TEMPO™ DUO PCIe®
6Gb/s eSATA+SuperSpeed USB 3.0 Adapter for PCI Express® Slot

Quick Start Guide

You Should Have
The following item should be included in your product package:
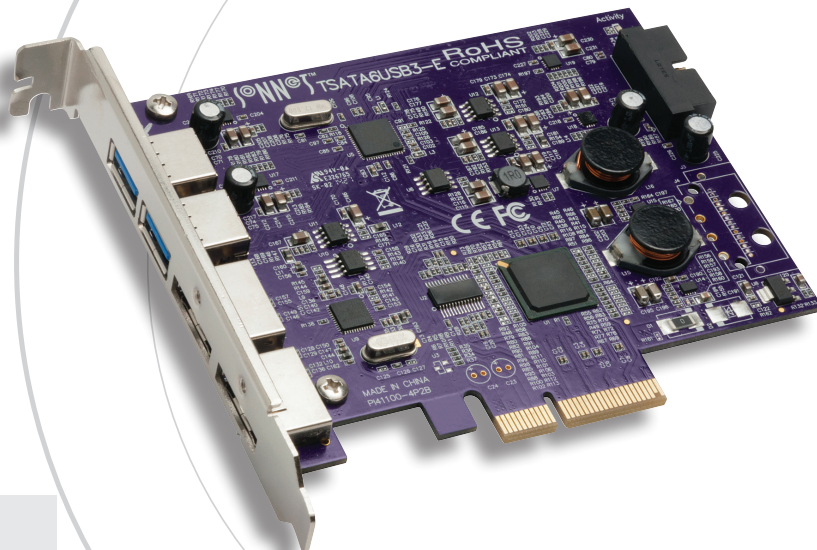
• One Tempo Duo PCIe adapter card

System Requirements
Tempo Duo PCIe requires the following in order to operate in your system:

• One available PCIe slot
• OS X® 10.8.5 or later, OS X Server 10.8.5 or later; Windows® 8, 7, Vista®, Server 2012, or Server 2008
• Internet access (for driver download)

Important Note for Mac Users
In order for this product's USB 3.0 ports to support full iPad®, iPhone®, and iPod® charging capabilities in systems running OS X, you must download and install a Sonnet driver. Go to www.sonnettech.com/support/kb/kb.php and click the Computer Cards link, and then click the PCIe Cards link. Click the Tempo Duo PCIe link, and then click the driver link. Download and install the USB 3.0 Charging Support Driver (OS X).

Support Notes: We recommend you make a backup of important information on your system's current hard drive(s) 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 by their edges, and avoid touching connector traces and component pins.

Support Note: This document was up to date at the time of printing. However, changes to the hardware or software may have occurred since then. Please check the Sonnet website for the latest documentation.
1. Go to www.sonnettech.com/support/kb/kb.php
2. Click the Computer Cards link
3. Click the PCIe Cards link
4. Click the Tempo Duo PCIe link, and then click the Documentation link.
5. Click the Tempo Duo PCIe Quick Start Guide [English] link, and then check the Document Version information. If the version listed is later than this document, click the Download Now button for the latest version.

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Installation Preparation

Prior to installing the Tempo Duo PCIe card into your system and connecting any devices, you should familiarize yourself with the card's ports. We also strongly recommend that you read the sections in your computer's user manual that address PCI Express card installation.

1. **Figure 1** shows the Tempo Duo PCIe card's USB 3.0 and locking eSATA ports:

   When connecting storage systems via eSATA, depending on the drive enclosure(s) used, you will need to use data cables with eSATA connectors on both ends, or cables with an eSATA connector on one end and a SATA I connector on the other end. Enclosures with external SATA connectors use eSATA connectors. **Note**: SATA I connectors are used on bare SATA hard drives.
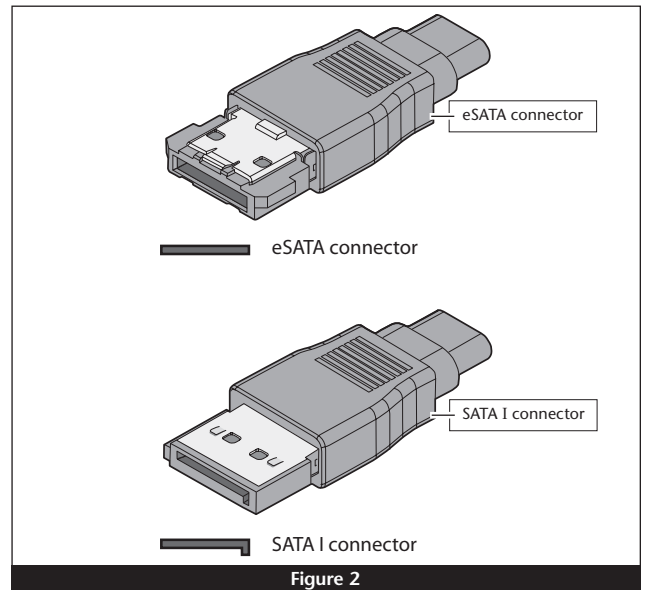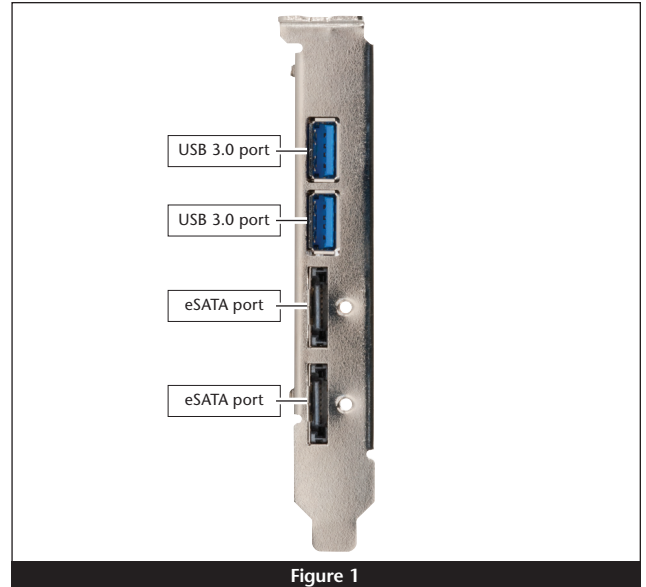
   When connecting USB 3.0 devices, use standard USB 3.0 cables. The Sonnet card is also compatible with USB 2.0 cables. *However; when a USB 2.0 cable is used to connect a USB 3.0 device, its performance may be greatly reduced.*

