



3124 PCI-Express 4/8 Lane HBA

User's Guide



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Silicon Image, Inc.
1060 East Arques Ave.
Sunnyvale CA 94085

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Contents

1	Getting Started	1
	Package Contents	1
	System Requirements	1
	3124 PCI-Express 4/8 Lane HBA Specifications	2
	References	3
2	Installing the 3124 PCI-Express 4/8 Lane HBA	4
	Install the 3124 PCI-Express 4/8 Lane HBA Card	4
	Install the Disk Drives/Devices.....	5
	Install External Devices on the 3124 PCI-Express 4/8 Lane HBA	5
	Install the Driver.....	5
	Microsoft Windows 2003 Server	5
	To confirm the driver installation	5
	Microsoft Windows XP	6
	To complete the driver installation	6
	To confirm the driver installation	7
	Microsoft Windows 2000	8
	To complete the driver installation	8
	To confirm the driver installation	10
	Mac OS X Installation	11
	To complete the driver installation	11
	Appendix A Regulatory Compliance Statements	15
	Federal Communications Commission Radio Frequency Interference Statement	15
	European Union Compliance Statement	16
	ICES-003 (Canadian) Compliance Statement	16
	VCCI (Japan) Compliance Statement	16

1 Getting Started

This User's Guide describes how to install and use your Silicon Image 3124 PCI-Express 4/8 Lane HBA (host bus adapter) card, Serial ATA (SATA) devices and device drivers.

Package Contents

Your 3124 PCI-Express 4/8 Lane HBA includes:

- 3124 PCI-Express 4/8 Lane HBA Card
- CD-ROM which includes drivers and documentation
- Quick Installation Guide

If ANY of the contents are missing or damaged, contact your dealer/distributor immediately.

System Requirements

- Processor Type:
 - ✓ Intel Pentium, Celeron, or Xeon system (or equivalent AMD Opteron or Athlon system) for Windows systems
 - ✓ G5 for Macintosh systems
- Operating System:
 - ✓ Windows 2000 with Service Pack 4 (or later)
 - ✓ Windows XP with Service Pack 2 (or later)
 - ✓ Windows 2003 with Service Pack 1 (or later)
 - ✓ Mac OS 10.4.x (or later)
- An available PCI-Express compliant slot
 - ✓ The slot must be x8 or x16, although PCI-Express “downshifting” to 4 lanes is also supported
- An available SATA device
- CD-ROM or DVD-ROM drive

3124 PCI-Express 4/8 Lane HBA Specifications

Figure 1 is an image of the 3124 PCI-Express 4/8 Lane HBA card and Table 1 lists its specifications.

Figure 1. 3124 PCI-Express 4/8 Lane HBA



Table 1. 3124 PCI-Express 4/8 Lane HBA Specifications

Specification	Description
Ports	Four external SATA ports, all able to run 3Gbps to SATA hard disk drives or Port Multiplier devices.
SATA Connectors	Four external SATA connectors are mounted on the component side, along the edge to the PCI bracket. The custom PCI bracket has four openings to accommodate these external SATA connectors.
Power	+12V +/- 8%, 0.40A (max) from the PCI-Express connector +3.3V +/- 9%, 1.25A (max) from the PCI-Express connector
Form Factor	PCI-Express up-plugging keyed form factor. A custom PCI bracket is installed on the left side of the board.
Dimensions	14.00 cm by 11.12 cm
Temperature	Operating: 0 to 55 degrees C (32 to 131 degrees Fahrenheit) Non-Operating: -40 to 65 degrees C (-40 to 149 degrees Fahrenheit) Temperature Gradient: 10 degrees C per hour
Relative Humidity	Operating: 5% to 80%, non-condensing Non-Operating: 5% to 95%, non-condensing

References

You might find the following reference documents useful in understanding more about the technology behind your SteelVine product:

