

Silver River DUO 2.5

2.5" PATA/SATA HDD to ESATA/USB 2.0
External Enclosure



Copyright Statement

It is a criminal offence, under applicable copyright laws, to make unauthorized copies of copyright-protected material, including computer programs, films, broadcasts and sound recordings. This equipment should not be used for such purposes.

Notice: The manufacture makes no warranty of any kind with regards to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular product.

The manufacture shall not be liable for errors contained herein or for incidental consequential damages in connection with the furnishing, performance, or use of this material.

Every effort has been made to ensure that the information in this manual is accurate. The manufacture is not responsible for printing or clerical errors.

Mention of third party products is for information purposes only and constitutes neither an endorsement nor a recommendation. The manufacture assumes no responsibility with regards to the performance of these products.

This document contains proprietary information, which is protected by copyright (see below). The information contained in this document is subject to change without notice.

Trademarks:

Microsoft is a registered trademark of Microsoft Corporation. Windows, Windows 95 and the Windows 98 logo are trademarks of Microsoft Corporation. IBM is a registered trademark of International Business Machines Corporation. NDAS® and XIMETA™ are trademarks of XIMETA, Inc. All other trademarks and product names used within this manual are the property of their respective companies and are hereby acknowledged.

Copyright: © 2006 all rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form, by any means, without prior written consent of manufacture.

FCC Compliance Statement

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.

FCC Warning 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 emit radio frequency energy and, if not installed or used in accordance with the instructions, may cause interference to radio communications. However, television reception interference can be determined by turning the equipment off and on. The user is encouraged 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 the receiver
- Connect the equipment into an outlet different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



Table Of Contents

INTRODUCTION	3
PACKAGE CONTENTS	3
FEATURES	3
SPECIFICATION	4
SYSTEM REQUIREMENTS	4
HARDWARE INSTALLATION	5
SYSTEM SETUP	6
USB CONNECTION	7
A. Hardware	7
B. Drivers Installation	7
Windows 98SE	7
Windows ME /2000 / XP	9
Mac OS	9
C. USING THE Silver River DUO 2.5 DEVICE	9
Connect the Silver River DUO 2.5 to computer	9
Disconnect the Silver River DUO 2.5 from Computer	10
Windows 98SE	10
Windows ME /2000 / XP	10
Mac OS	10
SERIAL ATA CONNECTION	11
A. Windows OS	11
B. Mac OS 10.2 or higher	11
PARTITION THE EXTERNAL HARD DISK	12
A. Partition under Windows 98/ME	12
B. Partition under Windows 2000/XP	15
C. Partition under Mac OS	15
LIMITED WARRANTY AND SERVICE	16

* Specifications are subject to change without notice.

* All brand names are registered trademarks of their respective owner

INTRODUCTION

Congratulations on your purchase of the Silver River DUO 2.5 PATA/SATA hard disk to ESATA/USB 2.0 external enclosure, the best way to cover portability and performance of the hard disk external enclosure for the computer.

The best solution for users who want to access their hard disk with either the PATA(Parallel ATA)interface or the newest HDD technology SATA(Serial ATA)interface while using the same USB2.0 enclosure. Not only does the Silver River DUO 2.5 support the USB interface, it also will support the new eSATA while using a SATA HDD. This offers two benefits for the user:

a)The most popular and convenient USB interface for your HDD or
b) the best access performance without any data interface change delay.
The Duo 2.5 external enclosure converts any 2.5" PATA/SATA HDD into a 480M bits/sec Hi-Speed USB2.0 transfer rate or a direct connection for SATA HDDS with eSATA allowing up to 1.5G bits/sec with SATA I or 3.0G bits/sec with SATA II. (The computer must have an eSATA port available)

Plug & Play and hot swappable, the DUO 2.5 hard drive enclosure is the perfect way to add extra storage to your laptop or desktop and for users who do not want to hassle with installing a new hard drive into a case. It offers you top performance, while making accessing your data even faster!

