

# Data Storage Solutions for High Performance Computing



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In high performance computing (HPC) environments, every element needs to operate at peak efficiency—especially storage systems. Spectra Logic® meets the intense demands of HPC with robust, high-performance tape libraries relied upon by top-tier research facilities and computing centers worldwide.



## Why HPC Storage Matters

As processing power, data modeling and advanced analytics continue to grow, so do data repositories. On-premises storage remains critical for the speed, control, and cost efficiency HPC requires. Essential qualities for HPC data storage include flexibility, reliability, scalability and ample capacity.

## Your Ideal Storage Solution

Spectra® offers a full range of high-capacity data management and storage solutions tailored for HPC. From the powerful Spectra TFinity® Plus tape library—the world's largest single storage device—to the versatile BlackPearl® platform that seamlessly integrates tape, disk, and cloud storage, Spectra solutions are built for the world's largest HPC environments. Our data management software further enhances access, protection, and archiving capabilities, taking your data to new heights.

# Spectra TFinity Plus Tape Library

## The Ideal High Performance Computing Archive Target

### Why Spectra TFinity Plus library for HPC?

The Spectra TFinity Plus tape library is built to handle the intense data demands of high performance computing (HPC) environments. Here's why it stands out:

**Unmatched Scalability** – Need room to grow? The TFinity Plus scales up to an incredible 6.4 exabytes, so it's ready for today's data demands and tomorrow's.

**Space Saver** – Maximize your data center space with leading storage density that takes up to 50% less floor space than other tape libraries.

**Energy Efficient** – Cut down on energy costs. Spectra tape solutions use less power than disk-based options, keeping your operating expenses low.

**Enhanced Performance** – With dual robotic arms, the TFinity Plus delivers faster data handling and retrieval, perfect for high-throughput HPC workflows.

**Tri-Media Flexibility** – Supports LTO, IBM TS11XX, and Oracle T10000 tapes, giving you flexibility and future-proofing your storage investment.

### Designed for HPC Workloads

The Spectra TFinity Plus library isn't just powerful; it's designed specifically for HPC environments, loaded with features that make data management a breeze:

**LumOS Library Management Software** – This advanced OS offers streamlined management, monitoring, and library control with a modern, reliable architecture.

**Bulk Loading Efficiency** – With the BulkTAP option, you can load 14 TeraPacks (140 LTO or 126 TS11xx tapes) in one go—perfect for massive media volumes. For even more efficiency, use two BulkTAPs at once to dramatically reduce load times for environments that manage extensive media volumes.

**High-Performance Transporter (HPT)** – Reduce cycle times and increase reliability with the HPT, which improves mount speeds and enhances system uptime. Dual transporters keep data access fast and uninterrupted.

**LumOS ReST API** – Streamlines operations and reporting and automates library functions, including software upgrades.

**Seamless Integration** – The TFinity Plus works smoothly with Spectra StorCycle®, high-performance storage systems (HPSS), HPE DMF, Varsity, Storage Protect and the Spectra BlackPearl Platform, enabling seamless data workflows.

With these features, the TFinity Plus is built to keep up with the demands of HPC—offering a storage solution that's robust, reliable, and ready for anything.



We have to store a lot of data for long periods of time. A single microscope can capture 10TB of data in as little as a few hours, and a published breakthrough on cancer research can take anywhere from a few years to a couple of decades. The BlackPearl and tape solution from Spectra provides a scalable and cost-effective way to store multiple data workflows with varying retention requirements."

Jeffrey McDonald, Director of IT,  
Hormel Institute - University of Minnesota



# Spectra Hybrid Storage Ecosystem

## High Performance Computing Storage Workflow

### Essentials of HPC Storage

In high-performance computing, success depends on three pillars: computing power, networking, and—most importantly—storage. If you're working with or considering HPC, you need a cutting-edge storage solution to preserve data and keep it accessible for the future. Spectra offers just that, with a range of hardware and software designed to make HPC data management smooth and reliable.

