

UNMATCHED STORAGE DENSITY

SHARED LIBRARY SERVICES™

MULTIPLE INTERFACES

EXTREMELY SCALABLE

HIGH AVAILABILITY

RACK MOUNTABLE

COLOR TOUCHSCREEN



*Spectra 12000
tape library —
unmatched density,
high availability —
an extremely
scalable solution
for the
space-conscious
data center*

**SPECTRA 12000 TAPE
LIBRARY: THE HIGHEST
STORAGE DENSITY
IN THE SMALLEST FOOTPRINT**

The Spectra 12000 offers an incredibly high storage density for a tape library. Now you can manage massive amounts of data without wasting valuable datacenter space. Scalable up to 120 slots and eight tape drives, two Spectra 12000 libraries fit in a standard NEMA® 19 inch rack mount enclosure. Whether you use Sony's AIT-2 tape technology, for 15 terabytes (TB) of compressed storage, or Exabyte's M2 technology, for 18 TB of compressed storage, no other tape library comes close to providing this much storage in such an economical amount of space.

**PATENTED GATOR
ARCHITECTURE: THE HEART
OF THE SPECTRA 12000**

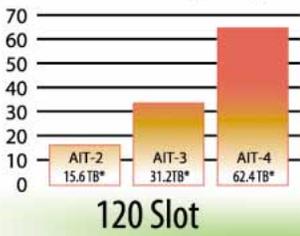
Spectra Logic's Gator architecture is the first of its kind to successfully combine all types of storage into a single library. Information Technology groups can accommodate the needs of Direct Attach Storage (DAS), Network Attach Storage (NAS) and Storage Area Networks (SAN), all at the same time within a single library. This allows a company to spread the cost of a single backup device across multiple servers, while facilitating a centralization of your data for lower total cost of ownership and administration. The Spectra 12000 combines the highest storage density of any multi-terabyte tape library with additional functions, such as high availability and ease of use, to provide state-of-the-art data protection to meet any need.

Tape drives in the Spectra 12000 library are hot swappable, and easily replaced with no impact to your company's data center operations.



Investment Protection—No

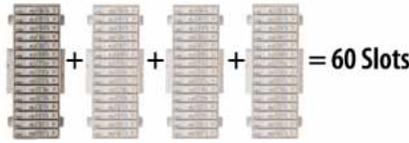
Growth in Capacity



120 Slot

growth

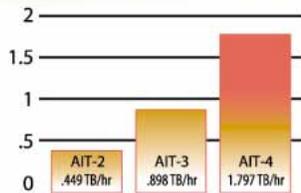
Upgrade from 60 to 120 slots
(4 Cartridge Packs with 15 tapes each)



Connecti
start out with SCSI
interface tech

DAS | M

Growth in Performance



8 Drive

flexibility

connectivity

Upgrade in capacity and performance
by adding additional drives



FLEXIBILITY: CHOOSE THE SOLUTION THAT MEETS YOUR NEEDS

There are many different storage architectures, with SAN and NAS among the front runners. The growth of primary storage and new architectures makes choosing your tape library a difficult decision.

Whether your goal is backup and restore or storage migration, the Spectra 12000 is designed to allow you to focus on the task of getting data protected without worrying about which storage architecture to use. Central to this design is the interface technology used within the Spectra 12000 library—Quad Interface Processor (QIP) boards. QIPs are both hot swappable and available in all of the latest interface technologies—S-QIP (HVD SCSI interface), F-QIP (Fibre Channel interface), L-QIP (LVD SCSI interface) and E-QIP* (GigaBit Ethernet interface). As new technologies become available, QIPs will be designed to accommodate them. QIPs can be intermixed within a library to provide data protection regardless of the environment.

The QIP is only part of Spectra Logic's "investment protection" philosophy. New QIPs make it simple for you to adopt new technologies without having to replace the tape library itself. When you choose to adopt a new technology as it becomes available, you can swap the QIP, not the tape library. See the graphic above for more information on how Spectra Logic builds "investment protection" into the Spectra 12000 library.

