# IBM System Storage DCS3700

*Maximize performance, scalability and storage density at an affordable price*

## Highlights

- Provide 6 gigabits per second (Gbps) serial-attached SCSI (SAS) high-density storage system that delivers scalable capacity at an affordable price point

- Support high-performance streaming applications that have rigorous bandwidth requirements, such as rich media, financial markets, telecommunications and weather modeling

- Help optimize the flow and management of large, file-based data while retaining ease-of-data access

- Enable intermixing of solid state drives (SSDs), high-performance SAS drives and nearline SAS drives

The era of smarter computing is here and is being driven by the need for more data with faster data access. Low-latency application performance in applications such as life sciences, real-time analytics, rich media, seismic processing, weather forecasting, telecommunications and financial markets require high-performance storage architectures. In addition, organizations are often looking for a better way to improve operational efficiency while maintaining the same data center footprint, quality of service and high availability.

The IBM System Storage® DCS3700 meets an organization's need for more capacity within their given space constraints. Designed for applications with high-performance streaming data requirements, the DCS3700 offers optimal space utilization, low power consumption and high performance. Organizations can now have a storage solution to maximize storage density, reduce operational expenditures and ensure high productivity.

IBM has combined highly available, dense storage capabilities and the proven System Storage disk controllers in the DCS3700. With up to 60 SAS drives in just 4U of rack space, it can reduce operational costs for capacity-intensive applications. With up to 4,000 megabytes per second (MBps) in sustained drive reads, the DCS3700 storage system is equally adept at delivering throughput to bandwidth-intensive applications and input and output per second (IOPS) to databases, Microsoft Exchange

and other applications. With its simple, efficient and flexible approach to storage, the DCS3700 is a cost-effective, fully integrated complement to IBM System x® servers, IBM BladeCenter® and IBM Power Systems™.

## Delivers unrelenting performance

Delivering unrelenting throughput and IOPS, the DCS3700 storage system supports the IBM tradition of balanced and sustainable performance. With up to 4,000 MBps in sustained drive reads, the DCS3700 storage system is equally adept at delivering throughput to bandwidth-intensive applications and IOPS to databases and Microsoft Exchange. The DCS3700 storage system now supports low-power and fast-performing SSDs.

## Enables uptime all the time

The DCS3700 storage system ensures not only high-speed data access, but continuous access to the data as well. It carries on the IBM legacy of high-availability system design with redundant components, automated path failover and extensive online administration capabilities that maximize computational efficiency and productivity, ensuring no single point of failure exists. This design helps keep these environments universally productive.

## Scales to meet high capacity demand

Today's storage demands call not only for performance and uptime, but solutions must also keep up with continuous growth and meet the most demanding capacity requirements. The DCS3700 storage system can support an additional two DCS3700 Expansion Units for a total of 180 3.5-inch drives in just a 12U rack space. With support for 3 terabytes (TB) capacity-optimized nearline SAS drives, the DCS3700 storage system can start small and grow up to 540 TB when storage requirements call for additional scalability.



## Offers green efficiency for today and tomorrow

As energy costs continue to rise, so does the demand to reduce power consumption. The DCS3700 storage system was developed with green requirements in mind. It offers power supplies designed to meet multiple efficiency standards and variable speed fans to help lower overall energy expenditures. In addition, with 60 drives housed in just 4U of rack space, the DCS3700 storage system has been optimized for maximum storage density, reducing its overall storage footprint. SSDs with low-power usage, high-reliability and high performance further help to improve the efficiency of the system.

## Delivers intuitive storage management that doesn't sacrifice control

DS Storage Manager software has the perfect combination of robustness and ease-of-use—two attributes not commonly found together in entry-priced storage. The DS Storage Manager's graphical user interface is ideally suited for full-time storage administrators who want complete control over their storage configuration, and part-time system administrators who

*The DCS3700 helps to reduce operational costs as your storage requirements grow. With up to 60 SAS drives in just 4U of rack space, improving storage density for capacity-intensive applications has never been easier.*

need an intuitive interface that helps them ensure optimal storage utilization. And with its industry-unique dynamic capabilities, administrators can support on-the-fly reconfigurations without interrupting storage system I/O.

## Includes VMware and heterogeneous OS support

The DCS3700 storage system offers the scalability, availability and integration necessary to power VMware implementations of all sizes. The heterogeneous OS support provides flexibility to manage a wide range of storage needs. It also includes support for VMware vSphere Storage application program interfaces for Array Integration.

The DS Storage Manager software has fully integrated replication features that allow administrators to choose the method that best meets their data utilization and protection requirements:

- IBM Enhanced FlashCopy® creates near-instantaneous, capacity-efficient, point-in-time volume images which provide logical volume for such uses as file restoration and backup.
- Volume Copy creates a complete physical copy—or clone—of a volume within a storage system. This unique entity can be assigned to any host and used for application testing or development, information analysis or data mining.

- Remote Volume Mirroring, supported across Fibre Channel host ports, provides storage-based data replication from one system to another to ensure data protection. And with features such as multiple mirroring modes, dynamic mode switching, suspend/resume, secondary volume access and cross-mirroring, maximum protection and utilization are ensured.
- Thin provisioning helps to create the appearance of more space disk than is actually available, which helps to consume less space. It offers the flexibility to increase space as data grows.
- Data protection capabilities simplify provisioning, improve rebuild times and provide more consistent performance under failure via selectable disk pooling behind a DCS3700 storage system.

