



DXi7500 Enterprise

Deduplication-enabled disk and remote replication solutions for the data center

The DXi7500 leverages data deduplication to reduce disk and network bandwidth requirements by 90% or more, lowering disk backup costs and making WAN replication a practical DR tool. Designed for data centers and consolidated backup environments, the DXi7500 gives users a choice of deduplication policies and replication strategies, and allows them to automate the integration of tape into their disk backup strategy to combine near-term protection and long-term retention in a single system. With up to 220TB usable capacity and 4TB/hr ingest, the DXi7500's policy-based deduplication gives users the ability to choose different deduplication approaches for different datasets, providing optimal value in the widest range of data protection environments. The DXi7500 supports VTL (Fibre Channel) and NAS (CIFS and NFS) presentations, and can be linked by replication to other disk backup systems leveraging Quantum's deduplication software, allowing it to anchor an enterprise-wide data protection strategy that includes both virtual and physical servers. The DXi7500 reduces costs and improves data protection by streamlining the management of multi-site, multi-tier backup and DR strategies through advanced features, flexible management, and close integration with backup applications, including Symantec™'s Open Storage Initiative.



The DXi7500 Enterprise disk backup system brings deduplication to the data center and provides consolidated protection for multi-site, multi-tier environments.

The DXi7500 offers the capacity, performance, and flexibility needed to anchor an Enterprise-wide data protection strategy that unifies disk, tape, and replication under common management.

KEY BENEFITS

Boosts Backup and Recovery Performance While Managing Costs

- ⓐ Uses patented data deduplication technology to decrease disk requirements by 90% or more
- ⓐ Increases performance and reliability while reducing capital costs and the demands for space, power, and cooling
- ⓐ Lets you choose the right deduplication policy for each specific application or business

Improve and Automate Disaster Recovery

- ⓐ Reduce bandwidth requirements by 90% or more, making remote replication a practical DR tool
- ⓐ Streamline replication through Open Storage API interface
- ⓐ Integrate direct tape creation from disk to combine short-term and long-term protection
- ⓐ Reduce media handling, lower risks and costs

Protect all Your Sites

- ⓐ Bring data deduplication to your Enterprise – up to 4TB/hour performance, 220TB capacity, and policy-based deduplication
- ⓐ Unify backup across multiple sites and backup tiers
- ⓐ Deploy common technology from 1TB to 220TB usable capacity

VM Ready

- ⓐ Powerful deduplication for virtual servers
- ⓐ Automated DR via leveraged replication
- ⓐ Consolidates protection for virtual and physical servers
- ⓐ Includes Quantum esXpress Backup for VMware

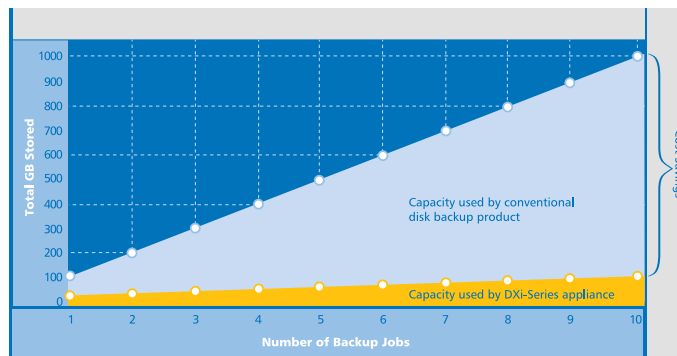
Advanced Data Deduplication Increases Disk Capacity—Preserves High Performance

QUANTUM'S COMPREHENSIVE DATA PROTECTION STRATEGY

All DXi-Series solutions are connected by a common technology base, replication interoperability, and management layer. For the first time, users can connect all their sites in a comprehensive data protection strategy that boosts performance and reduces media handling—all without changing their existing backup applications or re-architecting their network infrastructure. Quantum's approach 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 centers.

The DXi7500 uses Quantum's patented data deduplication technology to dramatically increase the role that disk can play protecting both virtual and physical servers. With DXi-Series solutions, users can reduce capacity requirements for disk by 90% or more and make WAN-based remote replication of backup data a practical tool for disaster recovery protection. 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. The DXi-Series policy-based deduplication option gives users the ability to choose different deduplication approaches for different data sets, providing business benefits for the widest possible range of data protection environments.

