

# eSATA II PCIe i/e Quick Installation Guide

## Introduction

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The *eSATA II PCIe i/e* is an ultra high-speed dual channel Serial ATA Generation 2 controller for use in PCI Express enabled systems.

## Features and Benefits

- Compliant with PCI Express Base Specification 1.0a
- Compliant with Serial ATA 1.0a specification with support for full complement of SATA II optional features
- PCI Express 1-lane (x1) SATA II adapter works with PCI Express slots with different lane width
- Installs in any available PCI Express slot - supports data transfer rates up to 3 Gb/s (300 MB/s)
- Spare enhanced low profile bracket is included to work in low profile chassis
- Supports Native Command Queuing (NCQ), Non-zero offsets NCQ, and Out-of-order data delivery NCQ
- Independent command fetch, scatter/gather, and command execution
- Supports hard disk hot-plugging

## System Requirements

- PCI Express-enabled system with an available PCI Express slot
- Windows® 7 (32-/64-bit) / Vista (32-/64-bit) / XP (32-/64-bit) / Server 2003 & 2008 (32-/64-bit) / Server 2008 R2 / 2000

## Package Contents

- *eSATA II PCIe i/e* board and spare enhanced low profile bracket
- SATA data cable and SATA 15-pin power cable
- Driver CD and quick installation guide

## Board Layout

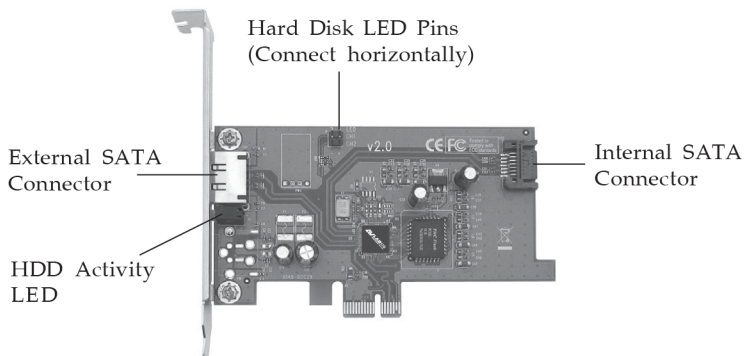


Figure 1. eSATA II PCIe i/e Board Layout

## Hardware Installation

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General instructions for installing the card are provided below. Since the design of computer cases and motherboards vary, refer to your computer's reference manual for further information, if needed.

Static electricity discharge may permanently damage your system. Discharge any static electricity build up in your body by touching your computer's case for a few seconds. Avoid any contact with internal parts and handle cards only by their external edges. **Note:** For low profile systems, replace the currently mounted bracket with the included low profile bracket.

1. Turn OFF the power to your computer and any other connected peripheral devices.

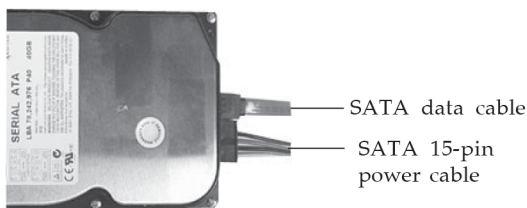
2. Unplug the power cord from the computer.
3. Remove the computer cover.
4. Remove the slot bracket from an available PCIe slot.
5. To install the card, carefully align the card's bus connector with the selected PCIe slot on the motherboard. Push the board down firmly, but gently, until it is well seated.
6. Replace the slot bracket holding screw to secure the card.

## Device Connection

The *eSATA II PCIe i/e* supports one internal and one external Serial ATA hard disk drive.

### Internal Serial ATA port

1. Install the hard disk drive into the chassis.
2. Connect the Serial ATA hard disk drive to the system power supply using the *SATA 15-pin power cable*.
3. Connect one end of the *SATA data cable* to the hard disk drive.



**Figure 2. Hard disk drive connections**

**Note:** For hard disk drives with both SATA power connector and legacy 5-pin connector, use either the SATA power connector or the legacy 5-pin power connector. Using both power connectors at the same time will damage the hard disk drive.

