Scalable, high-performance storage for on demand computing environments

IBM TotalStorage™ FAStT600 Storage Server

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Highlights

- ***Provides four 2Gb Fibre Channel host ports designed to economically support multipath failover for directly attached UNIX® and Intel® processor-based clustered servers***
- ***Designed to deliver high performance of up to 400MB/sec***
- ***Facilitates storage consolidation in Storage Area Network (SAN), Network Attached Storage (NAS) and direct-attach environments***
- ***Supports up to 42 hard disk drives and scales to more than 6TB of capacity***
- ***Includes FAStT Storage Manager to help centrally manage all FAStT storage subsystems***
- ***Includes failover drivers for Microsoft® Windows® 2000 and optional support for AIX®, Sun™ Solaris™ , HP-UX and other Intel processor-based platforms, including the Novell Netware and Linux operating systems***
- ***Can help improve service response time with automated alerts from the optional FAStT Service Alert feature***

Storage consolidation and clustering

The IBM TotalStorage FAStT600 Storage Server is designed to be an affordable, scalable storage server for storage consolidation and clustering applications. Its modular architecture can support on demand business models by enabling an entry configuration that can easily grow as storage demands increase. With more than 6TB of maximum capacity, this server is well suited for consolidating direct-attached storage into a centrally managed, shared or SAN environment.

The FAStT600 is well suited for cost-conscious workgroup SANs and small-business environments. With built-in support for four Fibre Channel-attached servers, the cost of additional switches is reduced or eliminated.

The FAStT600 supports IBM @server pSeries™ and xSeries™ servers as well as other popular Intel processor-based, AIX and UNIX-based servers and operating systems. To support easy integration, IBM tests the FAStT600 for interoperability with these IBM servers, as well as other brands of servers and switches.

Part of a family of storage servers

The FAStT600 is part of the FAStT family of storage servers, which uses common storage management software and expansion enclosures. It is compatible with existing FAStT EXP700 disk enclosures, and can support up to 42 disk drives when using two FAStT EXP700 disk enclosures.

High-performance design

The FAStT600 includes the same high-performance software and redundant hardware design as other FAStT products in the family. For example, it uses advanced caching algorithms to help optimize disk performance, capable of delivering more than 45,000 cached I/Os per second and up to 400MB/sec throughput.

Scalability throughout the family

A FAStT600 Storage Server can easily be upgraded from a workgroup SAN to an enterprise network storage system. Up to 42 disk drives are supported, providing the flexibility to grow with your business. Using the FAStT Storage Manager software, multiple FAStT600 servers can be combined to address additional performance and capacity requirements.

Dynamic capacity addition (DCA) provides the ability to add an EXP700 enclosure to an existing FAStT600 without stopping operations. The FAStT600 can provide capacity on demand, allowing unused storage to be brought online for a new host group or an existing volume.

Upgrades to higher performing FAStT Storage Servers can be performed while keeping data intact, helping to minimize disruptions during upgrades. The FAStT600 also supports online controller firmware upgrades, which can bring greater performance and functionality. Events such as upgrades to support the latest version of FAStT Storage Manager or to add services such as FAStT Service Alert can be executed without stopping operations.

Improved administration through FAStT Storage Manager

The FAStT Storage Manager software included with the FAStT600 Storage Server supports centralized management of all local and networked FAStT storage systems. Using Storage Manager, administrators can quickly configure and monitor storage from a simple, Java™-based Web browser interface. They also can customize and change settings on the fly as well as configure new volumes, define mappings, handle routine maintenance and dynamically add new enclosures and capacity to existing volumes—all without interrupting user access to data. Failover drivers, performance-tuning routines and cluster support are standard features of the FAStT Storage Manager.

By providing an intuitive user interface and reducing the complexity of storage management, this software tool can help reduce the amount of time spent managing storage, helping companies to realize a significant reduction in total cost of ownership.

