



DXi Series

Disk Backup and Remote Replication Solutions



The DXi-Series disk backup solutions leverage data de-duplication technology to increase disk capacities 10 to 50 times and replicate data between sites over existing WANs. The DXi Series spans the widest range of backup capacity points in the industry, from 1.2TB to 240TB of raw disk capacity. All models share a common software layer, including de-duplication and remote replication, allowing IT departments to connect all their sites in a comprehensive data protection strategy that boosts backup performance, reduces or eliminates media handling, and centralises disaster recovery operations. The DXi3500 and DXi5500 are easy-to-use disk backup appliances for distributed offices and midrange data centres. The DXi7500 offers enterprise performance and capacity, along with direct tape creation, policy-based de-duplication, and a high availability architecture. All DXi solutions offer simultaneous NAS and VTL interfaces—and all are supported by Quantum, the leading global specialist in backup, recovery, and archive.



DXi-Series replication uses existing WANs for DR protection, linking backup data across sites and reducing or eliminating media handling

DISK BASED BACKUP AND REMOTE REPLICATION

1.2TB TO 240TB SOLUTIONS

DATA DE-DUPLICATION

UP TO 8TB/HOUR PERFORMANCE

VTL AND NAS INTERFACES

MULTI-SITE REPLICATION

FEATURES AND BENEFITS

- Patented data de-duplication technology increases backup capacity of disk by 10 to 50 times
- Remote replication reduces bandwidth needed to move data—provides DR protection on existing WANs, reduces or eliminates media handling
- Broad solution set—from 1.2TB to 240TB raw capacity—protects both distributed sites and large data centres
- Common software layer links all models and interfaces (NAS or VTL) in a comprehensive data protection strategy
- Easy-to-use appliances support distributed and midrange environments
- True Enterprise capability—8TB/hour performance, 240TB capacity, direct tape creation, and high availability architecture—creates a secure, centralised backup system
- Solutions work with all leading backup software, and can be added to easily to existing environments

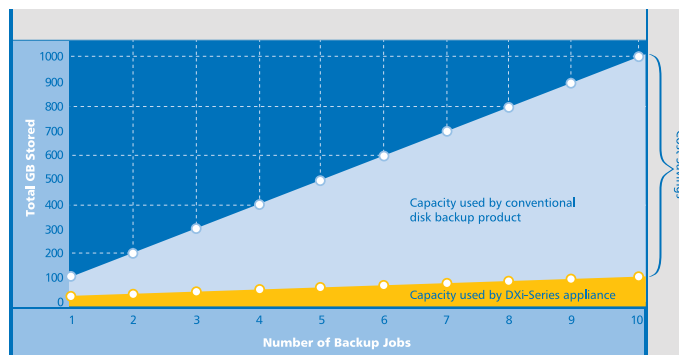
Advanced Data De-duplication Increases Disk Capacity—Preserves High Performance

QUANTUM'S INTEGRATED SOFTWARE LAYER

In developing the DXi-Series appliance family, Quantum leveraged the company's integrated software layer to provide a combination of enterprise performance and industry-leading functionality. This core set of advanced software elements includes patented de-duplication techniques, high performance file-system technology, in-line compression, asynchronous replication, and built-in monitoring, alerting and diagnostic tools. Quantum's integrated software layer provides a foundation for a new generation of intelligent backup, recovery and archive solutions that will improve data protection for a broad range of customer environments from small remote offices to large enterprise data centres.

The DXi series disk backup and replication systems use Quantum's patented data de-duplication technology to dramatically increase the role that disk can play in data protection. With DXi-Series solutions, users can retain 10 to 50 times more backup data on fast recovery disk than with conventional arrays. This advantage allows IT departments to cost-effectively retain months of backup data on disk for faster, more reliable restores and more data recovery points. Quantum's innovative implementation of this core technology means that users do not have to compromise on performance to take advantage of extended retention capability. DXi solutions support both in-line and post-processing de-duplication methodologies—allowing users to realise optimal use of disk resources and achieve the performance (up to 8TB/hour) needed to complete critical jobs during short backup windows.

