



Scalar i500

The Intelligent Midrange
Tape Library Platform

The Quantum Scalar® i500 is the intelligent tape library platform that gives growing midrange storage environments faster, easier, and more reliable data protection. The Scalar i500 combines modular design with continuous robotics to provide industry-leading scalability, performance, and reliability. Designed with Quantum's iPlatform architecture and iLayer management approach, the Scalar i500 makes backup easier to manage. Its proactive monitoring and remote diagnostics can reduce service calls by 50% and shorten issue resolution times by 30%. Its capacity-on-demand scalability lets it grow non-disruptively with users' data. And the Scalar i500 is designed to integrate easily with disk backup, making it the perfect library for next-generation backup architectures. With the Scalar i500, IT managers can be assured they will have reliable, high-performance backup, certain restores, and effective long-term protection for years into the future, no matter how their storage needs evolve.



The Scalar i500 combines a modular architecture with a single, continuous robotics system for the industry's leading combination of scalability, performance, reliability, and value.

1 TO 18 DRIVES











41 TO 409 CARTRIDGES

MODULAR GROWTH,
CONTINUOUS ROBOTICS

CAPACITY-ON-DEMAND

INTEGRATED iLAYER
MANAGEMENT SOFTWARE







FEATURES AND BENEFITS

-  iPlatform architecture and iLayer management approach integrates intelligent management into the library
-  Proactive monitoring and remote diagnostics can reduce service calls 50% and shorten resolution time by 30%
-  Combines flexible, modular architecture with single, continuous robotics to provide scalability, performance, and reliability
-  Streamlined expansion and capacity-on-demand growth lets library easily expand with data
-  I/O blade architecture for faster, more reliable SAN operation, reduced switch port requirements and seamless integration and operation
-  Native SMI-S support allows direct management by leading SRM tools
-  Designed to integrate easily with leading disk backup solutions
-  Supported by Scalar Key Manager Appliance in conjunction with LTO-4 drives to meet US Federal government recommended AES-256 Bit Encryption Standard for highest levels of security
-  Supported by Quantum's StorageCare® Guardian service approach that extends remote diagnostics to the storage ecosystem
-  One year warranty with enhanced service options

Scalar i500

Flexible Configuration Options

The Scalar i500 is designed to meet the industry's widest range of midrange backup needs, allowing users to create the right sized system for their environment and to easily expand it as their data needs change. Users start with one of three base systems and add expansion modules as they evolve. Expansion is simple and fast—a single rack-mount frame supports the entire library, and self-aligning expansion modules slide easily into place without tools. To give users the maximum usable capacity, Quantum includes free access to all physical I/E positions in the Scalar i500, even ones located in modules where physical storage devices have not yet been licensed or activated.

	BASE SYSTEMS					EXPANDED SYSTEMS	
				+		=	 
Configuration	5U System*	14U System*	23U System		9U Expansion Module		32U System 41U System
Authorized Slots (LTO)	41	41, 87, 133	41, 87, 133, 179, 225		0, 46, 90, 92		41 to 317** 41 to 409**
Drives	1, 2	1-6	1-10		0-4		Up to 14 Up to 18
I/E Positions	0, 6	0, 6, 12, 18	0, 6, 12, 18, 24, 30		0, 12		Up to 42*** Up to 54***

* Also available in free standing configurations. ** Authorized slots expand in increments of 46. *** I/E positions expand in increments of 6.

Intelligent Architecture

14U BASE SYSTEM FRONT VIEW

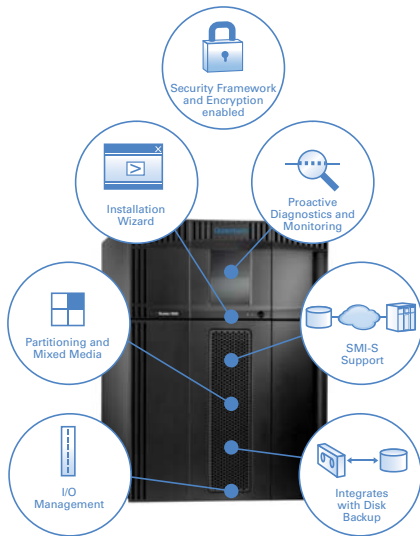


14U BASE SYSTEM REAR VIEW



The Scalar i500 combines modular scalability with single-robotics simplicity, reliability, and performance.

