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As a value-added distributor for long-term data storage, optical archive and production systems, as well as video surveillance, we offer manufacturer and industryindependent solutions.





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# **PRODUCT OVERVIEW**



# SPECTRA'S DATA STORAGE STORY

### **Rethinking Storage**

For nearly 40 years Spectra<sup>®</sup> has focused on innovation in storage systems and solutions. The leaders in data intensive industries, government entities, and researchers rely on Spectra solutions that are optimized to support their specific workflows. In addition to our traditional disk and tape storage solutions, Spectra also offers a single converged storage system – Spectra<sup>®</sup> BlackPearl<sup>®</sup> – to bring all of these options together including public and private cloud, enabling customers to get the most out of every storage medium available today through a single interface.



## Spectra's Hybrid Storage Ecosystem

**G** Spectra Logic's hybrid storage architecture automates the deep storage process and provides a cost-effective solution for long-term data storage needs. **7** 

- Jim Miller, senior analyst, Enterprise Management Associates We work with customers to help them rethink their approach to storage.

- Massive Amounts of Data Using cloud protocols to simplify application development, as well as access and management of massive amounts of data both near-term and long-term
- Hybrid Cloud Deploying hybrid cloud efficiently
- Genetic Diversity Making smart tradeoffs to balance the level of protection and speed of access with the overall cost of storage
- Digital Preservation Designing in redundancy through a standard workflow that includes a mix of media (tape and disk) and offsite storage





Storage is a strategic part of how customers are protecting and preserving their digital assets – maximizing the value they achieve from the data they store and use to:

- Educate and entertain millions
- Prevent crimes Develop new cures
- Improve predictions
- Build new revenue streams
- Comply with regulations

Our ecosystem of leading partners in high growth industries – such as Media and Entertainment, High Performance Computing, and Video Surveillance – provides core workflow software and solutions. We work with these partners to develop, sell, install and support a new generation of storage solutions based on a deep understanding of the workflows and storage requirements by industry.



Organizations in many industries use video surveillance to improve safety and security, protect business assets, meet legal requirements, and much more. To meet these demands, organizations are installing additional high definition cameras and retaining video for longer periods.



High Performance Computing environments require storage of massive amounts of data forever, with the ability to quickly provide parallel access across the complete storage system to multiple users in any location, concurrently.



With a focus on instant access of digital assets and monetization of content, one of the most critical needs in the Media and Entertainment industry is to have access to your content when you need it.



As the true costs of public cloud are realized, hidden costs of public cloud retrieval and unpredictable access times to critical content, organizations with large amounts of data are turning to private cloud solutions.



Life sciences, genomics, research, and biotech organizations are constantly creating data and using that data to conduct research. They have no way of knowing which piece of information will be critical. As a result of this a vast amount of data must be captured and immediately archived in such a way that it remains easily accessible and quickly retrievable in the long-term.

CONTINUE READING TO SEE OUR PRODUCT FAMILY >

#### Simply and Affordably Preserves Your Data Forever



Spectra<sup>®</sup> BlackPearl<sup>®</sup> Converged Storage System solves the problem of costly and complex approaches to digital preservation by combining NAS and Spectra S3 interfaces with multiple storage targets into a simple and affordable solution. Designed for numerous concurrent workflows, BlackPearl reduces the need for expensive third-party data movers by integrating Spectra S3 interfaces with a range of certified clients and simple file movers.

A BlackPearl solution with any combination of online disk, nearline disk, tape and cloud provides organizations with complete control of their data. BlackPearl is built to support local copies, offsite copies, replication to another BlackPearl and offsite public cloud storage. From the affordable BlackPearl V Series that can transfer data at 300 MB/s to the BlackPearl P Series that can transfer data at more than 3000 MB/s, there is a BlackPearl option perfectly sized for every organization.

. . .



