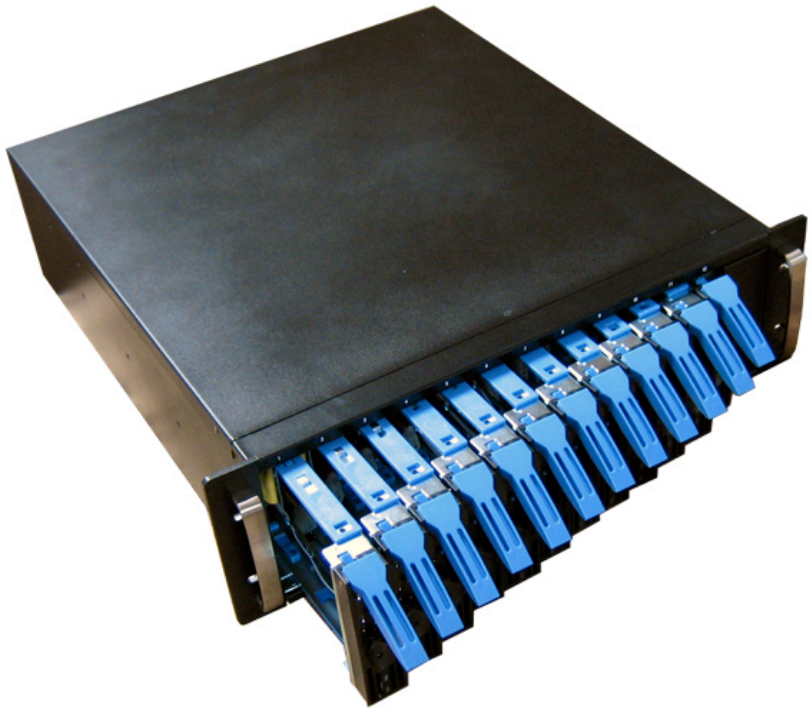
HSB-12RMS

User Manual



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FirewireDirect.com

http://www.firewiredirect.com/

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Table of Contents

Unpacking Your HSB-12RMS:

Open the HSB-12RMS box and carefully remove the HSB-12RMS unit and accessories, the HSB-12RMS and accessories including the following items:

- HSB-12RMS Unit (with three cooling fans, without hard drives)

- Drivers and Manual (*both downloadable*)

- SATA data cables (~1mt/3' feet) (4 units)

- PS2 Cable and PS2 Bracket

- FirewireDirect 4-Port PCI-X/PCI (4 Channel eSATA host adapter)

- Power Cable

- Screws and Screwdriver (HDD tray unlock tool)