PACKAGE CONTENTS

- One Silver River DUO 2.5" PATA/SATA hard disk drive to ESATA/USB2.0 External Enclosure
- One 5 foot A(M) to mini 5P(M) USB2.0 cable
- One 5 foot eSATA Cable
- USB driver for Windows 98SE
- USB-DC power Y cable
- User's Manual
- Screw kit for installing hard drive

FEATURES

- Ideal for 2.5" PATA/SATA hard disk drives
- Aluminium box for optimal heat dissipation
- One USB2.0 port, one eSATA port
- Converts 2.5" PATA/SATA hard disk drives into Hi-Speed USB 2.0 or eSATA external drives
- Supports all of the 2.5" PATA/SATA hard disk drives in any capacity
- Hi-Speed USB 2.0 transfer rates up to 480M bits/sec.
- SATA transfer rates up to 1.5G bits/sec or 3.0G bits/sec (depend in the SATA HDD type)
- Plugs & Plays and be hot-swappable
- USB 1.1 and USB 2.0 compatible
- Hard drive activity light for indication

SPECIFICATIONS

Interfaces: External Serial ATA, USB 2.0
Compliance with Gen1i, and Gen1m of Serial ATA II Electrical Specification 1.0
Support SATA II Asynchronous Signal Recovery (Hot Plug) feature
Supports 480Mbps High Speed (HS) and 12Mbps Full Speed USB operation
LED indicators: Front-Power,HDD activity
Case Material: Aluminium
Enviromental:
-Power Requirements: 110-220 VAC. 50-60 Hz, 12V/2A, 5V/2A
-Operating Temperature: 5 C to 50 C
-Storage Temperature: -40 C to 70 C
-Operating humidity: 5 to 90%, non-condensing
Warranty: 1 year, limited

SYSTEM REQUIREMENT

PC Requirements

Minimum Intel Processor II 350MHz, 64MB RAM
Serial ATA:Windows 98SE/ME/2000/XP
USB 2.0: Windows 98SE/ME/2000/XP
USB 1.1: Windows 98SE/ME/2000/XP
Computer must have proper port or PCI card

Mac Requirements

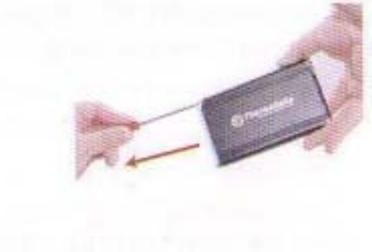
Minimum Apple G3 processor, 64 MB RAM
Serial ATA equipped Mac(eSATA); Mac OS 10.2 or higher
USB 2.0 equipped Mac; Mac OS 10.2, 10.3
USB 1.1 equipped Mac; Mac OS 9.1, 9.2, 10.1.5, 10.2, 10.3
Computer must have proper port or PCI card

Note: Before using the eSATA port and hot-swap function, please check the SATA Specification of your motherboard to see whether this is supported or if you need to have a SATA PCI card and Built in eSATA port.

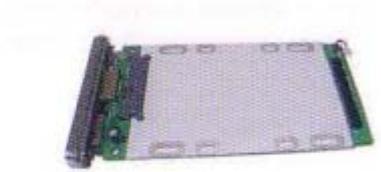
HARDWARE INSTALLATION

Note: Before using the Silver River DUO 2.5, please check the indication of the slide switch position of the back panel matches to the port for which you connect to or switch the slide to another side

- 1. Open the back of the enclosure by sliding the PCB out of the aluminum housing.**



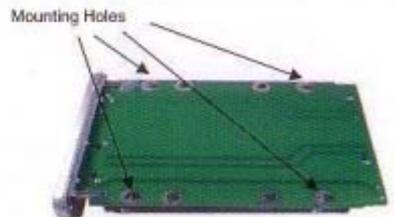
- 2. Remove the main board from the aluminium box.**



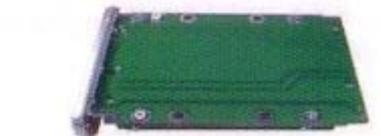
- 3. Connect the PATA or SATA data/power connector to the PATA/SATA HDD.**



- 4. Position the HDD on the top of the main board so that the mounting holes on the HDD line up with the main board mounting holes.**



- 5. Use the four (4) mounting screws to secure the HDD on the top of the main board.**



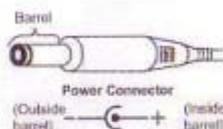
6. Gently insert the main board with hard disk drive into the enclosure aligning the guide rail with the grooves of the enclosure housing.



