

# FirmTek

*Store and Share your Digital Creations*



## SeriTek™ /5PM

**Five Bay Hot-Swap Port Multiplier External Serial ATA Enclosure**

*User Manual*

**FirmTek, LLC**  
**www.firmtek.com**

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Before installing SeriTek/5PM or any other hardware or software, you are responsible for backing up data contained on any storage devices. After hardware or software installation, you are responsible for backing up data on any storage devices at frequent intervals. FirmTek, LLC is not liable for any loss of data or damage to equipment resulting from the use of FirmTek products.

### **External Shielded Serial ATA Cables**

SeriTek/2SE4, SeriTek/2ME4-E, SeriTek/2SE2-E and SeriTek/2SM2-E host bus adapters use specially shielded external Serial ATA cables to ensure integrity during data transfers. These cables are not designed for heavy duty use. Use caution and handle the cables carefully. When inserting and removing the cable, hold the connector at the ends (not the cable) when inserting and removing the cable from the SeriTek/2SE4, SeriTek/2ME4-E, SeriTek/2SE2-E and SeriTek/2SM2-E and external Serial ATA enclosure.

**Note:** *The SeriTek/2SE4, SeriTek/2ME4-E, SeriTek/2SE2-E and SeriTek/2SM2-E utilize "Type I" Serial ATA cables and connectors: This is because of a new external SATA cable/connector specification from the ATA Committee that defines a new "external" SATA connector, called eSATA. See "Connecting the Shielded Data Cables" section of this document for more details.*

If you will be using the SeriTek/5PM with a Macintosh computer, please note that Macintosh computers require unique external shielded Serial ATA cables for maximum reliability. FirmTek Serial ATA cables were specially designed to be compatible with both PC and Macintosh computers. Please use only FirmTek external shielded Serial ATA cables with the SeriTek/5PM.

# TABLE OF CONTENTS

I. Introduction.....	1
II. Preparing the SeriTek/5PM .....	6
Introduction.....	6
Hard Drive Installation .....	7
Front Panel Status LEDs.....	11
III. Hot-Swapping Hard Drives .....	12
Introduction.....	12
General Hot-Swap Guidelines .....	12
IV. Sleeping & Wake-UP Procedures: .....	13
V. Troubleshooting .....	13
VI. Product Support .....	14
VII. Product Warranty and Disclaimers.....	14
VIII. Regulatory Compliance Statements.....	15

## I. Introduction

### Welcome

Congratulations and thank you for purchasing the SeriTek/5PM Five Bay Hot-Swap Port Multiplier External Serial ATA Enclosure. This product is yet another innovative solution from the folks at FirmTek.

### About This User Manual

This user manual will introduce you to the SeriTek/5PM enclosure. Please read it carefully to familiarize yourself with the proper operation of the SeriTek/5PM.

### About Serial ATA Technology

An evolutionary replacement for the Parallel ATA storage interface, Serial ATA (Advanced Technology Architecture) provides greater speed, simpler upgrades and easier configuration. Serial ATA is fully compliant with the ATA protocol and offers up to 300MB/sec performance compared to a maximum of 133MB/sec for Parallel ATA. Serial ATA devices can be hot-swapped (with most operating systems), something that is not normally possible with Parallel ATA devices. Serial ATA uses insulated cables that are thinner and longer with smaller 7-pin connectors.

### About the SeriTek/5PM

The SeriTek/5PM is a rugged, external five-bay Hot-Swap Serial ATA (SATA) hard drive enclosure with Port Multiplier support. It features FIS (Frame Information Structure)-based switching technology that allows the Port Multiplier to provide high performance with up to five hard drives while only using a single SATA data cable. The SeriTek/5PM also provides versatile hot-swap capabilities with virtually unlimited storage possibilities in a small form-factor package. Built from the ground-up as a true Serial ATA solution, the SeriTek/5PM features a case made of aluminum for maximum durability and heat dissipation.









SeriTek/5PM extends Serial ATA's storage capabilities outside of the computer chassis with flexibility on par with USB 2.0 or FireWire 800 but with much higher 3.0 Gbps transfer rates. Serial ATA Hard drives can be swapped in and out of the SeriTek/5PM enclosure within seconds.

Allowing for true end-to-end Serial ATA capabilities, SeriTek/5PM is compatible with external PCI/PCI-X and PCIe to Serial ATA host adapters such as the SeriTek/2SE4, SeriTek/2ME4-E, SeriTek/2SE2-E and SeriTek/2SM2-E (using eSATA to eSATA data cables). The SeriTek/2SE4, SeriTek/2ME4-E, SeriTek/2SE2-E and SeriTek/2SM2-E, like the SeriTek/5PM enclosure, are custom designed with shielded Serial ATA ports which meet regulatory requirements for electrostatic discharge (ESD), electromagnetic interference (EMI) emissions, and susceptibility. This ensures that a good ground path between the cables and the connectors exists to prevent any ESD discharge during cable insertion or removal.


In contrast to competing solutions, the SeriTek/5PM is designed with an innovative internal Serial ATA direct backplane (no data cable inside the enclosure) that makes the installation and removal of disk drives very easy and provides maximum signal/data transfer quality.

