

Simplified Storage Expansion

Cost-Effectively Expand Storage Capacity Without Straining IT Resources

Every company is faced with a rapidly growing amount of business data that must be continuously available to all the employees who need it. The latest regulations require business data to be retained and accessible for years, even after it is no longer critical for daily business. It all adds up to data that can easily overwhelm available storage resources.

The Challenge: Easy, Cost-Effective Capacity Scaling

62% of small businesses and 56% of medium-sized businesses still rely on direct attached storage using internal disks, according to IDC. Direct attached storage offers the virtues of low cost, high reliability, and easy management, but it is difficult to scale. Adding capacity requires opening the server and adding individual disks. Eventually, there is no more room to add disks. Yet, many IT managers are reluctant to move to a networked storage solution, fearing that it will require extra cost, increased time to implement and complexity that will strain already-tight IT resources.

The Solution: Direct Attached SAS RAID with Adaptec Serial Attached SCSI RAID 4805SAS/4800SAS Controllers and SANbloc S50 JBOD

The Adaptec Serial Attached SCSI RAID 4805SAS/4800SAS controllers and SANbloc S50 JBOD put the performance, reliability and investment protection of the Adaptec Unified Serial™ Architecture together in one complete, convenient storage expansion solution. It allows easy external expansion of DAS without moving to networked storage, and managing all the attached capacity with the same, familiar Adaptec Storage Manager interface that manages DAS.

Each SANbloc S50 JBOD holds up to 12 disks. Daisy-chaining provides massive scalability. Connect up to eight JBOD units to the Adaptec 4805SAS/4800SAS RAID controller.

You have the flexibility to install Serial ATA (SATA) drives for low cost and high capacity, Serial Attached SCSI (SAS) drives for high performance, or mix them in the same system to achieve the right price/performance balance. Upgrading or reallocating storage later is as easy as swapping out disks.

How it Works

Simply install the Adaptec 4805SAS (PCIe) or 4800SAS (PCI-X) card into your server. Then, connect the S50 JBOD and populate it with SATA and/or SAS drives. As your storage needs grow, attach additional JBODs by daisy chaining them to each other. Each SANbloc S50 can accommodate up to 9TB of SATA disks or 3.6TB of SAS disks.

Easy-to-Use Storage Management

This solution uses the same, familiar Adaptec Storage Manager (ASM) that many IT managers already know. The intuitive ASM tool centralizes management of all Adaptec RAID cards in the company. Remotely configure, monitor, and manage RAID through secure, encrypted communication. Pop-up tips and online help simplify RAID array creation and management.

Unmatched Data Protection

Adaptec delivers a proven RAID core hardened over years of use in demanding environments. The Adaptec 4805SAS/4800SAS controller offers the most advanced RAID feature set with RAID 0, 1, 5, 10, 50, RAID Level Migration, and Online Capacity Expansion without downtime.

Then we take it farther with the Adaptec Advanced Data Protection Suite, standard with Adaptec 4805SAS/4800SAS controllers. Enjoy the dual drive failure protection of RAID 6 and 60, the ability to mirror across an odd number of disks with RAID 1E, and the ability to use a hot spare while using all the drives for data of RAID 5EE. Copyback Hot Spare allows you to designate a drive location as a hot spare. After drive replacement, the controller migrates back to the original configuration. Optional

Key Features

Direct attached entry-level SAS RAID solution

Mix and match SAS and SATA drives to achieve the right performance, reliability, and price

Upgrade or reallocate just by swapping out disks

Easily scale storage capacity to meet growing data needs

Includes standard RAID levels 0, 1, 5, 10, 50

Includes the industry's most advanced data protection with RAID 6, 60, 1E, 5EE, Copyback Hot Spare and optional Snapshot Backup

Online Capacity Expansion makes new capacity immediately available without RAID rebuilds

Optimized Disk Utilization maximizes capacity usage, even when disks are of different sizes

Simplified Storage Expansion

Snapshot Backup creates point-in-time copies of an array for better data backup.