7. Insert the main board with hard disk drive the rest of the way into the housing and secure the main board faceplate to the enclosure using the screws provided.



8. Connect the round end of the USB-DC power cable to the DC jacket of the back panel of the enclosure and the other side connect to the PC USB port. Connect the USB or eSATA cable to the proper port of the DUO 2.5.
9. Always use USB-DC power cable while connecting to either USB or the eSATA port of the Silver River DUo 2.5 to provide the hard disk with adequate power. Some of the hard disk drives consume more than 500mA of power, if the USB-DC power cable is attached but the hard disk cannot start up then please use the proper 5v DC power adapter shown below.



Note: Most problems occur due to driver problems on the Host Card side!

SYSTEM SETUP

Before connecting your external storage enclosure, please:

- Make sure your PCI Host Card is installed correctly
- Double check that the Host Card driver is up to date
- If needed, update your Operating system or BIOS
- Only one interface can be connected at the same time
- For better heat sink and performance, do not cover the enclosure and leave adequate space around the unit.
- To enable auto mount for Serial ATA, your host card or motherboard driver needs SATA Plug and Play support
- Never expose the product to water or humid conditions.

Always check for visible damage or defects with the power and interface cables before using.

NOTE: If the system does not recognize the drive, connect the USB-DC power cable prior to connecting the USB or SATA cable.

USB CONNECTION

NOTE: Before using the DUO 2.5, The USB2.0/eSATA switch must be switched to **USB** mode.

A. Hardware-

1. Boot-up your computer into the Operating System. Make sure the USB/USB2.0 port device driver has been installed and is available in the Operating System.
2. Plug the USB-DC power cable to the DC jack of your Silver River DUO 2.5 and the other USB connector to the PC USB port.
3. Plug the port connector of the USB cable into the USB Port of the DUO 2.5.
4. Plug the port connector of the USB cable into the USB port of the computer.
5. Follow the Software Installation for the next steps.

NOTE: In order to reach USB 2.0 speed, you must have a computer or host adapter card that has USB 2.0 support. This device will auto sense the speed of your USB port and adjust between USB 1.0 and USB 2.0 speeds.

B. Drivers Installation

Windows 98/SE

1. Boot-up your computer into the Windows 98SE, **make sure the USB port device driver has been installed and is available** in Windows 98SE.
2. Plug the port connector of the USB cable into the USB port of the computer.

3. If this is the first time you have plugged the Silver River DUO 2.5 device into the USB port of computer, then the [Add New Hardware Wizard] dialog box appears.



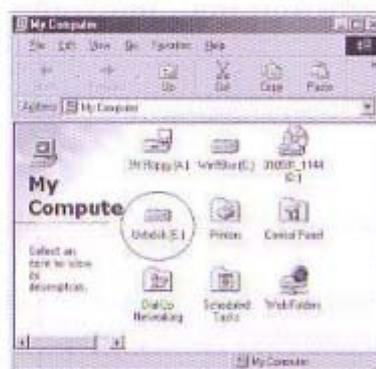
4. Click on [Next], check the [Search for the best driver for your device], and click on [Next].

5. Check the [CD-ROM drive], insert the device driver CD into your CD-ROM drive, Click on [Next], and a screen should appear showing which device you wish to install, click on [Next].

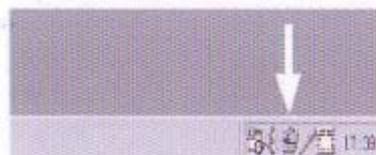


6. After the needed files are copied into your system, click on [Finish].

7. After the system installs the driver, double click on [My Computer], a new drive letter is added; this is the USB storage device which you just installed.



8. A green Unplug or Eject hardware icon will also appear in the system tray.



NOTE: If the new drive does not appear in My Computer, it means the Silver River DUO 2.5 drive does not have a recognizable partition or format; Please refer to the Partition the External Hard Disk chapter to prepare your drive.

