

IBM BladeCenter Family Overview ... the BladeCenter vision for IT



Highlights

- ***Depend on compatibility across the entire IBM BladeCenter® family of products to help enhance investment protection***
- ***Leverage flexibility to choose the applications, operating system and configurations that best suit your business needs***
- ***Drive greater IT simplification via solution simplification at the rack level using new flexible I/O virtualization***

The evolution of IT

In an increasingly competitive market, becoming an on demand business is no longer just a business goal. It's a top business priority. And IBM continues to provide ever-evolving, adaptable, feature-rich technologies capable of turning that priority into reality. The IBM BladeCenter family of products delivers easy-to-use, integrated platforms with a high degree of flexibility, scalability and manageability—all helping you stay focused on business goals, rather than IT fire drills.

BladeCenter delivers a flexible, adaptable, modular design that has revolutionized the blade server market since its announcement in 2002. With the introduction of the newest family member, IBM BladeCenter H, you can take advantage of even more powerful performance and features—while preserving your existing BladeCenter investment.

Powerful new features

BladeCenter H offers a host of new features and functionality, making it the ideal platform to run your next-generation, high-performance business-critical applications.

Faster I/O performance

Designed to support full-performance 4X InfiniBand® fabrics and future applications requiring 10Gb Ethernet or 10Gb Fibre Channel, BladeCenter H is optimized for today's IT environment and primed for future applications.

Visit

ibm.com to locate an IBM reseller or for more information.

A foundation for virtualization

While virtualization is nothing new to the BladeCenter family, BladeCenter H takes it to the next level by enabling server, storage and I/O virtualization across multiple chassis of blades—making it ideal for even the most demanding IT environments.

Outstanding efficiency

BladeCenter H offers exceptional efficiency for mission-critical environments. Whether you're limited by space constraints, cooling capacity or IT personnel, BladeCenter allows you to get the most from limited resources.

The power of the BladeCenter ecosystem

While BladeCenter H delivers many new powerful features and functions, it does not replace the original BladeCenter. BladeCenter's legacy of open, cross-compatible design means that all BladeCenter chassis support all blades, switches and ecosystem components—providing investment protection and reducing IT obsolescence. This compatibility is critical because it allows BladeCenter H to leverage the entire industry-leading BladeCenter ecosystem of hardware, software and partnerships.

Upgrade with ease

BladeCenter H is the latest evolution of the BladeCenter vision—a bladed infrastructure design capable of accommodating future technology advances without requiring new designs. The original 7U chassis supports up to 14 blades.

Evolution of an idea

With the introduction of the 8U BladeCenter T in 2004, IBM demonstrated revolutionary compatibility. Supporting eight blades, BladeCenter T is designed to operate in extreme temperatures and rugged environments demanded by the telecommunications industry. Despite the difference in BladeCenter and BladeCenter T, the two chassis share a common set of switches, blades and options, making them forward- and backward-compatible.

The same holds true for BladeCenter H. New blades, optimized for BladeCenter H, will also function in BladeCenter or BladeCenter T. Similarly, existing blades, switches and fabrics can be easily ported to BladeCenter H with little or no compatibility issues—letting you realize the benefits of this new chassis without having to upgrade your other existing infrastructure investments.

Collaborate to innovate

Making compatibility and upgrading even easier, IBM has made public the design specifications for BladeCenter, allowing partner companies to design compatible networking switches, blade adapter cards (daughter cards) and appliance and communication blades for the platform. The open BladeCenter design specifications are intended to harness the development power of the industry and deliver a more comprehensive solution to customers. In fact, IBM currently has more than 700 companies that produce switches, software solutions and other products that work to further the success of BladeCenter.

Select the right blades for applications

BladeCenter offers 2-processor and 4-processor blade configurations—supporting the IBM BladeCenter HS20 and HS40, the IBM BladeCenter JS21 and JS20, and the AMD Opteron™ LS20 for IBM BladeCenter. BladeCenter is designed to accommodate many different business requirements, from collaboration and compute-centric high performance computing to commerce or database applications. BladeCenter is designed to handle your diverse IT needs in a single architecture.

Innovate using integrated technologies

Marketplace shifts dictate rapid changes in business and IT priorities. BladeCenter helps facilitate these changes with a modular, integrated design, delivering the functionality, computing power and capacity you need, when you need it—helping improve responsiveness and efficiency. You expect IT technology to give you an advantage over competitors. BladeCenter helps reduce the risk and resources needed when investing in new technology.

