

iSCSI Target Storage Appliance



3U High Density iSCSI Storage Solution

Wasabi Storage Builder™ for iSCSI Appliances is a compact flash based solution that enables OEMs to produce high-performance native iSCSI target appliances. Modular, scalable, and able to run on off-the-shelf components, Wasabi Storage Builder™ is the industry-leading operating platform for creating advanced, iSCSI-enabled networked storage devices.

The iSCSI Protocol: Revolutionizing Storage

iSCSI is a new technology that connects computers to SCSI devices over a TCP/IP network. iSCSI allows system administrators and integrators to develop Storage Area Networks (SANs) using cost-effective Gigabit Ethernet Networks in the data center. iSCSI's TCP/IP underpinnings will also allow the easy extension of SANs over much greater distances than was previously possible, including extending SANs over the public internet. iSCSI includes built-in security features that make it possible to control which systems may gain access a given device. These features taken together make iSCSI an effective new technology for data transfer.

Wasabi Storage Builder™ for iSCSI helps OEMs create a low cost IP-enabled SAN, disk-based backup and near-line storage appliances in business continuation and recovery devices. iSCSI target appliances created with Storage Builder are the perfect companion to Microsoft's Storage Server 2003 acting as a NAS gateway to high capacity, low cost serial ATA based arrays with full RAID support for mirroring, striping, parity and virtualization.

Storage in a Flash

Wasabi's innovative Flashware™ software delivery mechanism encapsulates the entire operating system, iSCSI stack, and management software inside inexpensive, off-the-shelf CompactFlash cards, eliminating the need to waste a hard drive slot for the operating system. Flashware™ images are also field-upgradable using Storage Builder's web-based management interface.

In one CompactFlash card, Storage Builder™ includes all of the necessary software components you need to create a native iSCSI target solution, including the Wasabi Network OS, iSCSI protocol stack, web-based storage manager, storage software and security protocols. Simply plug it in and turn the system on.

FEATURES

- Up to 6.4 TB of Storage Capacity
- 16 Hot-Swappable Serial ATA Hard Drives
- Dual Intel® Xeon™ Processors (up to 3.2 GHz)
- Intel® E7501 Chipset
- Up to 16 GB Two-Way Interleaved DDR SDRAM
- 512 KB L2 Cache
- 3Ware® 8506 Series Serial ATA RAID Cards
- Dual Gigabit Ethernet Ports
- Redundant Power/Failover

BENEFITS

- High performance and scalability
- Low total cost of ownership
- High density design conserves space
- Hot-swappable components for assured reliability

Overview

Storing massive amounts of data has never been simpler. The high capacity, high density design packs 16 Serial ATA drives into a 3U chassis, for over 4 terabytes of capacity. As data needs grow, the solution is easily and cost-effectively scalable.

The iSCSI 1600 SATA offers an ideal solution for price sensitive environments that need performance, high reliability and scalability. Utilizing Serial ATA technology, the iSCSI 1600 provides point to point performance benefits and accommodates up to two 3Ware Escalade 8506 Series Serial ATA RAID controllers providing true hardware RAID and eliminating bottlenecks. Add to this the power of Intel® Xeon™ processors and you get the ultimate in performance and reliability.

To ensure data availability, the iSCSI 1600-SATA features include hot-swappable hard drives, power supplies, dual 10/100/1000 Ethernet interfaces, and RAID support for reliability and redundancy. The i1600-SATA supports both Linux and Windows platforms.

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iSCSI 1600-SATA

Hardware

Storage

Drive capacities: 4 up to 400GB
Drive Interface: SATA
System Max Capacity up to 6.4TB

System Drives

ATA/133 IDE 80 GB, Slim CD-ROM, Slim FDD

RAID

RAID levels 0, 1, 5, 10 and 50
TWO 3Ware Escalade 8506 Serial ATA controllers
8 drives supported per controller
Support for 16 drives with 2 RAID controllers

CPU

Intel® Dual Xeon (up to 3.2GHz)

Cache

512kb Integrated On-Die Level 2

Bus Speed

Up to 533 MHz

Motherboard

Dual Xeon Serverboard

Memory

Up to 16 GB of DDR-266 SDRAM

On-board Devices

Dual Ultra ATA/100 IDE channels
Two Intel® 82544 Gigabit Ethernet (copper)
On-board SVGA video

Expansion Ports

Two Fast 165550 UART Serial Ports
One ECP/EPP Parallel Port
USB 2.0 connectors
PS/2 Keyboard and Mouse connectors

Power Saving Features

APCI/APM power management
One Wake-On-Lan connector
Internal/External Modem Ring-on

Power Supplies

Dual 460W hot_swap power supplies

Power Requirements

Requires 2 100-120V 50-60Hz AC @ 3A inputs

Cooling

(6) 200 CFM fans and (2) 87 CFM fans

Chassis

Rackmount version
Width Depth Height
3U 19" 26.5" 5.25"

Warranty and Service

Two year return-to-manufacturer parts and labor
Two year 8x5x5 phone support

Wasabi Software

Standards Compliance

Supports IETF iSCSI RFC, draft 20, Error recovery levels 0

Supported Processors

Intel® XScale, IA32 and compatible (Pentium IV and Xeon processor)
AMD Athlon X86 processor families and compatibles

Certified Reference Platforms

Xeon: Intel SE7501HG2
Intel SE7501BR2
Intel SE7501WV2
Intel SE7501CW2

SuperMicro X5DPA-GG
Supermicro X5DP8

Memory Requirements

Minimum recommended: 512 MB
Maximum supported: 4 GB
Full memory utilization to cache iSCSI block data

Supported hardware

SCSI, IDE, and Serial ATA controllers from Intel, Adaptec, and others
Leading NICs and networking chipsets
Leading SCSI and Serial ATA RAID cards from Intel, Adaptec, and others
Multiport Ethernet cards: Intel Ethernet Controller 85246, Intel Pro1000 XT, MT
Intel and other leading iSCSI accelerator HBAs

Supported Networking

Gigabit Ethernet or 10/100 Ethernet (single or multi-port) TCP/IP v4
SLP and iSNS for iSCSI target discovery

Supported Volume Manager Features

Span/chaining, RAID levels 0, 1, 4, 5, 10, 50
Support for volumes in excess of 1,000 terabytes
Volumes may be partitioned into multiple virtual iSCSI disk nodes

Security

CHAP authentication, Password-protected web-based management

Administration

Web-based, password-protected user interface. Features configuration of network parameters, and configuration and management of virtual volumes and intelligent RAID controllers. Also provides "Expert Mode" for fine-tuning of iSCSI parameters.

All supported features are configured through this graphic user interface.

Configuration software is modular and can be extended using plug-ins

Compatibility

Compatible with Cisco, UNH, and Microsoft software initiators
Compatible with Intel PRO/1000 T IP Storage Adapter
Compatible with all other iSCSI Draft 20-compliant initiators
Platform-agnostic: The CAEN OS Kernel is the only module that needs to be ported to a different hardware architecture.

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