## Package Contents


Part number **SATA-5PM** includes:

<p>One Five-Bay external Serial ATA chassis</p>	
<p>Five removable hard drive trays (pre-inserted)</p>	
<p>Two keys</p>	
<p>Twenty hard drive countersink-style mounting screws</p>	
<p>Four clear rubber feet (Pre-installed)</p>	
<p>One external shielded Serial ATA data cables eSATA, 1-meter each</p>	
<p>One power cord</p>	
<p>One CD-ROM containing the SeriTek/5PM User's Manual</p>	

Part number **SATA-5PM-2SE4** also includes:

<p>One SeriTek/2SE4 4-port PCI-X external SATA PM host adapter</p>	
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Part number **SATA-5PM-2ME4** also includes:

<p>One SeriTek/2ME4-E 4-port PCI-Express external SATA PM host adapter</p>	
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Part number **SATA-5PM-2SE2** also includes:

One SeriTek/2SE2-E  
2-port PCI-Express external  
SATA PM host adapter



Part number **SATA-5PM-2SM2** also includes:

One SeriTek/2SM2-E  
2-port SATA PM  
ExpressCard/34 for MacBook  
Pro and PC Notebooks



### **SeriTek/5PM Highlights**

- ◆ Attractive, durable design with professional appearance
- ◆ Integrated with a specially-designed Serial ATA direct backplane, with no need for internal cabling
- ◆ Expand storage without overloading the computer's power supply or increasing heat within its chassis
- ◆ A true native Serial ATA solution, no master/slave settings
- ◆ Cross-platform, PC and Macintosh compatible, operating system independent
- ◆ Perfect for both storage-hungry and speed-sensitive applications
- ◆ Enough performance to handle multiple projects simultaneously
- ◆ Extruded Aluminum case for maximum durability and heat dissipation
- ◆ Choice of SATA I/II hard drive brands, any capacities, and drive rotational speed up to 10,000 RPM
- ◆ Supports up to five hard drives with a single SATA data cable
- ◆ High Performance FIS-based Port Multiplier-aware hardware
- ◆ Easy to set up: Only 3 steps to integrate each hard drive
- ◆ Easy to operate: Simply unlock and move latch to add or remove hard drives
- ◆ Easy to transport: Compact, portable, sturdy

### **SeriTek/5PM Applications**

- ◆ Graphic arts
- ◆ Digital photography
- ◆ Computer animation
- ◆ High-performance workstations
- ◆ File sharing over high-speed networks
- ◆ Digital audio/music composition, recording, editing, storage and playback
- ◆ Personal and professional high-definition digital video creation and editing
- ◆ Supported Video Formats: 10-bit uncompressed HD; 1080/60i, 8-bit; uncompressed SD; DVCPPro 25/50; HDV, DV, DVCAM

### **SeriTek/5PM Features**

- ◆ Front power switch; Press and hold for 5 second to Turn-Off power
- ◆ Power and activity LEDs for each hard drive
- ◆ High-performance storage data transfer up to SATA 3.0Gbps (300MB/sec) per drive
- ◆ Two built-in quiet exhaust fans with three user-selectable speeds for cool-running hard drives
- ◆ Fully RAID capable: Compatible with Operating System and host adapter based RAID solutions
- ◆ Supports up to 20 hard drives using four SeriTek/5PM enclosures and a single 4-port PM card
- ◆ Can be configured as JBOD or RAID and used with multiple SATA PM enclosures
- ◆ Five bay, hot-swappable, 3.5" Serial ATA hard drive enclosure with removable trays
- ◆ Provides physical tray lock and key security for each disk drive
- ◆ Faster than USB2.0, and FireWire 800
- ◆ Additional trays are available separately for virtually unlimited storage possibilities
- ◆ Surpasses rotational vibration and heat dissipation requirements of high RPM drives

- ◆ Works with PC and Macintosh computers with shielded Serial ATA ports running OS 8, OS 9, OS X, Windows 98/SE/ME/2000/XP/2003 and Linux
- ◆ Kensington Security Slot

