

Quantum

# DXi-SERIES BACKUP APPLIANCES

High-Performance, Scalable Backup Appliances  
for Data Protection, Cyber and Disaster Recovery



## DATASHEET

### FEATURES & BENEFITS

#### Reduce Backup Costs with Efficient Data Reduction

DXi inline, variable-length deduplication and compression minimizes overall storage footprint and reduces WAN traffic when replicating and tiering to other locations. Achieve data reduction rates up to 70:1.\*

#### Address Cybersecurity Threats with Immutable Storage Options

Create Secure Snapshots of your backup data or use OST WORM for Veritas environments.

#### Protect the Entire Enterprise

Virtual and physical DXi appliances, flexible DXi-to-DXi replication, plus tiering to cloud targets, enable solutions from the edge to the core to the cloud.

#### Maximize Production System Availability and Minimize the Time to Protection

Up to 99 TB/hr throughput using DXi Accent™ for fast data ingest and recovery.

#### Reduce Data Center Power & Cooling

Efficient solution architecture and industry leading storage density protects data with fewer disks, less rack space, less power, and less cooling.

#### DXi V5000 Community Edition

The DXi V5000 Community Edition is a free-to-download appliance that scales to 5 TB usable capacity, great for remote and branch office deployment, edge locations, and simple proof of concept testing. Download the Community Edition in minutes, use it immediately, and later upgrade to the DXi V5000 Enterprise Edition with the purchase of a DXi software subscription license. To download, visit [quantum.com/try-dxi](https://quantum.com/try-dxi).

### Fast, secure backup and recovery with efficiency and immutability

#### REDUCING THE RISKS TO YOUR BUSINESS IS MORE CRITICAL THAN EVER

Protecting data across the enterprise continues to get more complex with massive growth across databases, virtual environments, and unstructured data sets. IT managers need to maintain service levels to the business, protect against operational issues, protect data across sites, and ensure recovery from disasters, ransomware, and other forms of attack. Yet, budgets aren't growing nearly as fast as these requirements.

#### DXi-SERIES: AN EFFICIENT, PURPOSE-BUILT DESIGN

DXi®-Series appliances are uniquely powerful solutions for meeting your backup needs, service level requirements, and cyber recovery efforts. DXi provides cost efficiency, simple operations, fast access to your data, and scalable solutions from remote offices to the largest enterprise data centers. DXi enables you to reduce both your recovery times and your backup windows.

As configurable, purpose-built solutions. DXi provides the industry's most efficient variable-length deduplication and compression, minimizing storage requirements, replication bandwidth needs, and overall physical footprint.

Multiple standard access protocols and interfaces are supported across all popular backup applications, including comprehensive integration with Veeam and Veritas OST APIs. DXi appliances are delivered as a complete solution, with Capacity-on-Demand software licensing minimizing upfront costs and a rich all-inclusive feature set included without additional cost.



Outstanding Cost Efficiency

All-Inclusive Software Feature Set

Built-in Ransomware Protection and Recovery

Edge-Core-Cloud Architecture

Highly Optimized 3-2-1-1 Solutions

Rich Solutions Ecosystem

LEARN MORE:

[www.quantum.com/dxi](https://www.quantum.com/dxi)

