Starboard Storage AC Series

It's as simple as Click. Provision. Perform.

The Starboard Storage AC Series brings expert storage capabilities to IT professionals with industry leading performance for less. The Starboard Storage AC Series is a hybrid storage platform, combining the speed of solid state with the capacity and affordability of hard disks in a single, high performance storage system. Starboard Storage provides performance as a utility and capacity on-demand to dramatically simplify managing modern application workload environments.

Starboard Storage delivers the right storage solution for the next decade. Performance is SSD accelerated. On average, 5% of data is active at any one time. The AC Series uses advanced software to ensure that the active data is resident on SSD read and write cache to deliver maximum performance.

Starboard Storage's Mixed Application Storage Tiering (MAST™) architecture sets the standard for hybrid storage systems. MAST includes multi-protocol access for CIFS, NFS, iSCSI and Fibre Channel, and patented technologies such as SSD Accelerator Tier™, Dynamic Storage Pool™ and Application-Crafted™ optimization.

• SSD Accelerator Tier provides virtualized solid state accelerator and autonomic tiering of data to optimize performance for application workloads.

• Dynamic Storage Pool delivers a virtualized and expandable HDD pool of thinly provisioned capacity of mixed size and type of hard disks.

• Application-Crafted optimization simplifies configuration and provisioning of volumes based on Starboard Storage Apps™ that eliminate the management of complex RAID groups and automated data layout for optimized performance and capacity utilization

"Starboard provides real value by enabling storage to meet application demands with the use of dynamic pooling. Starboard manages to do this while improving performance at half the cost of existing SAN and NAS systems."

-Randy Kerns

Evaluator Group

The Starboard Storage AC Series

Starboard Storage AC Series delivers on the promise of sophisticated yet easy-to-manage storage for modern application workload environments. The AC Series includes storage management software features such as Starboard Storage Apps, fully automated thin provisioning, writeable snapshots, cloning and asynchronous replication as part of an all-inclusive solution. Additional capacity software licenses are not required as you expand storage capacity behind each node. All of these features work together to drive down total cost of ownership. Starboard Storage is the only company delivering on the full spectrum of customer requirements for hybrid storage. Starboard Storage delivers performance as a utility, capacity on-demand and simplicity and control.

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The Starboard Storage AC72:

The AC72 is a high performance hybrid storage solution built from the ground up to address the modern application work–load problem experienced by Small to Medium Enterprise IT administrators today. This system is massively scalable to 576 TB behind each node and delivers incredible solid state performance with leading $ per IOPs and $ per GB. The AC72 is ideal for storing large capacity fixed content data, virtual desktop environments and consolidation of modern application workloads. This system provides twice the performance at half the cost of traditional SAN and NAS systems. It also delivers 50% greater performance than the leading competitive unified storage systems.

The Starboard Storage AC45:

The Starboard AC45 Storage System is a hybrid storage platform that delivers solid state performance for budget conscious environments starting at less than $40,000. This storage system offers scalability up to 78TB behind each node. Performance is SSD accelerated and the AC45 enjoys all the same software features as the flagship AC72. The AC45 is ideal for use in modernizing Microsoft applications, virtualization, as a remote branch office or data protection site replicating from the AC72.

STARBOARD
STORAGE SYSTEMS

The Starboard Storage AC Series is an enterprise-class storage system built on a state of the art hardware platform with a robust storage file system and management features.

Simplicity & Control

| Dynamic Storage Pool | • Eliminates concept of RAID groups
• No complex setup or management
• No lengthy re-builds or risky re-stripes |
| Capacity On Demand | • Capacity added on the fly with automatic load balancing across new drives; no re-stripes
• Performance increases as drives are added |

Performance as a Utility

| SSD Accelerator Tier | • Built-in solid state drives with intelligent caching and data movement optimize system performance
• Hot files placed in SSD Accelerator Tier for performance
• Natural acceleration reduces the latency of other tiering architectures in moving large writes to disk |

Enterprise Hardware

| Best-in-Class Hardware | • Dual, fully redundant storage nodes
• Multi-core CPUs and large memory footprint
• 6Gb SAS disk drive interface |

Enterprise Features

Management Console	Easy-to-use, intuitive management console
Thin Provisioning	Fully automated thin provisioning delivers outstanding capacity utilization rates with no reservations, no administrative overhead, and no performance impact
Snapshots	Writable snapshots simplify backup and recovery processes
Cloning	Clone writeable snaphots of data for efficient deployment of VDI environments
Remote Replication	Efficient asynchronous replication between remote sites to ensure business continuity

Enterprise-Class features

	AC45	AC72-1 & 1S	AC72-2 &2S
Starting Capacity	12TB	24TB (1S starts with 7.2TB 15K SAS)	36TB (1S starts with 7.2TB 15K SAS)
Standard Drives	6 X 2TB 7200 RPM SAS	12 drive (2TB 7200RPM in -1, 600GB 15KSAS in -1S)	12 drive (3TB 7200 RPM in -1, 600GB 15KSAS in -1S)
Standard SSD Accelerator Tier	2 X 100GB Mirrored Write Cache	2 X 100GB Mirrored Write Cache	2 X 200GB Mirrored Write Cache
	1 X 100 GB Spillover Read Cache	1 X 200 GB Spillover Read Cache	1 X 400 GB Spillover Read Cache
Max Accelerator Tier SSD (Optional expansion)	2 X 100GB Mirrored Write Cache	2 X 100GB Mirrored Write Cache	2 X 200GB Mirrored Write Cache
	500GB (1x 100GB & 1 X 400 GB Spillover Read Cache)	1.4TB (1 x 200GB)	2.4TB (6 X 400 GB Spillover Read Cache*)
		3 X 400GB Spillover Read Cache*	
Software	Starboard OS including ;- Dynamic Pooling, thin provisioning, thin conservation, replication, snapshots, clones, & space reclamation		
Processor per Node	Single Intel Xeon^{TM} 5600		Dual Intel Xeon^{TM} 5600
Memory per Node	24G DDR3 ECC		48GB DDR3 ECC
I/O Interfaces per Node	Two PCIe x4 and one PCIe x8 ; Dual 1GbE ports for management		
	Dual 10GbE interconnect (Internal); IPMI with KVM over LAN support		
Network ports per node (2 expansion slots)	Standard 4x 1Gb Ethernet	Optional 1Gb, 10Gb Ethernet and 8Gb Fibre Channel	
	Optional 10Gb, 8Gb FC		
Capacity Expansion (6Gb SAS)	1 ES16 Expansion shelves	2 ES16 or 1 ES45 Expansion shelves	6 ES16 or 4 ES45 Expansion shelves

"With Starboard Storage, we were able to consolidate all data types under the AC72 to improve storage utilization and management. We've seen exceptional I/O performance, 20 times faster than the previous iSCSI solution."

-Shane Brown CEO, DigeTekS

STARBOARD
STORAGE SYSTEMS