

# Quantum®

## DXi6900-S Enterprise Deduplication Appliance



### > DATASHEET

A powerful and ultra-dense disk backup solution leveraging patented variable-length deduplication, the world's most powerful file system—StorNext 5—and a combination of SSD and 8TB self-encrypting drives for enterprise-wide protection.

The DXi6900-S is a high-performance deduplication solution with the power, scale, flexibility, and value to anchor an enterprise-wide backup, disaster recovery (DR), and data protection strategy. The DXi6900-S combines the speed of Solid State Disks to accelerate metadata operations, with the high density and low power consumption of 8TB self-encrypting drives (SEDs). It delivers the broadest scale with the smallest footprint, minimizing operational expense and maximizing value and rates of return. The DXi6900-S can scale from 34TB to 544TB of usable capacity, in only 18U of rack space, allowing customers the flexibility to grow using capacity-on-demand licensing, while saving space and cutting costs in their data center. Built on Quantum's

DXi® software, the DXi6900-S provides up to 37TB/hour performance and includes the following software licenses in its base price: NAS, VTL, OST, deduplication, replication, path-to-tape (PTT) and DXi Accent™ software for hybrid deduplication. To integrate short-term protection and long-term retention, the DXi6900-S features an integrated path-to-tape for both VTL and OST presentations, providing a direct link to physical tape libraries (creating offline copies) that bypasses the backup server but is fully integrated into leading backup applications' management interface and media catalogs; therefore, offering an easy way to protect backup data against ransomware and self-replicating viruses.

### FEATURES & BENEFITS

#### Fast and powerful

Powered by the world's most powerful file system, StorNext® 5, the DXi6900-S integrates SSD drives to deliver industry-leading backup speed to meet your backup window and SLA.

#### Maximize data reduction

Patented variable-length deduplication maximizes data reduction, and combined with 8TB drives you can store up to 10.9PB of logical data in only 18U.

#### Minimize datacenter footprint

DXi6900-S is the first deduplication appliance to use 8TB drives, providing better storage density than many other appliances on the market, and dramatically reducing power and cooling costs.

#### Protect data across sites and in the cloud

WAN efficient replication makes it faster and less expensive to move data in and out of the cloud and between sites for off-site backups.

#### Scale on your terms

Scale from 34TB to over 544TB with Quantum's unique Capacity-on-Demand (CoD) licensing.

#### Increase IT staff productivity

Comprehensive and intuitive management tools enable precise business decisions and speed resolution time.

#### Encrypt data from backup to expiration

Protect against data breaches across the enterprise using industry-standard AES 256-bit encryption with Self-Encrypting Drives. This is also applied to data-in-flight.

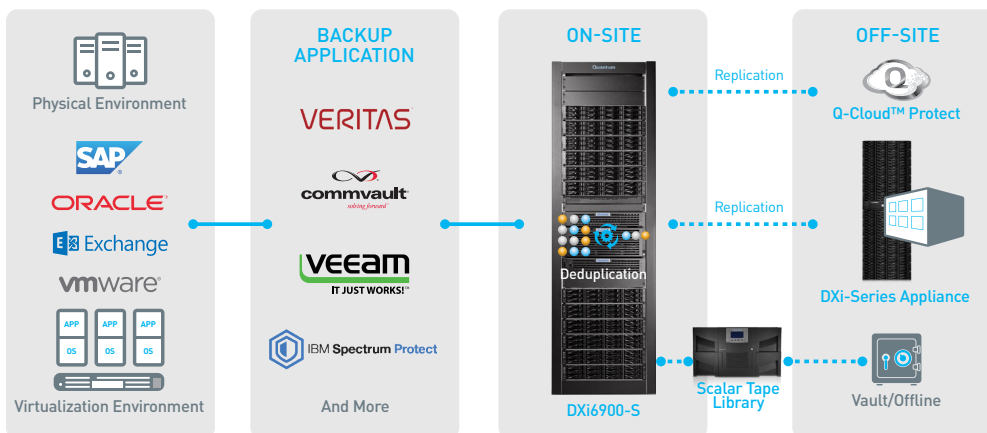


Figure 1 - Replication of Backup Data for Automated DR Protection

> LEARN MORE:  
[www.quantum.com/dxi](http://www.quantum.com/dxi)