## SeriTek/5PM Specifications

General System Hardware Requirements	Compatible with external PCIe, PCI-X, and PCI to SATA host adapters with port multiplier support. Such as: SeriTek/2SE4, SeriTek/2ME4-E, SeriTek/2SE2-E, SeriTek/2SM2-E
Operating Systems Supported	<ul style="list-style-type: none"> <li>• System independent</li> <li>• Cross-platform, PC and Macintosh compatible</li> </ul>
Enclosure Capacity	<ul style="list-style-type: none"> <li>• Five 3.5" hot-swappable drive bays</li> </ul>
External Connectors	<ul style="list-style-type: none"> <li>• 1-port shielded eSATA/I type receptacle</li> </ul>
Cables Supported	<ul style="list-style-type: none"> <li>• 7-pin shielded eSATA/ I type data cable, up to 2 meter in length</li> </ul>
Hard Drive Types Supported	<ul style="list-style-type: none"> <li>• 3.5" Serial ATA hard drive</li> <li>• Any capacity up to 10,000 RPM</li> </ul>
Data Transfer Rates	<ul style="list-style-type: none"> <li>• Up to 300 Mbytes/second or 3 Gbps burst data</li> </ul>
Advanced Data Features	<ul style="list-style-type: none"> <li>• Fully compliant with both SATA II 3.0Gbps and SATA I 1.5Gbps</li> <li>• Built-in FIS-Based Port Multiplier; 1port/cable supports up to 5 drives</li> <li>• Front system power button ON/OFF (Press/Hold for 5 second)</li> <li>• JBOD (Just A Bunch Of Disk)</li> <li>• Fully RAID-capable: Compatible with most operating system and host adapter based RAID solutions</li> <li>• RAID arrays can span across multiple enclosures</li> <li>• Multiple volume RAID 0 OR/AND RAID 1 can be configured</li> </ul>
Warranty	<ul style="list-style-type: none"> <li>• One year limited parts &amp; labor</li> </ul>
Enclosure Dimensions	<ul style="list-style-type: none"> <li>• 23.15 cm(L) x 20.97 cm(H) x 15.68 cm(W)</li> </ul>
Enclosure Weight	<ul style="list-style-type: none"> <li>• Enclosure Only: 4.6 Kgs (without hard drives)</li> <li>• Shipping weight: 6.6 Kgs (includes 5PM enclosure, power cable, eSATA cable, screws, retail box)</li> </ul>
Color	<ul style="list-style-type: none"> <li>• Anodized Aluminum – Silver Grey</li> </ul>
Built in Heat Management System	<ul style="list-style-type: none"> <li>• Aluminum case for maximum durability and heat dissipation</li> <li>• Two quiet exhaust fans, 70x70x15mm, with three user-selectable speeds for cool-running hard drives</li> <li>• FANS &amp; TEMP status with LEDs &amp; Audible alarm when faulty fan or internal temperature reach to 60°C</li> <li>• Mute-able Alarm for FANS &amp; TEMP</li> <li>• Green LED or no Audible alarm</li> <li>• Red LED or Audible alarm</li> </ul>
Other Status LEDs	<ul style="list-style-type: none"> <li>• Enclosure Power on – White</li> <li>• Disk drive Power on LED on each tray – White</li> <li>• Disk drive activity LED on each tray – Blue (Disk activity LED not supported on all disk drives)</li> </ul>
Power Supply	<ul style="list-style-type: none"> <li>• 105 – 230 VAC; 50-60Hz (Input)</li> <li>• 220 Watt (Output)</li> <li>• Server-Class universal</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>• Operation Temperature: +41°F to +131°F ( +5°C to +55°C)</li> </ul>
RoHS	<ul style="list-style-type: none"> <li>• Compliant</li> </ul>
EMC Compliance	<ul style="list-style-type: none"> <li>• EN55022/1998, EN55024/1998 (European Community)</li> <li>• FCC Part 15 Class B (US)</li> </ul>

## **SeriTek/5PM System Requirements**

### **Hardware Requirements**

- Compatible with external PCIe, PCI-X, and PCI to SATA host adapters with port multiplier support. Such as SeriTek/2SE4, SeriTek/2ME4-E, SeriTek/2SE2-E, SeriTek/2SM2-E with shielded eSATA/I type receptacle
- 3.5" SATA I or SATA II hard drive, any capacity up to 10,000RPM
- RAID or non-RAID configurations; JBOD
- Available 105-230VAC, 50-60Hz power

### **Materials Required**

- Standard medium-sized Phillips screwdriver



## II. Preparing the SeriTek/5PM



### Caution:

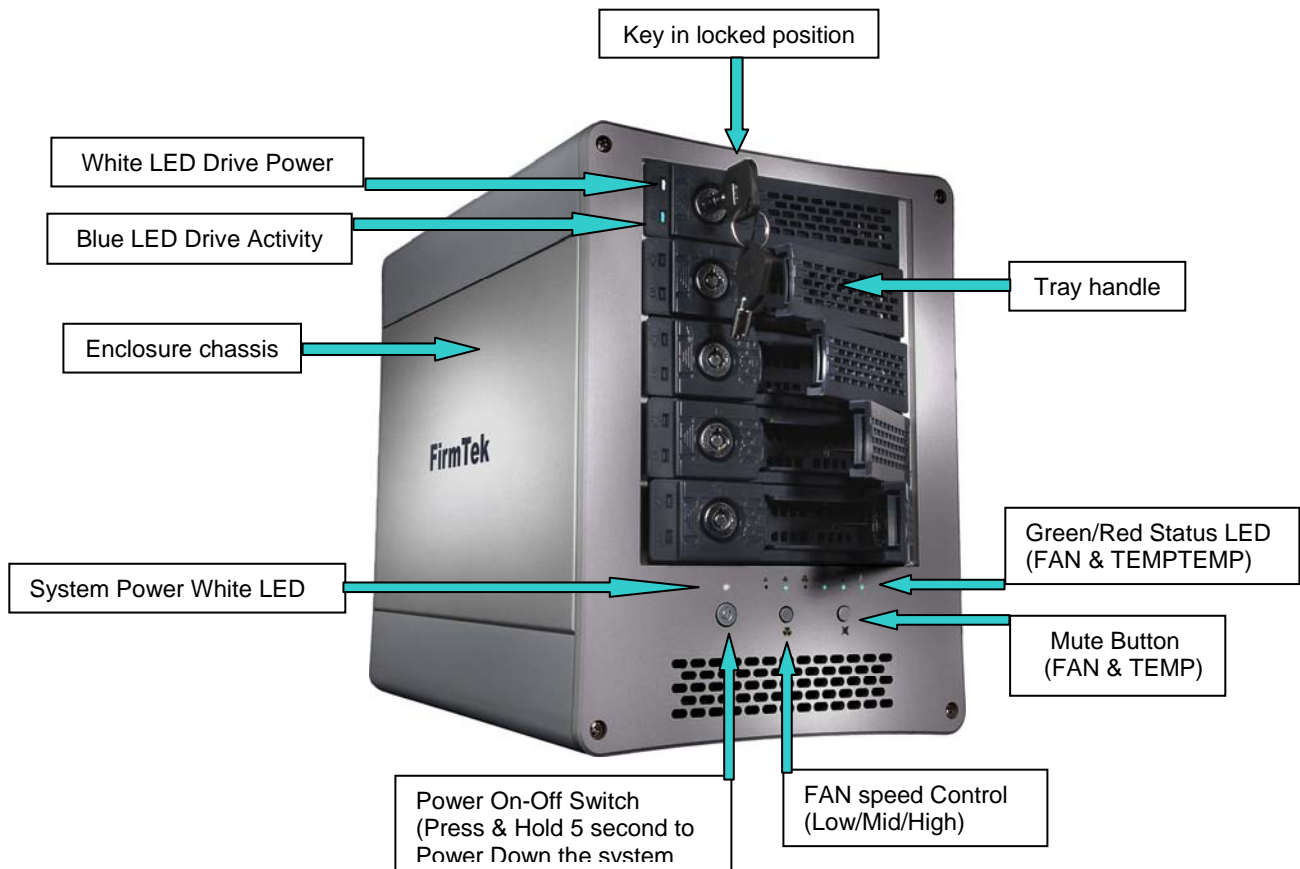
Please make sure your data is backed up before attempting to use the SeriTek/5PM external enclosure.

