLiant BL25p/30p/45p Server Blades	394588-B21
<b>Cluster Options</b>	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 (single license version- Red Hat EL 3&4, SUSE SLES9)	307754-B26
	HP Serviceguard for Linux ProLiant Cluster, A.11.16 (2 license version - Red Hat EL 3&4, SUSE SLES9)	305199-B26
	<p><b>NOTE:</b> For additional information regarding the <a href="http://www.hp.com/go/MSA1500cs">HP Serviceguard for Linux License</a>, please see the following QuickSpecs at:  <a href="http://h18000.www1.hp.com/products/quickspecs/11518_div/11518_div.html">http://h18000.www1.hp.com/products/quickspecs/11518_div/11518_div.html</a> (Worldwide)</p> <p><b>NOTE:</b> For configuration/certification options for the <a href="http://www.hp.com/solutions/highavailability/oracle">HP Parallel Database Cluster for Oracle RAC</a> please go to:  <a href="http://www.hp.com/solutions/highavailability/oracle">http://www.hp.com/solutions/highavailability/oracle</a></p>	
<b>USB Options</b>	USB 1.44-MB External Diskette Drive (Carbonite)	DC141B
	USB 2-Button Optical Mouse (Carbonite)	DC172B
	USB Optical Scroll Mouse (Carbonite)	DD441B
	256MB HP Drive Key II (USB 2.0)	PH657A

### Options

<b>HP Rack 5000 Series</b> (Graphite Metallic)	<p>HP 5642 Rack - Unassembled</p> <p><b>NOTE:</b> Please see the HP Rack 5642 QuickSpecs for additional part numbers and Technical Specifications such as height, width, depth, weight, and color: <a href="http://h18000.www1.hp.com/products/quickspecs/12074_div/12074_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12074_div/12074_div.HTML</a> (Worldwide)</p> <p><b>NOTE:</b> For additional information regarding Rack Cabinets, please see the following URL: <a href="http://www.hp.com/go/rackandpower">http://www.hp.com/go/rackandpower</a>.</p>	358254-B21
<hr/>		
<b>HP Rack 10000 G2 Series</b> (Graphite Metallic)	<p>10642 G2 (42U) Rack Cabinet - Pallet</p> <p>10642 G2 (42U) Rack Cabinet - Shock Pallet</p> <p>10642 G2 (42U) Rack Cabinet - Crated</p> <p>10642 G2 (42U) Rack Cabinet, with Extension - Shock Pallet</p> <p>10642 G2 (42U) Rack Cabinet, without door - Shock Pallet</p> <p>10642 G2 (42U) Rack Cabinet, with Extension, without door - Shock Pallet</p> <p>10636 G2 (36U) Rack Cabinet - Shock Pallet</p> <p>10636 G2 (36U) Rack Cabinet - Crated</p> <p>10636 G2 (36U) Rack Cabinet, with Extension - Shock Pallet</p> <p>10636 G2 (36U) Rack Cabinet, without door - Shock Pallet</p> <p>10636 G2 (36U) Rack Cabinet, with Extension, without door - Shock Pallet</p> <p>10642 G2 (42U) Rack Cabinet - Pallet</p> <p><b>NOTE:</b> Please see the Rack 10000 G2 QuickSpecs for additional part numbers and Technical Specifications such as height, width, depth, weight, and color: <a href="http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.HTML</a> (Worldwide)</p> <p><b>NOTE:</b> For additional information regarding Rack Cabinets, please see the following URL: <a href="http://www.hp.com/go/rackandpower">http://www.hp.com/go/rackandpower</a>.</p>	<p>AF001A</p> <p>AF002A</p> <p>AF003A</p> <p>AF004A</p> <p>AF005A</p> <p>AF006A</p> <p>AF011A</p> <p>AF012A</p> <p>AF013A</p> <p>AF014A</p> <p>AF015A</p> <p>AF016A</p>
<hr/>		
<b>HP Rack 10000 Series</b> (Graphite Metallic)	<p>10642 (42U) Infrastructure Rack (Low Voltage)</p> <p>10642 (42U) Infrastructure Rack (High Voltage)</p> <p>HP S10614 (14U) Rack Cabinet - Shock Pallet</p> <p>HP 10842 (42U, 800mm wide) Rack Cabinet - Pallet</p> <p><b>NOTE:</b> Server Blade Enclosures must be field integrated into the 10842 racks. Factory integration of Server Blade Enclosures into the 10842 is not supported.</p> <p>HP 10842 (42U, 800mm wide) Rack Cabinet - Shock Pallet</p> <p><b>NOTE:</b> Server Blade Enclosures must be field integrated into the 10842 racks. Factory integration of Server Blade Enclosures into the 10842 is not supported.</p> <p>HP 10647 (47U) Rack Cabinet - Pallet</p> <p>HP 10647 (47U) Rack Cabinet - Shock Pallet</p> <p>HP 10642 (42U) Rack Cabinet - Pallet</p> <p>HP 10642 (42U) Rack Cabinet - Shock Pallet</p> <p>HP 10642 (42U) Rack Cabinet - Crated</p> <p>HP 10636 (36U) Rack Cabinet - Pallet</p> <p>HP 10636 (36U) Rack Cabinet - Shock Pallet</p> <p>HP 10636 (36U) Rack Cabinet - Crated</p> <p>HP 10622 (22U) Rack Cabinet - Pallet</p> <p>HP 10622 (22U) Rack Cabinet - Shock Pallet</p>	<p>379006-001</p> <p>379005-001</p> <p>292302-B22</p> <p>257415-B21</p> <p>257415-B22</p> <p>245160-B21</p> <p>245160-B23</p> <p>245161-B21</p> <p>245161-B22</p> <p>245161-B23</p> <p>245162-B21</p> <p>245162-B22</p> <p>245162-B23</p> <p>245163-B21</p> <p>245163-B22</p>

