ESATA PCI CARD

User's Manual

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Introduction

The ESATA PCI CARD provides the advantages of next–generation Serial ATA in an easy–to-use expansion card. Designed to replace parallel ATA technology, Serial ATA overcomes speed obstacles of parallel ATA.

Serial ATA is the next-generation internal storage inter-connect, designed to replace parallel ATA technology. Serial ATA is the proactive evolution of the ATA interface from a parallel bus to serial bus architecture. This architecture overcomes the electrical constraints that are increasing the difficulty of continued speed enhancements for the classic parallel ATA bus. Though Serial ATA will not be able to directly interface with legacy Ultra ATA hardware, it is fully compliant with the ATA protocol and thus is software compatible.

Please thoroughly read and follow the instructions provided in this manual. Failure to do so may result in damage to the Mini Storage Hub and any or all connected devices.

System Requirements

Windows

- 266MHz or faster CPU
- 64MB of RAM
- One available PCI card slot
- Windows 98SE/ME/2000/XP/Server 2003

Macintosh

- G3 Processor or newer
- 64MB or RAM
- One available PCI card Slot
- Mac OS 8.6, 9.x or 10.2 and later

RAID Introduction

The following sections briefly describe the various RAID configuration options.

RAID 0 Disk Striping



RAID 0	
Minimum Number of Physical Drives	Two
Logical Capacity	N1+N2 or Minimum N x2 disk
Fault Tolerant	No

RAID 0 provides disk striping across all configured drives in the RAID subsystem. Although RAID 0 provides no data redundancy, it offers the best performance of any RAID level as it breaks up data into smaller segments, and stripes the data segments across each drive in the array as shown above. The size of each data segment is determined by the stripe size parameter, which is set during the creation of the RAID set.

RAID 1 Disk Mirroring



RAID 1	
Minimum Number of Physical Drives	Two
Logical Capacity	Minimum N /2 disk
Fault Tolerant	Yes

RAID 1 mirrors all data from one drive to a second drive. This configuration offers total data redundancy, but requires double the amount of data storage capacity.



RAID JBOD	
Minimum Number of Physical Drives	Two
Logical Capacity	N1+N2 disk
Fault Tolerant	No

JBOD combines two or more drives into a larger logical volume. JBOD offers neither fault tolerance, nor performance improvements when compared to individual drives.

BIOS Configuration Utility

Configuring the ESATA PCI card is outlined in the following. Use the provided BIOS RAID utility to assign RAID levels, plan array configuration, and optimize storage.

Configuring Arrays

A disk array consists of two or more physical disk drives, depending on the desired RAID level. RAID 0, RAID 1 and RAID JBOD arrays can all consist of two physical drives.

RAID Mode Definitions

The following table displays the drives required per RAID level.

RAID Mode	Description	Minimum Number of Physical Drives	Logical Capacity	Fault Tolerant
RAID 0	Disk Striping	Two	N1+N2 or Minimum Nx2 disk	No
RAID 1	Disk Mirroring	Two	Minimum N/2 disk	Yes
RAID JBOD	Just a Bunch of Disks	Тwo	N1+N2 disk	No

BIOS Configuration Utility

Perform the following steps to configure arrays and logical drives using the Configuration Utility:

- 1. Start the system.
- 2. Press <Ctrl>+<R>.
- 3. Select a configuration method.
- 4. Configure an array with available physical drives.
- 5. Define the logical drive.
- 6. Initialize the logical drive.

During boot-up, the following BIOS screen is presented:

1. Press Ctrl and R simultaneously to run ESATA RAID BIOS utility.

Initio INIC162.x SATA RAID BIOS Version 1.xx Copyright (C) Initio Corp. 2005	
Controller at Bus 0, slot 9	
Scan Drives Channel 0 : HDS728080PLA380 Channel 1 : WDC WD2000JS-00MHB0	78.5(GB) 190.7(GB
Scan RAID	====
Press <ctrl+r≥to enter="" raid="" utility<br=""> Press <esc> to continue</esc></ctrl+r≥to>	

2. The configuration utility associates each hard drive with a single logical drive. If logical drives have already been configured, the BIOS utility leaves the configuration unchanged.

