

TEMPO™ SATA X4i

Serial ATA Host Adapter for PCI-X

Quick Start Guide for Tempo SATA X4i

You Should Have

The following item should be included in your product package:

- One Tempo SATA X4i card
- One Serial ATA data cable

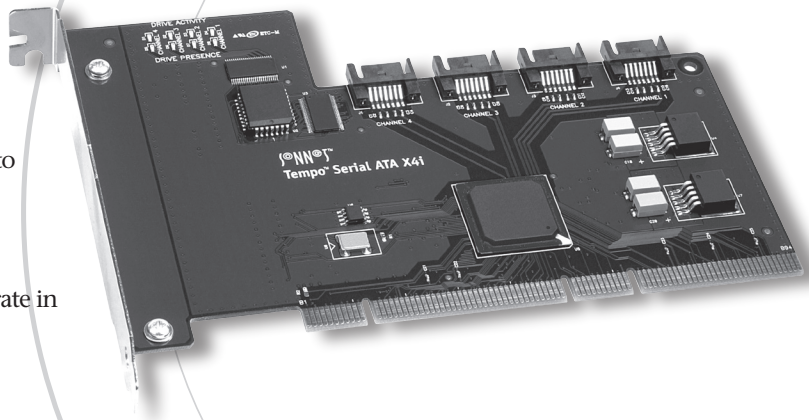
The following items may be required (sold separately):

- 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

The Tempo SATA X4i requires the following in order to operate in your system:

- One available PCI-X or PCI slot
- Mac OS® X Version 10.2.x or later, or Windows® XP



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.

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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 X4i 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 X4i card uses internal Serial ATA (SATA) data cable connectors. The internal connectors have an L-shaped "key" in the center (Figure 1).

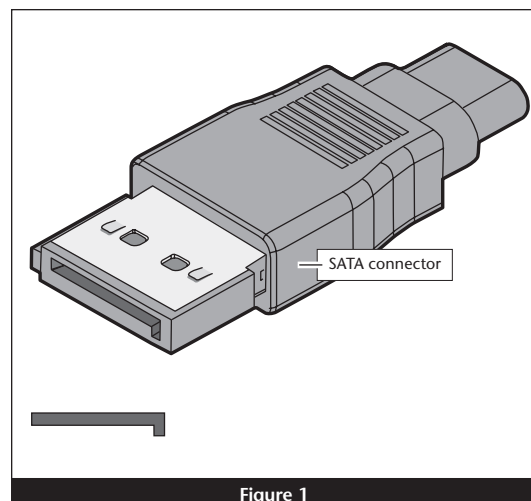


Figure 1

2. Figure 2 illustrates the internal Serial ATA data cable included with the Tempo card; *plug the straight connector into the Tempo card.*

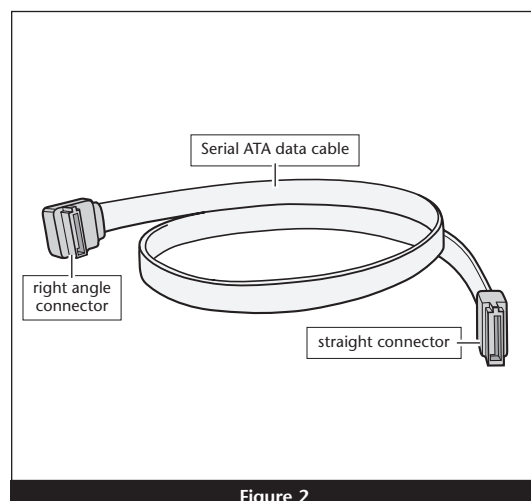


Figure 2

3. Locate the connector block on your drive. Many 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.

Hardware Installation Steps

This section covers the installation of the Tempo SATA X4i into your system and connection of one or more hard drives.

1. Shut down the computer.
2. Open your computer to access its expansion card area (PCI-X or PCI slots); refer to your computer's user manual for specific information.
3. 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.)
4. 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.)