Chapter 1 Introduction

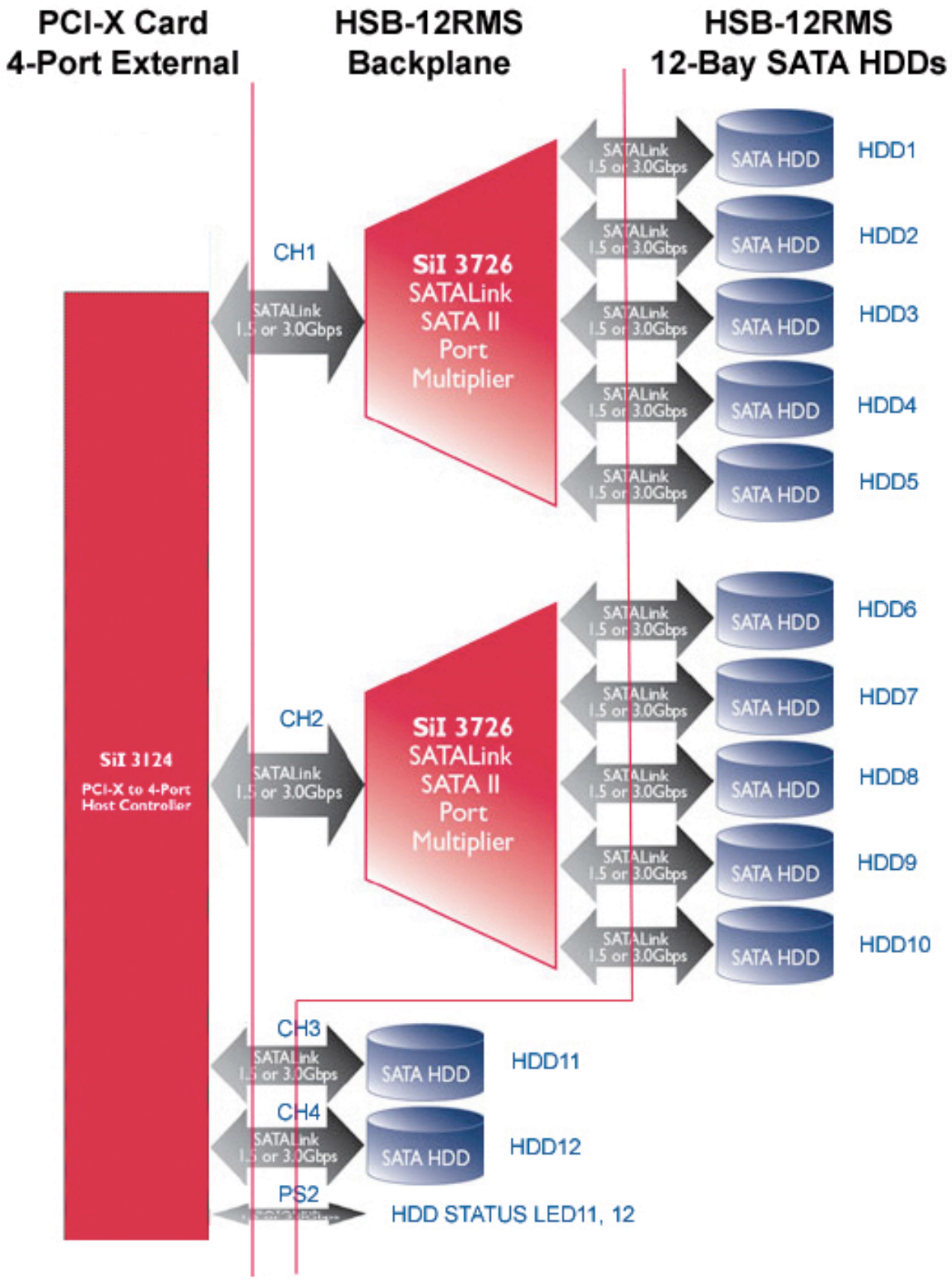
1.1 Overview

The HSB-12RMS is an easy-use and cost- effective 3.5" SATA Hot-swappable hard disk drive storage enclosure that can be used as SATA mass storage device, delivering industry-leading data performance, availability, storage capacity and upgrade ability to meet demanding and growing storage needs.

HSB-12RMS is ideal for data centre, departmental and DVR server users who need a flexible, universal storage enclosure that utilizes a common storage building block for their current and future data centre. HSB-12RMS is intended for use with servers delivering business-critical data and applications with requirements for high availability, performance, excellent serviceability, and large storage capacity.

Front View

Rear View



HSB-12RMS Block Diagram

1.2 Key Feature

- 4-Port eSATA host interface (Silicon Image SiI3124 + SiI3726 Multipliers chipsets);
- Supports up to twelve 3.5" SATA-I or SATA-II disk drives;
- 3U rack height;
- 1.5 Gb/s SATA Gen 1 and 3 Gb/s SATA Gen 2 host and drive support;
- Excellent cooling system ensures the drives' reliability;
- Hot-swappable disk drive tray with special designed power-off and lock mechanism;
- Monitor and Alarm indicators for temperature and fans;
- PCI-X/PCI card (Optional),4x (1mt/3') eSATA cables, power supply, HDD mobile rack, backplane, all mounting screws for HDDs included. **When purchased as an enclosure everything is included except the hard drives**.

