HP ProLiant BL25p Server Blade

Data sheet

The new HP ProLiant BL25p dual-processor Server Blade, engineered for enterprise performance and scalability, features AMD Opteron™ processors Model 252 (2.6 gigahertz) with 1-megabyte Level 2 cache, SAN storage capability, and 4-gigabit NICs standard. The ProLiant BL25p Server Blade also shares the same infrastructure components as all other ProLiant p-Class server blades.

The new ProLiant BL25p Server Blade delivers optional Fibre Channel support for SAN implementations and clustering capabilities. Through SAN implementation with the ProLiant BL25p Server Blade, customers can achieve improved data availability, easily scale capacity, and realize management cost savings from consolidating disk resources.

In addition, with HP's fusion of SAN and Network Attached Storage (NAS), customers can design a storage architecture that incorporates application, database, and file serving solution functionality. Fibre Channel capability is achieved using a dual-port Fibre Channel Mezzanine card (2 gigabit), specifically designed for the ProLiant BL25p Server Blade. The ProLiant BL25p Server Blade is optimized for HP StorageWorks and is also compatible with a variety of third-party storage vendors.

Key features and benefits

- Up to two AMD Opteron™ processors Model 252 (2.6 gigahertz) and hot-plug SCSI drives provide no-compromise performance and availability
- Redundant 2-gigabit Fibre Channel option delivers high-performance SAN connectivity for multivendor SAN solutions
- Perfect for multiserver applications such as dynamic Web hosting, application server, terminal server farm, and media streaming
- Modular architecture reduces operational costs and protects future investments
- Responds quickly to changing business needs through dynamic resource scaling and virtual presence and control

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The ProLiant BL25p Server Blade enables performance front-end and mid-tier computing with enterprise availability and scalability to run existing 32-bit applications, while also providing a simplified migration path to 64-bit computing.

Ideal environments

Managing costs and increasing efficiency

- Reduce acquisition costs when compared to traditional servers. The HP BladeSystem is a better design for density, power distribution, availability, and cooling.
- Dynamically adapt to changing business requirements by being able to install, provision, and re-purpose server blades quickly.

Optimized for environments of all types

- Consolidation: HP BladeSystem architecture combines servers, storage, power, and interconnects into an advanced management framework, improving collaboration processes.
- Symmetric multiprocessing (SMP) to Linux® migration: Reduces the overall platform/system cost by up to 70 percent.
- Multi-tiered environments: This includes Web and e-commerce, streaming media, mail and messaging, and enterprise applications, including enterprise resource planning (ERP) and customer relationship management (CRM).

Virtualized and automated data centers

- HP BladeSystem environments provide virtual pools of capacity that can be dynamically reallocated and simply managed.
- Self-aware, policy-driven environment eliminates manual processes, and server blade automation leverages the integrated design and virtualized architecture to create a dynamic, scalable utility of resources.

Up to two AMD Opteron™ processors and SCSI drives provide no-compromise performance and availability

- Each server blade includes up to two AMD Opteron™ processors Model 252 (2.6 gigahertz) with 1-gigahertz HyperTransport and 1-megabyte L2 cache.
- Two universal hot-plug SCSI hard drives for up to 600-gigabyte capacity, plus an embedded HP Smart Array 6i Plus Controller with Ultra3 SCSI performance and optional battery-backed cache.
- Eight DIMM slots have a maximum capacity of 16 gigabytes of 400-megahertz, ECC PC3200 DDR. Server blades feature 2 x 1 interleaved memory for added performance. DIMMs must be added in pairs.

Fibre Channel option delivers high-performance SAN connectivity for multivendor SAN solutions

- Enables more efficient and cost-effective utilization of storage with a SAN
- Provides scalable growth of storage capacity over time

Multiserver applications

The ProLiant BL25p Server Blade provides a perfect solution for multiserver applications such as dynamic Web hosting, application server, terminal server farm, and media streaming:

- Delivers performance for enterprise mid-tier applications with AMD Opteron™ processors, high-performance 15,000-RPM SCSI drives, and 16-gigabyte memory capacity.
- High-availability features such as redundant power, hot-plug drives, and redundant SAN connectivity ensure applications stay running.
- Scales quickly and easily as application usage needs change: addressing the needs of 32-bit applications today, while also providing a simplified migration path to 64-bit computing.

Modular architecture reduces operational costs and protects future investments

- All ProLiant p-Class two-processor and four-processor server blades can fit into 6U HP BladeSystem p-Class server blade enclosures and can be mixed within the same enclosure.
- Once the HP BladeSystem infrastructure is in place, server blades can be installed in seconds and are ready for automated provisioning.
- Dynamic scaling is available to add more server blades or power supplies without powering down the system.

Innovative design reduces cabling by more than 80 percent compared to traditional 1U servers

- The interconnect switches are used to consolidate server blade network cables to a more manageable quantity. They provide additional convenience by consolidating the 32 network connections into as little as a single cable per server blade enclosure.
- Designed for "headless" management: no keyboard, video, or mouse cables.
- Fewer power cables: centralized hot-plug power provides power cable consolidation.