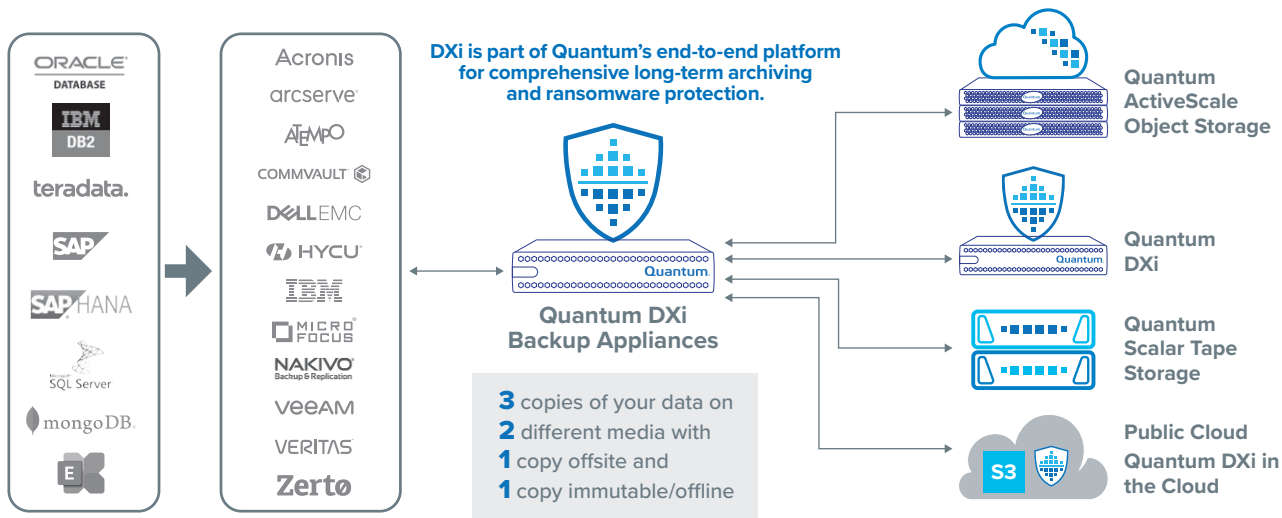
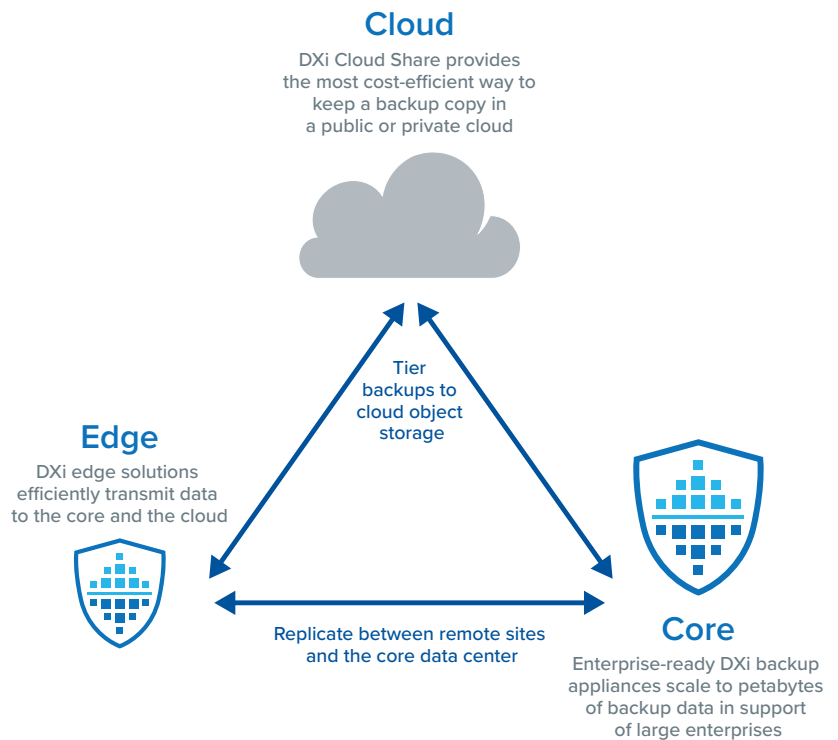
\*Based on internal field data of actual customer deployments. Realized rates will vary depending on the specific data and workload characteristics.

## SCALABLE, MULTI-SITE DATA PROTECTION ACROSS EDGE, CORE, AND CLOUD

DXi appliances flexibly scale to meet a variety of sizes and needs, from gigabytes to hundreds of petabytes. For the edge, DXi virtual and physical appliances provide simple, efficient data protection. Highly tuned DXi replication forwards optimized copies concurrently with data ingest (no landing zone required!) to configurable enterprise DXi platforms that scale to petabytes within the data center. DXi Cloud Share provides tiering to private and public clouds, tripling total storage under DXi management at no additional cost to meet organizational needs of any size.

