

# PCI Express SATA card

Dual Channel Serial ATA PCI Express Controller Card

PEXSATA22

Instruction Manual



Actual product may vary from photo

**StarTech.com**

The Professionals' Source for Hard-to-Find Computer Parts

## **FCC Compliance 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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and 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.

## **Use of Trademarks, Registered Trademarks, and other Protected Names and Symbols**

This manual may make reference to trademarks, registered trademarks, and other protected names and/or symbols of third-party companies not related in any way to StarTech.com. Where they occur these references are for illustrative purposes only and do not represent an endorsement of a product or service by StarTech.com, or an endorsement of the product(s) to which this manual applies by the third-party company in question. Regardless of any direct acknowledgement elsewhere in the body of this document, StarTech.com hereby acknowledges that all trademarks, registered trademarks, service marks, and other protected names and/or symbols contained in this manual and related documents are the property of their respective holders.

## Table of Contents

Introduction .....	1
Features .....	1
Before you begin .....	1
Installation .....	2
Specifications .....	8
Technical Support .....	9
Warranty Information .....	9

## **Introduction**

Thank you for purchasing a StarTech.com PCI Express SATA II two port card - the perfect solution for adding SATA/SATA II drives to your computer, using the speed and power of PCI Express. Featuring data transfer speeds of up to 300Mbps, this card can be used in PCI Express slots with any of the following lane widths (x1, x2, x4, x8, x16), and is compliant with PCI Specification V2.2 as well as Serial ATA Specification V1.0.

## **Features**

- Fully compliant with one-lane 2.5 GB/s PCI Express Specification
- Compliant with Serial ATA 1.0 specifications
- Serial ATA Generation 2 transfer rate of 3.0 Gb/s
- Supports Windows 98, 2000, XP, 2003, Linux, and MAC OS

## **Before You Begin**

### **System Requirements**

- Pentium-class computer with one available x1 PCI Express slot
- Microsoft Windows 2000, XP or Server 2003, Linux or Mac operating system
- CD-ROM/DVD-ROM drive (driver installation)

### **Contents**

This package should contain:

- SATA PCI-E Host Card (1)
- Serial-ATA Cable (1)
- User Manual (1)
- Driver CD

## Installation

### Windows 2000/XP/2003 Fresh Installation

Follow the instructions in this section if you are performing a new installation of Windows 2000/XP/2003, and you wish to boot from a drive attached to the SATA II to PCI Express Card.

Prior to installation, it is advisable to create a boot diskette. To do so, please locate the following folder, located on the Driver CD:

#### **D:\Serial-ATA\PCIEXPRESS\Siliconimage\2Ch\Raid driver**

Copy all files from this directory onto a blank floppy diskette. Remove the disk from the drive, and label it accordingly.

1. Shut down all power connected to the computer, as well as all devices connected to the computer peripherally (i.e. Printers, Monitors, Scanners etc.). As an added step to ensure safe installation, unplug the power supply from the computer.
2. Remove the computer cover. For more detailed instruction on how to perform this step, please refer to the documentation that was included with your computer at the time of purchase.
3. Locate an empty PCI Express slot, removing the metal bracket covering the accompanying empty port/socket.
4. Position the card above the open PCI Express slot, ensuring that the card is properly aligned with the slot. Insert the card firmly into the slot, distributing force evenly across the length of the board. Once inserted, secure the card into the adjoining socket (previously covered by metal bracket), using the correct size screw (if necessary, please consult documentation that accompanied purchase of computer).
5. Connect Serial ATA cable(s) between the SATA host card and the Serial ATA device(s).
6. Replace the computer cover and re-connect all power to the computer.
7. Turn on the computer. Upon booting up, Windows will instruct you to Press [ **F6** ] for third party SCSI or driver installation. As such, please hit **F6** to continue.

Press [ **S** ] when setup asks if you want to specify an additional device, and insert the boot diskette into your floppy drive.

Press [ **Enter** ] and select [ **Silicon Image Sil 3132 SATALink Serial ATA Controller** ].

