



IBM *e*server® Storage Server systems



X206 Storage Server



x226 Storage Server



HS20 Storage Server



x346 Storage Server

Highlights

- **Leverage storage solutions based on industry-leading Intel® processor-based server technology, along with the Microsoft® Windows® Storage Server 2003 operating system**
- **Take advantage of standards-based technology that lets you leverage existing IT infrastructure investments**
- **Choose from affordable, optimized network-attached file server offerings, including tower models, rack-dense options and gateway solutions**
- **Help lower total cost of ownership with preinstalled, preconfigured servers that help drive down installation, deployment and management costs**

Build on the differentiation and innovation of IBM server technology

The new IBM @server® Storage Servers offer optimized, fixed-function, network-attached file serving designed to address rapidly changing storage needs. They feature preconfigured models that help organizations store and protect their valuable end-user files and data. And leveraging the technology leadership of Intel processor-based servers, IBM brings mainframe-inspired technology innovation to the industry-standard server market.

From branch-office file serving to full enterprise integration, these servers are designed to provide dependable, scalable network attached storage (NAS). They offer feature-rich functionality that helps simplify file storing and retrieval—all in hardware designs that are easy to install and manage.

Optimize heterogeneous file serving

IBM Storage Servers feature Microsoft Windows Storage Server 2003 preinstalled as the operating system. This optimized Windows-based network storage solution uses Microsoft Windows Server 2003 as its foundation.

It is designed for compatibility and to take advantage of the technological and performance storage advances for storage and file serving introduced in Microsoft Windows Server 2003 such as:

- *File sharing across heterogeneous file system environments, including Windows, Linux®, UNIX® and Novell NetWare*
- *Volume Shadow Copy Services (VSS), helping to enhance data protection*
- *Shadow copying of shared folders, enabling users to retrieve data without the need for IT assistance and helping to eliminate the threat of accidental data deletion or corruption*
- *Disk quota management provided by Windows Storage Manager 2.0, letting administrators limit or monitor the size of file shares or volumes so they can take action when capacity becomes limited*

Unlike many proprietary NAS solutions, a Windows-based NAS solution can easily integrate into your existing IT and

Active Directory infrastructure. You can also use existing management tools like IBM Director, IBM Tivoli® software, Microsoft Systems Management Server, and your anti-virus software is fully compatible with Microsoft Windows Storage Server 2003.

Get up and running quickly

IBM Storage Servers are designed for easy and rapid deployment. They offer preconfigured hardware and a pre-installed operating system—many of the tedious and time-consuming tasks related to server deployments have been eliminated. Simply attach the server to the network, power it on and within minutes your IBM Storage Servers gets to work right out of the box.

Enjoy lower total cost of ownership

Ideal for file server and storage consolidation, IBM Storage Servers boast many features that help lower total cost of ownership (TCO). Easy-to-use remote administration enables remote deployment of IBM Storage Servers to be administered from centralized locations, which can eliminate the need for

skilled administrators in each remote location and potentially can help lower TCO. And because Microsoft Windows Storage Server 2003 does not require Microsoft Client Access Licenses, you can also realize potential cost savings in user-access fees, helping to significantly trim IT expenses.

Enhanced performance, entry-level affordability

The IBM @server xSeries® 206 Storage Server offers an affordable, entry-level uniprocessor solution in two preconfigured models: 640GB or 1TB storage. This cost-effective solution also features:

- *The latest Intel Pentium® 4 processor with Intel Extended Memory 64 Technology (Intel EM64T), and a high-performance, 800 MHz front-side bus, helping to improve the performance of the system and enable fast data retrieval*
- *Simple-swap Serial ATA (SATA) disk technology to help maintain availability during maintenance*
- *ServeRAID™-7t hardware RAID controller, providing enhanced disk performance and availability*

Flexible, scalable tower servers

The IBM @server xSeries 226 Storage Server offers a dual-processor capable 4U tower solution that provides a flexible choice of disk subsystems—so you can make the right purchase decision for your IT needs, and scale as your requirements change. The server features:

- *The latest Intel Xeon™ processor with Intel EM64T, 2MB L2 cache and 800 MHz front-side bus, improving system speed and data availability*
- *A choice of either SATA or hot-swap SCSI hard disk drives, giving customers greater flexibility in their choice of disks*
- *Four available empty disk drive bays (in the x226 SCSI model) to accommodate additional hot-swap SCSI disk drives, giving you the flexibility to add the right amount of data storage for your environment*

