

# TEMPO™ SATA E4i

## Serial ATA Host Controller for PCI Express® Slot

### Quick Start Guide for Tempo SATA E4i

#### You Should Have

The following items should be included in your product package:

- One Tempo SATA E4i card
- One Serial ATA data cable
- One Sonnet Software CD

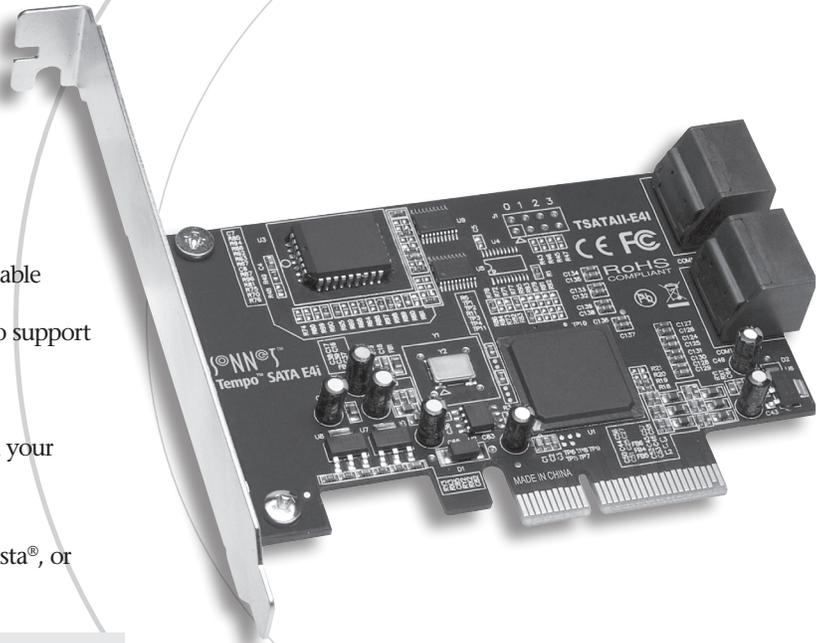
The following items may be required (sold separately):

- Medium Phillips screwdriver
- One or more Serial ATA data cables
- Internal drive mounting hardware
- One or more legacy (4-pin) power cable Y-adapters
- One or more legacy to Serial ATA (4-pin to 15-pin) power cable adapters
- One or more Ultra ATA to Serial ATA adapters (only used to support parallel ATA drives)

#### System Requirements

Tempo SATA E4i requires the following in order to operate in your system:

- One available PCI Express (PCIe) x4 slot\*
- Mac OS® X Version 10.3 or later, Windows® 7, Windows Vista®, or Windows XP with SP2 installed\*\*



**Support Notes:** We recommend that you make a backup of important information on your system's current hard drive prior to installing new hardware or software.

When handling computer products, you must take care to prevent components from being damaged by static electricity. Before opening your computer or removing parts from their packages, always ground yourself first by touching a metal part of the computer, such as a port access cover, and work in an area free of static electricity; avoid carpeted areas. Handle all electronic components only by their edges, and avoid touching connector traces and component pins. Also, avoid touching the logic board and any of its components.

\* x1 slot compatible, but with reduced performance

\*\* Creating RAID volumes under Windows requires dynamic disk storage, a formatting option available with Windows Server 2008 R2, Windows Server 2003 SP1, Windows 7 Professional, Enterprise or Ultimate (32- and 64-bit versions), Windows Vista Enterprise or Ultimate (32- and 64-bit versions), or Windows XP Professional (32- and 64-bit versions).

In order to create RAID volumes larger than 2TB, you must do one of the following: Span (link together in a virtual chain) the volumes, and then format them as NTFS. -OR- Use GPT formatting. Note that drives and volumes with GPT formatting are not visible to any version of Windows XP Professional, nor to the 32-bit version of Windows Server 2003 SP1.



Remember to register your product online at <http://registration.sonnettech.com> to be informed of future upgrades and product releases.

Software updates and links are available from the Sonnet web site at [www.sonnettech.com](http://www.sonnettech.com). • Online support form available at <http://supportform.sonnettech.com>.