Integrating Management



The Scalar i500 leverages Quantum's iLayer management software to integrate the industry's most advanced midrange management services inside the library, including proactive monitoring and remote diagnostics.

Quantum's integrated iLayer management software makes backups easier to manage and gives users more control over the process. The Scalar i500 features a server-class main controller, distributed control processors, an intelligent I/O system, and an embedded communications network. Quantum's iLayer management is designed to make backup simpler and more effective while eliminating the need for external library control software and servers.

iLayer capabilities include native partitioning, mixed media operation, drive hot swap, firmware management, proactive remote monitoring, intelligent diagnostics, configuration protection, and direct support for third-party Storage Resource Management (SRM) tools. The iLayer's integrated software approach means that the Scalar i500 can add new capabilities over time, providing long-term investment protection for end users.

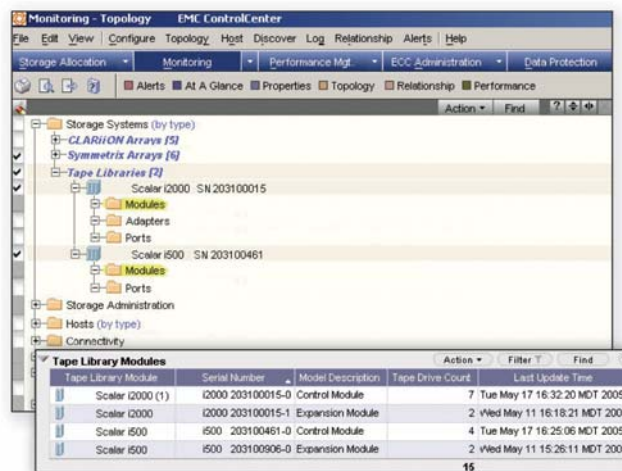
The iLayer management approach extends across all of Quantum's tape libraries and disk-backup solutions, allowing end users to manage their entire storage system more easily and to transition smoothly to next-generation backup solutions.

Easy To Install And Manage

The Scalar i500 management features were designed with midrange backup needs in mind. Its user-friendly setup wizards make it simple to install. Its partitioning, mixed media support, remote monitoring, and automated diagnostics make it easy to operate and maintain. And its native support for SRM tools using the SMI-S interface standard means users can include Scalar i500 libraries, even those in remote locations, within their managed storage environments along with their disk and fabric resources.

SECURITY FRAMEWORK AND ENCRYPTION

The Quantum Security framework enables customers to utilize industry standard encryption and key management solutions to protect their data and ensure regulatory compliance. The LTO-4 drive offers native encryption functionality giving customers strong AES 256 bit encryption and allowing them to take full advantage of drive performance and compression.



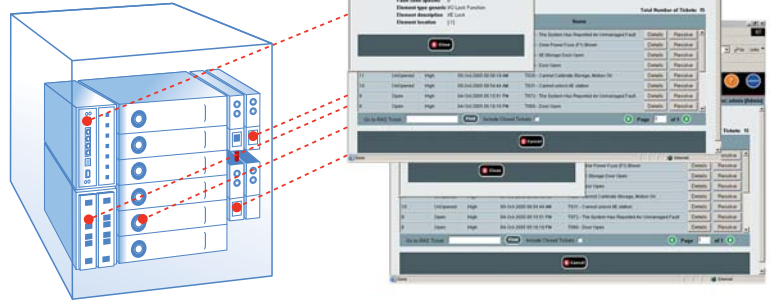
As the industry's first midrange library with SMI-S support, the Scalar i500 can be discovered and managed by industry-standard SRM tools. Native SRM support allows users to manage all their Scalar i500 libraries, along with their disk and fabric resources, through a single, common interface.

