

Announcing DXi6500: Disk-based NAS Backup Appliances with OST, Replication and VMware Backup Software

This announcement describes the DXi6500 family of disk backup appliances. The DXi6500 is designed to provide easy-to-deploy protection for midrange data centers and distributed office locations. This Announcement provides details about the DXi6500, including key messages, features and benefits, target markets, product specifications and more. Additional details including product model numbers and pricing will be provided in a subsequent Marketing Announcement expected to be published 02NOV09.

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Introduction

The DXi6500 is a family of scalable disk backup appliances designed to provide a better disk backup solution by making the most advanced technology both affordable and easy to use. The DXi6500 models leverage the latest deduplication technology—along with Solid State Disk, advanced connectivity options, seamless scalability, direct tape creation, VM-ready design, and OST support—in a family of five preconfigured appliance models that are easy to select and use. Its disk-to-disk speed and deduplication technology is presented over a NAS interface that makes it easy to deploy with all leading backup applications, and simple to install and share between different servers in any Ethernet environment. The result is improved protection that leverages existing infrastructure for fast return on investment.

Key Product Messages

- Family of five pre-configured backup appliances from 8TB to 56TB usable capacity
- Customer and channel partner installable
- Simple NAS interface for all models
- Up to 2TB/hour performance
- All software included: deduplication, replication, OST, esXpress™ for VMware
- 10GbE interface available (DXi6550)
- Not available with VTL support

Field Action

The information in this document can be communicated internally within Quantum and to the channel. The list of documentation sources available for this solution can be shared with channel partners. List and channel pricing for DXi6510 and DXi6520 items will be provided in the *Quantum Price Book*, revision 51 also expected to be published in early November, 2009. Items, prices and a configurator are expected to be available in Quantum Marketplace as of early November, 2009 as well.

Special Considerations

The DXi6500 is targeted at midrange data centers that want an economical, easy-to-use disk appliance that can simplify backup with any backup software and reduce typical disk requirements by 90% or more. All systems offer a NAS interface to simplify configuration, deployment, operation, and sharing. It is designed for IP-attached environments, where customers may want to easily connect their offices via replication for disaster recovery (DR) protection. Replication features include simple scheduling and file-by-file operation with automated access to data at the replication target. The DXi6500 can be a preferred data center replication source or target for the DXi2500-D or DXi7500. Full support for Symantec's OpenStorage API (OST) provides application-aware replication—the DXi moves data, leveraging deduplication to reduce network bandwidth requirements, but management is carried out automatically through the execution of NetBackup policies. DXi6500 also features direct-to-tape capability in OST, allowing NetBackup users to integrate direct tape creation for secure long-term retention into their disk-to-disk environment under control of the backup application.

Product Description

Overview

The DXi6500 is a family of pre-configured disk backup appliances that provide simple and affordable solutions for user backup problems. They provide disk-to-disk backup and restore performance with all leading backup applications using a simple NAS interface, and they leverage deduplication technology to reduce typical capacity requirements by 90% or more to reduce costs. For DR protection, the DXi6500 models replicate encrypted backup data between sites using global deduplication to reduce typical network bandwidth needs by a factor of 20 or more. Direct tape creation is a Series feature with support that includes the Symantec OpenStorage (OST) API. The DXi6500 is VM-ready, providing powerful protection for virtual environments as well as for conventional servers, and it includes backup software for VMware with every unit. With the DXi6500, IT departments improve protection, centralize management, and reduce overall costs.

Key Features

The DXi6500 product includes the following key features:

- Scalable usable capacity from 8TB to 56TB
- Up to 2TB/hr adaptive ingest performance
- SSDs turbo charge performance
- RAID 6 increased protection
- Deduplication and replication occur during ingest
- NAS (CIFS/NFS) host support
- Symantec Open Storage (OST) support
- Direct-to-Tape using OST
- VM-ready: Includes esXpress VMware backup application
- Simplified licensing with all software (deduplication, replication, OST, and VMware backup software) included in the base price of all units
- Quantum Vision™ support for common management across disk and tape

Usable Capacity

The DXi6500 models are designed to protect sites with a wide range of capacities—from approximately 2TB to more than 30TB of primary data per site, assuming average growth rates, standard business applications and conventional backup scenarios. In those scenarios, the DXi6500 can be expected to retain up to two years of backups on disk and to provide off-site protection by replicating the backup data to a central DXi7500 or another DXi6500, where DR protection, tape creation, and long-term retention can be consolidated.