#### Advanced Bucket Management

BlackPearl uses internal management policies for different storage devices, enabling the system to combine NAS and Spectra S3 interfaces with multiple storage targets, such as different tape libraries, tape partitions, disk storage systems and cloud. This allows BlackPearl to control where and how data is being written. The primary feature of Advanced Bucket Management is the object storage data policies, where BlackPearl can make multiple copies of data on tape, disk, cloud, or can be replicated to another BlackPearl. This provides a very flexible platform and storage management system, while protecting an organization's data with genetic diversity of media and storage devices. With Advanced Bucket Management, it's possible to have redundant copies of a file on IBM® TS1150 tape, LTO-7 tape, SAS HDD, and SATA HDD.

V	Vhat's Insid	de ·····	-		
		BlackPearl V Series	BlackPearl S Series	BlackPearl P Series	
		4 x 4 TB SAS HHD's	10 x 4 TB SAS HHD's	10x 960 GB SSD	
	Cache	(Upgrade) 10 x 4 TB SAS HDD's, (Upgrade) 10 x 8 TB SAS HDD's	(Upgrade) 20 x 4 TB SAS HDD's, (Upgrade) 20 x 8 TB SAS HDD's	(Upgrade) 10 x 1,920 GB SSD	
			2 SSD's = Up to 300 Million Objects	2 SSD's = Up to 300 Million Objects	
	Database	2 SSD's = Up to 300 Million Objects	4 SSD's = Up to 650 Million Objects	4 SSD's = Up to 650 Million Objects	
			6 SSD's = Up to 1 Billion Objects	6 SSD's = Up to 1 Billion Objects	
	Throughput	200 - 300 MBps to tape sustained	450 - 800 MBps to tape sustained	2,000 – 3,000 MBps to tape sustained	

\*Object database size estimate based on typical use, size may vary based on actual use.

# Arctic Blue<sup>®</sup>

# A purpose-built archive disk storage target for BlackPearl

ArcticBlue<sup>®</sup> Disk Solution leverages BlackPearl's hybrid storage architecture and dense archive drives, creating an object storage-based disk platform that delivers maximum longevity, efficiency, and cost effectiveness with the performance of nearline disk.

Drive Lifecycle Management, Spectra's power management technology, extends the life of your disk drives while delivering fast access to archive storage. Engineered for data reliability and integrity, Spectra's unique software implementation brings new life to long-term disk storage. ArcticBlue creates an on-premise cloud with an S3-based interface to make storage more accessible.

Spectra is an ideal partner due to its deep storage expertise. Spectra's BlackPearl product ecosystem, including their family of tape libraries and ArcticBlue disk products, will offer our customers an easy-to-deploy model, fast access to deep storage, and seamless scalability at a very attractive cost per terabyte.

alobus

– Steve Tuecke, Globus

## Features

- BlackPearl<sup>®</sup> Converged Storage System Enabled: Industry-standard S3-based object storage interface
- Drive Lifecycle Management:

Power management technology extends the life of drives while providing energy savings

- Global Spare: Built-in hot spare drives to ensure reliability
- Triple Parity: Minimizes data loss through redundancy and automatic rebuilds when properly monitored and maintained
- Continuous Data Checksum and End-to-End Checksum:
  - Statistically eliminates bit-rot and undetected bit error rate through continuous data checking while in storage
    Host can send and require end-to-end checksum where BlackPearl verifies and maintains the checksum for integrity
- Built-In Disaster Recovery:
  - Allows for seamess tape copy
  - Enables cloud-out copy
  - Provides for multi-site protection via replication to a second BlackPearl

ArcticBlue Nodes	From 1/2 a node to 8 nodes per BlackPearl	
RAW Capacity	768 TB per ArcticBlue node	
Throughput	1 GB per Second	
Power Consumption	750W (R/W), 210W Idle per Node 8TB Archive Drives	
Drive Type		

# **Tape-Based Solutions**



#### **TFinity ExaScale Tape Library** The World's Highest Capacity Storage System

Proven by the largest data users in the world, TFinity offers a highly flexible hardware architecture and a revolutionary management interface, helping you achieve the ultimate in data preservation.

Built upon Spectra's history as the undisputed leader in tape technology innovation, TFinity ExaScale offers many advantages: component redundancy, high-performance dual robotics, industry-leading storage density, extreme scalability, energy efficiency, ease of management, integrated encryption, enduring reliability and service that keeps customers loyal.