### Options

HP 10622 (22U) Rack Cabinet - Crated 245163-B23

**NOTE:** xxxxxx-B21 (pallet) used to ship empty racks shipped on a truck. xxxxxx-B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels). xxxxxx-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](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>.

### 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>.

TFT7600RKM US	AG052A
TFT7600RKM UK	AG053A
TFT7600RKM GR	AG054A
TFT7600RKM FR	AG055A
TFT7600RKM IT	AG056A
TFT7600RKM SP	AG057A
TFT7600RKM DEN	AG058A
TFT7600RKM NOR	AG059A
TFT7600RKM SE/FI	AG060A
TFT7600RKM SWI	AG061A
TFT7600RKM PORT	AG062A
TFT7600RKM BEL	AG063A
TFT7600RKM JPN2	AG064A
TFT7600RKM RUS	AG065A
TFT7600RKM INTL	AG066A

1U Rack Keyboard & Drawer (Carbon) 257054-xx1

#### Country Code Key (for 1U Rack Keyboard & Drawer (PN 257054-xx1))

xx = 001	US	xx = 091	Norway
xx = 031	UK	xx = 101	Sweden/Finland
xx = 041	Germany	xx = 111	Switzerland
xx = 051	France	xx = 131	Portugal
xx = 061	Italy	xx = 181	Belgium
xx = 071	Spain	xx = 291	Japan
xx = 081	Denmark	xx = B31	International

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

### HP KVM Switch Options

IP Console Switch Box (KVM/IP), 3 x 1 x 16 262586-B21

IP Console Switch Box (KVM/IP), 1 x 1 x 16 262585-B21





### 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 USB/PS2 KVM Switch, TT (NA/JPN)	371301-D71
HP 1x4 USB/PS2 KVM Switch, TT (AU/NZ)	371301-011
HP 1x4 USB/PS2 KVM Switch, TT (UK)	371301-031
HP 1x4 USB/PS2 KVM Switch, TT (EU)	371301-A21
HP 1x4 USB/PS2 KVM Switch, RM (ALL)	371302-B21
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 (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>.

**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	U4971E
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.

### Options

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
<b>NOTE:</b> 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
<b>Software Operating Environment Care Packs</b>	
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
<b>NOTE:</b> For more information, customer/resellers can contact <a href="http://www.hp.com/hps/carepack/services/">http://www.hp.com/hps/carepack/services/</a>	

### 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. If mixing dual- and single-rank DIMMs, the dual-rank DIMMs must be installed in memory bank 1.
6. For optimal performance in most applications, populate memory bank 1 for every populated processor socket.
7. 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
<b>Standard</b>	<b>2048 MB</b>	512 MB	512 MB	Empty	Empty	512 MB	512 MB	Empty	Empty
<b>Optional</b>	<b>10240 MB</b>	2048 MB	2048 MB	512 MB	512 MB	2048 MB	2048 MB	512 MB	512 MB
<b>16 GB PC3200 Maximum</b>	<b>16384 MB</b>	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB
<b>32 GB PC2700 Maximum</b>	<b>32768 MB</b>	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
<b>Standard</b>	<b>1024 MB</b>	512 MB	512 MB	Empty	Empty	Empty	Empty	Empty	Empty
<b>Optional</b>	<b>5120 MB</b>	2048 MB	2048 MB	512 MB	512 MB	Empty	Empty	Empty	Empty
<b>8 GB PC3200 Maximum</b>	<b>8192 MB</b>	2048 MB	2048 MB	2048 MB	2048 MB	Empty	Empty	Empty	Empty
<b>16 GB PC2700 Maximum</b>	<b>16384 MB</b>	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

<b>System Unit</b>	<b>Dimensions (HxWxD)</b>	1.69 in (4.29 cm) x 10.29 in (26.14 cm) x 28.00 in (71.1 cm)		
	<b>Weight (maximum)</b>	20.8 lb (9.43 kg)		
	<b>Temperature Range*</b>	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)	
	<b>Relative Humidity**</b> (non-condensing)	Operating	10% to 90%	
		Shipping	10% to 90%	
Storage		10% to 95%		
<b>Wet Bulb Temperature</b>	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.