

TEMPO™ -X SATA 4+4

8-Port Serial ATA PCI-X Host Controller

Quick Start Guide for Tempo-X SATA 4+4

You Should Have

The following items should be included in your product package:

- One Tempo-X SATA 4+4 card
- Two internal Serial ATA data cables
- Eight screws (for mounting hard drives)
- Two legacy to Serial ATA power cable adapters

The following items may be required for installation:

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

System Requirements

The Tempo-X SATA 4+4 requires the following in order to operate in your system:

- One available PCI-X or PCI slot
- One or more available hard drive bays (depending on configuration)
- Mac OS® X Version 10.2.x or later

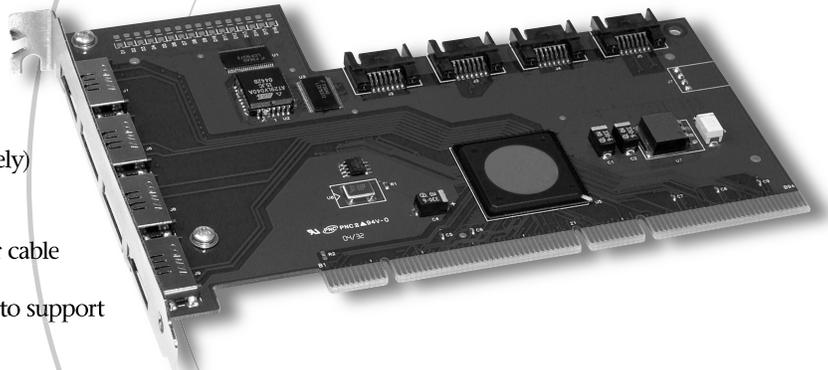


Support Notes: We recommend that you make a backup of important information on your system's current hard drive prior to installing new hardware or software.

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.



WARNING: This product is not compatible with the HighPoint RocketRAID product or the kernel extension installed by its supporting software. If you have the HighPoint product installed in your system, **be sure to remove the HPTRAIIDController.kext file before you install the Tempo-X SATA 4+4 into your system.** Refer to the RocketRAID documentation for detailed instructions.



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. • Online support form available at <http://supportform.sonnettech.com>.

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Support Note: Technical knowledge may be required to gain access to the drive 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-X SATA 4+4 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. **Figure 1** illustrates one of the internal Serial ATA data cables included with the Tempo card; plug the straight connector into the Tempo card.
2. Remove a hard drive from its packaging.
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 2**). Depending on your computer, you may need to use 4-pin to 15-pin power adapter cables (sold separately).

Hardware Installation Steps

This section covers the installation of the Tempo-X SATA 4+4 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 slots) and drive bay(s); refer to your computer's user manual for specific information.
3. If you are installing any hard drives inside your computer, do so now; otherwise,, skip to step 6 on page 3. (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 Serial ATA data cables' right angles connector into your drives; **verify the connectors are plugged in securely**. (If you are connecting three or more drives, you will need one or two additional internal Serial ATA data cables.)
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 (sold separately) or other adapters (sold separately) which will provide power to the connected hard drives. **Verify the connectors are plugged in securely**.