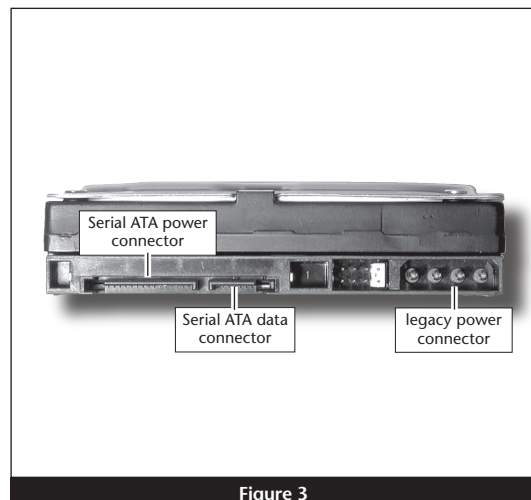


Figure 3

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5. 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 or other adapters which will provide power to the connected hard drives. **Verify the connectors are plugged in securely.**
6. Locate an available PCI-X or PCI slot inside your computer and remove its access cover, if present, from the rear of the computer.



Support Note for Power Mac G5 Users: If your computer has PCI-X slots, you should be aware that when certain standard 33 MHz PCI adapter cards are installed along with the Tempo card in slots 2 and 3, the Tempo card's performance may be adversely affected.

7. Remove the Tempo card from its packaging, and install it into the slot; **make sure the card is firmly seated.**
8. 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.
9. Plug in the Serial ATA data cable(s) to the Tempo card.
10. Check the cable connections; **make sure all cables are connected securely to the Tempo card and the hard drives.**
11. Secure the Tempo card firmly in place with the previously removed mounting screw if necessary, and then close the computer; be very careful not to pinch the cables.
12. **If you are a Mac user, skip to page 4. If you are a Windows user, continue below.**

Windows XP Driver Installation

This section describes the installation of drivers to support the Tempo SATA X4i in systems running Windows XP.

1. Turn on your computer; during Windows 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. Log on to the Internet and point your web browser to: www.sonnettech.com/downloads/adapter_sw.html#tsata-xwin
3. Find the file that matches the version of Windows XP you are using, click the Download button next to it, and save the file to your desktop.

4. Locate the tempo-x file on the desktop. Right-click it and select Extract All...
5. 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.)
6. When the *System Properties* window appears, click the Hardware tab, and then click Device Manager.
7. When the *Device Manager* window appears, click on the + next to IDE ATA/ATAPI controllers to expand the list. Right-click on Standard Dual Channel PCI IDE Controller and select Update Driver.
8. When the *Hardware Update Wizard* window appears, select "No, not this time", and then click Next.
9. When the next window appears, select "Install from a list or specific location (Advanced)" and then click Next.
10. When the next window appears, select "Don't search. I will choose the driver to install" and then click Next.
11. When the next window appears requesting you to select the device driver, select Standard Dual Channel PCI IDE Controller from the list, and then click Have Disk...
12. When the *Install From Disk* window appears, click Browse.
13. Navigate to and open the tempo-x folder, and then open the TempoXP folder, select "mvsata", and then click Open.
14. When the *Hardware Update Wizard* window appears again, click Next.
15. When the *Hardware Installation* window appears, the Tempo card will be identified as "Marvell Serial ATA Gen 2 PCI-X Adapter"; click next. When the *Hardware Installation* window appears, Continue Anyway and the driver will be installed.
15. When the next window appears, click Finish.
16. Click Start > Turn Off Computer, and then click Restart; you may now format drives attached to the Tempo card.

Windows Drive Formatting

If you intend to format drives connected to the Tempo SATA X4i using Windows drive formatting tools, you may locate the information by using "format volume" as the search item in Windows Help.

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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 X4i using Disk Utility under Mac OS X Version 10.4. If you intend to create a RAID set with the drives attached to the Tempo card, skip to “Mac OS X Drive Formatting—RAID Sets” on the next page.

1. Turn on your computer. During startup, your computer will display one or more messages referring to an unreadable disk; click Initialize... to launch Disk Utility (**Figure 4**). After Disk Utility launches, click the Initialize button in each remaining message window.



Figure 4

2. If it is not already open, launch Disk Utility (**Figure 5**). Note that all attached drives appear in the information window, regardless of being formatted or not.

