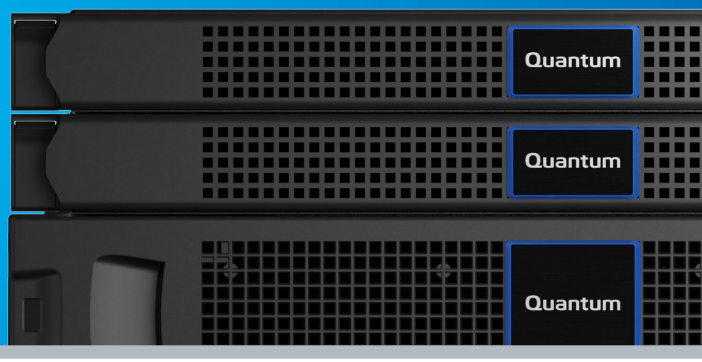
Quantum

Xcellis

High-Performance Shared Storage



> DATASHEET

Primary Storage Optimized for Demanding Video Workflows

Organizations that work with massive volumes of rich media constantly face a multitude of challenges related to providing access to this valuable content, preserving it over the long term, and protecting it from any number of external and internal threats. Teams also need to manipulate, analyze, and edit this content to extract its maximum value, and do so at a speed that fits within tight production deadlines.

The storage foundation to support such demands requires linear scalability without interrupting business processes, flexibility to be efficiently architected for varying requirements, coordinated accessibility regardless of user geographic location, and unparalleled performance that does not sacrifice reliability. Tested in demanding data-intensive environments for over a decade, Quantum Xcellis® high-performance shared storage rises to this challenge, and is the core building block for a truly optimized and cost-effective end-to-end workflow.

UNPARALLELED PLAYBACK PERFORMANCE

Whether you are a post-production editor working on parallel streams of 8K content for playout in immersive virtual reality, or an autonomous vehicle manufacturer optimizing your latest self-driving software algorithms based on real-world test results, having a high-speed storage infrastructure delivering data where and when it is needed most is critical. Now leveraging the benefits that come with an improved hardware platform, Xcellis will provide even higher levels of streaming performance for video playback, with even greater reliability. So whether it's over a NAS, SAN, IB, or NVMeoF storage architecture, or all simultaneously, Xcellis provides the performance needed for the most demanding video workflows.

COMPREHENSIVE UNIFIED ACCESSIBILITY

Business projects today can have long time horizons, span multiple geographies, and involve hundreds—if not thousands—of contributors. In this context, supporting a collaborative environment is no longer optional—it's mandatory. Not only does Xcellis present data across all logical storage tiers in one addressable global namespace, but it also allows native accessibility from users running macOS, Linux, and Windows. And with the ability to simultaneously access this data over Ethernet or Fibre Channel networking, Xcellis provides the right level of performance to the right people, improves collaboration, and simplifies deployments.

COST-EFFECTIVE SCALABILITY WITH ZERO DOWNTIME

Other scalable storage systems require additional system acceleration units or compute-heavy expansion nodes in order to scale. These units increase the cost and network complexity of scaling. Xcellis provides unmatched flexibility by enabling nodes and storage arrays to be scaled up or out independently, so every dollar invested pays off in more capacity and greater bandwidth. Furthermore, by providing a gateway to a multi-tiered storage infrastructure that incorporates flash, disk, tape, and cloud-based storage, organizations can optimize performance and capacity without overinvesting.

INTEGRATED DATA PROTECTION FUNCTIONALITY

Xcellis offers a variety of important features that ensure data protection of valuable content over its entire lifecycle. Customers can easily copy files to offsite tiers and take advantage of versioning to roll back to an earlier point in time, as well as set up automated replication for disaster recovery purposes—all of which is designed to protect valuable digital assets.

