

integraStor™ iS512 Series Storage Systems



- Scalable System Protects Investment
- Affordable Enterprise Drive Support — SAS or SATA

APPLICATIONS

- E-mail
- Database Applications
- Online Transactional Processing (OLTP)
- Video Editing
- Video Surveillance
- Direct-Attached Storage (DAS) Replacement
- Archiving
- E-discovery
- Disk-to-Disk Backup
- Other iSCSI SAN Storage

KEY FEATURES

High Availability

Volume Virtualization

- Online Capacity Expansion
- RAID Level Migration
- Auto-Rebuild
- Micro-Rebuild

iSCSI Performance

- Jumbo Frame Support
- Full TCP/IP Hardware Off-load Engine (TOE)
- MPIO, MCS, LAG

Standards Based Platform

- Conforms to Storage Management Initiative Spec (SMI-S)
- Enclosure Management Services

Security Features

- CHAP Authentication
- VLAN Support
- Initiator ACL
- SSL Encryption
- Read-only Volumes

Enterprise-class Storage System Extends SMB Value to a New Level

The integraStor™ iS512 solution provides a high performance, enterprise class feature set and the most cost-effective iSCSI solution for distributed data centers, Remote Office Branch Offices (ROBOs), and Small and Medium Enterprises (SMEs). integraStor storage products scale from

3TB to 36TB today with future expansion, while

	iS512	iS512-100
Bandwidth	890 MB/Sec	1160 MB/Sec
IOPS	> 80,000 IOPS	> 80,000 IOPS

providing maximum data integrity for iSCSI storage. iS512 successfully extends iStor's renowned price/performance, robust virtualization, energy efficient "green" iSCSI RAID storage solutions for IP Storage Area Networks (SANs). The iS512 storage system uniquely provides up to 10Gbps full wire speed host performance from a single controller. iS512's high level of integration provides a complete scalable solution at an attractive total cost of ownership (TCO).



Flexible Expansion

iS512 extends its unique host performance bandwidth to iS512-SX expansion arrays enabling high performance capacity expansion. The iS512 combines 8 ports of GbE (4x most competitors) or a single port of 10GbE for host connectivity with two separate ports of SAS expansion

per controller (2x the competition) for capacity growth. iS512 supports multiple iS512-SX expansion arrays per controller connecting 36 SAS or SATA drives today with expanding support in the future. iS512's exceptional host & expansion connectivity provides high bandwidth between servers and volumes.

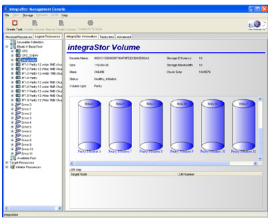
Robust Storage Virtualization

iStor's advanced storage virtualization firmware enables the iS512 to be the industry's most advanced iSCSI storage system offering high performance and low power at attractive entry level pricing. iS512 delivers enterprise data protection capabilities such as media scanning, battery-backed caching, redundancy, and RAID virtualization that meet the storage requirements and needs of both large and small customers. iS512's innovative Micro-Rebuild feature caches disk writes to unresponsive SATA drives, which avoids rebuilding drives that are temporarily offline reassigning bad blocks, cataloging SMART information, or other housekeeping operations.

By utilizing the fundamental building blocks of storage extents, the iS512 provides features such as RAID level migration, online capacity expansion, down drive and "virtual spare" rebuild. Extents enable optimized storage utilization, volumes that can be created from drives of dissimilar capacity, growth that can occur without volume migration or reconstruction, and multiple divergent RAID types occupying space on the same drive.

Impressive Energy Efficiency

iS512's low power is derived from its innovative purpose-built iSCSI RAID storage ASIC which only consumes 12 watts. iS512's impressive energy efficiency consumes only 250 watts for the total system with drives. Competitive storage systems are based on software running on x86 architecture and typically consume twice the overall power. Considering every 100 watts costs ~\$150 in annual power & cooling expense, savings become significant as configurations scale. In addition, lower wattage translates into higher system reliability.



