IBM

IBM TotalStorage DS4400
(formerly IBM TotalStorage FAStT700)

Highlights

- *2 Gbps technology offers faster response time*

- *IBM® FlashCopy®, VolumeCopy and Enhanced Remote Mirroring are designed to help increase data protection options*

- *Dynamic Volume Expansion is designed to support simplified data management*

- *Configuration scalability and flexibility help meet the needs of growing companies*

- *High-availability design enhances access to data*

- *SAN-ready, centralized storage can ease management workload*

Surging ahead with storage

As routine business processes become increasingly data-dependent, companies are ramping up their storage infrastructures. But today's companies must weigh storage requirements against tightening budgets. Solutions must be cost-effective, scalable, and accommodate a variety of storage requirements.

IBM provides flexible business solutions that are designed to offer maximized price-to-performance ratios. IBM TotalStorage DS4400 (formerly FAStT700 Storage Server) is a full-Fibre Channel, Storage Area Network (SAN) solution designed to provide the necessary performance at the right price.

The DS4000 EXP710 switched disk expansion unit has an ESM-imbedded Fibre Channel "loop switch." The loop switch creates what is essentially point-to-point Fibre Channel communication, allowing the ESMs and drives to operate as though they were on a private Fibre Channel arbitrated loop, but with the performance and diagnostic advantages of Fibre Channel fabric. A great advantage of the DS4000 EXP710 is a

significant reduction in the number of Fibre Channel nodes on the drive loops. The DS4000 EXP710 has far fewer nodes on the drive loop than the DS4000 EXP700.

2 Gbps technology
The DS4400 and DS4000 EXP700 and DS4000 EXP710 use today's sophisticated Fibre Channel technology, which transfers data at the rate of 2Gbps. This technology is designed to allow large amounts of data to be consolidated for quicker, more efficient access and management.

Flexibility and scalability to meet growth
Buy what you need now, add more later. The DS4400 is a scalable storage server designed to allow you to build on your initial investment. Simply upgrade—not replace—as your needs increase. The DS4400 scales from 36GB to greater than 32TB[1] of storage using 16 DS4000 EXP700 or 16 DS4000 EXP710 expansion enclosures. Each expansion enclosure is designed to support up to fourteen 2Gbps Fibre Channel disk drives. Moreover, you can select the appropriate RAID level (from RAID levels 0, 1, 3, 5 and 10) to match an application or suit particular needs, helping you to extend and leverage investments now and in the future.

Storage management
IBM TotalStorage DS4000 Storage Manager offers FlashCopy, VolumeCopy, Dynamic Volume Expansion, and Enhanced Remote Mirroring. These functions can be an important part of your data availability and protection strategy.

- *FlashCopy tool is designed to create a lightning-fast, single-point-in-time copy of all stored data and to support uninterrupted performance of normal SAN operations.*
- *VolumeCopy is an optional feature designed to provide the ability to create a full VolumeCopy of a point-in-time logical drive generated by FlashCopy on a single DS4000. This option requires DS4000 Storage Manager version 8.4 or later.*
- *Dynamic Volume Expansion resizes logical volumes, typically without interruption of other logical volumes.*
- *Supported with v9.1 is Enhanced Remote Mirror. It consists of Global Mirror with Asynchronous Write-order Consistency, which is critical for mirroring multi-LUN applications, Global Copy with Asynchronous and Metro Mirror with Synchronous*

DS4000 Storage Manager is also designed to set partitions, configure servers and drives, monitor storage hardware, and troubleshoot either locally or remotely.

Protect information investment with high availability
High availability is critical in today's knowledge-based economy. The DS4400 is designed to support high availability, providing protection against component failures. Dual hot-swap RAID controllers help provide high throughput and redundancy, and each controller supports 1GB of battery-backed cache. Redundant fans, power supplies, and dynamic storage management are designed to further support high availability to help reduce the risk of costly downtime or the loss of valuable data.

Save resources for core competencies
DS4000 Storage Manager is an open tool that lets you manage multiple DS4400s from a single console. Controlling your whole environment from one location helps to best employ in-house resources, releasing IT staff to focus on core competencies.

IBM TotalStorage DS4400 at a glance

Model	1742-1RU
RAID controller	Dual active RAID controllers
Controller cache	Total of 2GB, battery-backed
Host interface	Fibre Channel (FC) Switched and FC Arbitrated Loop (FC-AL)
Connectivity	4 standard, up to 8 via additional mini-hubs
Drive interface	FC-AL
Supported drives	250GB 7,200 rpm (2Gbps SATA) 36.4GB, 73.4GB and 146.8GB 10,000 rpm (2Gbps FC) 18.2GB, 36.4GB and 73.4GB 15,000 rpm (2Gbps FC)
RAID levels	0, 1, 3, 5, 10
Storage partitioning	Up to 64
Maximum drives supported	224 (via 16 DS4000 EXP700 or 16 DS4000 EXP710)
Fans and power supplies	Dual redundant, hot-swappable
Rack support	19 inch industry-standard rack
Management software	IBM TotalStorage DS4000 Storage Manager (version 8.34, 8.4, 9.1)
Supported operating systems and servers	For the most recent list, visit: **ibm.com**/storage/ds4400
FC switch support **FC hub support**	For the most recent list, visit **ibm.com**/storage/ds4400
Dimensions	174.5mm H x 444.5mm W x 609.6mm D (6.87 in x 18 in x 24 in)
Weight	38.6 kg. (85 lbs.)

IBM DS4000 EXP700 Expansion Unit

Model	1740-1RU
Number of drives supported	Up to 14 FC drives (18.2GB, 36.4GB, 73.4GB or 146.8GB)
Fans and power supplies	Dual redundant, hot swappable

Dimensions	**With Bezel**
Height	13.23cm (5.21 in.)
Depth	59.74cm (23.52 in.)
Width	48.18cm (18.97 in.)
Bezel thickness	3.63cm (1.43 in.)

For more information

To learn more about IBM TotalStorage DS4400 or IBM Systems and Technology Group, contact your IBM representative, IBM Business Partner, or visit:

ibm.com/totalstorage/ds4400