Your SeriTek/5PM enclosure, hard drive and computer contain sensitive components that can be permanently damaged by Static Electric Discharge. Be sure you're working in an area free of static electricity to prevent them from being damaged. Use a wrist grounding strap if you have one or regularly touch a metal part of the computer chassis such as the power supply case or a port access cover to discharge any built-up static electricity from your body. Make sure to handle your hard drives around the edges to avoid damage by static electricity.

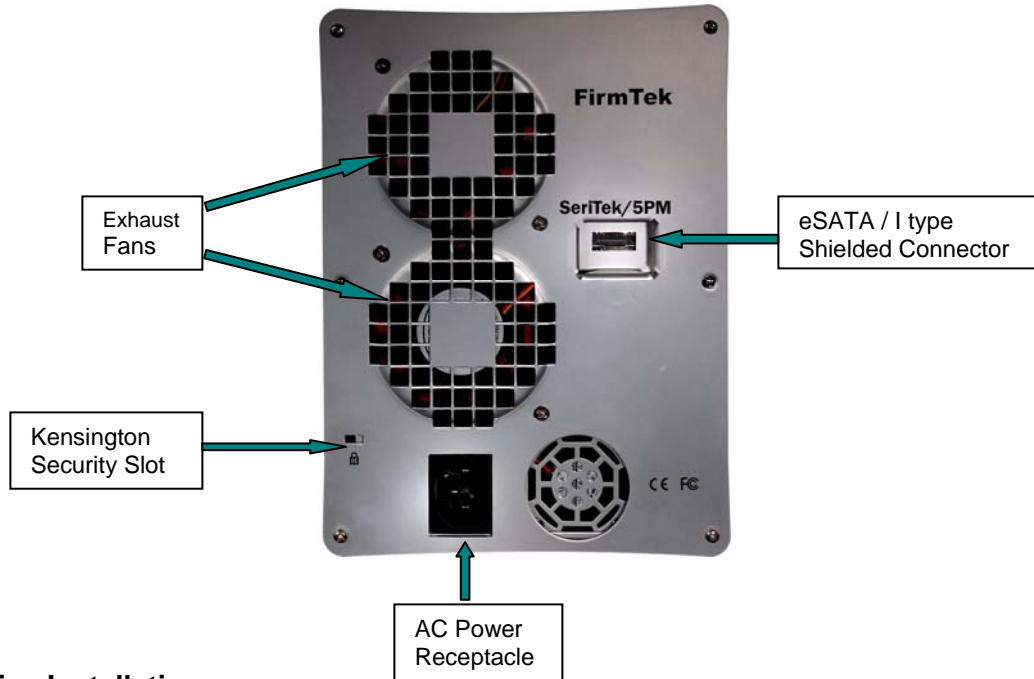
### Introduction

This section describes the proper method of preparing your SeriTek/5PM for use. Please review this section and familiarize yourself with the SeriTek/5PM enclosure before installing hard drives and connecting it to your computer.

Front view of the SeriTek/5PM enclosure:



