# Updating the BIOS

BIOS updates are released periodically, and posted on our website for download. There are several ways to flash the RR2300 BIOS.

For Windows based operating systems:

1) Download the desired BIOS update from the Support section provided for the RR2300 host adapter. Extract the download to the directory of your choice.
2) Insert the Driver and Software CD included with the RR2300 retail box into the system's CD-ROM or DVD drive.
3) The CD should autorun, and display the following screen:
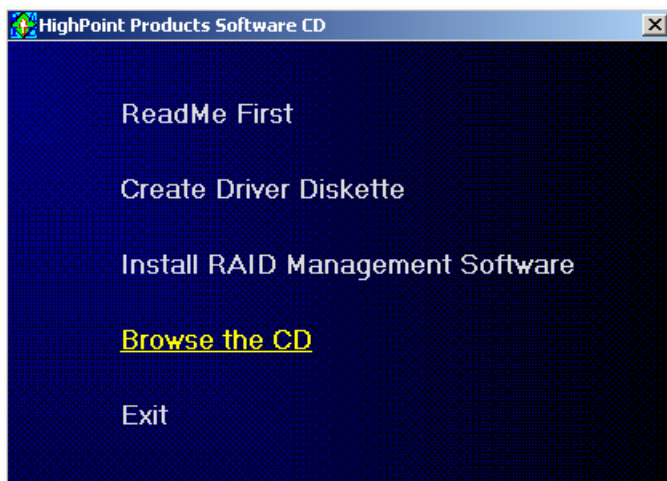
4) Select the "Browse the CD" option, and access the directory provided for the RR2300 host adapter.
5) Open the "BIOS" directory, and double click the "hptflash.exe" icon. This will start the BIOS flash utility:
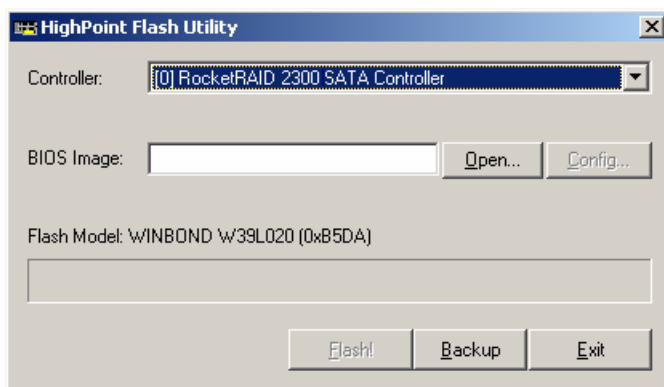
6) Select the RR232 from the drop down menu labeled "Controller", and press the "Open" button – this will allow you to browse to the extracted BIOS download (step 1).
7) Highlight the image file, and click the "Flash!" button. The utility will update the card, then verify the update.
8) Once complete, click on the "Exit" button to close the utility. Shutdown and reboot the system.

Note: the "Backup" button will save a copy of the card's current BIOS to the directory of your choice.

For other operating systems:

In order to update the BIOS, the system must be booted into DOS mode, using a DOS-boot diskette or CD image.

1) Copy the load.exe and the bios image file to the bootable floppy diskette (you may need to use a different floppy depending upon how much space is available on the boot diskette - this can vary).
2) If you are booting from a CD image, you will need to add these files to the CD.

   Insert the boot image media into the appropriate drive, and boot the system.

3) Once the A:\> prompt has appeared, insert the media that contains the required BIOS files, and type the following command:

   load xxx.xxx

   Then, press enter.

   Note: xxx.xxx = the name of the BIOS image file (type it exactly as it appears).

4) The utility will scan for the controller, and ask if you want to backup the BIOS (save a copy of the current BIOS to a floppy diskette). This is optional - you can answer No, and continue.
   Note: This option will not function if the system was booted from CD.
5) The utility will then ask if you want to flash the controller (upgrade the BIOS). Select Y for yes.
6) The utility will display a progress bar during the flash procedure, then will attempt verify the update.