# TECHNICAL SPECIFICATIONS

## INTERFACES

|  |   |
|--|---|
| <b>NAS Backup Target</b>               |   |
| <b>Presentations:</b>                  | CIFS and/or NFS   |
| <b>Shares:</b>                         | 128 max   |
| <b>OpenStorage (OST) API</b>           |   |
| <b>Presentations:</b>                  | Symantec Storage Servers and Logical Storage Units                              |
| <b>Shares:</b>                         | 128 max   |
| <b>VTL Fibre Channel</b>               |   |
| <b>Partitions (max):</b>               | 64  |
| <b>Drives (max):</b>                   | 512   |
| <b>Cartridges per Partition (max):</b> | 9,000   |
| <b>Emulations (libraries):</b>         | Scalar® 24, Scalar i40/i80, Scalar 100, Scalar i500, Scalar i2000, Scalar i6000 |
| <b>Emulations (drives):</b>            | DLT7000, SDLT 320, SDLT 600, DLT-S4, LTO-1, LTO-2, LTO-3, LTO-4, LTO-5          |

## INLINE PERFORMANCE

|                            |  |
|----------------------------|--|
| <b>Ingest Performance:</b> | Up to 24TB/hour<br>Up to 37TB/hour with DXi Accent |
|----------------------------|--|

## DATA AND SYSTEM REDUNDANCY

Enhanced RAID, redundant power, redundant cooling, redundant controllers and data path to storage, hot-swap drives, power supply and fans, and T10-PI technology.

## HOST TO APPLIANCE H/W INTERFACE

Provides 3x1GbE ports with room to add up to three of the following HBA:  
Dual-port 10GbE (Optical), Dual-port 10GbE (twinax), Dual-port 10G-Base-T (RJ45), and Dual-port 16G FC.

## SOFTWARE LICENSES INCLUDED

The base price of the DXi6900-S includes licenses for NAS, VTL, OST, deduplication, replication, path-to-tape (PTT), and DXi Accent software for hybrid deduplication.

## CAPACITY AND SCALABILITY

|                            |                            |
|----------------------------|----------------------------|
| <b>Usable Capacity:</b>    | 34TB to 544TB              |
| <b>Scaling Increment:</b>  | 34TB                       |
| <b>Logical Capacity:</b>   | 680TB to 10.9PB*           |
| <b>Hard Disk Drives:</b>   | 8TB Self-Encrypting Drives |
| <b>Server Node Drives:</b> | 13 x 800GB SSD             |

## PHYSICAL SPECIFICATIONS

|                          |   |
|--------------------------|---|
| <b>Dimensions:</b>       |   |
| <b>System Node:</b>      | 2U, [17.5in (W) x 3.4in (H) x 28.6in (D)] - [44.5cm (W) x 8.6cm (H) x 72.6cm (D)] |
| <b>Expansion Module:</b> | 2U, [17.6in (W) x 3.4in (H) x 21.8in (D)] - [44.6cm (W) x 8.6cm (H) x 55.4cm (D)] |
| <b>Array Module:</b>     | 2U, [17.8in (W) x 3.4in (H) x 21.8in (D)] - [45.1cm (W) x 8.6cm (H) x 55.4cm (D)] |
| <b>Weight:</b>           |   |
| <b>System Node:</b>      | 72lbs (32.6kg)  |
| <b>Array Module:</b>     | 73lbs (33.1kg)  |
| <b>Expansion Module:</b> | 72lbs (32.6kg)  |
| <b>Expansion:</b>        | Up to 16 34TB expansion points within 8 physical expansion modules 2U each        |

## POWER SPECIFICATIONS

|                                   |                                    |
|-----------------------------------|------------------------------------|
| <b>Power Input:</b>               | NEMA 5-15P to C13 power cord       |
| <b>Input Voltage:</b>             | 100 to 240VAC, 50-60Hz             |
| <b>Rated Current:</b>             |                                    |
| <b>System Node:</b>               | 12A @ 100VAC, 6.5A @ 240VAC        |
| <b>Array Module:</b>              | 7.0A @ 100VAC, 2.9A @ 240VAC       |
| <b>Expansion Module:</b>          | 7.0A @ 100VAC, 2.9A @ 240VAC       |
| <b>Typical Power Consumption:</b> |                                    |
| <b>System Node:</b>               | 468W, 4.7A @ 100VAC, 1.9A @ 240VAC |
| <b>Array Module:</b>              | 276W, 2.8A @ 100VAC, 1.2A @ 240VAC |
| <b>Expansion Module:</b>          | 168W, 1.8A @ 100VAC, 0.8A @ 240VAC |
| <b>Inrush:</b>                    | 59A @ 100VAC, 25A @ 240VAC - 544TB |
| <b>BTUs:</b>                      | 6,919BTU @ 544TB                   |