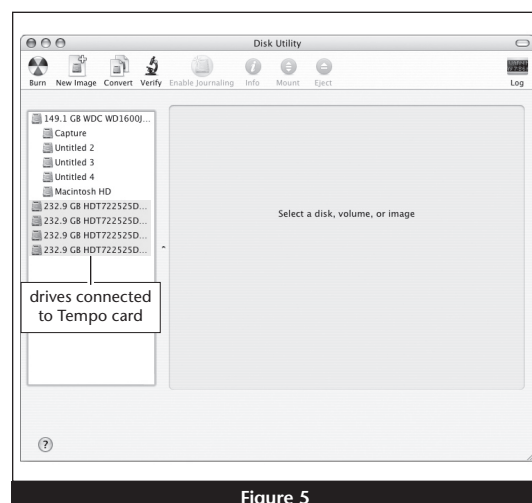


Figure 5

3. Select a drive you want to format by clicking the drive symbol or the “name” of the drive (**Figure 6**). At the bottom of the window, drive capacity, connection type, and connection ID information are listed.
4. Click on the Partition button (**Figure 6**). Click on the drop down menu beneath “Volume Scheme:” and select a number of partitions for the volume; you may optionally choose to partition each drive to create two or more smaller “virtual” drives.
5. Click to highlight a partition, and then type a name in the Name field; repeat for each partition (**Figure 6**). After formatting, each partition will appear in the Finder window as a drive*.
6. Click Partition (**Figure 6**).

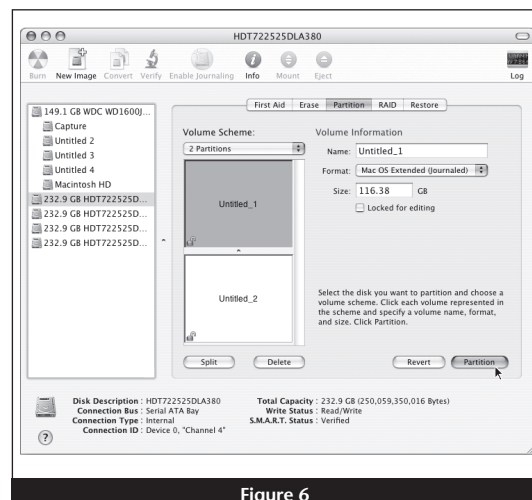


Figure 6

* If you changed the Finder preferences setting to not show hard drives on the desktop, newly-formatted drives won't appear on the desktop after you've formatted them.

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Mac OS X Drive Formatting—Individual Drives (continued)

7. When the *Partition Disk* window appears, click the Partition button (Figure 7). If necessary, repeat steps 3–6 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 7 for port and channel identification, and information on Tempo SATA X4i's status LEDs.

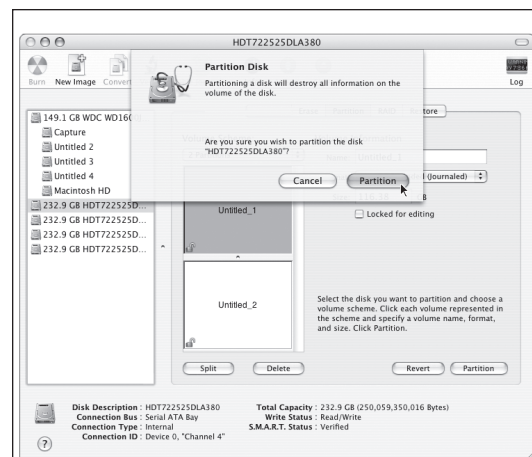


Figure 7

Mac OS X Drive Formatting—RAID Sets

This section describes the process of formatting (initializing) multiple hard drives connected to the Tempo SATA X4i using Disk Utility 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, your computer will display one or more messages referring to an unreadable disk; click Initialize... to launch Disk Utility (Figure 8). After Disk Utility launches, click the Initialize button in each remaining message window.

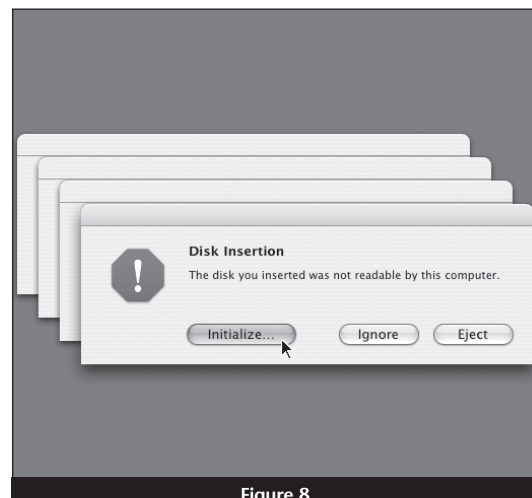


Figure 8

2. If it is not already open, launch Disk Utility (Figure 9). Note that all attached drives appear in the information window, regardless of being formatted or not.