INITIO SATA RAID BIOS Setup Utility						
RAID	Disk	Rescar	ו EXIT			
RAID	List		Hard Disk List			
			CH0: Passthrough HDS728080PLA380 78.5GB CH1: Passthrough WDC WD2000JS-00MH 190.7GB			
†↓: Select §	Screen	→ ←: Select Item	SPACE : Select/Deselect Enter : Execute			

Create a RAID Array

RAID 0

1. The stripe size parameter specifies the size of the segment written to each disk in a RAID configuration. Stripe size can be set to 8, 16, 32, 64, 128, or 256 Kbytes. The default is 8 Kbytes. A larger stripe size yields higher read performance. Choose a smaller stripe size if your computer regularly performs random read requests.

2. RAID 0 can optionally be expanded to maximum capacity.



3. The RAID Level, Stripe Size, Name and Capacity of the RAID 0 configuration will be shown in the RAID list.

INITIO SATA RAID BIOS Setup Utility						
RAID	Disk	Rescan	EXIT			
Create Delete Initialize Rebuild Verify						
RAID	List		Hard Disk List			
11 RAID 0	, StripeSize	269.3GB : 8K	CH0: RAID Member HDS728080PLA380 78.5GB CH1: RAID Member WDC WD2000JS-00MH 190.7GB			
∿ √: Select S	icreen 🗦 d	-: Select Item	SPACE : Select/Deselect Enter : Executi			

RAID 1

1. RAID 1 requires two physical drives. Data on a first disk is duplicated on another disk by mirroring, thus, more disk space is required. RAID 1 configuration reduces usable disk space to the size of the smallest drive and reduces performance during rebuilds.



2. Activate the load balance function for RAID 1 to average the load across the drives.



3 RAID 1 information including the RAID Level, Load Balance, Name and Capacity is provided in the RAID list.

INITIO SATA RAID BIOS Setup Utility						
RAID	Disk	Resca	n	EXIT		
Create Delete Initialize Rebuild Verify						
RAID	List			Hard Disk List		
11 RAID 1	I, Load B	78.5GB alance : ON	Ç	CH0: RAID Member HDS728080PLA380 78 CH1: RAID Member WDC WD2000JS-00MH 190	.5GB .7GB	
ተ ታ: Select §	Screen	→ ←: Select Item	S	PACE : Select/Deselect Ente	r : Execute	

JBOD

1. This configuration simply treats multiple disks as a single disk.



2. JBOD information including the RAID Level, Name and Capacity is provided in the RAID list.

INITIO SATA RAID BIOS Setup Utility						
RAID	Dis	k Resca	n	EXIT		
Create Delete Initialize Rebuild Verify						
RAID	List			Hard Disk Lis	t	
11 JBOD		269.3GB	Ç	CH0: RAID Member HDS728080PLA380 CH1: RAID Member WDC WD2000JS-00MH	78.5GB I 190.7GB	
ተ√: Select §	Screen	→ ←: Select Item	5	PACE : Select/Deselect	Enter : Exe	cute

Initialize RAID

1 Initialize a logical drive by selecting "initialize" using the initialize selection and completing the outlined steps. Acknowledge the prompt that all data in the selected drive will be lost and continue with the provided choices.



2. Initializing is a time-consuming process; the status bar displays the percent complete, press the ESC key to halt initialization.

ΙΝΙΤ	10 SA1	TA RAID BIO	ss	etup Utility		
RAID	Disk	. Resca	n	EXIT		
Create Delete Initialize Rebuild Verify		Initializing RAI Please wait or	D : pre:	00% ss ESC to stop		
RAID	List			Hard Disk Lis	t	
11 RAID (), StripeS	269.3GB Size : 8K	ţ	CH0: RAID Member HDS728080PLA380 CH1: RAID Member WDC WD2000JS-00MH	78.5GB 190.7GB	
ተ√: Select §	Screen	→ ←: Select Item	9	PACE : Select/Deselect	Enter : Execu	ute

Verify RAID

Verification is a time-consuming process; the status bar displays the percent complete, press the ESC key to halt verification.