### Rear view of the SeriTek/5PM enclosure:

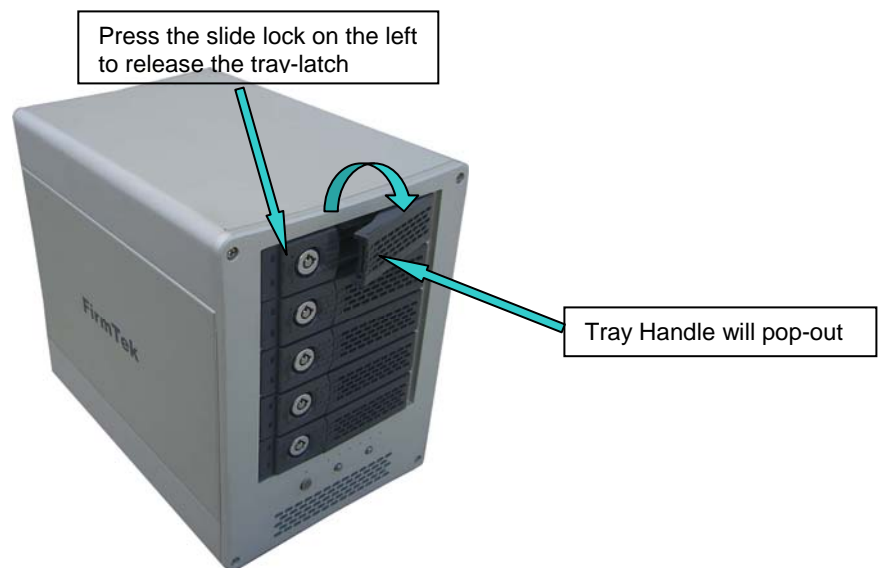


### Hard Drive Installation

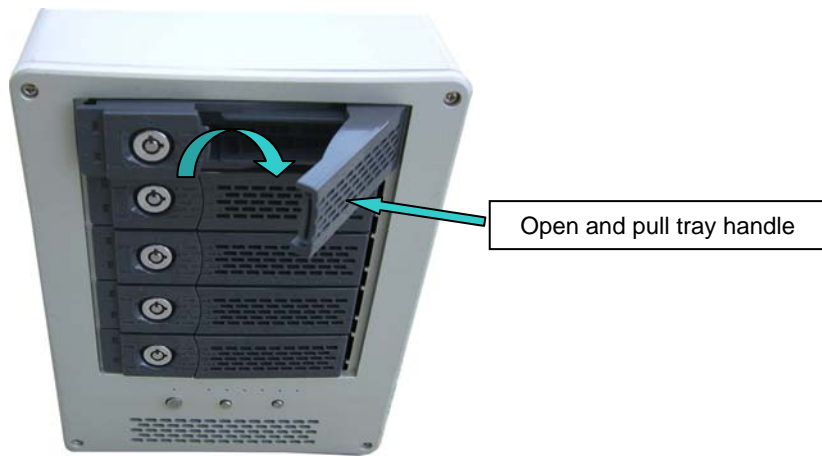
There are three steps to install a hard drive.

#### 1. Remove a tray from the enclosure

- ◆ On the front side of the tray, press the slide lock to the left (on the left side, where the key hole is) to release the tray latch:

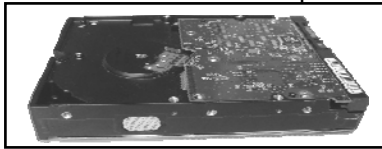


- ◆ Pull the tray handle forward, then pull out the tray:



**2. Attach the hard drive to the tray**

- ◆ Place your hard drive on a flat surface with the printed circuit board/circuitry facing up:



- ◆ Position the tray over the hard drive and align the four screw holes on the drive to the countersunk screw holes on the tray. The connectors on the back of the hard drive must be aligned with the back of the tray (to the right in the picture below):



- ◆ Attach the hard drive to the tray with the four supplied countersink-type



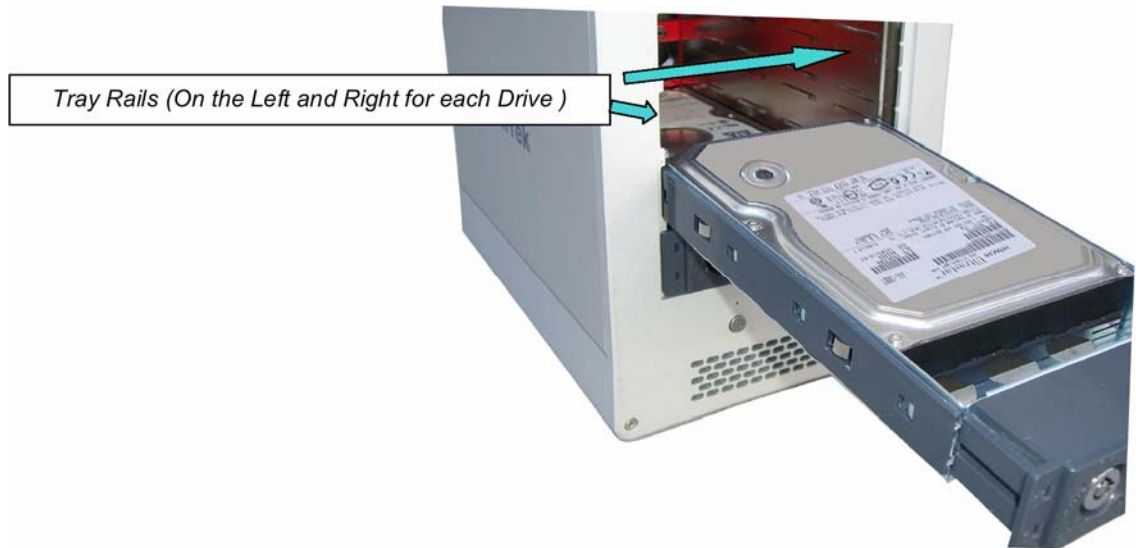
***Important:***  
Exposed hard drive connectors should be flush with the tray on this end

**WARNING - POTENTIAL DAMAGE ISSUE**

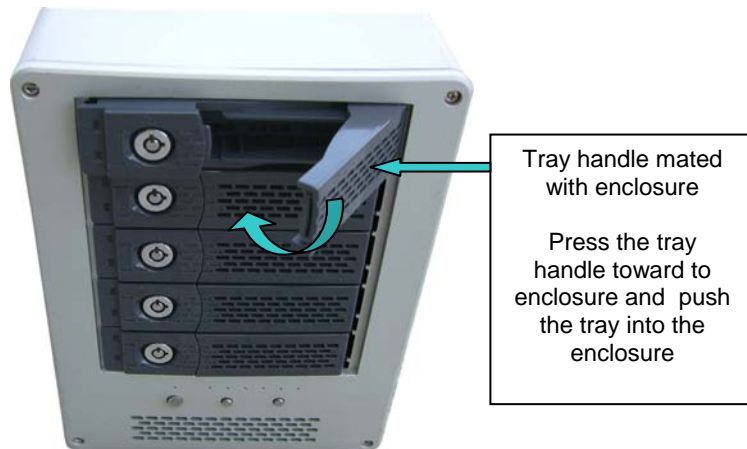
When attaching drives to tray/sleds, be sure that all screws are tightened completely, and that the screw heads are flush with, or below, the plane of the drive sled. Protruding screw heads can interfere with, or even prevent the tray's/sled's removal from the enclosure. In some cases, failure to securely tighten the drive tray screws may result in serious damage to the enclosure when the user attempts to recover the hard drive. If you are unable to tighten any screw until its head is completely seated, do not insert the sled into the enclosure until the potential interference is removed or corrected.