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## Quick Start Guide for Tempo SATA E4i



**Support Note:** Technical knowledge may be required to gain access to the computer's expansion bays in certain computers. We recommend you first consult your computer's user manual. If you feel you are unable to install the computer hardware, contact a qualified technician.

### Installation Preparation

Prior to installing the Tempo SATA E4i into your system and connecting any hard drives, you should familiarize yourself with the parts to be installed. We also strongly recommend that you read the sections in your computer's user manual that address hard drive and PCI card installation.

1. The Tempo SATA E4i card uses internal Serial ATA (SATA) data cable connectors. Internal connectors have an L-shaped "key" in the center (**Figure 1**).
2. **Figure 2** illustrates the internal Serial ATA data cable included with the Tempo card; *plug the straight connector into the Tempo card.*

3. Locate the connector block on your drive. Some Serial ATA drives are equipped with both a legacy 4-pin power connector and a Serial ATA 15-pin power connector (**Figure 3**). Depending on your computer, you may need to use 4-pin to 15-pin power adapter cables.

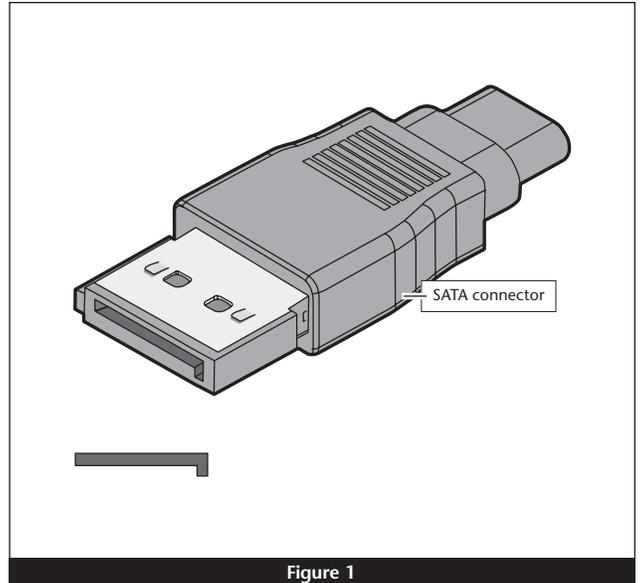


Figure 1

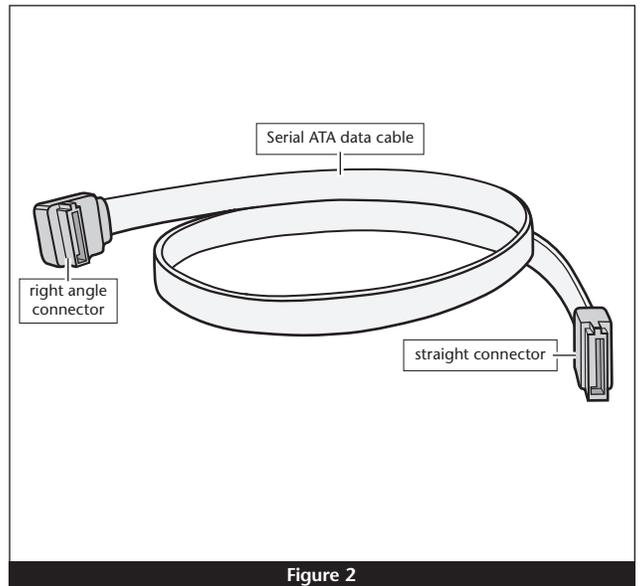


Figure 2

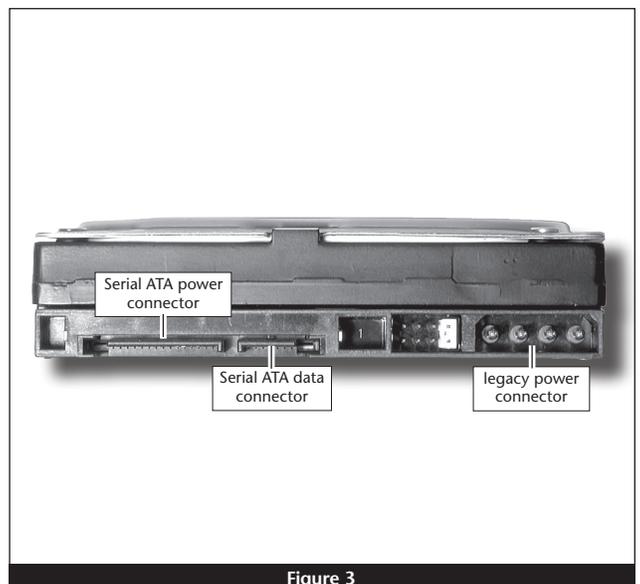


Figure 3

## Quick Start Guide for Tempo SATA E4i

### Hardware Installation Steps

This section covers the installation of Tempo SATA E4i into your system and connection of one or more hard drives.

1. Shut down your computer, and then open it to access the expansion card area (PCI Express slots); refer to your computer's user manual for specific information.
2. Install your hard drives now. (Depending on your computer model, drive mounting hardware may be required to secure your hard drives. Refer to your computer's user manual.)
3. Plug the SATA data cables' right angle connectors into your drives; **verify the connectors are plugged in securely.** (If you are connecting more than one drive, you will need additional SATA data cables.)
4. Locate the power connector plugged into your computer's existing hard drive. You should find at least one extra power connector near the existing drive; if you have installed only one new drive, plug the extra power connector into it. **Connect only one power connector to the drive.** If you have installed more than one new drive, or there are no additional power connectors, you may need to use power cable Y-adapters (sold separately) or other adapters (sold separately) which will provide power to the connected hard drives. **Verify the connectors are plugged in securely.**
5. Locate an available PCI Express slot inside your computer and remove its access cover.



