Adaptec ASR-5085/ASR-5405/ASR-5445/ASR-5805/ASR-51245/ASR-51645/ASR-52445 Unified Serial Controllers
Adaptec ASR-2045/ASR-2405 Unified Serial Controllers
Adaptec ASR-5405Z/ASR-5445Z/ASR-5805Z Unified Serial Controllers

NOTE: All Adaptec products are UL listed and for use only with UL listed ITE.
as of June 9, 2009

Please review this file for important information about issues and errata that were discovered after completion of the standard product documentation. In the case of conflict between various parts of the documentation set, this file contains the most current information.

NOTE: The latest firmware, BIOS, drivers and documentation can be downloaded from www.adaptec.com when they become available.

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1. Software and Documentation
   1.1 Controller & Utility Software

   Note: The latest versions of firmware, BIOS and driver software can be downloaded from www.adaptec.com when they become available.
1.2. Documentation on this CD

- Adaptec SAS RAID Controllers Installation and User's Guide
- Adaptec SAS RAID Controllers Quick Start Guide
- Adaptec SAS RAID Controllers README.TXT file

2. Installation and Setup

2.1 Installation Instructions

The Adaptec SAS RAID Controllers Installation and User's Guide contains complete installation information for the controllers and drivers, as well as complete instructions for all utilities. The Adaptec Storage Manager User's Guide contains complete installation information for the Adaptec Storage Manager software.

2.2 Adaptec ZMM-100CC Super Cap Card Setup

If you connect/plug a charged ZMM-100CC Super Cap Card in to a controller, you must wait for it to discharge before powering up the host system; otherwise, the BIOS will hang during boot. You can tell if the cap card is charged by observing the yellow LED on the Adaptec ZMM-100DB daughterboard. It shines brightly when the cable is first connected, then it goes dim. You must
wait for it to go out (not just dim) before powering up the system. This may take a few minutes, depending on the charge level.

2.3 Power Management Setup

You must use a compatible combination of Adaptec Storage Manager and controller firmware and driver software to use the power management feature. All software components must support power management. You can download the latest controller firmware and drivers from the Adaptec Web site at www.adaptec.com.

2.4 Linux Setup

Before installing the Linux operating system on a logical device, Adaptec recommends clearing (removing) old data first. If you do not remove old data prior to installation, the OS may not boot. As a workaround, use the boot parameter 'aacraid.wwn=2'.

3. General Cautions

- While an array is being built or cleared, do NOT remove and re-insert any drive from that array. Doing so may cause unpredictable results for any of the controller's arrays.

- DO NOT move drives containing an array from one controller to another while the power is on. Doing so could cause the loss of the array configuration or data, or both. Instead, power off both affected controllers, move the drives, and then restart.

4. Known Limitations

4.1 ACU Utility

- On some Intel and IBM systems, when you try to run the ACU utility, this message appears:

"Not enough free memory to load the utility! Press any key to attempt loading the utility forcibly OR wait for the system initialization to be completed [Default]"

This is normal. On Intel systems, wait for the system initialization to be completed. Then the ACU will run. On IBM systems, press any key when prompted to load the utility forcibly.

- The ACU erroneously displays deleted logical drives in the JBOD list. The logical drive(s) continue to appear in the JBOD list until you delete all of the JBODs.

- With some enclosures, the ACU displays incorrect box/slot information for managed disk drives; for example, Exp/Phy instead of Box/Slot.

4.2 Creating an Array from the Adaptec Storage Manager CD

When you create an array with the Adaptec Storage Manager bootable CD, the maximum size of the array is 2 TB.
4.3 Using the Controller with an Adaptec S50 JBOD Enclosure

Temperature warnings from the Adaptec S50 JBOD Enclosure with firmware version T016 are not shown in Adaptec Storage Manager (or on the enclosure). To correct the problem, upgrade to the latest firmware version.

4.4 UnixWare and OpenServer

Adding or moving controllers in an existing UnixWare or OpenServer system may cause some device resources to change, which may lead to the operating system being unable to boot. Currently, there is no workaround available in the operating system. Before installing the operating system, make sure all PCI devices are either enabled or installed.

4.5 OpenServer 6.0

Arrays may not be displayed correctly, even after you restart your computer.