2TB/hr Ingest Performance

DXi6500 ingest performance with adaptive deduplication (i.e., the speed of ingest when running concurrent with deduplication) is up to 2TB/hour (555MB/sec).

SSD Turbo-charging

DXi6500 offers Solid State Drive (SSD) technology, which is used for a portion of the DXi system's internal storage to accelerate deduplication. SSDs are present in the system node as well as each expansion module, so performance scales with capacity in a cost-effective manner.

RAID 6 Protection

DXi6500 offers standard RAID 6 for the primary DXi storage capacity, providing protection against simultaneous fault conditions in two disk drives in the same RAID set. Each DXi6500 system node and expansion module chassis has one RAID 6 set (8 + 2).

Replication with Deduplication

DXi6500 supports DXi replication, as well as OpenStorage (OST) application-aware replication. Only unique blocks are transmitted, reducing network bandwidth requirements to make conventional WANs practical for DR. Data is automatically encrypted during transmission and decrypted at its destination to provide maximum security.

NAS (CIFS/NFS) Host Support

DXi6500 supports both CIFS and NFS NAS presentations, simplifying installation and configuration, and allowing the system to support a wide range of different environments.

Symantec OST Support

DXi6500 supports Symantec's OpenStorage API (OST) for NetBackup v6.5.3 and later versions. OST gives NetBackup customers application-aware replication, where the DXi systems replicate data between units directly but where management and tracking is provided by NBU. Symantec has announced plans to extend the OST API to BackupExec in early 2010.

OST Direct-To-Tape support

As of NetBackup 6.5.4, OST provides a direct tape creation feature that Quantum DXi6500 systems support, delivering seamless disk-to-disk-to-tape (D2D2T) operations managed by a single pane of glass. Symantec has announced plans to extend the OST API to BackupExec systems in early 2010.

VM-ready

Quantum's DXi deduplication solutions provide a powerful way of solving common backup problems associated with virtual environments. DXi solutions provide very high deduplication rates in virtual environments, allow users to combine backup

for virtual and physical servers in a single system. The DXi6500 systems include a certificate for one free copy of esXpress Professional edition backup software for use with a VMware ESX server. Each license allows up to four Virtual Backup Appliances to be created as required on a VMware ESX server for simple, scalable backup of virtual machines.

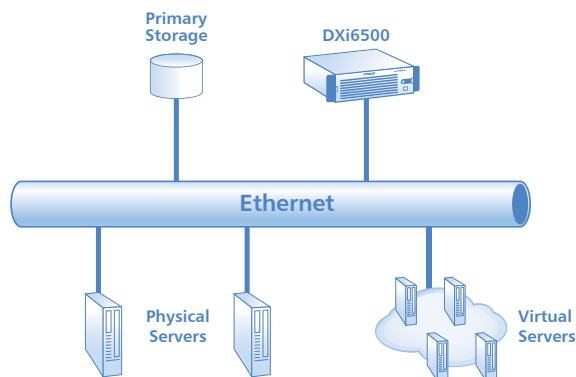


DXi6500

Easy-to-deploy disk backup with deduplication and replication

For many IT departments, traditional backup has not kept up with the need for faster performance and trouble-free restore. Disk-to-disk systems, which can increase backup speed and reliability, fill up too quickly, hold too few recovery points, and do not offer a practical DR solution. The ideal backup solution, IT departments are often told, will require major infrastructure changes, complex integration, and high costs.

The DXi6500 from Quantum offers a different kind of solution—it solves even complex backup problems simply and affordably by integrating the most advanced storage technology into a simple, pre-configured solution that includes all software licenses in the base price. The DXi6500 is a family of easily shared backup solutions that give disk-to-disk backup and restore performance with all leading backup applications using a simple NAS interface. The DXi6500's deduplication technology reduces typical disk capacity needs by 90% or more so systems stop filling up—and it scales easily without a service visit, providing effective investment protection. For DR protection, the DXi6500 replicates encrypted backup data between sites, using global deduplication to reduce typical network bandwidth requirements by a factor of 20 or more. For long term retention, the DXi6500 is designed to provide direct tape creation in conjunction with leading backup applications, including Symantec applications using the OpenStorage (OST) API. The end result is multi-site, multi-tier protection that is easy to manage both for near-term restore and long-term retention. The DXi6500 is VM-ready, providing powerful protection for virtual environments as well as for conventional servers, and it includes backup software for VMware with every unit. With the DXi6500, IT departments improve protection, centralize management, and reduce overall costs.



DXi6500 is a family of easily-deployed, affordable network-attached disk backup appliances with data deduplication that provide simple solutions to backup problems.