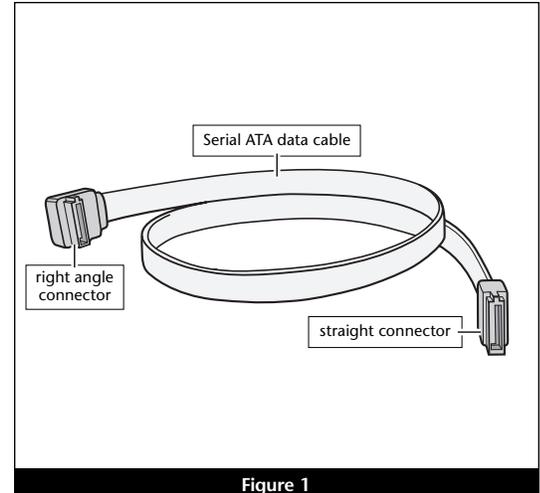


Figure 1

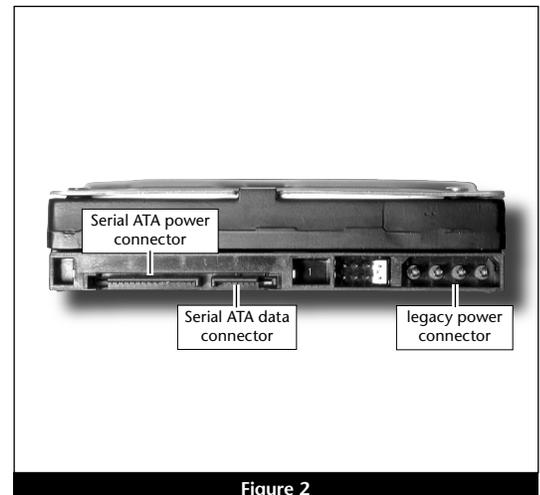


Figure 2

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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.
7. Remove the Tempo-X card from its packaging.



Support Note: Most faster Power Mac G5 computers feature PCI-X slots (two 100MHz, one 133MHz, check your computer's user manual for specific information). The Tempo-X card may be installed in any of the slots and perform equally well under most circumstances. Users should be aware that when certain standard 33MHz PCI adapter cards are installed along with the Tempo-X card in the 100MHz slots (slots 2 and 3), the Tempo-X card's performance may be adversely affected.

8. Install the Tempo-X card into the slot; make sure the card is firmly seated. Please note, **if you are connecting external drives to the Tempo-X card, do not fasten the mounting screw yet; you must connect the external cables before securing the card.**
9. Route the internal Serial ATA data cable(s) to the Tempo-X 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.
10. Plug in the internal Serial ATA data cable(s) to the Tempo-X card.
11. Check the cable connections; **make sure all cables are connected securely to the Tempo-X card and the hard drives.**



Support Note: If you will use external Serial ATA drives in your setup, we strongly suggest you use external Serial ATA data cables (sold separately) to connect them to the Tempo-X card. These cables are more robust and offer benefits such as better shielding from electrical interference.

12. If you are using any external drives, connect the external Serial ATA data cable(s) between the Tempo-X card and the drives; **make sure all cables are connected securely to the Tempo-X card and the hard drives.**
13. Secure the Tempo-X card firmly in place with the mounting screw, and then close the computer; be very careful not to pinch the cables.

IMPORTANT INFORMATION FOR EXTERNAL DRIVE USERS!

A very small number of Tempo-X SATA 4+4 users have reported a condition in which connected drives installed in an external case intermittently do not appear when their computer is booted. To avoid this issue, follow the steps below:

1. **Power on the external drive enclosure(s) at least 30 seconds BEFORE powering on the Power Mac.**
2. **Select Shut Down from the Apple Menu and wait for the Power Mac to shut down completely BEFORE powering off the external drive enclosure(s).**

This issue is under investigation by Sonnet; for further updates, check www.sonnettech.com/product/tempo-x_sata44.html

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Drive Formatting—Individual Drives (Not in a RAID Array)

This section describes the process of formatting (initializing) individual hard drives connected to the Tempo-X SATA 4+4 using Disk Utility under Mac OS X Version 10.2; the process under Version 10.3 is very similar. If you intend to create a RAID array with the drives attached to the Tempo-X card, skip to “Drive Formatting—RAID Arrays” on the next page.

1. Turn on your computer. During startup, your computer may display a message(s) referring to “unreadable volumes”, click Initialize... to launch Disk Utility (Figure 3).