Press [ **Enter** ] again when prompted to continue on with text mode setup.

Follow the setup instructions to select your choice for partition and file system.

After setup examines your disks, it will copy files from the CD to the hard drive selected above and restart the system. After restart, the setup process will resume installing the new drive(s).

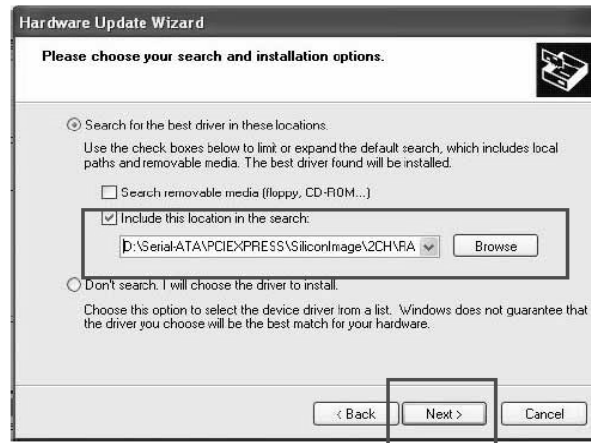
## Adding the SATA host card to an existing Windows 2000/XP installation

Follow the instructions in this section to install the SATA host card on a system already running Windows 2000 or Windows XP.

1. Shut down all power connected to the computer, as well as all devices connected to the computer peripherally (i.e. Printers, Monitors, Scanners etc.). As an added step to ensure safe installation, unplug the power supply from the computer.
2. Remove the computer cover. For more detailed instruction on how to perform this step, please refer to the documentation that was included with your computer at the time of purchase.
3. Locate an empty PCI Express slot, removing the metal bracket covering the accompanying empty port/socket.
4. Position the card above the open PCI Express slot, ensuring that the card is properly aligned with the slot. Insert the card firmly into the slot, distributing force evenly across the length of the board. Once inserted, secure the card into the adjoining socket (previously covered by metal bracket), using the correct size screw (if necessary, please consult documentation that accompanied purchase of computer).
5. Connect Serial ATA cable(s) between the SATA host card and the Serial ATA device(s).
6. Replace the computer cover and re-connect all power to the computer.
7. Turn on the computer. During boot up, Windows will display the **Found New Hardware Wizard**. When you see the screen depicted below, please select **No, not this time**, and click **Next**.



3. Select **Include this location in the search**, and click **Browse**. The necessary files are located in: **D:\Serial-ATA\PCIEXPRESS\SiliconImage\2Ch\Raid driver**, where D:\ is the drive letter designating your CD-ROM/DVD-ROM drive. Once this file has been selected, click **Next**.



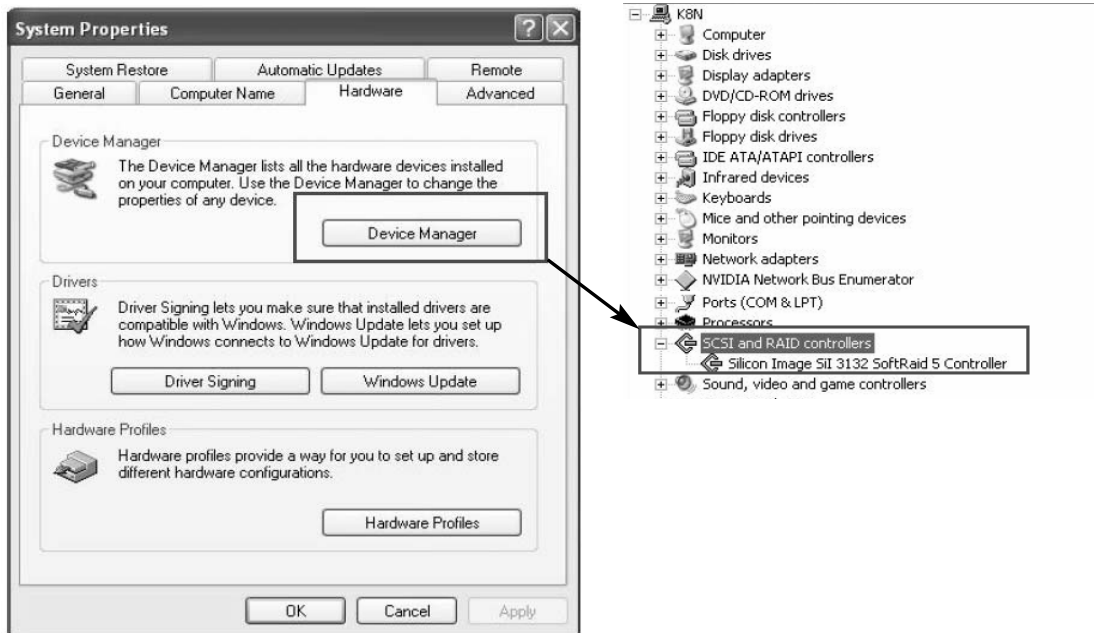
4. The wizard will now copy the required files to the system and begin installing the driver. Once the driver has been installed, the wizard will display a completion dialog. Click **Finish** to exit the wizard.



