



# Product Release Notes for 3ware 9690SA SATA+SAS 3GB/s and 9650SE SATA 3Gb/s RAID Controllers Cards

**Release 9.5.5.2**

**READ ME FIRST!**

## *Introduction*

Thank you for purchasing an LSI 3ware RAID controller card. This document contains the latest information that may not be included in the Installation or User Guides. Please read this document before you contact Technical Support.

The latest 3ware product information, firmware, software upgrades, and OS drivers are available from LSI at: <http://www.lsi.com/support/Pages/download-search.aspx>

The LSI knowledge base, including frequently asked questions (FAQs), is viewed at: <http://kb.lsi.com>

LSI product compatibility and interoperability lists can also be found at: <http://www.lsi.com/support/Pages/interoperability.aspx>

For specific answers to 3ware questions, technical support, or to give feedback about a 3ware product, please visit: <http://www.lsi.com/support/email/Pages/3ware.aspx>

LSI also offers support 24 hours a day, 7 days a week at 800-633-4545 in North America, + 49 (0) 89 45833-113 in Germany, and 00-800-5745-6442 for international customers.

Sign up for the latest LSI news and support updates at: <http://twitter.com/LSIsupport>

## ***Release Highlights***

This release includes the following:

- SATA+SAS 3Gb/s controllers
  - 9690SA-4I
  - 9690SA-4I4E
  - 9690SA-8I
  - 9690SA-8E
- SATA 3Gb/s controllers
  - 9650SE-2LP
  - 9650SE-4LPML
  - 9650SE-4LPME
  - 9650SE-8LPML
  - 9650SE-12ML
  - 9650SE-16ML
  - 9650SE-24M8

## ***Release Details***

The release has the following components:

- Windows driver version: 3.00.05.058 (for all supported Windows releases)

The following components are the same as 9.5.5.1:

- Firmware version: 4.10.00.027
- 3DM2 version: 2.11.00.021
- CLI version: 2.00.11.022
- FreeBSD 7.x driver version: 3.70.05.010
- FreeBSD 8.x driver version: 3.80.06.003
- FreeBSD 9.x driver version: 3.90.00.001
- Linux 2.4 driver version: 2.24.07.005 (source only)
- Linux 2.6 driver version: 2.26.08.006 (for supported distributions)
- Linux 2.6 up-stream driver version: 2.26.02.013 (for newer kernels)
- Mac OS X driver version: 2.2.10
- OpenSolaris driver version: 2.3

There is no 3ware software CD for this release. Refer to the 3ware Windows Driver Installation Addendum from this release for further instructions.

## ***Bug Fixes***

- Windows driver not signed, system won't boot (SCR-2302)

## ***Operating System Support***

The following operating systems are supported:

- FreeBSD 7.4 and 8.1 (x86 & amd64)
- Linux (x86 and x86\_64)
  - Fedora Core 11 & later
  - Red Hat Enterprise Linux 5.4 & later
  - openSUSE 11.1 & later
  - SUSE Linux Enterprise Server (SLES) 11 & later
  - For other distributions, refer to KB article:  
<http://kb.lsi.com/KnowledgebaseArticle14546.aspx>
  - Specific driver sources for kernels 2.6.8 through 2.6.37
- Mac OS X Leo (10.5), Snow Leopard (10.6), and Lion (10.7) for Intel Mac Pros
- OpenSolaris 2009.11 (x86 & amd64)
- VMware ESX, ESXi 4.x & ESXi 5.0 (x86\_64)
  - VMware drivers are available at [www.vmware.com](http://www.vmware.com) and [www.lsi.com](http://www.lsi.com)
- Windows XP, Vista, 7, 8, 2003 SP2, 2008, 2008 R2, & 2012 (x86 & x64)

## ***Restrictions***

### **Important: Older Drivers & Software Tools Are Not Compatible With This Release**

Drivers and software released prior to version 9.5.5.1 are not fully compatible with the firmware in this release. You must upgrade to a 3ware driver and a software level before you update the firmware on your 9690SA or 9650SE controllers.

### **Important: 3ware 7/8000 Series Units Are Deleted when Removed (SCR-233)**

Do not use the CLI or the 3DM2 interface to remove or export any RAID unit from a 7/8000 series controller with the exception of JBOD units. If you remove or export any non-JBOD RAID unit using these interfaces, the unit is deleted and is recoverable only with the help of 3ware Technical Support.

## ***Errata***

### **Support for Hard Drives Larger Than 4 TB**

As new capacity hard drives are made available, please check our compatibility list at <http://www.lsi.com/support/Pages/interoperability.aspx> for the latest additions.

### **Support for 3DM2 with Latest Windows Security Patch (SCR-1120)**

The latest Windows security service patch stops 3DM2 from running. Contact LSI support for a beta version to fix this issue.

