

## INTRODUCTION

The ADSA3R5-E features 1 eSATA and 3 internal SATA ports, allowing the versatility of both the latest External SATA and the industry standard SATA slots. This controller provides your system with RAID5 and JBOD configurations, giving you superior performance using the standard PCI slot. This RAID5/JBOD controller supports configurations of RAID 1, RAID 0, RAID 1+0, RAID5 and JBOD. JBOD combines individual drives into one large volume to show as one drive letter.

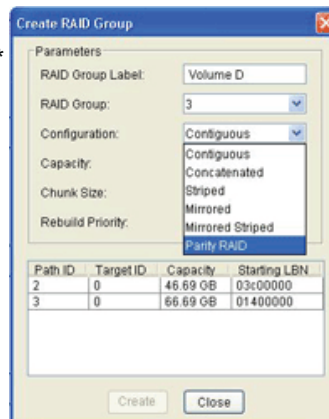
External SATA (eSATA) connector also provides more secured cable connection, improved durability, increased EMI protection and up to 2 meters cable length. (For more detail on this new SATA external connector, please review the following white paper posted on SATA-IO.org)

With the Addonics optional Disk Array 3SA system, you can add high performance storage system rivaling the traditional SCSI storage at less than half of the cost.



## FEATURES

- SATA II compliant
- Fits standard Desktop case and low profile systems
- PCI compatible
- Support data transfer of 3Gbits/sec (300MB/sec)\*
- 1 eSATA / 3 Internal Serial ATA ports
- Work with any SATA drive
- eSATA connector for more secure connection, reliability and supports up to 2 meters cable length
- Support large hard drives of 137 GB or greater
- RAID5/JBOD controller configuration possibilities
  - RAID 0, RAID1, RAID 1+0, RAID 1+ S, RAID5\*
- JBOD - combines individual drive into one large volume to show as one drive letter
- Can be used as a non-RAID controller for 4 individual drives
- Port Multiplier compatible
- Silicon Image chip set Sil 3124
- Hot swap - device can be removed and added without system shut down or restart
- simple plug and play
- compatible with Windows 2000, XP, 2003, Vista
- List of Sun OS x86 versions compatible with Addonics SATA Host Controllers
- List of Linux Distributions compatible with Addonics SATA Host Controllers



\* Note: It is common in RAID5 configuration that the WRITE speed performs slower than READ. Depending on system hardware, the WRITE performance can to 25% of the READ speed. This performance difference does not affect general database application where majority of the transactions are READ commands. For applications that require large files transfer or continuous writing of data on the the hard drive such as video editing, RAID5 configuration may not be desirable.

## SPECIFICATIONS

- Fully compliant with Serial ATA 1.0a and Serial ATA II Extensions to Serial ATA 1.0a Specifications revision 1.1
- Support SATA II transfer rate of 3G/sec (300 MB/ sec)
- Maximum transfer rate per port (150 MB/sec)\*
- Compliant with SATA 1.0 specification
- Supports SATA II First-party DMA commands for **Native Command Queuing (NCQ)**
- Supports **Serial ATA II Port Multiplier** 1.0 Specifications revision 1.1
- Plesiochronous, Single PLL architecture, 1 PLL for 4 ports
- 48-bit LBA support
- Four independent DMA channels with 256B FIFO per channel
- Virtual DMA in PCI with serial link in legacy PIO mode
- Supports command buffering for ATA TF shadow registers
- Independent Link, Transport, data FIFO, command fetch, scatter/gather, and command execution
- 31 Commands and Scatter/Gather Tables per Port
- Supports ATAPI devices: CD-ROM, DVD-ROM, etc.
- Supports bootable drive
- Hot-Plug capable
- Supports SATA active signal for 4 separate LEDs
- Built-in firmware RAID support for RAID 0, 1, 10 or 1+S, RAID 5, JBOD
- Supports Spread Spectrum in receiver
- Independent 256-byte FIFOs (32 bit \* 64 deep) per Serial ATA channel for host reads and writes
- Compliant with PCI Specification, revision 2.2
- Low Profile PCI form factor
- Integrated PCI DMA engines
- Temperature: Operating 0 to 70 degree C.
- Storage: -25 to 90 degree C.
- Humidity: Operating 20% to 80%
- Non Operating 15% to 90%
- Four Pin header on board for LED connection
- 32 bit, 33/66MHz fully compliant PCI host interface
- drivers for Windows 2000, XP, 2003 Server, Vista
- **PCI**
  - Compliant with PCI Specification, revision 2.3
  - Supports 66 MHz PCI with 32-bit data
  - Internal application interface multiplexed to 4 ports
  - All registers appear in unified memory space
  - Full-chip command completion status accessible with single PCI burst access
  - I/O port access to register space
  - **Low Profile PCI form factor**

\* The onboard SATA controller chip is SATA II compliant and capable of 3Gbits/sec. Depending on the clock rate of the PCI BUS, the actual data transfer may not be able to reach the 3Gbits/sec data transfer.

## System Requirement

- PC/AT or Compatible System
- One free PCI slot
- Pentium or greater
- Minimum 32 MB RAM
- 10 MB minimum free hard disk space
- One of the following operating systems: Windows 2000, XP, 2003, Vista