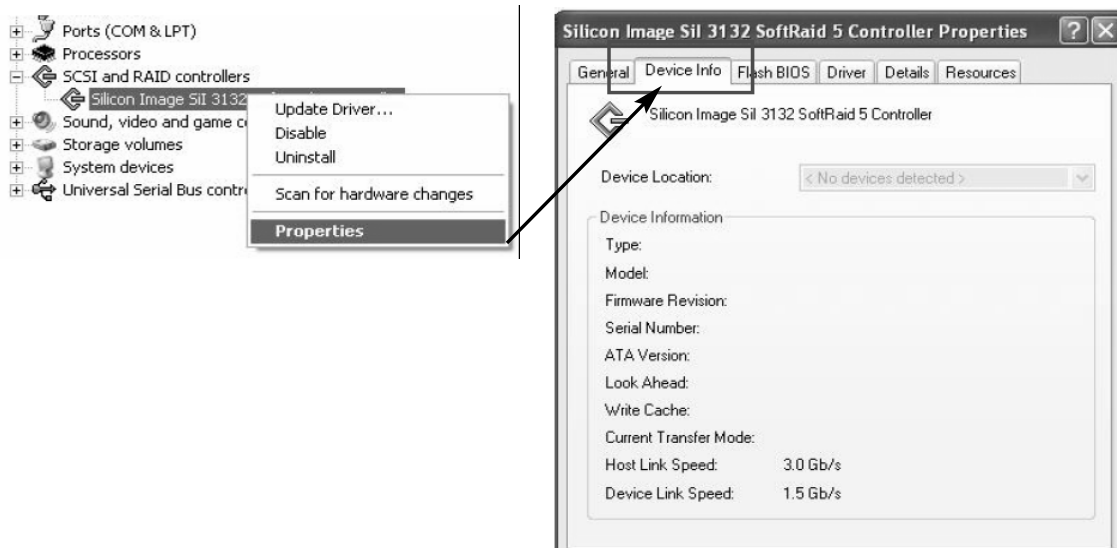
## Verifying installation

*Windows 2000/XP/2003*

1. Right-click on the **My Computer** icon. Select **Properties**, and left-click on the Hardware tab. Click on the **Device Manager** button. Double click on **SCSI and RAID Controllers**. If there is no yellow [ ! ] or [ ? ] in front of the listing for Silicon Image Sil 3132 Serial ATA Controller, the driver has successfully been installed.



2. To view information about the devices attached to the controller, right click the **Silicon Image Sil 3132 Serial ATA Controller** and select Properties from the context menu, then select the tab labeled **Device Info**.

