# StorTrends 1302i

## 1U IP-SAN and NAS Storage Appliance

## Highlights

- 1U IP-SAN & NAS storage appliance with StorTrends iTX Data Storage Software
- 4 Hot-swappable SATA Drives for a variety of capacity configurations:
- 2, 4, 6 , 8,10,12,14,16,20 TB raw capacity with SATA drives
- Advanced Snapshot
- Redirect on Write (ROW)
- Up to 1022 snapshots (R/O and R/W) per volume
- Up to 8,048 read-only & writeable snapshots per appliance
- Snapshot scheduling for SAN & NAS
- Rollback from any snapshot
- Random snapshot deletion
- Volume Replication
- Asynchronous
- Snapshot-assisted
- WAN-Optimization Data Services (WDS) featuring Deduplication, Encryption, and Link Acceleration
- Software RAID support: RAID levels 10, 5, 6, 50 & 60
- Network Teaming
- Storage Resource Management (SRM) with detailed reporting on usage and performance
- Enhanced Reliability with 300W Redundant Power Supply and Smart UPS Support

The StorTrends 1302i is an affordable 1U rack-mount storage appliance that offers support for both block and file data in a form factor that is perfect for departments or small offices. It merges Ethernet-based Storage Area Networks (IP-SAN) and Network Attached Storage (NAS) on a single storage platform.

Its support for iSCSI enables block applications like Microsoft® Exchange and Oracle® to be deployed or stored on the same server as traditional file services and storage. The StorTrends 1302i is designed with performance in mind, and includes features for advanced storage management such as Advanced Snapshots, Volume Replication, Failover, WAN optimization and much more.

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-effectiveand easily deployable storage appliance.

The StorTrends 1302i offers four hot-swappable drive bays with advanced SATA support, as well as highly distinguishing software features. Dual-dialect StorTrends® iTX software enables transfer of both block and file data over the existing Ethernet network, along with a host of advanced features that until now only existed in systems costing many times more than the StorTrends 1302i.

The Volume replication feature of the StorTrends 1302i allows data to be stored on multiple StorTrends appliances at multiple sites, for high availability and disaster recovery in the event of a catastrophe.

StorTrends' Advanced Snapshot capability features Redirect-on-Write (ROW) technology with near-zero performance degradation when writing or rolling back snapshots.

Administrators can schedule up to 1,022 read-write and 1,022 read-only snapshots per volume, and up to 8, 048 snapshots per box. A maximum of 256 volumes per appliance is supported.

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 WAN Data Services (WDS) feature included in the Asynchronous Replication module, the system employs data deduplication, compression and link optimization to reduce data transmission and bandwidth usage by several factors over conventional replication speeds.
For improved reliability and disaster prevention, the StorTrends 1302i features redundant power supplies, as well as Smart UPS support, which allows the appliance to seamlessly switch over to UPS power in the event of a power failure and initiate a graceful shutdown.

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

## IP-SAN & NAS 1U Storage Appliance with StorTrends® iTX Data Storage Software

**System Features & Highlights:**
Transfer block and file data over existing Ethernet network
Sturdy 1U rack mountable chassis
Redundant Power Supply Modules
Supports major file transfer protocols
WAN-optimization Data Service (WDS)
Network Teaming
Advanced Snapshot Capability
Volume Replication and Expansion
Storage Alerts
Support for 256 volumes per appliance
SATA support with hot swap
UPS Support
ADS/NIS Support

**Hardware Specifications:**
Form Factor
1U Chassis with 300W Redundant Power Supply
On-Board CPU
Intel Xeon E-2314 Quad-core 2.80 GHz Processor
Memory
16 GB RAM
Network Interface 1G * 2 Port
Drive & Storage Capacity
Four (4) 3.5" Hot-swappable SATA Drive Bays
2 TB, 4 TB, 6 TB or 8TB capacity hard drives are supported, for 8TB, 16 TB 24 TB or 32 TB of raw physical storage capacity per appliance
Status LEDs
5 LED Indicators (Power, Network Activity (x2), HDD Activity, System Information
Expansion Slots
Two PCI-Express Expansion Slots:
One (x16) PCI-Express Slot
One (x8) PCI-Express Slots
Data Management Ports
2x Single-port Gigabit PCI-Express Ethernet Controller
Other Connectors
Four (4) USB Ports
Power Specifications
300W (1+1) Redundant, AC Power Supply with PFC
AC Voltage (100 - 240V, 60-50Hz, 6.3 - 3.2 Amp)
Cooling Specifications
Four (4) Cooling Fans with status & tachometer monitoring
Cooling Air Shroud included
Operating Environment
Operating Temperature: 50 to 95˚F (10˚ to 35˚ C)
Operating Relative Humidity: 8% to 80% (non-cond.)
Physical Characteristics
Dimensions: 1.7" (43 mm) H x 17.2" (437 mm) W x 19.85" (503 mm) D
Weight: 45 lbs. (20.4 kg)

**StorTrends® iTX Software Specifications:**
Volume Replication
Asynchronous
Snapshot-assisted
- WAN Data Services (WDS) featuring Deduplication, Encryption, and Link Acceleration
 Many-to-One Replication/ Bi-Directional Replication

Advanced Snapshots
Up to 1,022 read-only and 1, 022 writeable snapshots per volume with near-zero performance degradation
Redirect on Write (ROW) Snapshot Technology
Random Snapshot Deletion
Rollback to any snapshot
Snapshot mounting for file recovery Backup
VSS-based backup support for Windows® Servers
SQL single line recovery
Exchange single mailbox recovery
Networking
TCP/IP, FTP, HTTP/HTTPS, SNMP, DHCP, UPnP
Windows® (CIFS) and Linux (NFS) 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
ACLsecurity 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
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 themes
Event Management
Detailed Event Log
SNMP, SNMP Traps (up to 4 destinations)
 Email Alerts
Storage Data Management
Storage Resource Management / Storage Reports
LUN (Logical Unit Number) creation & management
LUN dynamic volume expansion
Software RAID levels 10, 5, 6, 50 & 60
Auto RAID rebuild
Remote Management
SNMP, SMIS 1.1, VDS
Remote Management
CLI (SSH)
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

AmZetta's Advanced Snapshot technology enables up to 8,048 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 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.

### WAN Optimization Data Services (WDS)

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, data deduplication and bandwidth throttling.

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