## TRM

## Highlights

- Easily manage and deploy storage using a breakthrough graphical user interface
- Gain efficiency with internal storage virtualization and high-performance thin provisioning
- Have continuous access to data with integrated nondisruptive migration
- Improve network utilization for remote mirroring with innovative replication technology
- Optimize costs for mixed workloads, with up to three times performance improvement with only five percent flash storage capacity using IBM® Easy Tier®<sup>1</sup>
- Comply with Network Equipment Building System (NEBS) Level 3 and European Telecommunication Standards Institute (ETSI) specifications

# **IBM Storwize V3700**

Easy-to-use, affordable storage with advanced capabilities for small and midsize businesses

Organizations of all sizes are faced with a tidal wave of data coming from myriad new sources, including sensors, social media, mobile platforms and more. And while the sheer volume of this new data may seem overwhelming, the value of information is stronger than ever—some even consider it the new currency of business. To help maximize the benefits of growing amounts of data, businesses are turning to software-defined environments, which can provide flexibility and responsiveness to business demands—along with higher scalability and greater efficiency.

The IBM Storwize® family is the primary IBM storage solution for supporting software-defined environments and virtual infrastructures, delivering flexibility and innovative storage functions. Storwize V3700, the entry-level system in the Storwize family, is an efficient, easy-to-use, high-performance solution that enables small and midsize organizations to meet their changing storage needs.

To help address block storage requirements, Storwize V3700 is designed to provide small and midsize organizations with the ability to consolidate and share data at an affordable price, while leveraging advanced software capabilities usually found in more expensive systems. Providing up to 120 drives of capacity, Storwize V3700 delivers proven ease of management, functionality and interoperability.

## Simplify management

Storwize V3700 comes with an easy-to-use management interface based on the breakthrough Storwize family graphical user interface (GUI). With dynamic and customizable views, the interface is designed to give administrators intuitive control of the system, while interactive menus, tabs and charts can also help improve productivity.



## Optimize efficiency

Using thin provisioning, applications consume only the space they are actually using, versus the total space that they have been allocated. Designed to keep business overhead low, thin provisioning optimizes efficiency by allocating disk storage space in a flexible manner among multiple users, based on the minimum space required by each user at any given time. This can help organizations save power, lower heat generation and reduce hardware space requirements.

## Improve performance

Easy Tier technology, an optional function for Storwize V3700, automatically and dynamically moves only the appropriate data to flash storage, so users can achieve high performance without needing to manually create and manage storage-tier policies. Easy Tier automatically identifies highly-active data and moves only that data to flash storage. The remaining data can be placed on higher capacity drives for the best value. Using Easy Tier, you can improve performance up to three times with only five percent flash storage capacity. I

#### Protect data

Storwize V3700 includes IBM FlashCopy® technology, which is designed to create an almost-instant copy of active data that can be used for backup purposes or for parallel processing activities.



In addition, the optional remote mirroring function enables organizations to create copies of data at remote locations for disaster recovery. Metro Mirror supports synchronous replication at distances up to 300 km, whereas Global Mirror supports asynchronous replication up to 8,000 km. Replication can occur between any Storwize family systems, and can include any supported virtualized storage. Remote mirroring works with Fibre Channel, Fibre Channel over Ethernet (FCoE) and IP (Ethernet) networking between sites. With IP networking, Storwize V3700 supports both 1 GbE and 10 GbE connections and uses innovative Bridgeworks SANSlide technology to optimize use of network bandwidth. As a result, the networking infrastructure may require lower speeds (and thus, lower costs), or users may be able to improve the accuracy of remote data through shorter replication cycles.

IBM Storwize V3700 disk system at a glance	
Part number	2072L2C Large form-factor (LFF) dual-control enclosure 2072LEU LFF expansion enclosure 2072S2C Small form-factor (SFF) dual-control enclosure 2072SEU SFF expansion enclosure 2072T2C SFF DC dual-control enclosure 2072TEU SFF DC expansion enclosure
Host interface	1 Gbps iSCSI and 6 Gbps SAS (optional 8 Gbps Fibre Channel, 1 Gbps iSCSI, 6 Gbps SAS or 10 Gbps iSCSI/Fibre Channel over Ethernet)
User interface	Storwize V3700 graphical user interface
Single/dual controller	Dual controller
Cache per controller	4 GB upgradable to 8 GB
Drive type	Dual-port, hot-swappable 6 Gb SAS disk drives
Supported drives	SFF 2.5-inch disk drives:  • 146 GB, 300 GB at 15k rpm  • 600 GB, 900 GB and 1.2 TB at 10k rpm  • 1 TB at 7.2k rpm SAS nearline  LFF 3.5-inch disk drives:  • 2 TB, 3 TB and 4 TB at 7.2k rpm  • 900 GB and 1.2 TB at 10k rpm  • 300 GB at 15k rpm  SSD drives:  200 GB, 400 GB and 800 GB