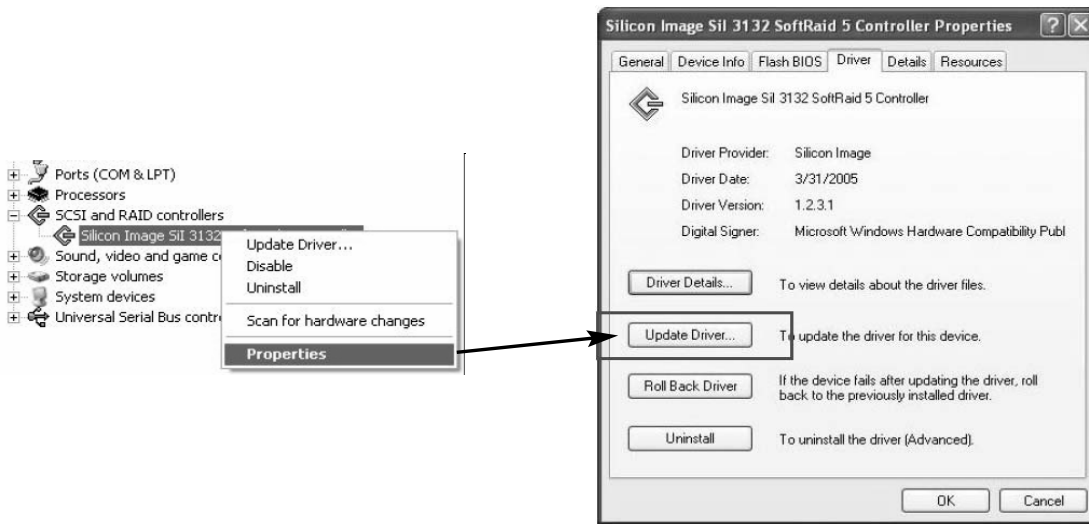




## Updating drivers on Windows 2000/XP/2003

With the SATA host card already plugged in and the driver already installed, follow the instructions below to update the SATA host driver:

1. Right click on **My Computer** and select **Properties**. Under the **System Properties** section, click on the **Hardware** tab, and then on Device Manager. Click **SCSI and RAID Controllers** and right-click on **Silicon Image Sil 3132 Serial ATA Controller**, then select **Properties** from the context menu.
2. Click on the **Update Driver** button on the **Driver** tab, and select **Search for a suitable driver for my device (Recommended)** . Insert the Driver CD into the CD-ROM drive.



3. Click **Next** to complete the driver installation.

4. The system will go through the enumeration process and install the driver. Once Windows finds the necessary file, it will ask if you wish to continue with the update. Please click **Next** to update the driver. At the end of the process, click **Yes** to reboot the computer.



After rebooting, ensure that the update was successful, by following the same steps used to verify installation was complete.

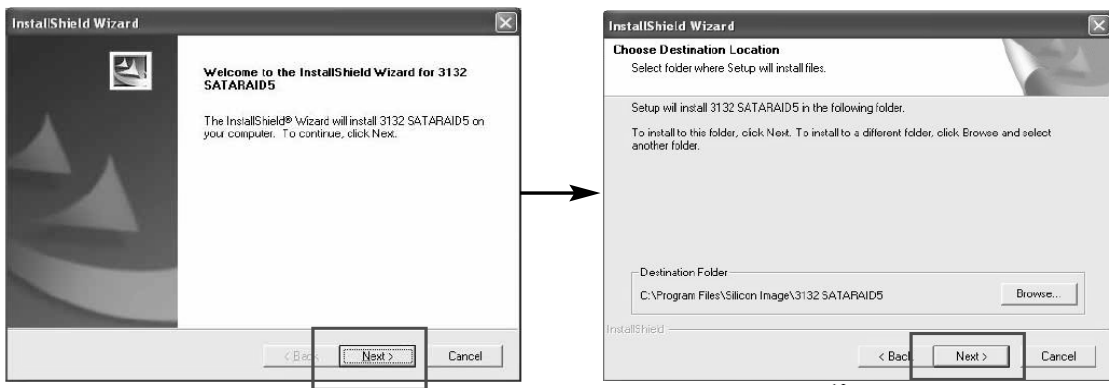
## Serial ATA Host Card GUI Utility installation

Insert the Driver CD into the computer's CD-ROM drive. When the autorun window appears, select the path **D:\Serial-ATA\PCIEXPRESS\Siliconimage\2Ch\GUI**, where D:\ specifies your CD-ROM/DVD-ROM drive.