7) Once complete, the system can be rebooted.

BIOS – Additional Settings

The RR2300 BIOS utility has several other configurable settings that can be accessed when flashing the BIOS.

Using the hptflash.exe utility (from within a Windows operating system):

Click on the "Configure" button from the main interface window.
The following window will appear:

```
Load Utility for Flash EPROM v2.5.50120---COFNIG          [X]
 ┌─Config Parameters───────────────────────────────┐
 │                                                  │
 │   Time waiting for CTRL-H key (seconds) [8    ]  │
 │                                                  │
 │   Reallocate EBDA - - - - - - - - -  [Enable  ▼] │
 │                                                  │
 │   INT 13 support - - - - - - - - - - [Enable  ▼] │
 │                                                  │
 │   BBS validation - - - - - - - - - - [Disable ▼] │
 │                                                  │
 │   Stop on error - - - - - - - - - -  [Enable  ▼] │
 │                                                  │
 │   Boot disk hook last - - - - - - -  [Disable ▼] │
 │                                                  │
 │   Private stack size - - - - - - - - [1700   ]   │
 │                                                  │
 │   Maximum array count - - - - - - -  [32     ]   │
 │                                                  │
 │   - - - - - - - - - - - - - - - - -  [       ▼]  │
 │                                                  │
 │       [  OK  ]          [ Cancel ]               │
 └──────────────────────────────────────────────────┘
```
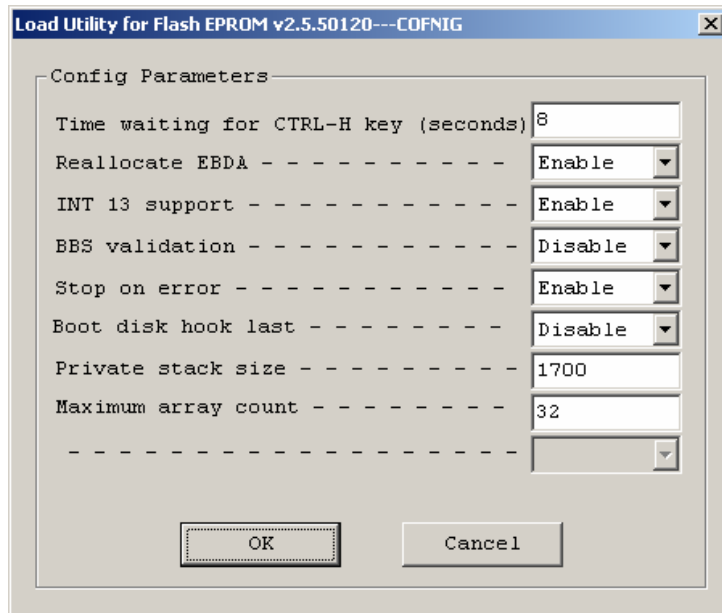
Use the drop down menus to enable or disable controller functions.

Using the DOS mode utility (load.exe):

Load xxx.xxx –c

Note: "xxx.xxx" refers to the BIOS image file.

A BIOS menu similar to the BIOS setup utility will be displayed.
This sub-menu allows the administrator to enable/disable various controller functions.

Several of the more common functions are described below:

Keyboard Timeout (diag.exe) / Stop on Error (hptflash.exe) – disabling this option will prompt the card to automatically skip error messages during bootup (broken array warnings), if the administrator does not input the "Control + H" command to access the BIOS menu.

EBDA Reallocation – this function refers to "Extended BIOS Data Area".
Disabling this feature may remedy boot problems associated with motherboards that halt after the RR2300 BIOS screen is displayed.

INT13 – The card's boot function. Disabling this feature removes the card's ability to boot the system. This may be useful for systems that utilize multiple bootable controllers – some motherboards may not be able to load the BIOS of each device during bootup, which may impair the system's ability to boot from a specific device.

Control-H – Allows the administrator to adjust the time allotted for hard disk scanning/detection. This may be useful for hard disks that do not support Staggered Drive Spinup.