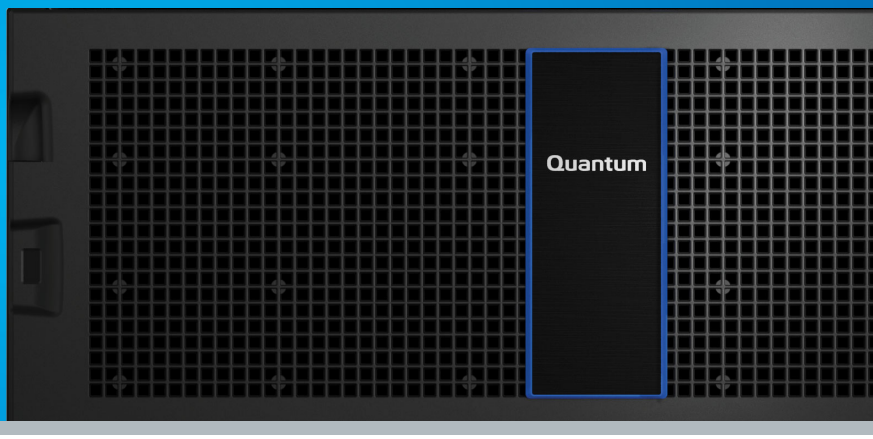
Quantum

QXS Storage



> DATASHEET

High-performance, reliable hybrid storage arrays designed to cost-effectively accelerate video workflows

Quantum QXS™ hybrid storage arrays are high-performance, reliable hybrid storage arrays designed to cost-effectively accelerate video workflows.

Providing the foundation on which to architect a multi-tier storage infrastructure, Quantum QXS storage best aligns storage performance and capacity requirements to where and when it is needed most. Each QXS system excels in supporting demanding video workflows by being tuned to deliver high levels of sequential I/O performance. Delivering this performance are highly dense 2U and 5U chassis options, offering nearly 1.2 PB of capacity per system.

Relative to other storage arrays, Quantum QXS systems are available in a variety of configurations, including up to 3 tiers of storage within a single array, and seamlessly support additional SSDs, HDDs, and expansion chassis when needed. Due to the unique ability to be highly customized, as well as simultaneously supporting online and offline workflows in one global namespace, customers can greatly improve the return on their storage investments.

With multi-core processing, active-active controllers, and separate paths for internal management and external data access, Quantum QXS has been engineered with high availability in mind. And it has proven this reliability through extensive in-house testing, as well as at the world's largest enterprises. Taking this one step further, QXS is NEBs and Mil-Spec compliant, meaning it's been tested to provide access to data in less-than-ideal environmental conditions.

FEATURES & BENEFITS

Performance Tuned for Video Workflows

Offering the ideal storage foundation for StorNext®, QXS is optimized to deliver maximum throughput and sequential I/O performance.

Designed with No Single Point of Failure

99.999% uptime means organizations can rely on QXS for mission-critical business operations.

High Configurability and Flexible Chassis Options

Workflow-optimized storage architecture provides improved return on IT investments.

Offers More than 10 PB Capacity per Rack

Reduce data center footprint to save on TCO.

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

QUANTUM QXS SERIES PRODUCT LINE OVERVIEW

The Quantum QXS product line offers two options for controller—the QXS-3 controller or QXS-4 controller—and each is available in a variety of form factors as summarized in the table below.