### **Support for SNMP with Linux & FreeBSD (SCR-1128, SCR-2258, 2284, 2288)**

New Linux & FreeBSD distributions do not support SNMP

### **Support for CLI and 3DM with Linux 3.0 kernels & Debian Linux (SCR-1152)**

New releases of Debian with Linux kernel 3.0 do not support CLI and 3DM

**Support for 3DM2 with Linux 3.0 kernels (SCR-1148)**

New Linux distributions using kernel 3.0 do not support 3DM2 email notification, causing the 3DM2 daemon to panic

**Support for CLI with Linux 3.0 kernels (SCR-1135)**

New Linux distributions using kernel 3.0, such as openSUSE 12.1, benignly reports "malloc: using debugging hooks" when running CLI. This error can be ignored.

**Support for CLI with VMware**

Refer to the following KB article for important tips when using CLI with VMware <http://kb.lsi.com/KnowledgebaseArticle16671.aspx>

**SAS 6 Gb/s Expanders Are Not Supported on the 9690SA Controller**

Due to a compatibility issue, do not use SAS 6 Gb/s expanders with the 9690SA controller.

**3ware User Guide Does Not Include 9.5.2 and Newer Releases**

The 3ware 9650 & 9690 User Guide is not updated for newer releases. Refer to the 9.5.2 addendum included on the CD and the latest release notes from [www.lsi.com](http://www.lsi.com).

**Fedora Core 11 Driver Does Not Load on Primary Storage (SCR-2154)**

Due to an installer issue, the Fedora Core 11 operating system does not load the latest 3ware driver when you install the operating system on a 3ware controller. Run the workaround as documented in the `install.txt` file that is included on the storage medium that contains the driver software.

**SUSE Driver Does Not Load Automatically for Secondary Storage (SCR-2166)**

Due to SUSE Linux Enterprise Server (SLES) 11 restrictions, the 3ware driver fails to load on boot even after the `mkinitrd` command is executed. As a workaround, edit the `/etc/init.d/boot.local` file in the distribution to add either of the following commands:

```
insmod /lib/modules/<kernel version>/kernel/drivers/scsi/3w-9xxx.ko
modprobe --allow-unsupported 3w-9xxx
```

While other supported Linux distributions should not be affected, the same procedure may be used. For Redhat or Fedora, edit the `/etc/rc.d/rc.local` file instead.

**Local Time Issue with openSUSE 11.1 and SLES 11 (SCR- 2164)**

On openSUSE 11.1 and SLES 11, a system set for local time will post asynchronous event notification (AEN) messages with a GMT timestamp. This difference in time will delay the start of scheduled events that include (but are not limited to) rebuilds, verifies, initializations, and migrations. This problem has been fixed with the openSUSE 11.2 distribution. At the time of this writing, there is no service pack solution for the SLES 11 distribution. SLES 11 systems set to GMT time will not be affected by this problem.

**CLI for FreeBSD May Fail to Show Controllers and CLI Version (SCR-945)**

With certain FreeBSD systems CLI may report a syntax error with the show and show version commands. Other commands are not affected including /cx show & /cx/ux show.

**CLI Allows Migration of a Single SAS Disk to RAID-1 Array Using a SATA Drive (SCR-594).** Mixed SAS and SATA drive configurations are normally not allowed during creation and migration by 3BM, CLI, or 3DM2.

**3DM2 May Display Invalid Characters in Email Notification Settings (SCR-705)**

If the 3DM2 email notification setting fields are not populated, random characters may be displayed in place of a blank field. Only Windows operating systems appear to be affected. These characters can be safely ignored.

**WinAVAlarm Does Not Sound on 64-bit Windows Systems (SCR-1161)**

No alarm is audible with Windows 64-bit systems when the WinAVAlarm option is activated for an AEN.

**OpenSolaris UFS File System Unit Limit (SCR-2157)**

To support eight or more drive units on OpenSolaris 2009 v6, use the ZFS file system instead. There are limitations with eight or more units when using the UFS.

**OpenSolaris System Hang Issue Using UFS File System (SCR-2087)**

When creating a UFS file system in Open Solaris 2009 v6, you must use the -T option to avoid a possible system hang: `newfs -T /dev/rdisk/cx/tx/dx/sx`

**Support for Units Larger than 2 TB OpenSolaris (SCR-973)**

While the 9750 supports units that are greater than 2 terabytes in size, these storage objects are too big for some 32-bit kernels, such as OpenSolaris. Use the 3ware autocarve option as a workaround. Refer to the 3ware SATA+SAS RAID Controller Card Software User guide for more details.

## 3ware Windows Driver Installation Addendum for 9.5.5.2 and 10.2.2.2 Release Notes

### **Installing LSI 3ware Drivers for Windows**

This section provides detailed instructions for installing the 3ware driver running under a Windows operating system.

The following topics are included in this section:

- Driver Installation Under Windows
- Updating the 3ware Driver Under Windows

### **Driver Installation Under Windows**

**Note:** Before installing the 3ware driver, you may want to physically install your 3ware RAID controller in the system. Consult the installation guide that came with your controller for how to do this. If you do not have a hardcopy of the installation manual, it is available from the LSI website at <http://www.lsi.com/support/pages/download-search.aspx>.

The 3ware RAID controller can be used with Windows OS versions mentioned in the 3ware release notes. It is recommended that you upgrade to the latest service pack available.

