

LINDY®

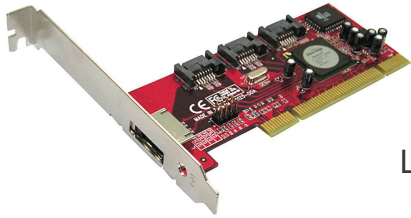
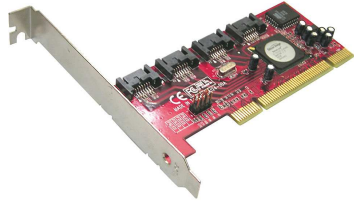
COMPUTER CONNECTION TECHNOLOGY

SATA II 4 Port PCI Host Adapter

User Manual

English

LINDY No. 51131



LINDY No. 51136



For Home and Office Use
Tested to Comply with FCC Standards

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The Individual features for the different models

LINDY No. 51131: SATA II – RAID 4 Internal Ports

- Supports four independent internal ports
- Special shielded and durable SATA connectors on each internal port

LINDY No. 51136: SATA II – RAID 4 External Ports

- Supports three internal ports and one external port
- Special SATA II connectors on the external Port (eSATA) to support Mobile HDD, Mobile CD-ROM, Mobile DVD and Mobile CD-RW etc.

4. Hardware Installation

Before installing the controller card we recommend you study the SATA Raid5 manual PDF on the supplied CD. You can find it in the following directory:

\ Raid5 SATA2_4Port \ Sil3124 \ Windows \ Gui.

1. Power off your computer
2. Remove the case cover screws and remove the case
3. Locate a spare 32-Bit PCI slot
4. Unscrew the PCI slot blanking plate and retain the screw
5. Carefully insert the PCI card into the slot. Make sure it is seated correctly
6. Secure the card using the retained screw
7. Replace the case and reinstall the screws
8. Power on your computer and proceed

5. BIOS Installation (RAID Setting)

Creating and deleting RAID sets is a function found in the BIOS. During boot up, the RAID setting message will appear and pause for a few moments to allow the user to choose what to do. This board will act as a normal NON-RAID card when the BIOS is not configured for RAID.

1. Introduction

Thank you for purchasing the LINDY RAID SATA II 4 Port PCI Host Adapter. This add-on card provides a 32 bit, PCI interface on the host side and four, fully compliant Serial ATA II ports on the device.

The card can be used to upgrade your desktop computer to have 4 Serial ATA Channels and to support RAID 5, RAID 0+1, RAID 0, RAID 1 and JBOD features. It can control four independent Serial ATA channels. Each channel has its own Serial ATA bus and will support one Serial ATA device.

The card supports Serial ATA Generation 1 & Generation 2 transfer rates of up to 1.5Gbps / 3Gbps. It comes complete with drivers for Windows 2000, Windows XP and Windows 2003.

2. Packing List

- 4 Port SATA II PCI Host Adapter
- This Manual
- Driver CD

3. Specifications

- Compliant with PCI Specification, revision 2.2.
- Integrated PCI DMA engines.
- 32 bit fully compliant PCI host interface.
- Four high speed SATA ports, each supporting 1st generation & 2nd generation SATA data rates of 1.5Gbps/ 3Gbps.
- Provides RAID 0 (Striping) to greatly increase the performance of data transfer by simultaneously writing data to 2 drives.
- Provides RAID 1 (Mirroring) to protect the data from a disk failure by writing identical data to 2 drives.
- RAID 0+1 (Mirrored-Striping) combines both Striping and Mirroring technologies to provide both the performance enhancements that from Striping and the data availability and integrity from Mirroring.
- Fully compliant with SATA specifications.

5.1 Creating Striped Sets (RAID 0)

1. As the BIOS boots, press CTRL+S or F4 to enter the RAID utility.
2. Select **Create RAID set**. Press **Enter**.
3. Select **RAID 0** then press **Enter**.
4. Select **Number of hard drive**. Press **Enter**.
5. Select **RAID size**. Press **Enter**.
6. Press **Y** to save your settings.
7. Press **CTRL+E** and then press **Y** to exit the setup.
8. Continue with conventional Fdisk and Format steps as if you were installing a conventional hard drive.
9. Your RAID configuration is complete. Please proceed to the software installation section.

5.2 Creating Mirrored Sets (RAID 1)

1. As the BIOS boots, Press CTRL+S or F4 to enter the RAID utility.
2. Select **Create RAID set**. Press **Enter**.
3. Select **RAID 1** then press **Enter**.
4. Select **Auto configuration**. Press **Enter**.
5. Press **Y** to save your settings.
6. Press **CTRL+E** and then press **Y** to exit the setup.
7. Continue with conventional Fdisk and Format steps as if you were installing a conventional hard drive.
8. Your RAID configuration is complete. Please proceed to the software installation section.

5.3 Creating a Mirrored-Striped Set (RAID 10)

1. As the BIOS boots, press CTRL+S or F4 to enter the RAID utility.
2. Select **Create RAID set**. Press **F2**.
3. Select **RAID 10** then press **Enter**.
4. Select **Auto Config**. Press **Enter**.
5. Press **Y** and then press **ESC** to exit the setup.
6. Continue with conventional Fdisk and Format steps as if you were installing a conventional hard drive.
7. Your RAID configuration is complete. Please proceed to the software installation section.

