

**DEEP STORAGE EXPERTS** 

# PRODUCT OVERVIEW



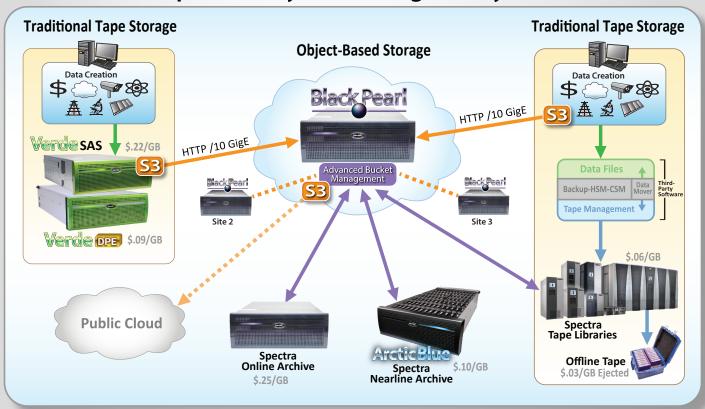
SPECTRALOGIC.COM

## SPECTRA'S DEEP STORAGE STORY

### **Rethinking Storage**

For nearly 40 years Spectra 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. Spectra has a rich ecosystem of leading solution providers combined with the only platform, BlackPearl, that provides a single interface to the industry's leading tape and disk storage using cloud protocols.

### Spectra's Hybrid Storage Ecosystem



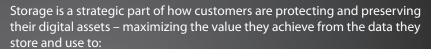
"Spectra Logic's hybrid storage architecture automates the deep storage process and provides a cost-effective solution for long-term data storage needs."

- 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, access to, and management of massive amounts of data both near and long-term
- · Hybrid Cloud Deploying hybrid cloud efficiently
- **Genetic Diversity** Using the right mix of media to make smart tradeoffs between speed of access and overall cost of storage
- **Digital Preservation** Designing in redundancy through a standard workflow that includes a mix of media and offsite storage







- 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.



MEDIA & ENTERTAINMENT

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.

## Deep Storage Solution



#### **Store Massive Data At Virtually No Cost**

BlackPearl is Spectra's Deep Storage Gateway, providing a RESTful S3 front end interface to tape. The Spectra S3 interface allows simple integration into any existing workflow using a Spectra Certified Client or our Deep Storage Browser for simple access between file and object storage.

BlackPearl fully automates all aspects of Deep Storage with our Advanced Bucket Management. This provides policy based multiple copies on both disk and tape libraries without the need for expensive middleware to operate the libraries or track metadata. BlackPearl includes a large and fast cache so objects sent can be staged and streamed at high speed to directly controlled tape drives, as well as internal flash based metadata storage allowing fast response and indexing.

BlackPearl delivers seamless data management for both large integrated workflows and simple manual moves to Deep Storage enabling hands-free, infinite retention, growth, and retrieval of data for as low as pennies per gigabyte for the life of the data.



#### Advanced Bucket Management -----

BlackPearl uses internal management policies for different storage devices, enabling the system to write data intelligently to different tape libraries, tape partitions, and now disk storage pools as well. This allows BlackPearl to control where and how data is being written. BlackPearl also includes intelligence of data policies. With data policies the BlackPearl can make multiple copies of data on Tape or Disk. This provides a very flexible platform and storage management system, while protecting the companies' data with Genetic Diversity of media and storage devices. With ABM it's possible to have a redundant copies of a file on TS1150 tape, LTO-7 tape, SAS HDDs, and SATA HDDs.

#### What's Inside ·····





## It Took a Tape Company to Release the True Potential of Disk

ArcticBlue leverages BlackPearl's hybrid storage architecture and dense Shingled Magnetic Recording (SMR) media, creating the first object storage based disk platform that delivers near the maximum longevity, efficiency, and cost effectiveness with the performance of nearline disk.

Drive Lifecycle Management, Spectra's power down technology, extends the life of your disk archive while delivering fast access to deep storage. Engineered for data reliability and integrity, local erasure coding combined with Spectra's unique implementation of ZFS software brings new life to long-term deep storage disk.

ArcticBlue creates an on-premise cloud with an S3 interface to make deep storage more accessible – all from a company that you want to do business with.



"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."