Windows ME/2000/XP

1. If you are plugging the enclosure in for the first time, the operating system will detect and install the driver automatically..
2. After the driver is installed, the device will appear in My Computer.



Mac OS

1. The Silver River DUO 2.5 is supported by the Mass Storage Support 1.3.5 in the Mac OS. You do not need to install any drivers.
2. Mac OS 8.6
If using Mac OS 8.6, the software of Mass Storage Support 1.3.5 is required to install. You can download this from Apple software updates at <http://www.apple.com/support>
3. Mac OS 9.0 or later
You do not need to install the software if you have Mac OS 9.0 or later. When plugged in, the device will appear on the desktop with a few seconds automatically.

NOTE: This Silver River DUO 2.5 is supported by the Mass Storage Device in Windows ME/2000/XP system directly. You do not need to install the drivers. Please refer to the Partition the External Hard Disk chapter to prepare your drive if the drive is unformatted or brand new.

C. Using the Silver River DUO 2.5 Device

After the first time installation, you may connect or remove the device without shutting the power of to the computer. Please follow these steps when doing so:

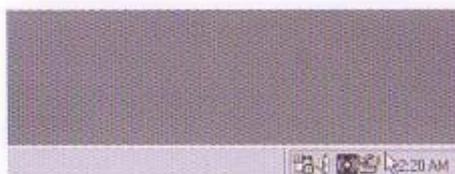
1. Plug the port connector of the USB cable into the USB Port of the DUO 2.5.
2. Plug the port connector of the USB cable into the USB port of the computer.

3. The Silver River DUO 2.5 is ready for use immediately.

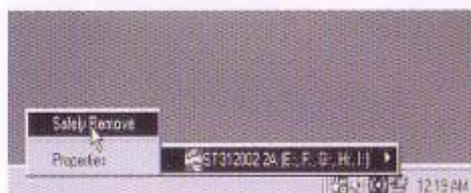
Disconnect the Silver River DUO 2.5 drive from computer.

Windows 98SE

1. Double click the green Unplug/Eject icon in the system tray and select the device you wish to remove. Click on [Safely Remove].



2. When system prompts, Confirm device to be stopped, click [OK]. When the icon disappears it is safe to unplug the enclosure.



Windows ME/2000/XP

1. Double click the green Unplug/Eject icon in the system tray and select the device you wish to remove.

2. Highlight the [USB Mass Storage Device] in the dialog box and click [Stop], choose the USB2.0 External drive you wish to disconnect and click {stop}.



3. After waiting a few seconds, the system will prompt "You may safely remove this device". It is then safe to remove the USB cables.

Mac OS

When disconnecting your DUO 2.5 drive from the computer, close all windows and quit all running applications that are stored on the External Drive. and drag the USB 2.0 External Drive icon into the "Trash" to dismount it from the desktop prior to unplugging the USB cables. Do not remove the drive while it is being accessed or data corruption or loss may occur.

Caution!!

Do not unplug the Silver River Duo from the USB port of the computer

or USB Hub while copying files to or from the device, while files or applications on the device are being used.

DOING SO MAY RESULT IN LOSS OF DATA.

SERIAL ATA CONNECTION

NOTE: The SATA port of the Silver River DUO 2.5 is only for users who have installed a SATA hard disk inside and want to use the eSATA connection. Before using the external SATA connection, the USB/eSATA switch must be switched to eSATA mode.

Before using the eSATA hot-swap function, please check your motherboard SATA port are supported or you may need to purchase a SATA PCI card instead.

A. Windows OS

Boot-up your computer into the operating system, make sure the SATA port device driver has been installed.

Switch the slide switch to SATA mode on the Silver River DUO 2.5

Plug the USB-DC power connector of the USB cable into the USB port of the computer.

Plug the port connector of the SATA cable into the SATA port of your Silver River DUO 2.5

Plug the port connector of the SATA cable into the SATA port of computer.

Let windows search and install the driver automatically

Open "My Computer" to see your external hard drive.

Unplug Procedure:

Click on the taskbar icon for external hardware.