1.3 Specification

Model	HSB-12RMS
Construction	Heavy duty 1.2mm steel, meets FCC/CE Class
Drive Bay	12 x hot-swappable SATA slim drive bays
Interface	4-Port eSATA 'I' host interface
Cooling Fan	Three 70mm fans
Switch	Power ON/OFF x 1, alarm ON/OFF
Indicator	HDD Power x 12, HDD Data Access x 12, temperature monitor, fan monitor
Maximum Storage Capacity	9000GB (utilizing 12x 750GB HDDs)
Data speed	3 Gb/s
RAID: (***depends on setup***)	Support RAID 0, 1, 3, 5, 0+1, JBOD
O/S Supported	MacOSX, Linux, Windows NT, Windows 2000, Windows XP, Windows 2003 Server ***(All SATA supported operating systems)***
Dimensions (W x D x H)	19" x 18.5" x 6.89" (483mm x 470mm x 175mm)
Temperature Range	Operating 41°F to 104°F (5°C to 40°C) Shipping -31°F to 167°F (-35°C to 75°C)
Weight	33 lb / 15 kg (without hard drive)

Chapter 2 Hardware Installation

2.1 Hardware Setting

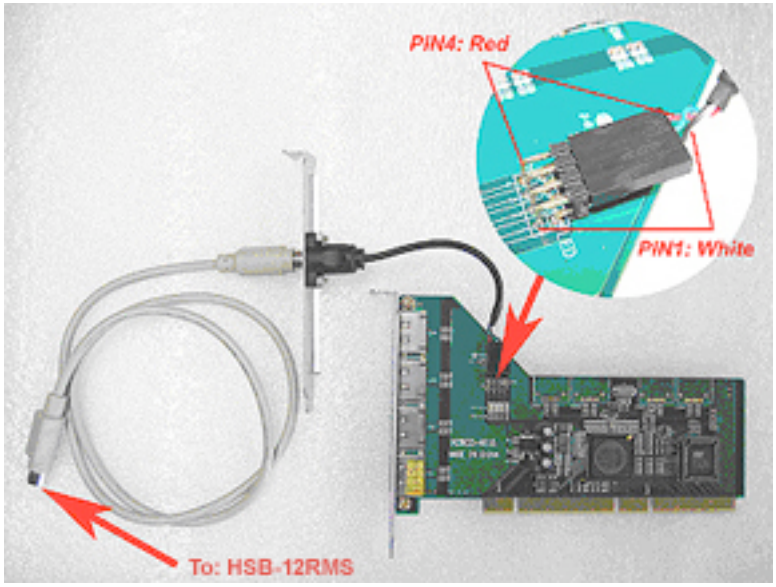
2.1.1 Insert the small screwdriver into the unlock hole of the drive carrier, press the unlock button softly to release the handle, and then withdraw the drive carrier.

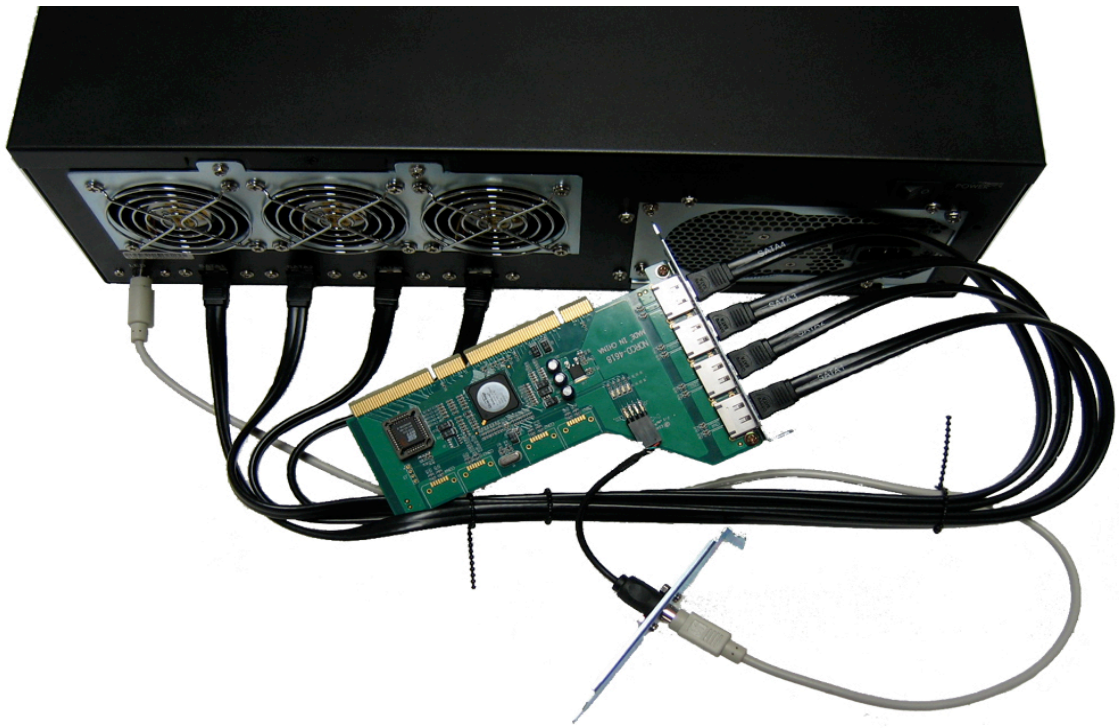
2.1.2 Connect the power and data connectors with the drive; fasten the drive with four screws.