- Steve Tuecke, Globus

#### Features -----

- BlackPearl Enabled: Industry standard S3 object storage interface
- Drive Lifecycle Management: Power down technology extends the life of drives
- SMR: Leveraging this technology to its fullest by using sequential data writes from physical high speed cache
  to increase performance, similar to writing to tape
- Spectra's ZFS Implementation and Local Erasure Coding: Unleashing the power of ZFS while eliminating the complexity
- Global Spare: Built in hot spare drives to ensure reliability
- Intelligent Rebuilds: ZFS architecture allows rebuilds based only on used capacity
- Triple Parity: Statistically eliminates data loss through redundancy and automatic rebuilds when properly
  monitored and maintained
- Continuous Data Checksum: Statistically eliminates bit-rot and undetected bit error rate through continuous data checking while in storage
- End-to-End Checksum: Host can send and require end-to-end checksum, where BlackPearl verifies and maintains the checksum for data integrity
- Very Wide Bands: Maximizes system performance while providing maximum protection

ArcticBlue Nodes	1/2	1	2	4	8
RAW Capacity TB	440 TB	800 TB	1.5 PB	2.3 PB	6.1 PB
Throughput	1 GB per Second				
Power Consumption	775W (R/W), 140W Idle per Node				
Drive Type	8TB SMR Drives				

## Tape Based Solutions .....



#### **TFinity:** Intelligent enterprise storage

Proven by the largest data users in the world, TFinity offers a highly flexible hardware architecture and an evolutionary management interface, helping you achieve the highest scalability, availability and performance possible.

Built upon Spectra's history as the undisputed leader in tape technology innovation, TFinity 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-frame Library Configuration							
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	1,920 slots	24 drives	11.5 PB / 28.8 PB	26 TB / 65 TB/hr			
LTO-6	1,920 slots	24 drives	4.8 PB / 12 PB	14 TB / 35 TB/hr			

<sup>1.</sup> TS1150 Technology Compressed at 2.5:1 and LTO-7 and LTO-6 Compressed at 2.5:1

40-frame Library Configuration						
Drive/Media	Max Frames	Max Slots	Max Capacity			
TS1150 Technology	40	38,115	953 PB			
LTO-7	40	50,100	801.6 PB			
LTO-6	40	50,100	313.1 PB			

<sup>1.</sup> TS1150 Technology Compressed at 2.5:1 and LTO-7 and LTO-6 Compressed at 2.5:1

#### Available with IBM TS1150 Technology

#### Spectra Exclusive!

We now offer the ultra high speed and capacity of TS Technology drives and media in our TFinity. T950 and T380 libraries

#### Maximum Scalability The TFinity Library Complex

Future expansion includes joining up to eight libraries in a single complex with up to:

- 16 robots
- 320 frames
- 304.920 TS1150 slots: 7.6 EB
- >960 TS1150 drives: 2.4 PB/hr

Contact your Spectra rep for more details.

#### Physical Characteristics

Number of Frames: 1 to 40 (320 in complex) Number of Drives: 2 to 120 (960 in complex)
Drives Supported: LTO-5, LTO-6, TS1140, TS1150 Slots: 100 to 50.100 LTO (400.800 in complex)

Single Frame Dimensions

Height: 79.15" / 201.0 cm Depth: 43.21" / 109.8 cm Drive/Media Frame Width: 29" / 73.7 cm Bulk TAP Service Frame Width: 31" / 78.7 cm

### Spectra T950:

Enterprise storage without compromise

#### **Product Specifications**

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	1000	6.4 PB 16 PB*	10,020	64 PB 160.3 PB*
LTO-6	1000	2.5 PB 6.2 PB*	10,020	25 PB 63 PB*

<sup>&</sup>lt;sup>2</sup> With four drives installed

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: 78.77" x 30.63" x 43.21" / 200 x 77.8 x 109.8 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, TS1140, TS1150 Interfaces: Fibre Channel - 4 Gb/s and 8Gb/s

\*Capacity and throughput values calculated using compression: LTO-5 (2:1); LTO-6 (2.5:1) TS1140 and TS1150 (2.5:1)



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:

Enterprise storage in a smaller footprint

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 Mid-Range 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, Capacity & Throughput*	Max. Drives	Maximum Capacity	Maximum Throughput	Dimensions	Weight (base frame)†:	Interfaces
	LTO-6		1.7 PB; 4.2 PB+	6.9 TB/hr; 17.3 TB/hr+	73.5" x 17.5" x 48"	765 lbs		
T680 <sup>1</sup>	680	LTO-7	12	4.3 PB; 10.7 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+	49" x 17.5" x 41"		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+	124.6 x 44.5 x 102.8 cm	305 lbs 138 kg	
	380	LTO-7		2.4 PB; 6.0 PB*	12.9 TB/hr; 32.4 TB/hr*	28U	100 1.9	
	LTO-6	LTO-6	_	500 TB; 1.3PB+	4.6 TB/hr; 11.5 TB/hr+	35" x 17.5" x 41" 88.9 x 44.5 x 102.8 cm 20U	230 lbs 104 kg	
T200	200	LTO-7	8	1.3 PB; 3.2 PB*	8.6 TB/hr; 21.6 TB/hr*			
T120	120	LTO-6	10HH	300 TB; 750 TB+	5.8 TB/hr; 14.4 TB/hr+	24.5" x 17.5" x 37.5" 62 x 44 x 93 cm 14U	305 lbs 138.3 kg	SAS – 6 Gb/s Fibre Channel –
	.20	LTO-7		720 TB; 1.9 PB*	10.8 TB/hr; 27 TB/hr*			4 Gb/s and 8Gb/s
TEOO	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
1306		LTO-7	4 HH	300 TB; 800TB*	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 +LTO-6 (2.5:1); LTO-7(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.

