



## EMC Disk Library 4000 Series

**Faster backup and restore, improved service levels, compatible with existing backup infrastructure, energy-efficiency, and data de-duplication**

### The easiest way to improve backup and restore

IT organizations face more-stringent requirements for service levels and response times. Traditional tape-based solutions are no longer adequate for fast-growing backup and restore environments and their new requirements. Changing existing processes and applications is complex and can be expensive.

EMC offers three disk library models to meet these challenges: the DL4106, DL4206, and DL4406. As the most-established disk library for open systems, EMC<sup>®</sup> Disk Library leverages EMC CLARiON<sup>®</sup> CX3 series storage arrays, the EMC Disk Library delivers industry-leading scale, performance, and availability while emulating leading tape solutions. With over three million most-qualified backup environments, EMC Disk Library is a simple-to-deploy and easy-to-use disk-based backup and recovery solution that delivers faster backup and restore and improved service levels compatible with an existing backup infrastructure.

### Performance: faster backup and restore

Volumes of data continue to grow while backup windows and restore-time objectives remain flat or decrease. The EMC Disk Library is the industry's only solution able to sustain performance of up to 2,200 MB/s for a high-performance streaming bandwidth solution. The EMC Disk Library can achieve single backup stream performance of up to 200 MB/s leveraging the proven UltraScale<sup>™</sup> architecture and UltraPoint<sup>™</sup> technology to achieve superior performance in receiving, restoring, and moving data.

The EMC Disk Library also leverages hardware compression which lowers the usable capacity cost by compressing the backup data with a 2:1 rate scale to over 1 PB of usable protected capacity—maximizing throughput to over 11 TB per hour backup performance. Compared with tape, a disk's random-access nature delivers an orders-of-magnitude benefit in restore and recovery times. Restore operations that once took hours or even days, now take only minutes or seconds.

### Data de-duplication option: high-density storage and lower replication costs

The new EMC 3D 4000 is an add-on option for new and installed DL4000s. The EMC 3D 4000 combines with any of the DL4000 series platforms to reduce capacity requirements, making storing backup data on disk more economical and allowing de-duplicated data to be replicated with less bandwidth. DL4000 performance is maintained by performing the de-duplication by policy after backup. It provides replication for offsite protection and since it's replicating de-duplicated data, it saves on bandwidth consumption. The EMC 3D 4000 is managed from a single console within the DL4000 interface, making it easy to establish de-duplication policies for both local and remote systems.

### The Big Picture

- Enables disk-based backup and restore without changing current operations or backup infrastructure
- Emulates leading open systems tape libraries, tape drives, and tape media for simple deployment and implementation
- Data de-duplication option for new and installed systems provides high-density storage and lowers replication costs
- Power savings with drive spin down option and low-power drives
- Delivers up to 300 percent faster backups and up to 200 percent faster recoveries than traditional tape-based solutions
- Offers superior end-to-end and aggregate sustained performance up to 2,200 MB/s
- Consolidated Media Management through integrated backup applications including EMC NetWorker<sup>®</sup> and NetBackup customers
- Provides flexible configuration options with support of up to 256 tape libraries, 2,048 tape drives, and 128,000 cartridges within a single disk library system
- Enables management of up to eight systems into one group and setting consolidated policies
- Leverages proven EMC UltraScale<sup>™</sup> architecture and high-availability UltraPoint<sup>™</sup> design with RAID data protection
- Leverages ATA disk technology and offers optional 2:1 data compression (software and hardware) for a lower cost-per-gigabyte, price competitive solution

## Scalability: industry-leading, high-end disk library

EMC Disk Library can hold the equivalent of multiple petabytes of cumulative, traditional backup capacity by adding the 3D 4000 option for de-duplication. The combination of high-capacity arrays, 1 TB SATA drives, hardware compression, and data de-duplication allows customers to store petabytes of data on disk. This provides the scale, performance, and unique software capabilities for customers looking for the highest level of reliability for their backup operations. By supporting up to 256 emulated virtual tape libraries, 2,048 virtual tape drives, and up to 128,000 virtual tape cartridges, EMC Disk Library provides new levels of scalability for larger arrays.

## Energy efficiency: lower power consumption with spin down and low-power drives

EMC Disk Library offers the option to lower disk-related power consumption with the drive spin down option and new low-power 1 TB SATA drives. The spin down option provides the ability to put all the drives in a LUN in “sleep mode” if they are idle for a specific amount of time. By utilizing the spin down option, you can be assured that during time of non-operation the Disk Library will consume less power. And since the low-power 1 TB SATA drives spin at 5,400 RPM, they consume less energy than higher speed disks. Combining the spin down option and low-power drives can reduce power and cooling requirements by up to 47 percent.

