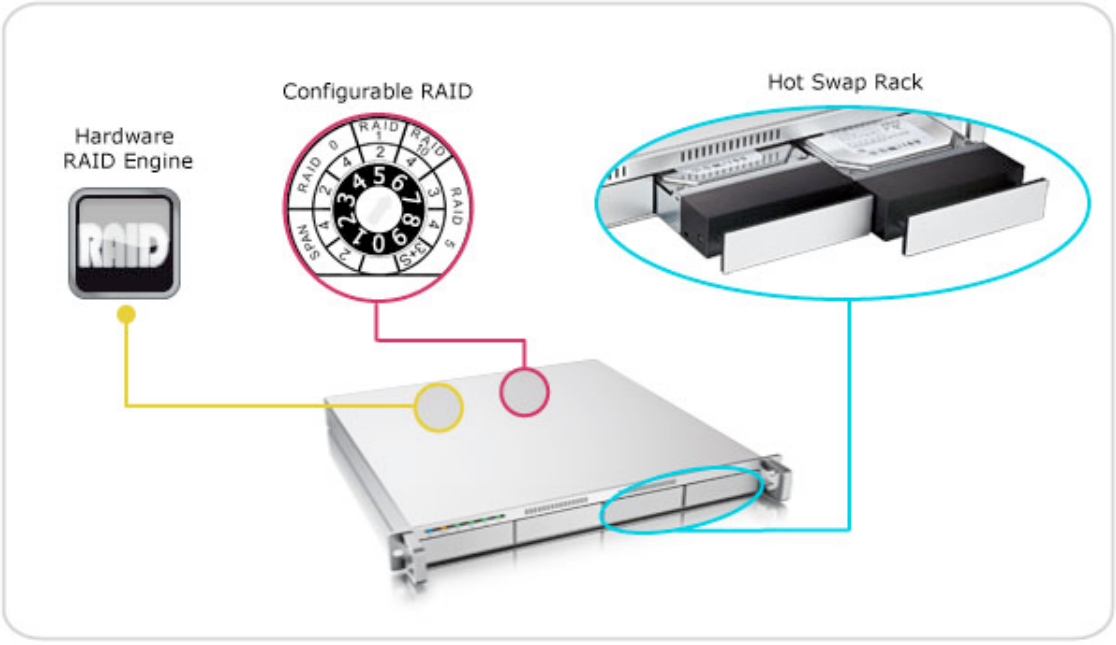
MD4 Super-S Combo

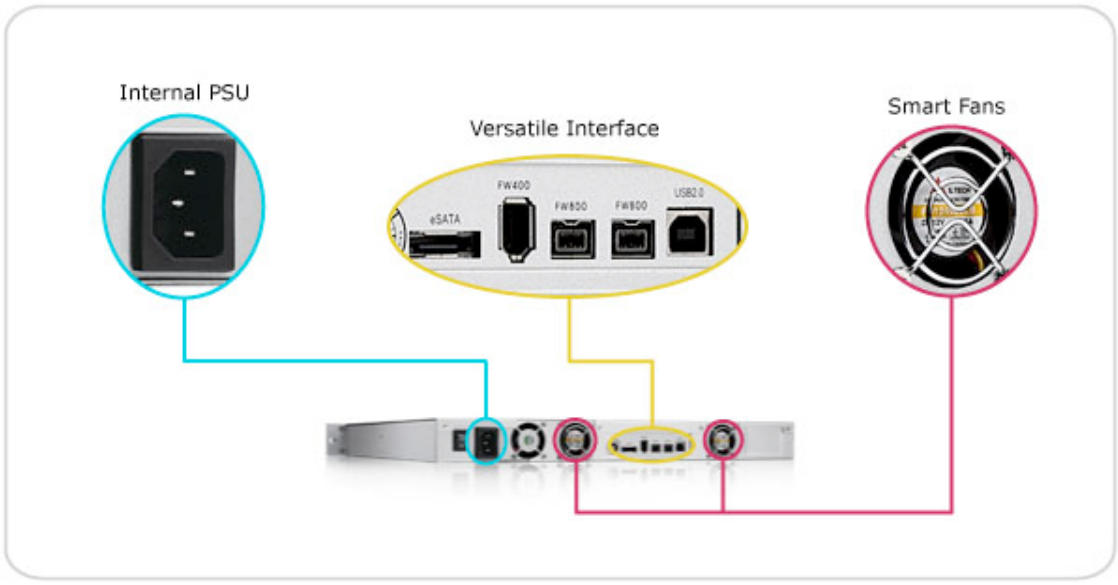
High quality 4-Bay rack mount chassis engineered to perform, not only for speed but also to maximise the storage capacity and secure your data. This industrial enclosure is designed to house up to four 3.5" SATA hard drives and provides efficient passive heat dissipation, plus extra powerful rear fans to keep your hard drives cool during long hours of operation. Advanced RAID technology provides extra protection for all your valuable data content and the hot swap rack allows easy replacement for faulty drives.

