

Integrated, off-the-shelf solutions for handling telecommunications management, services, control and I/O requirements



IBM BladeCenter H — A high-performance platform for next-generation networks



IBM BladeCenter H is an ideal systems platform for high bandwidth telecom applications like IPTV

Highlights

- **High-performance — IBM BladeCenter H enables data to travel at up to 10X speeds.**
- **Increased scalability and capacity — the BladeCenter H provides enhanced growth for your NGN applications.**
- **Investment Protection — The BladeCenter H is fully compatible, using the same blades and switches, with the entire family of BladeCenter systems enabling investment protection and seamless growth.**

IBM BladeCenter H is a powerful blade computing chassis delivering superior performance, simplicity, high speed connectivity (4 x 10GbE) and rich telecom functionality ideal for Telecom Equipment Manufacturers and Service Providers.

The BladeCenter H chassis offers higher performance for demanding Next Generation Network applications such as IPTV, VoD and Security, while maintaining compatibility with the entire IBM BladeCenter family. All the chassis' in the BladeCenter family share the same set of blades and switches, and support legacy and currently shipping BladeCenter blades. Compatibility of blades across the entire family — BladeCenter and BladeCenter T, and future BladeCenter chassis.

Telecom Service Providers, Network Equipment Providers and ISV's are given deployment flexibility, and will be able to match diverse environmental requirements with members of the BladeCenter family with options for — central office or data center, NEBS, AC or DC power. With such flexibility service providers may implement the platform based upon their specific application and infrastructure requirements, and are not limited by architectural platform design.

Customers who will benefit most from IBM BladeCenter H include telecommunications Network Equipment Providers and Service Providers seeking:

- *The ability to increase bandwidth and throughput for demanding applications such as IPTV, VoD, IMS and security*
- *Investment protection through compatibility and interoperability, in preparing architecture for the demands of future high speed application deployments*
- *Greater levels of flexibility and scalability through increased I/O performance, and ports per blade*

A scalable platform for next-generation networks

The IBM BladeCenter® H extends the value of the BladeCenter family by providing a highly-dense, platform on which IBM Business Partners, Service Providers (SPs) and Network Equipment Providers can build their IP-based, next-generation networks. This high-performance, scalable, industry-standard computing platform is designed to help SPs accelerate revenue generation, reduce costs and improve customer loyalty. With support for 14 blades per chassis and up to 56 servers per standard 42U telecom rack, the IBM BladeCenter H allows service providers to scale, consolidate existing and new workloads efficiently, while saving valuable floor space through a reduced footprint. By achieving these goals, telecommunications providers can become more nimble, efficient and responsive to business changes and opportunities — meeting the challenges of today and tomorrow's customers.

Increased operational flexibility

The IBM BladeCenter family has always provided system compatibility — achieved through common components for blades, switches and options. When combined with support for the Linux® and Solaris operating system, the IBM BladeCenter family helps provide SPs with the flexibility needed for application development and deployment. Focus on applications can be leveraged from one environment to another, expanding market reach and speeding time to market.

The BladeCenter family is unique in today's market as the only platform optimizing operational efficiency and flexibility — spanning both the telecommunications and enterprise markets — using a common set of components. The IBM BladeCenter, BladeCenter T, BladeCenter H and BladeCenter HT systems have all been designed to coexist with other telecom industry architectures such as Advanced TCA (ATCA). This is especially important for telecoms that have invested in ATCA technology, for transport plane network elements, and want to leverage the capabilities of BladeCenter to achieve economies of scale for the entire telecommunications network.

Highly reliable systems

The IBM BladeCenter H is designed with no single point of failure and integrates many fault-tolerant features, including optional hot-swappable redundant AC power supplies and cooling, and built-in system management resources. The result is a resilient server platform designed to run on ... and on ... and on.

Highly dense, scalable solution

The dense blade design of BladeCenter H can double the capacity available from IBM's carrier-grade, rack-mount server by supporting the deployment of 112 CPUs in a 42U rack. BladeCenter H supports IBM BladeCenter HS20, HS21, JS21, LS20, LS21, LS41 and QS20* (Cell Broadband NGN) blade servers, making it a cost-effective, efficient solution for adding scale and capacity in next-generation network environments.

