StorTrends® 3200i

3U IP-SAN and NAS Storage Appliance

American Megatrends

The StorTrends® 3200i is an affordable 3U, rack-mount storage appliance that offers support for both block and file data. It merges Ethernet-based Storage Area Networks (IP-SAN) and Network Attached Storage (NAS) on a single storage platform.

The StorTrends 3200i supports iSCSI, enabling block applications like Microsoft® Exchange and Oracle® to be deployed or stored on the same server as traditional file services and storage. The StorTrends 3200i is designed with performance in mind, and includes features for enterprise-level storage management such as hardware RAID, advanced snapshots, volume replication, and Continuous Data Protection (CDP), Information Lifecycle Management (ILM), failover and much more.

HIGHLIGHTS

- 4, 8 or 16 TB IP-SAN & NAS storage appliance
- 16 Hot-swappable SAS/SATA Drives
- Information Lifecycle Management
- Thin Provisioning
- WAN-optimization Data Service (WDS)
  - Deduplication, Compression, Encryption and Link Optimization
- Continuous Data Protection (CDP)
- Volume Replication
  - Synchronous
  - Asynchronous
  - Snapshot-assisted
  - Journal-assisted
- Advanced Snapshot
  - Redirect on Write (ROW)
  - Up to 1022 snapshots (R/O and R/W) per volume
  - Up to 2048 snapshots per box
  - Snapshot scheduling for SAN & NAS
  - Rollback from any snapshot
  - Random snapshot deletion
- Hardware RAID support: RAID levels 0, 1, 5, 6, 10, 50, 60
- Online capacity expansion, RAID level migration
- High Availability (HA) Grouping
  - Load Balancing
  - Active / Active Configuration
- Smart UPS Support
- Network Teaming

StorTrends®

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Data Sheet

06 18 2008

StorTrends® products provide true enterprise-level features to departmental and small- to mid-size business (SMB) users. They merge IP-SAN and NAS functionality into one cost-effective, scalable, and easily deployable storage appliance. Its dual-dialect capability enables transfer of both block and file data over the existing Ethernet network.

The StorTrends 3200i offers sixteen hot-swappable drive bays with advanced SATA and SAS support for multiple options in performance, capacity and cost, as well as highly distinguishing software features in StorTrends iTX Data Storage software, which comes preinstalled in each appliance. This system also offers the potential for significant capacity expansion; when used as the storage head for a chain of up to three StorTrends® 3201j JBOD units, storage capacity can be increased to a massive 64 TB of storage space.

One of the most powerful features of the StorTrends 3200i is its Advanced Snapshot capability with Redirect on Write (ROW) technology. Administrators can schedule SAN and NAS snapshots, and rollback to any snapshot in under a second. Snapshot-assisted replication (SAR) replicates delta snapshots from the primary system in chronological order to the secondary. In the event of a failover, the system will automatically recover to the latest available consistent snapshot image.

With up to 1,022 snapshots per volume and 2,048 per appliance, StorTrends iTX is capable of Continuous Data Protection (CDP) by combining low-latency snapshots with I/O journaling to offer one of the most efficient CDP repositories on the market today.

Volume replication allows data to be stored on multiple StorTrends appliances at multiple sites, for high availability and disaster recovery in the event of a catastrophe. Synchronous replication on the StorTrends 3200i provides robust high availability and disaster recovery capabilities. High Availability grouping allows two StorTrends SAN heads to be grouped as highly available cluster nodes for Microsoft® initiators, for extreme fault tolerance and always-up availability. This technology also provides protection against disk, path, and node failures with automatic, seamless failover.

Asynchronous replication bundles I/Os and sends them to the remote server, boosting network utilization efficiency and reducing bandwidth cost. When combined with the revolutionary WDS (WAN-Optimization Data Service) feature included in the asynchronous replication module, the system take advantage of a "triple-threat" of data deduplication, data encryption and link optimization to reduce data transmission and bandwidth usage by several factors over conventional replication speeds.

Finally, integrated web-based management with AMI's ManageTrends™ interface provides a simple configuration wizard to configure volumes, and logical disks, and provides 100% control of the discovery and management of multiple StorTrends appliances.

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StorTrends® 3200i

3U IP-SAN and NAS Storage Appliance

Features

16 TB IP-SAN & NAS 3U Storage Appliance
- Transfer block and file data over Ethernet
- network
- Sturdy 3U rack mountable chassis
- Redundant Power Supply Modules
- Supports major file transfer protocols
- Information Lifecycle Management (ILM)
- Continuous Data Protection (CDP)
- WAN-optimization Data Service (WDS)
- Network Teaming
- Advanced Snapshot Capability
- Volume Replication and Expansion
- High Availability (HA) Grouping
- Storage Alerts
- Support for volumes up to 64 TB
- Support for 64 volumes per appliance
- SATA / SAS support with hot swap
- Hardware RAID Controllers
- UPS support
- "Single pane of glass" ManageTrends™ Interface

Hardware Specifications:

Form Factor
3U Chassis with 800W Redundant Power Supply
One (1) Slim DVD-ROM Drive

On-Board CPU
Two (2) Dual-Core Intel® Xeon® Processor 5000 series with 1066 MHz FSB, 2 GB RAM

Host Interface
Expandable Dual Port Gigabit Ethernet Controller
Eight (8) Port Dual Channel SAS Controller