4. Attach the other end of the *SATA data cable* to the internal Serial ATA connector.
5. Replace the computer cover and reconnect the power cord.

### External Serial ATA port

External Serial ATA hard disk drives should come with their own accessories. In most cases, you just need to power up the external drive and connect it to the external port. For more information, please refer to the external device's manual.

## **Driver Installation**

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This section provides information on how to install the *eSATA II PCIe i/e* drivers.

### **Windows 7 (32-bit)**

#### **New Windows 7 (32-bit) Installation**

1. Install the board and follow Microsoft procedures to install Windows accordingly.
2. At **Where do you want to install Windows?**, click **Load Driver**.
3. Insert driver CD, click **Browse**. Close the **AutoPlay** box if prompted.
4. Double click **CD Drive ... Driver**.
5. Double click **Win7**, click **32bit**, click **OK**.
6. At **Select the driver to be installed**, click **Next**.
7. At **Where do you want to install Windows?**, re-insert your Windows 7 installation disk.
8. Wait several seconds, then follow the on-screen instructions to complete your Windows installation.

## Existing Windows 7 (32-bit) Installation

1. Install the board and boot up Windows.
2. At the Windows desktop, insert the driver CD. Close the **AutoPlay** box if prompted.
3. Right click **Computer**, click **Manage**, then click **Device Manager**.
4. Right click **Serial ATA Controller**, click **Update Driver Software**.
5. Click **Browse my computer for driver software**.
6. Type **D:\**, click **Next**. (Change **D:** to match your CD/DVD-ROM drive letter)
7. Click **Close** to complete the installation.

## Windows 7 (64-bit)

### New Windows 7 (64-bit) Installation

1. Install the board and follow Microsoft procedures to install Windows accordingly.
2. At **Where do you want to install Windows?**, click **Load Driver**.
3. Insert driver CD, click **Browse**. Close the **AutoPlay** box if prompted.
4. Double click **CD Drive ... Driver**.
5. Double click **Win7**, double click **64bit**.  
For non-Itanium processors: Select **AMD64**, then click **OK**.  
For Itanium processors: Select **IA64**, then click **OK**.
6. At **Select the driver to be installed**, click **Next**.
7. At **Where do you want to install Windows?**, re-insert your Windows 7 installation disk.
8. Wait several seconds, then follow the on-screen instructions to complete your Windows installation.

## Existing Windows 7 (64-bit) Installation

1. Install the board and boot up Windows.
2. At the Windows desktop, insert the driver CD. Close the **AutoPlay** box if prompted.
3. Right click **Computer**, click **Manage**, then click **Device Manager**.
4. Right click **Serial ATA Controller**, click **Update Driver Software**.
5. Click **Browse my computer for driver software**.
6. Type **D:\**, click **Next**. (Change **D:** to match your CD/DVD-ROM drive letter)
7. At Windows has successfully updated your driver software, click **Close** to complete the installation.

## Windows Vista (32-bit)

### New Windows Vista (32-bit) Installation

1. Install the board and follow Microsoft procedures to install Windows accordingly.
2. At **Where do you want to install Windows?**, click **Load Driver**.
3. Insert driver CD, then click **Browse**.
4. Select **CD Drive ... Driver**, click **OK**.
5. At **Select the driver to be installed**, click **Next**.
6. Follow the on-screen instructions to complete your Windows installation.

### Existing Windows Vista (32-bit) Installation

1. Install the board and boot up Windows.
2. At **Found New Hardware**, insert the driver CD, click **Locate and install driver software (Recommended)**, then click **Continue**.

3. Click **Don't Search Online**.
4. Click **Next**, then **Close** to complete the installation.

## **Windows Vista (64-bit)**

### **New Windows Vista (64-bit) Installation**

1. Install the board and follow Microsoft procedures to install Windows accordingly.
2. At **Where do you want to install Windows?**, click **Load Driver**.
3. Insert driver CD, then click **Browse**.
4. Double click **CD Drive ... Driver**.
5. Double click **64bit** folder.

