



StrongBox

Highlights

- Plug-n-play CIFS/NFS file share(s)
- Non-Proprietary Data Vault
- Persistent File View
- High Performance (600 MB/s) Write & Read
- Fully Portable, Non-Vendor Lock In
- Seamlessly Scalable to 5 Billion Files
- Policy-Based Data Management

Crossroads StrongBox®

Overview

Crossroads StrongBox® is an online all-the-time, non-proprietary, fully portable data vault for long term data retention. StrongBox leverages Linear Tape File System (LTFS) technology, providing the first-ever enterprise-level, file-based tape archive solution with built-in data protection and self monitoring for optimized performance at a significantly reduced cost. StrongBox incorporates disk for fast file storage and retrieval, and physical tape for cost effective, long-term, reliable capacity storage. StrongBox is the industry's most cost-efficient, vendor neutral and future-proof archive. It helps meet growing data archiving requirements that are driven by a mix of increased regulation, business expectations, and the sheer growth of unstructured data.

Non-Proprietary and Portable

By leveraging the 'open' nature of LTO technology, and the open source, self describing format of LTFS technology, StrongBox delivers a truly enterprise-class data vault that writes and reads data in an open, non-proprietary and fully portable manner. StrongBox provides total freedom from any OS or application with no specialized agents required resulting in the ability to share data among disparate systems, departments and even businesses. By not altering the file format, attributes, applications, or adding proprietary software layers, StrongBox operates as a fully vendor neutral archive.

Enterprise-Class, Network Attached Archive

StrongBox presents itself as a network-attached storage (NAS) target and one can mount a StrongBox share over any Common Internet File System (CIFS) or Network File System (NFS). It provides a persistent file view of all files written to the data vault. StrongBox enables users and applications to access data in a single global namespace and is purpose-built to handle multiple, simultaneous application/user accesses. It is compatible with any file-based system architecture. StrongBox's ability to seamlessly scale up to five billion files is valuable in leveraging tape as a less expensive alternative to disk for long-term archiving and managing unstructured data growth.

Self-Monitoring and Healing

StrongBox continually monitors, trends, analyzes and optimizes the physical storage subsystems (disk and tape), providing a reliable, long term data preservation system. StrongBox monitors tape media integrity, identifying suspect media

before data becomes unreadable. StrongBox invokes powerful auto-healing functionality by copying files to known good medium without user intervention. Additionally, StrongBox's advanced reporting interface gives the user full understanding of not only how the data vault is being used, but also details the operation of the physical storage systems.

Built-In Data Protection

StrongBox comes with built-in data protection capabilities including dual copy, replication, authentication, file hashing and proactive self-monitoring and healing. The dual copy policy enables organizations to have two copies of data on different tapes. StrongBox delivers protection against catastrophic failures by providing Wide Area Network (WAN) accelerated replication of data between primary and secondary StrongBox units over an encrypted and authenticated link. File hashing provides data validation and tamper proof evidence by comparing file hashes during the read operation. Active Directory authentication for shares, role-based access, and secure access to the Web ensures data integrity and peace of mind that the data is transferred, stored securely and recoverable in time of need.

Optimized Performance

Through purpose-built disk caching and buffering designs, StrongBox delivers significant performance benefits over traditional enterprise tape solutions. StrongBox utilizes buffering to address application timeouts, prevent thrashing of tape drives, and maximize the efficient use of tape library and drive resources. StrongBox is not a hierarchical storage management (HSM) solution. Instead of restoring files from tape-to-disk-to-user, StrongBox enables direct-file access from tape.

User Managed Policies

StrongBox allows the creation of granular policies to effectively manage data, address specific business requirements, and monitor archive growth. It provides a rich policy engine to manage data by tracking association between target directories and policies. Policies are by mounted volume/share to migrate and handle data on a periodic basis. Policies are determined based on the share where the file is written. Policies such as dual copy, compression, file retention timer and file cache offer capabilities that range from data protection and integrity to fast retrieval of data and prevention of application timeouts.

StrongBox Specifications

System Specifications	<i>StrongBox T1</i>	<i>StrongBox T3</i>
IP Services	NFS v3 – Unix/Linux CIFS - Windows	NFS v3 – Unix/Linux CIFS - Windows
Files Support	200 million files	5 billion files
Sustained transfer rate	Up to 160 MB/s (network shared performance)	Up to 600 MB/s (network shared performance)
Internal Hard disk drive	5.5 TB (RAID 5)	14 TB (RAID 6) <i>Option: 12 TB (RAID 6)</i>
Connectivity	<i>User:</i> Dual Gigabit Ethernet ports for data, Single Gigabit Ethernet port for management <i>Storage:</i> Dual 6 GB SAS ports for tape library and external RAID	<i>User Options:</i> Quad port Gigabit Ethernet for data, Dual port 10 Gigabit Ethernet for data, Single Gigabit Ethernet for management <i>Storage Options (for libraries and external RAID):</i> Quad port 6 GB SAS, Quad port 8 Gig FC
Format compatibility	LTFS, LTO 5 drives	LTFS, LTO 5 drives
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, 6.75 amps
Width	17.2 inches	17.2 inches
Depth	25.6 inches	25.5 inches
Height	1.7 inches (1U)	5.2 inches (3U)
Weight	46 lbs (20.9 kg)	72 lbs (32.7 kg)
Environmental Specifications		
Operating Temperature	10 to 40° C	10 to 40° C
Operating Humidity Range	8-90% non-condensing	8-90% non-condensing
Heat	564 BTUs	564 BTUs



11000 North MoPac Expwy. Ste. 100 Austin, Texas 78759 866.289.2737 512.349.0300 sales@crossroads.com

ABOUT CROSSROADS

Crossroads Systems, Inc. (NASDAQ: CRDS), is a global provider of solutions and services that ensure stored data is proactively protected and reliably recovered. Crossroads offers organizations powerful data protection, proactive data security, intelligent storage connectivity, unmatched performance, and significant cost savings. Founded in 1996 and headquartered in Austin, Texas, Crossroads holds more than 100 patents granted and pending and has been honored with numerous industry awards for innovation in data protection and storage. Visit www.crossroads.com.

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