**Support Note for Mac Users:** Power Mac G5 users should install the Tempo card either into slot 2 or 4.

6. Remove the Tempo card from its packaging, and then install it into the slot; **make sure the card is firmly seated and secured.**
7. Route the Serial ATA data cable(s) to the Tempo card; avoid heat sinks and make sure the cables will not get crushed or pinched by any part of the case when the computer is reassembled.
8. Plug in the Serial ATA data cable(s) to the Tempo card.
9. Check the cable connections; **make sure all cables are connected securely to the Tempo card and the hard drives.**
10. Close the computer; be very careful not to pinch the cables.
11. **If you are a Power Mac G5 user, your card installation is complete; skip to page 5 for drive formatting instructions. If you are a Windows user, go to the next panel for driver installation instructions.**

### Windows 7 Driver Installation

This section describes the installation of drivers to support the Tempo SATA E4i in systems running Windows 7.



**Support Note:** The software on the included Installer CD may not be the latest version available. Before installing this product, check the version number of the software on the CD and what's available at [www.sonnettech.com/support/kb/kb.php](http://www.sonnettech.com/support/kb/kb.php). Download and install the newer version, if available.

1. Turn on your computer and log in; during startup, a *Installing Device Driver Software* pop-up will appear, followed by a message that the device driver software was *not* successfully installed. Close the message.
2. Click Start > Control Panel.
3. In the *Control Panel* window, double-click Device Manager. If you have not disabled User Account Control (UAC), a UAC window will appear; click Continue.
4. When the *Device Manager* window appears, click the arrow next to IDE ATA/ATAPI controllers to expand the list. Right-click "Standard Dual Channel PCI IDE Controller" and select Update Driver Software.
5. When the *Update Driver Software* window appears, insert the Tempo SATA Host Controller Software CD into your computer's optical drive, and then click "Browse my computer for driver software".
6. When the next window appears, click Browse.
7. When the *Browse for Folder* window appears, click "Computer" to expand the list, then click the icon for the optical drive containing the software CD, and then click OK.
8. Back in the *Browse for driver software* window, make sure the checkbox next to Include Subfolders is checked, and then click Next. If a *Windows Security* window appears, click Install; the driver software will be installed.
9. When the *Windows has successfully updated your driver software* window appears, click close; you may now format drives attached to the Tempo card. Skip to page 7 for drive formatting information.