### Insert the drive tray into the enclosure

- ◆ There are five sets of tray rails inside the SeriTek/5PM enclosure, on the left and right sides of each of the five slots: 1 (top), 2 (second from the top), 3 (third from the top), 4 (four from top slot), and 5 (bottom slot).
- ◆ Position the tray with the hard drive between the tray rails and carefully slide it into the enclosure:



- ◆ Holding the handle out, press the tray into position. The tray is ready to be secured and locked into position:

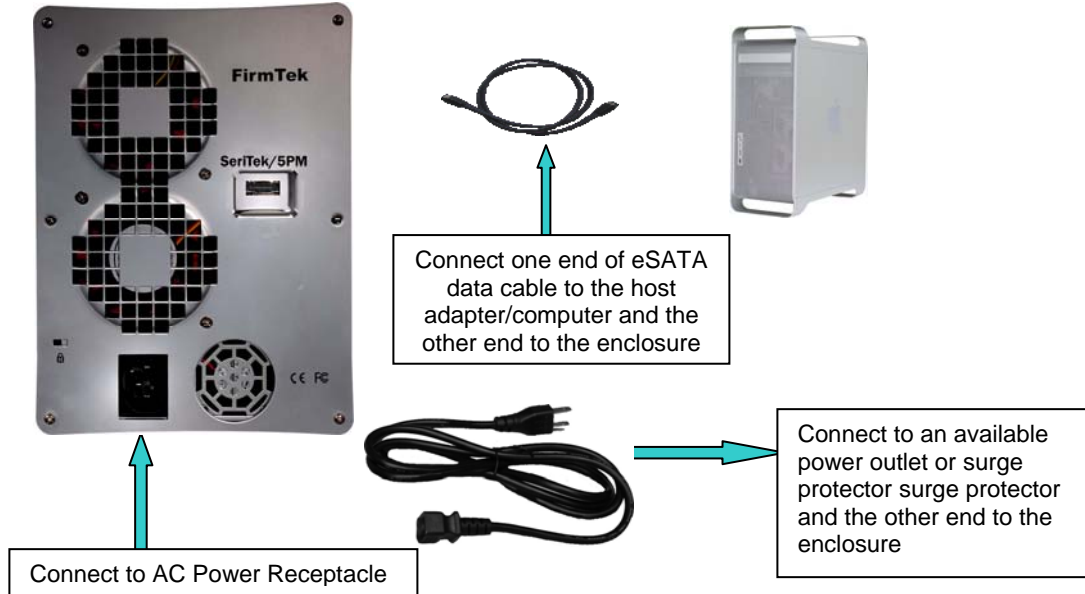


- ◆ Carefully push the tray into the enclosure while pressing the tray handle in. This will lock the tray and hard drive into position. **Note:** *This is a critical step. If there is any resistance, ensure the tray is positioned properly as shown in the previous step, and that the hard drive was properly attached to the tray. Damage can occur to the hard drive and enclosure if they are not installed properly.*

### Repeat the same procedure to install additional hard drives

If fewer than four drives are to be installed, please keep the empty trays inserted in the enclosure to ensure proper airflow.

## Connecting the Shielded Data Cables and Power Adapter



### Note:

- The original Serial ATA (Type A SATA) connectors have an L shaped opening. This type of connector is **not** used on the back of the SeriTek/5PM enclosure. See Figure 2A.
- The newer “eSATA” connectors have a rectangular opening. This style of connector is provided on the back of the SeriTek/5PM for connecting to the SATA host adapter. See Figure 2B.

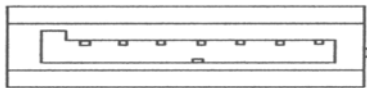


Figure 2A: “L shaped” connector



Figure 2B: “I shaped” eSATA connector

Figure 2: Serial ATA Connector Types: “L shaped” & “I shaped” eSATA

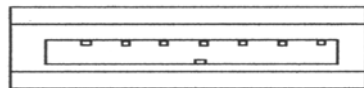
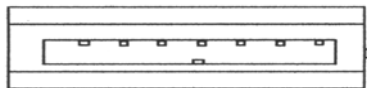


Figure 3: Serial ATA Cable Connectors Shipped with the SeriTek/5PM, both ends of the cable have eSATA / I type connectors

### Making the SATA Connections:

**Caution:** Be sure to connect the cable using the proper orientation to your SeriTek host adapter and external enclosure. It should easily snap into place. Please do not force the cable connector onto the host adapter and hard drive or peripheral interface.

Remember that male and female connectors must be of the same type for them to fit: L-shaped female to L-shaped male or eSATA female to eSATA male.