To meet the intense demands of HPC, your storage system should be able to:

**Ensure Data Availability** – Access data from any node whenever you need it.

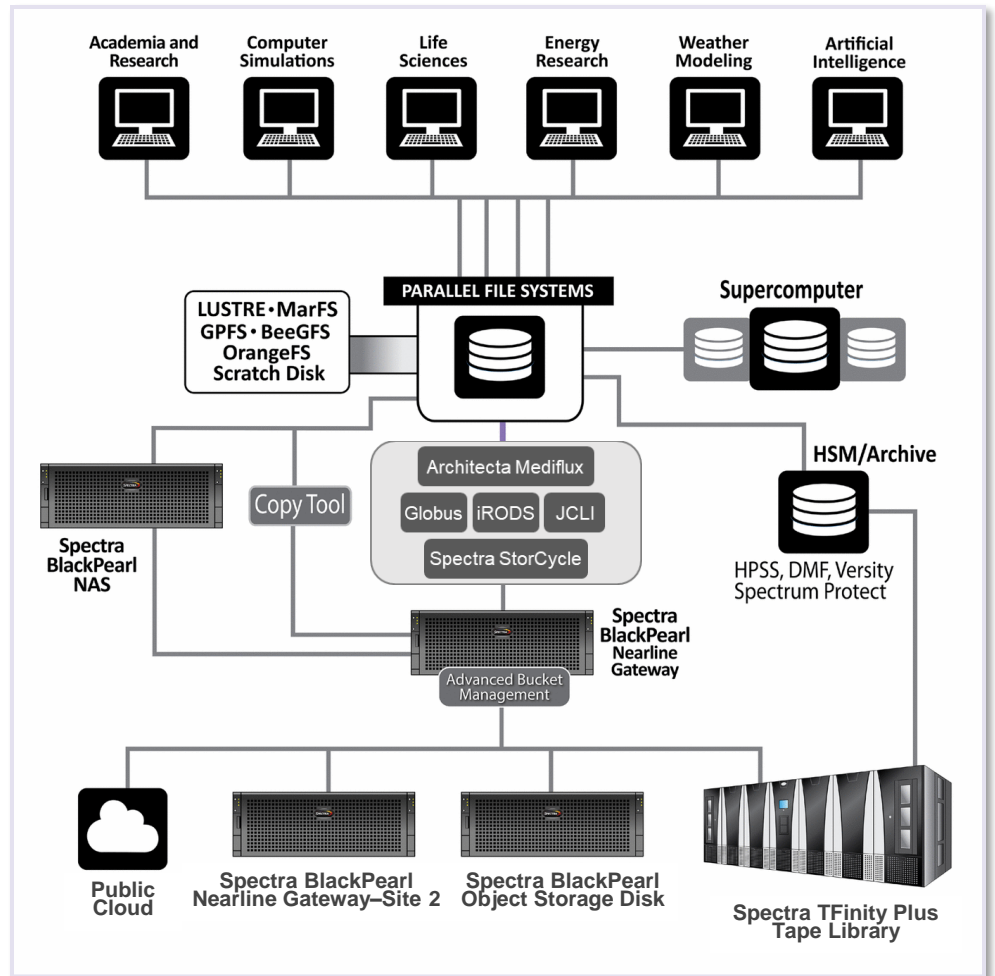
**Handle Any Size Request** – Be ready to tackle both small and massive data requests effortlessly.

**Support High-Performance Protocols** – Maintain speed with protocols built for performance.

**Scale Fast** – Keep up with the ever-tightening latency requirements and expanding data needs.

**Secure Your Data** – Protect against both internal and external threats.

With a modern approach to HPC storage, you're equipped to handle the vast data requirements of high-performance computing—reliably and securely.



