

# StorTrends® 3200i

3U IP-SAN and NAS Storage Appliance



## HIGHLIGHTS

- > 3U IP-SAN & NAS storage appliance with StorTrends iTX Data Storage Software
- > 16 Hot-swappable SAS/SATA Drives for a variety of capacity configurations:
  - 4, 8, 12 or 16 TB raw capacity with SATA drives
  - 2.3, 4.8, 7.2 TB raw capacity with SAS drives
- > Advanced Snapshot Technology
  - Redirect on Write (ROW) Snapshots
  - 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
- > Volume Replication
  - Synchronous
  - Asynchronous
    - Snapshot-assisted
    - Journal-assisted
    - WAN Data Services (WDS): Deduplication, Compression, Encryption and Link Optimization
- > Hardware RAID support: RAID levels 0, 1, 5, 6, 10, 50, 60
- > Capacity Expansion support with SAS / SATA JBODs up to 64 TB of raw capacity
- > High Availability (HA) Grouping
- > Network Teaming
- > Thin & Exact Provisioning
- > Continuous Data Protection (CDP)
- > Information Lifecycle Management (ILM)
- > Storage Resource Management (SRM) with detailed reporting on usage and performance
- > Smart UPS Support

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 High Availability, Advanced Snapshots, Volume Replication, Continuous Data Protection (CDP), Information Lifecycle Management (ILM), Failover and much more.

Data Sheet

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StorTrends® products provide true enterprise-level features to small and medium size business (SMB) users. They merge IP-SAN and NAS functionality into one cost-effective, scalable, and easily deployable storage appliance. The dual-dialect (IP-SAN and NAS) capability of its StorTrends® iTX Data Storage Software enables the 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, 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 64 TB of raw 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 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 Windows® 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 within snapshots and sends them to the remote server, boosting network utilization efficiency and reducing bandwidth cost. When combined with the revolutionary WDS (WAN-Optimization Data Services) feature included in the asynchronous replication module, the system employs 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 control the discovery and management of multiple StorTrends appliances.





# 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
- SATA / SAS support
- Supports major file transfer protocols for Windows®, Linux and Mac® clients
- "Single pane of glass" ManageTrends™ Interface
- Support for volumes up to 15.9 TB (NAS) and 64 TB (SAN, with JBOD support)
- Support for 64 volumes per appliance
- Advanced Snapshot Capability
- Volume Replication and Expansion
- Hardware RAID Controller with RAID levels 0, 1, 5, 6, 10, 50, 60

#### Hardware Specifications:

##### Form Factor

3U Chassis with Redundant Power Supply Modules  
Dimensions: 5.2" (132 mm) H x 17.2" (437 mm) W x 25.5" (648 mm) D  
Weight: 96 lbs. (43.5 kg)

##### 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  
One (1) Slim DVD-ROM Drive

##### Drive & Storage Capacity

250 GB, 500 GB, 750 GB or 1TB per drive (SATA) for 4 TB, 8 TB, 12 TB or 16 TB raw capacity per Appliance  
146 GB, 300 GB, 450 GB per drive (SAS) for 2.3 TB, 4.8 TB or 7.2 TB raw capacity 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 per appliance  
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 Hot-swappable Rear-exhaust Fans

##### Operating Environment

Operating Temperature: 50 to 95°F (10° to 35° C)  
Operating Relative Humidity: 8% to 90% (non-condensing)

#### Dual Dialect StorTrends iTX Data Storage Software

##### Volume Replication

Synchronous  
Asynchronous  
- Snapshot-assisted  
- Journal-assisted  
- WAN Data Services (WDS): Deduplication, Compression, Encryption and Link Optimization  
One to Many, Many to One, Many to Many Replication

##### Advanced Snapshots

Up to 1,022 read-only snapshots and 1,022 writeable snapshots per volume; 2,048 snapshots per box with near-zero performance degradation  
Redirect on Write (ROW) Snapshot Technology  
Random snapshot deletion

Rollback to any snapshot

Mounting snapshots as Read-Only or Read-Write

##### Backup

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

##### Networking

TCP/IP, AppleTalk®, FTP, HTTP/HTTPS, SNMP, DHCP, NDMP, UPnP  
Windows® (CIFS), Linux (NFS) and Apple® file protocols

##### 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 NIC 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  
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 and theme updates

##### Event Management

Detailed Event Log  
SNMP, SNMP Traps (up to 4 destinations)

##### 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

CLI (SSH)

##### UPS Support

Smart 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 performance degradation.

#### Snapshot-assisted Replication (SAR)

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.

#### WAN-optimization Data Services (WDS)

As part of its Asynchronous Replication module, StorTrends iTX 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 bandwidth throttling to improve bandwidth utilization. Additional performance gains are made through data reduction technologies such as compression, and data deduplication.

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