The new DXi6500 network-attach disk backup appliance family solves difficult backup and retention problems simply and affordably.

KEY BENEFITS

Boosts Backup and Recovery Performance While Reducing Costs

- 🔧 Uses patented data deduplication technology to reduce typical disk usage by 90% or more
- 🔧 Provides disk to disk performance while reducing acquisition costs and on-going management
- 🔧 Simple NAS interface makes system easy to deploy and operate

Improve and Automate Disaster Recovery Protection

- 🔧 Reduce typical bandwidth requirements by more than 90%, making remote replication a practical DR tool
- 🔧 Reduce media handling, lower costs, and mitigate risk
- 🔧 Full support for Symantec OpenStorage (OST) API gives end-to-end protection across sites for both disk and tape

Simple and Affordable Protection

- 🔧 Five pre-configured models, including all software licenses, make it easy to meet user needs
- 🔧 User installable and user scalable design reduces costs
- 🔧 Works with all leading backup software and your existing infrastructure to provide high return on your investment

VM Ready Design

- 🔧 Powerful deduplication for virtual servers
- 🔧 Automated DR using leveraged replication
- 🔧 Consolidated protection for virtual and physical servers to reduce cost and complexity
- 🔧 Includes Quantum esXpress™ backup software for VMware

Simple Solutions to Difficult Backup Problems

The DXi6500 is a family of disk backup appliances designed specifically to provide a better disk backup solution by making the most advanced technology both affordable and easy to use. The DXi6500 models leverage the latest deduplication technology—along with Solid State Disk, advanced connectivity options, seamless scalability, and direct tape creation—in a family of five preconfigured appliance models that include all the software licenses you need—replication, OST, and VMware backup software—making them easy to select and use. Its disk-to-disk speed and deduplication technology is presented over a NAS interface that makes it easy to deploy with all leading backup applications and simple to share between different servers in any Ethernet environment. The result is improved protection that leverages existing infrastructure for fast return on investment.

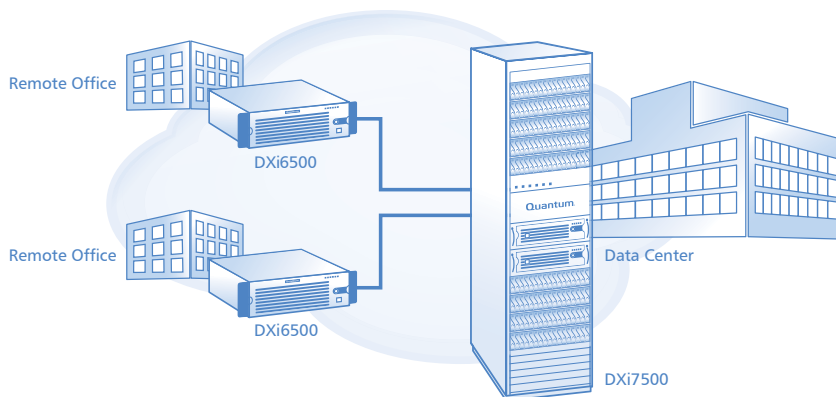
BACKUP PROBLEM	DXi6500 SOLUTION
Meeting backup and recovery windows	Disk performance and reliability
Backing up distributed offices	Simple NAS interface, remote replication
High backup costs	Reduced media use, fast return on investment
Running out of capacity	Deduplication reduces disk need by 90%
Rapid data growth	Systems scale simply, without a service visit
Backing up virtual servers	VMready design, includes backup software for VMware
Offsite security and DR	Encrypted replication, reduced removable media

Deduplication Reduces Disk Capacities and Lowers Costs

Conventional disk backup fills up rapidly, increasing costs and forcing users to migrate or expire data. Quantum’s proven deduplication technology dramatically reduces disk capacity requirements by using small reference pointers to replace the redundant data blocks inside backup datasets. This technology, which Quantum pioneered, makes disk backup more affordable and lengthens retention time. Deduplication—which typically reduces the disk needed to store backup data by 90% or more—allows IT departments to cost effectively retain backups on disk for extended periods, providing faster restores and increased recovery points. Quantum’s deduplication technology provides ROI value for the widest variety of business data—data bases, email, user share data—it protects data on both physical and virtual servers, and it works effectively with all leading backup software applications to provide rapid return on user investment. DXi® customers report high rates of savings—in a recent survey users reported that on average they reduced offsite vaulting costs by 32%, cut media purchase expenses by 48%, and spent 63% less time managing backup.