HIGHLY ADAPTABLE CONVERGED ARCHITECTURE

Only Xcellis allows for such a high number of configurable options to optimize the entire data path between user and storage media. Whether your choice is NAS, SAN, IB, or NVMe access, organizations can maximize their networking investment and still function effectively—even across hybrid architectures. By using converged storage and access, organizations can scale their storage system more efficiently by maximizing their investment to benefit all connected users.

Xcellis optimizes video production tasks, accelerates time to insight, and empowers organizations to do more with their data.

FEATURES & BENEFITS

Exceptional performance
Xcellis optimizes video production tasks, accelerates time to insight, and empowers organizations to do more with their data.

Multi-protocol access built in
Optimizes workflow efficiency and data access by enabling all clients access to the same data regardless of protocol, on a scale-out NAS or SAN.

Independent scalability
Add client nodes and storage arrays independently to scale from the smallest configurations to the largest with no forklift upgrades or extra accelerators.

Expand infrastructure without limits
Support for billions of files across up to 64 virtual file systems. Virtually unlimited capacity. Scale to hundreds of petabytes. Extend scalability even further using cloud, object storage, or tape.

Better protect valuable assets
Integrated with the capability to protect data through automated data copies, versioning, and replication.

Powered by StorNext®
Xcellis is optimized to run on StorNext, an award-winning file system that provides advanced data management for high-performance, multi-tier, shared storage.

Simplified management tools
Built-in deployment, management, monitoring, and reporting for multiple systems from a single-pane-of-glass interface.

Dynamic Application Environment
Xcellis has the unique capability of supporting applications running on the Workflow Director as virtual machines (VMs) using a feature called the Dynamic Application Environment.

> **LEARN MORE:**
> **www.quantum.com/xcellis**

TECHNICAL SPECIFICATIONS

SYSTEM

Workflow Director Nodes	Dual rack servers Redundant power supplies Dual eight-core high-performance Intel Silver CPUs
Shared Storage Arrays	Quantum QXS™-3 and QXS-4 Dual redundant high-performance controllers Available in 2U12, 2U24, and 4U56 options
Storage Support	Supports Quantum QXS storage for combined metadata and data options; Quantum or 3rd-party storage for user data*

**3rd-party user data storage requires dedicated Quantum QXS metadata storage.*

LICENSING

NAS Connectivity License	Enables connection of SMB and NFS clients directly to Xcellis; does not require per-client licensing
Optional StorNext LAN Gateway License	Enables connection of StorNext LAN clients directly to Xcellis; does not require per-client licensing
Included StorNext Software	StorNext High Availability License Option, ten SAN clients available to the user for any OS type, one embedded SAN client for each Xcellis Workflow Director Node, and a Distributed Data Mover license (for the secondary node)

CONNECTIVITY OPTIONS

Up to Three Fibre Channel or Ethernet Adapters

Fibre Channel (includes optics and cables)	Dual 32 Gb or Quad 16 Gb
Onboard Ethernet	Quad 1 Gb for management, metadata, and service
Ethernet	Optional NICs for StorNext LAN, NAS, cloud, and object Dual 25 Gb/10 Gb Ethernet with SFP28 sockets, optional SFP or DAC kit for 25 Gb or 10 Gb Quad 10GBASE-T (also supports 1 Gb Ethernet) Dual 100 Gb/40 Gb Ethernet with QSFP28 sockets, optional QSFP or DAC kit for 100 Gb or 40 Gb
Client Protocol Support	StorNext SAN, StorNext LAN, SMB 1 (CIFS), SMB 2, SMB 3, NFS v3, NFS v4, Active Directory, OpenLDAP, RESTful API
Client Support	Linux, Mac OS X, Windows

