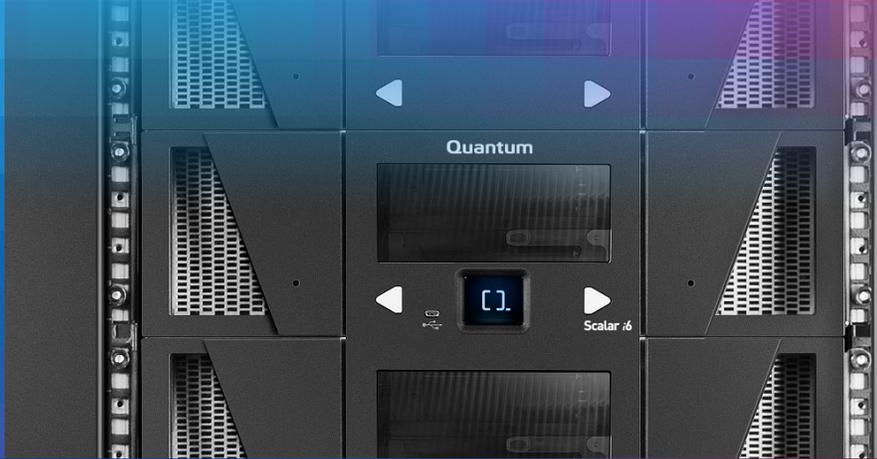


Quantum

SCALAR i6



DATASHEET

FEATURES & BENEFITS

Best-in-Class Storage Density

Saves valuable data center footprint with up to 36 PB in a single standard rack.

Extended Data Life Management (EDLM)

Ensures stored data remains readable with automated integrity checks.

Active Vault

Protects data against ransomware and other cyber threats. Archive tapes inside the library, minimizing costs and cartridge handling while improving security and access to vaulted content.

Automated, Hands-Free Tape Management

Removes complexity of tape handling. Robot manages the movement of tapes from backup partition to Active Vault (AV) partition.

Capacity-on-Demand Growth

Simplifies growth by scaling quickly and easily, without disruption.

Cloud-Based Analytics (CBA)

Gain insight into your system with Real-Time Monitoring and Predictive Issue Resolution analytical tools.

80 PLUS Certified Power Supplies

High-efficiency, green power supplies minimize power and cooling costs.

Advanced Reporting

Media, drive, and media security reports help manage system resources, improve security, and improve budget and planning. Automated report scheduling and distribution save time.

High-Availability Features

Redundant power supplies and path failover prevent downtime in the event of failure.

Proactive Monitoring and Diagnostics

Ensures the entire system stays running smoothly; provides guided steps to resolve issues, often before failures occur.

Scalar Key Manager (Encryption)

The Scalar Key Manager FIPS-validated solution makes it easy to manage keys, mitigating risk of lost data. AES 256-bit encryption standard provides the highest levels of security.

Multi-Factor Authentication (MFA)

Protects library admin/user accounts with an additional layer of security via a time-based one-time password.

Efficient, Intelligent, and Secure Enterprise-Scale Tape Storage

Massive growth of unstructured data is challenging IT organizations across all industries. The sheer scale of data under management and its rapid growth rate is requiring new levels of storage efficiency. Organizations are realizing the best approach is an intelligent, multi-tiered storage solution that balances performance and cost, and scales easily while providing users with simple access to all their stored content. As the lowest-cost storage technology, tape is playing an important role in these new solutions. Scalar[®] i6 provides the most efficient, lowest-cost storage solution for these demanding workflow environments.

HIGH EFFICIENCY

Scalar i6 delivers best-in-class storage density with up to 36 PB in a single standard rack, minimizing your valuable data center footprint. 80 PLUS[®] certified power supplies require the lowest power and cooling, which further minimizes ongoing operating costs, while iLayer[™] software features like Proactive Diagnostics and RESTful Web Services, save you valuable library administration time.

DATA INTEGRITY AND SECURITY

Policy-based data integrity checks are automated with the Extended Data Life Management (EDLM) feature, ensuring stored content remains readable. With intelligent data management applications like Quantum StorNext[®], suspect tapes can have content copied automatically to a new tape, creating a self-healing archive.

Additional security features like AES 256-bit encryption and media removal notifications ensure valuable content is protected from unauthorized access.

