

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



IBM System Storage DS3200



Highlights

- **3 Gbps Serial Attached SCSI (SAS) host interface technology**
- **Easy to deploy and manage with the DS3000 Storage Manager**
- **Combination of 12 SAS or SATA 3.5" drives per enclosure**
- **Scalable to 3.6 TB of storage capacity with 300 GB hot-swappable SAS disks or 12.0 TB with 1.0 TB hot-swappable SATA disks in the first enclosure**
- **Expandable by attaching up to three EXP3000s, a total of 14.4 TB of storage capacity with 300 GB SAS or up to 48.0 TB with 1.0 TB SATA**
- **Affordable for the small and medium business budgets**
- **Telco model supports -48V dc power supplies**
- **NEBS and ETSI compliance for AC and DC models**

One clear message heard from small and medium businesses is that their data is as valuable to their organizations as data is to the enterprise customer. In fact, small businesses are experiencing even faster data growth and are discovering that their storage and data protection requirements have more similarities than differences, relative to large enterprises.

Small businesses can take an overburdened internal storage infrastructure to a new level by using the flexible and affordable IBM System Storage™ DS3200 storage system. By moving storage outside the server, small businesses can increase the capacity and reliability of the data solution well beyond the initial storage investment. And with SAS and SATA drive Intermix support, the DS3200 can be optimized with the right workload demand utilizing the appropriate drive technology.

Select configurations of the DS3200 are part of the IBM Express Portfolio™, designed and priced to meet the needs of small-to-medium businesses. The Express models combine the DS3200 storage system with the IBM SAS HBA Controllers and SAS cables to help you get started with storage quickly.

Easy to deploy and manage

With many small business IT departments having either one administrator, or a part-time administrator and limited time to spend on data management, the DS3200 can be installed easily without extensive knowledge or effort.

The DS3000 Storage Manager software was designed for easy implementation for an unseasoned administrator. The task-oriented management interface of the DS3000 Storage Manager presents tasks to the administrator first and then asks which object to perform the task on. This contrasts to an object-oriented interface of a typical system in which the object is selected first, then the task and requires a greater depth of storage networking expertise. The DS3000 Storage Manager approach enables even non-storage administrators to quickly set up and deploy the storage solution. The management application's

task-oriented interface removes the resistance that many organizations have with their limited in-house expertise.

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. By accommodating high-access and near-line data within a single enclosure, the right application with the appropriate drive technology is accomplished. 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 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. Thus organizations can easily increase capacity and storage capabilities with minimal cost and effort. The DS3200 capacity is increased either by adding hard disk

drives or by expanding the configuration and adding EXP3000 expansion units. Both of these operations can be performed without having to shut down the DS3200. This means "zero-impact" to your environment and gives users control of their data storage as they expand capacity on an as-needed basis.

Flexible approach to storage

The DS3200 is a comprehensive storage solution for IBM System x™ 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 disk storage system can deliver powerful dynamic capabilities that help you protect data. The disk storage system enables 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 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

With the functionality and availability features that come standard and a price-point that does not strain the budget, the DS3200 is the simple

choice for small and medium businesses. Other storage products require the purchase of expensive options for basic storage configurations. The DS3200 is a solution that will satisfy the majority of storage needs.

IBM System Storage DS3200 at a glance

Models	1726-21X—single controller 1726-22X—dual controller 1726-22T—dual controller telco 1726-21E—single controller Express 1726-22E—dual controller Express
RAID controller	Dual active
Cache per controller	512 MB battery-backed cache with 1 GB upgrade option
Host interface	1 or 3 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 and 300 GB SAS drives at 10,000 rpm and 36 GB, 73 GB, 146 GB and 300 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, -10
Storage partitions	4, 16
Maximum drives supported	48 drives (using 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)

IBM System Storage DS3200 at a glance

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/

For more information

Contact your IBM representative or IBM Business Partner or visit:

- ibm.com/systems/storage/disk
- ibm.com/systems/x
- ibm.com/systems/bladecenter



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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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