



ISE 28.8

Accelerate Database Applications
Enable VDI in the Enterprise
Increase Server Consolidation

ISE Storage Systems

The ISE storage system is an easy to use, high performance fibre channel storage system supporting SAS HDDs. ISE storage provides enterprise-class reliability with self-healing capabilities. ISE storage systems are an excellent solution for Citrix XenServer, VMware vSphere, Microsoft Hyper-V, Exchange 2010, SQL Server 2008, SharePoint and Oracle.

ISE Storage System Unique Features

High performance SAS HDD FC-SAN storage system
Fast Forever architecture supports high performance throughout entire lifecycle
Fully active-active controllers
Linearly scalable performance and capacity
Self-healing storage with head-level sparing and full internal telemetry
Optimized for any workloads including mixed environments
Cloud-based management interface
Lowest power consumption in the industry—700 Watts
Low TCO with zero-touch maintenance and 5-year hardware warranty

Solving a Data Storage Dilemma

Purpose-built for server & desktop virtualization, cloud computing, and other applications with multi-tenant workloads generating near-simultaneous I/O requests to shared storage resources; ISE storage systems are a simple and efficient way to rapidly deliver critical information across the enterprise.

Predictable Performance

As capacity is consumed, ISE storage system performance remains constant at over 90% utilization. ISE performance does not degrade as capacity is used as in the case of traditional frame-based storage arrays.

Fast Forever

ISE storage systems provide high performance throughout the complete lifecycle due to the way they handle vibration, heat dissipation, data placement, and drive reliability. Additionally, the disk drives within ISE storage systems are not treated as individual and disposable components, but rather as a single organism. As such, they work congruently resulting in higher performance and reliability.





ISE storage systems reach reliability levels impossible for standard drives and enclosures, providing more than 100 times the reliability of a regular disk drive enclosed in a typical storage drive bay—significantly reducing service events and their impact on IT organizations.

Manage multiple, simultaneous streaming and random I/O patterns with advanced scheduling algorithms and unique queue priority capabilities.

Performance-Driven Storage

ISE 28.8 is the latest in a new class of storage systems achieving up to 15,000 IOPS in a single 3U, 28.8 TB system. That is over .5 IOPS per gigabyte. ISE 28.8 provides an ideal balance of price, performance, capacity, and reliability. ISE 28.8 outperforms traditional disk systems by delivering 2-3 times the number of IOPS per disk. ISE is designed specifically for performance-driven applications that require enterprise-class reliability.

ISE 28.8 is a Fibre Channel-based 3U storage system with 28.8 TB of capacity after sparing, supporting SAS HDD drives. It provides true split-second active-active failover for high availability.

Heat & Vibration	The two greatest causes of Hard Disk Drive (HDD) failures		ISE storage system's mechanical design dramatically reduces heat and vibration
Undetected Data Corruption	Rarely mentioned, but quite pervasive are silent data errors that go unreported and undetected resulting in corrupt data being provided to apps		ISE is one of the first storage technologies to incorporate ANSI T10-DIF that makes it possible to detect and identify data errors including misdirected, lost, or torn writes
Long RAID Rebuilds	If a rebuild is given a low priority to be completed in off hours, it can take days. The RAID group is also subject to higher risk of another failure (except RAID 6)		ISE automatically performs preventive and remedial repair of components to eliminate RAID rebuilds. ISE "heals-in-place"
Service Avoidance	A system of 240 HDDs can expect a failure rate of 40 drives per year*. 67-90% of failures are No Trouble Found (NTF) after run through manufacturer's repair process		Each ISE storage system includes spare redundant capacity to replace a hard drive in the rare circumstance that "heal-in-place" does not solve the problem
*Carnegie Mellon study that reported FC and SAS drives have a realistic mean time between failure of 52,560 hours, or an annual replacement rate of 16.67%. Study and results presented at 5th USENIX in 2007.			

The only 5-Year Warranty in Storage

ISE storage is backed by a no cost 5-year hardware warranty based on its reliability and self-healing capabilities. XIO is the only storage company willing to stand by its reliability claim.

Performance and Capacity		Connectivity and Compatibility		Physical and Environmental	
Performance	Up to 15,000 IOPs	SAN or DAS interconnect	SAN & DAS*	Depth	28.5in/72.39cm
RAID Levels	ISE RAID 10 ISE RAID 5	Internal controllers	2	Width	17.5in/44.45cm
Capacity after RAID	ISE RAID 10 13,054 GiB ISE RAID 5 20,888 GiB	Ethernet management ports	2	Height	5.2in/13.2cm
Max read bandwidth	1.4 GB/sec	Drive interconnect	6Gb/s SAS	Weight without drives	71lbs/32.3kg
Max write bandwidth	1.4 GB/sec	Operating systems*	AIX, Mac OS, RHEL, SLES, Solaris, Windows Server 2003 & 2008	Voltage	100-240VAC 47-63Hz
Hard drive type	2.5" 10K RPM SAS	Hypervisors*	Citrix XenServer, VMware vSphere, Microsoft Hyper-V	Current	6.6A @ 110V 3.6A @ 208V
				Power (max)	700W
		*Please check the compatibility matrix or with your sales associate for availability		Heat dissipation (max)	2400btu/hr



9950 Federal Drive, Suite 100 | Colorado Springs, CO 80921 | 1.866.472.6764 www.XIOstorage.com

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