RANSOMWARE PROTECTION

Active Vault, a first of its kind in-library vaulting mechanism, provides protection from ransomware and other cyber threats, offering automated, true air-gapped protection with an offline, in-library vault for onsite backups or archive. No need to remove your tapes from the library to prevent network access to the data; keep your offline copy close for quick recovery and to allow for EDLM health scans of the media. In-library vaulting provides protected long-term storage in the security of the customer's data center, which also includes securing the admin account that accesses the AV with multi-factor authentication (MFA), prompting users for a time-based, one-time password.

SCALABILITY

A modular design simplifies scalability for managing growth. Each Scalar i6 module supports up to three full-height LTO tape drives and 100 storage slots, for up to 4.5 PB of storage per module. Capacity-on-Demand (CoD) slot licensing in 25-slot increments provides small granularity to better manage your storage costs in a pay-as-you-grow approach, with capacity scaling from 125 TB up to 36 PB within a single standard rack.

LEARN MORE:

www.quantum.com/scalar



TECHNICAL SPECIFICATIONS

CAPACITY CONFIGURATIONS

SYSTEM CAPACITY													
No. of Modules	Form Factor	Maximum Slots	Maximum Drives	Maximum Capacity TB (PB) ¹									
				LTO-6 (L6)		LTO-7 (L7)		LTO-8 (M8) ²		LTO-8 (L8)		LTO-9 (L9) ³	
				TB	PB	TB	PB	TB	PB	TB	PB	TB	PB
1 (1 CM)	6U	100	3	625	0.6	1,500	1.5	2,250	2.25	3,000	3.0	4,500	4.5
2 (1 CM, 1 EM)	12U	200	6	1,250	1.25	3,000	3.0	4,500	4.5	6,000	6.0	9,000	9.0
3 (1 CM, 2 EM)	18U	300	9	1,875	1.9	4,500	4.5	6,750	6.75	9,000	9.0	13,500	13.5
4 (1 CM, 3 EM)	24U	400	12	2,500	2.5	6,000	6.0	9,000	9.0	12,000	12.0	18,000	18.0
5 (1 CM, 4 EM)	30U	500	15	3,125	3.1	7,500	7.5	11,250	11.25	15,000	15.0	22,500	22.5
6 (1 CM, 5 EM)	36U	600	18	3,750	3.75	9,000	9.0	13,500	13.5	18,000	18.0	27,000	27.0
7 (1 CM, 6 EM)	42U	700	21	4,375	4.4	10,500	10.5	15,750	15.75	21,000	21.0	31,500	31.5
8 (1 CM, 7 EM)	48U	800	24	5,000	5.0	12,000	12.0	18,000	18.0	24,000	24.0	36,000	36.0

Minimum capacity is 50 slots; additional slots can be activated with a Capacity-on-Demand (CoD) license.

¹Assumes 2.5:1 compression.

²New, unused LTO generation 7 cartridges can be initialized as LTO-8 Type M media [M8].

³LTO-9 does not support read/write of LTO-8 Type M [M8] media.

OPERATION

User Interface:	Local touch screen; HTML5 remote management GUI with mobile-first design for mobile, tablet, and PC support
Connectivity Options:	8 Gb Fibre Channel and 12 Gb SAS (LTO-9 only) for library control and data; 1 GbE for management
Inventory Speed:	Ranges from approx. 1 minute to 6 minutes, depending on the configuration
Firmware Updates:	Customers can choose to have automatic checks for firmware updates to ensure use of the latest library and drive code levels.
Configuration:	Auto-discovery and auto-calibration for installed/added components (modules, tapes, drives, magazines, etc.)
Library Partitioning:	Supports up to 24 partitions
Import/Export:	Configurable, 0 to 50 slots in 5-slot increments for every module with a maximum of 240 I/E slots per partition

RELIABILITY

Library MSBF:	Greater than 2 million
Library MTTR:	30 minutes
Power:	Optional 2N power
Diagnostics:	Proactive Diagnostics embedded within the library monitor major subsystems, run self-diagnostic procedures, and send policy-based communications to system administrators
Module Upgrade:	Any module may be added in less than 30 minutes; all components are customer installable.

PHYSICAL

Module	H x W x D
Control Module	10.4 in x 17.4 in x 36.4 in (26.5 cm x 44.1 cm x 92.45 cm)
Expansion Module	10.4 in x 17.4 in x 36.4 in (26.3 cm x 44.1 cm x 92.45 cm)

RACK INSTALLATION REQUIREMENTS

- Library must be installed in a standard 19-inch four-post rack enclosure
- Rack must support product depth of 36.4 in (92.5 cm)

SOFTWARE AND PLATFORM COMPATIBILITY

For a complete list of software and platforms compatible with Scalar i6, consult the most recent Quantum Software Compatibility Guide at www.quantum.com/swcompguide.aspx.