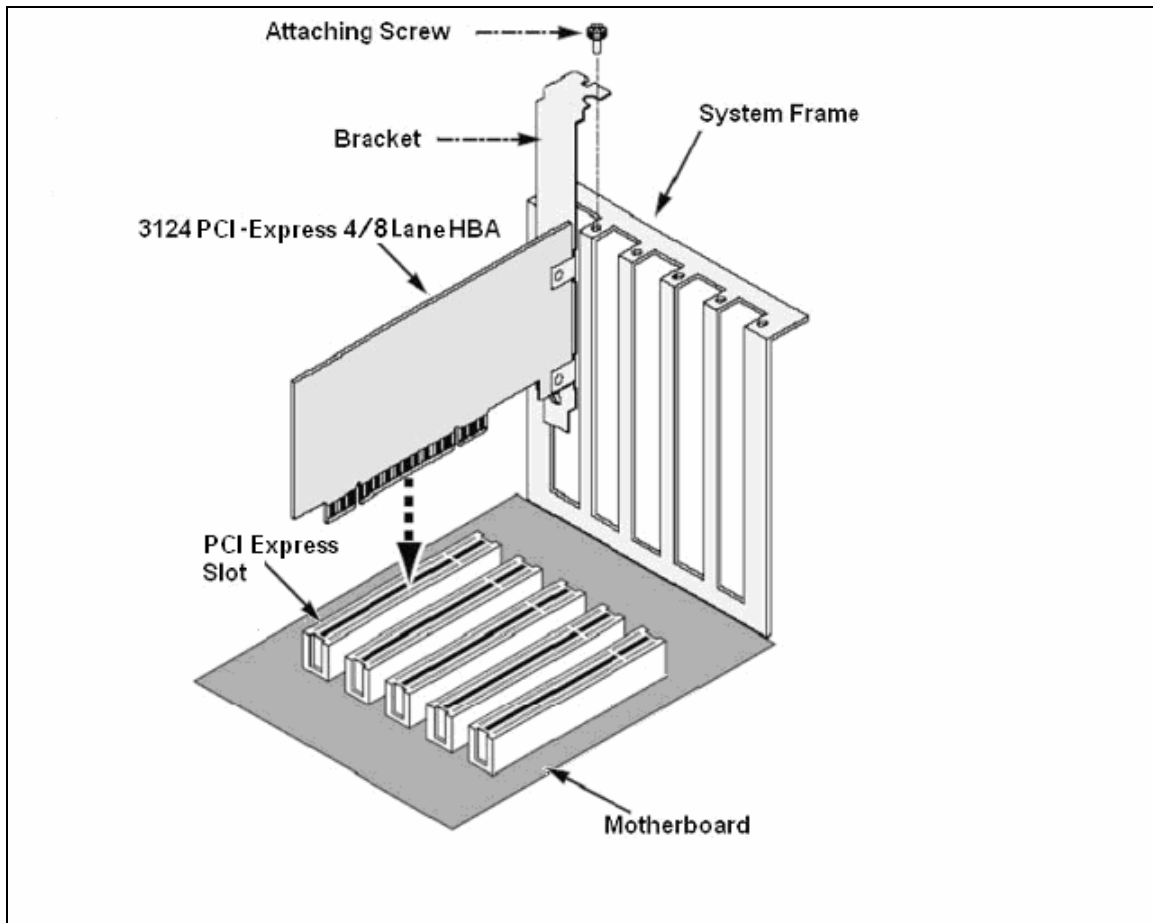
- PCI Local Bus Specification Revision 2.3
- PCI-X Addendum to the Local PCI Bus Specification Revision 1.0a
- PCI-Express Specification, Revision 1.1
- Serial ATA/High Speed Serialized AT Attachment specification, Revision 1.0a
- Serial ATA II/Extensions to Serial ATA 1.0, Revision 1.0
- Silicon Image SiI3124-2 Design Specification Revision 1.0

2 Installing the 3124 PCI-Express 4/8 Lane HBA

Install the 3124 PCI-Express 4/8 Lane HBA Card

The 3124 PCI-Express 4/8 Lane HBA card fits into any available compliant PCI-Express slot on your PC or Server motherboard, as shown here in Figure 3.

Figure 3. PCI-Express slot on motherboard



Use the following procedure to install the 3124 PCI-Express 4/8 Lane HBA card into your computer system:

- 1). Turn-off your computer and unplug its power cord from the AC power receptacle.
- 2). Remove the cover from your computer.
- 3). Remove the inside slot cover of an available PCI-Express slot on the motherboard.
- 4). Install the 3124 PCI-Express 4/8 Lane HBA card into the open PCI-Express slot and secure the bracket to the frame of your computer.
- 5). Replace the cover of your computer.

Install the Disk Drives/Devices

The 3124 PCI-Express 4/8 Lane HBA card supports up to four external devices. For optimal performance, install Serial ATA drives of the same model and capacity since matched performance of the drives allows the logical disk to function better as a single drive.

Install External Devices on the 3124 PCI-Express 4/8 Lane HBA

- 1). Connect one Serial ATA data cable between each external Serial ATA device and a SATA connector on the 3124 PCI-Express 4/8 Lane HBA card.
- 2). Power on the external SATA device(s).
- 3). Plug the power cord of your computer back into an AC power receptacle and turn-on the power to boot-up your computer.

Install the Driver

The procedures in this section are based on the assumption that either the Windows or Mac operating system has already been installed on your PC or Server.