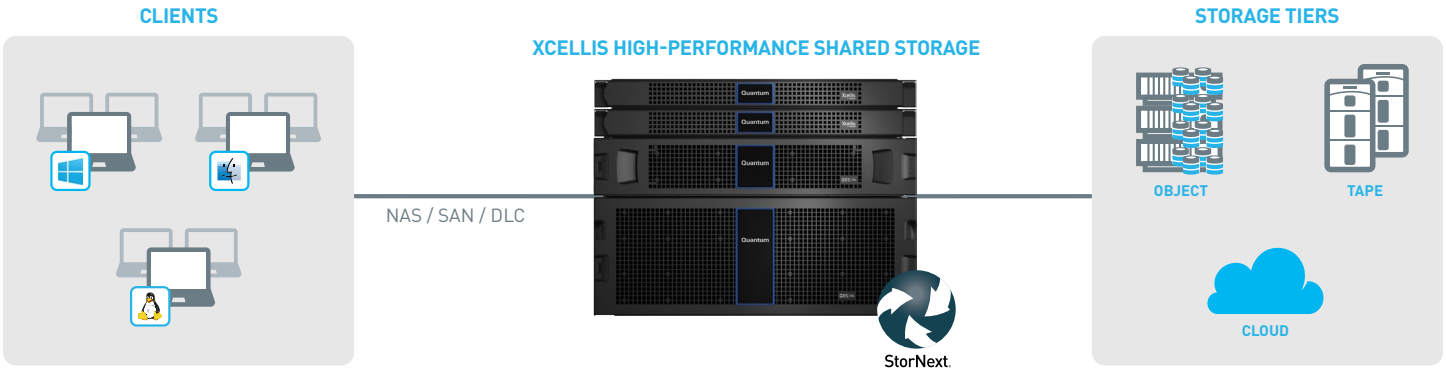
MULTI-TIER OPTIONS

Cloud Storage	The FlexTier™ feature of StorNext Storage Manager provides support for customer-owned public cloud accounts in Amazon AWS including S3, S3 Infrequent Access, Glacier, GovCloud, and C2S; Microsoft Azure Locally Redundant Storage (LRS), Zone Redundant Storage (ZRS), Geographically Redundant Storage (GRS), Read-Access Geographically Redundant Storage (RA-GRS); or Google S3 Cloud services (see compatibility document for details)
Object Storage	Quantum Lattus low-latency, massively scalable object storage Support for third-party object storage using StorNext Storage Manager (see compatibility document for details)
Tape Archive	StorNext AEL500, StorNext AEL6000 tape archive Scalar i3/i6 tape libraries 3rd-party tape archive systems also supported

XCELLIS STORAGE ARRAYS

	QXS-312	QXS-412	QXS-324/424	QXS-456
Usage	Combined user data and metadata	Combined user data and metadata	Dedicated metadata	Combined user data and metadata
Capacity Options (Raw)	48 TB, 72 TB, 96 TB, and 120 TB per chassis	48 TB, 72 TB, 96 TB, and 120 TB per chassis	2.4 TB, 4.8 TB, 9.6 TB, 10.8 TB, 19.2 TB, 21.6 TB, 28.8 TB, 38.4 TB, and 76.8 TB	224 TB, 336 TB, 448 TB, and 560 TB
RAID Array to Expansion Ratio	Up to three expansions per RAID Array	Up to three expansions per RAID Array	RAID Array only	Up to three expansions per RAID Array
Drive Type	3.5-in LFF HDD or SSD Drives	3.5-in LFF HDD or SSD Drives	2.5-in SFF HDD or SSD Drives	3.5-in LFF HDD or SSD Drives

Fig. 1: Xcellis scale-out storage integrates seamlessly into your workflow with the performance and data management capabilities needed for high-value and data-intensive workloads.



ABOUT QUANTUM

Quantum technology and services help customers capture, create, and share digital content—and preserve and protect it for decades at the lowest cost. Quantum's platforms provide the fastest performance for high-resolution video, images, and industrial IoT, with solutions built for every stage of the data lifecycle, from high-performance ingest to real-time collaboration and analysis and low-cost archiving. Every day the world's leading entertainment companies, sports franchises, research scientists, government agencies, enterprises, and cloud providers are making the world happier, safer, and smarter on Quantum. See how at **www.quantum.com**.

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