



HP Integrity server blades

Sales-support positioning paper

What's new?

The HP Integrity BL870c server blade is the first four-socket Integrity server blade. This full-height, double-wide server blade will enable more demanding business-critical applications and larger workloads to run in the HP BladeSystem.

Key features include:

- The latest dual-core Intel® Itanium® 9100 series processor enhanced by the HP zx2 chip set
- Up to eight processor cores
- Up to 96 GB of memory (24 DIMM slots)—or twice the memory capacity of the two-socket BL860c server blade

The HP Integrity server blade family

HP Integrity server blades, the BL860c and the new BL870c, combine the modular energy efficiency of the HP BladeSystem with the business-critical power and functionality of the Integrity server family. Key selling points include:

Multiple operating systems—HP Integrity server blades support HP-UX 11i, OpenVMS, Red Hat and Novell SUSE Linux, and Microsoft® Windows® Server 2003.

Large memory capacity—With up to 96 GB of memory, the new Integrity BL870c server blade allows demanding, business-critical workloads to run in blade environment.

Compatibility—HP Integrity server blades work alongside HP ProLiant server blades and HP StorageWorks storage blades within the same HP BladeSystem c7000 and c3000 enclosures.

New solution blocks—Take the guesswork out of building total solutions

- Example configurations and sales and customer collateral for specific Integrity blade-based applications (SAP ERP, Oracle® PeopleSoft, Siemens PLM, BEA SOA, IBM WebSphere to start)
- Channel partners and end users can feel confident that the solution they are deploying is based on HP expertise in collaboration with ISVs.
- For channel partners, solution blocks simplify the deployment and speed the sales cycle.
- Value to the end user is in the cost savings associated with enclosure optimization and a solid starting point with HP-approved example configurations.

The HP Integrity BL870c server blade packs up to four dual-core Intel Itanium processors into a compact blade footprint. This new offering complements the two-socket HP Integrity BL860c server blade to provide an expanded range of choices for business-critical computing in a blade environment.

Multiple markets—HP Integrity server blades are a good fit for:

- Large enterprise data centers
- Midsize data centers and departments and branch offices
- Many vertical markets, including retail, distribution, manufacturing, telecommunications and financial services
- Memory-hungry applications, such as business intelligence, Oracle Database, enterprise resource planning (ERP), service-oriented architecture (SOA) and product data management (PDM)
- Customers running legacy systems (HP 9000 and AlphaServer) looking to consolidate and modernize their infrastructure

Why buy the HP BladeSystem?

The HP BladeSystem is an infrastructure in a box. With it, your customers can build start-to-finish solutions that are more affordable, easier to maintain, use less power and are ready to grow with the business.

Key selling points:

- Simplify IT infrastructure within a standard, modular design.
- Streamline management with HP System Insight Manager.
- Use a common services portfolio with HP BladeSystem.
- Reduce data center footprint with HP BladeSystem.
- Cut power and cooling costs with HP Thermal Logic technology.
- Wire infrastructure once and then add, replace or recover blades on the fly with HP Virtual Connect.
- Optimize resource usage with HP Virtual Server Environment (VSE) and HP Global Workload Manager.

- Support server blades, virtual machines and storage blades in the same enclosure.
- Connect to networks via popular brands and standards, including Ethernet, Fibre Channel and InfiniBand.

Why buy Integrity server blades?

Proven performance—HP Integrity server blades provide up to two or four dual-core Intel Itanium 9100 series processors and up to 48 or 96 GB of memory for demanding business and technical applications.

Superior reliability and high availability—High-availability features enhance data integrity, improve application availability and reduce planned maintenance time.

- The Intel Itanium processors are ideal for higher-end application and technical workloads where high availability is important.
- Cache Safe Technology delivers mainframe-class availability by greatly reducing cache errors.
- The Dynamic Processor Resiliency—only available on HP Integrity servers—de-allocates CPUs that have an unacceptable number of correctable errors.

Easy management

- HP Systems Insight Manager (SIM) saves valuable administrative time with simple and reliable hardware infrastructure provisioning, monitoring and control.
- HP Integrity Lights-Out 2 (iLO 2) Advanced Pack enables easy remote management.
- Single-console view of all infrastructure resources—servers, storage and networking—with HP BladeSystem Onboard Administrator

Intelligent virtualization

- The HP Integrity Virtual Server Environment (VSE) improves server utilization in real time by creating a pool of virtual servers that can grow or shrink as needed. This flexibility is enabled through integration of intelligent control with partitioning and high availability using HP Serviceguard.
- Support for HP Integrity Virtual Machines provides operating system isolation, shared CPU, shared I/O and automatic, dynamic resource allocation.
- The HP Global Workload Manager intelligent policy engine allows customers to centrally define resource-sharing policies to be used across multiple HP servers to increase utilization.

BladeSystem economies—HP Integrity server blades take advantage of the unique power, cooling, virtualization, connectivity and redundancy features of the HP BladeSystem to drive down costs.