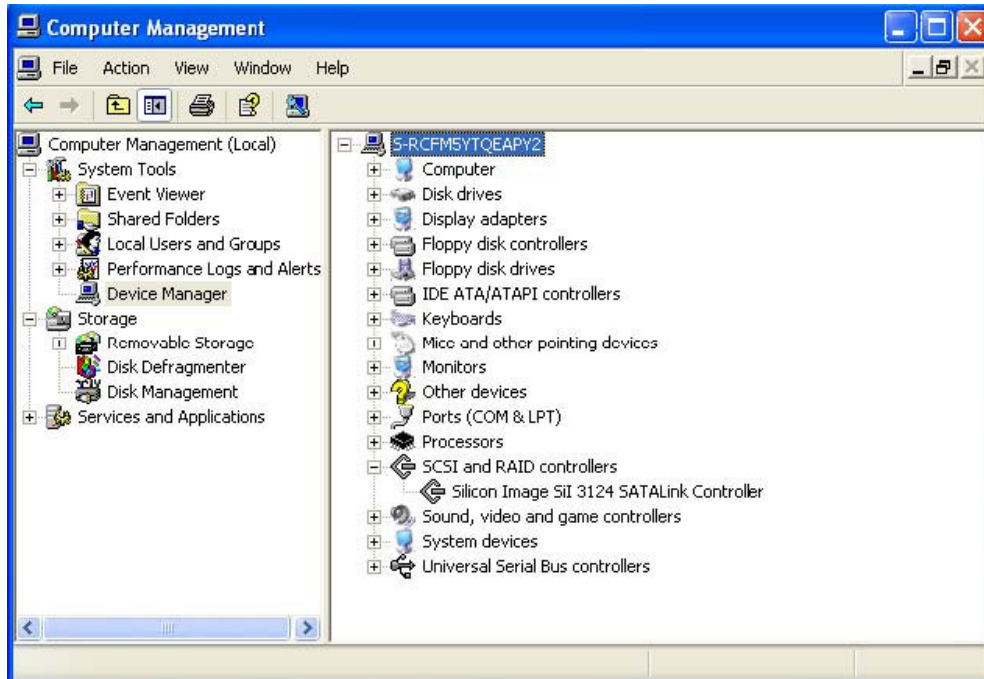
Note: Drivers for the Silicon Image SiI3124 SATALink Controller have been fully tested and certified to work with the 3124 PCI-Express 4/8 Lane HBA card.

Microsoft Windows 2003 Server

Windows 2003 Server comes pre-loaded with the software drivers necessary to run the 3124 PCI-Express 4/8 Lane HBA card, so you do not have to install any driver.

To confirm the driver installation

- 1). Right-click **My Computer** on your desktop and choose **Manage** from the pop-up menu.
- 2). Double-click **Device Manager**.
- 3). Double-click **SCSI and RAID controllers**.
- 4). Verify that “Silicon Image SiI 3124 SATALink Controller” appears, as shown here.



Microsoft Windows XP

The first time you re-boot your computer after having installed the 3124 PCI-Express 4/8 Lane HBA card and devices, the **Found New Hardware Wizard** opens, as shown here:



To complete the driver installation

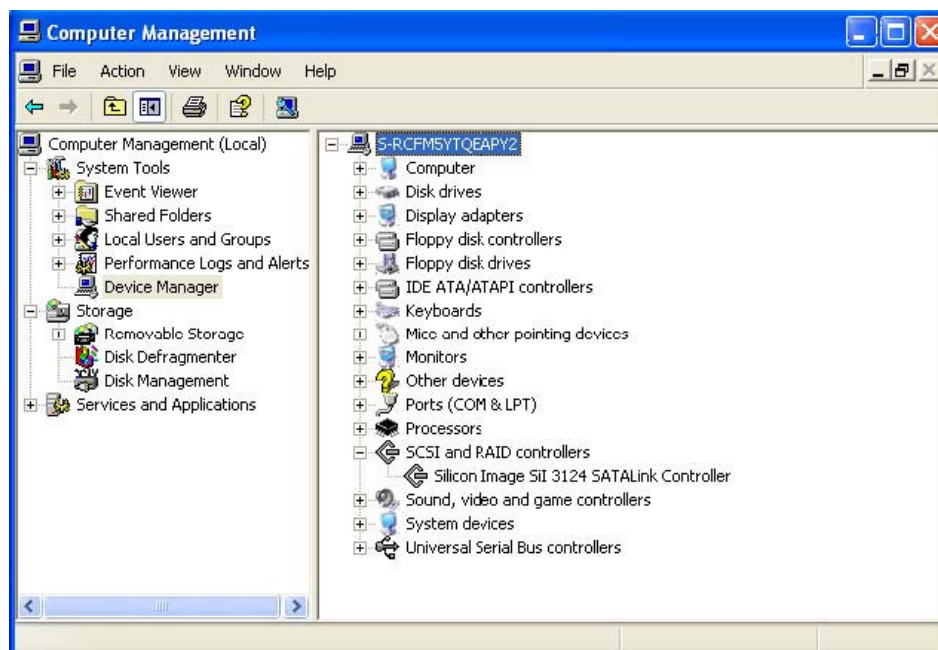
- 1). Insert the 3124 PCI-Express 4/8 Lane HBA CD-ROM into your CD- or DVD-ROM drive.

