StorTrends® 1100i

1U IP-SAN and NAS Storage Appliance

American Megatrends

The StorTrends® 1100i is an affordable 1U, 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 1100i 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 1100i is designed with performance in mind, and includes features for enterprise-level storage management such as advanced snapshots, volume replication, and failover.

Data Sheet

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HIGHLIGHTS

- 1, 2 or 4 TB IP SAN & NAS storage appliance
- Cost-effective and scalable
- Extreme performance levels
- Network Teaming
- Universal UPS Support
- Volume Replication
  - Synchronous
  - Asynchronous
  - Snap-assisted
  - Journal-assisted
- Failover / Failback
- SATA support with hot swap
- Advanced Snapshot
  - Redirect on Write (ROW)
  - Up to 1024 (R/O and R/W) Snapshots per volume
  - Up to 2048 Snapshots per box
  - Snapshot scheduling for SAN & NAS
  - Rollback from any snapshot
  - Random snapshot deletion
- Advanced Caching
- High Availability (HA) Grouping
  - Load Balancing
  - Active /Active Configuration

StorTrends®

www.ami.com

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.

The StorTrends 1100i offers four hot-swappable drive bays with advanced SATA support as well as highly distinguishing software features.

Dual-dialect StorTrends® iTX 2.7 software enables transfer of both block and file data over the existing Ethernet network. It provides advanced disaster recovery features such as syncronous, asynchronous, and snap-assisted replication, fail-over, and fail-back. This software also features high-availability grouping, network teaming support, UPS support, advanced snapshots, SAN and NAS snapshot scheduling, backup support, and advanced caching for IP-SAN appliances.

Volume replication allows data to be stored on multiple StorTrends appliances at multiple sites, to enable high availability and disaster recovery in the event of a catastrophe.

StorTrends' Advanced Snapshot capability features Redirect-on-Write (ROW) technology with near-zero degradation when writing or rolling back snapshots. Administrators can schedule up to 1024 read-write and 1024 read-only snapshots per volume, and up to 2048 snapshots per box. A maximum of 64 volumes per target is supported.

SAN snapshots are supported through Microsoft® VSS snapshot technology, or by specific agents for application servers such Exchange Server and Oracle. Microsoft® VSS-based snapshots also support SQL Server and agent-less LAN-free backup.

Advanced caching improves read and write-back performance, and allows for efficient IO scheduling, while IO aggregation significantly improves snapshot performance.

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

StorTrends® 1100i

1U IP-SAN and NAS Storage Appliance

Features

1 TB or 2 TB IP SAN & NAS Storage Appliance
Dual-Dialect StorTrends iTX 2.7 Storage Software

- High performance
- Cost-effective and scalable
- Transfers block and file data over existing Ethernet network
- Slim 1U rack mountable chassis
- Low Total Cost of Ownership (TCO)
- Supports major file transfer protocols
- Network Teaming
- Advanced Snapshot Capability
- Volume Replication
- High Availability (HA) Grouping
- Storage Alerts
- Volume Expansion
- Support for volumes up to 256 TB
- Support for 64 volumes
- SATA support with hot swap
- Hardware RAID Available
- Software RAID 0, 1, and 5 support

Hardware Specifications:

On-board CPU
Intel® Pentium® 4 3.0 GHz Hyper-threaded
Host Interface
Dual Gigabit Ethernet
Drive Interface
Four (4) 3.5" hot-swap SATA bays
Drive & Storage Capacity

- 250 GB, 500 GB or 1 TB per drive
- 1, 2 or 4 TB total capacity per appliance

Peripheral Drive
CD-ROM Drive
Status LEDs
Five (5) Status LEDs: Power, HDD, Network Status (2), and System Overheat
Expansion Slots
Full height/length 64-bit 133/100 MHz PCI-X
Data Management Ports
Two (2) 1 Gigabit Ethernet Data Ports
Other Connectors
One (1) front Fast UART 1650 Serial Port
One (1) rear Fast UART 1650 Serial Port
Two (2) front USB 2.0/1.1 ports
Two (2) rear USB 2.0/1.1 ports
Power Specifications
300W AC power supply module w/PFC
AC Voltage (100-240V, 50-60Hz, 7Amp)
Cooling Specifications
Five (5) 3 x 4cm 12,500 RPM Fans
Fan tachometer monitoring
Operating Environment
Operating Temperature

- 10° to 35°C (50° to 95°F)

Non-operating Temperature

- -40° to 70°C (-40° to 158°F)

Operating Relative Humidity

- 8% to 90% (non-condensing)

Non-operating Relative Humidity

- 5% to 95% (non-condensing)

Physical Characteristics
Dimensions: 1.7" H x 17.2" W x 19.8" D
Weight: 38 lbs.
Volume Replication
Synchronous, Asynchronous, Snapshot-assisted, Journal-assisted
Replication Wizard
Failover / Failback
Advanced Snapshot
Up to 1024 read-only, 1024 writeable snapshots per volume
Up to 2048 snapshots per box
Snapshot scheduling for SAN & NAS
Redirect (allocate) on Write (ROW)
Random snapshot deletion
Rollback to any snapshot
Mounting snapshots as Read-Only or Read-Write
Advanced caching
Caching-assisted snapshot
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), 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 volumes per target
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
Event Management
Detailed Event Log
SNMP Traps (up to 4 destinations)
Remote Management
SNMP, SMIS 1.1, VDS
Storage Data Management
Storage pool
LUN (Logical Unit Number) creation & management
LUN dynamic volume expansion
Dynamic NAS volume expansion
Unified RAID Management
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®, Microsoft® Media Server (and many more)

Advanced Features

Advanced Snapshot Technology

AMI's Advanced Snapshot technology enables up to 254 snapshots (R/O and R/W) from the block or file level. The module allows for rapid creation and deletion of a snapshot with near-zero degradation, permitting faster back-ups than ever before - with the assurance of a complete and secure back-up. Advanced Snapshot technology is focused on performance, enabling customers to mount a snapshot as a volume, read from a snapshot simultaneously, instantaneously roll back to a snapshot and delete it.

Replication

Synchronous Replication allows data to be stored on multiple StorTrends appliances at multiple sites, for high data availability and disaster recovery. Volumes are protected from site failure at the granularity of an I/O: primary and secondary sites are always in-sync with each other. Asynchronous replication minimizes bandwidth requirements for users willing to tolerate a few seconds of data loss, reducing bandwidth cost dramatically.

Snap-assisted Replication

This technology allows replication of snapshots in chronological order on a remote machine. Snapshots can be organized by application-based consistency groups. In fail-over to a secondary appliance, StorTrends iTX will automatically rollback to the latest consistent snapshot.

Advanced Caching Technology

Advanced Caching, a unique 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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