INITIO SATA RAID BIOS Setup Utility					
RAID	Disk	Rescar	ר	EXIT	
Create Delete Initialize Rebuild Verify	Ve Pl	erifying RAID : ease wait or pi	00 ress	% s ESC to stop	
RAID	List			Hard Disk List	
11 RAID (), StripeSize	269.3GB e: 8K	Ç	CH0: RAID Member HDS728080PLA380 78.5GB CH1: RAID Member WDC WD2000JS-00MH 190.7GB	
∿ ↓: Select §	Screen 🗦	🗧 Select Item	s	PACE : Select/Deselect Enter : Exe	cute

Delete RAID

From the RAID menu select "delete", then choose the desired RAID.



Rebuild

1. Use the Rebuild function to repair a damaged RAID 1 configuration. The "Reserved For RAID" disk is required to complete the rebuild.



2. Acknowledge the prompt that all data in the selected drive will be lost to proceed.



3. The state will be changed from "Passthrough" to "Reserve For RAID".

INITIO SATA RAID BIOS Setup Utility				
RAID	Disk	Rescan	n EXIT	
C R	Change to Passthrough Reserve For RAID			
RAID	List		Hard Disk List	
11 RAID 1,	, Load Balar	78.5GB — nce : ON	CH0: RAID Member HDS728080PLA380 78.50 CH1: Reserve For RAID WDC WD2000JS-00MH 190.70	58 58
ተ√: Select S	creen 🗦 🤆	: Select Item	SPACE : Select/Deselect Enter :	Execute

4. Rebuilding is a time-consuming process; the status bar displays the percent complete, press the ESC key to halt the rebuild.



Change to Pass-through

Select "Change to Passthrough" on the Disk menu to change the hard disk to passthrough mode to leave the state of Raid Member or Reserve for RAID.

INITIO SATA RAID BIOS Setup Utility			
RAID	Disk	Rescar	ו EXIT
C	Change to Passthrough Reserve For RAID		
RAID	List		Hard Disk List
			CH0: Passthrough HDS728080PLA380 78.5GB CH1: Passthrough WDC WD2000JS-00MH 190.7GB
rv: Select S	creen 🤿	: Select Item	SPACE : Select/Deselect Enter : Execu

Reserve for RAID

Select "Reserve For RAID" on the Disk menu to change from "Passthrough" to "Reserve For RAID" to rebuild the array.



Rescan

The Rescan function updates the status of RAID drive that will refresh all of the attached devices. The resulting information is shown in the RAID List and Hard Disk List.

INITIO SATA RAID BIOS Setup Utility				
RAID	Disk	Rescan	EXIT	
RAID L	list		Hard Disk List	
			CH0: Passthrough HDS728080PLA380 78.50 CH1: Passthrough MDC M02000 IS.00MH 190.70	GB GB
			WDC WD200055500MH 15013	50
∱↓: Select Sc	;reen →€	-: Select Item S	SPACE : Select/Deselect Enter :	Execut

Exit BIOS Utility

Select "Exit" selection to leave the RAID BIOS Setup utility.



Application and Driver Installation Windows* 98/ME/2000/XP/2003

After installing the eSATA PCI card perform the following steps to install the Initio RAID Manager application and eSATA PCI card driver.

Download the driver from http://www.onnto.com.tw

Locate and open the downloaded folder. Double-click the Setup.exe.



Click "Next".



Click "Next" to install the application in the default folder. Click "Browse" to specify a different folder. Click "Disk Cost" to determine the amount of space available on the designated hard drive.

i₿ Initio SATA RAID Manager v1.01	
Select Installation Folder	
The installer will install Initio SATA RAID Manager v1.01 to the following folde To install in this folder, click "Next". To install to a different folder, enter it belo	r. ow or click "Browse".
Eolder: C:\Program Files\Initio\Initio SATA RAID Manager v1.01\	Browse
Install Initio SATA RAID Manager v1.01 for yourself, or for anyone who use	<u>D</u> isk Cost
 ○ <u>E</u>veryone ③ Just me 	
Cancel < <u>B</u> ack	<u>N</u> ext >

Click "Next" to confirm that you want to install the application.