4-Bay RAID in a slim, low-profile rack
This 1U rack mount enclosure is designed to house up to four 3.5" SATA hard drives with the option to set the RAID configuration yourself, depending on your system requirements. Use it as a reliable backup for your important data with RAID 1/10, for optimal performance and speed with RAID 0 striping, or select RAID 5 for the perfect balance between high performance and data integrity. In case of a drive failure, the externally accessible hot swap rack makes installing and replacing the hard drives quick and easy.



Versatile interface featuring eSATA, FireWire and USB all in one unit
This 19" rack mount chassis comes with a choice of four different interfaces all combined into one single unit. eSATA and FireWire 800 where maximizing transfer speed is most important and the more common FireWire 400 or high speed USB 2.0 connections for flexibility to access your data on workstations that do not offer the

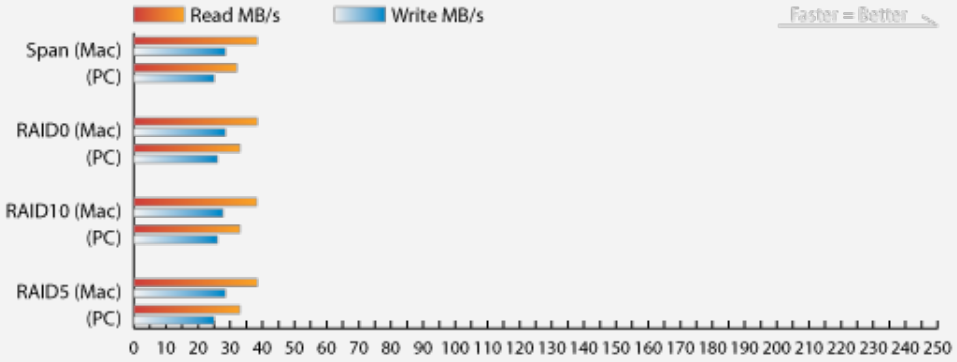
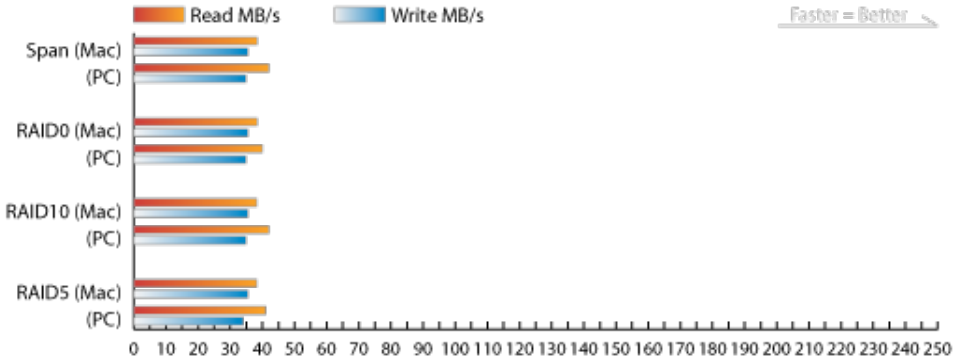
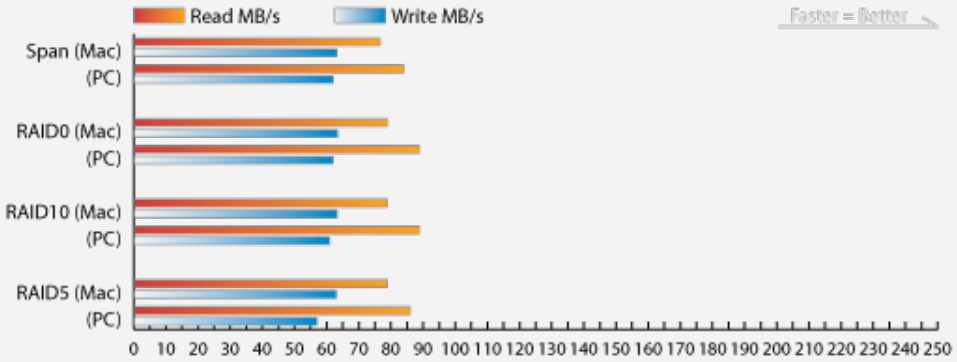
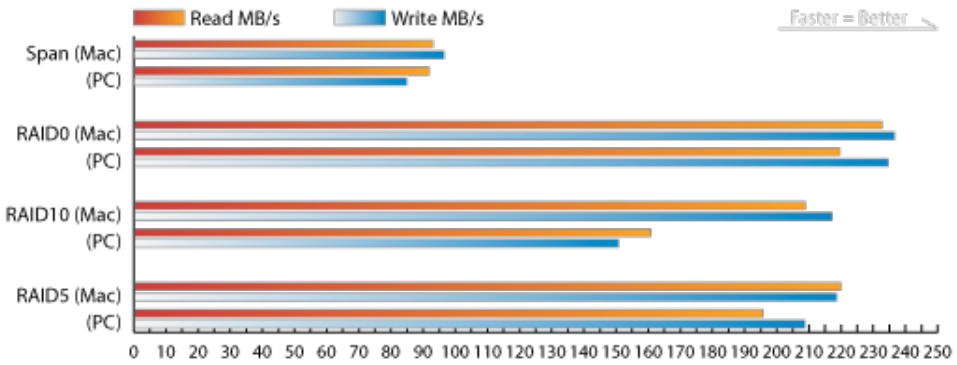
modern eSATA or FireWire 800 connections. To keep your drives cool during long hours of operation, this enclosure uses Macpower's smart fan technology. It automatically regulates fan speed according to the internal temperature, optimizing cooling and reducing noise levels.



