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Release notes for the AAR-1220SA SATA HostRAID dated: September 29, 2006
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This release notes contains the following:

1. Description of the release
2. Supported hardware
3. Supported Operating Systems
4. Major functional changes
5. Prerequisites of using the Software
6. Tested Configuration
7. Known Issues
8. Windows registry Parameters

1. Description of the Release:

Date of release: September 29, 2006

This is the official software release containing the list of software components
listed in the section 3 of the release note.

2. Supported Hardware:

The software release supports the following hardware listed below:

a. Adaptec AAR-1220SA SATA HostRAID controller

3. Supported Operating Systems:

Windows Driver 32-bit and 64-bit (AMD & EM-64T)   - 1.4-0 Build 12047

- Windows 2000 Server, Advanced Server, Professional
- Windows 2003 Server, Standard, Enterprise, Web Edition, x64 Edition
- Windows XP Professional, x64 Edition

Linux Driver   - 1.4-0 Build 12047

- Red Hat Enterprise Linux 3.0, IA-32 and x64
- Red Hat Enterprise Linux 4.0, IA-32 and x64
- SUSE Linux Enterprise Server 9.0, IA-32 and x64
- SUSE Linux Enterprise Server 10.0, IA-32 and x64

Netware Driver   - 1.4-0 Build 12047

- Netware 6.5 SP5

3.1 Adaptec Storage Manager:

Adaptec Storage Manager and HRCONF   - 4.30 Build 16042

Supported OS:
- Windows IA-32 and x64
- Linux IA-32 and x64
- Netware 6.5

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3.2 BIOS and DOS Tools:
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1. Expansion ROM BIOS for 1220SA                 - 5.0-0 Build 2227
2. Adaptec Flash Utility (AFU.EXE) for 1220SA    - 5.0-0 Build 2227

4. Major Functional changes:
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1. Support for Medium Error handling from the drives.
2. SATA Tape and CD ROM support.


5. Prerequisites of Using the Software:
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- BIOS and the driver should use above stated software version.

6. Tested Configuration:
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The software was tested with the Hardware Supported list on the motherboard with
the IBM PC/AT compatible PCI-x platforms. These are the various components used
during the testing:

- IBM x86 PC/AT compatible platform with Intel Xeon
- Tested with direct attached SATA-I and SATA-II drives
- Adaptec Storage Enclosure 335SAS enclosures with SATA drives


7. Known Issues/Limitations:
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7.1 Windows

- All Windows
 Drive Letter may disappear after Medium Error on a Simple Volume
 On a simple volume with Medium error, the error is reported to the Windows OS.
 All the error handling is done by the operating system. The expected behavior
 is intermittent and some times drive letter disappear.

- OS Caching cause invalid data in file copy from Medium Error locations in
 specific conditions
 When read medium error occur in simple volume or RAID-0 or a good member of a
 degraded RAID-1/RAID-10, file copy in Windows Explorer will fail the first few
 times but will pass on the later attempts; however, the file gets copied has
 invalid data in the section where the medium error was. This happens because of
 the Windows OS caching invalid data.

7.2 Netware 6.5

- Netware 6.5 SP5
 Driver Fails to load if OS is installed in onboard IDE/SATA drive
 Reason: IDE Driver takes over the control by default
 Work Around: Remove loading of multiple IDEATA.HAM by modifying Startup.ncf,
 and reboot. (ADPml00709)

7.3 Linux

- Red Hat Enterprise Linux 4 QU3 (64-bit)
  Compatibility issue with Supermicro X6DHE-G Server
  Supermicro X6DHE-G Server has a problem with RHEL4 QU3/64 Bit. The system hung
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when "formatting /boot file system...", and installation failed.
This issue happens even with IDE drives, and without Adaptec HostRAID
controllers present in the server. (ADPml00943)

8. Windows REGISTRY PARAMETERS:

8.1 Driver Specific Registry Parameters

WARNING: Altering or adding these driver parameters incorrectly can render your
system inoperable. Use them with caution.

