



## Highlights

- Simple-to-deploy NAS solution
- Tunable performance
- Online, nearline and archive in one system
- Cost-effective storage utilizing LTFS
- Built-in data protection
- Non-proprietary, vendor neutral

Empower your storage.  
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## Crossroads Systems StrongBox NAS

### Overview

*Massive data growth requires scalable, protected and resilient storage*

Data is exploding across the digital universe, putting pressure on overburdened budgets and IT resources. In order to meet the ever-growing challenges driven by the need to keep data available, online and protected in a cost-effective and sustainable manner, users must seek out new ways to manage and protect their data.

### StrongBox NAS

*The most cost-effective solution for unstructured data*

Crossroads StrongBox® is a network-attached storage (NAS) appliance built to simplify data access and provide the most cost-effective storage for unstructured data. With its intelligent storage management, StrongBox delivers embedded data protection for all of your online, nearline and archive storage needs.

From a user's perspective, StrongBox presents itself as one or more CIFS/NFS shares, and each share is customizable to meet user-defined data protection and performance requirements. StrongBox enables you to automatically create one or more copies of files and export files on tape or over the LAN/WAN for offsite protection. StrongBox incorporates file and media-based health checks to ensure the long-term resiliency of your data. With this intrinsic data protection, files stored in StrongBox are secure for long-term data preservation, yet always accessible.

By utilizing Linear Tape File System (LTFS) tape technology along with intelligent storage management, StrongBox delivers the performance of disk with the economics of tape in one simple and massively scalable solution.

### *Scalability for storage growth*

StrongBox allows you to take advantage of the low power and maintenance costs of tape, without sacrificing performance. In fact, StrongBox can reduce power costs by up to 95 percent, compared to disk-only storage. Likewise, a single StrongBox appliance can seamlessly scale to tens of petabytes.

### *Data availability to meet business needs*

StrongBox empowers you to access data when and where you need it. Using StrongBox as your primary NAS for unstructured data ensures nearline accessibility for applications and users. Or, configure StrongBox as a high-performance active archive, unlocking the economic value of tape to maximize ROI. Through user-defined policies, you can customize the system to balance performance and accessibility with cost-effective protection to meet your business needs. No matter how you use StrongBox, files are always secure and retrieval is simple and fast.

### *Simple to deploy and use*

StrongBox data is presented as a standard file system and is easily accessed by users or applications. Accessing a file is as simple as a familiar "drag-and-drop" from a StrongBox share, which appears as a network drive.

### *Intrinsic data protection*

#### *for the file and physical media*

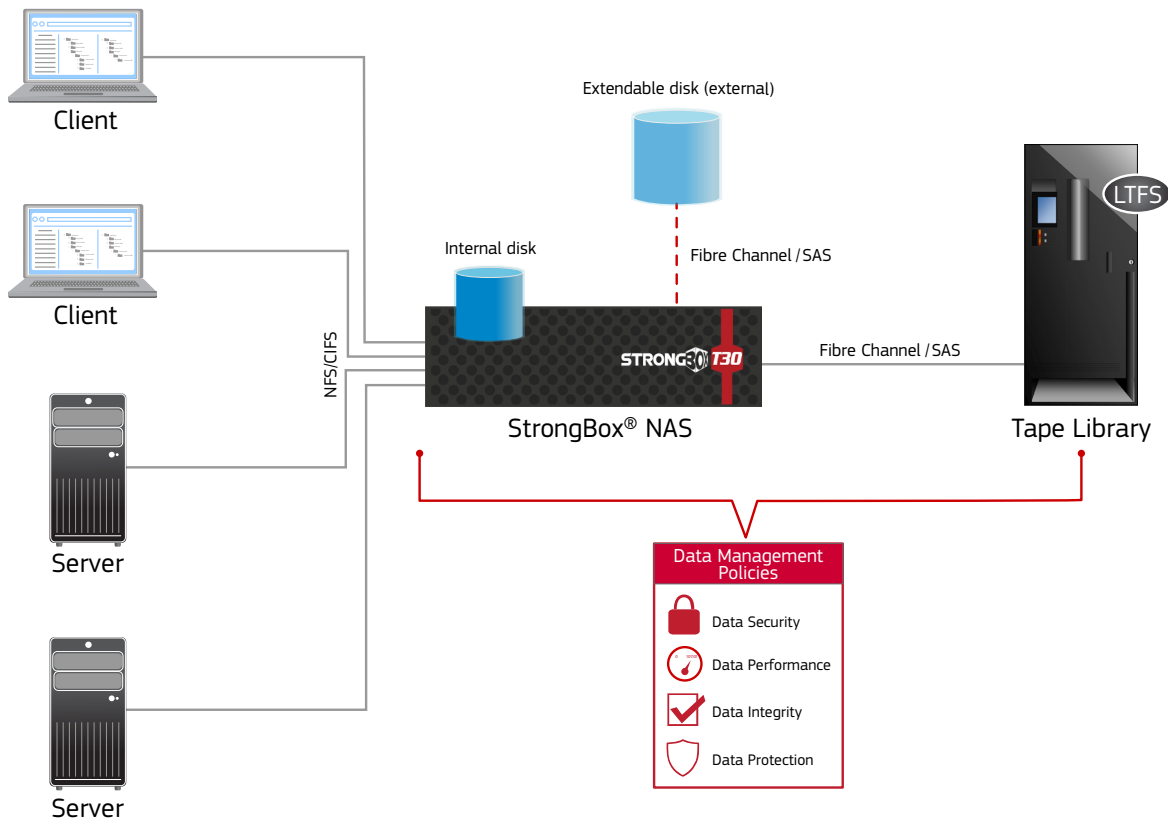
While storing data is fundamental, reliably retrieving data in time of need is crucial to a successful preservation strategy. StrongBox never alters or changes file formats; data is always stored and accessed in its original state. StrongBox provides file-level integrity checks so that you can be confident that data written will be the data read.