ADVANTAGE OVER CONVENTIONAL DISK

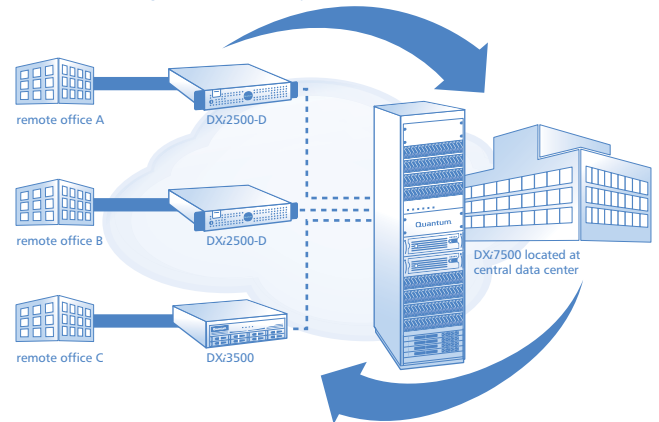


The DXi7500's data deduplication technology eliminates the need to store redundant data, letting users reduce capacity requirements for disk by 90% or more than conventional storage systems.

Remote Replication Links Backup Data Across Multiple Sites for Automated DR

Today most backup occurs on isolated devices, making it difficult to deploy disk backup when disaster recovery protection is required. Quantum's data deduplication technology makes replication of backup data practical and cost effective by dramatically reducing the bandwidth needed to move backup datasets between sites, giving disk backup an automated DR protection component and reducing the need to manage removable media. With the DXi7500, replication is an asynchronous, automated background process that includes a flexible set of options, including encryption of data in transit, scripting, scheduling, deduplication of data prior to transmission, and immediate file-by-file data availability. Application-aware operation—both for replication and for direct tape creation—is provided through support for the Symantec Open Storage API (OST).

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.



DXi7500 Enterprise

Policy-Based Deduplication: Expanding the Business Benefits of Deduplication

Selecting a deduplication system used to mean limiting yourself to a single deduplication approach. If you decided to deduplicate while backup data was being ingested (like conventional in-line approaches), you minimized disk use but risked slowing down the backup. If you ingested first and deduplicated later—in a post process—the backup window stayed short and recovery times improved but extra disk space was needed. The DXi7500 is the first deduplication system with policy-based deduplication, allowing users to choose different deduplication modes on a partition-by-partition or time of day basis so they can match the right technology to their business needs. The DXi7500's policy based deduplication was designed specifically to make disk backup work more effectively in Enterprise environments by allowing a single system to provide optimal performance and economy with the widest possible range of backup needs.



	Small to Midrange	Midrange to Large	Varied, Rich Media
TYPICAL JOBS	Email, file shares, etc.	OLTP, VM's, etc.	Graphics, encrypted data, etc.
WHEN TO DEDUPE	During window	Outside window	Not at all
ADVANTAGES	Lowest disk use	Shortest window, fastest recovery	Highest raw ingest; 2:1 compression
DISADVANTAGES	Overhead in window	Reserved landing area	No deduplication

Part of a Comprehensive, Enterprise DR Strategy from the Leading Backup, Recovery, and Archive Specialist

The DXi7500 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 across virtual and physical server resources often requires a combination of approaches and technologies depending on data volume and types, recovery objectives, budgets, and long term retention policies. The DXi7500 makes it easy for users to create a single, integrated data protection system that combines disk backup for high performance access to near term data with remote replication and physical tape creation for automated DR and secure, economical long term retention. Providing management for all these resources and operations is Quantum Vision™, management software that provides a single-console view of a user's global backup infrastructure, including both disk and tape systems. Vision's advanced reporting gives users easy-to-read summaries and scheduled reports that include deduplication statistics, replication, reduction and capacity utilization trend analysis. Finally, the DXi7500 is supported, along with Quantum's iLayer libraries, by StorageCare™ Services, providing proven, comprehensive service for your entire data protection environment.



