iSAN® 4000 Series

Enterprise SAN Storage Solutions

Cybernetics' iSAN® 4000 Series SAN storage solution is the ideal choice for businesses seeking maximum data protection, and performance, within a single solution. It provides maximum performance, and the redundancy of hardware level mirroring, with automatic failover, within a single SAN storage solution. Ideal for Virtual Environments, the iSAN® 4000 Series is loaded with onboard data protection features like snapshot backup, portable disk backup, tape backup and encrypted and deduplicated WAN replication. Virtual disk snapshots can be performed, on-demand anytime, on a timed schedule as often as every 5 minutes, or when data changes reach a threshold that you set. Backups execute per virtual disk as a background task with minimal operational impact, and can be scheduled to occur after hours or on-demand at any time, including during business hours. Offload copying starts immediately, so there is no "backup window". Replication can be performed either as snapshots occur or on a separate schedule, if desired. Data at the remote site is available for immediate use with no need to perform a restore function.

Up to 1.2 GB/s throughput

Up to 400,000 IOPS

Up to 24 disk drives, per unit

Scalable, up to 6 expansion units

Unlimited snapshots

Multi-site replication

Available 10 GbE and FC available

CYBERNETICS Powerful Data Storage Solutions

iSAN® 4000 Series

iSCSI SAN Storage Solutions

Better Engineering. Budget friendly.

Since 1978, Cybernetics has been combining storage, features, performance and pricing. We have helped tens of thousands of small-to-medium sized businesses implement Enterprise data center solutions for a fraction of the cost associated with overpriced and under-engineered brand name storage.

Performance

Sustainable high speed access is built into every Cybernetics' SAN. To ensure data is moved to and from the SAN quickly, multiple connectivity ports and protocols are supported. Choose from 1/10GbE iSCSI, Direct-Attached SAS and 8/16Gb FC. The iSAN® 4000 supports all of these protocols and connections simultaneously; along with Multi-path redundancy, load balancing and Jumbo frames.

Cybernetics also employs an advanced, self-tuning, optimized caching algorithm; 30X faster than SSD. This was originally developed to eliminate latency with slower rotating disk drives while providing the performance needed for high demand applications. Today, the same caching technology is deployed with SSD based storage. It provides faster-than-SSD performance, eliminates "write-cliffs" with SSD and provides sustained performance throughout the entire capacity of the array. It also extends the endurance of the SSD drives.

Features

Built-in data protection keeps your data safe using multiple technologies while reducing the overhead of processing, storage and management. Snapshots provide automated, instant, deduplicated backups that can be mounted and used as restore points. Using a very granular block size, these backups do not waste valuable storage, providing more usable capacity. Automated snapshot tiering makes efficient use of mixed storage, balancing performance, capacity and cost. Cybernetics' native replication technology uses snapshots to reduce the bandwidth necessary to keep sites synchronized and provide site redundancy. USB, eSATA and SAS ports are included which allow removable disk drive and tape drive support, including encryption. These built-in automated protection policies can be configured with just a few mouse clicks.

With our easy-to-use interface, installation and daily administration is extremely simple. Real time monitoring provides hardware status, performance metrics for cache, processors, LUNs, IOPS and more. Cybernetics' Call Home feature ensures a speedy and proactive response.

Dual controller units provide hardware redundancy for automatic fail-over within one chassis. Separate chassis' can be live mirrored with Cybernetics' High Availability feature, ensuring no single point of failure at the controller, chassis or drive pool layer. Controllers are hot-swappable and upgradeable – without downtime or data migration; ensuring an easy and affordable path to future performance, if required.

Storage

Cybernetics storage solutions support NL-SAS, SAS and SSD drives. Drives can be mixed using the same chassis and multiple RAID sets can be defined, even with similar drive types. RAID sets can be dynamically expanded and converted without downtime. Expansion cabinets can be added for more capacity. Tightly integrated with the caching system, expansions, conversions and rebuilds can be accomplished without sacrificing performance.