2. **Figure 2** shows eSATA and SATA I connectors.

Hardware Installation Steps

This section covers the installation of the Tempo Duo PCIe card into your computer or Thunderbolt-to-PCIe expansion chassis.

1. Shut down your computer or Thunderbolt-to-PCIe expansion chassis, and then open it to access the expansion card area (PCIe slots); refer to the user's manual for specific information.

2. Locate an available x4 (4-lane) or x8 (8-lane) PCIe slot and remove its access cover.

3. Remove the Sonnet card from its packaging, and then install it into the PCIe slot; **make sure the card is firmly seated and secured.**

4. Close the computer or Thunderbolt-to-PCIe expansion chassis.

USB 3.0 port
USB 3.0 port
eSATA port
eSATA port

Figure 1

eSATA connector
eSATA connector

SATA I connector
SATA I connector

Figure 2

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Driver Information—OS X

The standard USB 3.0 and SATA drivers that enable the Tempo Duo PCIe card to work in your computer or Thunderbolt–to–PCIe card expansion chassis are installed as part of OS X 10.8.5 and later; the Tempo card is ready to use when you power on your computer.

Driver Download and Installation Steps—Windows

Download and install drivers to support the Tempo card's USB 3.0 ports in computers running Windows. The drivers that enable the card's eSATA ports to work in your computer are installed as part of Windows.

Support Note: Although drivers that enable the Tempo Duo PCIe card's USB 3.0 ports to operate in systems running Windows 8 and Server 2012 are installed automatically, Sonnet strongly recommends you download and install the latest drivers through Sonnet's website.

1. Turn on your computer and log in. During startup, a *Found New Hardware Wizard* window will appear; click Cancel.

2. Log onto the Internet, and go to http://www.sonnettech. com/support/kb/kb.php, click on the Computer Cards link, and then click on the PCIe Cards link.

3. Locate and click the Tempo Duo PCIe link, then click the Driver link, and then click the Tempo Duo PCIe USB 3.0 Driver (Windows) link. Click the Download Now link; a new window or tab will open.

4. In the new window or tab, locate and click the download link for the latest driver for Fresco Logic FL-1000/1009 USB 3.0 Controllers. When asked whether to run or save the file, click Save. If prompted to select a location to save the file, select a new location to save the file or accept the default location, and then click Save.

5. When notified the download has completed, click Open Folder; a new window will open.

6. Double-click the Fresco_USB3… file. When the *Open File – Security Warning* window appears, click Run.

7. When the next window appears, select a new location to save the files or accept the default location, and then click Extract.

8. In the location where the files were extracted, locate and double-click the Setup file; the driver installer will launch.

9. When the *Welcome to the Fresco Logic Host Controller Setup Wizard* window appears, click Next.

10. When the *Fresco Logic xHCI Driver License Terms* window appears, read the terms, and then click Yes.

11. When the *Select Installation Folder* window appears, click Next.

12. When the *Ready to Install* window appears, click Install. If you haven't disabled User Access Control (UAC) on your computer, another window will appear asking you to allow the program to run; click Yes (or Continue); the driver will be installed.

13. When the *Completing the Fresco Logic USB 3.0 Host Controller Setup Wizard* window appears, click Finish; the installation is complete and the card is ready to use.

Formatting Drives—OS X

Use Disk Utility (found in the Utilities folder within the Applications folder) to set up connected drives for use.

Formatting Drives—Windows

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

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Known Limitations and Advice

USB and eSATA peripherals have some limitations you should be aware of, and we have listed some additional advice here. Refer to the peripheral manufacturers' Websites for more information.

• USB 3.0 devices require USB 3.0 cables to support USB 3.0 (SuperSpeed) transfer speeds (up to 5 Gb/s). Use of USB 2.0 cables between USB 3.0 devices and Tempo Duo PCIe is supported, but data transfers are limited to USB 2.0 speeds (up to 480 Mb/s).

• Many USB peripherals require additional drivers and application software to operate or have full functionality. Software should be included with the device, or available to download from the manufacturer's Website. Check the peripheral's user's manual for information about necessary software.

• OS X Users: Before disconnecting attached drives, eject any mounted drive or volume by dragging its icon to the Eject icon in the Dock, or clicking its Eject button in a Finder window; otherwise, data on the connected drives may be corrupted.

• Windows Users: Always "eject", "stop", "unplug", or "put away" any drive (hard drive, SSD, etc.) before disconnecting it from its cable or the Sonnet card.

• Always "eject" any memory card before removing it from the card reader, or disconnecting the card reader (with the card inserted in it) from its cable or the Sonnet card.

• Disconnecting drives while they are transferring or receiving data may result in damage to the file(s) being transferred or cause your system to hang.

• Although many peripherals may draw power directly from the Sonnet card's USB 3.0 ports, other devices require an external power source. Remember to use external power supplies when necessary.