

### INTRODUCTION

Designed to the latest 3Gbits/sec ASIC from Silicon Image and eSATA connector, this 4-port controller incorporates many advanced features that are only found in some expensive RAID controllers. With the onboard BASE firmware, any drives connected will be detected by the system as individual pass-through drives.

When installed into the fast PCI-Express BUS, this controller ensures maximum data throughput of 3 Gbits/sec per port. In addition, the latest 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](http://SATA-IO.org))



### FEATURES

- SATA I and SATA II compliant
- PCI-Express 8 lane compatible (also fits into PCI-Express 16 Lane or the graphic card slot)
- Up to 300 Mbytes/sec (3 Gbits/sec) per port
- 4 External SATA (eSATA) ports
- BASE BIOS firmware - drives are automatically detected as pass-through devices by the system
- Software RAID using Windows Disk Management or MAC OS X Disk Utility
- Support large hard drives of 137 GB or greater
- Silicon Image chip set Sil 3124
- Port Multiplier compatible
- Fits standard height Desktop case
- Hot swap support - drive can be removed and added without system shut down or restart\*
- Simple plug and play
- Compatible with Windows 2000, Windows XP, Windows 2003 Server, Vista, Mac OS X 10.4.8+ \*\*

\*Note: It is common in RAID5 configuration that the WRITE speed performs slower than READ. Depending on system hardware, the WRITE performance can be 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.

\* Hot swapping hard drive has been tested on Windows OS only. When drives are configured as RAID 0 and certain RAID combination, the removal of the hard drive will result in breaking the RAID set and result in data loss.

\*\*Note: There are currently reports of incompatibility with this controller under Mac OS X 10.6 Snow Leopard. Please check back for updates on this incompatibility.

### SPECIFICATIONS

- 48 bits LBA, support HDD partition larger than 137GB
- Fully compliant with Serial ATA 1.0a and Serial ATA II Extensions to Serial ATA 1.0a Specifications revision 1.1
- Hot-plug capability
- Supports Serial ATA Generation 2 transfer rate of 3.0 Gbps
- Supports Serial ATA II Port Multiplier 1.0 Specifications revision 1.1
- Supports First-party DMA commands for Native Command Queuing (NCQ)
- Plesiochronous, Single PLL architecture, 1 PLL for 4 ports
- Output Swing Control
- Supports four independent Serial ATA channels
- Independent Link, Transport, data FIFO, command fetch, scatter/gather, and command execution
- 31 Commands and Scatter/Gather Tables per Port
- Four Pin header on board for Device LED connection
- Protocol Override per Command
- Staggered Spin-up Control
- Temperature: Operating 0 to 70 degree C.
- Storage: -25 to 90 degree C.
- Humidity: Operating 20% to 80%
- Non Operating 15% to 90%
- BASE BIOS firmware - drives are automatically detected as pass-through devices by the system
- Completely with drivers for Windows 2000 , XP, and 2003 Server, Vista, Mac OS X 10.4.8+
- RoHS compliant
- **PCI-Express 8 lane:**
  - x8 PCI Express Bus
  - PCI Express Specification, Revision 1.0a
  - Maximum realized bandwidth on PCI Express 8x interface is 2 GB/s in each direction simultaneously, for an aggregate of 4 GB/s
  - Fan info:
    - Maximum air flow: 4.53 CFM
    - Sound level: 19.7 dBA (Max: 22.2dBA)

SATA data transfer rate is calculated at 10 bits=1 byte

### System Requirement

- PC/AT or Compatible System
- One free PCI-Express 8 lanes slot or 16 lanes slot (same as the PCI-Express graphic card 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 Server, Vista, Mac OS X 10.4.8+