## FLEXIBLE, COST-EFFECTIVE 3-2-1-1 SOLUTIONS

Protecting your data requires careful planning and consideration. DXi appliances are the cornerstone of flexible, cost-effective application of 3-2-1-1 best practices across any organization. Immediate DXi processing of incoming backup streams reduces the overall storage footprint and networking bandwidth across both onsite DXi resources and downstream offsite resources. DXi appliances integrate with other DXi appliances, object storage, tape libraries and the public cloud to deliver complete data protection, disaster recovery, and long-term data retention.



## SIMPLE, SECURE RANSOMWARE PROTECTION AND RECOVERY

In-flight and at-rest data encryption, immutable storage capabilities, secure access protocols, multi-factor authentication and role-based access control (RBAC) help you defend your data from cyber risks and recover your backups quickly. DXi Secure Snapshot protects against ransomware and other disasters by isolating immutable point-in-time copies in non-network addressable storage according to user-defined retention policies. In the case of a ransomware attack, backup data sets can be quickly recovered by restoring to a pre-attack Secure Snapshot.

## KEY FEATURES

Feature	Benefit
<b>Cost-efficient, inline, variable length deduplication and compression</b>	DXi deduplication and compression maximizes data reduction and minimizes network traffic, providing 3x to 6x greater efficiency than fixed-block deduplication, resulting in data reduction ratios up to 70:1** Plus, all processing is performed inline, upon ingest, without the requirement for a costly landing zone.
<b>Offsite protection with flexible replication</b>	DXi further reduces business risks with automated, offsite copies. Replication is asynchronous, AES 256-encrypted and highly optimized to minimize bandwidth usage. Incoming backup streams are concurrently ingested, data reduced, stored, and replicated for fast, secondary protection of the data. Up to 1:3 replication fan-out enables creation of safety copies in multiple locations, and up to 50:1 fan-in enables centralized, highly efficient remote protection of dozens of edge sites.
<b>Cost-efficient cloud archiving with Cloud Share*</b>	DXi Cloud Share lowers cloud storage costs by archiving compressed, deduplicated, AES 256-encrypted backup data sets to public and private clouds, including Quantum ActiveScale™. Included as a bundled feature, Cloud Share dramatically reduces cloud storage costs, bandwidth requirements, and egress charges by up to 70X.** Cloud storage under DXi management equals 2X DXi local licensed capacity, effectively tripling a DXi appliance's total capacity under management at no extra charge.
<b>Immutable protection with Secure Snapshot</b>	DXi Secure Snapshot enhances protection against ransomware and other disasters by retaining immutable point-in-time copies of backup data. These secure copies, which are protected from deletion or modification by user-defined retention policies, are stored in isolated, non-network-addressable storage. In the case of a ransomware attack, backup data sets can be quickly recovered by restoring to a pre-attack Secure Snapshot. DXi also supports Veritas OST WORM.
<b>Secure encryption of data-at-rest and in-flight</b>	DXi supports data-at-rest encryption using self-encrypting drives (SED). Data that resides on SEDs can only be accessed by the key-authorized controller that originally wrote the data, ensuring that a drive removed from the DXi appliance cannot be read by another system. Ingest, replication and tiering are AES 256-encrypted in-flight.
<b>Secure system access</b>	DXi limits access to data through secure protocols, role-based access control, multi-factor authentication and logging of all admin and user activities. System administrators can create user groups and assign users as Operators or Administrators, with access to specified NAS shares, OST LSUs, and VTL Partitions.
<b>Capacity-on-demand licensing</b>	DXi's unique capacity-on-demand reduces upfront cost and provides the ability to respond quickly to unpredictable growth requirements. Administrators can defer software licensing of installed capacity and simply activate a new license key whenever additional capacity is needed.
<b>Efficient operations with DXi Advanced Reporting and Metrics Explorer</b>	DXi Advanced Reporting reduces administration time, improves operations, and streamlines performance tuning by providing a detailed view of operational statistics for trend analysis. All these metrics, including CPU, memory usage, network activity, and data reduction rates are exportable in Prometheus format using DXi Metrics Explorer for custom analysis, visualization, and long-term retention using tools like Grafana.