Choose your external hard drive and confirm to remove it

B. Mac OS10.2 or higher

Boot-up your computer into the operating system, make sure the SATA port device driver has been installed.

Switch the slide switch to SATA mode on the Silver River DUO 2.5

Plug the USB-DC power connector of the USB cable into the USB port of the computer.

Plug the port connector of the SATA cable into the SATA port of your Silver River DUO 2.5

Plug the port connector of the SATA cable into the SATA port of computer.

No driver installation is needed

The external drive will mount and show up on the desktop.

Unplug Procedure:

Drag the external hard drive icon to the trash bin.

Turn off your device

PARTITION THE EXTERNAL HARD DISK

CAUTION!!

Before you partition the hard disk, please be aware this will destroy all existing data on the drive, so make sure you have a backup! This setup is usually only required the first time you install a factory new hard drive. if you change the format or want to erase all data on your drive.

NOTE: If you can not see the drive, make sure the jumper settings of the hard drive are correct, the drivers are installed and the power is turned on!

If using FAT32, the largest single partition can only be 32GB. To create a larger partition you will need to format the drive with NTFS.

Mac OS does not recognize the NTFS format. To use the device on both platforms, use the FAT32 format.

A. Partition under Windows 98/ME

NOTE: Win98/SE/ME do not recognize NTFS formatted drives. We recommend using FAT32 format instead. If using a 3rd party program to backup data we recommend formatting the drive with FAT32 format

Boot the computer into the Windows98/ME. Plug in the external drive. There are two methods to partition and format external drives.
(here we use the USB2.0 disk setting as an example)

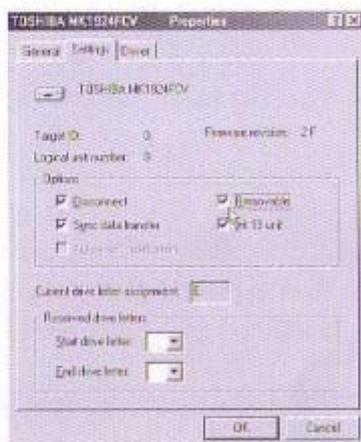
Method 1

Step1. Click on [start], choose {control panel} in [setting], double click [system] and open [hard disk]. A screen appears as in the pic to the right.

Step2. You can see the USB2.0 disk you just added. Highlight the drive and chose [property] select [setting], setting the USB2.0 hard disk to [removable]. A screen will show as in the pic to right.



Step3. After restart the system, a removable HDD is added to [My Computer]. Choose the removable HDD and click right button on the mouse. Select [format] to format the drive.



You can only set the HDD to one partition in this method.

Method 2

Step1. Go into the MS-DOS mode by clicking on [Start], choose the [MS-DOS Prompt] in [Programs].

Step2. At the Dos prompt, type [FDISK] and press Enter.

Step3 If FDISK quits without message then restart system and return to Step1

Step4. In the first screen of FDISK answer this Question.

Do you want to enable large disk support?

[Y] If you want to build partition larger than 2 GB

[N] if you want to build partition smaller than 2 GB



Step5. The next screen is [FDISK OPTIONS], type "5" to select disk. The screen to right will appear.

Important: you must type [5] in this screen to changed the current fixed disk drive to build a partition, the default fixed drive set by FDISK is your internal hard disk, if you do not change the fixed disk drive to the USB2.0 Hard disk, the data of your internal drive will be destroyed.

Step6. In the [Change Current Fixed Disk Drive], type the disk drive number that is assigned to the USB2.0 hard disk.

Step7. Back to [FDISK OPTIONS] screen, now you can create or delete the partition of the USB2.0 Hard Disk.

Step8. After you finish FDISK, go back to the windows screen and unplug and replug in the USB2.0 hard disk to activate the changes. Double click on [My Computer] icon , the USB2.0 Hard disk drive will appear.

B. Partitioning under Windows 2000/XP

For Partitioning under Windows 2000/XP please see the following FAQ.

<http://www.thermaltakeusa.com/Faq.aspx?ID=1073>

C. Mac OS

For Partitioning under Mac OS please see the following FAQ.

<http://www.thermaltakeusa.com/Faq.aspx?ID=1101>