Infrastructure Management

BladeCenters integrated management tools and enhanced autonomic and virtualization capabilities via IBM Director, help simplify administration and reduce costs associated with supporting multiple disparate servers and operating systems, including maintenance, licensing, floor space and other overhead.

IBM BladeCenter H at a glance:

BladeCenter H	
Introduced	2006
Chassis size	9U x 28"
30mm blades	14 vertical
Power per slot	400w available
Power supply	240V AC
Compliance	FCC, UL, CSA
Ethernet capability	4 x 1GbE 4 x 10GbE
Chassis bandwidth	616Gb
42U blade capacity	56

A foundation for virtualization

The IBM BladeCenter H takes virtualization 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 telecommunications environments.

Collaborate to innovate

Unprecedented system innovation enabling data to travel at up to 10X speeds helps Service Providers deliver emerging Next Generation Network applications such as IPTV, VoD and Security cost effectively and efficiently.

Openness

Making compatibility and upgrading even easier, IBM has published the design specifications for BladeCenter, allowing equipment manufacturers, Service Providers and ISV's to design compatible NGN and appliance blades, networking switches and adapter cards for the BladeCenter platform.

Products and services from trusted technology providers

The IBM BladeCenter ecosystem allows leading industry suppliers to develop, innovate and test interoperability of their products around BladeCenter systems, helping to accelerate technology advances so you can deliver new services to your customers. IBM fosters industry collaboration and open access to BladeCenter design specifications for blades, switches and I/O cards, enabling developers to easily build and test their products on BladeCenter systems. We also offer access to IBM development programs and information around new releases, product updates and other relevant news through Blade.org and the 700+ member BladeCenter Alliance Program. Make no mistake about it ... IBM is committed to growing an open, vibrant ecosystem of providers around the world !

Industry leadership

IBM is uniquely positioned to drive the transformation of telecommunications networks, providing:

- *Excellence in modular design, integrating a very broad array of servers, switches, storage and I/O options, BladeCenter H helps optimize deployment of next-generation networks*
- *Experience helping enterprise and public networks efficiently converge into IP-based platforms*
- *Accelerated adoption and support of the trusted, carrier-grade Linux operating system*
- *Integration of third-party blade servers for robust control plane, service plane and transport plane (for example, I/O) solutions*
- *Comprehensive, integrated platforms supporting IBM's Integrated Platform for Telecommunications designed to quickly activate and deploy services and reduce costs*
- *Continued solution integration services and advancements in leveraging carrier-grade open environment (CGOE) and Open Communication Architecture Forum (OCAF)*
- *Commonality with the enterprise data center, helping reduce support costs and accelerating deployments*



In building BladeCenter H, IBM leverages its experience in deploying blade technologies within the enterprise — including banking, industrial and public sector — to the telecommunications and other rugged environments requiring highly reliable and compact solutions. This transformation is designed to provide faster time-to-market and help lower TCO.

Through industry-leading and innovative on demand initiatives and frameworks — such as Service Provider Delivery Environment (SPDE) — IBM and its Business Partners are applying the practical technology advantages of COTS.

These transformation-enabling initiatives and solutions, coupled with strong support of carrier-grade Linux, AIX® (JS21) and now Sun Solaris 10 (HS21 and LS21/41 blade servers only), its ISV porting and tuning capabilities, and the enterprise acceptance of IBM blades and racks, combine to solidify a leadership position for IBM in next-generation networks.

For more information

Learn how IBM Systems can help your company achieve more revenue and help reduce your costs, while helping you keep your profitable customers.

Have questions? Contact the IBM Telecommunications team today on how we can help you take advantage of our extensive industry expertise. Please visit us on the web at:

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IBM Systems and Technology Group
Department XVXA
3039 Cornwallis Road
Research Triangle Park, NC
U.S.A., 27709

Printed in the United States of America

11-06

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* QS20 blades require a chassis separate from other blade server models.

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