SHARED LIBRARY SERVICES™: CENTRALLY MANAGED BACKUP THROUGHOUT THE DATA CENTER

Shared Library Services (SLS) is built into the Spectra 12000 library. SLS allows a single library's resources to be divided across the data center, while providing support for heterogeneous platforms, software applications, drives, media and interface technologies. For example: one Spectra 12000 can provide LAN-free backup of mission-critical databases via a SAN with 4 AIT-2 drives and 45 AIT-2 cartridges over Fibre Channel, manage NT data with 2 AIT-2 drives and 30 AIT-2 cartridges via SCSI and still deliver fast, reliable backups of the departmental NAS via GigaBit Ethernet* with 2 AIT-2 drives and 45 AIT-2 cartridges. Not only does the Spectra 12000 insulate IT departments from changes in

ow & Into the Future

ivity upgrades;
QIPs, upgrade to other
nologies as needed

IAS | SAN



sharability

As you add additional servers,
each one can be connected to the Spectra 12000



Spectra 12000 Tape Library

interface technology and storage architectures, it also insulates them from tape drive technology changes. Sony's AIT-2, Ecrix's VXA and Exabyte's M2 tape technologies can all be integrated into the Spectra 12000 at the same time. If industry trends shift toward a specific tape format preference, the Spectra 12000 can accommodate that change. No other library gives you as much control and flexibility. That's true "investment protection!"

GUARANTEED MAXIMUM UPTIME WITH HOT-SWAPPABLE ELECTRONICS



DRIVES

- the Spectra 12000 library is scalable up to 8 tape drives, it's easy to add drives as your performance needs grow and change
 - hot swappable

QIPS

- the Spectra 12000 can accommodate up to two QIPs
- to upgrade or replace a QIP, off-line the QIP, perform the hot swap and bring the new QIP on-line
 - available for all interface technologies:
 - HVD SCSI (S-QIP),
 - Fibre Channel (F-QIP),
 - LVD-SCSI (L-QIP) and
 - GigaBit Ethernet (E-QIP)*



PICKER

- classic rack and pinion design
- easy to replace
- can perform over 600 tape handling operations per hour
- rated for more than 2,000,000 MCBF
- resumes processing upon completion of hotswap

Remote Management* via the Gator Control Panel

YOU ARE HERE



LONDON

Is your tape library located in a different building, maybe a different country? No problem. The Spectra 12000 library's Gator Control Panel (GCP) can be accessed on-site or remotely over the network*. The GCP is a color touchscreen that offers easy and intuitive administration of the library. Any operation can be performed via the GCP from library partitioning to diagnostics and media management. A standard Ethernet

port is all you need to facilitate remote management of the Spectra 12000 library. The GCP will even send out alerts via SNMP* (Simple Network Management Protocol).