Enables quick response to changing business needs

Integrated virtual management ensures continuous access and control

- HP Integrated Lights-Out (iLO) advanced functionality ships standard on every ProLiant p-Class server blade. In addition to full graphical access to the host server's display, keyboard, and mouse, the advanced functionality also includes virtual CD and floppy disk capability. Preboot Execution Environment (PXE) technology enhances remote access by installing and configuring operating systems to boot remotely.
- HP Systems Insight Manager Software provides visualization of all blades at an enclosure and rack level for all ProLiant server blades.
- Virtual management enables users to deploy and redeploy hundreds of blades by simply dragging and dropping predefined scripts and images with HP ProLiant Essentials Rapid Deployment Pack.

Technical specifications

Processors	AMD Opteron™ processor Model 252 (2.6 GHz)/1 GHz—1 MB AMD Opteron™ processor Model 250 (2.4 GHz) low-power (68 W)/800 MHz—1 MB
Upgradability	Upgradable to dual processing
Cache	1-MB L2 cache
Chipset	AMD 8131 and 8111 chipsets
RAM standard/maximum	Standard: 1024 MB or 2048 MB of 2-way interleaved PC3200 DDR SDRAM running at 400 MHz (depending on model) Maximum: 16 GB (Note: Memory must be installed in pairs.)
Hard drive controller	Smart Array 6i Plus controller
Maximum internal drives	Two
Internal storage	Maximum: 600 GB (internal drive cage; 2 x 300-GB Ultra320 SCSI, 1-in drive)
Form factor	Plugs vertically into HP BladeSystem p-Class server blade enclosures 8 server blades per 6U
Expansion slots	No PCI slots; all features are integrated
Network adapter	Five network adapters total: Four PCI-X Gigabit NICs (embedded with WOL and PXE) One 10/100 iLO NIC dedicated to management Note: Must use HP BladeSystem p-Class server blade enclosure with enhanced backplane to utilize all four NICs (281404-B22, 243564-B22, or 380625-B22)
Server management	ProLiant Integrated Lights-Out (iLO) Management Advanced (ASIC on the system board)
Power	Rack-centralized redundant power subsystem, with hot-plug power supplies
Operating systems supported	Microsoft® Windows® Linux

Environmental specifications

HP BladeSystem p-Class Server Blade Enclosure	
Altitude	Maximum for storage: 70 KPa
Temperature range	Operating: 50° to 95° F (10° to 35° C)
	Nonoperating: –22° to 140° F (–30° to 60° C)
Wet bulb temperature	Operating: 82.4° F (28° C)
	Nonoperating: 101.7° F (38.7° C)
Humidity (noncondensing)	Operating: 20% to 80%
	Nonoperating: 5% to 95%
Dimensions	10.5 in x 17.60 in x 28.86 in (26.67 cm x 44.70 cm x 73.30 cm)
Input specifications	Rated input voltage: –43 VDC to –53 VDC; nominal: –48 VDC
	Rated input power: 3000 W
	Rated input current: 62.5 A at –48 VDC
Individual server blade bay ratings	Rated input voltage: –43 VDC to –53 VDC; nominal: –48 VDC
	Rated input power: 300 W
	Rated input current: 6.25 A at –48 VDC
Regulatory	IEEE 802.2, 802.3, 802.3u

Note: Operating temperature has an altitude derating of 1.8° F (1° C) per 1,000 ft (300 m). No direct sunlight. Upper operating limit is 10,000 ft (3,000 m) or 70 KPa/10.1 psia. Upper nonoperating limit is 30,000 ft (9,144 m) or 30.3 KPa/4.4 psia. Storage maximum humidity of 95% is based on a maximum temperature of 113° F (45° C). Altitude maximum for storage is 70 KPa.

HP BladeSystem p-Class Server Blade Enclosure with enhanced backplane components	
Altitude	Maximum for storage: 70 KPa
Temperature range	Operating: 50° to 95° F (10° to 35° C)
	Nonoperating: –22° to 140° F (-30° to 60° C)
Wet bulb temperature	Operating: 82.4° F (28° C)
	Nonoperating: 101.7° F (38.7° C)
Humidity (noncondensing)	Operating: 20% to 80%
	Nonoperating: 5% to 95%
Dimensions	10.5 in x 17.60 in x 28.86 in (26.67 cm x 44.70 cm x 73.30 cm)
Input specifications	Rated input voltage: –43 VDC to -53 VDC; nominal: –48 VDC
	Rated input power: 6000 W
	Rated input current: 125 A at –48 VDC
Individual server blade bay ratings	Rated input voltage: –43 VDC to –53 VDC; nominal: –48 VDC
	Rated input power: 700 W
	Rated input current: 14.6 A at –48 VDC
Regulatory	IEEE 802.2, 802.3, 802.3u

Note: Operating temperature has an altitude derating of 1.8° F (1° C) per 1,000 ft (300 m). No direct sunlight. Upper operating limit is 10,000 ft (3,000 m) or 70 KPa/10.1 psia. Upper nonoperating limit is 30,000 ft (9,144 m) or 30.3 KPa/4.4 psia. Storage maximum humidity of 95% is based on a maximum temperature of 113° F (45° C). Altitude maximum for storage is 70 KPa.

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Ordering information

Part number	Product name	Description
374797-B21	HP ProLiant BL25p Server Blade	2.4 GHz—1 MB (68 W), 1 GB, 1 processor
374798-B21	HP ProLiant BL25p Server Blade	2.6 GHz—1 MB, 1 GB, 1 processor
374799-B21	HP ProLiant BL25p Server Blade	2.6 GHz—1 MB, 2 GB, 2 processor

For more information

For more information about the HP ProLiant BL25p Server Blade, visit **www.hp.com/servers/bl25p**.

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