Engineered to meet data protection requirements, StrongBox can create multiple, secure data copies on separate media with the option to export physical media for offsite vaulting. Data can also be protected at a remote site via secure, encrypted WAN optimized asynchronous replication. Unique system analysis technology provides automated reporting on the health and use of tapes, drives and disk subsystems, ensuring that hardware and media components are operating efficiently.

### The Bottom Line

The StrongBox NAS solution lowers the cost of data storage while providing protection and simplified management for your online, nearline and archive needs. StrongBox is the ultimate solution for unstructured data.

## StrongBox Solution Architecture



## StrongBox Platforms

StrongBox is available in two flexible, scalable platforms to meet your specific business needs.



- Flexible for SMB to enterprise customers, managing up to 39 PBs of usable storage (100 million files)
- Space-efficient 1U model with up to 16TB of internal disk storage
- Support for up to 4 LTO 5/6 or IBM TS1140/50 LTFS tape drives

# T10



- The most robust StrongBox model, ideal for the enterprise data center, offering managed capacity up to 39 PBs or 1.6 billion files
- Powerful performance with up to 65TB internal disk storage
- Support for 16 LTO 5/6 or IBM TS1140/50 tape drives

# T30

## StrongBox NAS Technical Features and Configuration

### Appliance Connectivity

StrongBox is an appliance offered in two hardware configurations: 1U or 3U. Connecting to the local network via 1Gb or 10Gb Ethernet, data transfers are managed via standard Network File System (NFS) or Common Internet File System (CIFS) protocols. StrongBox provides a unique storage tier with performance tuning and embedded data protection. As a plug-and-play NAS appliance, StrongBox brings cost-effective simplicity to unstructured data management while removing the complexities of data protection.

### System Features



#### *Performance with tunable policy-driven data management*

With StrongBox, it's simple to access files when and where you need them. StrongBox combines disk and tape to deliver a NAS solution that meets online, nearline and archive requirements. User-defined policies balance performance and cost efficiency so you can optimize your storage resources. This empowers you to leverage the system as your primary NAS, making files rapidly accessible for applications and users, or as an active archive, maximizing your ROI for long-term storage.



#### *Data Protection*

For the first time ever, store your data without the need for backup! StrongBox provides robust, built-in data protection features that ensure your data is always safe and protected on tape without third-party applications or backup.

- Multi-copy policy to create one or more file copies on separate media
- Physical tape export for offsite protection and data portability
- Asynchronous file replication to one or more StrongBox appliances
- Self-monitoring and healing features with the ability to recreate new copies of files or media



#### *Data integrity, reliability and security*

Storing data is fundamental, but reliably retrieving it is essential to a successful IT strategy. StrongBox incorporates file and media-level integrity features to ensure data security and long-term system reliability.