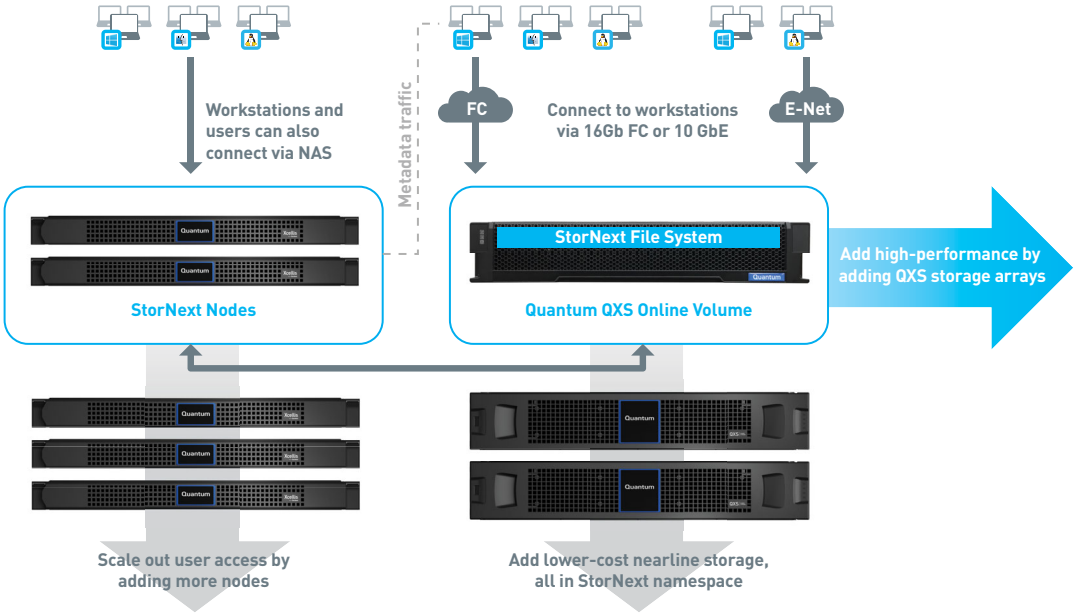

Feature	QXS-3 SERIES: Cost-effective Performance	QXS-4 SERIES: High Performance
Chassis Types	2U12, 2U24	2U12, 2U24, 5U84
Raid Controllers	Dual Active/Active	Dual Active/Active
Ports per Controller	2	4
Interface Options	8/16G FC & 10G iSCSI	8/16G FC & 10G iSCSI
Power Options	AC or DC	AC
Drive Support	10K/15K HDD, NL SAS	SSD, 10K/15K HDD, NL SAS
Drive Encryption Available	No	Yes
Maximum Capacity	336 TB	1.17 PB
Throughput	3.5 GB/s	7 GB/s
IOPS	100K	320K

When architecting a workflow-optimized storage configuration, QXS provides flexible FC and Ethernet (iSCSI) interface options, which can even be configured so that an individual chassis simultaneously supports both iSCSI and FC connections.

Both solutions are NEBS Level 3-compliant for Telco and MIL-STD-810G spec.

QUANTUM QXS USE CASE

In combination with StorNext, QXS can be configured to provide a precise blend of performance and capacity for both online and nearline workloads in one shared storage environment. This gives customers the ability to easily scale up in capacity or scale out to support additional clients or high-performance workloads. Scalability can happen without downtime, and with any configured version of QXS series storage arrays.



QUANTUM QXS BENEFITS

VIDEO WORKFLOWS RUN FASTER ON QXS

Quantum QXS storage is tuned for production storage found in media & entertainment and large unstructured data environments. With up to 8 ports per chassis, internal 12G SAS connectivity, and fast multi-core processing, the upgraded systems significantly outperform previous generation chassis. And as most customers use QXS in combination with StorNext for video-based workflows, the systems have been tested and optimized for sequential I/O performance.

KEEP YOUR BUSINESS OPERATIONS RUNNING 24/7/365

In the world of digital content, storage infrastructure provides the technical foundation that ultimately supports the final output of complex business operations. With more individuals collaborating on content than ever before, the reliability of a storage solution is paramount to ensure productivity is at the highest possible levels, and output is delivered on time. QXS hybrid storage arrays are designed with industry-leading, high-reliability specifications such as dual active/active controllers, hot-swappable power supplies and hard drives, and no single point of failure. This ensures business can stay online without interruption.

REDUCE DATA CENTER FOOTPRINT

For those customers that need to minimize data center footprint, QXS can be configured up to nearly 1.2 PB in a 5U chassis, offering high levels of capacity for customers with large amounts of infrequently accessed data. Reducing data center footprint also comes with the added benefit of reduced power and cooling costs.