#### **Product Specifications**

Minimum 3	tion			
Drive/Media	Max Slots	Max Drives	Capacity Native/Compressed <sup>1</sup>	Throughput Per Hour Native/Compressed <sup>1</sup>
TS1150 Technology	1,350 slots	24 drives	13.5 PB / 33.8 PB	31 TB / 61 TB/hr
LTO-7 1,800	1,800 slots	24 drives	10.8 PB / 27 PB	26 TB / 65 TB/hr
LTO-6	1,800 slots	24 drives	4.5 PB / 11.2 PB	14 TB / 35 TB/hr

1. Compressed at 2.5:1 for TS1150 Technology, LTO-7 and LTO-6

As large as a 44-frame Library Configuration							
Drive/Media	Max Frames	Max Slots	Max Capacity <sup>1</sup>				
TS1150 Technology	44	40,680	1 EB				
LTO-7	44	53,460	801.6 PB				
LTO-6	44	53,460	334.1 PB				

1. Compressed at 2.5:1 for TS1150 Technology, LTO-7 and LTO-6

# **Spectra T950:** Enterprise Storage Without Compromise

#### Product Specifications

CAPACITY				
Media	Base frame max slots <sup>2</sup>	Base frame max capacity <sup>2</sup>	8 frame max slots	8 frame max capacity
TS1150 Technology	738	7.4 PB 18.5 PB*	7,614	76 PB 190 PB*
LTO-7	920	5.5 PB 13.8 PB*	10,020	60.1 PB 150.3 PB*
LTO-6	920	3 PB 5.7 PB*	10,020	25 PB 63 PB*
<sup>2</sup> With four drives	s installed			

#### with four drives ins

THROUGH	PUT			
Drive	Base frame max drives	Base frame max throughput	8 frame max drives	8 frame max throughput
TS1150 Technology	24	31 TB/hr 61 TB/hr*	120	156 TB/hr 302 TB/hr*
LTO-7	24	26 TB/hr 65 TB/hr*	120	130 TB/hr 324 TB/hr*
LTO-6	24	14 TB/hr 35 TB/hr*	120	69 TB/hr 173 TB/hr*

#### T950 Physical Characteristics (Base Frame)

H x W x D: 79.2" x 29" x 43.25" / 201 x 73.6 x 109.9 cm Weight (loaded): 1850 lbs (LTO) / 839.2 kg Min/Max Slots: 100 (expandable to 10,020 LTO slots) Drives Supported: LTO-5, LTO-6, LTO-7, TS1140, TS1150, T10000x Interfaces: Fibre Channel – 4 Gb/s and 8Gb/s

\*Capacity and throughput values calculated using compression: LTO-6, LTO-7,TS1140 and TS1150 (2.5:1)

#### **Maximum Scalability**

TFinity ExaScale Library Complex Future expansion includes joining up to eight libraries in a single complex with up to:

- 16 robots
- 352 frames
- 325,440 TS1150 slots: 8.1 EB
- >960 TS1150 drives: 2.4 PB/hr



#### **Spectra Exclusive!**

Now available with Oracle® T10000 Technology



We now offer the ultrafunctionality of tri-media. LTO, IBM\* TS11X0, and Oracle\* T10000 all in the same tape library. This provides for maximum flexibility in any environment and makes migration of data easier from one media to another.

**Operational Reliability:** TFinity has been tested to 3 million MCBF and to 6.33 years MTBF.



8-Frame Spectra T950 With Bulk Entry/Exit Frame

> Base Frame Spectra T950

The award-winning Spectra T950 library leads the field with the lowest TCO of any tape solution — from the greatest storage density and feature set to integrated encryption with key management – in an automated library. T950 also offers comprehensive media and hardware health monitoring inside our easy-to-use, single management BlueScale® interface, giving you a simple and secure system that eliminates the element of surprise.

# Spectra T200, T380 & T680 Enterprise Libraries

Designed for enterprise growth and scalability, these Spectra libraries are engineered to preserve your initial investment in storage. Investment protection is realized by utilizing components which are interchangeable among the T200, T380, T680, T950 and TFinity libraries, allowing you to seamlessly transfer and scale (TranScale) library components between libraries as your organization grows. Spectra's industry-first TranScalable architecture is designed with your growth in mind and can meet your future capacity, management and data protection needs. Currently our T380 library can be configured for LTO drives or TS1140 or TS1150 tape drive technology.