## 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
- · Manage from anywhere using a secure web browser
- Monitor power usage with EnergyAudit™
- · 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 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 10-tape TeraPack containers allow for bulk media loading which can reduce the time you spend handling tapes up to 90%.

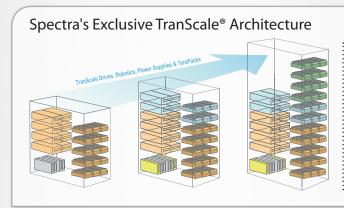


#### Spectra Hardware: Protecting Your Investment ------

#### 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 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.

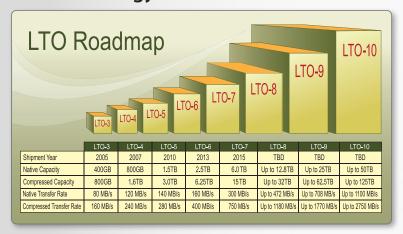
PreScan ensures that tapes are usable and can accept data. PreScan checks each imported tape and verifies that the tape can be written to, scanning the tape for potential issues including broken or dislodged leader, poor media health and write-protected status.

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 (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

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

volume data protection and archive.

#### 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.



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



## **Disk-Based Solutions**



## **Performance NAS:**Simply Affordable File Storage

Verde DPE/DP



Spectra Verde disk is the optimal platform to easily and affordably handle data growth. The 4th generation of the Spectra's disk product line, Verde is half the cost of traditional file storage. It is designed to offer the highest levels of data assurance and is easily managed to meet your requirements for long-term backup and archive storage. Verde is available in two models, Verde 2U and Verde 4U, ranging in sizes from 48 TB up to 3.4 PB of raw storage. Deploying disk for backup and archive has never been easier.

Verde Specifications			
	Verde 2U Master Node	Verde 4U Master Node	Verde 4U Expansion Node
Minimum Node Capacity	48 TB	80 TB	40 TB
Maximum Node Capacity	96 TB	280 TB	352 TB
Maximum System Capacity	800 TB (1 Master, 2 Expansion)	3.4 PB (1 Master, 9 Expansion)	
Network Connectivity	4 x 1GbE, 2 x 40GbE (optional)	4 x 1GbE, 2 x 40GbE	N/A
Dimensions	Width: 17.2" (437mm) Height: 2U; 3.5" (89mm) Depth: 27.5" (699mm)	Width: 17.2" (437mm) Height: 4U; 7" (178mm) Depth: 27.5" (699mm)	
Gross Weight	61 lbs (27.7 kg)	104 lbs (47.2 kg)	



#### Bulk NAS: A Breakthrough in Affordable Digital Preservation for Enterprise

Verde DPE and DP are a Shingled Magnetic Recording (SMR)-based Network Attached Storage (NAS) disk platform that delivers high density bulk storage. Engineered for data reliability and integrity, Spectra's unique implementation of ZFS software RAID combined with the newest disk technology brings new life to long-term storage – Verde DPE. The built in NFI portal provides a link to Spectra tape libraries through the BlackPearl Deep Storage Gateway creating a genetically diverse storage strategy.

Specifications				
	Verde DPE 4U Master Node	Verde DPE 4U Expansion Node	Verde DP 2U	
Cost	As low as 9¢/GB for a f	.14¢ /GB		
Capacity	Up to 200TB		96 TB	
Maximum System Capacity	7.4 PB Raw (1 M	96 TB		
Connectivity	2x10GE optica	10 Gig Base T optical		
Power	1280W (R/W), 1000W idle	775W (R/W), 640W idle	350 (R/W), 210 idle	
Performance	Up to	rface		
Warranty	year extendable to 5 years, optional NBD, and 4 Hour     on-site service available depending on location			
Width: 17.2"  Dimensions Height: 4U; 7"  Depth: 27.5"		Width: 17.5" Height: 4U; 7" Depth: 40" (including cable mgmt)	Width: 17.2" (437mm) Height: 2U; 3.5" (89mm) Depth: 27.5" (699mm)	



## World-Class Support

## "A company you'll want to do business with."

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 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.









Drive

Power Supply > Robotics

I/O Blade (RIM)

#### 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® 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).





#### About Spectra Logic Corporation

Spectra Logic develops deep 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 more than 35 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 deep storage — including archive, backup, cold storage, cloud and private cloud.



BlackPearl, BlueScale, CC, Spectra, SpectraGuard, Spectra Logic, TeraPack, TFinity, TranScale, and Verde are registered trademarks of Spectra Logic Corporation. ArchiveGrade, ArcticBlue, and Verde DPE are trademarks of Spectra Logic Corporation. All rights reserved worldwide. All other trademarks and registered trademarks are the property of their respective owners. Specifications subject to change without notice. © 2015 Spectra Logic. All rights reserved worldwide.