To resolve the problem:

As root, run 'resmgr -r -m vtoc' until it fails. Then, as root, run '/etc/conf/bin/idconfupdate -f'. Then, reboot.

4.6 SuSE Linux Enterprise Server 10 with Service Pack 2

If your boot array is installed on the controller, and the boot OS is SLES10 SP2 with driver version 1.1.5-2458, you must add 'aacraid.wwn=1' to the kernel boot command line. Alternatively, install the latest aacraid driver.

4.7 Hot-adding Disk Drives

- If you hot-add multiple disks simultaneously to a large configuration (100 disk drives or more), it may take a large amount of time before those disk drives appear in Adaptec Storage Manager.

- With Intel Backplanes AXX4DRV3GEXP and AXX6DRV3GEXP, if a drive bay is empty at enclosure power on and then a SATA disk drive is hot-added into the empty bay, the controller does not detect the new disk drive. To work around this issue, remove and re-insert the SATA disk.

4.8 SuperMicro Disk Drive Enclosures

If the controller does not detect disk drives installed in a SuperMicro M28E2 Mobile Rack, use backplane SAS connectors marked with "SAS In" only.

4.9 Using the Controller with a SuperMicro X7DBE Motherboard

The ASR-2405 and ASR-2045 do not support the SuperMicro X7DBE motherboard. Adaptec recommends using the SuperMicro X7DBE+.

4.10 Using the Controller with a Seagate Barracuda 1TB SATA Drive

To ensure reliability when using Adaptec 2-series and 5-series controllers with a Seagate Barracuda ES.2 1TB SATA Drive (ST31000340NS), Adaptec recommends using Seagate firmware version AN05 or SN06 or higher. For low-port 5-series
controllers, use Seagate firmware version SN05.

4.11 Intel SE7525RP2 and SE7320EP2 Motherboards

The Intel SE7525RP2 and SE7320EP2 motherboards do not support Mode 0 flash. These motherboards use 64-bit PCI addressing. The AFU currently supports 32-bit PCI addresses only.

4.12 Windows Server 2008 64-Bit SCSIport Driver

The Windows Server 2008 64-Bit SCSIport driver is in the process of being certified and is not supported in this release. Use the Storport driver instead.

4.13 Boot Drive Failure after OCE/RLM

The system may fail to boot after a boot drive OCE/RLM (online capacity expansion/RAID level migration). To correct the problem, verify that the boot drive is still listed as the first logical device in Adaptec Storage Manager (ASM). If not, use the Control-A BIOS utility to reselect the proper boot device.

4.14 Online Capacity Expansion (OCE) Limits

This release supports a maximum of 8 concurrent OCE tasks in the RAID array migration wizard.

4.15 Power Management under FreeBSD

The FreeBSD driver does not support power management in this release.

4.16 Using RAID10 under FreeBSD

If a RAID10 array fails under FreeBSD the firmware may crash causing the system to reboot automatically.

4.17 Power Management with Seagate SAS Drive ST31000640SS

Power Management is not supported by the Seagate ST31000640SS SAS drive. (The drive powers down but will not power up without rebooting.)

4.18 Linux Cache Synchronization

With Linux driver 1.1-5-2459 (or higher), you may see an improvement in performance if you suppress cache synchronization. For a controller with battery back-up, add 'options aacraid cache=6' to the /etc/modprobe.conf.local file. To completely suppress cache synchronization, add 'options aacraid cache=2'. Then, reboot. Note that the smaller value provides no protection in case of a power outage.

4.19 Listing Devices in VMware ESX 4.0 Console

After an array is deleted with ARCCONF, the VMware ESX 4.0 Console will hang if you try to list available devices with 'fdisk -l'. As a work-around, rescan first, then try 'fdisk -l'.

4.20 BIOS Hangs During Boot

Possible Cause: After a system shutdown, the daughterboard remains active for several minutes. The Super Cap connector may have been
improperly removed and/or re-inserted with charge still present.

Solution: Plug the Super Cap connector in when the system is OFF and, if the yellow activity LED is illuminated on the ZMM-100DB daughterboard attached to RAID Controller, wait for the LED activity indicator to go out. This may take several minutes. The system should then boot normally.