
README.TXT

Adaptec RAID Controllers: ASR-2020ZCR/2025ZCR/2120S/2130S/
2200S/2230S
AAR-2020SA/2025SA/2410SA/2810SA/21610SA
as of April 11th, 2005

Please review this file for important information about issues and erratas 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 and documentation will be available for download at www.adaptec.com.

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1. Software and Documentation

1.1. Controller & Utility Software

Note: The latest versions of firmware and driver software can be downloaded from www.adaptec.com.

- Firmware
- ACU
- Windows Drivers
 - o Windows 2000 Server, Advanced Server, and Professional
 - o Windows 2003 Server, Standard and Advanced
 - o Windows XP, Home Edition and Professional
 - o Windows Server 2003 x64
 - o Windows XP 64-Bit Edition for 64-bit Extended Systems
- Linux Drivers
 - o Red Hat Advanced Server 2.1
 - o Red Hat Advanced Server 3.0
 - o SuSE 9.0 and 9.1
 - o SuSE Linux Enterprise Server 9
- Other Drivers
 - o UnixWare 7.1.x and OpenUNIX 8, Base and Business Editions
 - o SCO OpenServer 5.06 and 5.07
 - o Novell NetWare 6.x

1.2. Documentation on this CD

- SATA and SCSI RAID Controllers Quick Installation Guide (printed)
- SATA and SCSI RAID Controllers Installation and User's Guide
- Command Line Interface Reference Guide
- Adaptec RAID Controllers README.TXT file

2. Installation Instructions

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

3. General Cautions and Notes

3.1 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.

3.2 General Notes

- When displaying information on a physical device, the device, vendor and model information may be displayed incorrectly.
- During array migration from a RAID 1 or RAID 5 to a RAID 0, if the original array had a spare drive attached, the resulting RAID 0 retains the spare drive.
- After building or verifying a leg of a second-level array, the status of the second-level array is displayed as a "Quick Initialized" array.
- The Adaptec controller supports only new drives or drives that have been initialized or low-level formatted. Attaching used drives could cause problems, including:
 - o Existing/rebuilding arrays may go off line
 - o Interrupted rebuilds may continue on the wrong drive
- On motherboard BIOSes supporting BBS, BBS support is usually enabled on the Adaptec controller. This can cause problems during restart. WORKAROUND: Disable BBS.
- After using a hot spare to successfully rebuild a redundant array, information about the hot spare drive may not display as expected. CLI may continue to display it as a global spare, but the array will not have a spare attached. ARC (the BIOS utility) displays the spare attached to the array as expected.
- Arrays created with stripe sizes greater than 64k cannot be imported back to earlier firmware releases.

4. Array Level-Specific Notes

4.1 RAID 10 Notes

- If a RAID-10 is degraded, the BIOS reports a degraded RAID-0 and a degraded RAID-1 instead of degraded RAID-10.
- You cannot change the priority of a RAID-10 verify. Setting the priority at the start of a verify has no effect. The priority is still shown as high. Changing the priority of a running verify on a raid-10 changes the displayed priority until a rescan is done, then the priority shows as high again.
- A RAID 10 created using the ACU using the CLEAR method shows as "IMPACTED" until the CLEAR operation is complete. Also, the drives' statuses are reported as Not Busy, even though the drives are clearing.
- Performing a Verify and Verify/Fix on an RAID 10 displays the same message text in the event log, "Build/Verify started on second level array of array 'Array_0.'" You may see the message three times for a Verify, but only once for a Verify/Fix.
- Adaptec 2020ZCR/2120S/2200S only -- RAID 10 arrays with greater than 20 drives support the Build/Verify command, but not the Clear command.
- Do not reboot a system when a degraded RAID 10 has an Online Capacity Expansion (OCE) in progress. Allow the OCE to complete before rebooting the system.

4.2 RAID 50 Notes

- Adaptec 2020ZCR/2120S/2200S only -- RAID 50 arrays with greater than 18 drives support the Build/Verify command, but not the Clear command.

4.3 Simple and Spanned Volume Notes

- Adaptec 2020ZCR/2025ZCR/2020SA/2025SA only -- For a redundancy array (R5, R1, etc.), an alarm will normally sound for a few seconds when a member of an array goes off line. However, for a non-redundancy array, one very short beep will sound if a member of an array goes off line.