## Quick Start Guide for Tempo SATA E4i

### Windows Vista Driver Installation

This section describes the installation of drivers to support the Tempo SATA E4i in systems running Windows Vista.



**Support Note:** The software on the included Installer CD may not be the latest version available. Before installing this product, check the version number of the software on the CD and what's available at [www.sonnettech.com/support/kb/kb.php](http://www.sonnettech.com/support/kb/kb.php). Download and install the newer version, if available.

1. Turn on your computer and log in; during startup, an *Installing Device Driver Software* pop-up will appear, followed by a message stating that the device driver software was *not* successfully installed. Close the message.
2. Click Start > Settings > Control Panel.
3. In the *Control Panel* window, double-click Device Manager. If you have not disabled User Account Control (UAC), a *UAC* window will appear; click Continue.
4. When the *Device Manager* window appears, click the + sign next to IDE ATA/ATAPI controllers to expand the list. Right-click "Standard Dual Channel PCI IDE Controller" and select Update Driver Software.
5. When the *Update Driver Software* window appears, insert the Tempo SATA Host Controller Software CD into your computer's optical drive, and then click "Browse my computer for driver software".
6. When the *Browse for Folder* window appears, click "Let me pick from a list of device drivers on my computer".
7. When the next window appears, click Have Disk; a new window will appear. **Substituting whatever drive letter is appropriate**, type F:\DRIVERS\x32 (or F:\DRIVERS\x64 if you're using 64-bit Windows Vista), and then click OK.
8. Back in the *Update Driver Software* window, click Next; the software will be installed. (If a window appears stating that the Tempo software has not passed Windows Logo testing, click Continue Anyway.)
9. When the next window appears, click Close; you may now format drives attached to the Tempo card. Skip to page 7 for drive formatting information.



**Support Note:** After its driver software has been updated, Tempo SATA E4i will be listed as a Storage Controller in the *Device Manager* window under Windows Vista.

### Windows XP Professional Driver Installation

This section describes the installation of drivers to support the Tempo SATA E4i in systems running Windows XP Professional.



**Support Note:** The software on the included Installer CD may not be the latest version available. Before installing this product, check the version number of the software on the CD and what's available at [www.sonnettech.com/support/kb/kb.php](http://www.sonnettech.com/support/kb/kb.php). Download and install the newer version, if available.

1. Turn on your computer; during startup, two *New Hardware Found* pop-ups may briefly appear, with IDE Controller and Standard Dual Channel PCI IDE Controller listed as the new hardware types.
2. Click Start > Control Panel. When the *Control Panel* window appears, double-click the System icon. (If the System icon is not visible, click the Switch to Classic View link to make it appear.)
3. When the *System Properties* window appears, click the Hardware tab, and then click Device Manager.
4. When the *Device Manager* window appears, click the + sign next to IDE ATA/ATAPI controllers to expand the list. Right-click "Standard Dual Channel PCI IDE Controller" and select Update Driver.
5. When the *Hardware Update Wizard* window appears, select "No, not this time", and then click Next.
6. When the next window appears, click "Install from a list or specific location", and then click next.
7. When the next window appears, click "Don't search. I will choose the driver to install", and then click Next.
8. When the next window appears, click Have Disk; a new window will appear. Insert the Tempo SATA Host Controller Software CD into your computer's optical drive. **Substituting whatever drive letter is appropriate**, type F:\DRIVERS\x32 (or F:\DRIVERS\x64 if you're using 64-bit Windows XP), and then click OK.
9. Back in the *Hardware Update Wizard* window, click Next; the software will be installed. (If a window appears stating that the Tempo software has not passed Windows Logo testing, click Continue Anyway.)
10. When the next window appears, click Finish; you may now format drives attached to the Tempo card. Skip to page 7 for drive formatting information.



**Support Note:** After its driver software has been updated, Tempo SATA E4i will be listed as a SCSI and RAID Controller in the *Device Manager* window under Windows XP.