1. Click on **GUI.exe**



2. Click **Next**. If you wish to specify a location for the software installation other than that specified by default, please make your selection now. Click **Next**, once the folder has been specified.



3. Choose the GUI function by placing a checkmark next to GUI, and click **Next**.



4. Once the GUI is installed, you will be notified and given the option to click **Finish**. Please do so, to allow the system to reboot.

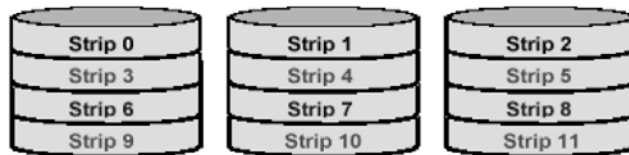
## RAID Explained

**RAID:** Redundant Array of Independent Disks

RAID technology manages multiple disk drives, to enhance I/O performance and provide redundancy in order to withstand the failure of any individual member, without loss of data. PEXSATA22 provides two RAID Set types: Striped (RAID 0) and Mirrored(RAID 1).

### *Disk Striping (RAID 0)*

Striping is a performance-oriented, non-redundant data mapping technique. While Striping is discussed as a RAID Set type, it actually does not provide fault tolerance. With modern ATA bus mastering technology, multiple I/O operations can be done in parallel, enhancing performance. Striped arrays use multiple disks to form a larger virtual disk. This figure shows a striped set using three disks with stripe one written to disk one, stripe two to disk two, and so forth.



### *Disk Mirroring (RAID 1)*

Disk mirroring creates an identical twin for a selected disk by having the data simultaneously written to two disks. This redundancy provides instantaneous protection from a single disk failure. If a read failure occurs on one drive, the system reads the data from the other drive.

## Specifications

<b>Interface</b>	One-lane PCI-Express
<b>Mode</b>	SATA II (backward compatible with SATA)
<b>Controller</b>	Silicon Images Sil3132
<b>RAIDsupport</b>	RAID 0 (Striping) and RAID 1 (Mirroring)
<b>Channel</b>	2 independent Serial ATA II internal channels
<b>Operating systems supported</b>	Windows2000/XP/2003/ and Linux 2.4x, 2.6x
<b>Operation temperature</b>	0° ~ 57°C
<b>Storage temperature</b>	-20°C ~ 85°C
<b>Operation humidity</b>	5 ~ 95% RH

## **Technical Support**

StarTech.com's lifetime technical support is an integral part of our commitment to provide industry-leading solutions. If you ever need help with your product, visit **[www.startech.com/support](http://www.startech.com/support)** and access our comprehensive selection of online tools, documentation, and downloads.

## **Warranty Information**

This product is backed by a lifetime warranty. In addition, StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

## **Limitation of Liability**

In no event shall the liability of StarTech.com Ltd. and StarTech.com USA LLP (or their officers, directors, employees or agents) for any damages (whether direct or indirect, special, punitive, incidental, consequential, or otherwise), loss of profits, loss of business, or any pecuniary loss, arising out of or related to the use of the product exceed the actual price paid for the product.

Some states do not allow the exclusion or limitation of incidental or consequential damages. If such laws apply, the limitations or exclusions contained in this statement may not apply to you.

## **About StarTech.com**

StarTech.com is “The Professionals’ Source for Hard-to-Find Computer Parts”. Since 1985, we have been providing IT professionals with the quality products they need to complete their solutions. We offer an unmatched selection of computer parts, cables, server management solutions and A/V products and serve a worldwide market through our locations in the United States, Canada, the United Kingdom and Taiwan.

Visit [www.startech.com](http://www.startech.com) for complete information about all our products and to access exclusive interactive tools such as the Parts Finder and the KVM Reference Guide. StarTech.com makes it easy to complete almost any IT solution. Find out for yourself why our products lead the industry in performance, support, and value.