Enhanced storage management capabilities

The IBM TotalStorage FAStT600 Storage Server has several features designed to improve data management and storage system performance. Using the FAStT Storage Manager software, administrators can partition the FAStT600 Storage Server into as many as eight virtual servers. This capability allows organizations to strategically allocate storage capacity, helping to optimize the utilization of

IBM FAStT600 Storage Server at a glance

Characteristics

Model	1722-60U
RAID controller	Dual active 2GB RAID controllers
Cache	256MB, battery-backed
Host interface	4 Fibre Channel (FC) Switched and FC Arbitrated Loop (FC-AL) standard
Drive interface	2Gbps FC-AL
Supported drives	36.4GB, 73.4GB and 146.8GB 10,000 rpm 18.2GB, 36.4GB and 73.4GB 15,000 rpm
RAID levels	0, 1, 3, 5, 10
Storage partitions	1, upgradeable to 8
Maximum drives supported	42 (using two EXP700 Expansion Units)
Fans and power supplies	Dual redundant, hot-swappable
Rack support	19-inch, industry-standard rack
Management software	IBM FAStT Storage Manager version 8.3
SAN support	Supported IBM FC switches and directors (product numbers 2109, 3534, 2031, 2032, 2042 and 2062)
Warranty	3-year parts and labor warranty, next-business-day response; upgradeable to 24×7 support with 4-hour response

Physical characteristics

Dimensions	132.3 mm H × 482 mm W × 597 mm D (5.2 in × 19 in × 24 in)
Weight[1]	30 kg (66 lbs)

Supported systems[2]

For a list of currently supported servers, operating systems, host bus adapters, clustering applications and SAN switches and directors, refer to the FAStT600 Interoperability Matrix available at www.**ibm.com**/storage/fast600.

The FAStT600 Storage Server is supported only in rack installations. With optional features, up to two FAStT EXP700 Expansion Units can be attached to the FAStT600 enclosure for a maximum of 42 disk drives.

[1] Excluding disk drive modules.
[2] For specific details and configuration availability, please visit www.ibm.com/storage/fast600.

storage space and reduce hardware and storage management costs. Instead of purchasing eight separate RAID controllers with their own dedicated disks and management, the FAStT products enable multiple servers to attach to one central system with hardware failover and common management.

Dynamic Volume Expansion enables administrators to resize logical volumes without disrupting users. This feature works well for applications with rapidly growing data requirements, such as Lotus Notes® and Microsoft Exchange.

Multiple FAStT600 systems can use a common pool of hot-spare disk drives as a cost-effective way of improving availability, even if the FAStT600 systems are attached to different servers. An administrator can determine the number of drives to allocate as spares.

Additional tools to help manage storage

The FAStT600 Storage Server is supported by a variety of IBM Tivoli® software products, including Tivoli Storage Manager and Tivoli Storage Resource Manager, as well as many third-party

hardware and software products. These applications add to the capabilities of the FAStT600 by enabling backup and storage reporting. The IBM TotalStorage Proven™ program is designed to identify and test these products for interoperability with the FAStT600 and other IBM disk products. Products in this program have been tested and have support in place to help eliminate time-consuming installation and support issues. For more information visit www.storage.**ibm.com**/totalstorage/proven.

Service and support

FAStT Storage Servers have a three-year hardware warranty and are supported by IBM's award-winning service team. Additional services for hardware installation, FAStT Storage Manager configuration and advanced storage management are also available from IBM Global Services (IGS). IBM SupportLine services can assist with using FAStT Storage Manager, enabling customers to self-maintain their FAStT Storage Server.

The optional FAStT Service Alert feature enables the FAStT600 to quickly notify IBM service of problems when they occur, reducing or eliminating the need for the customer to place a service call and thus improving service response times.

For more information

For more information, contact your IBM representative or IBM Business Partner. In the United States or Canada, you also can call IBM Direct: 1-800-IBM-CALL (1-800-426-2255). Or visit www.**ibm.com**/totalstorage.

For more product information and country-specific phone numbers for those outside the U.S. and Canada, visit www.**ibm.com**/storage/media.

Custom labeling and initializing also can be obtained through these numbers.

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GB equals one billion bytes; when referring to hard drive capacity, accessible capacity may be less.

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