😸 Initio SATA RAID Manager v1.01	
Confirm Installation	
The installer is ready to install Initio SATA RAID Manager v1.01 on your computer.	
Click "Next" to start the installation.	
Cancel < <u>B</u> ack	<u>N</u> ext >

Click "Close", the application has been successfully installed.

🖟 Initio SATA RAID Manager v1.0	01	
Installation Complete		
Initio SATA RAID Manager v1.01 has be Click "Close" to exit.	en successfully installed.	
	Cancel < Ba	ck <u>C</u> lose

Restart the computer.

Repair the Windows* 98/ME/2000/XP/2003 Application and Driver Installation

Double-click "Setup.exe" to repair the RAID Manager.



The repair can also be initiated vial the "Change" option from the "add and remove programs" control panel.



Select "Repair Initio SATA RAID Manager" and click "Finish".



Click "Close" to complete the installation.

🙀 Initio SATA RAID Manager v1.01	
Installation Complete	
Initio SATA RAID Manager v1.01 has been successfully installed.	
Click "Close" to exit.	
Cancel < <u>B</u> ack	<u>C</u> lose

Restart the system.

Remove the Windows* 98/ME/2000/XP/2003 Application

Double-click "Setup.exe" file to remove the RAID Manager application and eSATA PCI card driver.



The files can alternatively be removed by via the "Remove" option from the the "add and remove programs" control panel.



Select "Remove Initio SATA RAID Manager" and click "Finish".

📸 Initio SATA RAID Manager v1.01	
Welcome to the Initio SATA RAID Manager v1.01 Setup Wizard	
Select whether you want to repair or remove Initio SATA RAID Manager v1.01.	
 <u>Remove Initio SATA RAID Manager v1.01</u> <u>Remove Initio SATA RAID Manager v1.01</u> 	
Cancel < Back	<u>F</u> inish

Click "Close" to complete the removal.

记 Initio SATA RAID Manager v1.01	
Installation Complete	
Initio SATA RAID Manager v1.01 has been successfully removed.	
Click "Close" to exit.	
Cancel < <u>B</u> ack	<u>C</u> lose

Restart the system.

Installing the eSATA driver for Windows 2000/XP/2003

Press F6 to install the SATA Host Controller.



Press S to specify additional drivers for use with Windows2000.



Insert the disk and press ENTER.

Windows 2000 Setup	=	
Plea Manufacturer-	se insert the disk supplied hardware	labeled e support disk
	into Drive A :	
	Press ENTER wh	ien ready.
ENTER=Continue	ESC=Cancel	F3=Exit

The driver and index file for installation will be displayed.



Select the SATA Adapter from the displayed list and press ENTER.

Windows 2000 Setup					
You have chosen to configure a SCSI Adapter for use with Windows 2000, Using a device support disk provided by an adapter manufacturer.					
Select the SCSI Adapter you want from the following list, or press ESC					
to return to the previous screen.					
INITIO INIC162X S-ATA Adapter For Windows NT4.0 INITIO INIC162X S-ATA Adapter For Windows 2000 INITIO INIC162X S-ATA Adapter For Windows XP/2003					
ENTER=Continue ESC=Cancel F3=Exit					

Press ENTER to continue.



Windows* 98/ME Driver Installation

Select "Specify the location of the driver" and click "Next".



Choose "Specify a location" and enter a location for the driver.



Click "Next" to install the driver.

Update Device Driver W	/izard
	Windows driver file search for the device: Initio INIC162x S-ATA Raid Controller
	Windows is now ready to install the selected driver for this device. Click Back to select a different driver, or click Next to continue. Location of driver: D:\WIN9X\INIC162X.INF
	< <u>B</u> ack Next> Cancel

Click "Finish".