Maximum drives supported	<ul> <li>SFF enclosure: 24 x 2.5-inch drives</li> <li>LFF enclosure: 12 x 3.5-inch drives</li> </ul>
RAID levels	RAID 0, 1, 5, 6 and 10
ans and power supplies	Fully redundant, hot-swappable
Rack support	Standard 19-inch rack-mount enclosure*
	Storwize V3700 machine code
Management software  Advanced functions included	
with each system	Internal virtualization, thin provisioning, one-way data migration and FlashCopy (up to 64 targets)
Optional licensed functions	FlashCopy upgrade (up to 2,040 targets), Easy Tier, Remote Mirror and turbo performance
Warranty	<ul> <li>3-year limited warranty</li> <li>Customer-replaceable units</li> <li>On-site service</li> <li>Next-business-day 9x5</li> <li>Service upgrades available<sup>†</sup></li> </ul>
Size	LFF dual-control enclosure:  • Height: 8.7 cm (3.4 in.)  • Width: 48.3 cm (19.0 in.)  • Depth: 55.6 cm (21.9 in.)  • Approximate weight:  - Empty: 18.0 kg (39.6 lb)  - Fully configured: 28.3 kg (62.2 lb)  SFF dual-control enclosure:  • Height: 8.7 cm (3.4 in.)  • Width: 48.3 cm (19.0 in.)  • Depth: 55.6 cm (21.9 in.)  • Approximate weight:  - Empty: 19.0 kg (41.8 lb)  - Fully configured: 27.3 kg (60.0 lb)
Operating environment	Air temperature:  Operating: 10°C – 35°C (50°F – 95°F) at 30.5 m below to 3,000 m above sea level (100 below to 9,840 ft above)  Non-operating: -10°C – 50°C (14°F – 125°F) Relative humidity: Operating: 20% – 80% Non-operating: 10% – 90% Electrical power: Voltage range: 100 – 240 V ac/-48 – -60 V dc Frequency: 50 – 60 Hz Power: LFF dual-control enclosure: 358 watts SFF dual-control enclosure: 405 watts
Heat dissipation (BTU per hour)	LFF dual-control enclosure: 1,222 SFF dual-control enclosure: 1,383
Supported systems	For a list of currently supported servers, operating systems, host bus adapters, clustering applications and SAN switches and directors, refer to the System Storage Interoperation Center at: ibm.com/systems/support/storage/config/ssic
ISV solutions	For a list of high-quality solutions with our partner ISVs, including access to solution briefs and white papers

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### **Avoid disruptions**

Storwize V3700 includes a dynamic data migration function that is designed to move data from existing block storage into the new system while maintaining user access to data. The data migration function might be used, for example, when replacing older storage with newer storage, as part of load-balancing work.

## Leverage proven ISV solutions

IBM is committed to the continuous improvement and seamless application integration of IBM disk systems to optimize your business results and time to value. Our commitment is evident through our ongoing work and enduring partnerships with independent software vendors (ISVs) such as Microsoft, Oracle, SAP, Symantec and VMware.

#### Why IBM?

The Storwize family of products from IBM, a recognized leader in the storage industry, is known for providing efficiency and high-performance storage for any type of workload. IBM System Storage offerings, customized for small and midsize organizations, are specifically designed to deliver performance in streamlined packages that are easy to buy, deploy and manage.

#### For more information

To learn more about the IBM Storwize V3700 disk system, please contact your IBM representative or IBM Business Partner, or visit the following website:

ibm.com/systems/storage/disk/storwize\_v3700



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Actual available storage capacity may be reported for both uncompressed and compressed data and will vary and may be less than stated.

- \*To assure installation and serviceability in non-IBM industry-standard racks, review the Storwize V3700 publications for any product-specific installation requirements.
- <sup>†</sup> Warranty service upgrades via IBM ServicePac® and maintenance agreements.
- <sup>1</sup> IBM laboratory measurements August 2010.



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