## Quick Start Guide for Tempo SATA E4i

### Mac OS X Drive Formatting—RAID Sets

This section describes the process of formatting (initializing) multiple hard drives connected to the Tempo SATA E4i using Disk Utility under Mac OS X Version 10.5; the process is nearly identical under Mac OS X Version 10.4. If you choose to do so, you may format your drives using SoftRAID 3.1 or later; refer to that product's documentation for instructions.

1. Turn on your computer. During startup, one or more messages referring to unreadable volumes will be displayed; click Initialize... to launch Disk Utility. After Disk Utility launches, click the Initialize button in each remaining message window.
2. If it is not already open, launch Disk Utility (**Figure 4**). Note that all drives attached to the Tempo card may be identified in the information window by their custom icon with the Sonnet S logo.



**Support Notes:** The remaining steps in this section describe the creation of a RAID 0 (striped) set. If you intend to create a RAID 1 (mirrored) or RAID 10 (striped/mirrored) set, the procedure is similar to the remaining steps. Please refer to Disk Utility help for further information.

3. Select one of the drives you want to format in a RAID set by clicking the drive symbol or the "name" of the drive; a set of tabs will appear in the right pane. Click the RAID tab, select all the drives you will use to create your striped RAID set, and then drag them into the disk field (**Figure 5**). **Be careful NOT to accidentally drag in a drive you don't want included in the RAID.**
4. From the drop-down menus, select the volume format and the RAID scheme (Striped RAID Set), and then type in the name for your RAID volume (**Figure 5**).
5. Click the Options button. From the drop down menu, select a RAID block size (**Figure 6**). If you are working with video, selecting the largest block size will help improve performance. If you are working with many smaller files (databases, etc.) a smaller block size will work well. Click OK.
6. Click Create. When the *Creating RAID* window appears, click the Create button; all of the selected drives will be formatted and the RAID volume created. Close Disk Utility; your drives are now ready for use and your installation is complete.



