

# StorTrends® 3200i ManageTrends™ 2.7

## 3U IP SAN & NAS Storage Appliance

### HIGHLIGHTS

- Advanced Snapshot
  - Redirect on Write (ROW)
  - Up to 1.024 (read only) + 1.024 (writable) Snaps per volume
  - Snapshot scheduling for SAN & NAS
  - Rollback from any snapshot
  - VSS Hardware Provider
- Volume Replication
  - Synchronous
  - Continuous Data Replication (Journal)
  - Snap-assisted
  - High Availability (HA) Grouping
  - MP I/O Support
  - Volume Cloning
  - One to Many - Many to one Replication
  - Round Robin and Bidirectional Replication
  - Failover and Failback
- Storage Resource Management (SRM)
- Compression
- Encryption
- Data Dedupe
- Information Life Cycle Management (ILM)
- 4, 8 or 16 Terabyte storage capacity per box
- Expandable SAS Topology by SAS Expander & JBODs for SATA or SAS HDDs
- Support for volumes up to 256 TB
- Hardware RAID
- RAID levels 0,1, 1+N, 10, 10+N, 5, 50, optional 6, 60
- Support for SATA2 & SAS HDD
- Volume expansion, RAID migration
- Advanced Caching
- Storage Alerts by E-mail and SNMP
- Adaptive & Ultra-Thin Provisioning
- 2 Gigabit Ethernet Ports
- up to 6 Gigabit Ports optional
- optional Support of 10 Gigabit links
- 2 Intel 64-Bit Dual Core Xeon Processors
- Extreme performance levels



**StorTrends® 3200i is designed and tuned to provide enterprise class features with DUAL DIALECT. StorTrends consolidates block level based data and file data. It merges Ethernet-based Storage Area Networks (IP-SAN) and Network Attached Storage (NAS) on a single storage platform. StorTrends supports iSCSI to allow multiple applications to be deployed on the same storage. The StorTrends 3200 platform, a two Dual core 64bit system with hyper-threading, offers effectively 4 virtual CPUs with double wide data paths – more than enough power to manage the I/Os within an SAS topology of up to 112 disk drives of the most enhanced interface technologies. StorTrends® 3200i is designed with performance in mind and includes features for enterprise-level disaster recovery such as advanced snapshot, hardware RAID, volume replication and fail-over.**

AMI's StorTrends iSCSI technology leverages the existing Ethernet infrastructure as well as the internal know-how, thus optimizing ROI and TCO. Volume replication allows data to be stored on multiple StorTrends appliances at multiple sites, which enables high availability and disaster recovery.

AMI's Advanced Snapshot features Redirect-on-Write (ROW) with almost zero degradation when writing or rolling back snapshots. SAN snapshots are supported using VSS snapshot technology or through agents specific for application servers like SQL Server, Exchange Server and Oracle. Microsoft VSS-based snapshots support agent-less LAN-free backup. Advanced caching improves read and write-back performance and allows for efficient IO scheduling. IO aggregation significantly improves snapshot performance.

StorTrends appliances can be managed by the integrated web-based ManageTrends™, which provides discovery and management of multiple StorTrends appliances deployed across the network.

A variety of enhanced features may be added optional to show up in a tailored storage appliance that fits exactly to the request of each enterprise and SMB IT management. Up to 6 Gigabit Ethernet ports can be utilized to manage the data movement. Storage Resource management (SRM) provides graphs for the data usage. Information Life Cycle Management (ILM) supports decisions on data placement. The modules for Data Compression and Encryption support the security of data to be moved between different locations. Data Dedupe takes care on redundant information and tightens data in the most efficient way. Even a further integration of 10 Gigabit Ethernet technologies is foreseen.

