

Installation Manual for Sonnet RAID Controller

System Requirements - Mac® Users

The Sonnet RAID controller requires the following in order to operate in your system:

- One available PCI Express (PCIe) 1.1 or 2.0 x8 or x16 slot*
- Mac OS® X Version 10.4 or later
- Java 1.5 or later

System Requirements - Windows® Users

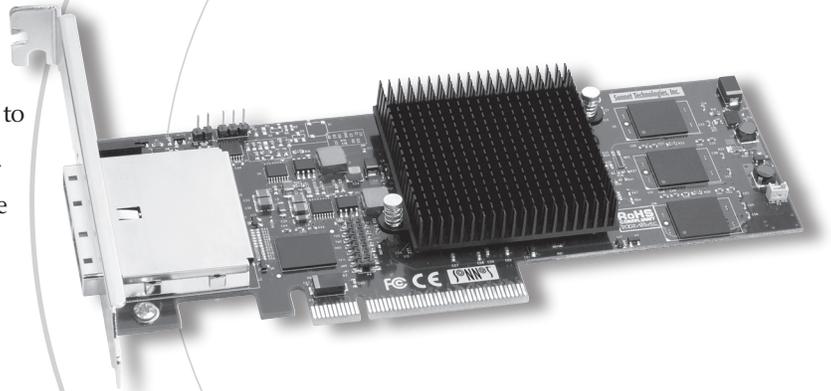
The Sonnet RAID controller requires the following in order to operate in your system:

- One available PCI Express (PCIe) 1.1 or 2.0 x8 or x16 slot*
- Windows Vista, Server 2003, or XP with SP2 installed
- Java 1.5 or later

System Requirements - Linux® Users

The Sonnet RAID controller requires the following in order to operate in your system:

- One available PCI Express (PCIe) 1.1 or 2.0 x8 or x16 slot*
- RedHat ES 3, 4; Suse Linux 9, 9.1, 9.2, 9.3, 10, 10.1 and the following architectures: i386 (with or without CONFIG_REGPARM); x86_64 (AMD64, Intel EM64T).
- Java 1.5 or later



Support Notes: We recommend that you make a backup of important information on your system's current hard drives 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.



Support Note: The software on the Installer CD included in the product package may not be the latest version available. Before using this product, check the version numbers of the software on the CD and what's available at www.sonnettech.com/support/downloads/computercards.html. Download and install the newer version, if available.

* (x4 slot compatible with decreased performance)



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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Software Installation Steps

Mac OS X Driver and Software Installation

This section describes the installation of drivers and software to support the Sonnet RAID controller in systems running Mac OS X Version 10.4 and later.

1. Insert the Sonnet RAID Controller Installer CD into the CD-ROM drive. Double-click the Sonnet RAID CD icon. When the *Sonnet RAID x.xx* window appears, double-click the Drivers folder.
2. Double-click the ATTOExpressSASRAID_XXX.pkg icon to launch the installer (XXX is the version).
3. When the *Welcome to the ATTO ExpressSAS RAID Driver Installer* window appears, click Continue.
4. When the *Software License Agreement* window appears, read the agreement, click Continue, and then click Agree.
5. When the *Installation Type* window appears, accept the default location or choose a different one, and then click Install.
6. When the *Easy Install* window appears, click Install.
7. When the *Authenticate* window appears, enter the Administrator password, and then click OK.
8. When the *Summary* window appears, click Restart to restart your system and finish the driver installation.
9. If necessary, double-click the Sonnet RAID CD icon. In the *Sonnet RAID x.xx* window, double-click the Configuration Tool folder.
10. Double-click the ConfigTool icon to launch the Configuration Tool installer.
11. When the *Authenticate* window appears, enter the Administrator password, and then click OK.
12. When the *Introduction* window appears, click Next.
13. When the *License Agreement* window appears, read the agreement, click the I accept the terms of the License Agreement radio button, and then click Next.
14. When the *Choose Install Folder* window appears, accept the default location or choose a different one, and then click Next.
15. When the *Choose Install Set* window appears, click the icon next to Full Installation, and then click Next.
16. When the *Pre-Installation Summary* window appears, click Install.
17. When the *Install Complete* window appears, click Done to quit the installer.
18. Shut down your computer, and proceed to Hardware Installation on page 6.

Software Installation Steps

Windows Vista Driver and Software Installation

This section describes the installation of drivers to support the Sonnet RAID controller in systems running Windows Vista. If your system is running Windows XP or Windows Server 2003, skip to page 4.