COMPLIANCE AND CERTIFICATION

Safety Standards:	IEC 60950-1 and IEC 62368-1 with worldwide deviations
Emissions Standards:	CNS 13438 Class A, EN 55032 Class A, FCC Part 15 Class A, KN 32, VCCI, EN 300 386
Immunity Standards:	EN 55024, KN 35
International Certifications:	CE (Europe), VCCI (Japan), TUV/GS (Germany), FCC (USA), ICES (Canada), cTUVus (USA and Canada), EAC (EurAsian Conformity Mark), KCC (Korea), BSMI (Taiwan)

OPERATIONAL/STORAGE ENVIRONMENTAL REQUIREMENTS

Environmental Factor	Recommended ¹	Allowable ²	Shipping ³
Dry-Bulb Temperature	LTO 6, 7, 8: 16 to 25° C (61 to 77° F) LTO 9: 15 to 25° C (59 to 77° F)	LTO 6, 7, 8: 16 to 35° C (61 to 95° F) LTO 9: 15 to 35° C (59 to 95° F)	-23 to 49° C (-9 to 120° F)
Relative Humidity	20 to 50% (non-condensing)	20 to 80% (non-condensing)	5 to 80% (non-condensing)
Maximum Temperature Change	5° C / hour	5° C / hour	n/a
Maximum Humidity Change	5% / hour	5% / hour	n/a
Temperature Limitation for Humidity Conditions	LTO 6, 7, 8: Wet Bulb Temperature <= 26° C (79° F) LTO 9: max Dew Point 22° C (72° F)	LTO 6, 7, 8: Wet Bulb Temperature <= 26° C (79° F) LTO 9: max Dew Point 22° C (72° F)	Wet Bulb Temperature <= 26° C (79° F)
Maximum Altitude	3048 m (10000 ft)	3048 m (10000 ft)	12192 m (40000 ft)

¹Recommended: The recommended operational/storage environmental envelope provides guidance on the environmental range for optimal performance and high reliability. This environmental range protects for 30-year archival storage. (Derate the maximum recommended dry-bulb temperature by 1°C/300 m above 1,800 m (1.8°F/1,000 feet above 6,000 feet)).

²Allowable: The allowable operational/storage environmental envelope defines the test limits to verify that the equipment will function within the environmental envelope. This environmental range is defined for operational storage of less than 6 months. (Derate the maximum dry-bulb temperature by 1°C/300 m above 900 m (1.8°F/1,000 feet above 3,000 feet)).

³Shipping: When shipping media over extended environmental ranges, shipping times should be limited to minimize the duration of media being exposed to varying environmental conditions at lower and upper ranges. LTO tape media specifications provided by the LTO program at www.lto.org or specifications provided by the media manufacturer.

Note: The prolonged exposure to conditions outside the recommended range, especially approaching the extremes of the allowable operating environment, can result in decreased equipment reliability and longevity. An occasional short-term excursion into the allowable envelope is generally acceptable but may result in performance and reliability implications and higher power consumption. For additional information regarding tape cartridge storage, shipping and operational requirements, including acclimation requirements, please visit www.quantum.com/lto-media, or refer to specific LTO tape media specifications provided by the LTO consortium at www.lto.org or specifications provided by the media manufacturer.

ELECTRICAL AND POWER

Electrical:	100 VAC to 240 VAC, 50 Hz to 60 Hz
Power:	80 PLUS certified power supplies

DRIVE CAPACITY AND PERFORMANCE

Drive Type	Media Type	Cartridge Capacity Native/Compressed ¹ (TB)	Drive Throughput Native/Compressed ¹ (MB/sec)
LTO-9	LTO-9 (L9)	18 / 45	400 / 1,000
LTO-8	LTO-8 (L8)	12 / 30	360 / 900
LTO-8	LTO-7 (M8)	9 / 22.5	300 / 750
LTO-7	LTO-7 (L7)	6.0 / 15.0	300 / 750
LTO-6	LTO-6 (L6)	2.5 / 6.25	160 / 400

LTO tape drives support encryption.

¹Assumes 2.5:1 compression.

ADVANCED FEATURES

Extended Data Life Management:	Automated, policy-based data integrity checks
Active Vault:	In-library, ultra-secure media vaulting removes tape handling complexity
Advanced Reporting:	Media Integrity Analysis report, Media Usage report, Drive Utilization report, Security report and media removal notifications; report scheduling with automated report creation and delivery to distribution lists
Path Failover:	Control Path and Data Path Failover

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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