## Supports distributed, enterprise-wide and file-based storage

When combined with the IBM General Parallel File System (GPFS™), the DCS3700 becomes a holistic, policy-driven, shared-disk file management solution that can provide faster, more reliable access to a common set of file-based data. GPFS is designed for advanced business analytics, "big data" or technical computing applications that require application access to very large data files or very large numbers of data files. It's the ideal companion for the DCS3700 storage system.

## Why IBM?

IBM is committed to helping you achieve measurable business value with the right combination of storage products to meet your needs. A market leader in the storage industry, IBM offers innovative technology, open standards, excellent performance and a broad portfolio of storage-proven software, hardware and solutions offerings. Technology and services from IBM help provide an infrastructure for securely managing information, and can open the door to new insights and innovation for your business.

*The IBM legacy in enterprise storage systems, with next-generation 6 Gbps SAS drive technology, delivers best-of-breed technology, reliability and capacity in a very dense form factor, addressing the needs of streaming data, low latency analytics and extreme capacity.*

Before you make your next storage investment, we ask you to compare:

- The breadth of our storage software, hardware and solutions offerings
- Our IT services and support offerings
- Our prices and financing options
- Our quality, reliability and dependability

There is no "one-size-fits-all" solution for your storage environment. The performance and availability of your storage environment can either enhance or hamper your business processes. That's where IBM comes in. As a market leader in the storage industry, we can help you handle the challenges that your network or company, as a whole, encounters.

What is the IBM advantage? You get some of the best storage products, technologies, services and solutions in the industry without the complexity of dealing with different hardware and software vendors, as well as system integrators.

| IBM System Storage DCS3700 at a glance | |
|---|---|
| **Models** | DCS3700 Storage System and DCS3700 Expansion Unit |
| **RAID controller** | Dual-active, intelligent controllers |
| **Cache per controller** | 4 gigabyte (GB) cache (2 GB per controller) with field or plant upgrades to 8 GB (4 GB per controller) |
| **Host interface** | • Two 6 Gbps SAS host ports per controller standard with the option to add a daughter card with additional connectivity<br>• Four 8 Gbps Fibre Channel ports per card (includes eight 8 gigabits (Gb) shortwave small form-factor pluggable transceivers) |
| **Drive interface** | One 6 Gbps SAS drive interface |
| **Supported drives** | 6 Gbps SAS 3.5-inch drives:<br>• 2 TB 7.2k rpm Nearline (NL)<br>• 3 TB 7.2k rpm NL<br>• 6 Gbps SAS 2.5-inch drives:<br>• 300 GB 15k rpm<br>• Solid state SAS 2.5-inch drives:<br>• 200 GB SSD<br>• 400 GB SSD |

### IBM System Storage DCS3700 at a glance

| | |
|---|---|
| **RAID levels** | RAID levels 0, 1, 3, 5, 6 and 10 |
| **Storage partitions** | Eight partitions standard with upgrade options (16, 32, 64 and 128) |
| **Maximum drives supported** | Up to 180 drives per system with the attachment of two DCS3700 Expansion Units (60 drives per enclosure)<br>20 drives minimum drive quantity per enclosure* |
| **Fans and power supplies** | Two each per enclosure |
| **Rack support** | Slim 4U, 19-inch rack mount enclosure |
| **Management software** | DS Storage Manager |
| **Warranty** | One-year warranty. On-site service 24 hours per day, 7 days a week, 4-hour average and same-day response |
| **Size** | Fits in a standard 1,000 mm cabinet (32-inch maximum depth) |
| **Environment** | Operating temperature range: 10°C to 40°C (50°F to 104°F) |
| **Heat output** | 4,030 BTUs per hour |
| **Supported systems** | IBM System x servers, BladeCenter and Power Systems<br>Operating systems supported: Apple Macintosh, Solaris (W-SAS Single Drive), Linux, IBM AIX®, Microsoft Windows |

| Features | Benefits |
|---|---|
| **Supports up to sixty 3.5-inch nearline SAS drives in just 4U** | Achieves great capacity per rack and density per floor tile with support for up to 45 TB per U |
| **Unrelenting performance** | Meets the demands of high-performance computing and streaming media environments |
| **Front-load, 12-drive drawers which can be extended while drives remain active** | Offers superior serviceability and easy installation or replacement of individual drives |
| **Supports up to 180 drives with two additional DCS3700 Expansion Units** | Meets the most demanding data growth requirements |

## For more information

To learn more about the IBM System Storage DCS3700, please contact your IBM representative or IBM Business Partner, or visit the following website:
**ibm.com**/systems/storage/disk/dcs3700

To learn more about GPFS, the robust clustered file management solution from IBM, visit the following website:
**ibm.com**/systems/software/gpfs

Additionally, IBM Global Financing can help you acquire the IT solutions that your business needs in the most cost-effective and strategic way possible. We'll partner with credit-qualified clients to customize an IT financing solution to suit your business goals, enable effective cash management, and improve your total cost of ownership. IBM Global Financing is your smartest choice to fund critical IT investments and propel your business forward. For more information, visit:
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