## SOLUTION INTEGRATION

<b>Broad ecosystem support across multiple protocols</b>	DXi support of NAS, OST, VTL*, and Veeam Data Mover Service (VDMS) protocols and interfaces enable a rich set of software solutions including Veeam, Veritas, Commvault, Attempo and others. For a complete list of compatible software, visit <a href="http://www.quantum.com/compatibility">www.quantum.com/compatibility</a>
<b>DXi Accent</b>	DXi Accent provides faster backups over bandwidth-constrained LANs or WANs, enabling the backup server to collaborate in the deduplication process, offloading activities so that only unique blocks are sent to the DXi appliance. Support for DXi Accent includes Veritas OST, Oracle RMAN, and, via AccentFS, any application that can write to a file system.
<b>Veritas OpenStorage (OST) API</b>	DXi OST support simplifies and enhances operations with Veritas, 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), Accelerator, Granular Restore Technology (GRT), OST Path-to-Tape, Optimized Synthetic Full Backups, and OST WORM.
<b>Veeam Data Mover Service (VDMS)</b>	DXi VDMS support simplifies and enhances DXi operations with Veeam, optimizing data movement between the Veeam proxy server and the DXi appliance for advanced features including Fast Clone and VM Instant Recovery. VDMS efficiently manages data flow between Veeam and DXi, resulting in 15 times faster creation of synthetic full backups. DXi appliances are qualified as Veeam Ready Integrated storage.
<b>Path-to-Tape (PTT)</b>	When configured on a DXi system, the Path-to-Tape feature allows the export of data to an attached physical tape library. Backup software solutions that support this feature include Veritas NetBackup and Backup Exec, Oracle Secure Backup, Attempo Tina, and Dell Networker.
<b>Dynamic Application Environment*</b>	The DXi Dynamic Application Environment (DAE) saves money and rack space by eliminating the need to run a separate server for select backup applications. DAE embeds a KVM hypervisor to run a media or data mover server as a VM on DXi appliances.

\*Features not supported on Virtual DXi V5000

\*\*Based on internal field data of actual customer deployments. Realized rates will vary depending on the specific data and workload characteristics.