Intuitive Management

iS512 includes a management graphical user interface (GUI) with an easy “4-click” installation that greatly reduces configuration time so IT managers can focus their valuable resources on supporting their users instead of maintaining equipment. iStor’s comprehensive storage management suite allows remote configuration and monitoring of iS512’s SAN storage subsystems. This embedded IP-based management console is rich in features, allowing users to install, configure, and maintain their online network storage with uncommon ease and flexibility. Communication is via a standards-based Storage Management Initiative (SMI-S) interface which is embedded directly in the management console for ease of deployment.

Secure, High-Performance iSCSI SAN Networking

The heart of the iS512 storage system is a next generation “Storage System on a Chip” designed to accelerate iSCSI RAID to accommodate both the most demanding transaction processing workloads and bandwidth intensive applications. iS512 supports Multi-path I/O (MPIO), Multiple Connections per Session (MCS), and Link Aggregation Group (LAG) for network performance and resiliency. iS512 secures iSCSI data connections, using CHAP authentication, VLAN “zoning,” and initiator ACL “LUN masking.” Management connections are protected with SSL encryption.

COMMON TECHNICAL SPECIFICATIONS

iSCSI NETWORK INTERFACE

• Host Connectivity	1GbE x 8 ports, RJ45 connectors. 10GbE x 1 port, requires XFP module
• Connections	1,024
• Network-based Security	CHAP Authentication, Initiator Access Control (ACL)
• iSCSI/TCP/IP Full HW Offload	Yes
• Jumbo Frame Support	Yes

VOLUME AND RAID SUPPORT

• RAID Support	RAID Levels 0, 1, 1+0, 5 and JBOD
• Volumes	1,024 Virtual Volumes
• VLANs Supported	Up to Eight VLANs Supported
• Data Protection	“Virtual Spare”, Auto-Rebuild, Micro-Rebuild, Auto-Detection of Failed Drive, Microsoft Volume Shadow Copy Service (VSS)
• Volume Operations	Instant Volume Access during initialization, RAID Level Migration, Online Capacity Expansion
• Drive Operations	Down Drive, Drive Roaming, Hot-Swappable Drives
• Battery backed-up cache memory size	2GB standard; 4GB option

iSCSI ECO-SYSTEM

• Compatible with all leading iSCSI initiators	Windows® 2000/2003/2008; Red Hat Linux; SuSE Linux; Mac® OSX; VMware ESX Server; IBM AIX-5, Sun Solaris 10
• For the latest list of supported hardware & software	Please refer to the iStor inAble matrix at www.istor.com

POWER

• Supply Type / Input Voltage / Frequency / Current	Redundant dual 430 watt / 85-264 VAC (auto-switching) / 50-63 Hz / 2A maximum at 115 VAC
• Power Consumption / Thermal	250 W (single controller, full configuration) / 855 BTU per hour (single controller, full configuration)

ENVIRONMENTAL

• Operating / Storage Temperature — English (Metric)	41° to 104° F (5° to 40° C) / -40° to 158° F (-40° to 70° C)
• Operating / Storage Humidity	10 to 80% non-condensing / 5 to 95% non-condensing

PHYSICAL

• Form Factor	2U industry-standard 19” rack
• Height x Width x Depth x Weight — English (Metric)	3.5” x 17.6” x 19.5” x 60 lbs full configuration (8.9 cm x 44.7 cm x 49.5 cm x 27 kg full configuration)

STANDARDS

• Emissions	CE Mark, FCC Class A, EN55022 Class A, EN55024
• Safety / RoHS	UL/CUL, CSA International / Compliant

iS512 Integrated Solutions:

Two controller configuration, 8xGbE host interface, 12x 3.5” drives, 2U chassis

PART NUMBER	DRIVE TYPE	RPM	SYSTEM CAPACITY
iS5300XV	300GB SAS	15K	3.6 TB
iS5400X	400GB SAS	10K	4.8 TB
iS5500A	500GB SATA	7.2K	6 TB
iS5700A	750GB SATA	7.2K	9 TB
iS51000A	1000GB SATA	7.2K	12 TB

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