#### **Spectra T120 and T50e Midrange Libraries** Enterprise Feature Set and Performance

The Spectra T120 library provides more enterprise features and functionality than any other mid-range library. T120 offers 30 to 120 slots, and up to 10 LTO tape drives in a rack-mountable solution delivering enterprise-class features including encryption with integrated key management plus media, drive, and library hardware health monitoring. The T120 saves you time through ease of use with its unique, 8-tape TeraPack magazine and lowers your costs through scalability and investment protection.

The Spectra T50e combines simplified management with proven reliability in a tape library solution that gives you the confidence to let your applications run unattended. Scalable from 10 to 50 slots, one to four tape drives and offering customer replaceable components, the T50e is the easiest library in its class to configure, manage and upgrade.

## Product Specifications

Model	Max. Slots	Media	Max. Drives	Maximum Capacity Native / Compressed	Maximum Throughput Native / Compressed	Dimensions	Weight (base frame)†:	Interfaces
	680	LTO-6		1.7 PB / 4.2 PB*	6.9 TB/hr / 17.3 TB/hr*	80.5" x 24" x 48"	765 lbs	
T6801		LTO-7	12	4 PB / 10.2 PB*	12.9 TB/hr / 32.4 TB/hr*	186.7 x 44.5 x 102.8 cm 42U	347 kg	
	261	TS1150		2.6 PB / 6.5 PB*	15.5 TB/hr / 30.2 TB/hr*		305 lbs 138 kg	Fibre Channel - 4 Gb/s and 8Gb/s
T380	000	LTO-6	12	0.95 PB / 2.4 PB*	6.9 TB/hr / 17.3 TB/hr+	49" x 17.5" x 41" 124.6 x 44.5 x 102.8 cm		
	380	LTO-7		2.2 PB / 5.7 PB*	12.9 TB/hr / 32.4 TB/hr*	28U		
-		LTO-6		500 TB / 1.3PB*	4.6 TB/hr / 11.5 TB/hr*	35" x 17.5" x 41"	230 lbs	
T200	200	LTO-7	8	2 PB / 3 PB*	8.6 TB/hr / 21.6 TB/hr*	88.9 x 44.5 x 102.8 cm 20U	104 kg	
T120	120	LTO-6	10HH	300 TB / 750 TB*	5.8 TB/hr / 14.4 TB/hr*	24.5" x 17.5" x 35" 62 x 44 x 93 cm 14U	305 lbs 138.3 kg	SAS – 6 Gb/s Fibre Channel – 4 Gb/s and 8Gb/s
		LTO-7		720 TB / 1.8 PB*	10.8 TB/hr / 27 TB/hr*			
T50e	50	LTO-6		125 TB / 313 TB*	2.3 TB/hr / 5.8 TB/hr*	7" x 17.5" x 31.6"	40 lbs	SAS - 6 Gb/s
1500	50	50 4 HH LTO-7	300 TB / 750 TB*	4.3 TB/hr / 10.8 TB/hr*	17.8 x 44.5 x 73.7 cm 4U	18 kg	Fibre Channel - 4 Gb/s and 8Gb/s	

\*Compressed Capacity and throughput values at a ratio of 2.5:1 (Maximum capacity and throughput may change according to configuration.)

Drive support includes LTO-6, LTO-7 and TS1150 in the T380 library.

1) T680 ships with a standard 19" rack. †Additional weights: Drive/Sled: 12lbs / 5.4 kg; TeraPack® Case (With Media): 6lbs / 2.7 kg.





# **Tape Library Product Features**

## BlueScale®: Simple, Yet Powerful Library Management

BlueScale is the common software management interface for all Spectra libraries and brings enterprise command and control features right to your fingertips. Available through each library's on-board LCD color touchscreen and also through remote web access, BlueScale is an easy-to-navigate, browser-based library management tool that enables our storage solutions to work easily, flexibly and safely with your data.