The new library has just shy of 14,000 slots for tapes. We were able to easily move all 70 petabytes of existing data into the new system and have grown to 104 petabytes in size and have plenty of room for at least a year or two before we have to start thinking about expanding.”

HPC Linux Systems Engineer, OLCF





# Flexibility to Meet Your Needs & Style

## SpectraGuard® Service: Support on Your Terms

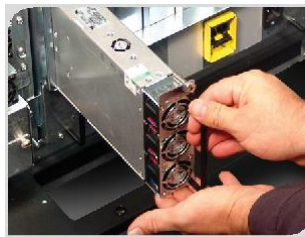
Get the support you need, when and where you need it, with SpectraGuard® service. From standard next-business-day replacement to advanced options like same-day, four-hour onsite service and even Assisted Self-Maintenance (ASM) for high-security sites, we've got you covered. Our support team is trained not just on our hardware but across the entire storage ecosystem, so we can help resolve issues from start to finish.



## Assisted Self-Maintenance: Perfect for Secure Sites

For maximum security and minimal downtime, Spectra's industry-first ASM offers 24x7 support with an extra layer of control. We'll stock essential customer-replaceable parts right at your site so you can make immediate repairs without the need for on-site visits, keeping things secure, efficient and hassle-free.

With SpectraGuard® service, you get flexible, comprehensive support tailored to your needs.



Drives

Power Supplies

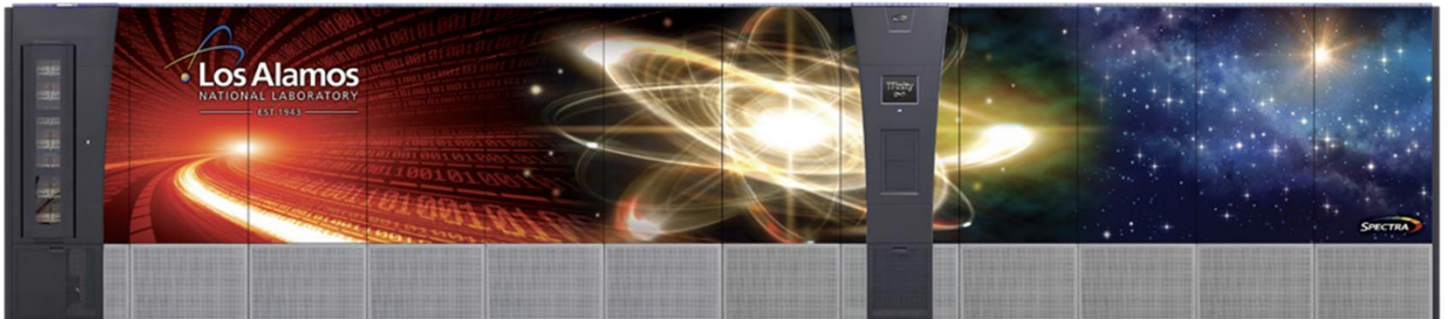
Robotics

I/O Blade (RIM)

## Brighten Your IT Environment

Visually stand out with a bold color palette in your modern IT environment. One way is by applying unique graphic wraps to your TFinity Plus tape libraries.

These colorful designs blend practicality, aesthetic appeal and brand representation, allowing you to infuse your data storage infrastructure with individuality and character. From reinforcing corporate identity to fostering a visually engaging workspace, the option to wrap your Spectra tape libraries with bespoke graphics will resonate across your data center.



Spectra TFinity tape library – 12 frames

## About Spectra Logic Corporation

Spectra Logic modernizes IT infrastructures to preserve, protect and defend data, from days to decades, whether on-premises, in a single cloud, across multiple clouds or in all locations at once. Our cost-effective solutions help organizations efficiently manage, migrate and store long-term data, from terabytes to exabytes, with features that make it ransomware resilient.

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Toll Free: 800-833-1132 • 303-449-6400 • 6285 Lookout Road • Boulder, CO 80301 USA