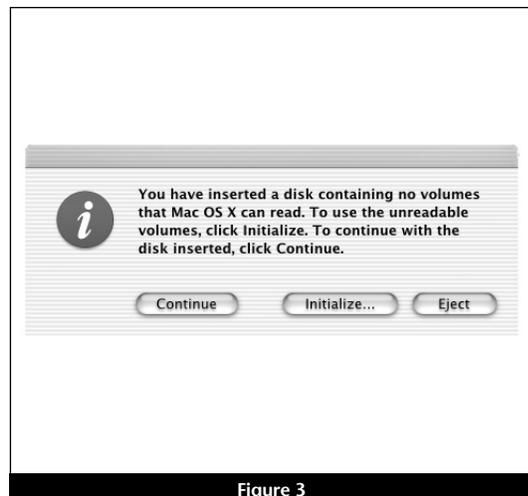


Figure 3

2. If it is not already open, launch Disk Utility (Figure 4). Note that all attached drives appear in the information window, regardless of being formatted or not.
3. Select the drive you want to format by single clicking the drive symbol or the “name” of the drive (Figure 4). In the information window, the drive capacity and Connection type are listed.



Figure 4

4. Click on the Partition tab (Figure 5). In the Partition frame, 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 5). After formatting, each will appear in the Finder window as a drive. If you need to access a drive or partition from Mac OS 9, be sure to click the Install Mac OS 9 Drivers checkbox.
6. Click Partition (Figure 5).

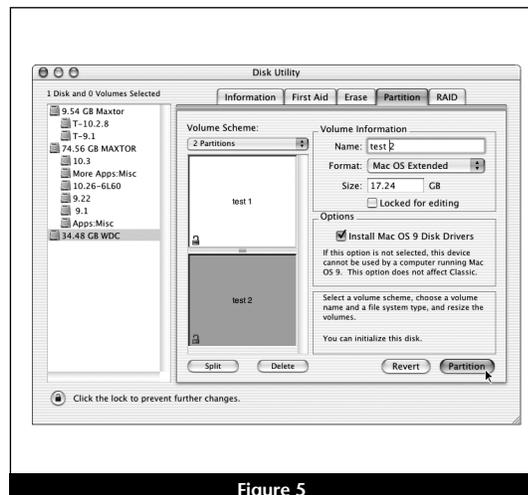


Figure 5

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Drive Formatting—Individual Drives (continued)

- When the *Warning* window appears, click the Partition button (Figure 6). If necessary, repeat steps 3–6 to partition any other drives connected to the Tempo-X card. When partitioning and formatting are complete, close the Disk Utility application; you can now use your drive(s).

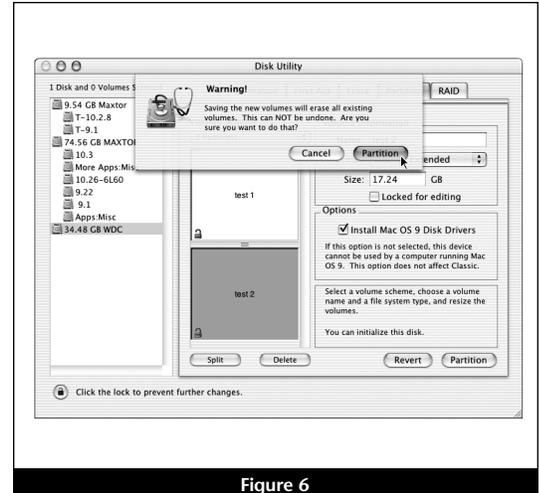


Figure 6

Drive Formatting—RAID Arrays

This section describes the process of formatting (initializing) individual hard drives connected to the Tempo-X SATA 4+4 using Disk Utility under Mac OS X Version 10.3; the process under Version 10.2 is very similar. 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.

- Turn on your computer. During startup, your computer may display a message(s) referring to “unreadable volumes”, click Initialize... to launch Disk Utility (Figure 7).

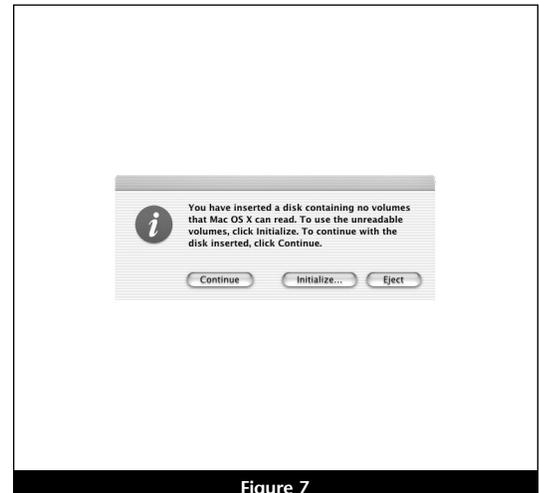


Figure 7

 **Support Note:** All hard drives connected to the Tempo-X card will be described by Disk Utility as having an internal connection (Figure 8).