RAID Setup			
Note: The difference in performance is only visible for fast interfaces like FireWire 800 and specifically eSATA.			
Disk Spanning The drives show up as one large single volume but the total size will depend on the drive with the smallest capacity. Spanning is an array (not RAID) that is written sequentially across the drives. By itself, it does not provide any performance or redundancy benefits.			
2 hard drives	Storage Capacity	Data Safety	Performance
4 hard drives	Storage Capacity	Data Safety	Performance
Disk Striping (RAID 0) The drives show up as one large single volume but the total size will depend on the drive with the smallest capacity. Used where speed is the primary objective but RAID Level 0 (also called striping) is not redundant. This form of array splits each piece of data across the drives in segments; since data is written without any form of parity data-checking, it allows for the fastest data transfer of all other modes. However, if one drive becomes damaged, the whole array can become corrupted.			
2 hard drives	Storage Capacity	Data Safety	Performance
4 hard drives	Storage Capacity	Data Safety	Performance
Disk Mirroring (RAID 1) The drives show up as one volume but only 50% of the total capacity, depending on the drive with the smallest capacity, can be used. RAID 1 creates an exact copy (or mirror) of a set of data on the second drive. This is useful when reliability and backup are more important than data capacity. When one hard drive fails, it can be replaced and the data rebuilt automatically.			
2 hard drives	Storage Capacity	Data Safety	Performance
Disk Mirroring with Striping (RAID 10) The drives show up as one volume but only 50% of the total capacity, depending on the drive with the smallest capacity, can be used. RAID 1 creates an exact copy (or mirror) of a set of data. This is useful when reliability and backup are more important than data capacity. When one hard drive fails, it can be replaced and the data rebuilt automatically.			
4 hard drives	Storage Capacity	Data Safety	Performance
Disk Striping with parity (RAID 5) The drives show up as one volume but the total capacity, depending on the drive with the smallest capacity, is the combined size minus the size of one drive. RAID 5 uses block-level striping with parity data distributed across all member disks and therefore provides the perfect balance between high performance and data integrity. When one hard drive fails, it can be replaced and the data rebuilt automatically.			