For non-Itanium processors: Select **AMD64**, click **OK**.

For Itanium processors: Select **IA64**, click **OK**.

6. At **Select the driver to be installed**, click **Next**.
7. Follow the on-screen instructions to complete Windows installation.

### **Existing Windows Vista (64-bit) Installation**

1. Install the board and boot up Windows.
2. At **Found New Hardware**, insert the driver CD, click **Locate and install driver software (Recommended)**, then click **Continue**.
3. Click **Don't Search Online**.
4. Click **Next**, then click **Close** to complete the installation.

## **Windows XP (32-bit) / Server 2003 (32-bit)**

### **New Windows XP (32-bit) / 2003 (32-bit) Installation**

A new installation of Windows XP & Server 2003 requires a floppy disk for the driver installation. To make this floppy disk, copy the **contents** of the **Floppy** folder, found on the driver CD, onto a blank floppy disk then follow the directions below.

1. Install the board and follow Microsoft procedures to install Windows accordingly.
2. At the **Windows Setup** screen, press **F6** to continue.
3. Insert the driver floppy disk you made above. Press **S**, then press **Enter**.
4. Select **Silicon Image SiI 3132 ... Controller for Windows XP and Server 2003**, then press **Enter**.
5. Press **Enter** again to continue and follow the on-screen instructions to complete your Windows installation.

### **Existing Windows XP (32-bit) / 2003 (32-bit) Installation**

1. Install the board and boot up Windows.
2. At the **Found New Hardware Wizard**, select **No, not this time**, then click **Next**. Skip this step if not prompted.
3. Insert the driver CD, select **Install the software automatically (Recommended)**, then click **Next**.
4. Click **Next**, then click **Finish** to complete the installation.



## Windows XP (64-bit) / Server 2003 (64-bit)

### New Windows XP (64-bit) / 2003 (64-bit) Installation

A new installation of Windows XP & Server 2003 requires a floppy disk for the driver installation. To make this floppy disk, copy the contents of the **64bit** folder, found on the driver CD, onto a blank floppy disk then follow the directions below.

1. Install the board and follow Microsoft procedures to install Windows accordingly.
2. At the **Windows Setup** screen, press **F6** to continue.
3. Insert the driver floppy disk you made above. When prompted, press **S**, then press **Enter**.

For non-Itanium processors: Select **Silicon Image SiI 3132 ... Controller (64-bit Extended)**, and press **Enter**.

For Itanium processors: Select **Silicon Image SiI 3132 ... Controller (Itanium)**, and press **Enter**.

4. Press **Enter** again to continue and follow the on-screen instructions to complete the installation.

### Existing Windows XP (64-bit) / 2003 (64-bit) Installation

1. Install the board and boot up Windows.
2. At the **Found New Hardware Wizard**, select **No, not this time**, then click **Next**.
3. Insert the driver CD, select **Install the software automatically (Recommended)**, then click **Next**.
4. Click **Finish** to complete the installation.

## Windows Server 2008 (32-bit)

### New Server 2008 (32-bit) Installation

1. Install the board and follow Microsoft procedures to install Windows accordingly.

2. At **Where do you want to install Windows?**, click **Load Driver**.
3. Insert the driver CD, click **OK**.
4. Select **Silicon Image SiI 3132 ... Controller ...**, then click **Next**.
5. Follow the on-screen instructions to complete your Windows installation.

### **Existing Server 2008 (32-bit) Installation**

1. Install the board and boot up Windows.
2. At the **Found New Hardware** window, select **Locate and install driver software (Recommended)**, then click **Don't Search Online**.
3. Insert the driver CD. Windows will automatically search the CD and install the correct driver.
4. At **Windows has finished installing the driver software for this device**, click **Close** to complete the installation.