2.1.3 Put the drive carrier back to the chassis; push the handle back to lock the drive carrier.

2.1.4 Put FirewireDirect 4-Port PCI-X/PCI SiI3124 (4 channel eSATA host adapter) in to PCI slot

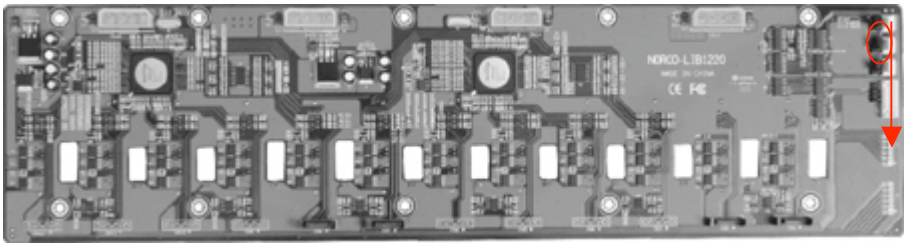
2.1.5 Use eSATA cables to connect HSB-12RMS with FirewireDirect 4-Port PCI-X/PCI SiI3124 (Hard drive activity LEDs of #11 and #12 drive bay are connected directly to the PCI-X card. When using these two bays, please installed the slot bracket with PS2 connector and connect the PS2 cable to the HSB-12RMS unit. Please follow the figure below to connect the PS2 connector to the FirewireDirect 4-Port PCI-X/PCI SiI3124 (4 channel eSATA host adapter).

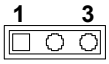




2.2 Jumper Setting

FAN Monitor



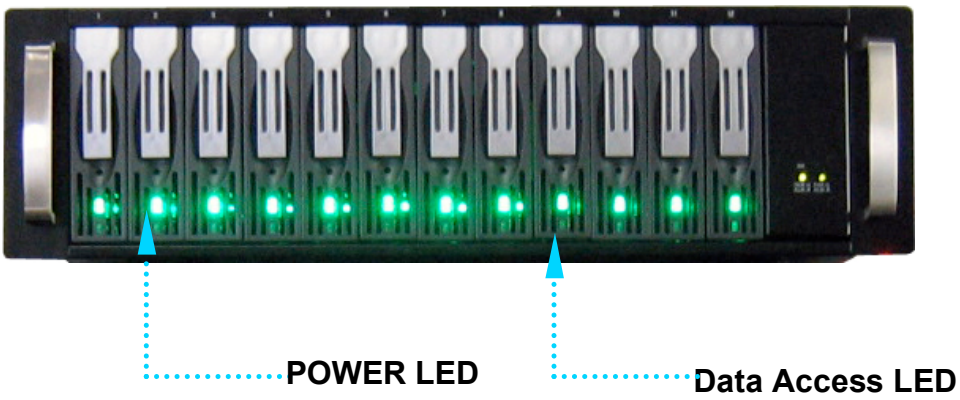


1-2 FAN Monitor (default) 

2-3 NO Monitor 

2.3 Indicators and Switch

2.3.1 LED Indicators



Power LED (Green): Always on
Data Access LED (Yellow): Flashing when data's writing or reading

2.3.2 Alarm Indicators

TEM-G/ALM-R: Temperature Monitoring

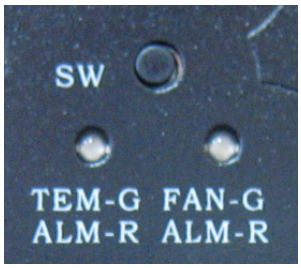
This indicator stays green when the operating temperature inside the chassis is normal (under 105°F). It will turn red when it is over the normal operating temperature.