- First check that you are connecting the correct type of connectors
- If your connectors still do not fit, rotate the cable and try again

## Front Panel Status LEDs

### Power-On Self Test, Test/Fault Beeper, & Mute Button

On the front of the SeriTek/5PM Five-Bay Enclosure there are 3 status lights (PWR, FAN, & TEMP), and a MUTE button. There are also status lights on each disk drive tray: a white light (top) and a blue light (bottom). Look at Table 1, Status Light & Test/Fault Beeper Function Table for a description of what these lights mean:

SYSTEM POWER	FANs	TEMP	Beeper	Top White LED Tray/Sled Light	Bottom Blue Tray Light
White = On	Green = OK	Green = OK		On = Drive Powered On	Flashing = Drive Access
					OFF = Disk Drive does not support activity light
	Constant Red = Fan Not Spinning	Red = Temperature Over 60°C	Constant Sound = Fault		

Table 1: Status Light & Test/Fault Beeper Function Table

If one of the two fans in your SeriTek/5PM fails (or spins slowly) the FAN status light will turn Red and the Beeper Alarm will stay on continuously. **FirmTek recommends if a fan fails, replace it as soon as possible.** At this time, pressing the Mute button will turn the Beeper off. However, if the second fan fails the Beeper Alarm will stay off.

The default SeriTek/5PM fan setting is Medium. The low speed fan setting is designed for short term use with noise critical applications. The manufacturer does not recommend using the low speed fan setting for extended periods of time. If the temperature within the enclosure rises above 60°C (140 degrees Fahrenheit), the TEMP LED will turn Red and the Beeper Alarm will sound continuously, indicating an over-temperature FAULT.

**Note:** If the Beeper Alarm was turned off (muted) after a fan failure and the enclosure temperature later increases to above 60°C, the Beeper Alarm will sound off again continuously and the TEMP LED will turn Red indicating an over-temperature FAULT.

**Note:** The Beeper Alarm can be turned off by pressing the Mute button; FirmTek, recommends that the SeriTek/5PM not be used when there is an over-temp condition: In such a case, shutdown the SeriTek/5PM until the over-temp condition is resolved.

### III. Hot-Swapping Hard Drives

#### Introduction

The SeriTek/5PM external enclosure extends Serial ATA's storage capabilities outside of the computer chassis. Serial ATA hard drives can be swapped in and out of the SeriTek/5PM enclosure within seconds.

While hard drives may be easily inserted and removed, some operating systems and/or host adapters do not support the removal and addition of hard drives while the computer is running. Hot-swapping hard drives on the Macintosh computer is only supported when utilizing FirmTek's SeriTek/2SE4, SeriTek/2ME4-E, SeriTek/2SE2-E and SeriTek/2SM2-E external host adapters that include advanced hot-swap capabilities. Windows 2000, Windows XP, and Windows 2003 hot swapping is supported when a special procedure is followed (described below under "Windows Hot-Swap Procedure").

#### General Hot-Swap Guidelines

- ◆ Do not disconnect or remove hard drives while transferring data.
- ◆ Save your work and close associated applications before removing the external hard drive (applications need to be closed since they may keep temporary working files open on the external hard drive).
- ◆ Always unmount the volumes (eject, disable, or drag the volumes to trash) associated with an external hard drive before removing it.
- ◆ As a general rule, power-down the SeriTek/5PM external enclosure after powering down the computer. Power on the external enclosure before powering on the computer.
- ◆ If RAID volumes span internal and external hard drives, do not attempt to remove and insert external hard drives that partially support the RAID volume or data loss may occur. An example is a RAID volume that spans hard drives located within the computer chassis and the SeriTek/5PM external enclosure.
- ◆ Do not remove a hard drive that is being used as the Startup Disk.

#### Macintosh Hot-Swap Procedure with the SeriTek/2SE4, SeriTek/2ME4-E, SeriTek/2SE2-E and SeriTek/2SM2-E host bus adapters External Host Adapter

The hot-swap procedure is the same for both Macintosh OS 9.XX and 10.1.5 and later.

##### ***Connecting External Hard Drive(s)***

If your Macintosh computer is not turned on, power on the external enclosure then power on the computer. If the Macintosh computer is already powered on, you may power on the external enclosure and then insert the hard drives. When you connect the first hard drive, you will see a "SATA Configuration Changed" window. If this is the only hard drive you connect, you may select "OK" in the dialog box. If you have an additional hard drive to connect, insert it and then select "OK" in the dialog box.

##### ***Removing External Hard Drive(s)***



**Caution:** To prevent loss of data, save your work and close associated applications before removing an external hard drive (applications need to be closed since they may keep temporary working files open on the external hard drive). Always unmount the volumes (eject or drag the volumes to trash) associated with an external hard drive before removing it.

Eject or drag all of the volumes associated with the hard drive(s) before disconnecting or removing them. When removing a hard drive you will see a "SATA Configuration Changed" window. If this is the only hard drive you plan to remove, you may select "OK" in the dialog box. If you have additional hard drives to remove, remove them and then select "OK" in the dialog box.

## Windows Hot-Swap Procedure

Hard drives may be hot-swapped under Windows 2000, Windows XP, and Windows 2003.

Note: Hot-swap functionality is not available for Windows 98/98SE/ME; please shut down the system before adding or removing hard drives when using these operating systems.



**Caution:** To prevent loss of data, save your work and close associated applications and directory folders before removing the external hard drive (applications need to be closed since they may keep temporary working files open on the external hard drive).