Quantum Vision allows you to manage and monitor all your disk, tape and replication solutions from a single console.



INTERFACES

Multiple interfaces supported in single unit simultaneously

NAS Backup Target:	NFS or CIFS mount point
VTL (Fibre Channel):	
Partitions (max):	64
Drives (max):	160
Virtual Cartridges (max):	30,000
Emulations Libraries:	ADIC Scalar 24, Scalar 100, Scalar i500, Scalar i2000 ; ATL P7000 ; Quantum M2500, PX500 Series
Emulations Drives:	DLT7000, SDLT 320, SDLT 600, SLT-S4, LTO-1, LTO-2, LTO-3, LTO-4

PERFORMANCE

Adaptive Mode:	up to 1.8TB/hour
Deferred Mode:	up to 3.2TB/hour
Native VTL (no dedupe):	up to 4TB/hour (assumes 2:1 compression)

SYSTEM REDUNDANCY

RAID 5 and RAID 6 with hot spare, Redundant power, Redundant cooling, Hot swap drives, power supplies, fans

HOST TO APPLIANCE H/W INTERFACE

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

POWER INPUT

DXi7500: Power Cord NEMA, L6-30P on system, 2-8 connectors

POLICY-BASED DEDUPLICATION

Adaptive Mode:	For most efficient disk usage (deduplicates during ingest)
Deferred Mode:	For shortest backup window and fast restore (post processing)
Native VTL/NAS Mode:	Fastest backup and restore for specialized datasets

REPLICATION

Replication compatible with all DXi-Series products. 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; data is deduplicated and encrypted prior to transmission; cartridge-by-cartridge and file-by-file replication provides automated access to data at the target; CLI support scripting/scheduling. Provides application-aware replication with NetBackup OST interface.

OST SUPPORT

Symantec OpenStorage (OST) API Support

Support for OST is an option for all DXi7500 units, allowing users to write data to OST logical storage units (LSUs) and enabling application-aware replication. DXi-Series units with direct tape path capability (including DXi7500 models) support the OST direct path to tape introduced in NetBackup 6.5.4.

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. For VTL interface, the function maintains barcode integrity between virtual and physical tapes and is compatible with backup software direct to tape commands (e.g., NetBackup, EMC Networker, Oracle Secure Backup, and Atempo TimeNavigator). Shadow tape creation supported for automated creation of physical media with applications, including Bakbone NetVault, CA ARCserve, CommVault Galaxy, HP Data Protector, IBM TSM, and Symantec BackupExec. DXi7500 units also support direct to tape operation under Symantec's OST initiative—creating tape copies directly from OST LSU data without using a media server to move data but under NBU control. OST direct tape creation is also compatible with application aware replication.

SCALABILITY

18TB to 220TB usable capacity for DXi7500 Enterprise models, depending on configuration. In addition, field upgrades from DXi7500 Express units to the full DXi7500 Enterprise disk backup systems are available. All disk is retained and all data is preserved during all capacity upgrades.

POWER ENVIRONMENT

Input Voltages:	100 to 240 VAC
Rated Frequency:	50 to 60 Hz
Rated Current:	8.5A @ 200VAC

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

Rack units:	18U for base system. Each additional expansion disk shelf is 3U. Fully expanded system uses 40U in each of two racks.
Dimensions:	
DXi7500 Racked System:	24 in (W) × 80.32 in (H) × 43.6 in (D)
DXi7500 Non-Racked System:	24 in (W) × 31.5 in (H) × 43.6 in (D)

VM READY

Consolidates backup for virtual and physical servers in one system. Includes Quantum esXpress Backup for VMware.



For contact and product information,
visit quantum.com or call 800-677-6268

Quantum®

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

©2009 Quantum Corporation. All rights reserved. Quantum, the Quantum logo, and all other logos are registered trademarks of Quantum Corporation or of their respective owners. Protected by Pending and Issued U.S. and Foreign Patents, including U.S. Patent No. 5,990,810.

About Quantum

Quantum Corp. (NYSE:QTM) is the leading global storage company specializing 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 organization. This includes the DXi™-Series, the first disk backup solutions to extend the power of data deduplication and replication across the distributed enterprise. 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.