5. Controller-Specific Compatibility Issues

5.1 SATA Controllers

- A Clear operation on an array causes a severe performance impact to other processes, such as Build/Verify processes, involving the same array members. Therefore, Adaptec recommends that you NOT

attempt any other operations while performing a Clear operation on a SATA array.

- SATA events are displayed with SCSI nomenclature.
- Adaptec 2810SA/21610SA only -- ACU is not supported on these controllers when installed in the following motherboards:
 - o SuperMicro P40C6+/P4DCE Server Board, 512 MB DDR RAM
 - o Intel Xeon x 2 System BIOS rev: 1.26

WORKAROUND: Use Adaptec Storage Manager on the bootable CD to create arrays.

5.2 SCSI Controllers

- In Linux, the controller does not support attached CD drives during OS installation.
- Adaptec 2020ZCR/2120S/2200S only -- RAID 10 arrays with greater than 20 drives and RAID 50 arrays with greater than 18 drives support the Build/Verify command, but not the Clear command.
- Adaptec 2120S only -- When you flash this controller, the confirmation message says "Writing 2200S firmware (4MB) to the Controller..." The model number and size are incorrect. (The message should say "Writing 2120S firmware (2MB) to the Controller...") However, the flash process is successful.

6. Adaptec Bootable CD

6.1 Intel SATA chipset compatibility

- The Adaptec bootable CD will not boot when connected to motherboards equipped with the Intel ICH5 SATA I/O device.

6.2 Intel 875 chipset and DVD ROM drive compatibility

- The Adaptec bootable CD will not boot when it is inserted in a DVD ROM drive connected to a motherboard equipped with the Intel 875 chipset.

6.3 Usability Issue

- If you experience problems with your video display or mouse when you boot from the Adaptec CD, specify your hardware by typing the following at the command prompt:

bootcd [options] <Enter> or lowres [options] <Enter>

lowres -Forces the Adaptec CD to use a generic framebuffer of 640x480.

fbdev -Forces the Adaptec CD to use a generic framebuffer of 800x600.

options:

Ø m=<mouse type>
 Ø s=<video server type>
 Ø mon=<monitor value>
 Ø p=<port> fbdev

Ø <mouse type>
 man: for manual configuration
 serial: for generic, thinking, logitech, logitechcc, msnew,
 msintelli, mousesystems, mmseries, mmhittab
 non-serial: for alpsps/2, atibm, geniusnmps/2, geniusnmps/2,
 thinkingps/2, logibm, logimman+ps/2, msintellips/2,
 msbm, usb

Ø <video server type>
 man: for manual configuration
 or one of these types:
 vga16, svga, s3, mach32, mach8, 8514, p9000, agx,
 w32, mach64, i128, s3V, 3dlabs

Ø <monitor value> can be a number from 0 to 11:

- 0 - 640x480 @ 60 Hz
- 1 - 800x600 @ 56 Hz
- 2 - 1024x768 @ 87 Hz interlaced (not 800x600)
- 3 - 1024x768 @ 87 Hz int, 800x600 @ 56 Hz
- 4 - 800x600 @ 60 Hz, 640x480 @ 72 Hz
- 5 - 1024x768 @ 60 Hz, 800x600 @ 72 Hz
- 6 - 1024x768 @ 70 Hz
- 7 - 1280x1024 @ 60 Hz
- 8 - 1280x1024 @ 74 Hz
- 9 - 1280x1024 @ 76 Hz
- 10 - 1600x1200 @ 70 Hz
- 11 - 1600x1200 @ 76 Hz

Ø <port> is a number from 1 to 4 representing com1..com4
 for serial mice.

7. RAID Utility-Specific Compatibility Issues

7.1 ACU (Adaptec Configuration Utility)

- A RAID 10 created using the ACU using the CLEAR method shows as "IMPACTED" until the CLEAR operation is complete. Also, the drives' statuses are reported as Not Busy, even though the drives are clearing.

7.2 AFU (Adaptec Flash Utility)

- Caution: If the disk does not have enough space to save the flash image, an error message informs you that an error occurred while saving the image, and AFU saves an unusable image file.
- When you use the Save command, you are prompted to insert the disk labeled AA2161 firmware. Insert a blank, formatted disk and label it "AA2161 Firmware Disk 1." If the disk is not

formatted, you will receive an error message telling you that the disk cannot be opened.

7.3 CLI (Command Line Interface)

- DO NOT run concurrently with Adaptec Storage Manager. Doing so may cause unpredictable results.