Verify that the drive has been installed successfully via the Device Manager (optional).

ystem Prop	erties				<u>?</u> ×
General D	evice Man	ager Hardware	e Profiles F	Performance	
View	devices by	type C V	/iew devices	s by <u>c</u> onnecti	ion
	Cuter 394 Bus C DRBM Jisk drives Jisplay ada: Joppy disk fard disk co (eyboard donitors Mouse Vetwork ad Ports (COM SCSI contro Ports (COM SCSI contro Ports (COM Sound, vide	ontrollier oters controllers antrollers apters & LPT } liers iC162x S-ATA F siD interface o and game cor	taid Controlle ntrollers	5;	
Prope	rties	Re <u>f</u> resh	Remo	ive	Pri <u>n</u> t
				OK	Cancel

Windows* 2000/XP/2003 Driver Installation

Select "No, not this time" and click "Next".

Found New Hardware Wiz	ard
	Welcome to the Found New Hardware Wizard Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). Read our privacy policy
	Can Windows connect to Windows Update to search for software? Yes, this time only Yes, now and <u>e</u> very time I connect a device No, not this time
	< <u>B</u> ack Next > Cancel

Select "Install from a list or specific location" and click "Next".

Found New Hardware Wiza	rd
	This wizard helps you install software for: Initio INIC162x S-ATA Raid Controller If your hardware came with an installation CD or floppy disk, insert it now. What do you want the wizard to do? Install the software automatically (Recommended) Install from a list or specific location (Advanced) Click Next to continue.
	< <u>B</u> ack <u>N</u> ext > Cancel

Select "Include this location in the search" and click "Browse" to specify a location.



Click "Continue Anyway" to install the software.

Please wait while the wi	zard installs the software
Initio INIC162x	S-ATA Raid Controller
	The software you are installing for this hardware: Initio INIC162x S-ATA Raid Controller has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why this testing is important.</u>) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	Continue Anyway STOP Installation

Click "Finish".



The Raid Interface will be discovered.

Found New Hardware Wiz	ard
	Welcome to the Found New Hardware Wizard Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). Read our privacy policy
	Can Windows connect to Windows Update to search for software? O Yes, this time only O Yes, now and <u>e</u> very time I connect a device O No, not this time
	Click Next to continue.
	< Back Next > Cancel

Choose "install the software automatically" and click "Next".



Click "Continue Anyway" to install the software.

Found New Hardware V	Vizar d
Please wait while the	wizard installs the software
Initio Raid Ir	iterface
Hardw	vare Installation
	The software you are installing for this hardware: Initio Raid Interface has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	Continue Anyway STOP Installation

Click "Finish".

Found New Hardware Wizar	d
	Completing the Found New Hardware Wizard The wizard has finished installing the software for: Initio Raid Interface
	K Back Finish Cancel

Upon successful installation, the "Initio INIC162x S-ATA Raid Controller" and "Initio Raid Interface" list in "SCSI and RAID Controllers" will appear in the Device Manager.



The eSATA PCI card is now ready for use, for further information visit <u>http://www.onnto.com</u>.

ESATA PCI Card RAID Manager Configuration Utility

The ESATA RAID Manager supports the Windows 2000/2003, XP operating systems and mainly consists of a System Menu , a Task Menu , an Array View Window and a Device View Window. The task menu consists of all available operations, the array and device view windows display the results of operations and the current RAID configuration and related devices.

The RAID Manager provides the following functions:

Configuration of RAID

Provides access to create and delete functions.

Maintenance of RAID

Provides access to adapter inquiry, array and device functions for information; initialize create a mirrored set; verify verify the integrity of a mirrored set; and rebuild for rebuilding a damaged mirrored set.

Modify RAID and device states

Provides access to modify array properties and change device state.

Event viewing and notification

Provides access to an event viewer and notification mechanism enabling monitoring of RAID and device operation.

System Menu

The system menu provides to RAID Manager commands.