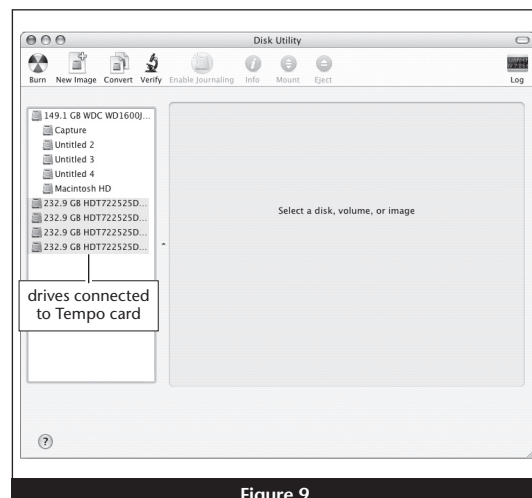


Figure 9

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Drive Formatting—RAID Sets (continued)



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.

All hard drives connected to the Tempo card will be described by Disk Utility as having an internal connection.

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. At the bottom of the window, drive capacity, connection type, and connection ID information are listed.
4. Click the RAID tab in the *Disk Utility* window, select all the drives you will use to create your striped RAID set, and drag them into the disk field (Figure 10). Be careful NOT to accidentally drag in a drive you don’t want included in the RAID.
5. 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 set (Figure 10). Click the Create button.
6. When the *Creating RAID* window appears, click the Create button; all of the selected drives will be formatted and the RAID set created (Figure 11). Close Disk Utility; your drives are now ready for use and your installation is complete.



Support Note: See page 7 for port identification and information on Tempo SATA X4i’s status LEDs.



Figure 10

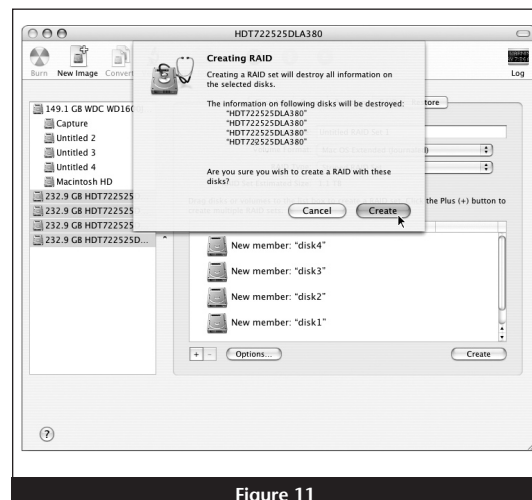


Figure 11

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About Tempo SATA X4i's Ports and LEDs

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**).

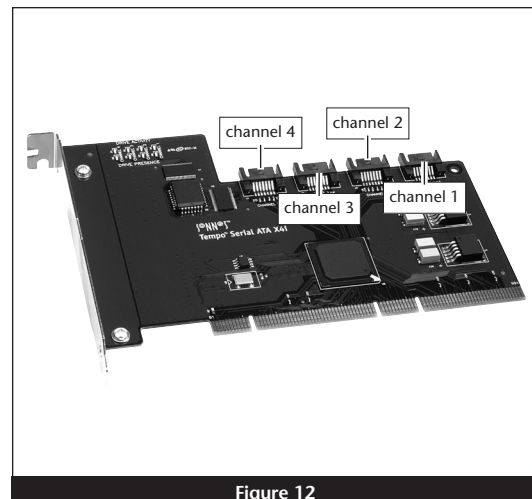


Figure 12

2. When drives connected to the Tempo card are powered and active, the status LEDs on the card will light (**Figure 13**):
 - Green LED ON: Drive(s) present and ready.
 - Amber LED ON/Flashing: Drive(s) reading/writing data.

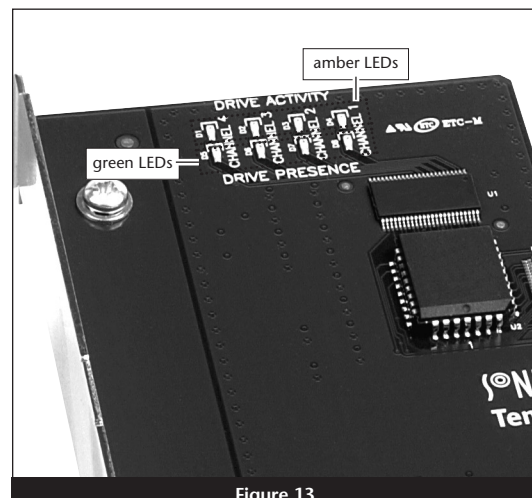


Figure 13