Choice of processing engines

Choose from four different 2-processor offerings: the HS20; the new JS21; the JS20; and LS20 blades. All provide computing power to meet varied solution requirements and diverse computing workloads.

Diverse interconnect technologies

Providing a wide selection of integrated switching options, BladeCenter helps lower your total cost of ownership (TCO) by alleviating the need to buy additional KVM, Ethernet and Fibre Channel switches, or the cumbersome, expensive cabling they require. BladeCenter is an industry leader in providing flexibility and choice—excelling at integration with components that fit into your existing infrastructure and deliver a comprehensive blade solution.

Flexible storage options

Choose internal drives or attachment to external storage such as a storage area network (SAN) or Network Attached Storage. Whether you're looking for the ultimate boot from SAN diskless solution or one with large capacity hot-swap drives, BladeCenter can deliver it all.

OS and application flexibility

BladeCenter supports Microsoft® Windows®, IBM AIX®, Novell NetWare, Linux® and even Sun Solaris—allowing you to choose the operating system that best suits your needs.

Management tools

Integrated management tools like IBM Director and IBM Remote Deployment Manager help simplify administration to help lower costs and improve control of the data center—eliminating the need for extra tools to manage the system. In addition, the new more robust BladeCenter Advanced Management Module brings simplicity to the complex task of solutions management and firmware/bios updates.

Power and cooling benefits

BladeCenter's superior density and feature set are made possible by its innovative chassis architecture.

Because BladeCenter uses highly energy-efficient components and shared infrastructure architecture, clients can realize lower power consumption when compared to comparable, alternative designs. Less power consumption and lower heat output allow customers to pack more servers into their tight power and cooling envelopes.

Technology innovation that matters

BladeCenter's highly integrated, modular architecture provides the high performance, manageability and flexibility of rack-optimized platforms, helping to accommodate changing business and IT needs. This highly adaptable ecosystem helps:

- *Protect current and future IT and networking investments while helping lower TCO by providing functionality in one integrated, flexible, compatible system*
- *Take advantage of IT and networking flexibility and deploy computing resources dynamically to meet varying workload requirements*
- *Empower your business to do more with fewer resources by optimizing productivity*
- *Expand computing power economically with pay-as-you-grow scalability and the ability to support future fabrics and evolving technologies*

BladeCenter Family of Products

	BladeCenter	BladeCenter T	BladeCenter H
Year introduced	2002	2004	2006
Form factor	7U	8U	9U
30mm blades	14	8	14
Power input	AC	AC/DC	AC
NEBS-/ETSI-compliant	No	Yes	No
4X InfiniBand, 10Gb Ethernet capability	No	No	Yes
Common usage	Multipurpose, lowest cost, high density	Telecommunications, military, government, rugged environments, long life	Ultimate performance, 4X InfiniBand, virtualization

For more information

World Wide Web

U.S.

ibm.com/systems/bladecenter



© Copyright IBM Corporation 2006

IBM Systems and Technology Group
Route 100
Somers, NY 10589Produced in the United States of America
February 2006
All Rights Reserved

IBM reserves the right to change specifications or other product information without prior notice. This publication could include technical inaccuracies or typographical errors. References herein to IBM products and services do not imply that IBM intends to make them available in other countries. IBM PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OR CONDITION OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME JURISDICTIONS DO NOT ALLOW DISCLAIMER OF EXPRESS OR IMPLIED WARRANTIES IN CERTAIN TRANSACTIONS; THEREFORE THIS STATEMENT MAY NOT APPLY TO YOU.

Warranty information: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, N.C. 27709, Attn: Dept. JDJA/B203. IBM makes no representation or warranty regarding third-party products or services including those designated as ServerProven or ClusterProven. Telephone support may be subject to additional charges. For onsite labor, IBM will attempt to diagnose and resolve the problem remotely before sending a technician.

IBM, the IBM logo, AIX, BladeCenter and the On Demand logo are trademarks of IBM Corporation in the United States, other countries, or both. For a list of additional IBM trademarks visit ibm.com/legal/copytrade.shtml

AMD and AMD Opteron are trademarks or registered trademarks of Advanced Micro Devices, Inc., in the United States, other countries, or both.

Intel is a registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product and service names may be trademarks or service marks of others.