## Hardware Features

3U Chassis with 800W Redundant Power Supply  
16 x 1" Hot-swappable SAS / SATA Drive Bays  
2 DualCore Intel 64-bit Xeon Processors (Option: QuadCore)  
667/1066/1333 MHz FSB  
Intel 5000 P (Blackford) Chipset  
2 GB DDR2 @ 667 & 533 SDRAM fully buffered DIMMs (Option: 32 GB)  
Intel 82563 Southbridge (ESB2)  
- Dual Port Gigabit Ethernet Controller  
- Dual Channel SAS Controller (each 8 Ports)  
- 6 SATA 3.0 Gbps Ports  
- PCIe, PCIx expansions  
28-Port 3Gb/s SAS Expander with Enclosure Management  
1 x Slim DVD-ROM Drive  
7 x Full-height, Full-length Expansion Slot  
3 x 8cm Hot-swappable Fan  
2 x 8cm Rear-exhaust Fan  
Power Switch and 6 LED Indicators  
Disks: 250, 500 or 1.000 GB

## Advanced Software Features

High performance  
Adaptive provisioning  
Provision tracking  
Replication  
- Synchronous  
- Asynchronous  
- Snap-assisted  
Replication Wizard  
Failover / Failback  
Storage alerts  
Support for volumes up to 256TB  
Volume Expansion  
Snapshots  
- Redirect (allocate) on Write (ROW)  
- Mounting snapshots as Read-Only or Read-Write  
- Up to 1.024 read-only snapshots per volume  
- Up to 1.024 writeable snapshots per volume  
- Random snapshot deletion  
- Rollback to any snapshot  
Advanced caching  
Caching assisted snapshot  
Support for 64 volumes

## Backup

VSS based backup support for Window 2003 Servers  
Backup agents for popular application servers  
Consistent SAN snapshot scheduling  
NAS snapshot scheduling  
Easy SAN snapshot management  
iSCSI tape support

## Networking

TCP/IP, FTP, HTTP, HTTPS, SNMP, Windows (CIFS), UNIX (NFS), Apple

## iSNS Configuration

Up to 16 iSNS servers are supported  
Compatible with MS iSNS Server v3.0 and later versions  
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  
Maximum of 64 target volumes  
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 updating  
Detailed Event Log  
SNMP Traps (up to 4 destinations)  
SNMP, SNMP traps (up to 4 destinations)  
SMIS 1.1, VDS

## Storage Data Management

Storage pool  
LUN (Logical Unit Number) creation & management  
LUN dynamic volume expansion  
Dynamic NAS volume expansion  
Auto RAID rebuild  
Dynamic NAS volume expansion  
Hardware RAID 0, 1, 1+N, 10, 10+N, 5, 50 6, 60

## Operating Range

Temperature: 10 – 35 ° C  
Humidity: 8-90 %

## Advanced Features

### Advanced Snapshot Technology

AMI Advanced Snapshot enables up to 1.024 snapshots (RO and RW) from the block or file level. The module allows for rapid creation and deletion of a snapshot with almost ZERO degradation, permitting faster back-ups than ever before - with the assurance of a complete and secure back-up. Performance is the emphasis of AMI's Advanced Snapshot, which enables customers to mount a snapshot as a volume, read from a snapshot simultaneously, instantaneously roll back to a snapshot and delete it.

### Replication

AMI supports Synchronous, Asynchronous, and Snap Assisted Replication to provide customers with a variety of options to fill differing needs.

For highest availability and disaster recovery, Synchronous Replication allows data to be stored on multiple StorTrends appliances at multiple sites. Volumes are protected from site failure with the granularity of an I/O: primary and secondary sites are always in-sync with each other.

Asynchronous replication dramatically reduces costs by minimizing bandwidth requirements for customers willing to tolerate a few seconds of data loss. With Asynchronous Replication data is buffered, which provides the ability to improve bandwidth utilization.

Snap Assisted Replication allows replication of snapshots in chronological order on a remote machine. Snaps can be organized by application- based consistency groups. On fail-over to secondary, StorTrends will automatically rollback to the latest consistent Snapshot. Snap assisted replication is supported on both NAS and SAN volumes.

### Advanced Caching Technology

Advanced Caching, a new technology created by AMI, utilizes sector granularity technology based on an AMI proprietary mechanism, resulting in outstanding performance gains. Advanced Caching technology assists in snapshot read-modify-writes and in replication.

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American Megatrends International GmbH  
www.ami.de  
Wardeinstr.3a  
80825 München

American Megatrends Inc.  
www.ami.com  
6145-F Northbelt Parkway  
Norcross GA 30071