8. Operating System-Specific Compatibility Issues

8.1 Windows - All

- Formatting a logical volume using the My Computer function may result in an incomplete format which would necessitate a reformat. WORKAROUND: Use Windows Disk Management/Manager.
- PCI hotplug is not supported.

8.2 Windows 2000

- Verify that you have installed the most recent service pack. You should use Service Pack 4 or later.
- More event notifications are generated than arrays degraded. For example, in a configuration with four RAID 5s sharing three drives, one failed drive causes six notifications--one for each of the arrays affected, plus two extra for the second array.

8.3 Windows Server 2003 x64

- Check www.adaptec.com for the latest drivers.
- Adaptec 2020ZCR/2025ZCR/2020SA/2025SA only -- With Windows Server 2003 (SP1 RC2), when restoring backed up data to a local drive from a tape drive, you will get an inconsistency error.

8.4 Windows XP 64-Bit Edition for 64-bit Extended Systems

- The Windows XP 64-Bit Edition for 64-bit Extended Systems drivers on the CD are not final versions. They are supplied only for evaluation with beta versions of the operating system and should not be deployed in a production environment.
- Check www.adaptec.com for the latest drivers.

8.5 Linux

- When you delete an array, the operating system can no longer see the last array either. WORKAROUND: To allow Linux to see the last array, restart your system.
- The controller does not support attached CD drives during OS installation.

- Hot target discovery is not supported for smaller arrays. Arrays created may not be available to the Linux OS until an OS reboot.
- Adaptec 2020ZCR/2025ZCR/2020SA/2025SA only --
With the SLES 9.0 64-Bit operating system, you cannot format a spanned volume of a large size without the operating system locking up. If this happens, you can do a hard shutdown of the machine, however, if you try to format again, the operating system will continue to lock up. WORKAROUND: Disable Adaptec Storage Manager during Linux format procedure.

8.6 SCO OpenServer 5.06 and 5.07

- Adaptec 2020SA/2025SA/2810SA/21610SA controllers are supported as secondary controllers, but not as bootable controllers on these operating systems.

8.7 NetWare

- NetWare supports only a single DOS partition.

9. Motherboards and System-Specific Compatibility Issues

9.1 BBS (BIOS Boot Specification)

- On motherboard BIOSes supporting BBS, BBS support is usually enabled on the Adaptec controller and could cause problems during restart. WORKAROUND: Disable BBS.

9.2 ASUS P3C-2000 and P2B

- The Adaptec RAID controllers are not supported in these motherboards.

9.3 ASUS P4PE

- The system generates many Event 15's even though the system continues to operate normally. WORKAROUND: To avoid filling up the event log, delete these events periodically.

9.4 IBM E-Server XSeries 220

- If you install the Adaptec controller in a 64-bit slot and the on-board SCSI controller is enabled, the system scans the controller, displays the controller's banner immediately followed by BIOS NOT INSTALLED, and then freezes. WORKAROUND: Use a 32-bit slot or disable the on-board SCSI controller.

9.5 IBM Netfinity 5000

- The system generates many Event 9's even though the system continues to operate normally. WORKAROUND: To avoid filling up the event log, delete these events periodically.

9.6 Intel Xeon (x 2 System BIOS rev: 1.26)

- Adaptec 2810SA/21610SA only -- ACU is not supported on this motherboard. WORKAROUND: Use Adaptec Storage Manager on the bootable CD to create arrays.

9.7 Microstar MS-6321

- The Adaptec RAID controllers are not supported in Slot 5. WORKAROUND: Use a different slot.

9.8 SOYO KT333 Dragon Ultra

- The Adaptec controller cannot coexist with the sound driver (system's on-board C-Media 8738). The system reboots, then locks up, when the OS is started. WORKAROUND: Either do not install the sound driver or disable sound hardware in the system BIOS.

9.9 SuperMicro P3T-DDE

- Mode 0 flash is not supported with the Adaptec RAID controllers.

9.10 SuperMicro P40C6+/P4DCE (512 MB DDR RAM)

- Adaptec 2810SA/21610SA only -- ACU is not supported on this motherboard. WORKAROUND: Use Adaptec Storage Manager on the bootable CD to create arrays.

9.11 Tyan Trinity 400

- When running Windows Server 2003 (and possibly other Windows systems), the Adaptec RAID controllers are not supported in Slot 5 or 6. WORKAROUND: Use a different slot.

9.12 Tyan S2460

- The Adaptec RAID controllers are not supported in 32-bit slots in these motherboards. WORKAROUND: Use a 64-bit slot.

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