Figure 1. Quick compare

Model	HP BL870c	HP BL860c	IBM JS22	IBM JS21
Processors	4-socket Intel Itanium 9100 Series 1.6 GHz	2-socket Intel Itanium 9100 Series 1.6 GHz	2-socket POWER6 4.0 GHz	2-socket PowerPC970 2.5 GHz
DDR memory	24 DIMMs/96 GB	12 DIMMs/48 GB	4 DIMMs/32 GB	4 DIMMs/16 GB
Internal storage	4 hot-plug SFF SAS HDDs	2 hot-plug SFF SAS HDDs	1 internal SFF SAS HDD (installation of legacy form factor expansion card precludes support for SAS HDD)	2 internal SFF SAS HDDs
Embedded NICs	4 GbE NICs	4 GbE NICs	2 GbE NICs	2 GbE NICs
Expansion slots	3 mezzanine slots	3 mezzanine slots	1 mezzanine slot (installation of legacy form factor expansion card precludes support for SAS HDD)	1 mezzanine slot

Specifications on IBM systems as of November 2007 and the launch of the POWER6 Blade JS22

How do Integrity blades stack up against the competition?

When you're competing against IBM, the main challenge to be prepared for is IBM-propagated FUD—fear, uncertainty and doubt. IBM likes to nitpick at a small point and make it look like that's the only thing that customers care about. That's why it's important for us to always focus on the big picture: solving real customer problems.

Key selling points

Full-featured servers

HP Integrity server blades are full-featured servers designed for a blade environment. Notable HP BladeSystem features include:

- Hot plug drives
- Lots of DIMM slots
- Lots of I/O expansion
- Built-in RAID and remote control capabilities.

IBM blades don't have these features. To add these features, IBM customers must make big compromises. Examples:

- To have hot plug drives, IBM customers must give up a server slot, cutting the number of servers per enclosure in half and doubling the total cost.
- With only four DIMM slots in the POWER6 Blade JS22, IBM forces customers to use very expensive 8-GB DIMMs to reach the JS22 maximum of 32 GB of memory, making for an extremely expensive server.

Lower costs

- **Acquisition**—A BladeSystem is up to 42 percent less expensive to buy than standard infrastructures. Blades share fans, cables, switches, power supplies and other resources.
- **Operational**—A simple, modular design and useful features help customers save time, save power and reduce deployment time from weeks or days to hours or minutes.

Time savings

- HP Virtual Connect gives customers the ability to wire once and provision LAN and SAN resources in advance. Server administrators can then add, replace, recover or reallocate blades on the fly.
- IBM's response to Virtual Connect, Open Fabric Manager, is not a complete and comparable offering, but rather a conglomeration of third-party products. It offers only a small subset of Virtual Connect capabilities.
- HP System Insight Manager provides a simplified, unified management solution in a single, common package for easy deployment and installation.

Energy savings

- With the HP Integrity BL870c, customers can realize up to 25 percent power savings and fit 2.5 times as many BL870c server blades into the same space as a comparable rack-mount configuration.
- HP Thermal Logic technology helps customer save money with built-in instrumentation, accurate monitoring and control, and the ability to easily pool, share and allocate power.
- IBM's legacy power and cooling design exposes the entire chassis to potential shutdown in the case of a blower failure. IBM customers must choose between performance and redundancy and be ready for inaccurate reports of power usage.

IBM makes lots of claims about power and cooling. HP has a published, third-party lab analysis that tells the real story. It's available at www.hp.com/go/bladepowerreport. For another resource that separates fact from fiction, read the "The Real Story about IBM's BladeCenter power claims" at www.hp.com/go/therealstory.

Flexibility to change

- The HP BladeSystem helps customers move beyond interconnectivity issues and computing silos by putting virtualization to work to enable a scalable, change-ready infrastructure.

Why buy Integrity server blades instead of rack-mount servers?

Shared resources—A BladeSystem is less expensive to buy than standard infrastructures because it is consolidated from the start.

- Resources such as fans, cables, switches and power supplies are shared by many blades at once.
- Integrated redundancy for all components can lower purchase cost by up to 40 percent over conventional rack infrastructures.

Small footprint—Two and a half times as many BL870c server blades will fit within the same space versus a comparable rack-mount configuration.

Efficiency—HP Integrity server blades combine the efficiencies of the HP Integrity servers, the HP-UX 11i operating system and the HP BladeSystem c-Class architecture.

OS support—HP Integrity server blades support multiple operating systems, giving customers more choice for business-critical applications.

Scalability—The BladeSystem c-Class server environment scales to thousands of servers.

Simplified management—With a conventional racked environment, customers spend more time patching, monitoring, configuring and deploying server and storage resources.

Energy savings—The BladeSystem puts HP Thermal Logic technology to work to help customers use power more efficiently. Adding more standard servers brings higher power and cooling costs.

Better value proposition—The HP BladeSystem offers a quick return on investment (ROI) and a lower total cost of ownership (TCO) compared to conventional rack and tower choices.

Ready to learn more?

External web

HP BladeSystem and Integrity server blades:

www.hp.com/go/bladesystem

www.hp.com/go/integrityblades

www.hp.com/go/bl870c

www.hp.com/go/bl860c

“The Real Story about IBM’s BladeCenter power claims”: www.hp.com/go/therealstory

HP Integrity BladeSystem solution blocks:

www.hp.com/go/solutionblocks

Internal sites

Debunk IBM claims:

<http://isscompetitive.corp.hp.com/blades.html>

<http://hpcompetition.corp.hp.com>

HP Integrity BladeSystem solution blocks:

<http://iss.tsgonline.hp.com/bladesystem/solution-blocks/index.asp>

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For more information, visit www.hp.com/go/integrityblades

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