**Support Note:** See page 8 for the Tempo SATA E4i card's port and channel identification information.

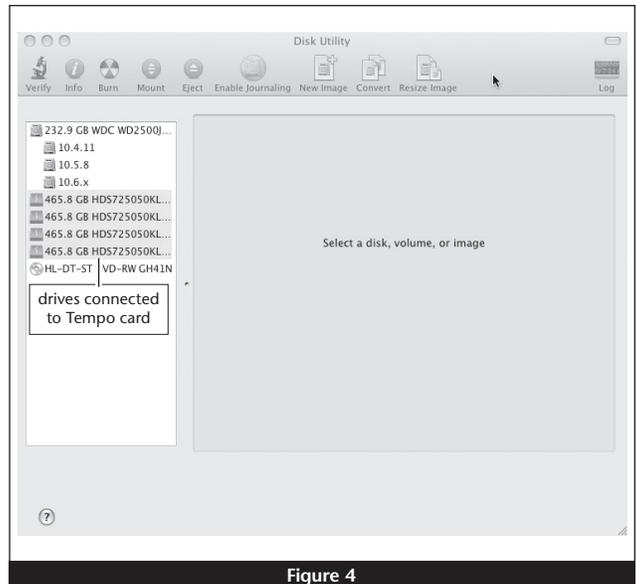


Figure 4

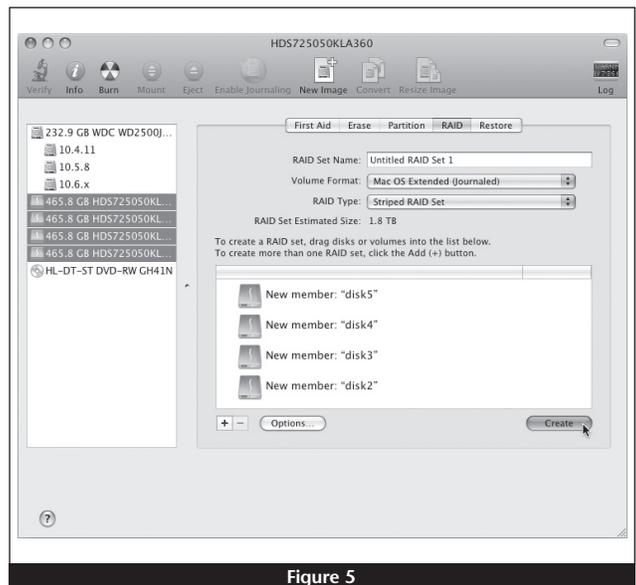


Figure 5

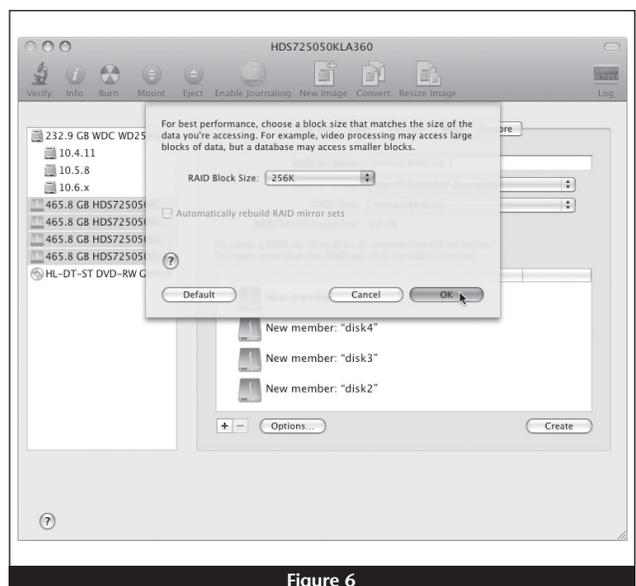


Figure 6

## Quick Start Guide for Tempo SATA E4i

### Mac OS X Drive Formatting—Individual Drives (Not in a RAID Set)

This section describes the process of formatting (initializing) individual hard drives connected to the Tempo SATA E4i using Disk Utility under Mac OS X Version 10.5; the process is nearly identical under Mac OS X Version 10.4. If you intend to create a Mac OS-formatted RAID set with the drives attached to the Tempo card, go back to “Mac OS X Drive Formatting—RAID Sets” on the previous page.

1. Turn on your computer. During startup, one or more messages referring to unreadable volumes will be displayed; click Initialize... to launch Disk Utility. After Disk Utility launches, click the Initialize button in each remaining message window.
2. If it is not already open, launch Disk Utility (Figure 7). Note that all drives attached to the Tempo card may be identified in the information window by their custom icon with the Sonnet S logo.
3. Select one of the drives you want to format by clicking the drive symbol or the “name” of the drive; a set of tabs will appear in the right pane. Click the Partition tab, and then click on the drop down menu beneath “Volume Scheme:” to select a number of partitions for the volume; you may optionally choose to partition each drive to create two or more smaller “virtual” drives (Figure 8).
4. Click to highlight a partition, and then type a name in the Name field; repeat for each partition (Figure 8). After formatting, each partition will appear in the Finder window as a drive.
5. Click Apply (Figure 8).
6. When the *Partition Disk* window appears, click the Partition button (Figure 9). If necessary, repeat steps 3–5 to partition any other drives connected to the Tempo card. When partitioning and formatting are complete, close the Disk Utility application; you can now use your drive(s).



