



DIAMOND SYSTEMS CORPORATION

Application Note

Loading Free-DOS on Helios AV/DV boards

Introduction:

The Helios SBC contains an on-board Flash memory device which is 2MB in size and can be used as a general purpose boot device. This flash memory communicates over the SPI bus and can be loaded with Free-DOS operating system. This application note describes the steps on how to load the Free-DOS image on the said Flash memory using the SPITool.EXE application.

Procedure:

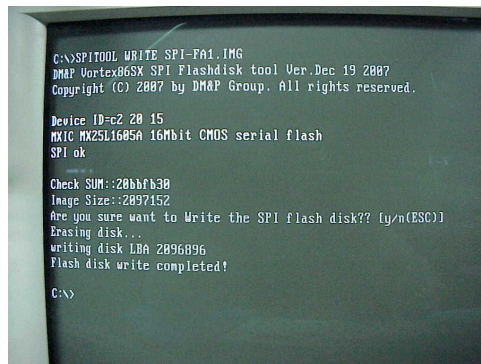
To Enable the On-Board Flash:

The on board flash memory needs to be enabled in the BIOS using the following steps.

- Power up the board.
- Press DEL to go into the BIOS.
- Go to the 'Boot' menu
- Go to "Boot Settings Configurations" submenu.
- Select the "OnBoard Virtual Flash FDD" option and change the settings to "Enabled".
- Save the BIOS settings and let the board boot.
- If the FreeDOS OS is already installed on the on board flash, the board will boot in Free DOS.

To install Free-DOS image to the flash:

- Make a bootable MS-DOS flash disk.
- Copy the SPITool.EXE and the SPI-FA1.IMG file on the root directory of the flash disk.
- Let the board boot in DOS using the flash disk.
- At the command prompt type "SPITool FORMAT /y"
 - The application will show that the flash memory format is complete.
- At the command prompt type "SPITool WRITE SPI-FA1.IMG /y"
 - This will write the Free DOS image to the on board flash and a message will appear indicating update of flash was successful.



- Power cycle the board and the board will boot using the Free-DOS from the on board flash device which is considered by the BIOS as on board floppy and will be termed as A drive.