Proactive Remote Monitoring and Diagnostics

The iLayer management software uses proactive remote monitoring and relational diagnostic logic to improve backup reliability, reduce service calls by 50%, and speed up issue resolution by 30%.

Quantum's proactive approach to diagnostics is fundamentally different from other, reactive library monitoring systems. When a sensor is triggered in the Scalar i500, the library determines the subsystems involved, gathers log data, references event history, and proactively emails detailed, context-sensitive information to administrators and the Quantum service team.

With the Scalar i500, users are warned about exceptions before they interrupt service, and fault conditions can be identified quickly and certainly, even when they involve components that are outside the library. Many common fault conditions are designed to be user correctible with the help of the Scalar i500's intuitive service wizards.

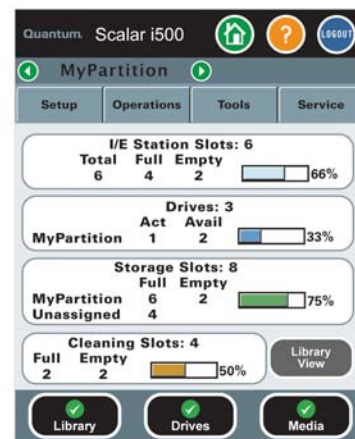


The Scalar i500 monitors hundreds of library, drive, and media conditions, proactively warns users about exceptions via email, and uses integrated relational diagnostic logic to synchronize and analyze log data. Quantum's iLayer management software can reduce service calls by 50% and speed up issue resolution by 30%.

The Midrange Library with Enterprise-Class Reliability, Availability, and Serviceability

The Scalar i500 offers industry-leading RAS features designed to meet the availability requirements of the most demanding midrange data centers. Hot swap drives are standard on all models. A full 2N power option protects the library and all drives from any single point of failure in the power system. The library's capacity-on-demand scalability provides non-disruptive growth, its flexible design makes it easy for users to add new modules, and its single, continuous robotics system provides fast, reliable cartridge transfer under the widest possible range of conditions.

The Scalar i500 also offers configuration protection, a standard feature that stores all library configuration data and event logs on a flash memory card, which can be backed up outside the library. The flash memory allows users to quickly and automatically transfer a library's configuration settings and diagnostic history to a replacement controller. The result is faster recovery from fault conditions, reduced management time, and increased reliability.

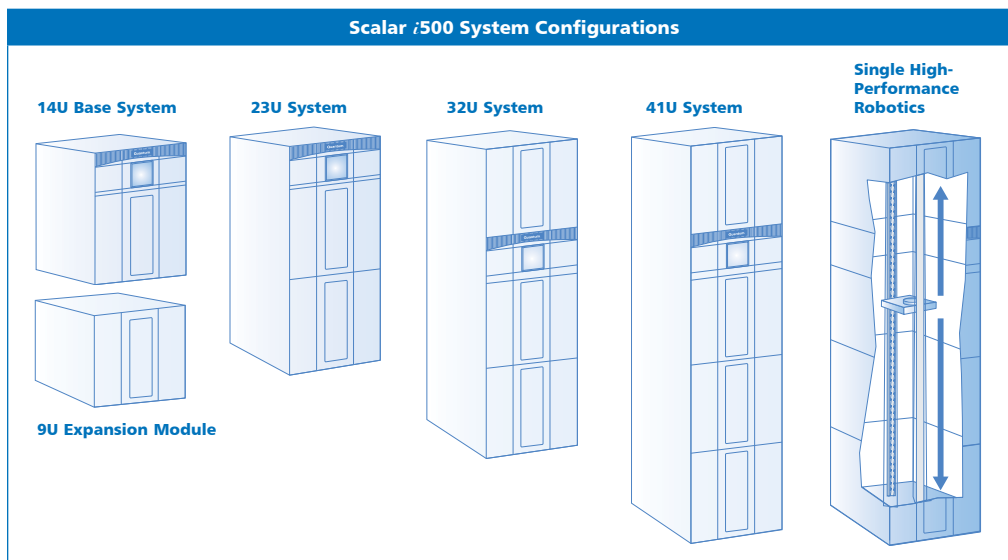


All of the Scalar i500 configuration data and event history is protected in a flash memory card. This card automatically transfers the library's configuration and diagnostic history to a new controller or to a replacement library.