**Support Note:** See page 8 for the Tempo SATA E4i card’s port and channel identification information.

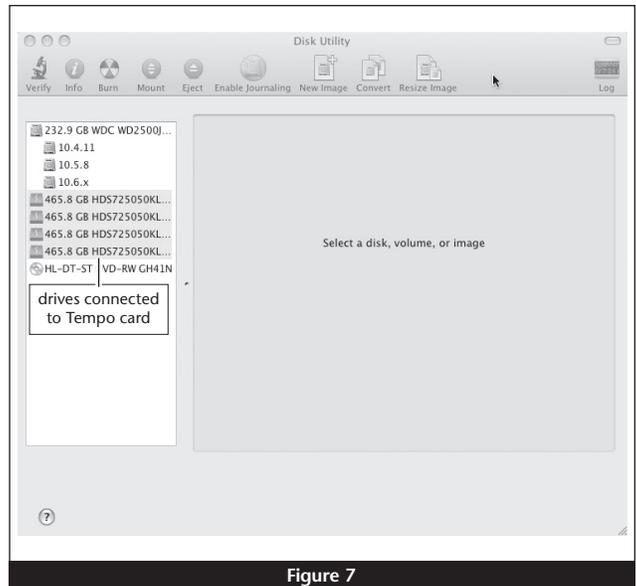


Figure 7

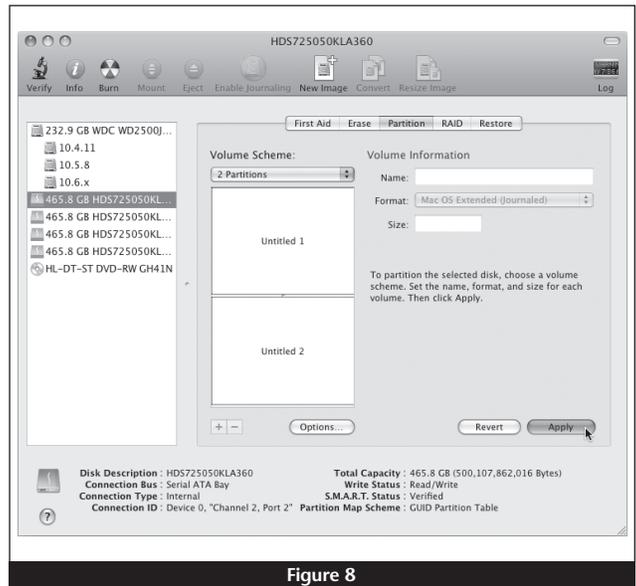


Figure 8

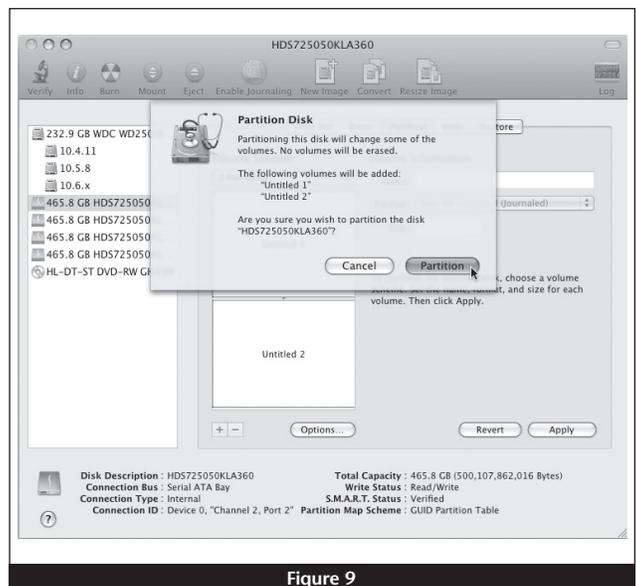


Figure 9

## Quick Start Guide for Tempo SATA E4i

### Windows Drive Formatting

If you intend to format drives connected to the Tempo SATA E4i using Windows drive formatting tools, you may find much more information by using “format volume” as the search item in Windows Help.

The procedure listed below describes the process of formatting and configuring drives under Windows Vista; steps for formatting under Windows 7 and XP Professional are very similar.

1. Start Windows, log in, and then click Start > Control Panel.
2. In the *Control Panel* window, double-click Administrative Tools. If you are using Windows Vista or Windows 7 and have not disabled User Account Control (UAC), a *UAC* window will appear; click Continue.
3. In the *Administrative Tools* window, double-click Computer Management.
4. In the *Computer Management* window, click Disk Management under Storage to launch the Disk Management application.
5. If an *Initialize Disk* window appears or if disks are described as not initialized, select a partition style for the attached drive(s), and then click OK; the drive will be initialized (**Figure 10**). Repeat as necessary with other drives attached to the Tempo card.
6. Right-click the field next to the name field of one of the attached drives and select the formatting type you wish to use for it. Repeat as necessary with other drives attached to the Tempo card (**Figure 11**).
7. Depending on the formatting type you chose, a New Partition Wizard may appear; follow the onscreen instructions to complete formatting of the drive(s). Once the drives are finished being formatted, they are ready to use.



