



AMCC 3ware 9550SX/9590SE Release Notes

Release 9.3.0.6

READ ME FIRST!

Thank you for using 3ware SATA RAID controllers. This document describes known issues and important recommendations.

AMCC 3ware Contact Information

Knowledgebase:

<http://www.3ware.com/KB/kb.asp>

System Compatibility Lists:

http://www.3ware.com/products/compatibility_sata.asp

Service and support:

<http://www.3ware.com/support/index.asp>

Main U.S. Phone: 800-840-6055 (US only) or 858-535-6517

European Phone: 00 (800) 3-927-3000 or +49-89-800777-15

Release Highlights

- Bug fixes and enhancement to release 9.3.0.4
- Chassis Control Unit Support (CCU): Drive status and drive activity LEDs are fully functional

Release Details

The following firmware, driver, 3DM 2, and CLI versions comprise the 9.3.0.6 release package:

- Firmware version: 3.04.01.010 (9550SX/9590SE)
- Firmware version: 2.08.00.006 (9500S)
- 3DM 2 version: 2.04.00.018
- CLI version: 2.00.03.017
- Windows driver version: 3.00.01.084
- Linux 2.6 driver version: 2.26.04.009 (For supported distributions)
- Linux 2.6 driver version: 2.26.02.007 (For upstream kernels)
- Linux 2.4 driver version: 2.24.04.009
- FreeBSD driver version: 3.50.02.016

Operating System Support

- Windows 2000 with Service Pack 4 and newer
- Windows XP 32-bit and 64-bit x64
- Windows 2003 32-bit and 64-bit x64
- Red Hat Workstation 4.0 Update 2 32-bit and 64-bit x64
- Fedora Core 4 32-bit and 64-bit x64
- SuSE Professional 10.0 - 32-bit and 64-bit x64
- SuSE Enterprise Server 9.0 - 32-bit and 64-bit x64
- FreeBSD 5.4 32-bit and 64-bit x64
- Linux 2.4 and 2.6 driver sources are available to build your own driver for other distributions
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Bugs fixed:

Drive LED blinking problem after rebuilding

For certain chassis that do not fully comply with AMCC's CCU reference design, we have provided a work around in this release to fix the problem where the LED for a rebuilding drive continues to blink after the rebuild has completed.

Long response time on unit under various conditions in AV mode

A few customers experienced long command response times on a unit in AV mode under conditions such as removing a drive, injecting the system with lots of read and write operations, or issuing SMART IOCTL calls to the system. This has been resolved with this release.

Unaligned requests bug in Windows

This release fixes the issue with the system running out of allocated memory when unaligned requests are issued to the driver.

Battery health voltage limits reduced

The limits for the weak battery and battery health check have been lowered. Please see KnowledgeBase article 14945 for the new limits.

<http://www.3ware.com/KB/article.aspx?id=14945>

Errata

Latest firmware and driver

We are constantly fixing bugs and adding new features to our controllers. Remember to check our web site for the latest release and to sign up for the AMCC 3ware Technical Newsletter. <http://www.3ware.com/support/index.asp>.

Support for the 7000/8000 series controllers

See 3ware KB article 14851 for support on the 7000/8000 series products

<http://www.3ware.com/KB/article.aspx?id=14851>

Drivers prior to release 9.3.0 are not compatible with 3ware 9550SX/9590SE controllers

Using drivers released prior to 9.3.0 for the 3ware 9550SX/9590SE controller can result in system crashes. We have observed this problem when swapping a 3ware 9500S controller with a 3ware 9550SX controller without first updating the driver to release 9.3.0 or newer. The solution is to always upgrade the driver to release 9.3.0 or newer before swapping out your older 3ware controller.

Installing FreeBSD 5.4 and 6.0 on the 9550SX/9590SE controller

Since FreeBSD 5.4 and 6.0 do not have native support for the 9550SX controller, please follow the instruction in our knowledge base article:

<http://www.3ware.com/KB/article.aspx?id=14850>

Unit under Linux 2.6 can be deleted or removed even when the unit is mounted and in-use

If a unit is running under Linux kernel 2.6, 3DM2 and CLI allow the deletion or removal of a unit even when the unit is busy. This is due to a new implementation in this kernel where the EBUSY signal fails to return when the device is busy. We are currently working on a resolution for this problem. **If you are planning to use 3DM2 or CLI to remove or delete a unit, make sure the unit is safe to remove or delete—in other words, make sure it is unmounted and that no I/Os are being issued.** (For example, make sure you are not copying files to the unit, and make sure that there are no applications with open files on that unit.)

NCQ is disabled by default

By default, NCQ is disabled on a unit when you create the unit under 3DM2, CLI and 3BM. If you are using drives that have NCQ support and wish to enable NCQ, do so after the unit is created.

Auto Verify does not run when there is only one time slot set in the scheduling section

Currently there is a firmware bug that will cause the auto verify process not to run if you schedule only one time slot. The resolution is to set at least two time slots in the scheduling window or select “ignore schedule” while enabling the auto verify function.

3ware driver support for Linux 2.6 kernel

Updates to the Linux 2.6 kernel include:

- SCSI driver reset entrypoint spinlock
- SCSI driver shutdown entrypoint
- Kernel "change_queue_depth" driver entrypoint.

The 3ware in-kernel driver supports the 9500S, 9550SX, and 9590SE controllers beginning with Linux 2.6.14 kernel. Subsequent Linux kernel releases will also support these controllers.

AMCC does not recommend changing only the driver source to upgrade the 3ware in-kernel driver. Instead, upgrade to the next Linux 2.6 kernel that has a newer 3ware in-kernel driver. Please reference AMCC/3ware Knowledge Base Article 14831, through this link: <http://www.3ware.com/KB/article.aspx?id=14831>

The 3ware 2.6 kernel source driver, labeled “upstream driver,” was tested using the latest pre-released kernel from kernel.org at the time of product release. No other kernel versions were tested.

3ware will continue to provide a binary code for the supported distribution such as RedHat, SUSE, and Fedora Core.

The upstream driver has the following fixes:

- 1) Fix use_sg == 0 mapping on systems with 4GB RAM or higher.
- 2) Disable local interrupts during kmap/umap_atomic fix.
- 3) Add big endian support.
- 4) Fix 9550SX pchip reset timeout.

JBOD drives become available drives after power fails

We have seen conditions where JBOD drives become available drives when the user is updating the controller settings and a power failure happen at that instance. This occurs because the policy setting for “Export Unconfigured Disks” becomes disabled. The workaround is to enable “Export Unconfigured Disk” policy again in 3BM. If you are using JBOD drives, we recommend not enabling the auto rebuild policy. Enabling the auto rebuild policy may cause data loss if a JBOD drive that has been used to store data becomes an available drive and it is automatically used to rebuild another unit. This could occur when auto rebuild policy is enabled.

3BM might not power on correctly after multiple power failures

If your system experiences multiple power failures (power off and on multiple times in a short period), your system might not see the 3ware controller during the following power-on. The workaround is to turn off the system and then turn it on again a minute later.

9590SE controller might not recover from a failed firmware upgrade

If you experience a power failure during a firmware upgrade on the 9590SE controller, there is a chance that the controller will not be recoverable. Subsequent flashing of the controller code will fail. If this happens, you can contact our technical support team for a replacement controller.