- · Monitor your tape's activity and health with Media Lifecycle Management (MLM)
- Track hardware health with Library Lifecycle Management (LLM)
- · Monitor your drive's health with Drive Lifecycle Management (DLM)
- · Verify the integrity before writing to your Spectra Certified Media with PreScan
- · Verify the integrity of the data stored on your Spectra Certified Media with QuickScan and FullScan

#### Spectra Encryption and Key Management .....

All Spectra Tape Libraries allow you to add AES-256 bit encryption through encryption-capable tape drives. This lets you compress, encrypt and backup data in a single step. To help any organization secure data on tape, Spectra® Encryption offers a range of solutions to meet your individualized encryption requirements. Spectra SKLM and BlueScale Encryption deliver tailored, customer-centric encryption key management solutions through very flexible design options.

#### Spectra Certified Media: Efficient Management and Data Assurance

Spectra Certified Media is ready to use when you receive it: cleaned with CarbideClean,® pre-labeled, pre-loaded in TeraPacks, and covered by Spectra's Lifetime Media Guarantee. Our Certified Media offers a wide range of media options: bulk or individual cartridges, cleaning cartridges, and custom and standard bar-code labels. Spectra's Certified tapes also support Media Lifecycle Management for lifetime health tracking and notification of at-risk media. We also offer custom-fit Iron Mountain cases for secure offsite handling.

Efficiently managing hundreds of tapes is an ongoing challenge. Spectra's patented solution: TeraPack® media containers. The unique TeraPack design gives Spectra's libraries unrivaled storage density, offers secure stacking for storage and provides you with highly efficient media handling. The 9- and 10tape TeraPack containers allow for bulk media loading which can reduce the time you spend handling tapes up to 90%.

#### Spectra Hardware: Protecting Your Investment .....

#### Innovative Design Offers Energy Savings and a Greener Data Center

Spectra's tape libraries are engineered for optimal energy efficiency, consuming less power than comparable solutions. Spectra LTO media tape libraries also include tools to track your power usage. BlueScale EnergyAudit® power monitoring allows you to display and record actual power consumption, giving you greater control of your data center and budget.

# Spectra's Exclusive TranScale® Architecture TranScalable

- · Manage from anywhere using a secure web browser
- Monitor power usage with EnergyAudit<sup>™</sup>
- · Monitor the interior of your library through a web-based camera
- · Secure your data through integrated encryption with key management
- · Support multiple partitions in a single library with Shared Library Services (SLS)





Spectra has developed another industryfirst concept that protects your initial investment in storage-TranScale.

The TranScale® architecture utilizes components that are interchangeable among our Spectra Libraries, allowing you to seamlessly transform and scale (TranScale) your library as your organization grows.



### Complete Lifecycle Management

For highly reliable tape archive and backup, Spectra libraries track and report the expected lifetime utilization thresholds for tape media, drives and library components. With advance notification, you can address any potential concerns about the critical components of your entire library before they become an operational issue.



To ensure the viability of your data, **Media Lifecycle Management** (MLM) tracks and reports on health and security related statistics for Spectra Certified Media. Detailed reporting mitigates media problems and restores issues, allowing you to copy and move your data onto new media before degraded media affects your data.

Like MLM, **Drive Lifecycle Management** (DLM) extends the same proactive approach to drives by integrating tape drive analysis and reporting within the library. Using easy-to-manage, color-coded icons, you can quickly identify the health status of a drive. DLM also offers easy-to-use tape drive diagnostics to test and verify drive health and operation.

Managing the health of your library's critical components is made easy with **Library Lifecycle Management** (LLM). By delivering utilization metrics relative to the expected useful life of library robotics, filters and other critical components; you are able to service your library before issues occur.

#### Data Integrity Verification (DIV)

#### Spectra's Suite of Features for DIV

To give you data integrity verification on tape, Spectra's BlueScale management interface offers a sophisticated suite of features that allows you to actively check data already written to tape. Each process is performed by the library independent of the application used to read and write data.

**PreScan** ensures that tapes are usable and can accept data. PreScan checks each imported tape and verifies that the tape can be written to, scanning the tape for potential issues including broken or dislodged leader, poor media health and write-protected status.