TOKYO

CAPE TOWN

ABOUT SPECTRA LOGIC

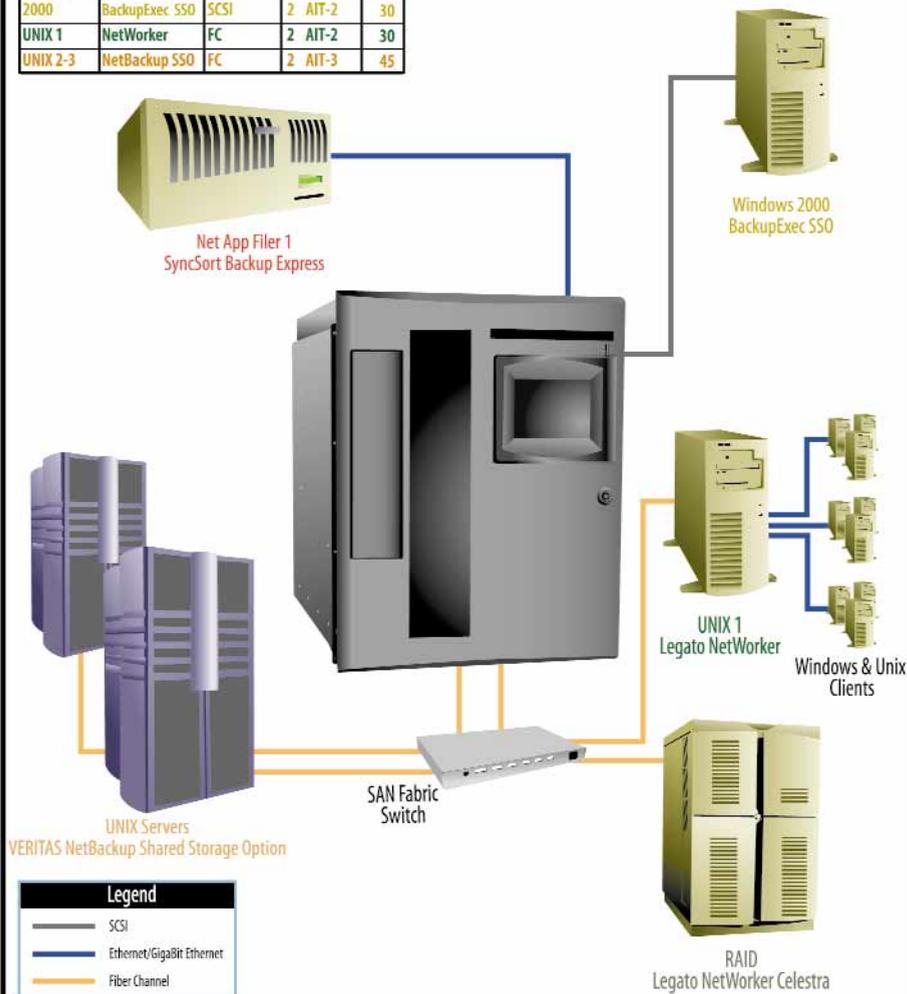
Spectra Logic has been designing and manufacturing leading edge storage peripherals for a wide range of computer applications since 1979. Our tape libraries deliver best-of-class performance, reliability, scalability and affordability. Spectra Logic provides data protection for customers worldwide with library products ranging in capacity from hundreds of gigabytes to hundreds of terabytes.

SYDNEY

SHARED LIBRARY SERVICES™

Example of a running Spectra 12000 using Shared Library Services™ (SLS) Partitions

HOST	APPLICATION	INTERFACE	DRIVES	SLOTS
Net App	SyncSort	GigE	2 AIT-2	15
2000	BackupExec SSO	SCSI	2 AIT-2	30
UNIX 1	NetWorker	FC	2 AIT-2	30
UNIX 2-3	NetBackup SSO	FC	2 AIT-3	45



Entry/Exit Port holds one, removable 15-slot Cartridge Pack



SLS™ allows the Spectra 12000 library to be subdivided from one to four virtual tape libraries supporting heterogeneous applications.

Cartridge Packs simplify the media rotation process. Turn to the back of this brochure for more information on Spectra Logic Certified Media, Cartridge Packs and PackRacks™ media storage racks.

Worldwide Technical Support

Too often on-site maintenance cost of a tape library are prohibitively expensive. Spectra Logic offers a variety of support options for the Spectra 12000 that are structured to maximize your data center operations and minimize your "total cost of ownership."

Choose the response time your systems require and rest assured that Spectra Logic will keep your data center protected and operational. One of our most innovative support options is the Assisted Self Maintenance (ASM) program, which goes beyond the offerings of typical on-site response time support services.

ASM is the support program of choice for many self-sufficient data centers with critical support needs. Due to the Gator architecture's modular, hot swappable design, a user can hot swap a failed part from an on-site pool and be back on-line in moments. This program puts a specific quantity of electronic parts at the user's data center location, then gives the user access to Spectra Logic's support specialists for technical assistance via telephone or email. In the event of component failure, the user is guided through the replacement process via the phone or email. If further evaluation determines that on-site repair is required, a technician will be dispatched. The ASM program results in timely, efficient solutions for most operational problems, while assuring professional support assistance when needed.