A drive or unit managed by the 3ware RAID controller may be configured to be your system's boot device. Or, you can use units managed by the 3ware controller for secondary storage and boot from another device, such as a disk attached to the motherboard, or other bootable media.

This section contains instructions for how to:

- Create a driver disk for the 3ware RAID controller
- Install the 3ware driver and Windows on a new drive or unit
- Install the 3ware driver when Windows is already installed on a different device

**Note:** You must have administrator privileges for your system to install the Windows operating system and the 3ware driver.

#### **Materials Required**

- Microsoft Windows installation media (Not required if Windows is already installed on another drive.)
- Floppy diskette or USB drive, to create a driver disk, if required

#### **Creating a 3ware Driver Disk**

If you are installing Windows on a new unit or drive managed by the 3ware RAID controller, you can create a driver disk. The latest 3ware OS drivers are available from LSI at: <http://www.lsi.com/support/Pages/download-search.aspx>

### Download and copy the driver to a floppy diskette or USB drive

1. Download the latest 3ware driver for your controller from:  
<http://www.lsi.com/support/Pages/download-search.aspx>

For Windows 8 and Windows 2012, no driver download is required for the 3ware 9750 controller. The 3ware driver is already included (in box) with the Windows OS.

2. Unzip the 3ware driver installation package. The SDK7 driver package is for Windows 7 and earlier. The SDK8 driver package is for Windows 8 and 2012. There are 32-bit and 64-bit drivers available for each. Be sure to select the correct one.
3. Copy the driver files to a floppy diskette or USB drive

### Installing the 3ware Driver and Windows on a New RAID Unit

If you want to install Windows on a new drive configuration managed by the 3ware RAID controller, follow the instructions in this section.

If Windows is already installed on another drive, refer to “Installing the 3ware Driver and Windows on a New RAID Unit”

### To install Windows XP, Vista or 2003 and the 3ware driver

1. Boot from the Windows installation media and press **F6** when you see the message: “Press F6 if you need to install a 3rd party SCSI or RAID driver” at the bottom of the display.
2. When you see the message: “Setup could not determine the type of one or more mass storage devices or you have chosen to manually specify an adapter...” Type **S** to specify that you have an additional 3ware RAID controller.
3. Insert the floppy or USB drive with the 3ware driver and press **Enter**. Once inserted, select **Browse** or **OK** and navigate to the location of the driver.
4. When a box with **LSI 3ware RAID Controller** appears, press **Enter** to select it.
5. Type **S** if you have additional devices to add. Otherwise, press **Enter**.
6. Continue with the normal Windows installation at this point. There are no instructions after installing the driver that are specific to 3ware. If you need additional instructions, refer to the Windows documentation supplied by Microsoft.

## To install Windows 7, 8, 2008 or 2012 and the 3ware driver

1. Boot from the Windows installation media and specify the following: language to install, time and currency format, and keyboard or input method. Click **Next** and then click **Install Now**.
2. Accept the Microsoft License Terms and click **Next**.
3. When the message “Which type of installation do you want:?” appears, click **Custom (advanced)**.
4. When the message “Where do you want to install Windows?” appears, click **Load Driver**.
5. Insert the media with the 3ware driver. Once inserted, select **Browse** or **OK** and navigate to the location of the driver.
6. When the message “Select the driver to be installed” appears, choose **LSI 3ware RAID Controller** and click **Next**.
7. Continue with the normal Windows installation at this point. There are no instructions after installing the driver that are specific to 3ware. If you need additional instructions, refer to the Windows documentation supplied by Microsoft.

## Installing the 3ware Driver on a Windows System that Boots from a Different Device

If you are installing the 3ware RAID controller on a system that already has a Windows operating system boot device, follow the instructions in this section.

**Note:** It is easiest and simplest to install the driver before you install the 3ware RAID controller card. If you install the controller card first, when Windows displays the Found New Hardware wizard, cancel the prompts. Then continue with the procedure below.

1. Download the latest 3ware driver for your controller from:  
<http://www.lsi.com/support/Pages/download-search.aspx>  
  
For Windows 8 and Windows 2012, no driver download is required for the 3ware 9750 controller. The 3ware driver is already included (in box) with the Windows OS.
2. Unzip the 3ware driver installation package. The SDK7 driver package is for Windows 7 and earlier. The SDK8 driver package is for Windows 8 and 2012. There are 32-bit and 64-bit drivers available for each. Be sure to select the correct one.
3. Select and double-click to run the applicable SDK executable for your 3ware system. For newer Windows versions right click on the executable and select “Run as administrator”.
4. The 3ware Device Driver Installation Wizard will open.



5. Click **Next**

You will see the following screen. The green checkmarks indicate successful installation of the driver. If unsuccessful, there will be a red checkmark.

**3ware Device Driver Final Installation Screen:**



6. Click **Finish** to exit the installer
7. If your 3ware RAID controller card is not yet installed, power down the system and physically install the controller card
8. When you turn your computer on again, Windows will automatically detect that the controller has been installed
9. When prompted, click the default **Next** to have Windows automatically select the driver.
10. The driver will automatically be detected, and the controller will be ready to use. Windows may or may not require that you reboot your computer.