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README.TXT

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

as of December 5, 2008

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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](http://www.adaptec.com) when they become available.

The following information is available in this file:

1. Software and Documentation
  - 1.1 Controller & Utility Software
  - 1.2 Documentation on this CD
2. Installation and Setup
  - 2.1 Installation Instructions
  - 2.2 Power Management Setup
  - 2.2 Linux Setup
3. General Cautions
4. Known Limitations
  - 4.1 ACU Utility
  - 4.2 Creating an Array from the Adaptec Storage Manager CD
  - 4.3 Using the Controller with an Adaptec S50 JBOD Enclosure
  - 4.4 UnixWare and OpenServer
  - 4.5 OpenServer 6.0
  - 4.6 SuSE Linux Enterprise Server 10 with Service Pack 2
  - 4.7 Hot-adding Disk Drives
  - 4.8 SuperMicro Disk Drive Enclosures
  - 4.9 Using the Controller with the SuperMicro X7DBE Motherboard
  - 4.10 Using the Controller with a Seagate Barracuda 1TB SATA Drive
  - 4.11 Intel SE7525RP2 and SE7320EP2 Motherboards
  - 4.12 Windows Server 2008 64-Bit SCSIport Driver
  - 4.13 Boot Drive Failure after OCE/RLM
  - 4.14 Online Capacity Expansion (OCE) Limits
  - 4.15 Power Management under FreeBSD
  - 4.16 Power Management with Seagate SAS Drive ST31000640SS
  - 4.17 Linux Cache Synchronization

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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](http://www.adaptec.com) when they become available.

- BIOS
- ACU
- Windows Drivers
  - o windows 2003 server, Enterprise, Standard, and Web Edition

readme.txt

- o Windows 2008 Server, Enterprise, and Standard
- o Windows XP All versions
- o Windows Vista - All versions
- Linux Drivers
  - o Red Hat Enterprise Linux 4.6, IA-32 and x64
  - o Red Hat Enterprise Linux 5.2, IA-32 and x64
  - o SuSE Linux Enterprise Server 9, IA-32 and x64
  - o SuSE Linux Enterprise Server 10, IA-32 and x64
- FreeBSD Drivers
  - o FreeBSD 6.3, 7.0
- SCO Drivers
  - o OpenServer 6.0
  - o UnixWare 7.1.4
- VMware Drivers
  - o VMware ESX Server 3.0.2, 3.5

NOTE: The VMware ESX 3.5 driver is in process of being certified by VMware. In its current state it is offered only for evaluating interoperability. Upon formal certification it will be fully supported by VMware, and will become available at [www.adaptec.com](http://www.adaptec.com) and [www.vmware.com](http://www.vmware.com).
- Sun Solaris Drivers
  - o Solaris 10 Update 4

## 1.2. Documentation on this CD

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

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## 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 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](http://www.adaptec.com).

### 2.3 Linux Setup

readme.txt

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'.

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### 3. General Cautions

- while an array is being built or cleared, do NOT remove and reinsert any drive from that array. Doing so may cause unpredictable results for any of the controller's arrays.
  - while a drive is being cleared, do NOT try to include it in a new array. Doing so may cause unpredictable results.
  - DO NOT move drives containing an array or volume 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.
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### 4. Known Limitations

#### 4.1 ACU Utility

- o 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.

- o 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.
- o 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

readme.txt

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

- o 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.
- o 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.
- o If you remove a disk drive from an enclosure and that drive is not part of any logical device, Adaptec Storage Manager will not auto-detect the disk when the same drive is re-inserted into the same slot in the enclosure. To correct the problem, manually rescan the controller in ASM: right click the controller in the Enterprise view, then select 'Rescan'.

Note that ASM will auto-detect the drive if:

- The same drive is re-inserted into a different slot
- A different drive is inserted into the same slot

#### 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

readme.txt

(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 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.)

#### 4.17 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.

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