



ATA disk based RAID

OVERVIEW

Nexsan's ATA disk-based storage solutions deliver the best in form and function now. The InfiniSAN ATAboy series provides Enterprise class features and functionality in a low profile, correct cost expandable package.

Nexsan designed the InfiniSAN ATAboy for maximum flexibility and scalability. All of the ATAboy's critical components, including the RAID controllers and host connections, are user-pluggable. This design enables customers to maximize the return on their storage hardware investment by extending the capabilities of the ATAboy system with future upgrades for enhanced performance and functionality.

KEY BENEFITS

Nexsan's advanced RAID design allows single or multiple drives to be designated as hot spares. The ATAboy ensures dependable hot swapping of drives by combining a custom unitized ATA connector specially designed for drive-plugging operations and an electronic soft-start capability that further enhances reliability when hot swapping. The current InfiniSAN RAID architecture has the ability to support ATA disk in excess of 128 GB, with the flexibility to support even higher capacities with Nexsan's proprietary ATAengine™ with soft-reconfigurable FPGAs, allowing field updates of the ATA interface design. Remote firmware updates are supported using FTP.

Correct Cost Enterprise Class Reliability

Unsurpassed fault tolerance results from eliminating all potential single points of failure. The advanced hardware design of the ATAboy is supported by Nexsan's Extreme Intelligence software, NexSCAN™, providing sophisticated centralized management and monitoring of all InfiniSAN subsystems. Tele-Guard™, Nexsan's phone home manager, provides operator selectable parameters monitoring all system conditions. Tele-Guard™ provides the vehicle to notify single or multiple system operators of any user defined, system triggered event. In addition to supporting on-line hot swap for all active components, the InfiniSAN ATAboy's unique run-time diagnostics and error handling software monitors automatic failover initiation for all active components. InfiniSAN ATAboy systems provide the maximum uptime operation and data protected environment available today.

Storage Virtualization

Utilizing Veriture, Nexsan's innovative virtualization application, the InfiniSAN ATAboy series offers the latest advances in on-line configuration. Nexsan's Veriture application allows storage pools and virtual volumes to be built dynamically from unique physical storage devices.

- On-Line Capacity Expansion (OCE)
- Dynamic Spares Allocation (DSA)
- Hot spare drives can be added and deleted either as a pool or an array dedicated spare
- Dynamic Array Expansion (DAE) and Dynamic Partition Expansion (DPE)
- Some additional features include: Snapshot, Bit level replication, Remote Mirror and Virtual Tape.

HIGHLIGHTS

- Enterprise class RAID built around the latest advanced ATA high-speed disk drives.
- OS independent - No special software drivers required to connect to any host system.
- On-line capacity expansion allows reconfiguration without interruptions.
- NexScan™, our Web enabled GUI, provides system configuration, event and component monitoring from any standard web browser.
- Advanced Storage Management. Volume Replication - Snapshot - Remote Mirror - Compression / Encryption - Virtual Tape etc.
- Storage Virtualization provides centrally managed storage pooling and virtual volume allocations.
- Virtual data volumes can be dynamically created, expanded, deleted or moved from place to place.
- Storage Pools and Volumes can be built from different physical Storage Devices.



Technical Specifications

ATABoy

Host Interface / Connectivity	U160/U320 SCSI
Drive Bay Size	8 Bay/4U
Cache	128
Battery Back-up	Yes
RAID Levels	0,4,5
Sustained Data Rates	80 MB/sec
IOPS	10,000
Luns Supported	One
Power	Dual 300 Watt PSU
Cooling	Dual Fans

Configuration And Management

NexScan™ is our embedded web-enabled Graphical User Interface (GUI). The platform independence of the ATABoy series allows you to access your system from any standard internet browser or from any host computer either directly connected or via a LAN or WAN with no software or patches required.

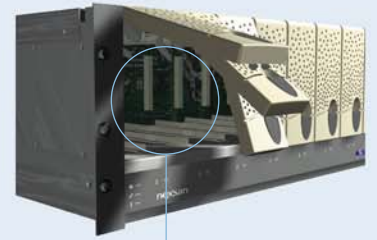
- Real-time event, hardware and thermal monitoring dynamically presented.
- Performance statistics monitoring; event logging, rebuild and verify utilities.
- SAF-TE and SMART environmental monitoring support.

Advanced System Features

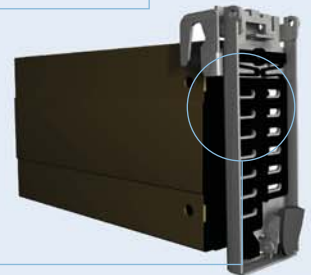
- Continual event monitoring with active user notification.
- On-line capacity expansion, No power cycling
- All active components hot-swap supported.
- Dynamic spare pooling and dedicated spares; array verification.
- Tele-Guard™ - Active/Dynamic phone home notification.
- Active array status monitoring; adjustable stripe width; automatic sector re-mapping.
- Write-back data cache memory bus, 800 Mbytes/sec bandwidth.
- User-settable priorities for dynamic array reconstruct, verify, create, and expand operations.
- Centrally or remotely managed dynamic storage pooling and virtual volume allocations.
- Volume Replication, Remote Mirror, Snapshot, Compression/Encryption, Virtual Tape.
- Storage Pools and Volumes can be built dynamically from different physical storage devices.
- System security password protected.
- Serial port access - all system settings are stored in non-volatile flash memory in case of accidental power loss.
- Graphic display of enclosure layout including rack and tower orientation.
- Alarm status displayed on the events page directly translated from and associated with the occurrence.
- Auto re-scan initiates automatic system scans for real-time "Correct Status" reporting for all RAID arrays and connected disk drives.
- Parity Scrub / Array Verify scheduling - User defined automatic repair of all configured arrays.
- Show-Start - Displays captured start-up messages automatically at power up, restart or upon a user initiated kill/un-kill operation to graphically assist in trouble shooting incorrect configurations, set-ups, etc.



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1 The front door cam mechanism offers soft insertion and ejection of the drives to eliminate gyroscopic damage to the disc drive.

2 Anti-Rotational Vibration (ARV) drive guides absorb vibration on all three axis for maximum performance and reliability.

3 Each drive bay has its own auto-venting front door mechanism which maintains the thermal characteristics of the unit even when not fully populated with drives.

The extruded aluminum drive shuttles offer the optimum combination of convective and conductive cooling by channelling the airflow over drive hot spots.

4 All units are cooled by incorporating two high-pressure centrifugal blowers within the power modules. These have true RPM monitoring and predictive failure reporting. Redundant (N+1) power supplies are designed for RAID.

5 Multiple RAID, DAS and SAN reconfiguration. All active components dock into a passive midplane, eliminating cables and offering an upgrade path to technology advancements.

Nexsan Technologies

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