1. Start Windows and log on as System Administrator.
2. Insert the included software CD. If an Internet Explorer window appears, proceed to the next step. Otherwise, perform one of the following:
 - If an *Autoplay* window appears, click the Run autorun.bat link to launch Internet Explorer.
 - If a Windows Explorer window appears displaying the CD-ROM's contents, double-click the icon for the Autorun batch file to launch Internet Explorer.
3. In the Internet Explorer window, click the Windows Drivers link in the upper left corner.
4. Click the link for the drivers that apply to your computer.
5. Under the Windows Vista heading, click the Install Storport Driver link.
6. If an Internet Explorer warning window appears, check or uncheck the checkbox per your needs, and then click Yes. Otherwise, go to the next step.
7. When the next window appears, click Run. If you have not disabled User Account Control (UAC), a *UAC* window will appear; click Continue.
8. When the *ATTO Windows Driver Installer* window appears, click Install.
9. When the *Windows Security* window appears, click the Always trust software from "ATTO Technology, Inc." checkbox, and then click Install.
10. After the driver installation is complete, a window will appear with a message stating no adapter was detected; click No to close the window and continue with the software installation.
11. Back in the browser window click the Windows Applications link on the left.
12. Click the Install Configuration Tool link.
13. When the *File Download - Security Warning* window appears, click Run.
14. When the *Internet Explorer - Security Warning* window appears, click Run. If you have not disabled User Account Control (UAC), a *UAC* window will appear; click Allow.
15. If the installer window is hidden, click the Configuration Tool button in the taskbar to bring the window to the front. Click Next.
16. When the next window appears, click the radio button next to the option to accept the license agreement, and then click Next.
17. When the *Choose Install Folder* window appears, click Next to accept the default installation location.
18. When the *Choose Install Set* window appears, click the Full Installation icon, and then click Next.
19. When the *Choose Java Virtual Machine* window appears, click the radio button next to the Choose a Java VM specifically for this application option, and then click Next.
20. When the *Pre-Installation Summary* window appears, click Install.
21. When the *Install Complete* window appears, click Done.
22. Back in the browser window, click the Install Windows Utilities link.
23. If an *Internet Explorer* warning window appears, check or uncheck the checkbox per your needs, and then click Yes. Otherwise, go to the next step.
24. When the *File Download - Security Warning* window appears, click Run. If you have not disabled User Account Control (UAC), a *UAC* window will appear; click Continue.
25. When the *Welcome to the ATTO HBA Utilities Setup Wizard* window appears, click Next.
26. When the *Select Installation Folder* window appears, either accept the default location or choose a new one, and then click Next.
27. When the *Confirm Installation* window appears, click Next.
28. After the utilities have been installed, an *Installation Complete* window appears; click Close to exit.
29. Shut down your computer, and proceed to Hardware Installation on page 6.

Software Installation Steps

Windows XP/Server 2003 Driver and Software Installation

This section describes the installation of drivers to support the Sonnet RAID controller in systems running Windows XP or Windows Server 2003.

1. Start Windows and log on as System Administrator.
2. Insert the included software CD; an Internet Explorer window will appear.
3. Click the Windows Drivers link in the upper left corner.
4. Click the link for the drivers that apply to your computer.
5. If you are using a 32-bit version of Windows XP, click the Install Scsiport Driver link under the Windows XP heading. If you are using a 64-bit version of Windows XP, or any version of Windows Server 2003, click the Install Storport Driver link under the appropriate heading.
6. When the Internet Explorer warning window appears, check or uncheck the checkbox per your needs, and then click Yes.
7. When the *File Download - Security Warning* window appears, click Run.
8. When the *Internet Explorer - Security Warning* window appears, click Run and the installer will launch.
9. When the *ATTO Windows Driver Installer* window appears, click Install.
10. When the *Setup* window appears, click OK.
11. When the *Software Installation* window appears, click Continue Anyway.
12. After the driver installation is complete, a window will appear with a message stating no adapter was detected; click No to close the window and continue with the software installation.
13. Back in the browser window click the Windows Applications link on the left.
14. Click the Install Configuration Tool link.
15. When the *File Download - Security Warning* window appears, click Run.
16. When the *Internet Explorer - Security Warning* window appears, click Run and the installer will launch.
17. If the installer window is hidden, click the Configuration Tool button in the taskbar to bring the window to the front. Click Next.
18. When the next window appears, click the radio button next to the option to accept the license agreement, and then click Next.
19. When the *Choose Install Folder* window appears, click Next to accept the default installation location.
20. When the *Choose Install Set* window appears, click the Full Installation icon, and then click Next.
21. When the *Choose Java Virtual Machine* window appears, click the radio button next to the Choose a Java VM specifically for this application option, and then click Next.
22. When the *Pre-Installation Summary* window appears, click Install.
23. When the *Install Complete* window appears, click Done.
24. Back in the browser window, click the Install Windows Utilities link.
25. When the *File Download - Security Warning* window appears, click Run.
26. When the *Internet Explorer - Security Warning* window appears, click Run.
27. When the *Welcome to the ATTO HBA Utilities Setup Wizard* window appears, click Next.
28. When the *Select Installation Folder* window appears, either accept the default location or choose a new one, and then click Next.
29. When the *Confirm Installation* window appears, click Next.
30. After the utilities have been installed, an *Installation Complete* window appears; click Close to exit.
31. Shut down your computer, and proceed to Hardware Installation on page 6.