ADVANTAGE OVER CONVENTIONAL DISK



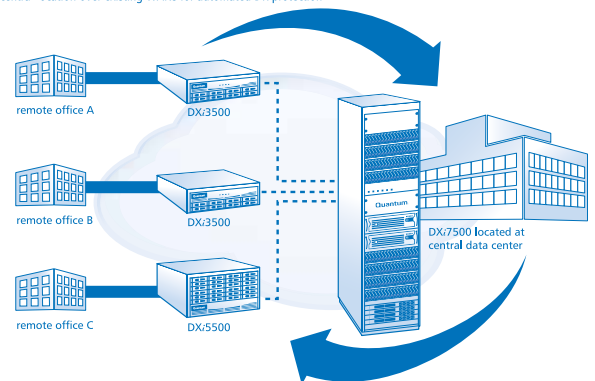
The DXi Series' data de-duplication technology eliminates the need to store redundant data, letting users retain 10 to 50 times more backup data on disk than conventional storage systems.

Remote Replication Links Backup Data Across Multiple Sites

Today most backup occurs on isolated devices, making it difficult to deploy disk backup when disaster recovery protection is required. DXi-Series solutions combine data de-duplication with replication to decrease by 100 times the bandwidth required to move backup data over networks and between sites. This dramatic gain makes it practical and cost-effective for users to replicate backup data over WANs for secure, network-based disaster recovery protection, and it lets users combine rapid, local restores with sound disaster recovery protection.

With DXi-Series replication, users can transmit data from a single site or multiple sites to a central location using any DXi model. DXi-Series replication is an asynchronous, automated background process that includes encryption of data in transit. This model for protecting the distributed enterprise—Quantum's Advanced Distributed Backup Initiative—allows users to combine disk, replication and tape for an optimal combination of performance, simplicity, and security.

Quantum's Replication Technology
Users can transmit data from a single site or multiple sites to a central location over existing WANs for automated DR protection.



DXi3500 and DXi5500: Easy to Install and Manage in Distributed Environments

The Quantum DXi3500 and DXi5500 disk backup solutions make data de-duplication and remote replication easy to install and use in distributed environments and midrange data centres. These integrated appliances offer an intuitive graphical user interface for local and remote management, and provide a choice of presentations that make them easy to integrate into existing backup environments. A backup NAS interface (CIFS or NFS) allows direct connection to any Ethernet network for easy device sharing. For environments where performance is key, a virtual library interface (Fibre Channel or iSCSI) supports SAN backup with all leading ISV applications. Partitioning allows any DXi Series solution to support all of these interfaces at the same time, and replication links them to any other DXi Series solution.



DXi7500: Scalability, Performance, and Enterprise Availability

The DXi7500 is the Enterprise disk backup solution that integrates data de-duplication and replication technology to connect backup and DR protection across distributed corporate environments. The DXi7500 scales to 240TB of raw capacity, and it features 8TB/hour performance, direct creation of physical tape, and an active-active redundant architecture that eliminates all single points of failure. The DXi7500 features policy-based de-duplication, allowing users to select an in-line approach when maximising disk utilisation is most important or post-processing techniques when the highest possible ingest speed is needed. The DXi7500 supports both VTL (Fibre Channel and iSCSI) and NAS (CIFS and NFS) presentations, and its replication links it to any other DXi-Series model over IP networks. The DXi7500 direct tape creation capability writes physical media over dedicated Fibre Channel connections, offloading the user's media servers and backup SAN, and it supports direct tape creation commands issued by backup applications, including Symantec NetBackup 6.5's Direct-to-Tape.



Part of a Comprehensive, Supported Solution from the Leading Backup, Recovery, and Archive Specialist

The DXi-Series solutions represent a major step forward in making disk backup an easily deployed and practical part of a comprehensive data protection strategy. Protecting critical data in distributed sites often requires a combination of approaches and technologies depending on data volume and types, recovery objectives, time constraints, budgets, and long term retention policies. As the leading global supplier of backup, recovery, and archive solutions, Quantum offers a full line of backup solutions, and a team of technical advisors to help users make the right choice for their environment. All of the solutions—whether they are based on disk, replication, tape or a combination of technologies—are supported by Quantum's innovative StorageCare Guardian technology and the industry's premier global service organisation dedicated to backup, recovery, and archive.





