## CE/FCC Statement & Recycling Information

***CE Certification***
This equipment complies with the requirements relating to Electromagnetic Compatibility Standards EN55022/EN55024 and the further standards cited therein. It must be used with shielded cables only.
It has been manufactured under the scope of RoHS compliance.

***CE Konformitätserklärung***
Dieses Produkt entspricht den einschlägigen EMV Richtlinien der EU für IT-Equipment und darf nur zusammen mit abgeschirmten Kabeln verwendet werden.
Diese Geräte wurden unter Berücksichtigung der RoHS Vorgaben hergestellt.
Die formelle Konformitätserklärung können wir Ihnen auf Anforderung zur Verfügung stellen

***FCC Certification***
You are cautioned that changes or modification not expressly approved by the party responsible for compliance could void your authority to operate the equipment.
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 operation.

**WEEE (Waste of Electrical and Electronic Equipment), Recycling of Electronic Products**

**Europe, United Kingdom**
In 2006 the European Union introduced regulations (WEEE) for the collection and recycling of all waste electrical and electronic equipment. It is no longer allowable to simply throw away electrical and electronic equipment. Instead, these products must enter the recycling process.
Each individual EU member state has implemented the WEEE regulations into national law in slightly different ways. Please follow your national law when you want to dispose of any electrical or electronic products. More details can be obtained from your national WEEE recycling agency.

**Germany / Deutschland**
Die Europäische Union hat mit der WEEE Direktive Regelungen für die Verschrottung und das Recycling von Elektro- und Elektronikprodukten geschaffen. Diese wurden im Elektro- und Elektronikgerätegesetz – ElektroG in deutsches Recht umgesetzt. Dieses Gesetz verbietet das Entsorgen von entsprechenden, auch alten, Elektro- und Elektronikgeräten über die Hausmülltonne! Diese Geräte müssen den lokalen Sammelsystemen bzw. örtlichen Sammelstellen zugeführt werden! Dort werden sie kostenlos entgegen genommen. Die Kosten für den weiteren Recyclingprozess übernimmt die Gesamtheit der Gerätehersteller.

**France**
En 2006, l'union Européenne a introduit la nouvelle réglementation (DEEE) pour le recyclage de tout équipement électrique et électronique.
Chaque Etat membre de l' Union Européenne a mis en application la nouvelle réglementation DEEE de manières légèrement différentes. Veuillez suivre le décret d'application correspondant à l'élimination des déchets électriques ou électroniques de votre pays.

**Italy**
Nel 2006 l'unione europea ha introdotto regolamentazioni (WEEE) per la raccolta e il riciclo di apparecchi elettrici ed elettronici. Non è più consentito semplicemente gettare queste apparecchiature, devono essere riciclate. Ogni stato membro dell' EU ha tramutato le direttive WEEE in leggi statali in varie misure. Fare riferimento alle leggi del proprio Stato quando si dispone di un apparecchio elettrico o elettronico.
Per ulteriori dettagli fare riferimento alla direttiva WEEE sul riciclaggio del proprio Stato.

Tested to Comply with
FCC Standards
For Home and Office Use!

LINDY No.51158

1st Edition, February 2013

**www.lindy.com**

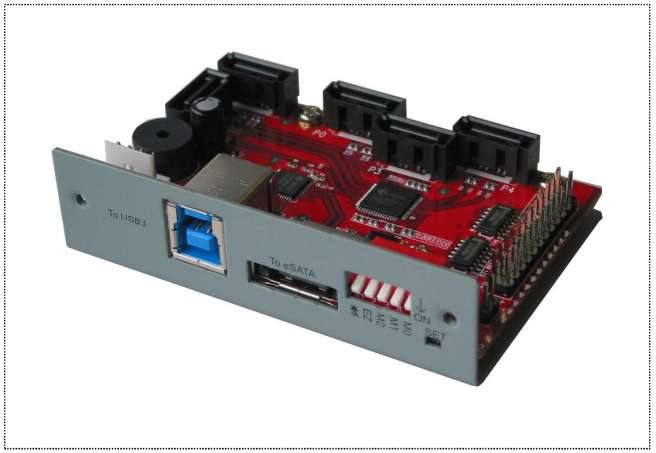
LINDY®

CONNECTION PERFECTION

# USB 3.0 & eSATA to 5x SATA RAID Adapter

## 1-to-5 SATA Port Multiplier RAID Adapter

***User Manual*** ***English***




No. 51158

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## Introduction

This adapter can be used in an external enclosure to set up a RAID storage array with up to 5 SATA drives. Connection to the host computer can be made by one cable only: either USB 3.0 or by eSATA.