PERFORMANCE	*DENSITY*	*CAPACITY*
CONTROLLER **Interface Options** iSCSI • FC • SAS	**CHASSIS**	**DRIVES**
 **QXS-3** Cost-effective performance	 2U12  2U24	 2.5" HDD  3.5" HDD
 **QXS-4** High performance	 2U12  2U24  5U84	 2.5" HDD  3.5" HDD  SSD
Ensure you get the intelligence and connect speed you need.	Maximize storage capacity. Up to 1.2 PB in the densest array available in the market.	Mix SSD with HDD to achieve the optimal system, or use all SSD or all HDD.

EXTRACT MORE VALUE FROM STORAGE ASSETS

Most storage vendors provide only a handful of configuration options for their storage arrays. With exponentially increasing amounts of content that must be accessed and preserved, not being able to architect a solution tailored to a specific environment or business requirement costs both time and money. QXS can be configured across a wide array of hardware parameters, even within the same chassis, offering more control over the exact amount of performance and capacity needed.

TECHNICAL SPECIFICATIONS

	QXS-312	QXS-324	QXS-412	QXS-424	QXS-484	QXS-5600
Use Case	Online Storage - Video SAN Real-time Operations				Non Real-Time Operations, Transcoding, Rendering Specialized Configurations (Flash, Multiple LUNs)	Non Real-Time Operations Dense Nearline
Maximum Raw Capacity (TB)	672	230.4	576	576	230.4	1,344
Maximum Disk Drives	48	96			192	224
Supported Drive Types	4 TB 7.2k RPM 3.5" NL-SAS 8 TB 7.2k RPM 3.5" NL-SAS 10 TB 7.2k RPM 3.5" NL-SAS 12 TB 7.2k RPM 3.5" NL-SAS 14 TB 7.2k RPM 3.5" NL-SAS		4 TB 7.2k RPM 3.5" NL-SAS 8 TB 7.2k RPM 3.5" NL-SAS 10 TB 7.2k RPM 3.5" NL-SAS 12 TB 7.2k RPM 3.5" NL-SAS 14 TB 7.2k RPM 3.5" NL-SAS		4 TB 7.2k RPM 3.5" NL-SAS 8 TB 7.2k RPM 3.5" NL-SAS 10 TB 7.2k RPM 3.5" NL-SAS 12 TB 7.2k RPM 3.5" NL-SAS 12 TB 7.2k RPM 3.5" NL-SAS SED 14 TB 7.2k RPM 3.5" NL-SAS	3 TB 7.2k RPM 3.5" NL-SAS 4 TB 7.2k RPM 3.5" NL-SAS 6 TB 7.2k RPM 3.5" NL-SAS
Form Factor & Max Weight	2U				5U	4U
Drives per Unit	12	24	12	24	84	56
Expansions	2U Form Factor Up to 3 per RAID 20.46" (51.9 cm) deep 78.2 lb (35.5 kg)		2U Form Factor Up to 9 per RAID 20.46" (51.9 cm) deep 78.2 lb (35.5 kg)		2U Form Factor Up to 3 per RAID 20.57" (52.25 cm) deep 57.32 lb (26 kg)	Not Applicable
Recommend RAID Configuration	RAID 6					
I/O Interface Options	16 Gbps Fibre Channel; 8 ports					
System Memory	12 GB (6 GB per controller)					
Operating Systems Supported for Fibre Channel Connectivity	Windows, Linux, Mac OS					
	Easy-to-use web-based management interface. CLI management interface. Non-disruptive updates. Volume expansion.					
Height	3.43" (8.71 cm)				3.5" (8.9 cm)	7" (17.8 cm)
Width	18.99" (48.24 cm)				17.6" (44.7 cm)	
Depth	20.46" (51.9 cm) deep				20.57" (52.25 cm) deep	36" (91.44 cm) deep
Max Weight	78.2 lb (35.5 kg)				57.32 lb (26 kg)	210 lb (95.3 kg)
Watts	465				436	1,200
BTU	1,587				1,488	4,095

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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