### **Hot-Swap Procedure**

- ◆ Bring up the Windows Device Manager: Right-click on *My Computer*, click *Manage*, and then click *Device Manager*.
- ◆ Go to *Disk Drives* and find the disk you want to remove.
- ◆ Right click on the desired disk drive and select *Remove/Disable*.
- ◆ After performing this operation, you can remove the hard drive without risk of losing any data that is currently stored in cache memory.
- ◆ To reconnect the external hard drive, reconnect it and Windows will automatically detect it.
- ◆ If you are re-attaching a hard drive after the remove/disable operation as explained above, you must make sure that the hard drive is power cycled before reconnecting it (Removing, waiting a few seconds, and reinserting the hard drive into the SeriTek/5PM external enclosure will effectively power-cycle the drive. If several drives were removed/disabled, then the external enclosure itself may be power-cycled).

## IV. Sleeping & Wake-UP Procedures:

When you wish to sleep or shutdown the system and the SeriTek/5PM:

1. Dismount the volume: On a Mac dragging the volume to the trash causes the trash icon to change; dropping the volume there dismounts the volume.
2. Put the system into Deep Sleep, or shutdown normally.
3. Turn off the SeriTek/5PM enclosure.

When you wish to Wake-Up or Turn-On the Computer System:

1. Turn on your SeriTek/5PM enclosure.
2. Wake-Up or Turn-On your System normally.

At this point your system should automatically load, then discover, and mount your volumes

## V. Troubleshooting

### • **My hard drive isn't recognized**

Check cables and connections. Ensure the 7-pin sSATA cable is properly oriented to the connectors on the computer and the external enclosure. Ensure the enclosure is properly powered. Make sure the hard drive(s) has been initialized for use with the computer.

### • **The transfer rate on my Power Macintosh 8500 seems less than the Serial ATA specified maximum of 150Mbytes/sec.**

Early Power Macintosh computers, typically built before the "beige G3" was available, have limited hardware resources. These limited resources severely limit data transfer rates of many storage technologies, including Serial ATA.



- **Does the SeriTek/5PM work with all PPC and Intel based Macintosh computers?**  
No, SeriTek/5PM only works with computers with at least one PCI, PCI-X or PCIe slot available. If your system lacks PCI, PCI-X or PCIe slots you cannot install the SeriTek/2SE4, SeriTek/2ME4-E, SeriTek/2SE2-E and SeriTek/2SM2-E host adapters.
- **My older Parallel ATA hard drives and peripherals have jumper settings. However I can't find jumper settings on my new Serial ATA hard drive or peripheral. How can I set it to Master or Slave; is there any way to set the SCSI ID?**  
Serial ATA hard drives and peripherals are internally configured as Master drives. Only one drive can be attached to each Serial ATA bus/connector. There is no need to change settings on either the drive or the controller.

## VI. Product Support

### Technical Support

For additional information on how to use SeriTek/5PM, download the latest firmware updates, or for technical assistance, please visit us at [www.firmtek.com](http://www.firmtek.com), or email us at [support@firmtek.com](mailto:support@firmtek.com).

Please provide the following information when contacting us:

- Product model and serial number
- Computer model
- Computer OS type and version (example: Mac OS X, version 10.2; Windows 2000 or Windows XP)
- Hardware and software installed on your system
- Contact information including daytime telephone number and email address
- A detailed description of the question or problem

### Return Merchandise Authorization

If FirmTek technical support determines the product needs to be repaired or replaced, a Return Merchandise Authorization (RMA) number and shipping address will be provided. Please pack the product in the original shipping container and include all of the original packaging - including the static bag, all hardware, software, cables, and other accessories that came with the original product. You are responsible for shipping and insurance costs, and any damage incurred due to improper packaging or transport.

FirmTek reserves the right to determine whether the product is to be repaired or replaced with new or refurbished parts, or with a new or refurbished product. Standard United States return shipping charges will be paid by FirmTek. Foreign and other shipping methods such as express shipping are available for an additional charge.

Write down the RMA number on the outside of the shipping container, and include the following information with the shipment:

- A description of the problem
- A copy of the original purchase invoice
- Return shipping address
- Contact information including daytime telephone number and email address

FirmTek, LLC reserves the right to refuse shipments missing a valid RMA number.

## VII. Product Warranty and Disclaimers

FirmTek warrants to the original buyer only that this product shall be free from defects in material and workmanship for a period of one year from the original date of purchase. This warranty is valid only when the original purchase invoice is provided. This warranty shall not apply to any defects resulting from improper handling, misuse, misapplication, abuse, or unauthorized modification(s) which are performed by the end user.

FirmTek, LLC reserves the right to make changes to any products described in this manual at any time without notice. FirmTek, LLC assumes no responsibility for the use or reliability of hardware or software that is not supplied by FirmTek, LLC or its affiliated companies. FirmTek, LLC does not assume any responsibility or liability arising out of the application or use of any product described in this document, except as expressly agreed to in writing by FirmTek, LLC; nor does the purchase or use of a product from FirmTek, LLC convey a license under any patent rights, copyrights, trademark rights, or any other intellectual property rights of FirmTek, LLC or third parties.

## **VIII. Regulatory Compliance Statements**

### **RoHS compliant**

### **Federal Communications Commission Radio Frequency Interference Statement**

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

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 instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. However, if this equipment does cause interference to radio or television equipment 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 equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.
- Use a shielded and properly grounded I/O cable and power cable to ensure compliance of this unit to the specified limits of the rules.

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.

### **CE European Union Compliance Statement**

EMC compliance:

Emissions: EN55022: 1998, Class B  
Immunity: EN55024: 1998  
EN61000-4-2: 1995+A1: 1998  
EN61000-4-3: 1995+A1: 1998  
EN61000-4-4: 1995  
EN61000-4-6: 1996  
EN61000-4-8: 1993

SeriTek/5PMTSLKC2KH0101