## Availability: high availability comes to secondary storage environments

IT departments are faced with a number of availability challenges when dealing with tape drives and tape media. The EMC Disk Library leverages the high availability and data protection designed into the UltraScale architecture to address these issues. The EMC Disk Library provides several important features:

- UltraPoint storage features a high-availability design with no single points of failure.
- RAID 6 protection ensures that a disk failure does not cause data availability issues.
- Dual-engine active-failover capabilities ensure an increased level of availability for mission-critical environments.

## EMC Disk Library Management Platform

### No changes: easy implementation and deployment

The EMC Disk Library’s tape emulation functionality allows the disk-based solution to appear as existing tape libraries and tape drives to the backup application. No retraining of operators or expensive software changes and upgrades are required. A simple GUI, combined with wizards, helps the user configure the libraries and drives to be emulated. These emulated libraries, drives, and cartridges can be allocated or deleted dynamically.

### Single point of management of DL capabilities and tape pools

The EMC Disk Library management interface allows you to manage its capabilities from a single point of control, including tape emulation, replication, data de-duplication, spin down, capacity upgrades, group management, consolidated media management, and more.

EMC Disk Library provides the industry’s only consolidated media management designed to allow customers to control their entire tape pool (both virtual and physical) through a single application interface. This solves a challenge in traditional virtual tape deployments where the tape pool is managed by two applications—the virtual tape library software and the backup application. By allowing customers to deploy an EMC Disk Library solution that is under complete control of the backup application, customers can deploy a more efficient model, lower bandwidth costs, and support cloning of virtual tapes to physical tapes locally or over distance.



EMC DL4206 and DL4406 models offer a dual-engine configuration with active failover capabilities—delivering maximum performance and reliability for the most demanding environments.

### **Advanced functionality provides efficient storage utilization and minimal user intervention**

The EMC Disk Library provides the ability to group up to eight systems into one management group and set consolidated policies on access control, systems configurations, storage monitoring, SNMP, and reporting. In addition, EMC Disk Library dynamically allocates storage for backup data as required. Unlike other offerings where storage space is pre-allocated, the need for active management is minimal because the EMC Disk Library intelligently manages the backup capacity requirements. This “on-the-fly” allocation also maximizes the utilization of media, increasing the return on investment (ROI) of the EMC Disk Library.

### **Remote replication provides added security**

Customers have the ability to replicate between any EMC Disk Library model across a number of transports (IP, FC/IP, extended SAN, etc.). Site-to-site replication provides additional security and operational benefits by reducing tape handling.

### **Most qualified backup applications, tape libraries, and drives**

Customers can quickly and easily integrate EMC Disk Libraries into their environment, speeding time to deployment and value. Interoperability and qualification standards set EMC apart and help ensure our customers can deploy EMC Disk Library seamlessly and with as little risk as possible. The process of deployment has been simplified to the point where the majority of installs complete in less than four hours. And because every environment is different, EMC has spent the last three years qualifying over three million backup configurations.

### **Maximize EMC Disk Library benefits with EMC Global Services**

EMC Global Services provides expert plan, build, and management services to ensure that your EMC Disk Library performs optimally in your environment and exceeds your business objectives. Leveraging EMC’s best practices, these services include the Backup-to-Disk Design and Implementation Service which provides expert installation and integration of the EMC Disk Library into your backup environment to ensure the success of your implementation and accelerate the business impact of your investment.

A five-time winner of the SSPA STAR Award for outstanding mission-critical support, the customer service team is made up of more than 4,700 technical and field experts serving customers in over 75 countries. Our experienced Global Services professionals keep your information available 24/7, maximizing uptime commitments you have with your customers. The EMC Disk Library also includes EMC CLARAlert® remote support, which detects hardware or software storage issues, if they were to occur, and proactively notifies the EMC Customer Support Center with necessary information to troubleshoot any alerts.

Ask your EMC sales representative about the full spectrum of services from EMC that can benefit your organization, including strategic consulting services and point and custom solutions—from consolidation of your current resources to a transformation of your environment—to achieve information lifecycle management.



**EMC Corporation**  
Hopkinton  
Massachusetts  
01748-9103  
1-508-435-1000  
In North America 1-866-464-7381  
www.EMC.com

#### **Take the next step**

For more information on the EMC Disk Library and its value to your business operations, contact your EMC sales representative or authorized EMC value-added systems integrator. Or visit our website at [www.EMC.com](http://www.EMC.com).