5.4 Creating Parity RAID (RAID 5)

1. As the BIOS boots, Press CTRL+S or F4 to enter the BIOS utility.
2. Select **Create RAID set**. Press **Enter**.
3. Select **RAID 5** then press **Enter**.
4. Select **Auto configuration**. Press **Enter**.
5. Press **Y** to save your settings.

5.5 Creating JBOD Sets

1. As the BIOS boots, Press CTRL+S or F4 to enter the RAID utility.
2. Select **Create RAID set**. Press **Enter**.
3. Select **JBOD (Single)** then press **Enter**.
4. Select **JBOD Drives**. Press **Enter**.
5. Select **RAID size**. Press **Enter**.
6. Press **Y** to save your settings.

5.6 Creating a Spare Drive

1. As the BIOS boots, Press CTRL+S or F4 to enter the RAID utility.
2. Select **Create RAID set**. Press **Enter**.
3. Select **Spare Drive** then press **Enter**.
4. Select **Spare Drives**. Press **Enter**.
5. Select **RAID size**. Press **Enter**.
6. Press **Y** to save your settings.

5.7 Deleting RAID Sets

1. As the BIOS boots, Press CTRL+S or F4 to enter the RAID utility.
2. Select **Delete RAID set**. Press **Enter**.
3. Answer **Y** to remove the RAID set. If the RAID set being deleted is a striped set, then all of the data will be lost. If the set being deleted is a mirrored set, then the data will remain intact and accessible on both drives.

5.9 Rebuilding Mirrored Sets (RAID 1)

1. After replacing the failed hard drives boot the BIOS, Press CTRL+S or F4 to enter the RAID utility.
2. Select **Rebuild RAID 1 set**. Press **Enter**.
3. Select **Rebuild Hard Drive**. Press **Enter**.
4. Answer **Y** to rebuild the Mirrored set of hard drives.

Resolving Conflicts

When a RAID set is created, the metadata written to the disk includes drive connection information (Primary and Secondary). If, after a disk failure, the replacement disk was previously part of a RAID set (or used in another system), it may have conflicting metadata, specifically in reference to the drive connection information. If so, this will prohibit the RAID set from being either created or rebuilt. In order for the RAID set to function properly; this old metadata must be first overwritten with the new metadata. To resolve this, select **Resolve Conflicts**, and the correct metadata, including the correct drive connection information, will be written to the replacement disk.

6. Driver Installation

6.1 Windows 2000/XP/2003 fresh installation

1. Insert your Windows 2000/XP CD into the CD-ROM/DVD drive, or the 2000/XP boot diskette #1 in the floppy drive (if your system cannot boot from the CD).
2. Press F6 for third party SCSI or driver installation at the beginning of the text mode installation. Press 's' when setup asks if you want to specify an additional device and insert the Driver CD. Press **Enter** and select 'E:\Raid5 SATA2_4Port \Sil3124\Windows\Driver'.
3. Press 'Enter' to continue with text mode setup.
4. Follow the setup instructions to select your choice for partition and file system.
5. After setup examines your disks, it will copy files to the Windows installation folders and restart the system. The setup program will continue and finish the installation after restart.
6. Wait until Windows finishes installing devices, regional settings, networking settings, components, and final set of tasks. Reboot the system if it is required.
7. See the instructions in section 6.3 to verify the controller was installed correctly.

6.1 Adding the card to an existing Windows 2000/XP/2003 installation

1. During OS boot up, Windows will display the 'Found New Hardware Wizard'. Click 'Next'.
2. Select 'Search for a suitable driver for my device (Recommended)' and click 'Next'.
3. Insert the Driver CD in your CD-ROM/DVD drive, check Specify a location, uncheck the other boxes, click Next, type in E:\ (If your CD-ROM/DVD is E:\). Click 'Browse'.
4. Specify a location, e.g. E:\ Raid5 SATA2_4Port \ Sil3124 \ Windows \ Driver, click 'Open' then 'OK'.
5. When the wizard indicates that it has found a driver for the device, click 'Next'.
6. If the 'Digital Signature Not Found' dialog appears, click 'Yes' to continue installing the driver.
7. The wizard will now copy the required files to the system and start the driver. After starting the driver the wizard will display a completion dialog, click 'Finish' to exit the wizard.
8. See the instructions in section 6.3 to verify the controller was installed correctly.

6.2 Updating the driver on a Windows 2000/XP/2003 system

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 Controller' and right click 'Silicon Image Sil 3124 SoftRaid5 Controller'.
2. Click 'Driver', 'Update Driver' and select 'Search for a suitable driver for my device [Recommended]'. Insert the driver CD. Press 'Enter' and select 'E:\ Raid5 SATA2_4Port\Sil3124\Windows \Driver'. Click 'Next' and complete the driver installation.
3. The system will go through the enumeration process and install the driver. At the end of the process, click 'Yes' to reboot your system when necessary.
4. See the instructions in section 6.3 to verify the controller was installed correctly.

6.3 Verifying controller installation under Windows 2000/XP/2003

1. Right click on the 'My Computer' icon, select 'Properties', left click on the 'Hardware' tab and then on the 'Device Manager' button.
2. Double click on 'SCSI and RAID Controllers'. If there is no yellow '!' or '?' in front of 'Silicon Image Sil 3124 SoftRaid5 Controller', the driver has started correctly.
3. To view information about the devices attached to the controller, use the SilCfg Utility and click on the device from the list.

LINDY No's 51131, 51136



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operations.

2nd Edition November 2005

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