## Package Contents

- This adapter - User manual - Multiple Controller Driver CD

## Specification

- 5 Ports SATA II 3Gbps hardware RAID Adapter, SATA Port Multiplier
- Supports eSATA, USB2.0 and USB3.0 host connection
- Supported RAID modes: Hardware RAID 0, RAID 1, RAID 3, RAID 5, Clone, JBOD (BigDrive mode), Individual Drives (PM mode)
- eSATA host connection must support Port Multiplier function and may also support optical drives – supports transfer rates up to 3 Gbps
- USB3.0 host connection supports transfer rates up to SuperSpeed 5 Gbps, USB 2.0 backwards compatible
- Supports Native Command Queue (NCQ)
- Supports SATA 1 (1.5 Gbps), SATA II (3Gbps) , SATA III (6 Gbps) drives
- Supports Windows 8, 7, Vista, XP, 2003, 2008, Mac OS X and Linux kernel 2.4 and above

## Installation & RAID mode setting

**!!! RAID Mode Setting or Change will erase all data or metadata on your existing drives !!!**

When you change the RAID mode on existing used drives, you should initialize the used disks by setting the RAID mode to “Disk Initial Mode” (same as Individual Drive Mode), then set RAID mode again to your desired mode.

**Installation of the RAID GUI – Graphical User Interface**

1) Go to driver CD folder “**\DiskArray\1to5HWRAID**”, run “**Setup.exe**” to install “JMB39X HW RAID Manager”. This tool can configure the RAID and monitor the RAID drive status
2) When using Windows 7/8, you may have to set the User Account Control to “Never Notify” for successfully install the GUI tools
3) Find GUI_Linux.zip and GUI_Mac.zip in driver CD folder **\DiskArray\1to5HWRAID** for Linux and Mac OS

**Hardware Installation**

1) Install the adapter into your external storage case
2) Install up to 5 SATA hard drives to device ports (P0~P4), and connect the eSATA or USB 3.0 port to to your host computer
3) Drive status LEDS can be connected to J1 Pin Headers
4) Plug the internal power cable 4 pin connector to JP1 connector of the adapter but **don't turn on the power yet**.
5) Set the desired RAID mode by adjusting the DIP switches (M0, M1, M2, EZ, Buzzer) – see next paragraph
6) Push & Hold the SW2 = SET
7) **Turn on** the power
8) If buzzer is off, don’t release SW2 until the system is booted, watch to see the screen of your host computer. If buzzer is on, release SW2 when the buzzer sound disappears.
9) When the system is booted, the host PC system BIOS POST shall show “TWN-L H/W RAID” string on SATA host port message. For example, RAID0 will show “TWN-L H/W RAID0”, RAID5 shows “TWN-L H/W RAID5”.

User Manual English

**RAID Options – RAID Setting Switch (SW1)**

| BZS | EZ | M2 | M1 | M0 | Name | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | Pin # | |
| Turn on to silent the buzzer. | Turn off for 'Spare Drive rebuilding' mode. | ON | ON | ON | Raid0 | Raid Mode |
| | | ON | ON | OFF | Raid1 & Raid10 | |
| | | ON | OFF | OFF | Raid3 | |
| | | OFF | ON | OFF | Raid5 | |
| | | OFF | ON | ON | Clone | |
| | | ON | OFF | ON | JBOD | |
| | | OFF | OFF | OFF | Individual Drives | |

**RAID1 & RAID10 Mode:**
When two drives exist and SW1 is set as “RAID1 & RAID10” mode, the RAID Adapter will set two drives to RAID1 mode. If four drives exist, then it will set four drives to RAID10 mode.

**Clone Mode:**
All of the hard disks will be mirrored when Clone mode is set. Clone mode can be used to copy data from a hard drive to several hard drives simultaneously.

**Rebuilding:**
When the RAID array fails and **EZ** pin is **OFF**, the RAID Adapter will automatically rebuild the RAID array to the spare drive. If **EZ** pin is **ON**, rebuilding will work when the fresh drive is connected to the failed port.

**Which port will act as a Spare Drive?**
The last Drive will become Spare Drive automatically, see examples below:

| Condition | Result |
|---|---|
| Port 0-3 set to RAID5 | Port 0 – Port 2 are RAID5 and Port 3 is Spare Drive |
| Port 0-4 set to RAID10 | Port 0 – Port 3 are RAID10 and Port 4 is Spare Drive |
| Port 0, 3, 4 set to RAID1 | Port 0 & Port 3 are RAID1 And Port 4 is Spare Drive |

**USB and eSATA Host connection**
When both eSATA and USB are connected, USB will be selected as the Host input.

**Active & Error LED Pin-Header (J1 & J3)**

J1: Active LEDs for eSATA, drive 0-4
J3: ERROR LEDs for eSATA and drive 0-4

eSATA (Host) Error LED always has the same indication as any of the five Devices Error LEDs.

| Description | ACT LED | ERR LED |
|---|---|---|
| Device Unplugged | OFF | OFF |
| Device Plugged | ON | OFF |
| Device Accessing | Flash (ON) | OFF |
| Device Error | OFF | ON |
| Device Rebuild | Flash (ON) | Blink |