### **Windows Server 2008 (64-bit)**

#### **New Server 2008 (64-bit) Installation**

1. Install the board and follow Microsoft procedures to install Windows accordingly.
2. At **Where do you want to install Windows?**, click **Load Driver**.
3. Insert the driver CD, click **OK**.
4. At **Select the driver to be installed**, click **Browse**.
5. Double click **CD Drive ... Driver**.
6. Double click **64bit** folder.

For non-Itanium processors: Select **AMD64**, click **OK**.

For Itanium processors: Select **IA64**, click **OK**.

7. Select **Silicon Image SiI 3132 ... Controller ...**, then click **Next**.
8. Follow the on-screen instructions to complete your Windows installation.

### **Existing Server 2008 (64-bit) Installation**

1. Install the board and boot up Windows.
2. At the **Found New Hardware** window, select **Locate and install driver software (Recommended)**, then click **Don't Search Online**.
3. Insert the driver CD and Windows will search the CD and install the correct driver.
4. At **Windows has finished installing the driver software for this device**, click **Close** to complete the installation.

### **Windows Server 2008 R2**

#### **New Windows Server 2008 R2 Installation**

1. Install the board and follow Microsoft procedures to install Windows accordingly.
2. At **Where do you want to install Windows?**, click **Load Driver**.
3. Insert driver CD, click **Browse**. Close the **AutoPlay** box if prompted.
4. Double click **CD Drive ... Driver**.
5. Double click **Win7**, double click **64bit**.  
For non-Itanium processors: Select **AMD64**, then click **OK**.  
For Itanium processors: Select **IA64**, then click **OK**.
6. At **Select the driver to be installed**, click **Next**.

7. At **Where do you want to install Windows?**, re-insert your Windows Server 2008 R2 installation disk.
8. Wait several seconds, then follow the on-screen instructions to complete your Windows installation.

## **Existing Windows Server 2008 R2 Installation**

1. Install the board and boot up Windows.
2. At the Windows desktop, insert the driver CD. Close the **AutoPlay** box if prompted.
3. Right click **Computer**, click **Manage**, then click **Device Manager**.
4. Right click **Serial ATA Controller**, click **Update Driver Software**.
5. Click **Browse my computer for driver software**.
6. Type **D:\**, click **Next**. (Change **D:** to match your CD/DVD-ROM drive letter)
7. At Windows has successfully updated your driver software, click **Close** to complete the installation.

## **Windows 2000**

### **New Windows 2000 Installation**

A new installation of Windows 2000 requires a floppy disk for the driver installation. To make this floppy disk, copy the **contents** of the **Floppy** folder, found on the driver CD, onto a blank floppy disk then follow the directions below.

1. Install the board and follow Microsoft procedures to install Windows 2000 accordingly.
2. At the **Windows 2000 Setup** screen, press **F6** to continue.

3. Insert the driver floppy disk you made above. Press **S**, then press **Enter**.
4. Select **Silicon Image SiI 3132 ... Controller for Windows 2000** and press **Enter**.
5. Press **Enter** again to continue and follow the on-screen instructions to complete the installation.

### Existing Windows 2000 Installation

1. Install the board and boot up Windows 2000.
2. At the **Found New Hardware Wizard**, click **Next**.
3. Select **Search for a suitable driver for my device (recommended)**, and click **Next**.
4. Insert the driver CD, check **CD-ROM drives**, uncheck the other boxes, and click **Next**. Click **Next** again to continue.
5. Click **Finish** and restart Windows to complete the installation.

### To Verify Windows Installation

1. Use Device Manager to verify installation.  
*For Windows 7:* Right click **Computer**, click **Manage**, click **Device Manager**.  
*For Windows Vista:* Right click **Computer**, click **Manage**, click **Continue**. Click **Device Manager**.  
*For Windows XP / Server 2003 / 2000:* Right click **My Computer**, click **Manage**, click **Device Manager**.  
*For Windows Server 2008 / Server 2008 R2:* Right click **Computer**, click **Manage**. Double click **Diagnostics**, click **Device Manager**.
2. Double click either **SCSI and RAID controllers** or **Storage controllers**. **Silicon Image SiI 3132 ... Controller** should be displayed.

