



The StorTrends® 3200n is an affordable 3U, high-density rack-mount Network Attached Storage (NAS) appliance, perfect for workgroups or departments. It provides a reliable way to manage, store and protect valuable business data without complexity. Easy to install, the StorTrends 3200n enables an administrator to coordinate all functions relating to discovery, management and planning for future storage growth.

## 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
- > Supports major file transfer protocols for Windows®, Linux and Mac® clients
- > Advanced Snapshot
  - Redirect on Write (ROW)
  - Up to 1,022 Snapshots (R/O and R/W) per volume
  - Up to 2,048 Snapshots per box
  - Rollback from any snapshot
  - Random snapshot deletion
- > Volume Replication
  - Snapshot-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
- > Network Teaming
- > Thin & Exact Provisioning
- > Information Lifecycle Management (ILM)
- > Storage Resource Management (SRM) with detailed reporting on usage and performance
- > Smart UPS Support

Data Sheet

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StorTrends® data storage products provide true enterprise-level features to small and mid-size business (SMB) users, and the StorTrends 3200n NAS appliance is no exception. It makes an ideal alternative to traditional Direct Attached Storage (DAS) environments and is perfect for rapidly growing workgroup or departmental data storage, because of its ability to centralize file data storage from Windows®, UNIX, Linux and Mac® clients across an existing Ethernet network and ensure its safety and accessibility. Network teaming support also ensures load balancing across the dual Ethernet ports for exceptional data throughput.

The StorTrends 3200n offers sixteen hot-swappable drive bays with both SATA and SAS support for multiple options in performance, capacity and cost, as well as highly distinguishing software features in its StorTrends iTX Data Storage software, preinstalled in each appliance. The 3200n also has 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.

Volume replication with StorTrends iTX allows data to be stored on multiple StorTrends appliances at multiple local and remote sites. The Asynchronous Replication module 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 Data Services) feature, the 3200n employs data deduplication, compression, and link optimization to reduce bandwidth usage exponentially over conventional replication speeds.

One of the most powerful features of the StorTrends 3200n is its Advanced Snapshot capability with Redirect on Write (ROW) technology. Administrators can schedule point-in-time snapshots, and manually review, rollback and mount any snapshot in the repository in under a second – for the power and flexibility to recover lost data quickly and with precision, just moments after a catastrophe. Additionally, smart UPS support enables the appliance to seamlessly transition to UPS power in the event of a power failure and initiate a graceful shutdown, while automatically switching the RAID cache to write-through mode.

Finally, integrated web-based management with AMI's ManageTrends™ interface provides a simple configuration wizard to configure volumes, and logical disks, and the control of the discovery and management of multiple StorTrends appliances. ManageTrends also provides event management, a detailed analysis of enterprise-wide storage usage and availability reporting.

# StorTrends® 3200n

## 3U NAS Storage Appliance

### Features

#### 16 TB 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)
- Support for up to 64 TB of raw capacity 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 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

##### Host Interface

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, 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  
Online RAID level migration  
Multiple arrays per appliance  
Read with Write-back caching  
Global & dedicated hot-spare

##### Status LEDs

Six (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 x4  
Two (2) PCI-X 133MHz  
One (1) PCI-X 100 MHz

##### Data Management Ports

Two (2) Gigabit Ethernet Data Ports

##### 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 - 60 Hz, 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%

##### 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)

#### StorTrends® iTX Software Specifications:

##### Volume Replication

Snap-assisted Replication  
WAN Data Services (WDS), featuring:

- Deduplication
- Compression
- Encryption
- Link Optimization

##### Advanced Snapshots

Up to 1,022 read-only, 1,022 writeable snapshots per volume  
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

##### Networking

TCP/IP, AppleTalk®, FTP, HTTP/HTTPS, SNMP, DHCP, NDMP, UPnP

Windows® (CIFS), Linux (NFS) and Apple® file protocols

##### Security

ACL security implementation supports: Local users, Windows® NT/2000 Domain users, Windows® 2003 Active Directory users, NIS Domain users

##### Management

Command line interface through RS232 & SSH  
Integrated web-based management  
Tool for easy customization and theme updating

##### Event Management

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

##### Storage Data Management

Storage Resource Management / Storage Reports  
Storage pool  
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

### Advanced Features

#### Advanced Snapshot Technology

AMI's Advanced Snapshot technology enables up to 1,022 Read-Only and Read-Write snapshots per volume. 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 users to mount a snapshot as a volume, read from a snapshot simultaneously, instantaneously roll back to a snapshot, and delete it on demand.

#### 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.

#### WAN 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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