FAN-G/ALM-R: Fan Monitoring

When the fans operate normally, this indicator stays green. It will turn red when one of the fans malfunction or is no longer working properly.

2.3.3 Switch

SW: Alarm Reset



The alarm will go off when the operating temperature is above limit or one of the fans stop running. You may select to stop the alarm by pressing the SW and have the system running continually (NOT RECOMMENDED).

Chapter 3 Driver and Software Installation

3.1 Contents of Driver CD

3.1.1 \BIOS

BIOS flash tool “updflash.exe” for 4-Port eSATA PCI-X/PCI card.

3.1.2. \Drives

Drivers for Win2K-XP, MAC and Linux. “Base” drivers are for SiI3124 PCI-X BIOS without RAID. “RAID” drivers are for SiI3124 PCI-X flashed with RAID BIOS.

3.1.3 \SATARAID5 Utility

SATARAID5 Utility for PC and MAC** provided by Silicon Image (www.siliconimage.com).

3.1.4 \Manual

Manual for HSB-12RMS and Acrobat Reader Software

3.2 BIOS Setting of FirewireDirect 4-Port PCI-X/PCI SiI3124

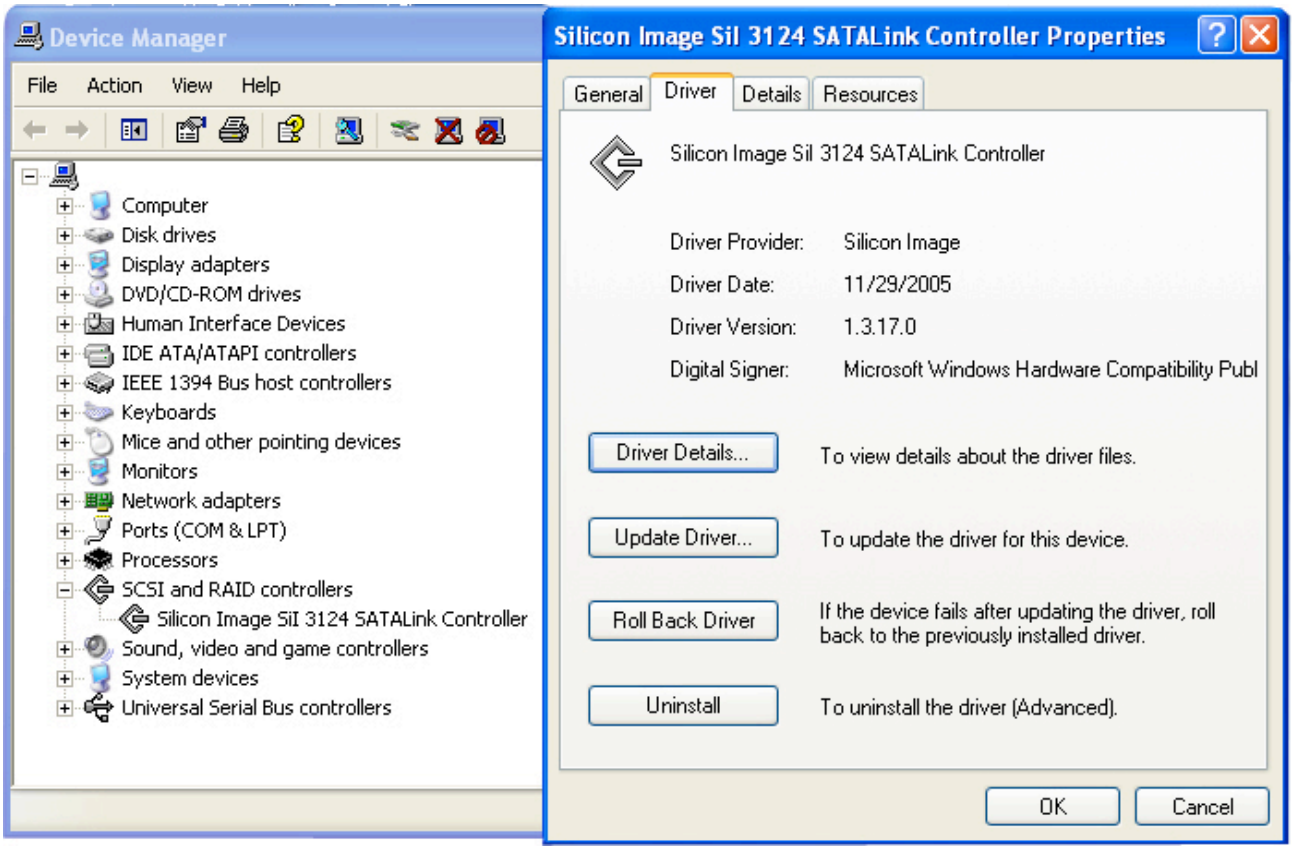
3.2.1 The FirewireDirect 4-Port PCI-X/PCI SiI3124 on-board BIOS by default is flashed as RAID BIOS (filename: r6318.bin*). The Base BIOS (without RAID) is with filename b6318.bin. You can boot from this CD on a PC to flash the on-board BIOS to non-RAID BIOS with the BIOS flash tool (updflash.exe) provided. (*can change without notice)