# **Safely Remove External Hard Disk Drives**

Before unplugging or turning off your external hard disk drive from a powered up system, it is recommended to first follow the steps below. Not doing so may corrupt the data stored on the external hard drive and/or cause your system to crash.

## **Windows 7**

1. Right click **Computer**, click **Manage**.
2. Select **Device Manager**.
3. Double click **Disk Drives**, right click the target disk.
4. Click **Uninstall**. Click **OK** to confirm device removal.
5. You can now unplug or turn off the hard disk.

## **Windows Vista**

1. Right click **Computer**, click **Manage**, click **Continue**.
2. Select **Device Manager**.
3. Double click **Disk Drives**, right click the target disk.
4. Click **Uninstall**. Click **OK** to confirm device removal.
5. You can now unplug or turn off the hard disk.

## **Windows XP / Server 2003 / 2000**

1. Right click **My Computer** and click **Manage**.
2. Select **Device Manager**.
3. Double click **Disk Drives**, right click the target disk.
4. Click **Uninstall**. Click **OK** to confirm device removal.
5. You can now unplug or turn off the hard disk.

# Windows Server 2008/ Server 2008 R2

1. Right click **My Computer** and click **Manage**.
2. Double click **Diagnostics**, select **Device Manager**
3. Double click **Disk Drives**, right click the target disk.
4. Click **Uninstall**. Click **OK** to confirm device removal.
5. You can now unplug or turn off the hard disk.

## Assigning Drive Letter to an External Hard Disk

Most external hard disk drives come formatted and ready to use, when connected a drive icon will show up in **Computer/My Computer** and you can access the drive. However, sometimes Windows will not automatically assign a drive letter to a formatted drive, in this case, the drive icon will not show up in **Computer/My Computer**. If this happens, follow the directions below to assign the drive letter. These steps, written from Windows Server 2003, are similar in all Windows versions.

1. Right click **My Computer**, click **Manage**, click **Disk Management**, look for a **Healthy** disk without a name and drive letter assigned to it, see **Figure 3**.

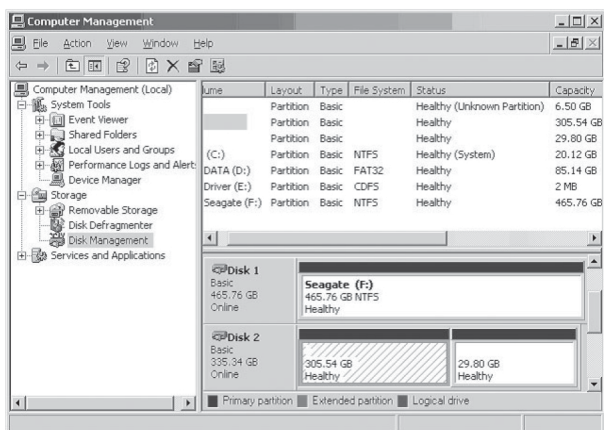


Figure 3: Disk Management

2. Right click on the **Healthy** disk, the disk without a drive letter, then click **Change Drive Letter and Paths**. See Figure 4.