Attributes	DXi V5000* Community Edition	DXi V5000* Enterprise Edition	DXi4800	DXi9000	DXi9000 High Density	DXi9100
Usable Capacity (TB)	100 GB - 5 TB	5 - 256 TB	8 - 315 TB	51 TB - 1.02 PB	204 TB - 1.02 PB	204 TB - 2 PB
Total Usable Capacity with Cloud Share***	NA		8 - 945 TB	51 TB - 3.06 PB	204 TB - 3.06 PB	204 TB - 6 PB
Total Logical Capacity with Cloud Share @ 70:1****	7 - 350 TB	350 TB - 17.92 PB	560 TB - 66.15 PB	3.57 - 214.2 PB	14.28 - 214.2 PB	14.28 - 420 PB
Performance (TB/h)	Customer Hardware		Up to 35 TB/h 95 TB/h (DXi Accent)	Up to 64 TB/h 98 TB/h (DXi Accent)		Up to 63 TB/h 99 TB/h (DXi Accent)
Expansion and Capacity-on-Demand (CoD)	Licensed in 1 TB increments		8, 16, 27 TB Base 16 X 18 TB increments in 4 X JBOD (CoD)	51 TB increments (CoD)		102 TB increments (CoD)
Disk Drives	Customer Hardware		4 TB (SED-FIPS/HDD) 8 TB (SED-FIPS/HDD) Up to 2 X 480 GB SSD (Node)	12 TB (Non-SED/SED) 16 X 960 GB SSD (Node)		12 TB (SED) 13 x 1,920 GB SSD (Node)
Access Protocols	All but VTL		NFS / SMB / OST / VTL / AccentFS / VDMS			
Administration/ Monitoring/ Reporting	GUI / CLI / Web Services / SNMP / SMTP / Advanced Reporting / Metrics Explorer / Cloud-Based Analytics					
Connectivity	Customer Hardware		BASE: 2x 10GbE (Optical or DAC Copper) and 2x 1GbE (RJ45) OPTIONAL: Up to 4 of any combination of the following: Quad-port 10GBASE-T (RJ45), Quad-port 10/25 GbE (Optical or DAC Copper), Dual-port 25 GbE (SFP28 optical or DAC Copper)   DXi9000/DXi9100 only: Dual-port 100 GbE (Optical or DAC Copper) or Quad-port 16 Gb FC   DXi4800 Only: Dual 16Gb FC			
Protocol Limits	Variable (no VTL)		128 NAS Shares OST: 100 Storage Servers VTL: Up to 64 partition, 64 VTDs per partition, 150 total VTDs 61,000 VTC per partition	128 NAS Shares OST: 100 Storage Servers VTL: Up to 64 partition, 64 VTDFs per partition, 512 total VTDs 61,000 VTC per partition		
Optional Features	Dynamic Application Environment (DAE)** for NetBackup, Nakivo, Veeam VDMS (Fast Clone Support)					
Security	Encrypted in-flight replication and tiering, Secure Snapshot, RBAC, Audit logging, Multi-factor authentication, Secure email					
Drive Encryption	Customer Hardware		SED/FIPS Drives	SED Drives		
Data Availability	Customer Hardware		Redundant Interconnect (Internal) Path Failover	Dynamic Disk Pooling (DDP), Redundant RAID Controllers, Redundant Interconnect, (Internal) Path Failover, T10DIF		
RAID	Customer Hardware		Node HDD -> RAID6 + Hot Spare Array HDD -> RAID6 + Hot Spare	Node SSD -> RAID6 Array HDD -> Dynamic Disk Pooling (DDP)		
System Availability	Customer Hardware		Redundant power and cooling, hot spare drives, hot-swap drives, power supplies and fans			
Rack Space Min/Max	Customer Hardware		2U to 10U	4U to 22U	6U to 10U	6U to 18U
Watts/BTU (Max Capacity)	Customer Hardware		1,620 Watts / 4,837 BTU @ 315 TB Watts: Node: 452; EBOD: 292	2,653 Watts / 9,052 BTU @ 1,020 TB Watts: Node: 635; RBOD: 362; EBOD: 207	2,726 Watts / 9,301 BTU @ 1,020 TB Watts: Node: 635; RBOD: 1,170; EBOD: 921	4,817 Watts / 16,426 BTU @ 2,040 TB Watts: Node: 635; RBOD: 1,170; EBOD: 921
Replication Compatibility	All supported DXi appliances and versions; number of connections variable		All supported DXi appliances and versions; connectivity 20 to 1	All supported DXi appliances and versions; connectivity 50 to 1		

\* Minimum requirements for DXi V5000: Hypervisor: KVM, VMware, Hyper-V; Disk: 200 GB of disk; RAM: 4 GB; CPU Cores: 2; Ethernet Port: 1. Scaling up requires additional resources. See install documentation at [www.quantum.com](http://www.quantum.com).

\*\* Features not supported on Virtual DXi V5000.

\*\*\* Cloud Share usable capacity scales at a rate of 2X the DXi capacity licensed.

\*\*\*\* Realized rates will vary depending on the specific data and workload characteristics. Based on internal field data of actual customer deployments, data reduction rates can be as high as 70X.



Quantum technology, software, and services provide the solutions that today's organizations need to make video and other unstructured data smarter – so their data works for them and not the other way around. With over 40 years of innovation, Quantum's end-to-end platform is uniquely equipped to orchestrate, protect, and enrich data across its lifecycle, providing enhanced intelligence and actionable insights. Leading organizations in cloud services, entertainment, government, research, education, transportation, and enterprise IT trust Quantum to bring their data to life, because data makes life better, safer, and smarter. Quantum is listed on Nasdaq (QMCO) and the Russell 2000® Index. For more information visit [www.quantum.com](http://www.quantum.com).

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