**QuickScan** confirms that a single track (one direction) can be read. QuickScan scans a tape uni-directionally by reading the length of one track of the tape to provide a rapid indicator of integrity of data written.

**FullScan** checks an entire tape to ensure that all sectors can be read. FullScan confirms that there are no media errors on the tape by reading the entire length of the tape up to the end of the recorded data.

After the PreScan, QuickScan and FullScan operations are complete, the library stores the information into a database. Users can set triggers to check the health of tapes over an interval of time to ensure that the data is valid. Users can also verify a specific tape's data integrity on request. This process allows for rapid spot-checks of data integrity.

#### LTO Technology

LTO Roadmap									
LTO-5 LTO-6 LTO-7 LTO-8									
		L10-4	TO-5					170.10	
Shipment Year	LTO-3 2005	LTO-4	LTO-5 2010	LTO-6 2013	LTO-7 2015	LTO-8 TBD	LTO-9 TBD	LTO-10 TBD	
Shipment Year Native Capacity	LTO-3	LTO-4	LTO-5	LTO-6					
	LTO-3 2005	LTO-4 2007	LTO-5 2010	LTO-6 2013	2015	TBD	TBD	TBD	
Native Capacity	LTO-3 2005 400GB	LTO-4 2007 800GB	LTO-5 2010 1.5TB	LTO-6 2013 2.5TB	2015 6.0TB	TBD Up to 12.8TB	TBD Up to 25TB	TBD Up to 50TB	

Enterprise Drive Technology

Spectra has the unique capability to offer enterprise-class organizations an even higher capacity and throughput tape drive and media solution within select Spectra libraries. This advanced system for addressing exponential data growth is the pairing of TS1150 tape technology with Spectra TFinity, T950 and T380 tape libraries. LTO (Linear Tape-Open) Ultrium Technology is optimized for high capacity and performance with exceptional reliability in either a stand-alone or an automated environment. Ideally suited for backup, deep storage and archive applications, the LTO tape format establishes a new benchmark for large

volume data protection and archive. LTO technology will meet the needs of the enterprise with a roadmap and migration path that extends into the next decade.

> High Capacity TS1150 = 10 TB native (25.0 TB compressed @ 2.5:1) Fast Performance:

TS1150 = 360 MB/s (700 MB/s compressed) Reliability: 237,000 hour MTBF





# Spectra Verde NAS Simple, flexible, and affordable

file storage – as low as... 7.5¢ per gigabyte

The Spectra® Verde® NAS Solution is the optimal disk platform for storage of mid-tier data, including primary storage offload, data staging, backup and archive. Flexible, simple and affordable, the Spectra Verde delivers file storage for as low as 7.5 cents per gigabyte. The expandable Verde disk solution provides raw storage capacities from 48TB to 7.1PB. Designed for a variety of workloads, a single Verde solution supports three different disk drive types, including 4TB, 8TB and 12TB enterprise drives; 8TB archive drives; and high-performance SSD drives. Reliable, economical and archive-ready, Spectra Verde simplifies the data storage process.



Verde 2U model

Verde 4U Archive Expansion

Verde Disk Specifi	cations	2U Verde	4U Verde			
	Size	2U	4U			
Master Node	Capacity	48 TB - 144 TB	80 TB - 420 TB			
	# of Drives	12	20 to 35			
	Archive*	8 TB				
Drive Type	Enterprise <sup>1</sup>	4 TB, 8 TB, 12 TB				
	SSD	1 T	В			
Expansion Chassis	Archive	No Expansion	96 Drives (768 TB)			
Drives & Capacity	Enterprise	45 Drives (540 TB)	44 Drives (528 TB)			
	Archive	96 TB	7.1 PB			
System Capacity	Enterprise	1.2 PB	5.1 PB			
		1 Port - 10 Gbase-T (RJ45)	2 Port - 10 Gbase-T (RJ45)			
Network	Ports and Connectivity	2 Port - 10 Gbase-T (RJ45)	2 Port - 10 GigE (SFP+)			
		2 Port - 10 GigE (SFP+)	2 Port - 40 GigE (QSFP+)			
	Archive	Triple F	Parity			
Protection Level	Enterprise	None / Mirror / Parity (single, double or triple				
Acceleration Kit	# of SSD	N/A	0, 4, or 6 Drives			
Failover Mode		N/A	HotPair			
Dimensional	Enterprise Master Node	Width: 17.2" (437mm) Height: 2U; 3.5" (89mm) Depth: 27.5" (699mm) 61 lbs (27.7 kg)	Width: 17.2" (437mm) Height: 4U; 6.9" (175mm) Depth: 29.5" (699mm) 136.4 lbs (61.8 kg)			
Dimension and Weight	Archive Expansion Chassis	N/A	Width: 19" (483mm) Height: 4U; 6.9" (175mm) Depth: 40" (1,016mm) (including cable mgmt) 248.8 lbs (112.9 kg)			