- 2). Select **Install the software automatically (Recommended)** and click **Next**.
- 3). When installation is complete, click **Finish**.



To confirm the driver installation

- 1). Right-click the **My Computer** icon on your desktop and choose **Manage** from the pop-up menu.
- 2). Double-click **Device Manager**.
- 3). Double-click **SCSI and RAID controllers**.
- 4). Verify that the Silicon Image SiI 3124 SATALink Controller appears, as shown here.



Microsoft Windows 2000

After you install the 3124 PCI-Express 4/8 Lane HBA card and devices and power-on your computer, the **Found New Hardware Wizard** opens.

To complete the driver installation

- 1). Insert the 3124 PCI-Express 4/8 Lane HBA CD into your CD- or DVD-ROM drive and click **Next**.



- 2). Select **Search for a suitable driver for my device (recommended)** and click **Next**.



- 3). Select **CD-ROM drives** and click **Next**.



- 4). Click **Next** once if the driver is found.

- 5). If you get the **Digital Signature Not Found** message, click **Yes** to continue installation.

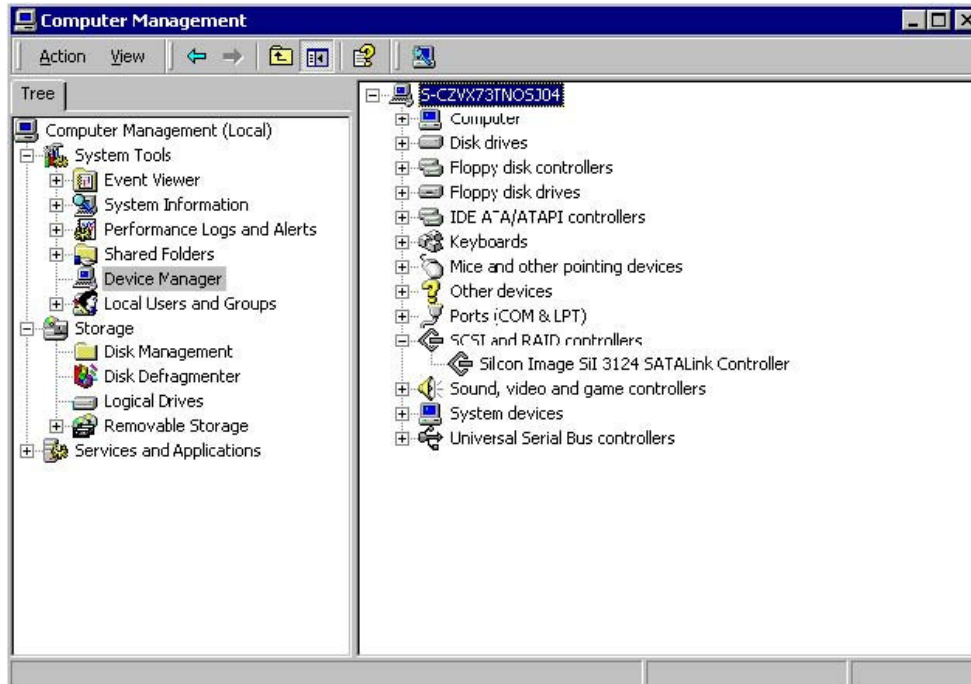


- 6). When the installation is complete, click **Finish** and reboot the system.



To confirm the driver installation

- 1). Right-click the **My Computer** icon on your desktop and choose **Manage** from the pop-up menu.
- 2). Double-click **Device Manager**.
- 3). Double-click **SCSI and RAID controllers**.
- 4). Verify that the Silicon Image Sil 3124 SATALink Controller appears, as shown here.



Mac OS X Installation

After you install the 3124 PCI-Express 4/8 Lane HBA card, power-on your computer.