Scalar i500

Easy Flexible Expansion, Single Robotics Design

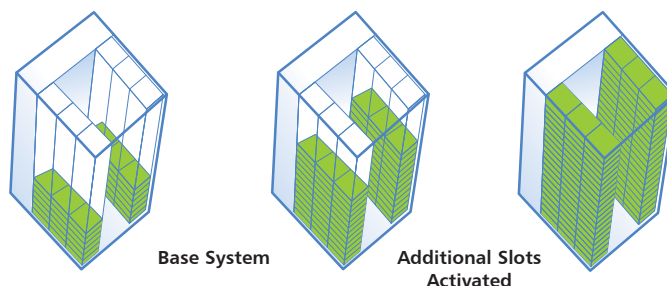
The Scalar i500 combines a flexible, modular design for fast and easy scalability with a single, continuous robotics system for performance, reliability, and value. The result is a solution that grows easily with users' data but provides the simplicity of a single library. With the Scalar i500, users start with one of three preconfigured base systems. When more capacity is needed, users add an expansion module, installing it either above or below the base system. All media and drives in the library are served by a single, continuous robotics system for easier operation, higher performance, and increased reliability—there is never a need for pass-through ports, elevators, or other complex tape transfer systems. The self-aligning expansion modules slide into place quickly without additional mounting hardware.



The Scalar i500 combines a flexible, modular design with single, continuous robotics to provide fast, flexible growth while maintaining single-library simplicity, performance, and reliability. Expansion modules are added quickly above or below the base system without additional mounting hardware. With the Scalar i500 there are no pass-through ports.

Capacity-on-Demand Scalability

The Scalar i500 uses capacity-on-demand scalability to allow users to increase usable capacity easily and non-disruptively as data grows. Users simply select an initial configuration that provides additional tape slots, preinstalled and ready to be activated using a simple software key. When all the base systems' tape slots are activated, users can increase slots available for growth by adding expansion modules. With capacity-on-demand, Scalar i500 users can expand their library capacity in 46-slot increments from 41 to 409 tape positions.



With the Scalar i500, users can add capacity quickly and non-disruptively by activating additional tape storage slots using a software authorization key.

Enterprise Proven Security For Your Valuable Data At Rest

To protect and secure your valuable data, the Scalar Key Management Appliance integrates directly with Quantum's Scalar libraries to provide a simple, scalable security solution designed to work with LTO-4 encryption. It offers high-availability key management that can be integrated simply and seamlessly into existing backup architectures and is built to comply with FIPS 140-2 Level 1, a security standard established by the US Federal Government and widely adopted outside of the United States. More information on Scalar Key Manager Appliance can be found by downloading the data sheet DS00406.pdf.

CAPACITY CONFIGURATIONS

BASE SYSTEM CAPACITY OPTIONS			
Active Tape Positions Options (LTO)	5U System	14U System	23U System
41	x	x	x
87		x	x
133		x	x
179			x
225			x

9U expansion modules hold up to 92 tapes. At installation, users may select slot activation levels of 0, 46, 90, or 92 tape positions.