A full rack of Verde in a network-attached storage environment can combine enterprise drives, archive drives, and SSD to deliver a flexible storage system that is the right fit for any work flow. Verde can be configured to accommodate your organization's requirements for performance, capacity, and cost without sacrificing reliability.

# World-Class Support

Spectra Logic's SpectraGuard customer support prides itself in providing users with more comprehensive support options than any other data storage vendor today. Support options include self-monitoring and automatic e-mail notification of issues, and a unique Assisted Self Maintenance (ASM) option that minimizes downtime by allowing customers to replace select parts. You can also take advantage of Spectra AutoSupport that proactively and immediately alerts you and SpectraGuard technical support of maintenance requirements and even impending problems. By proactively monitoring library status, Spectra can head off trouble before it has an operational impact. Spectra offers four levels of support\* detailed below:



#### A. Next Business Day:

Upon verification that the unit requires repair; a replacement part or unit will be shipped the same day for delivery the next business day.

#### **B. Next Business Day Onsite:**

A SpectraGuard representative will make a repair visit onsite the following business day.

#### C. Same Business Day Onsite:

SpectraGuard guarantees a four-hour onsite response time Monday through Friday, 8AM through 5PM customer local time.

#### **D. Four-Hour Onsite:**

Designed for environments requiring the maximum amount of uptime 24 hours a day, 7 days a week, 365 days a year. A four-hour onsite response is guaranteed around the clock!

### Assisted Self Maintenance

Spectra's Assisted Self-Maintenance (ASM) is an industry-first support option designed for tape library customers that require minimal downtime or for environments where normal support services are not feasible (e.g. high-security facilities, mobile sites such as ships). ASM stocks all customer replaceable parts at your site, giving you the ability to make immediate repairs and eliminate the delays that a site visit can involve.



## Professional Services

Spectra Logic Professional Services are designed to help our customers above and beyond their chosen support levels. Our solutions are implemented quickly and according to specification so you can begin to achieve a rapid return on your storage investment. Each Professional Service offering goes through a rigorous checklist to guarantee that all aspects of the offering have been addressed. These services ensure high reliability, availability and serviceability from the time of first contact to the end of the product life cycle. Some of these services include: Installation and Integration Services, Media Migration Services, Customized Training, Efficiency Implementation, Audit/Optimization, Disaster Recovery and Data Center Services.

#### Sustainable and Affordable Support

Spectra Logic understands this customer pain and addresses it with SpectraGuard<sup>®</sup> Service PriceLock - an industry exclusive price guarantee for the support life of your Spectra tape product. Unlike other vendors that may institute exorbitant price increases during extended support lifetimes, Spectra Logic guarantees the support price of your Spectra tape product will never exceed the support list price plus the rate of inflation (CPI).



\*Support options may vary depending on product and country of installation.



#### About Spectra Logic Corporation

Spectra Logic develops data storage solutions that solve the problem of long-term storage for business and technology professionals dealing with exponential data growth. Dedicated solely to storage innovation for nearly 40 years, Spectra Logic's uncompromising product and customer focus is proven by the largest information users in multiple vertical markets globally. Spectra enables affordable, multi-decade data storage and access by creating new methods of managing information in all forms of storage — including archive, backup, cold storage, cloud and private cloud.



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