Follow the instructions below to enter registry values that affect the
configuration information for the ADP3132 driver. Note that all HostRAID
adapters supported by the installed driver are affected by the values you enter
here.

The key used for this HostRAID release is "ADP3132". To enter driver-specific
parameters, follow these steps:

1) Select Run from the Start button.

2) Type "regedt32" and press Enter.

3) Open the registry list to the following location:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ADP3132

If the \Parameters\Device\ keys already exist, skip to step 6 to begin entering
parameters. If the keys do not yet exist, follow steps 4 and 5 to create them.

4) Click on the ADP3132 key. Select "New -> Key" from the Edit menu, type
"Parameters" in the "New Key #1" edit box, and press Enter.

5) Click on the Parameters key. Select the "New -> Key" from the Edit menu, type
"Device" in the "New Key #1" edit box, and press Enter. To specify a specific
host adapter, append Device with the number of the host adapter. For example,
type "Device0" for the first host adapter, "Device1" for the second, etc. If you
omit the host adapter number, the configuration information will apply to all
supported host adapters.

6) Go to the Parameters\Device key. Select "New -> String Value" from the Edit
menu, type "DriverParameters" in the "New Value #1" box, and press Enter twice.
The Edit String text box appears. Enter valid parameters in the text box. Use a
semicolon to separate multiple parameters. For example:

<Parameter1>=<Value1>;<Parameter2>=<Value2>;
MaximumSGList=17;PK=1;

NOTE: Changes made with the Registry Editor do not take effect until you reboot
your computer.

Option: Performance/Compatibility Settings

Definition: This registry option tunes the setting for performance purpose. This
registry option modifies the maximum number of I/Os and maximum number of
scatter gather elements or number of physical breaks. The setting can be set as
high or normal. When set to high it modifies the maximum I/Os to 255 and maximum
scatter gather list to 33. In this mode, system hibernation may not work. Use
the following parameter and value to modify the driver behavior.

To run driver in high performance:
Use the registry file HIGHPERF.REG.

To run driver in normal mode:
Use the registry file WHQL.REG.

Follow these steps to change the settings:

1) Select Run from the Start button.
2) Browse to the folder containing above mentioned version of the HostRAID
driver, select file "HIGHPERF.REG" or "WHQL.REG" and click OK.

NOTE: The default value for this parameter is normal mode and it supports system
hibernation.

Possible Values: Normal Mode - High Performance Mode
Default Value: Normal Mode

Option: ExposeEnclosure

Definition: This registry option changes the appearance of enclosure management
devices to the operating system. One can directly edit the registry and apply
the required changes to this option as explained in section 8.1.

There is another way to reflect expose enclosure change using the
"ENCLOSURE.REG" file. Follow these steps to change the settings:

1) Select Run from the Start button.
2) Browse to the folder containing above mentioned version of the HostRAID
driver, select file "ENCLOSURE.REG" and click OK.

Note: If you use the second option to expose enclosure, then use the
"Performance/Compatibility Settings" option to bring driver to Normal Mode using
"WHQL.REG" file.

Possible Values: 0-1 (0=do not expose enclosure, 1=expose enclosure)
Default Value: 0

8.2 Windows Specific Registry Parameters

NOTE: This setting applies to Windows Server 2003, Windows 2000, and Windows XP.

The only Windows-specific parameter that you can currently change is the
TimeOutValue. This registry option increases the timeout for all disk class
devices (in contrast to the driver-specific registry parameters that affect only
your HostRAID adapter).

The default TimeOutValue is 10 seconds. Follow these steps to increase this
value to 60 seconds:

1) Select Run from the Start button.
2) Browse to the folder containing above mentioned version of the HostRAID
driver, select the file "TIMEOUT.REG"
and click OK.

Note: Changes made with the Registry Editor do not take effect until you reboot
your computer.