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Available with SATA, SSD, and SAS Hard Disks

	iSAN® 4124 Series	iSAN® 4116 Series	iSAN® 4112 Series	iSAN® 4108 Series
Disk Drive bays	24 Bays	16 Bays	12 Bays	8 Bays
Scalable	1 head unit plus 6 expansion units			
Transfer Rate	1.2 GB/s			
Disk Drives	SATA, SAS, SSD			
RAID Levels	0, 1, 5, 6, 10			
Hot Swap/Redundant	Power Supplies, Disk Drives			
Dedicated I/O Cache	24 GB, expandable			
System Type	4U Rackmount	3U Rackmount	2U Rackmount	
Network Interface	Nine (9) 1 GbE ports			
Power Supply	Dual 1000w @ 100-140VAC	Dual 1200w @ 180-240VAC			Dual 700w, 1+1
Electrical	50-60 Hz 11.5-8A	50-60 Hz 8-5.5A			100-240 VAC, 47-63 Hz
Power Consumption	404 watts average	323 watts average	300 watts average	244 watts average
Heat Output	1,380 BTU/HR average	1,103 BTU/HR average	1,024 BTU/HR average	834 BTU/HR average
Operating Temperature	+5° C to +55° C (+41° F to +131° F)			
Non-Operating Temperature	-40° C to +70° C (-40° F to +158° F)			
Max. Ambient Temperature	< +30° C (< +86° F)			
Altitude	10,000 feet			
Weight	108 lbs.	83.4 lbs.	77.5 lbs.	58 lbs.

- Fast transfer rates – Up to 1.2 GB/s.

- Exceptional performance – Up to 400,000 IOPS.

- Scalable – Supports up to 6 expansion units in a single SAN for expanding capacity.

- Dynamic Storage Provisioning – Expand virtual disk space anytime.

- Reliable – Hardware level mirroring and automatic failover, with dual controllers

- Flexible – Configure with your choice of SATA, SSD, SAS hard drives - even mixed in same chassis.

- Unlimited Snapshots – Mountable points for recovery or rollback.

- Connectivity – GbE, USB and eSATA ports standard. 10 GbE and Fibre Channel available. Unlimited Snapshots – Mountable points for recovery or rollback.

- WAN Replication – Automated, deduplicated, and encrypted multi-site replication, per volume.

- High Availability – Hardware level mirroring and automatic failover with no single point of failure.

- Secure Access – Control volume access by IP address and/or user.

- Integrated – Backup to attached portable disk or tape devices directly from the iSAN® 4000 Series, with no backup server or software required.

- Flexible Control – Backups and replication can be performed in alignment with snapshots, executed on-demand, or can be on a separate schedule.
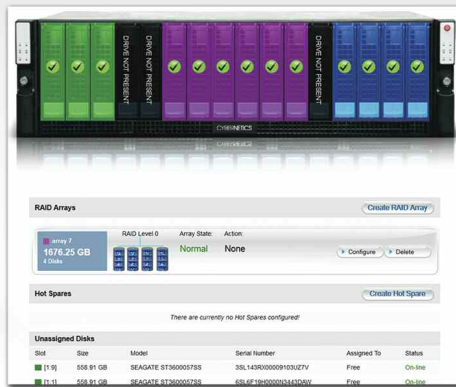
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iSAN®

4000 Series

iSCSI SAN Storage Solutions

Powerful GUI Simplifies Management

Cybernetics' powerful GUI will simplify your SAN storage management with secure access to settings and features of your SAN storage unit from any IP address you allow. Configure storage settings, add virtual disks and virtual disk users conveniently and quickly through easy to navigate options.

It's easy to add disk capacity, upgrade disk drives, create new and separate RAID sets, convert existing RAID sets to different RAID levels -- all with zero user interruption and downtime.

Visual physical status performance metrics, notifications, including temperature, fan speed, disks and connections.

Compatibility

Operating System Compatibility

- AIX 5.3 and higher
- HPUX 11.11 and higher
- Linux
- Netware 6.5 SP6+
- MAC OS (with initiator)
- Solaris 10.X and higher
- Windows 7, 2000, 2003, 2008, XP, or above

Special Applications Compatibility

- VMware ESX Server 3.5, 4.X, 5.X
- vSphere 4, 5
- Xen
- HyperV
- SQL Database
- Oracle Database
- Microsoft Exchange

iSCSI Initiator Compatibility

- Microsoft iSCSI Software Initiator
- Linux Open-iSCSI Initiator
- Novell iSCSI Initiator for Netware
- Apple Macintosh iSCSI Initiator.

Cybernetics makes choosing the right SAN storage system for your growing data demands easy as...

1. Determine The Capacity And Performance To Best Suit Your Data Storage Needs.

2. Take Advantage Of Powerful Features With No Hidden Fees.

3. Get A Higher Quality And Performance Data Storage Solution For Less.

Founded in 1978 and headquartered in Yorktown, Virginia, Cybernetics is a privately held corporation specializing in the design and manufacture of high performance disk, tape, and virtual tape storage solutions. Our product line features cutting edge technologies which have been rigorously tested to deliver seamless compatibility and solid reliability, along with innovative – and exclusive – features that provide greater functionality, data accessibility, and return on investment than any other storage solutions provider.

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Call Today! 757-833-9000

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