Replication Provides Automated, LAN-based DR Protection

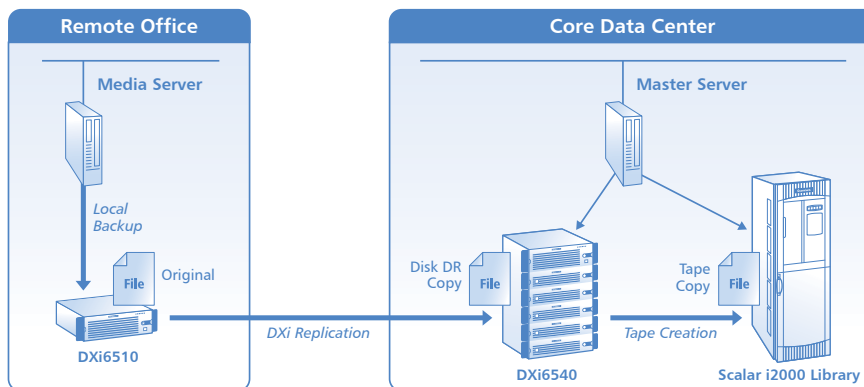
DR protection for distributed sites is a persistent IT problem. Managing removable media across multiple remote sites is expensive, time consuming, and error-prone. Traditional disk-to-disk systems don’t offer an effective solution since backup volumes are too large to allow replication for most users. Quantum’s data deduplication technology makes remote replication a practical and cost effective tool for DR protection by dramatically reducing the bandwidth required to move backup data over networks. Offsite copies of backup sets are created automatically by DXi systems and copied to DR centers, letting users reduce or eliminate the need to manage removable media. The DXi-Series makes replication an easy, lights-out background operation that automatically includes advanced features such as global deduplication, encryption of transmitted data, and support for Symantec’s OST API as part of a fully integrated, application-aware process.



Replication of backup data provides DR over WAN connections, reducing use of removable media and lowering costs.

Integration with Leading Backup Software

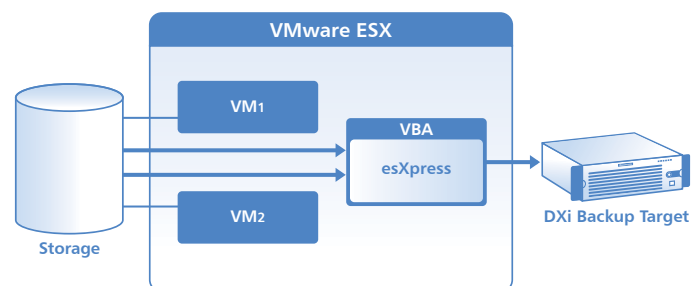
The DXi6500 integrates smoothly with all leading backup software, allowing users to solve their backup problems easily and economically without changing their existing architectures or procedures. The DXi6500's support for Symantec and its OpenStorage API (OST) provides a good example. The integration allows customers to set policies in NetBackup that initiate copying data between different sites and creating physical tape from data on disk. The actual data movement, however, instead of going through the media servers, is sent directly from one DXi system to another and directly from a DXi system to a tape library. Users have all the advantages of the DXi's deduplication, replication, and direct tape links, but they control the entire process simply and automatically from their backup application which also provides a central catalog for all the data.



Close integration with backup applications means reduced complexity for users. The DXi6500 works with NetBackup's OpenStorage API, for example to let users automatically manage data on disk and tape across sites using NetBackup policies. Data is moved by DXi systems—initiation, management, cataloging is through NetBackup.

VM-ready Design – Better Protection for Virtual Environments

Virtual environments create unique data protection problems. Installing traditional backup agents on virtual servers creates bottlenecks because multiple processes all use the same physical resources so all operations slow down. Compounding the problem is the fact that backup volumes are increased because redundant OS and application data is spread across many virtual servers. The most commonly recommended backup solutions use extra physical servers, require cumbersome management, and fail to provide offsite protection. The DXi6500's deduplication dramatically reduces disk use in virtual environments—typical data reduction results are greater than 95%—and its replication capability provides automated DR protection. For users that want an alternative to traditional agents, the DXi6500 appliances include Quantum's esXpress—backup software for VMware that dynamically creates virtual servers for backup, providing fault-tolerant backup and restore without use of a proxy server, and with minimal impact to VM server, console, and network performance.



DXi systems reduce user costs by creating high reduction rates—typically 95% or higher—in virtual server environments. DXi systems all include Quantum esXpress Backup for VMware, set-and-forget software that leverages the virtual environment itself.

