

Easy, scalable, flexible and affordable external storage solution for small and medium businesses



IBM System Storage DS3200 Express



Highlights

- **3 Gbps Serial Attached SCSI (SAS) host interface and drive expansion technology**
- **Easy to deploy and manage with the DS3000 Storage Manager—perfect for inexperienced and/or part-time administrators**
- **Combination of 12 SAS or SATA 3.5" drives per enclosure**
- **Expandable by attaching up to three EXP3000s, a total of 21.6 TB of storage capacity with 450 GB SAS or up to 48.0 TB with 1.0 TB SATA**
- **Affordable for the small and medium business (SMB) budgets**
- **RAID data protection – redundant I/O paths and components, hot spares**
- **Shared-storage benefits – consolidation, single management, increased efficiencies within the IT infrastructure**
- **Telco model supports -48 V dc power supplies**
- **NEBS and ETSI compliance for AC and DC models**

SMBs face unique challenges. When new servers are purchased, typically they will house several drives. For a SMB with a restrictive budget, this is often viewed as a convenient and low-cost solution for their data storage. However as the organization grows, this distributed storage strategy leads to wasted data space, duplicated functions, inefficiencies in data protection and availability inconsistencies.

A SMB can take an overburdened internal storage infrastructure to the next level by using the flexible and affordable SAS-based DS3200 Express storage system. The DS3200 combines next-generation SAS technology with time-proven designs for external storage and intuitive management interface to create a fully-featured storage system ideally-suited for the SMB. By moving storage outside the server and sharing storage across several servers, the business can increase the capacity, management efficiency and availability of their data solution.

Easy to deploy and manage

Many small business IT departments have either one administrator or a part-time administrator with limited time to spend on data management. In response to this challenge, the DS3200 Express can be installed easily without extensive IT knowledge or effort.

The IBM System Storage DS3000 Storage Manager software is designed to provide a friendly user interface from setup to administration. This intuitive software builds on generations of IBM software development to provide trusted and reliable data management. Its task-based user interface helps to significantly reduce the complexity of installation, configuration and management. The DS3000 Storage Manager approach is designed to enable even non-storage savvy administrators to quickly set up and deploy their storage solution.

And with SAS host-interface technology, up to three servers can be attached to a single DS3200 storage system. This supports the sharing of a single storage system across multiple servers while maintaining a very simple configuration that does not require a switch.

Tiered storage solution

Tiered storage is the assignment of different categories of data to different types of drives in order to reduce total

storage cost. A key attribute of the DS3000 series of disk systems is the integration of SAS and SATA technologies within a single enclosure. This simplifies purchasing and storage deployment with nearline applications using inexpensive SATA drives and highly-utilized applications deploying SAS drives.

Expand with multiple EXP3000s

The scalability of the DS3200 Express enables IT managers to respond to their constantly changing storage environment. By starting small, the DS3200 enables users to make additional investments in their infrastructure only when their data growth necessitates it. Therefore, organizations can easily increase capacity and storage capabilities with minimal cost and effort. The DS3200 capacity is increased by adding hard disk drives and by expanding the configuration with additional EXP3000 expansion units. Both of these operations can be performed without having to take the DS3200 offline. This means “zero-impact” and gives users control of their data storage as they expand capacity on an as-needed basis.

Flexible approach to storage

The DS3200 Express is a comprehensive storage solution for IBM System x™, IBM BladeCenter®,

and select third-party servers. This flexibility enables you to break free of server barriers and use a single storage solution in a mixed vendor environment. And because you do not have to sacrifice functionality for affordability, the DS3200 storage system can deliver powerful dynamic capabilities that help you protect data. The DS3200 storage system offers optional copy and disaster recovery features such as FlashCopy® and VolumeCopy that can be enabled when required by your application.

Telco options

The IBM System Storage DS3200 Express includes a DC-powered model that is especially suited for Telco industry environments. The IBM System Storage DS3200 Model 22T, a NEBS-3 and ETSI compliant disk system and the IBM System Storage EXP3000 Model 02T storage expansion unit are both designed to be powered from a -48 V DC Telco industry-standard power supply.

Priced right for small business

The DS3200 Express was built in mind for the SMB with a limited budget. With functionality and availability features that come standard, the DS3200 is the simple choice for small and medium businesses.

IBM System Storage DS3200 at a glance

Models	1726-21X—single controller 1726-22X—dual controller 1726-22T—dual controller telco
RAID controller	Dual active
Cache per controller	512 MB battery-backed cache with 1 GB upgrade option
Host interface	One or three host ports per controller, Serial Attached SCSI (SAS) 3 Gbps
Drive interface	Serial Attached SCSI (SAS)
Supported drives	3 Gbps SAS: 73 GB, 146 GB, 300 GB, and 450 GB SAS drives at 15,000 rpm speeds 3 Gbps SATA: 500 GB, 1.0 TB SATA drives at 7,200 rpm speed
RAID levels	RAID-0, -1, -3, -5, -6, -10
Storage partitions	4, 8, 16, 32
Maximum drives supported	48 drives (utilizing three EXP3000 Expansion Units)
Fans and power supplies	Dual-redundant, hot-swappable
Rack support	19" industry-standard rack
Management software	IBM System Storage DS3000 Storage Manager
Warranty¹	Three-year parts and labor
Size	Height: 8.7 cm (3.4 in.) Depth: 55.0 cm (21.6 in.) Width: 44.7 cm (17.6 in.) Weight: approximately 17.2 kg (38.0 lb) for a standard unit; when fully configured, 29.2 kg (64.5 lb)
Environment	Air temperature: – DS3200 on: 10° to 35°C (50.0° to 95°F); altitude: 30.5 (100 ft) below to 3000 m (9840 ft) above sea level; temperature change: 10°C (18°F) per hour – DS3200 off: 10° to 50°C (14.0° to 120.0°F); maximum altitude: 3000 m (9840 ft); temperature change: 15°C (27.0°F) per hour Humidity: – DS3200 on: 20 to 80% – DS3200 off: 10 to 90% – Maximum dew point: 26°C (79°F) – Maximum humidity gradient: 10% per hour
Heat output	Approximate heat output in British thermal units (Btu) per hour: – Minimum configuration: 205 Btu (60 watts) – Maximum configuration 1235 Btu (361 watts)
Supported systems	For a list of currently supported servers, operating systems, host bus adapters, clustering applications, SAN switches and directors, refer to the DS3000 series interoperability matrix available at ibm.com/systems/storage/disk/ds3000/ds3200/



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- ibm.com/systems/storage/disk
- ibm.com/systems/x
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MB, GB and TB = 1,000,000, 1,000,000,000 and 1,000,000,000,000 bytes, respectively, when referring to storage capacity. Accessible capacity is less; up to 3 GB is used in service partition. Actual storage capacity will vary based upon many factors and may be less than stated. Some numbers given for storage capacities give capacity in native mode followed by capacity using data compression technology. Maximum internal hard disk and memory capacities may require the replacement of any standard hard drives and/or memory and the population of all hard disk bays and memory slots with the largest currently supported drives available.

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