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## Highlights

- 3 Gigabits per second (Gbps) Serial Attached SCSI (SAS) host interface and drive expansion technology
  - DS3000 Storage Manager is easy to use for inexperienced and/or part-time administrators
  - Combination of 12 SAS – up to 7.2 TB – or Serial Advanced Technology Attachment (SATA) – up to 24.0 TB – drives per enclosure
  - Expandable to 28.8 TB with SAS or up to 96.0 TB SATA with up to three EXP3000 enclosures
  - Affordable for SMB budgets
  - Redundant Array of Independent Disks (RAID) data protection – redundant input/output (I/O) paths and components, hot spares
  - Network Equipment Building System (NEBS) and European Telecommunication Standards Institute (ETSI) compliance.
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# IBM System Storage DS3200 Express

*Easy, scalable, flexible and affordable external storage solution for small and medium businesses (SMBs)*

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 organisation 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-utilised 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, organisations can easily increase capacity and storage capabilities with minimal cost and effort. The DS3200 capacity is increased by adding hard disk drives (HDDs) and by expanding the configuration with additional EXP3000 expansion units. Both of these operations can be performed without having to take the DS3200 off-line. 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 (DR) features such as FlashCopy and VolumeCopy that can be enabled when required by your application.

### **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 SMBs.

**IBM System Storage DS3200 at a glance**

<b>Models</b>	1726-21X – single controller 1726-22X – dual controller
<b>RAID controller</b>	Dual active
<b>Cache per controller</b>	512 MB battery-backed cache with 1 GB upgrade option
<b>Host interface</b>	One or three host ports per controller, SAS 3 Gbps
<b>Drive interface</b>	SAS
<b>Supported drives</b>	3 Gbps SAS: 146 GB, 300 GB, and 450 GB SAS drives at 15,000 revolutions per minute (rpm) speeds 6 Gbps SAS: 300 GB, 450 GB, 600 GB SAS drives at 15,000 rpm speeds 3 Gbps SATA: 500 GB, 750 GB, 1.0 TB, 2.0 TB SATA drives at 7,200 rpm speed
<b>RAID levels</b>	RAID-0, -1, -3, -5, -6, -10
<b>Storage partitions</b>	4, 8, 16, 32
<b>Maximum drives supported</b>	48 drives (utilising three EXP3000 Expansion Units)
<b>Fans and power supplies</b>	Dual-redundant, hot-swappable
<b>Rack support</b>	19" industry-standard rack
<b>Management software</b>	IBM System Storage DS3000 Storage Manager
<b>Warranty<sup>1</sup></b>	Three-year parts and labour
<b>Size</b>	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)
<b>Environment</b>	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 percent – DS3200 off: 10 to 90 percent – Maximum dew point: 26°C (79°F) – Maximum humidity gradient: 10 percent per hour
<b>Heat output</b>	Approximate heat output in British thermal units (Btu) per hour: – Minimum configuration: 205 Btu (60 watts) – Maximum configuration 1235 Btu (361 watts)
<b>Supported systems</b>	For a list of currently supported servers, operating systems, host bus adapters (HBAs), clustering applications, Storage Area Network (SAN) switches and directors, refer to the DS3000 series interoperability matrix available at <a href="http://ibm.com/systems/uk/storage/disk/ds3000/ds3200/">ibm.com/systems/uk/storage/disk/ds3000/ds3200/</a>

## For more information

To learn more about the [IBM System Storage DS3200 Express](#), please contact your IBM representative or IBM Business Partner, or visit:

- [ibm.com/systems/uk/storage/disk](http://ibm.com/systems/uk/storage/disk)
- [ibm.com/systems/uk/x](http://ibm.com/systems/uk/x)
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