3 hard drives	
4 hard drives	
3 hard drives 1 hot spare disk	
Remarks	Hard drives of identical capacities are recommended. If the capacity is different, the total amount of the space that can be used will depend on the drive with the smallest capacity. Changing the RAID setup will require you to re-format the drives. Make sure you backup all data before doing so!

Model No.	**MD4-SAFBA5U2OA**
Bridge Chipset	Oxford 936QSE
Rack Mount Chassis	• Width: 19" • Height: 1U • Material: Anodized sheet metal
Application	• **Two to four 3.5" SATA-I or SATA-II hard drives (1.5Gb/s or 3.0Gb/s)** • 4 hard drives of identical capacities are recommended for optimal performance • Supports large volumes in excess of 2TB *
Interface/Ports	• eSATA 1 port • Firewire 800 (1394b) 2 ports • Firewire 400 (1394a) 1 port • USB 2.0 High Speed (USB 1.1 compatible) 1 port
Data Transfer	• eSATA up to 3.0Gbps (300MB/s) • Firewire 800 (1394b) up to 800Mbps (100MB/s) • Firewire 400 (1394a) up to 400Mbps (50MB/s) • USB 2.0 up to 480Mbps (60MB/s) • USB 1.1 up to 12Mbps (1.5MB/s)
Features	• **Configurable hardware RAID controller (RAID 0, RAID 1, RAID 5, RAID 10)** • Utilizes hardware accelerated RAID rebuild engine • Supports SATA II Gen2m specification with 3.0Gbps and 1.5Gbps data rates • Supports SATA HDD ATA7 • Universal interfaces including eSATA, Firewire 800, FireWire 400 and USB 2.0 • USB mass-storage compliant • Smart Fans (automatically regulates fan speed according to the internal temperature) • Externally accessible "Hot Swap" removable rack
Environment	• Operating Temperature: 5°C ~ 40°C • Operating Humidity: 20%RH ~ 80% • Storage Temperature: -20°C ~ 70°C • Storage Humidity: 10%RH ~ 90%RH
System Requirements (PC)	• eSATA: Windows 2000/XP/Vista • Firewire 800 (1394b): Windows 2000/XP/Vista • Firewire 400 (1394a): Windows 2000/XP/Vista • USB 2.0 (USB 1.1): Windows 2000/XP/Vista • Your hardware device must have the correct corresponding port (eg. USB 2.0, USB 1.1 or PCI card)
System Requirements (Mac)	• eSATA: Mac OS 10.3 or higher • Firewire 800 (1394b): Mac OS 10.2 or higher • Firewire 400 (1394a): Mac OS 10.1.5 or higher • USB 2.0 (USB 1.1): Mac OS 10.2 or higher • Your hardware device must have the correct corresponding port (eg. USB 2.0, USB 1.1 or PCI card)
Power Supply	• Internal Power Supply universal auto-switching (UL, TUV, CE, BSMI, FCC approved) • Protection: OVP, Short • Input: AC 90-260V, 50Hz/60Hz • Output: DC 12V/14A, 5V/12A, 220W
Enclosure Size	43cm x 42cm x 4.3cm
Packing Accessories	• MD4 Super-S Combo (no HDD included) • USB 2.0 cable • Firewire 1394a cable (6 to 6pin) • Firewire 1394b cable (9 to 9pin) • eSATA cable • Power cord & manual
Carton/Packing	Retail Box Size: 55cm x 52.8cm x 16cm (1pc per box)
Remarks	* In order for the computer to access volumes larger than 2TB, both the

	hardware and Operating System need to support large volumes (e.g.: WinVista 32bit/64bit or Mac OS 10.4 and above)
RAID Performance	
Test Environment	PC: Motheboard GA-8I945P, Intel Pentium 4, CPU 3.0GHz, 2GB RAM, Windows XP - FDBench v1.01 Mac: MacPro, Intel Xeon Quad Core, CPU 2.8GHz, 4GB RAM, OS 10.5.5 - Quickbench v4.0 HDD: 4x Seagate 250GB (ST3250310AS)
USB 2.0	
FireWire 400	
FireWire 800	
eSATA	
Remarks	The difference in transfer speed for the different RAID modes is most pronounced for fast interfaces like FireWire 800 and especially eSATA.