To complete the driver installation

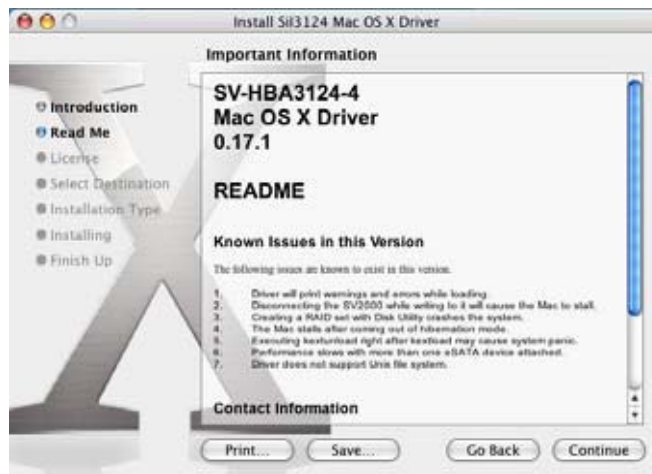
- 1). Insert the 3124 PCI-Express 4/8 Lane HBA CD-ROM into your CD- or DVD-ROM drive.
- 2). Open the Mac folder and click the **SiI3124.pkg** installer.



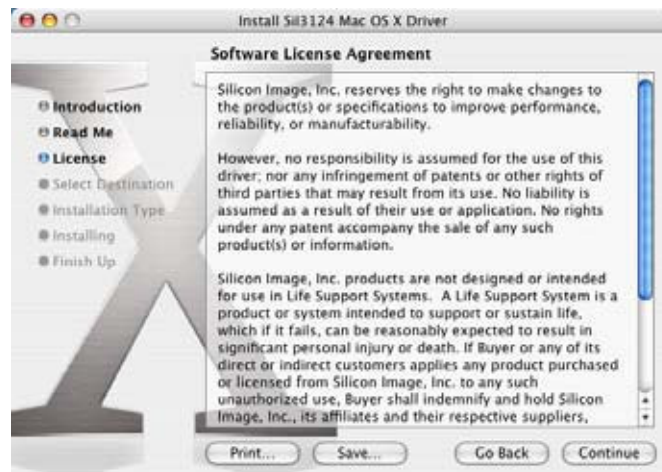
3). Click **Continue**.



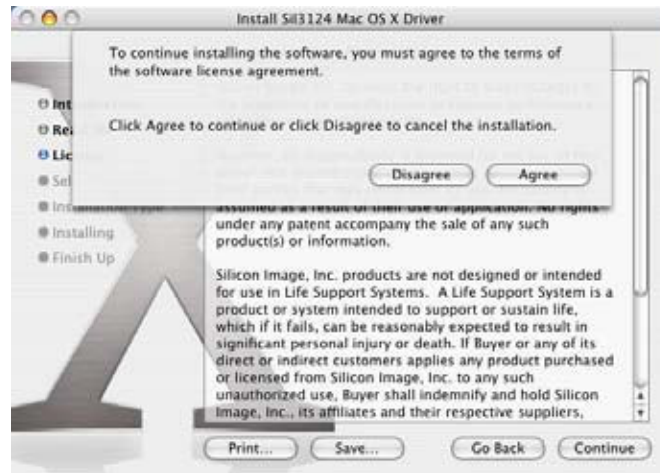
4). Double click Read Me and read it, then click **Continue**.



5). Review the License agreement, then click **Continue**.



- 6). Click **Agree** to accept the terms of the License agreement and proceed with the installation.



- 7). Select the system hard disk drive.



- 8). Click **Upgrade** to install the driver.



- 9). Enter the username and password for the root account (if necessary, check with your system administrator for them), then click **OK**.



- 10). Click **Continue Installation** to acknowledge the restart warning.



- 11). Click **Restart** to reboot the computer and complete the installation.



Appendix A

Regulatory Compliance Statements

Federal Communications Commission Radio Frequency Interference Statement

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Also, you may find the booklet "How to Identify and Resolve Radio-TV Interference Problems" helpful. It was prepared by the FCC and is available from the U.S. Government Printing Office, Washington D.C. 20402.

Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commissions or Industry Canada regulations.

To maintain compliance with FCC regulations, shielded cables must be used with the equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio & television reception.



European Union Compliance Statement

Directives to which conformity is declared:

- EMC Directives 89/336/EEC

Standards to which conformity is declared:

- EN55022: 1998 +A1+A2:2003
- EN55024: 1998+A2:2003
- EN61000-3-2: 2000
- EN61000-3-3: 2001

ICES-003 (Canadian) Compliance Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

VCCI (Japan) Compliance Statement

This is a Class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。