- If it is not already open, launch Disk Utility (Figure 8). Note that all attached drives appear in the information window, regardless of being formatted or not.
- Select one of the drives you want to format in a RAID array by single-clicking the drive symbol or the “name” of the drive (Figure 8). In the information window, the drive capacity and Connection type are listed.

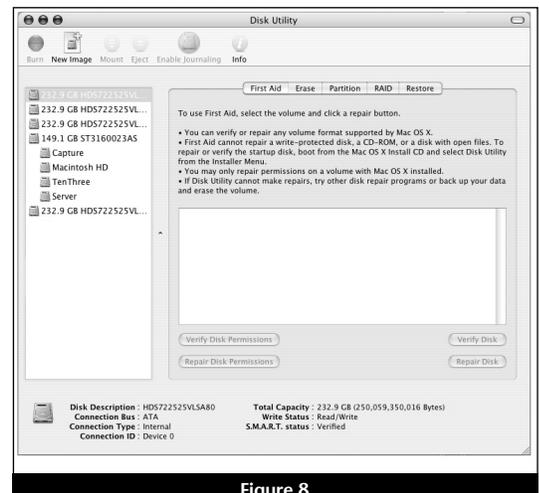


Figure 8

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Drive Formatting—RAID Arrays (continued)



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

4. Click the RAID tab in the *Disk Utility* window, select all the drives you will use to create your RAID 0 (Stripe) array, and drag them into the disk field (Figure 9). Be careful to NOT accidentally drag in a drive you don't want included in the RAID.
5. From the drop-down menus, select the RAID scheme (stripe) and the volume format, and then type in the name for your RAID volume (Figure 9).
6. When the *Creating RAID* window appears, click the Create button; all of the selected drives will be formatted and the RAID volume created (Figure 10). Close Disk Utility; your drives are now ready to use and your installation is complete.

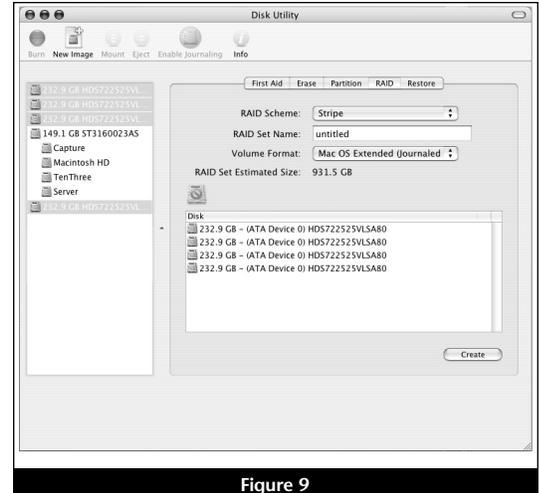


Figure 9

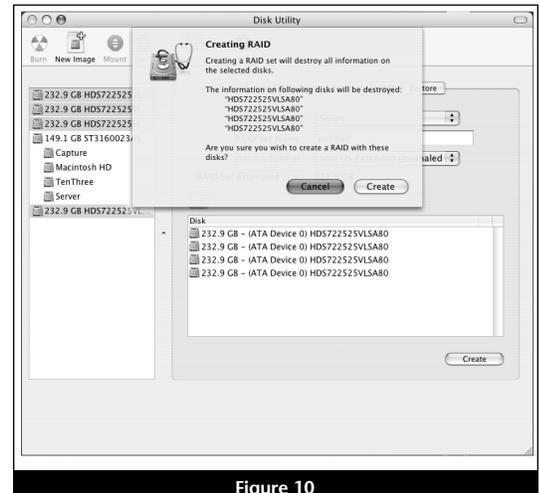


Figure 10