Superior performance, rack-dense design

The IBM @server xSeries 346 Storage Server is designed to deliver enterprise-grade, industry-leading performance, availability and capacity—all in a 2U rack design. This 2-way capable server provides an ideal, space-saving NAS environment for a variety of needs, from large enterprise deployments to branch offices and even small businesses requiring high performance and capacity. The server offers:

- *Hot-swap redundant cooling, power and hard disk drives (HDDs), helping to ensure a robust, highly available and reliable platform for file server requirements*
- *High-performance, hot-swap SCSI disk drive technology available in two models: an internal SCSI disk server with 1.2TB disk space or two mirrored 36.4GB, 15,000 rpm hot-swap HDDs for the operating system—letting you choose a fine-tuned system that meets your specific storage needs*

- *Support for additional external disk subsystems, including IBM TotalStorage® DS300, DS400, DS4000, DS4300, DS4500 and the IBM EXP400, providing greater storage flexibility and scalability with capacity of up to 67TB*

Innovative, scalable gateway solution

The IBM @server BladeCenter™ HS20 Storage Server offers an innovative approach to Windows-based network-attached gateway servers. Designed as a NAS storage server gateway, the HS20 blade lets you take advantage of your existing storage area network (SAN) for file serving. By combining NAS and SAN, the HS20 NAS gateway enables you to scale your storage capacity to the size of your existing SAN infrastructure. Scalability is further enhanced through the BladeCenter design, enabling one or more HS20 Storage Servers to fit in the BladeCenter chassis. This provides an

economical and reliable storage server gateway to an external SAN infrastructure. In addition, each HS20 blade features:

- *1GB RAM and one Small Form Factor Fibre Channel expansion card, improving storage reliability and enabling increased functionality across a network Fabric*
- *Two mirrored 36.4GB, 10,000 rpm SCSI HDDs, helping to improve system reliability*
- *Enhanced scalability with support for additional external disk subsystems, including TotalStorage DS300, DS400, DS4100, DS4300 and DS4500, providing up to 67TB of storage capacity*

Enable on demand storage

From enterprise environments to small-office infrastructures, IBM Storage Servers are designed to offer easy-to-deploy, reliable, scalable NAS solutions to meet a variety of on demand storage needs and budgets.

IBM Storage Servers at a glance

	x206	x226	x346	HS20
Form factor	4U tower/optional rack kit	4U tower/optional rack kit	Rack, 2U	1U blade
Number of processors (std/max)	1/1	1/2	1/2	1/2
Cache	1MB L2	2MB L2 (x226)	2MB L2	2MB L2
Memory¹ (std/max)	512MB or 1GB/4GB (model dependent)	512MB or 1GB/4GB (model dependent)	1GB/4GB	1GB/4GB
Expansion slots	2 PCI-X, 3 PCI	3 PCI-X, 2 PCI, 1 PCI-Express	4 PCI-X or 2 PCI-X and 2 PCI-Express	Not applicable
Maximum external storage^{1,2}	Not applicable	Not applicable	67TB	67TB
Maximum internal storage^{1,2}	640GB or 1TB	1TB or 1.2TB (model dependent)	1.2TB	72GB
Network	Integrated 10/100/1000 Ethernet	Integrated 10/100/1000 Ethernet	Dual integrated 10/100/1000 Ethernet	Dual gigabit Ethernet
Power supply (std/max)	340W 1/1	530W or (2) 514W hot-swap	625W 1/2	Dual 200W
Hot-swap components	None	Disk drives (model dependent)	Power supply, fans and hard disk drives	Two hot-swap blowers and power supplies
RAID support	Preconfigured RAID-1, RAID-5	Preconfigured RAID-1 and RAID-5 (model dependent)	RAID-1 and RAID-5 (model dependent)	RAID-1
Systems management	Supports optional Remote Supervisor Adapter II	Supports optional Remote Supervisor Adapter II	Integrated Systems Management Processor (supports optional Remote Supervisor Adapter II)	Integrated systems management processor
Operating systems supported	Microsoft Windows Storage Server 2003 Express	Microsoft Windows Storage Server 2003	Microsoft Windows Storage Server 2003	Microsoft Windows Storage Server 2003
Limited warranty³	3-year onsite limited warranty			

For more information:

World Wide Web

U.S.	ibm.com/servers/eserver/xseries/storage/servers_storage.html
Canada	To come

Buy direct

U.S.	1 888 SHOP IBM
Canada	1 888 SHOP IBM

Reseller locator and generation information

U.S.	1 800 426-4968
Canada	1 800 426-2255



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