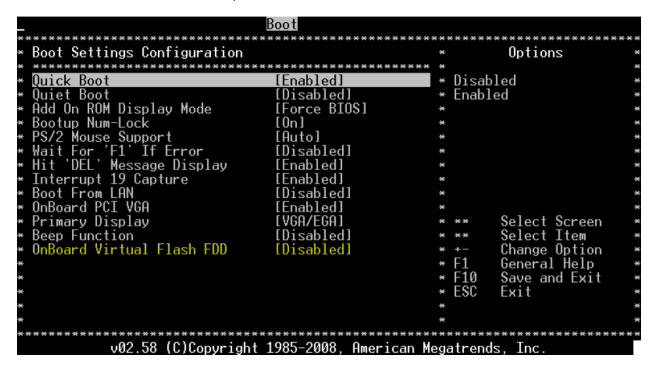Configuring the onboard SPI flash on Vortex boards –

The Onboard SPI flash mounts as A: drive, for this flash to be functional it needs to be enabled in the BIOS (in the Boot Menu, select the Boot Settings Configuration options and switch the Onboard Virtual Flash to External)

```
                             Boot
_
************************************************************************
* Boot Settings Configuration              *        Options          *
* ***************************************** *                         *
* Quick Boot                   [Enabled]    * Disabled                *
* Quiet Boot                   [Disabled]   * Enabled                 *
* Add On ROM Display Mode      [Force BIOS] *                         *
* Bootup Num-Lock              [On]         *                         *
* PS/2 Mouse Support           [Auto]       *                         *
* Wait For 'F1' If Error       [Disabled]   *                         *
* Hit 'DEL' Message Display    [Enabled]    *                         *
* Interrupt 19 Capture         [Enabled]    *                         *
* Boot From LAN                [Disabled]   *                         *
* OnBoard PCI VGA              [Enabled]    *                         *
* Primary Display              [VGA/EGA]    * **     Select Screen    *
* Beep Function                [Disabled]   * **     Select Item      *
* OnBoard Virtual Flash FDD    [Disabled]   * +-     Change Option    *
*                                           * F1     General Help     *
*                                           * F10    Save and Exit    *
*                                           * ESC    Exit             *
*                                           *                         *
*                                           *                         *
************************************************************************
        v02.58 (C)Copyright 1985-2008, American Megatrends, Inc.
```

When enabled, this flash is loaded with Freedos and some testing tools by default from the factory,

To change the operating system or reformat this flash, the SPITOOL must be used to format or erase the flash, as DOS format tool will corrupt the flash (DOS 6.22 format defaults to a 1.44MB size and corrupts the flash FAT{File Allocation Table})

To reconfigure the flash to another OS other than FDOS, the DOS SPITOOL needs to be run with the following commands-

C:\> SPITOOL FORMAT

To make the flash bootable for DOS operating systems, run the SYS command from the operating system folder:

C:\> SYS A:

(run the SYS for OS requested or license sold on the order)

Location of SPI tool http://ftp.emacinc.com/LegacyProducts/SBC/drivers/vdx/SPItool/

Also see the spitool.pdf for additional operations of the SPITOOL.

The Onboard SPI flash is included on Vortex86 SX, Vortex86 DX and Vortex86 DX2 boards

This flash space works well for DOS, while a slower storage media it is recommended for recovery operations or running software with a limited number of disk write operations.

While read-write mode is needed to install or update files, it can be configured to read only for change-protected operations.