**Support Note:** See page 8 for the Tempo SATA E4i card's port and channel identification information.

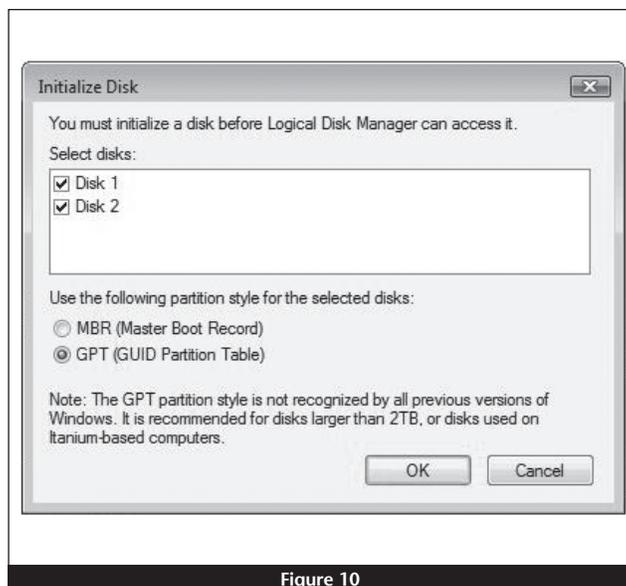


Figure 10

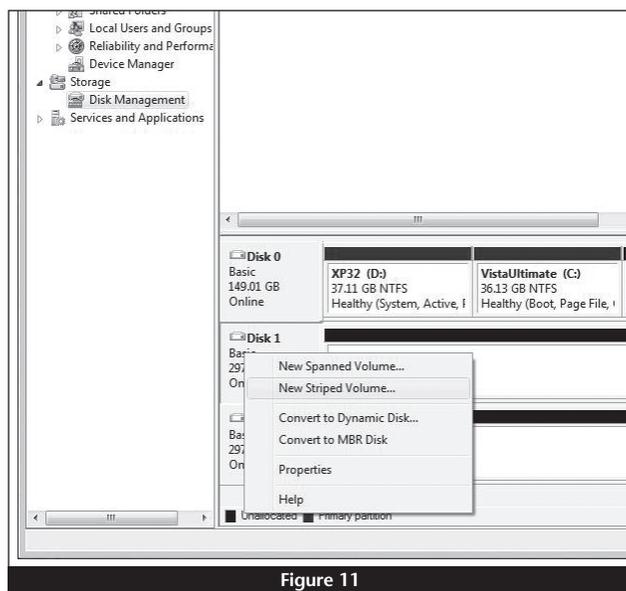


Figure 11

## Quick Start Guide for Tempo SATA E4i

### About Tempo SATA E4i's Ports

1. Each SATA connector on the Tempo card is assigned a channel number that may be helpful if you need to diagnose any issues (**Figure 12**).

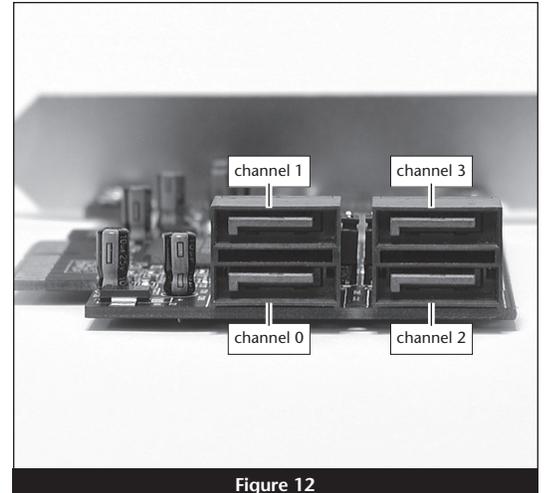


Figure 12