OPERATION

Drive Interface:	SCSI-2/SCSI-3 LVD; Storage Networked 4Gb FC interface option
Library Interface:	SCSI-2/SCSI-3 LVD; SAS; integrated FC interface option
Inventory Speed:	55 seconds for average 5U configuration; 110 seconds for average 14U configuration
Configuration:	Auto-discovery and auto-calibration for installed/added components (modules, tapes, drives, magazines, etc.)
Import/Export:	Up to 54 (LTO) positions in removable magazines

RELIABILITY

Library MCBF:	Greater than 2,000,000
Library MTTR:	30 minutes
Power:	Optional 2N power for all systems and drives
Diagnostics:	Embedded monitoring of major subsystems, self-diagnostic procedures, and policy-based email and pager alerts to system administrators and Quantum Global Services
Module Upgrade:	Any storage module may be added in less than 30 minutes; customer-installable components include drives, fans, power supplies, slot upgrades

PHYSICAL

System	HxWxD	Weight
5U Base System	8.6" x 17.4" x 31.4" (21.9cm x 44.2cm x 79.8cm)	66 lbs (30 Kgs)
14U Base System	24.4" x 17.4" x 31.4" (61.9cm x 44.2cm x 79.8cm)	125 lbs (56.8 Kgs)
23U Base System	40.1" x 17.4" x 31.4" (101.9cm x 44.2cm x 79.8cm)	184 lbs (83.6 Kgs)
9U Expansion Module	15.8" x 17.4" x 31.4" (40cm x 44.2cm x 79.8cm)	59 lbs (26.8 Kgs)
Drive	8.9" x 13" x 16.4" (22.6cm x 33cm x 41.7cm)	10 lbs (4.6 Kgs)
Power Supply	8.9" x 13" x 16.4" (22.6cm x 33cm x 41.7cm)	5 lbs (2.3 Kgs)

TOTAL LIBRARY CAPACITY ¹					
Activated Tape Positions	Max. Cap. (TB) LTO-3	Max. Cap. (TB) LTO-4	Activated Tape Positions	Max. Cap. (TB) LTO-3	Max. Cap. (TB) LTO-4
41	32.8	65.6	225	180	360
87	69.6	139.2	271	216.8	433.6
133	106.4	212.8	317	253.6	507.2
179	143.2	286.4	363	290.4	580.8
			409	327.2	654.4

SOFTWARE AND PLATFORMS

Consult the most recent Quantum Software Compatibility Guide on www.quantum.com for a complete list of software and platforms compatible with Scalar i500.

COMPLIANCE AND CERTIFICATION

Safety Standards:	IEC 60950 with worldwide country deviations
Emissions Standards:	CISPR 22 Class A, EN55022 Class A, EN61000-3-2, EN61000-3-3
Immunity Standards:	EN 55024
International Certifications:	CE (Europe), VCCI (Japan), TUV/GS (Germany), FCC (USA), ICES (Canada), cTUVus (USA & Canada), GOST (Russia), MIC (Korea), BSMI (Taiwan)

ENVIRONMENTAL

Electrical:	100-240 VAC, 50-60Hz
Temperature:	10 to 40°C operating
Humidity:	20 to 80% non-condensing operating

DRIVE CAPACITY AND PERFORMANCE

Drive Type	Cartridge Capacity Native/Compressed ¹ (GB)	Drive Throughput Native/Compressed ¹ (MB/sec)	Data Buffer (MB)	File Access Time (sec)
LTO-4	800 / 1600	120 / 240	128	51
LTO-3	400 / 800	80 / 160	128	68

¹ Assumes 2:1 compression.

For contact and product information, visit quantum.com or call 800-677-6268

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Backup. Recovery. Archive. It's What We Do.

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About Quantum

Quantum Corp. (NYSE:QTM) is the leading global storage company specializing in backup, recovery and archive. Combining focused expertise, customer-driven innovation, and platform independence, Quantum provides a comprehensive range of disk, tape, media and software solutions supported by a world-class sales and service organization. This includes the DXi™-Series, the first disk backup solutions to extend the power of data deduplication and replication across the distributed enterprise. As a long-standing and trusted partner, the company works closely with a broad network of resellers, OEMs and other suppliers to meet customers' evolving data protection needs.