Spectra 12000 Specifications



Spectra 12000 tape library

Capacity	AIT-2		AIT-3*		Time to load cartridge: < 6 seconds
	Native	Compressed ¹	Native	Compressed ¹	
60 Cartridges	3.0 TB	7.8 TB	6.0 TB	15.6 TB	
120	6.0 TB	15.6 TB	12.0 TB	31.2 TB	

Performance	AIT-2			AIT-3*		
	Native	Compressed ¹	Hourly	Native	Compressed ¹	Hourly
2 Drives	12.0 MB/sec	31.2 MB/sec	112.3 GB/hr	24.0 MB/sec	62.4 MB/sec	224.6 GB/hr
4	24.0 MB/sec	62.4 MB/sec	224.6 GB/hr	48.0 MB/sec	124.8 MB/sec	449.3 GB/hr
6	36.0 MB/sec	93.6 MB/sec	336.9 GB/hr	72.0 MB/sec	187.2 MB/sec	673.9 GB/hr
8	48.0 MB/sec	124.8 MB/sec	449.3 GB/hr	96.0 MB/sec	249.6 MB/sec	898.6 GB/hr

Physical

Unit Dimensions: 24.25" H x 17.5" W x 31" D
 In Rack Dimensions: Two Spectra 12000s may be rack mounted. The rack is: 80" H x 24" W x 35" D.
 Weight: 197 pounds (fully loaded)

Power Requirements

Input Voltage: 100-120 VAC @ 6.0 Amps
 50/60 Hz
 200-240 VAC @ 3.0 Amps
 50/60 Hz
 Power Consumption: 600 W maximum

Tape Technology Migration Path (for a 120 slot Spectra 12000)

Generation	Drive Technology ¹		Spectra 12000 Capacity ¹		Spectra 12000 Transfer Rate ¹			
	Capacity	Transfer Rate	60 Cartridge	120 Cartridge	2 Drive	4 Drive	6 Drive	8 Drive
AIT-2	130.0 GB	56.2 GB/hr	7.8 TB	15.6 TB	112.3 GB/hr	224.6 GB/hr	336.9 GB/hr	449.3 GB/hr
AIT-3*	260.0 GB	112.3 GB/hr	15.6 TB	31.2 TB	224.6 GB/hr	449.3 GB/hr	673.9 GB/hr	898.6 GB/hr
AIT-4*	520.0 GB	224.6 GB/hr	31.2 TB	62.4 TB	449.3 GB/hr	898.6 GB/hr	1347.8 GB/hr	1797.1 GB/hr
M-2*	150.0 GB	108.0 GB/hr	9.0 TB	18.0 TB	216.0 GB/hr	432.0 GB/hr	648.0 GB/hr	864.0 GB/hr
M-3*	300.0 GB	162.0 GB/hr	18.0 TB	36.0 TB	324.0 GB/hr	648.0 GB/hr	972.0 GB/hr	1296.0 GB/hr

Gator Architecture Specifications

Interface

SCSI (HVD, LVD) and Dual Port Fibre Channel - copper², single-mode optical² with support for private loop, public loop and fabric topologies (Class II and Class III).

Reliability

Robotics: >2,000,000 MCBF (Mean Cycles Between Failure)

Software Compatibility

Spectra Logic's Gator architecture used in the Spectra 12000 tape library is supported by the industry's leading software packages on a wide variety of platforms. Visit the software partner section of our web site for details.

Multiple Drive Technology Support

Gator architecture can support multiple drive technologies, including Sony AIT, Exabyte Mammoth and Ecirix VXA

Media and Racks



Spectra Logic's Certified Media, Cartridge Packs and PackRacks™

Spectra Logic offers a wide selection of certified media, individually packaged and loaded into Cartridge Packs. All media is bar-coded with uniquely sequenced labels.

Purchasing your media in a Cartridge Pack is the easiest way to have media always available for your data center (no need to unwrap individual cartridges). Spectra Logic Cartridge Packs include a protective dust cover to protect your media from contamination during media rotation. Cartridge Packs are designed to snap into the dual Entry/Exit Port of the Spectra 12000 tape library and most other Spectra Logic tape library products. Cartridge Packs are easily stored on a Spectra Logic PackRack which keeps media organized and accessible. A PackRack holds four cartridge packs (60 cartridges maximum) and mounts to your data center wall. PackRacks are cascadable. You'll never lose track of your media.



Cartridge Packs easily snap into a PackRack.

SPECTRA LOGIC

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