MODELS AND CAPACITIES

DXi3500 Disk Backup Appliances				
Models (usable capacity)	1.2TB	1.8TB	2.8TB	4.2TB
Models (raw capacity)	2TB	3TB	4TB	6TB
Retention Capacity @ 20:1*	24TB	36TB	56TB	84TB
Retention Capacity @ 50:1*	60TB	90TB	140TB	210TB

DXi5500 Disk Backup Appliances				
Models (usable capacity)	3.6TB	5.4TB	7.2TB	10.8TB
Models (raw capacity)	6TB	9TB	12TB	18TB
Retention Capacity @ 20:1*	72TB	108 TB	144TB	216TB
Retention Capacity @ 50:1*	180TB	270 TB	360TB	540TB

*Capacities and amount of data protected assume standard business data mix and extended on-disk data retention. 20:1 capacity ratio assumes a weekly full and daily incremental backup model. 50:1 capacity ratio assumes daily full backups. Actual results will vary with data type, change rates, and backup methodologies. Smaller DXi-Series appliances can be scaled in-chassis and on-site to specific larger units: DXi3500 1.2 TB units scale to 2.8 TB units; DXi3500 1.8 TB units scale to 4.2 TB units; DXi5500 3.6 TB units scale to 7.2 TB units; DXi5500 5.4 TB units scale to 10.8 TB units. Data de-duplication is in-line.

DXi7500 Disk Backup Systems	
Models	24TB to 240TB raw capacity
Policy Based Data De-duplication Options:	In-line: data is de-duplicated on ingest Post-processing: data is ingested to disk first, and de-duplicated in a separate process Both methodologies may be enabled for different data sets in the same DXi7500
Direct Tape Creation:	Direct tape creation—physical tape can be written in background over a dedicated Fibre Channel connection without using media server or backup SAN. Function maintains barcode integrity between virtual and physical tapes and is compatible with backup software direct to tape commands (e.g., NetBackup 6.5)
High Availability	Dual main system controllers (active-active) Dual RAID controllers (active-active) Dual redundant power Dual redundant cooling Hot swap drives, power supplies, fans

INTERFACES

NAS Backup Target:	NFS or CIFS
Virtual Library:	Fibre Channel or iSCSI connectivity Different partitions in same appliance can present different interfaces simultaneously

PERFORMANCE	DXi3500	DXi5500	DXi7500
	up to 290GB/hour	up to 800GB/hour	Up to 8TB/hour

REPLICATION

DXi3500, DXi5500 and DXi7500 models all offer support for remote replication. Replication is asynchronous, one-to-one or multiple-to-one configurations; partitions in same unit act as replication source or target; units with partitions acting as replication targets can also support local backup.

HOST TO APPLIANCE H/W INTERFACE

DXi3500/DXi5500:	10/100/1000 BaseT Ethernet, 2 Gb Fibre Channel
DXi7500:	10/100/1000 BaseT Ethernet, 4 Gb Fibre Channel

POWER INPUT	DXi3500	DXi5500	DXi7500
	Power Cord NEMA 5-15P to C13 3 connectors	Power Cord NEMA 5-15P to C13 4 connectors	Power Cord NEMA L6-30P on system 2 - 8 connectors

POWER ENVIRONMENT

Input Voltages:	100 to 240 VAC	110 to 240 VAC	100 to 240 VAC
Rated Frequency:	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz
Rated Current:	4A @ 230 VACx2	5A @230 VACx4	12A @230 VAC x 2

CLIMATIC ENVIRONMENT

Temperature			
Operating:		50° to 95°F	(10° to 30°C)
Shipping & Storage:		-4° to 140°F	(-20° to 60°C)
Relative Humidity			
Operating:		20 to 80% non-condensing	
Shipping & Storage:		15 to 95% non-condensing	
Altitude			
Operating:		0 to 10,000ft (0 to 3,048m)	
Shipping & Storage:		0 to 39,370ft (0 to 12,000m)	

PHYSICAL SPECIFICATIONS

	DXi3500	DXi5500
Width (in/cm)	19 / 48.3	19 / 48.3
Height (in/cm)	3.5 / 8.8 2U	8.75 / 22.2 5U
Length (in/cm)	27 / 68.5	25.4 / 64.5
Weight (lbs/kg)	50 / 22.68	122 / 55.34

DXi7500
24TB unit - 18U
Additional disk shelf 12TB capacity - 3U
240TB unit - 36U in each of two racks



For contact and product information,
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Quantum®

Backup. Recovery. Archive. It's What We Do.

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About Quantum

Quantum Corp. (NYSE:QTM) is the leading global storage company specialising in backup, recovery and archive. Combining focused expertise, customer-driven innovation, and platform independence, Quantum provides a comprehensive range of disk, tape, media and software solutions supported by a world-class sales and service organisation. As a long-standing and trusted partner, the company works closely with a broad network of resellers, OEMs and other suppliers to meet customers' evolving data protection needs.