Drive Interface
Sixteen (16) 3.5" Hot-swappable SAS / SATA Drive Bays

Drive & Storage Capacity
250 GB, 500 GB or 1TB per drive
4 TB, 8 TB or 16 TB per Appliance

Hardware RAID Support
LSI Logic MegaRAID® SAS 8888ELP RAID Controller
RAID levels 0, 1, 5, 6, 10, 50, 60
Online capacity expansion & RAID level migration
Multiple arrays (same type) per drive
Read with Write-back caching
Global & dedicated hot-spare

Status LEDs
6 LED Indicators (Power, Network / HD Activity, Power Fail, System Overheat)

Expansion Slots
Six (6) Full-height, Full-length Expansion Slots
- Two (2) PCI-Express x 8
- One (1) PCI-Express x 4
- Two (2) PCI-X 133MHz
- One (1) PCI-X 100MHz

Data Management Ports
Two (2) Gigabit Ethernet Data Ports (expandable)

Other Connectors
Two (2) USB Ports (2.0, 1.1)

Power Specifications
Two (2) Redundant, Hot-swappable 800W AC Power Supply Modules with PFC
AC Voltage (100 - 240V, 50-60Hz, 10A - 4 Amp)

Cooling Specifications
Three (3) 8cm Hot-swappable Fans
Two (2) 8cm Rear-exhaust Fans

Operating Environment
Operating Temperature: 50 to 95˚F (10˚ to 35˚ C)
Operating Relative Humidity: 8% to 90% (non-cond.)

Physical Characteristics
Dimensions: 5.2" (132 mm) H x 17.2" (437 mm) W x 25.5" (648 mm) D
Weight: 96 lbs. (43.5 kg)

Dual Dialect StorTrends iTX Data Storage Software

Volume Replication
- Synchronous
- Asynchronous
- Snapshot-assisted
- Journal-assisted
- Replication Wizard
- Failover / Failback
- One to Many Replication

Advanced Snapshots
Up to 1,022 read-only, 1, 022 writeable, 2, 048 snapshots per box with near-zero degradation
Redirect (allocate) on Write (ROW)
Random snapshot deletion
Rollback to any snapshot
Mounting snapshots as Read-Only or Read-Write
Caching-assisted snapshots

Backup
VSS-based backup support for Windows® 2003 Servers
Backup agents for popular application servers
iSCSI tape support

Networking
TCP/IP, FTP, HTTP, HTTPS, SNMP
Windows® (CIFS), UNIX (NFS), AppleTalk®

iSNS Configuration
Up to 16 iSNS servers are supported
Compatible with MS iSNS Server v3.0 and later
iSNS client supporting Draft 22 of iSNS specification

Security
ACL security implementation supports: Local users, Windows® NT/2000 Domain users, Windows® 2003 Active Directory users, NIS Domain users
iSCSI Target Configurations
iSCSI Qualified Name (iqn) format
Enable/Disable individual network ports for iSCSI traffic
iSCSI target supporting iSCSI RFC 3720
Tight iSCSI and iSNS integration
iSCSI error recovery level 0, 1 and 2
Maximum of 4 connections per session
Multiple levels of authentication: Mutual CHAP, user name/password CHAP authentication & iSCSI initiator WWN name
iSCSI Portal Tag configuration from UI
View iSCSI data and error statistics

Management
Command line interface through RS232 & SSH
Integrated web-based management
Tool for easy customization, branding and theme updates

Event Management
Detailed Event Log
SNMP, SNMP Traps (up to 4 destinations)
SMIS 1.1 , VDS

Storage Data Management
Information Lifecycle Management (ILM)
Storage Resource Management / Storage Reports
LUN (Logical Unit Number) creation & management
LUN dynamic volume expansion
Dynamic NAS volume expansion
Unified RAID Management
Auto RAID rebuild

Remote Management
SNMP, SMIS 1.1, VDS

UPS Support
Universal UPS Support; Supports Windows® OS/iTX/ Linux as UPS slaves and many UPS makes & models

Applications Supported
Oracle®, SQL, Microsoft® Exchange, VMware®, etc.

Advanced Features

Advanced Snapshot Technology

AMI's Advanced Snapshot technology enables up to 2,048 snapshots (R/O and R/W) at the block or file level. It also allows for rapid creation and deletion of a snapshot, permitting faster, more secure back-ups than ever before. Advanced Snapshot technology is focused on performance, enabling customers to mount, review and instantaneously roll back to a snapshot with ***near-zero degradation*** of data.

Snapshot-assisted Replication

This technology allows chronological replication of snapshots on a remote machine, with the ability to organize by application-based consistency groups. In fail-over to a secondary appliance, StorTrends iTX will automatically rollback to the latest consistent snapshot.

Journal-assisted Replication

The JAR module is essentially an application layer that registers with the Journal Module as a client and replicates data to the recovery site according to an administrator-defined schedule. Data is sent to the remote site along with metadata, so the recovery server can maintain its own CDP log and/or create snapshots.

WAN-optimization Data Services

StorTrends utilizes several sophisticated techniques to optimize the speed of long distance WAN connections. It uses an intelligent mix of standards-based transport protocols to overcome the inefficiencies and high latencies of TCP protocols in WANs and provide excellent bandwidth utilization. Additional performance gains are made through data reduction technologies such as compression and data deduplication.

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