File menu
 Help menu
 Initio SATA RAID Manager

File Menu Commands



The File menu provides the following commands for configuring the ESATA RAID Manager.

Hide when minimized: Select this command to hide the ESATA RAID Manager when minimized. While hidden an icon on will be displayed in the task bar.

Start minimized: Select this option to minimize the ESATA RAID Manager at startup.

Exit: Exit the ESATA RAID Manager.

Help Menu



The Help menu provides access to:

Help Topics: A comprehensive index of help topics. **About:** Displays the application version number.

Array View Window

The Array View Window displays the configured array and its major properties, including RAID level, array name, and status.



Device View Window

The Device View Window displays all the devices connected to the ESATA PCI Card as well as device operational status and properties. Malfunctioning or offline devices in the array can be located in the Device View Window.



Task Menu

The Task Menu provides access the following operations, Information, Operations, Create Array, Delete Arrays, Rebuild Arrays, Rescan, and Event Viewer.



Information

The Task Menu information option provides access to adapter information, array information and device information.

Adapter information: Displays information about the currently selected adapter, array or device. If no array or device is selected, the information page will only show information about the currently selected adapter.

Array information: The Array View Window, displays detailed information about a currently selected aray.

Device information: The Device View Window, information about a currently selected device

Operations

The Operations button provides access to the following:

Array Operations: When an array is selected in the Array View Window common operations for all array levels and RAID 1 specific operations are available.

Array Level

Specifies how data is organized on the set of disks which form the array.

Level	Data organized	Specific properties
0 (RAID 0)	Data is striped into blocks and stored cross disks	Stripe Size Stripe Only
1 (RAID 1)	Data is mirrored on two disks	Load Balance
Span (RAID SPAN)	Data is stored disk after disk	

Common operation:The name of the selected array can be changed via the Change Name item in the Change Properties category.

RAID 1 specific operation:

Initialize Array: This command clears both mirrored disks ensuring that they are in sync. It is highly recommended that a RAID 1 array be initialized immediately subsequent to array creation.

Warning: This operation erases all data.

Verify Array: This operation compares both mirrored disks to determine if they are in sync.

Load Balance: The Load balance check box in the change property category turns the RAID load balance feature on or off.

Device Operations: The Device View Window displays operations related to a currently selected device. The Device Operations only support Change State of a selected disk. Based on a current array configuration, however, only applicable new disk states can be changed to.. Applicable new disk states are summarized in the following table:

Array Configuration	Current State	Applicable New States
No Array,	Pass through	Reserved for RAID
Array (RAID 0/SPAN)	Reserved for RAID	Pass through
Array (RAID 1)	Pass through	Reserved for RAID
····· · ······························	, and an engine	Dedicated spare
	Reserved for RAID	Pass through
		Dedicated spare
	Dedicated spare	Pass through
		Reserved for RAID

Disk States

The ESATA RAID Manager defines for device states. Disk states are changed via Device Operations

Pass through	The ESATA RAID Manager has configured no physical device.
Reserved for	A disk has been configured for later deployment in an array and
RAID	is currently hidden from the operating system.
Array Member	A disk is a configured member of an an array
Dedicated Spare	A disk configured for participation in a selected array reserved
	for later use.

Create Array

Build an array from a set of selected disks into a logical disk based on user specified you specified.

Common array properties for an array are name and array level. Additional array properties are available for different array levels. Refer to array level for more information.

Warning: All data on selected disks will be erased when creating an array.

Delete Array

This command deletes a selected array; the original array member disks are changed to the Reserved for RAID state.

Warning: All data on stored in the array will erased when deleting the array.

Rebuild Array

The Rebuild Array command copies the entire disk image from one disk to another in a RAID 1 array (mirrored set). Typically, only a few circumstances, necessitate an array rebuild:

A mirrored set requires a rebuild when the mirrored disks are out of sync. This occurs when unrecoverable I/O errors occur or when one of the disks is removed from the array. To repair a damaged array the bad (or missing) disk must be replaced with a good disk with a capacity no smaller than the remaining disk in the array.