Software Installation Steps

Linux Driver and Software Installation

The Sonnet RAID controller supports Linux operating systems RedHat ES 3, 4; Suse Linux 9, 9.1, 9.2, 9.3, 10, 10.1 and the following architectures: i386 (with or without CONFIG_REGPARM); x86_64 (AMD64, Intel EM64T). **Note:** The Sonnet RAID controller is not supported under Linux 2.4.

1. Power on your system, and log in as root.
2. Verify that the kernel header files, usually included with the Linux kernel development package, are installed.
3. Insert the Installation CD, and mount it to your chosen mount point such as /mnt/cdrom.
4. Open your File Browser and browse to /mnt/cdrom/Linux/Drivers.
5. Click on the driver; the driver filename appears as **lnx_drv_esasraid_XXX.tgz** where XXX is the driver's current version number.
6. Copy the driver file to a directory such as /usr/src.
7. Open a Terminal session, and then change to the directory where you stored the driver.
8. Extract the driver source tar **xfz lnx_drv_esasraid_XXX.tgz**.
9. Navigate to the **lnx_drv_esasraid_XXX** directory.
10. Compile and install the driver using **./install.sh**; the driver is now installed and ready to use.
11. Add the following line to /etc/modprobe.conf after installing the driver: **alias scsi_hostadapterX esasraid** where X is the next available adapter number.

Loading drivers

If drivers load automatically, continue to Hardware Installation on page 6. Otherwise, refer to the steps below.

- To load a driver manually, type **\$ modprobe esasraid** You may receive a warning that the module will taint the kernel.
- Red Hat Hardware Discovery Utility may ask you to **Configure the Device, Ignore, or Do Nothing** after loading the driver for the first time. Select **Configure** and follow the utility's configuration prompts.

To load a driver at boot if your system does not do so automatically:

- Red Hat 4. Add the following line to /etc/modprobe.conf after installing the driver: **alias scsi_hostadapterX esasraid** where X is the next available number.
- Red Hat 3. Add the following line to /etc/rc.modules after installing the driver **modprobe esasraid**
You may need to create /etc/rc.modules and make it executable with **chmod +x /etc/rc.modules**
- SUSE 9
 1. Run the **yast** utility by selecting it in the GUI under **System** in the application menu or running it from a command line.
 2. Select **Hardware**
 3. Select **Disk Controller**
 4. Under **Disk Controller Configuration**, select the ATTO device.
 5. Under the **Module to Use** heading, select the esasraid module
 6. In the box next to **Load Module in initrd**, put an X
 7. Select **Finish** to complete the configuration.
- SUSE 10. Add the following line to /etc/init.d/boot.local after installing the driver: **modprobe esasraid**

Hardware Installation

Installation Preparation

Sonnet strongly recommends that you read the section in your computer's user manual that addresses PCI Express card installation, prior to installing the Sonnet card into your system.

1. **Figure 1** shows the RAID controller card's mini-SAS ports, as well as the status LEDs.

Installation Steps

This section covers the installation of the Sonnet RAID controller card into your system.

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. Locate an available x8 (8-lane) or x16 (16-lane) PCI Express slot* inside your computer and remove its access cover.
3. Remove the Sonnet card from its packaging, and then install it into the PCI Express slot; **make sure the card is firmly seated and secured.**
4. Close your computer.
5. Turn on your computer; depending on the computer and operating system used:
 - If you installed the card into a Mac Pro (Early 2009) or Mac Pro (Early 2008), your installation is complete.
 - If you installed the card into a pre-2008 Mac Pro, depending on which version of Mac OS X your computer is running, Expansion Slot Utility will open automatically. If it does not open by itself, you must do so manually (Expansion Slot Utility is located in the /System/Library/CoreServices folder). Select the configuration appropriate for your setup (your Sonnet card is an x8 card, and should be assigned to at least a x4 slot), and then click Quit if the default configuration was appropriate, or click Save and Restart if you changed the configuration. Your installation is complete.
 - If you installed the card into a Power Mac G5, your installation is complete.
 - If you installed the card into a computer running Windows, various pop-ups will appear during startup as the card is "installed"; your installation is complete.

* (x4 slot compatible with decreased performance)

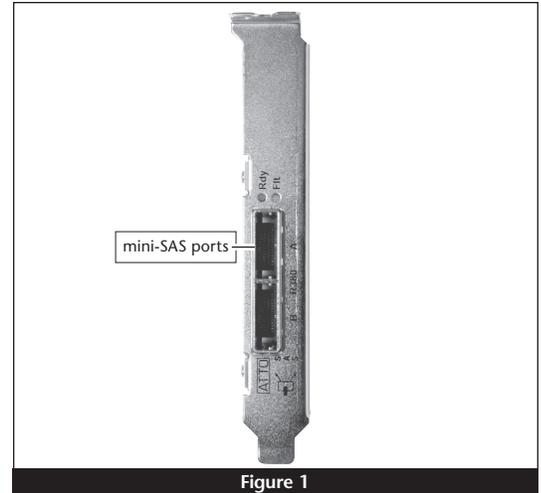


Figure 1