3.2.2 When using FirewireDirect 4-Port PCI-X/PCI SiI3124 eSATA card with RAID BIOS connecting to HSB-12RMS unit, DO NOT CONFIGURE YOUR RAID UNDER THE BIOS, it will only recognize up to 4 drives and is designed for connection of up to four individual hard drives. Please use the SATARAID5 Utility which either came in the box or is downloadable from FirewireDirect. Please contact HelpDesk if you are looking for this utility.

3.3 Install the Driver

3.3.1 In Microsoft Windows XP

Windows XP is preloaded with the software drivers necessary to run the FirewireDirect 4-Port PCI-X/PCI SiI3124 eSATA card. You do not have to install the driver.

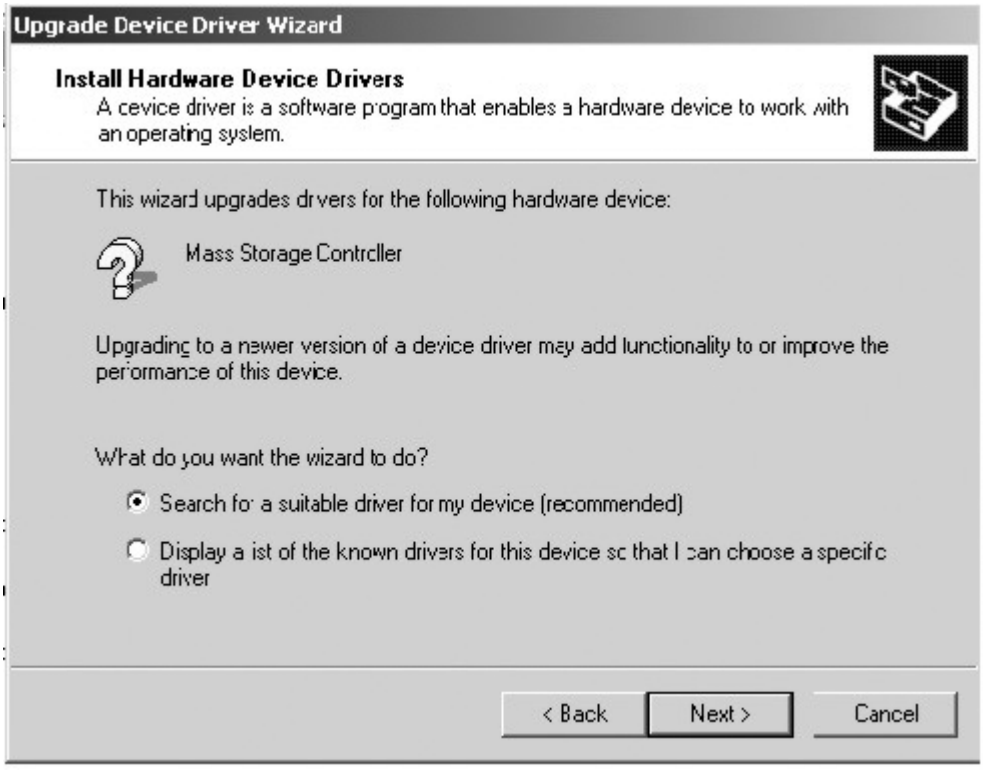


3.3.2 In Microsoft Windows 2000

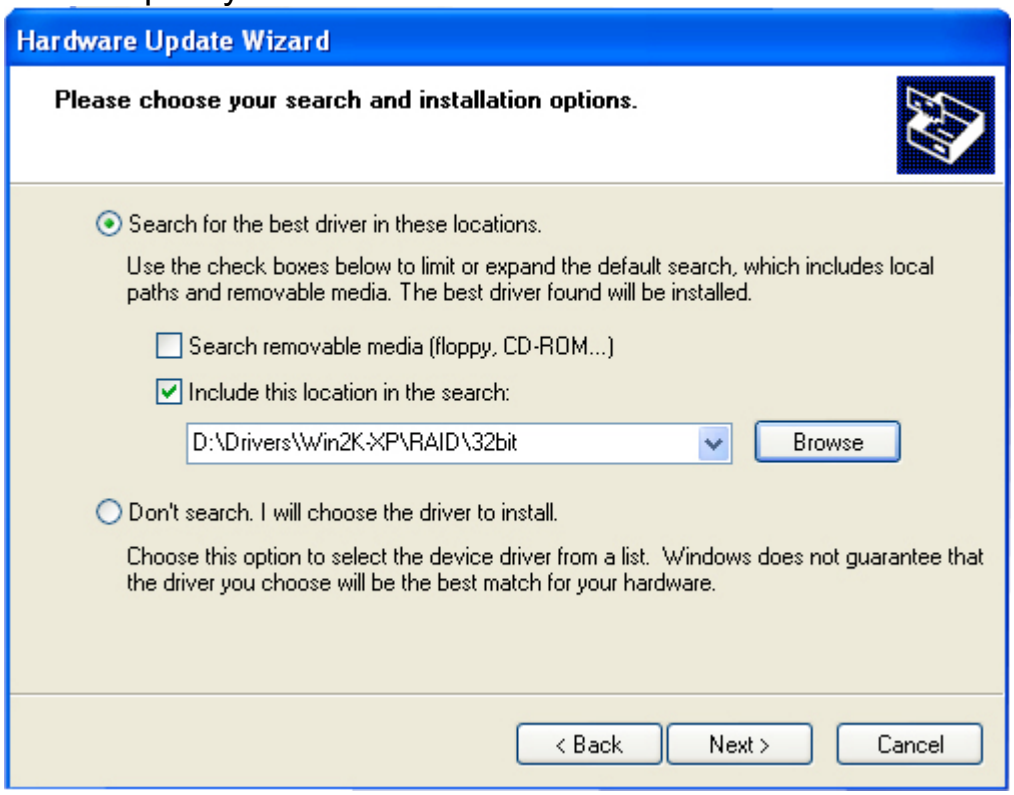
After you install the FirewireDirect 4-Port PCI-X/PCI SiI3124 eSATA card and then power on your computer, **the Found New Hardware Wizard** opens.