Rescan

This refreshes all current statuses to newly initialized status.

Event Viewer Tool

The Event Viewer displays a log of events and operations. The Event Viewer tool is supported by Windows 98SE/ME

Date	Time	Sevenity	Category	Adapter ID	Description
5/6/2004	10:30:33 AM	Informative	Add RAID	1	Array added successfully
5/6/2004	10:17:30 AM	Informative	Delete RAID	1	Array deleted successfully
5/5/2004	6:28:23 PM	Informative	Add RAID	1	Array added successfully
5/5/2004	6:16:47 PM	Informative	Delete RAID	1	Array deleted successfully
5/5/2004	6:3:55 PM	Informative	Add RAID	1	Array added successfully
5/5/2004	6:3:22 PM	Informative	Delete RAID	1	Array deleted successfully
4/22/2004	11:18:38 AM	Informative	Add RAID	1	Array added successfully
4/22/2004	11:18:24 AM	Informative	Delete RAID	1	Array deleted successfully
4/19/2004	11:40:50 AM	Informative	RAID process	1	Array initialized
4/19/2004	11:0:53 AM	Informative	RAID process	1	Array initialization started

The Event Viewer comprises several columns describing various events.

- The Date/Time column(s) record the time of the event or operation.
- The Severity column displays the severity level of the event or notification.
- The Category column displays the event or notification type.
- The Adapter ID column displays which adapter has generated the event or notification.
- The Description column displays a brief description of the event or notification.

The Event Viewer can be further configured via the Log Menu and View Menu items.

Log Menu

I/O Pro Event Viewer					
Log	View				
Clear All Events		-			
			Severity	Categ	
		AM	Informational	Add R	
Ø5,	6/2004	10:17:30	D AM	Informational	Delete
Ø5/5/2004 6:28:23		PM	Informational	Add R	

• Select "Clear All Events" will clear all logged messages and events from the log file.

• To close the Event Viewer window and return to the ESATA RAID Manager, select "Exit".

I/O Pro Event Viewer					
Log	View				
Date	All Events Filter Events	Severity	Categ		
Ø5,	Newest First Oldest First	1 Informational Informational	Deleti Add F		
Ø5, Ø5,	Refresh	Informational Informational	Deleti Add F		
Ø 5	/5/2004 6:3:22 PM	Informational	Delet		

View Menu

- All Events: bypasses all event filter settings to displays all events in the log file.
- Filter Events: filter viewable event via selecting among various criteria in the Filter window.
- Newest First: display events from newest to oldest.
- Oldest First: display events from oldest to newest.
- Refresh: reload the event viewer with events from the log file.

Set Filter Events

Filter		
Time Filter First Event 5/ 7/2004 Last Event 5/ 7/2004	 ▼ 12:00:00 AM ▼ 6:35:43 PM ▼ 	Cancel Clear
Severity		

Configure criteria in the in the Filter dialog to display only relevant events. The filter can be configured to display events based on time and/or severity.

Troubleshooting

Potential operational problems and recommended solutions are provided in the following table:

Problem	Recommended solution
Drives aren't detected.	Change cables or change the drives if everything fails.
BIOS system will hang during booting.	Modify HDD boot up sequence at BIOS setting of the mainboard: Press Del key during booting. Enter the BIOS setting program, and set the local HDD as the first boot-up HDD.
It can't finish the installation of Raid manager application on windows 2000 when you updating the application of Raid manager.	Remember to unplug the SATA host card when you update the application or driver of windows 2000.
Booting function fail with SATA optical drive from SATA host controller.	Update the motherboard's BIOS.
There is not existing RAID configuration on any of the drives connected to the system and the message with RAID utility displays reserve for Raid.	Press <ctrl +="" r=""> key to enter the BIOS configuration Utility, then select a rebuild method to configure the drives.</ctrl>
Update the windows service patch file that will show warning message during the upgrading action.	Remember to unplug the SATA host card when you update the service patch file of windows 2000.

Notices and Classifications

FCC-B Radio Frequency Interference Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.