



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

**Release 9.5.4**

**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/channel/support/products/Pages/FindSupportByProduct.aspx>

- Select your applicable product, such as “3ware 9690SA-8I”

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 and at 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
- Added support for 3TB SATA and SAS hard drives
- Improved serviceability to upgrade drive firmware using CLI
- Added drive power management support (SCR-1039). Refer to KB article: <http://kb.lsi.com/KnowledgebaseArticle16389.aspx> for the new CLI commands
- Added 3DM2 email notification for Yahoo SSL email (SCR-1967)
- Support for the latest FreeBSD, Mac, Linux, OpenSolaris & VMware releases
- Updated firmware, software (3DM2 & CLI) and drivers (FreeBSD, Mac and Windows)

## ***Release Details***

This release has the following components:

- 3ware PC CD version: 2.02.00.015 and Mac CD version: 2.02.01.007
- Firmware version: 4.10.00.024
- 3DM2 version: 2.11.00.019
- CLI version: 2.00.11.020
- FreeBSD 7.x driver version: 3.70.05.010
- FreeBSD 8.x driver version: 3.80.06.003
- 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: 2.2.5
- OpenSolaris driver version: 2.3
- Windows driver version: 3.00.05.056

## ***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
  - Red Hat Enterprise Linux 5.4
  - openSUSE 11.1
  - SUSE Linux Enterprise Server (SLES) 11
  - 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 (Driver available at [www.vmware.com](http://www.vmware.com) or [www.lsi.com](http://www.lsi.com))
- Windows 2003 SP-2, 2008, 2008 R2, Vista and Windows 7 (x86 & x64)

## ***Bug Fixes***

- CLI segmentation fault with VMware (SCR-1040)
- 3DM2 Unable to migrate from a 2-drive RAID-0 array (SCR-1020)
- 3DM2 Unable to migrate from a single drive to a RAID-1 Array (SCR-1030)
- 3DM2 password doesn't work if special characters used (SCR-1064)
- Inoperable array due to DCB corruption (SCR-1896)
- RAID-6 initialization remains at 100% complete (SCR-2182)
- Incomplete unit after power failure when RAID-1 is initializing (SCR-2217)
- Multiple customers are experiencing XFS corruptions (SCR-2232 & 2263)
- Controller hangs with heavy I/O if RAID-5 or 6 cache is disabled (SCR-819)
- Unexpected soft resets (SCR-2196)
- Performance drops during SES polling (SCR-2214)
- 500 GB drive is shown as 200 TB if export JBOD is enabled (SCR-2257)

## ***Restrictions***

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

Drivers and software released prior to version 9.5.4 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 3 TB**

As new hard drives larger than 3 TB are made available, please check our compatibility list at <http://www.lsi.com/support/Pages/interoperability.aspx> for the latest additions.

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

Due to a compatibility issue, do not use SAS 6Gb/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 9.5.2 thru 9.5.4 release notes from [www.lsi.com](http://www.lsi.com).

### **3ware CD Menu Tools Do Not Run With Fedora Core 10 & Later (SCR-1781)**

Due to security restrictions the 3ware menu is no longer supported with Fedora Core. The workaround is to login as root and run the tools directly from a command line instead.

### **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 a 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.