3.3.2.1 Insert the CD-ROM or Download from the FirewireDirect site driver software – run and click next.

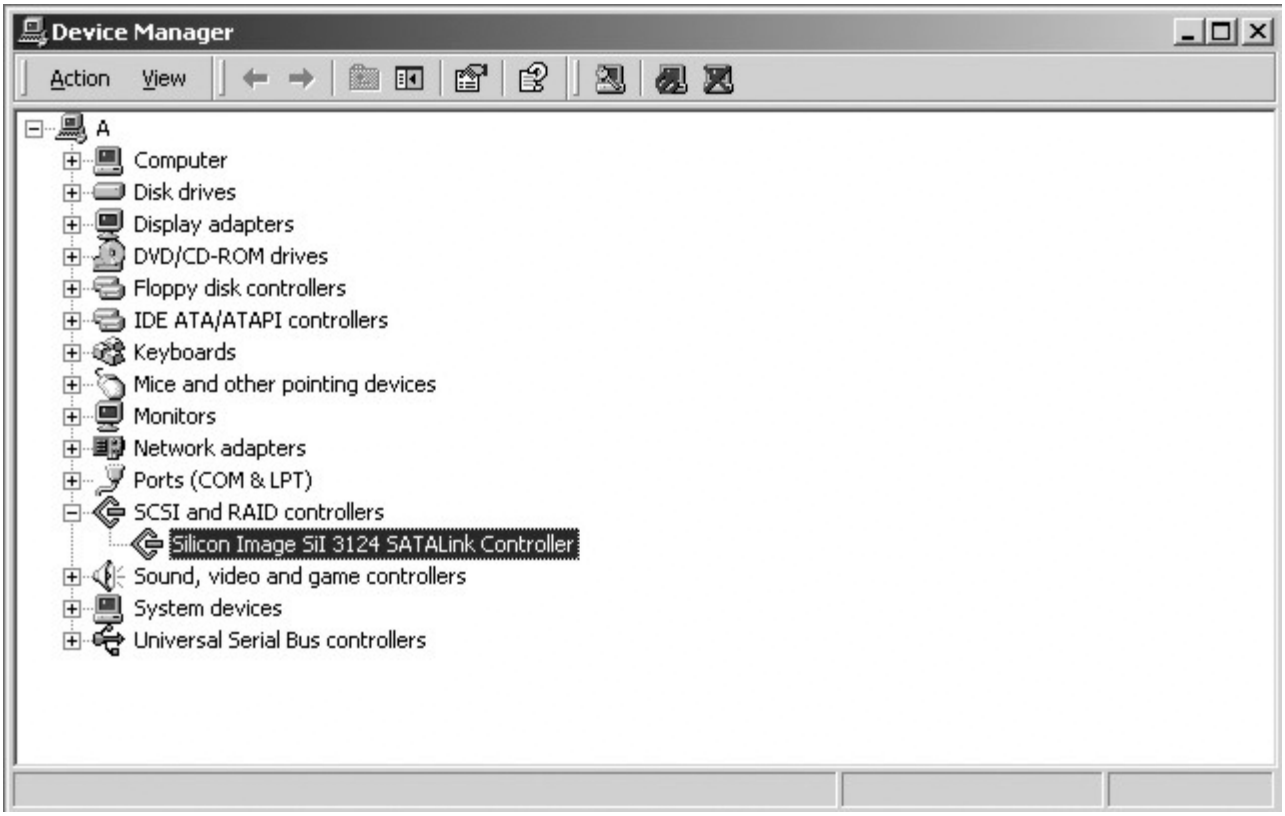
3.3.2.2 Select **Search for a suitable driver for my device (recommended)** and click next.



3.3.2.3 Specify the location and click next.



3.3.2.4 When the installation is complete, click Finish and reboot the system.



Note: When the controller card is flashed with RAID BIOS, it is installed as “Silicon Image SiI 3124 SoftRaid 5 Controller”. When it is with non-RAID BIOS, it is installed as “Silicon Image SiI 3124 SATALink Controller”.

3.4 Install SATARAID5 Utility

When using the RAID BIOS on the controller card, you will need to install the SATARAID5 Utility provided by Silicon Image to make the all the hard drives in the unit available to the host system. Please refer to the SATARAID5-UserGuide on the CD/Downloadable provided to configure the hard drives in different RAID configurations. The following is how the drives are connected in the HSB-12RMS unit:

Driver bays #1, #2, #3, #4, #5 are in the first channel;
Driver bays #6, #7, #8, #9, #10 are in the second channel;
Driver bay #11 is in the third channel;
Driver bay #12 is in the fourth channel.

You can configure up to 5 hard drives in one RAID Group using the SATARAID5 Utility provided. Setup multiple RAID Groups when you have more than 5 hard drives in the DS-1220. For latest updates of

the SATARAID5 Utility, please visit www.siliconimage.com/support and search under product “SiI3124”.

Cautions:

1. It will cause damage if removing the drive carrier from the chassis before unlocking the carrier by using the tool;
2. Although HSB-12RMS supports hot swappable, never withdraw a HDD that is being read or written. Before you want to disconnect SATA cable or withdraw a HDD, please make sure data transmission has been completed.
3. For the best result of ventilation inside the chassis, please don't open the case while HSB-12RMS is operating.