True Reliability and Fault Tolerance

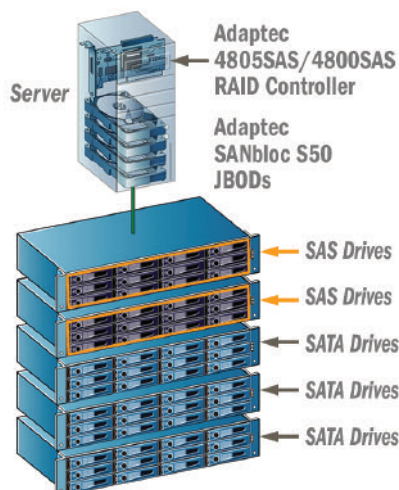
Hot-swappable drives and redundant, hot-swappable power and cooling are standard with the SANbloc S50. Plus, each disk drive has its own dedicated 3Gb SAS channel and point-to-point connection. Unlike traditional SCSI where a failed drive can bring down the entire bus, the SANbloc S50 isolates the failure to the affected drive.

Fast Throughput

This solution is ideal for data- and transaction-intensive applications. The dual SAS host connections of the SANbloc S50 transfer terabytes of data at up to 1200MB/s each, for an aggregate bandwidth of 2400MB/s. The Adaptec 4805SAS/4800SAS transfers data at rates up to 3Gb/s, then about 300MB/s, per port.

Investment Protection

This solution is designed to minimize cost as your data needs grow and change. To upgrade from SATA to SAS, or to reallocate primary and secondary storage in tiered storage scenarios, just swap out disks. There's nothing else to buy or install.



Controller & Part Number	OS	SANbloc 50 & Part Number	Max # Systems	Server
4805SAS 2183100-R	• Windows	S50 3TB SATA - 5325302036	8 shelves	Supports common x86 architecture servers with Intel or AMD architecture with available 8-lane PCIe slot, including:
	• XP/2000/2003	S50 2TB SATA - 2221000		
	• SUSE Linux Enterprise Server	S50 1TB SATA - 2220900		
	• Red Hat Enterprise Linux	S50 1.2TB SATA - 2221100		
	• Solaris 10 x86	S50 584GB SAS - 2222100		
4800SAS 2183300-R	• Windows	S50 3TB SATA - 5325302036	8 shelves	Supports common x86 architecture servers with Intel or AMD architecture with available PCI-X slot, including:
	• XP/2000/2003	S50 2TB SATA - 2221000		
	• SUSE Linux Enterprise Server	S50 1TB SATA - 2220900		
	• Red Hat Enterprise Linux	S50 1.2TB SATA - 2221100		
	• Solaris 10 x86	S50 584GB SAS - 2222100		

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Adaptec 4805SAS

- Form factor: 3/4 size
- Data transfer rates: up to 3Gb/s per port
- Cache memory: 128MB of ECC-protected DDR2 memory (256MB, battery backup optional)
- Bus type: 8-lane PCIe host interface
- External connector: One x4 SAS

Adaptec 4800SAS

- Form factor: 3/4 size
- Data transfer rates: up to 3Gb/s per port
- Cache memory: 128MB of ECC-protected DDR2 memory (256MB, battery backup optional)
- Bus type: PCI-X
- External connector: One x4 SAS

Adaptec SANbloc S50

- Form factor: 2U
- Host Interface: One SAS I/O module supports two SAS connections up to 1200MB/s, which can be used for host connection and expansion
- Disk Drive Interface: 300MB/s point-to-point connections to each SAS or SATA drive
- Measured Performance: Up to 750MB/s (sustained reads)
- Capacity Per Enclosure:
 - SATA - up to 12 drives (9TB)
 - SAS - up to 12 drives (3.6TB)
- Max. Capacity: Daisy-chain up to 8 JBODs together
- Disk Drives: Up to 750GB; 7200 RPM, 15K RPM; 3.5in form factor; only Adaptec Snap Server disk drives are supported
- Redundant, Hot-Swappable Components: two advanced power and cooling modules, two AC power inlets, disk drives. No active components are on the data path.
- S50 kit includes: power cords, rail kit, 1-meter external SAS cables

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