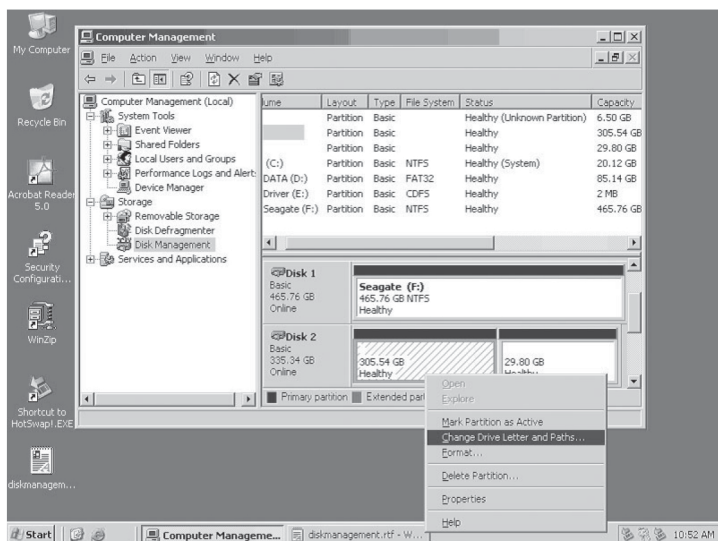


Figure 4

3. At Change Drive Letters and Paths, click **Add**.

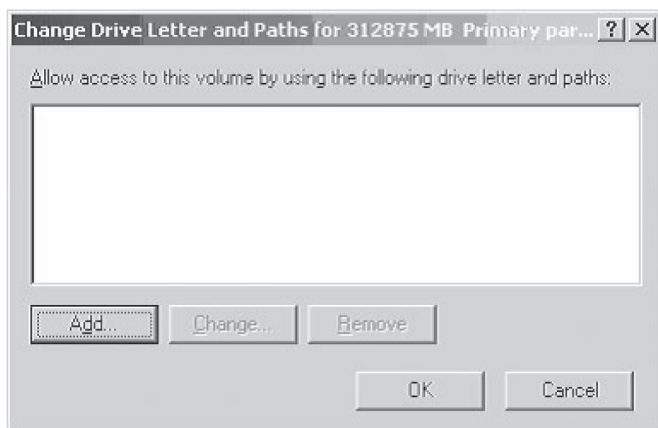


Figure 5



4. At the Add Drive Letter or Path box, select **Assign the following drive letter**, then choose an available drive letter from the drop down box. Click **OK**.

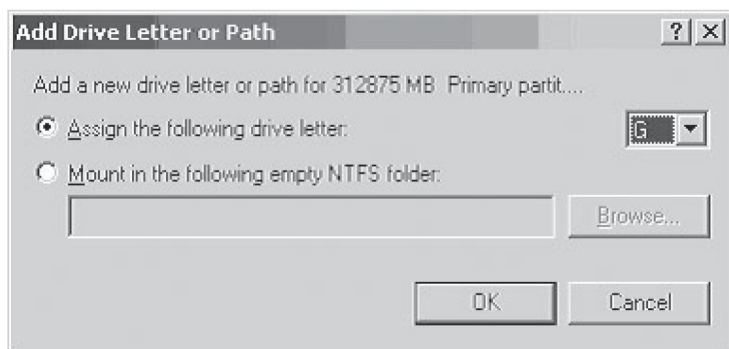


Figure 6

5. A drive letter should be assigned to the **Healthy** drive. Repeat these steps if no drive letter appears.

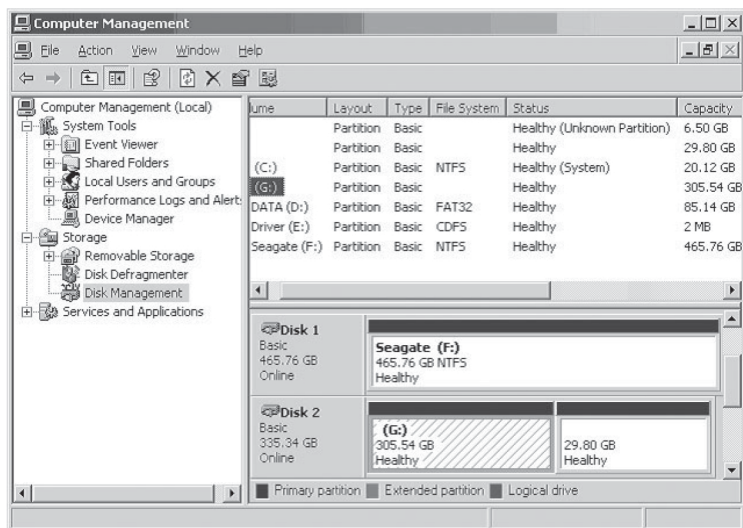


Figure 7