- SHA512 hash code on every file with integrity verification policies
- Tamper checking to validate that files were not changed on media
- The no-delete feature provides "software WORM" for compliance
- Share-based data grouping for secure, Active Directory authenticated access
- Private shares that provide access control to isolate and protect data confidentiality



#### *Open standard*

Break free from vendor lock-in, proprietary software or dedicated hardware. StrongBox makes no changes to your data and stores your files in their original state as written by an application. The system never alters or modifies your data and uses the self-describing standard of LTFS (linear tape file system) when writing to tape.

StrongBox seamlessly integrates with your existing disk and tape systems, allowing you to extend your current investment or deploy StrongBox with the technology that best fits your storage requirements.

- Supports external SAS/FC disk to expand storage and cache capacity
- Compatible with most libraries with LTFS tape drives (LTO 5, LTO 6 and IBM TS1140/TS1150)



#### *System optimization for maximized ROI*

The simple user interface provides one consolidated point for data management, reporting and configuration. For end-users, accessing data is as simple as dragging and dropping content from a standard file system.

- RESTful API enables application integration and enhances performance and file management
- Archive Utility enables integration with applications like AVID®
- System monitoring to ensure ubiquitous uptime on hardware components
- System analysis and reporting to ensure resource optimization
- Intelligent media and drive management to streamline resource use
- Simple drag-and-drop file access from any browser
- Intuitive file management using StrongBox Access Client



## StrongBox Technical Specifications

System Specifications	StrongBox T10G2	StrongBox T30G2
IP Services	NFS v3 – Unix/Linux CIFS SMB1 - Windows	NFS v3 – Unix/Linux CIFS SMB1- Windows
Files Supported	Up to 100 million files	Up to 1.6 billion files
File Shares Supported	256	256
Internal Disk Storage	3TB Drive Option - Includes 4 x 3TB disk drives (RAID5, ~7.9TB Usable Disk Storage) 4TB Drive Option - Includes 4 x 4TB disk drives (RAID5, ~10.6TB Usable Disk Storage) 6TB Drive Option - Includes 4 x 6TB disk drives (RAID5, ~16.1TB Usable Disk Storage)	3TB Drive Option - Includes 16 x 3TB disk drives (RAID6, ~32.5TB Usable Disk Storage) 4TB Drive Option - Includes 16 x 4TB disk drives (RAID6, ~43.4TB Usable Disk Storage) 6TB Drive Option - Includes 16 x 6TB disk drives (RAID6, ~65.2TB Usable Disk Storage)
Connectivity	Standard: Quad Gigabit Ethernet ports for data with Single Gigabit Ethernet port for management  Storage Options (for libraries and external RAID): Dual port 6 Gb/s SAS, Dual port 8 Gb/s FC	Standard: Single Gigabit Ethernet for management Option: 1 or 2 Quad port Gigabit Ethernet or 1 Dual port 10 Gigabit Ethernet for data  Storage Options (for libraries and external RAID): 1 or 2 Quad port 6 Gb/s SAS, 1 or 2 Quad port 8 Gb/s FC, Single port 6Gb/s SAS for StrongBox XpanDisk
Format Compatibility	LTFS – 4 drives LTO 5 & LTO 6 IBM TS1140/TS1150	LTFS – 16 drives LTO 5 & LTO 6 IBM TS1140/TS1150
Physical Specifications		
Form Factor	1U server	3U Server
AC Power	100-240 VAC auto-sensing, 50/60 Hz, 2.72 amps	100-240 VAC auto-sensing, 50/60 Hz, 5.67 amps
Width	17.2 in. (437 mm)	17.2 in. (437 mm)
Depth	25.6 in. (650 mm)	25.5 in. (648 mm)
Height	1U - 1.7 in (43 mm)	3U- 5.2 in. (132 mm)
Weight	46 lbs. (20.9 kg)	72 lbs. (32.7 kg)
Environmental Specifications		
Operating Temperature	10 to 35° C	10 to 40° C
Operating Humidity Range	8-90% non-condensing	8-90% non-condensing
Heat	1126 BTUs	2322 BTUs



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### CROSSROADS SYSTEMS STRONGBOX

Crossroads Systems, Inc. (NASDAQ: CRDS) is a global provider of data archive solutions. Its StrongBox product is a NAS appliance built to simplify data access and provide the most cost-effective storage for unstructured data. Visit [www.crossroads.com/strongbox](http://www.crossroads.com/strongbox).

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