Quantum Delivers Value

The DXi6500 products are part of a comprehensive family of solutions from Quantum, a global leader in backup, recovery, and archive that has been providing independent guidance to end users for more than two decades. When customers select a Quantum solution—whether it's data deduplication, replication, tape libraries, storage management software, or our storage consulting services—users know that along with innovative technology they can count on one of the industry's most experienced teams for advice before a sale and service after a purchase is made. For users concerned about controlling costs, Quantum's ROI analysis services help users save money by showing them how they can implement an optimal mix of protection technologies and architectures.



DXi6500 Family of Disk Backup Appliances



Model	DXi6510	DXi6520	DXi6530	DXi6540	DXi6550
Capacity (usable)	8TB	8TB - 32TB	24TB - 56TB	24TB - 56TB	24TB - 56TB
Connectivity	2 × 1GbE	6 × 1GbE	6 × 1GbE	6 × 1GbE	2 × 1GbE, 2 × 10GbE
Configuration	System node	System node + up to 3 expansion modules	System node + up to 6 expansion modules	System node + up to 6 expansion modules	System node + up to 6 expansion modules
Highlights	Most affordable midrange dedupe appliance.	Scales to 32TB, with increased connectivity.	Scales from 24 to 56TB.	Scales from 24 to 56TB, and provides direct path to tape (2 × 8Gb FC).	Scales from 24 to 56TB, provides direct path to tape (2 × 8Gb FC), and 10GbE connectivity.

INTERFACES

Multiple interfaces supported in single unit simultaneously
NAS Backup Target: NFS and/or CIFS mount point
OpenStorage (OST) API: Symantec Storage Servers and Logical Storage Units (LSU)
Shares (max): 128

PERFORMANCE

In-line Adaptive Operation: up to 2.0TB/hour

STANDARD SOFTWARE INCLUDED

The base price of all DXi6500 models includes deduplication, replication, OST support, and esXpress™ backup software for VMware.

SCALABILITY STANDARD

8TB to 56TB usable capacity for DXi6500 models, depending on configuration. All systems scale on site without requiring a service visit by adding 8TB expansion modules. All disk is retained and all data is preserved during all capacity upgrades.

REPLICATION INCLUDED FOR ALL UNITS

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; file-by-file replication provides automated access to data at the target; CLI support scripting/scheduling. Also included is application-aware replication with NetBackup OST interface.

OPENSTORAGE (OST) SUPPORT INCLUDED FOR ALL UNITS

Support for OST is included on all DXi6500 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 (DXi7500, DXi6540 and DXi6550 models) support the OST direct path to tape introduced in NetBackup 6.5.4.

DIRECT TAPE CREATION INCLUDED (DXi6540 AND DXi6550)

Direct tape creation—physical tape can be written in background over a dedicated Fibre Channel connection without using media server or backup SAN. DXi6500 units 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.

HOST INTERFACES

Host-to-Appliance Hardware Interface: Up to six 10/100/1000 BaseT Ethernet ports
 Up to two 10GbE CX4 Ethernet ports
Path-to-Tape Hardware Interface: Two 8Gb Fibre Channel ports for direct path-to-tape (DXi6540, DXi6550)

ELECTRICAL PER CHASSIS

Power Input: NEMA 5-15P to C13 power cord
Input Voltage: 100 to 240VAC, 50-60Hz
Rated Current: 10A @100V, 4A @240V
Power Consumption: System node: 570W
 Expansion module: 230W

SYSTEM NODE PHYSICAL CHARACTERISTICS

Dimensions: 17.2 in (W) × 5.1 in – 3U (H) × 25.5 in (D)
 43.7 cm (W) × 13.2 cm – 3U (H) × 64.8 cm (D)
Weight: 125 lbs (32.7 kg)

EXPANSION MODULE PHYSICAL CHARACTERISTICS

Dimensions: 17.2 in (W) × 3.5 in – 2U (H) × 25.5 in (D)
 43.7 cm (W) × 8.9 cm – 2U (H) × 64.8 cm (D)
Weight: 75 lbs (23.6 kg)

CLIMATIC ENVIRONMENT

TEMPERATURE
Operating: 50° to 95°F (10° to 35°C)
Shipping & Storage: -40° to 158°F (-40° to 70°C)
RELATIVE HUMIDITY
Operating: 20 to 80% non-condensing
Shipping & Storage: 5 to 95% non-condensing
ALTITUDE
Operating: -100 to 10,000ft (-30 to 3,048m)
Shipping & Storage: -1000 to 39,370ft (-305 to 12,000m)

VM READY

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



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

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

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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.