## ENVIRONMENTAL SPECIFICATIONS

|                                |                                    |
|--------------------------------|------------------------------------|
| <b>TEMPERATURE</b>             |                                    |
| <b>Operating:</b>              | 50° to 86°F (10° to 30°C)          |
| <b>Shipping &amp; Storage:</b> | -4° to 140°F (-20° to 60°C)        |
| <b>RELATIVE HUMIDITY</b>       |                                    |
| <b>Operating:</b>              | 20 to 80% non-condensing           |
| <b>Shipping &amp; Storage:</b> | 5 to 95% non-condensing            |
| <b>ALTITUDE</b>                |                                    |
| <b>Operating:</b>              | -50 to 10,000ft (-15.2 to 3,048m)  |
| <b>Shipping &amp; Storage:</b> | -50 to 39,370ft (-15.2 to 12,000m) |

\*Assumes a deduplication ratio of 20:1. Actual deduplication ratios will vary depending upon data types, retention, and compressibility of your data.

## SYMANTEC OPENSTORAGE (OST) API SUPPORT

Support for OST is a standard feature for all DXi6900-S Series units, allowing users to write data to OST logical storage units (LSUs) and enabling application-aware replication in NetBackup and Backup Exec environments. Support includes Optimized Duplication, Auto Image Replication (AIR), Granular Restore Technology (GRT), and OST path-to-tape introduced in NetBackup 6.5.4. OST Optimized Synthetic Full Backups is supported to reduce network I/O and shorten time to perform full restore from incremental backups.

## DXi ACCENT

DXi Accent software, a standard feature on all DXi6900-S Series models, allows the backup server to collaborate in the deduplication process, off-loading part of the data reduction activity so that only unique blocks are sent over the network to the DXi appliance. This distributed approach provides faster backups over bandwidth-constrained LANs or WANs. DXi Accent can be enabled or disabled on a per-media server basis. Initial support for DXi Accent is provided through the NetBackup OpenStorage (OST) API and Oracle RMAN.

## DATA-AT-REST ENCRYPTION

Data-at-Rest Encryption uses Self-Encrypting Drive (SED) technology to secure all data stored on the DXi6900-S. This includes file data and metadata, configuration files, and the DXi software and operating system. When Data-at-Rest Encryption is enabled, all hard drives in the DXi are paired with the disk controllers using encryption keys. After this, accessing data on the drives requires the same encryption keys and controllers that were used to write the data. This ensures that a drive that is physically removed from the DXi cannot be read using another system or device.

## DXi ADVANCED REPORTING

DXi Advanced Reporting, which is included on all DXi appliances, sets new standards for onboard intelligence by giving users a detailed view of internal appliance operations and provides them with years of backup and replication data for extended trend analysis. DXi Advanced Reporting reduces administration time, improves operations, streamlines performance tuning, and helps users maximize the value of their DXi appliances.

## QUANTUM VISION

Quantum Vision® provides powerful monitoring, reporting, and analysis tools for all of the Quantum storage devices in your backup environment. You can view the status and track the performance of multiple DXi disk backup systems, DXi V-Series virtual devices, Scalar LTFs devices, and Scalar libraries using a single flexible interface.

## Q-CLOUD READY

Quantum Q-Cloud provides a new, innovative Cloud backup and DR strategy designed specifically for virtual and physical environments. Q-Cloud is a subscription-based solution that allows customers of all sizes to keep more data off-site for a longer period of time by efficiently replicating data to the Cloud with a simple, cost-effective approach. Q-Cloud is a secure cloud data protection solution that integrates with your existing backup software and reduces risk for IT Departments with a convenient option to efficiently replicate your data to the cloud.

## REPLICATION

Replication compatible with all DXi-Series products, schedules and bandwidth use set in DXi6900-S scheduler. Replication is asynchronous, one-to-one, one-to-two, 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 (AES 256-bit) 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 and Backup Exec OST interface.

## DXi SOFTWARE

Combined with StorNext 5 high-performance file system, variable-length deduplication, built-in intelligence with iLayer Management for DXi, and efficient replication, customers can realize their data protection goals. Quantum DXi's Software delivers the most efficient deduplication algorithm, high-performance file system with tuned optimized storage, and the most comprehensive management suite available. Combined, the Quantum DXi Software stack provides customers with the greatest reduction in disk resources, highest performance and broadest scale in a single system, and management capabilities designed to reduce overall management time and expenses.

## ABOUT QUANTUM

Quantum is a leading expert in scale-out storage, archive, and data protection, providing solutions for capturing, sharing, and preserving digital assets over the entire data lifecycle. From small businesses to major enterprises, more than 100,000 customers have trusted Quantum to address their most demanding data workflow challenges. Quantum's end-to-end, tiered storage foundation enables customers to maximize the value of their data by making it accessible whenever and wherever needed, retaining it indefinitely and reducing total cost and complexity. See how at [www.quantum.com/customerstories](http://www.quantum.com/customerstories).