



OPERATION GUIDE

VIA UEFI Flash V2.005a for DOS Environment

History:

Version	Date	Modification	Writer
V1.051	2009/08/19	1. Initial Version.	Kirk Wang
V2.001	2012/05/10	1. UEFI Initial Version. 2. Porting SPI 2M Flash Driver "PCT25VF016B" for M920 board to vf_uefi Tools	Julian Lan
V2.001a	2012/06/24	1. Verify all Vx900 and Vx11 chipset board that is need by pass from "verify process" between bios image and VIA tools.	Julian Lan
V2.002	2012/09/01	1. Porting SPI 4M Flash Driver "PCT25VF032B" for M920 board to vf_uefi Tools	Julian Lan
V2.003	2012/09/24	1. Porting SPI 4M Flash Driver "PCT25VF032B" for P910 board to vf_uefi Tools	Julian Lan
V2.003a	2012/11/07	1. Disable -c function (please see note 8)	Julian Lan
	2013/05/17	1. Update Document	Eddy Fu
V2.004	2013/01/07	1. add "ARTiGO A1250" support 2. add "COMEDB4/9X90" support	Julian Lan
V2.005	2013/04/24	1. Fixed issue "memory auto reflash issue" is for when warm boot during reboot time. 2. Remove -b string	Julian Lan
	2013/06/24	1. no need to add the "comparing boot block" function"	Julian Lan
V2.005a	2013/07/02	This version is the same with v2.005 1. modify Flash type from 25VF032BT2 to 25VF032B	Julian Lan
	2013/07/03	1. Update Document	Julian Lan

1. Operating environment.....	3
2. Set up the DOS Environment.....	3
3. Boot up & Copy file.....	6
4. Execute.....	7
5. Notes.....	12
6. Known issues/limitations.....	12

1. Operating environment

OS	Win98 DOS/DOS 6.22
Support BIOS	AMI BIOS

2. Set up the DOS Environment

(1) Install Win98 DOS on HDD

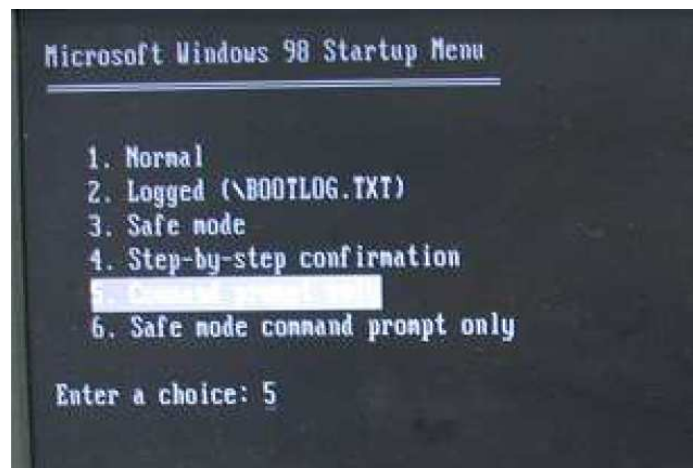
You would install windows 98 on your hard disk, then get win98 DOS environment. Insert the Windows 98 CD-ROM in the CD-ROM drive, and then follow the prompt to install.

Please pay attention Windows 98 supports the FAT16 and FAT32 file systems.

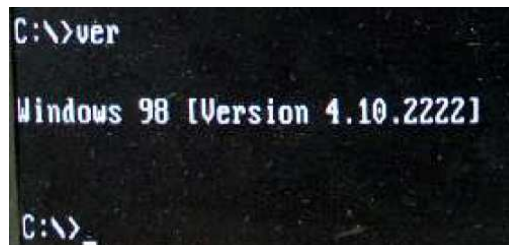
The FAT16 file system has a maximum of 2 gigabytes (GB) for each allocated space, or drive Letter. The FAT32 file system supports drives up to 2 terabytes in size. The FAT32 file system does not support drives that are smaller than 512 MB.

After installation, restart your computer, press F8 in the boot up process.

When you do this, the Windows 98 Startup menu is displayed.



Select the "5. Command prompt only" menu option from the Startup menu, and then press Enter. You can enter Win98 DOS. Type command ver, you can see the DOS version.

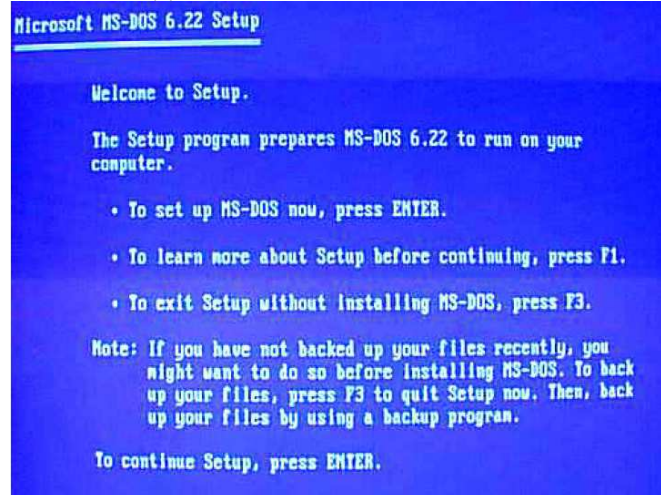


(2) Install DOS 6.22 on HDD

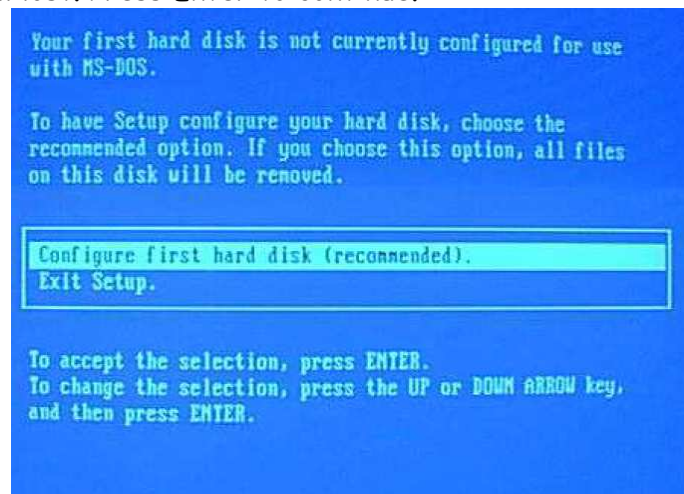
Install Microsoft Dos 6.22:

A). Start up your computer with the MS Dos Disk 1 in the floppy drive. Boot up from the floppy.

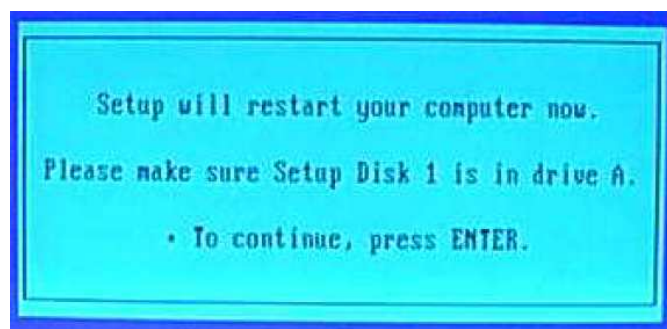
The following screen will now appear. Press Enter to continue.



B). Then, you will be prompted to configure the Hard Drive, this means it will be formatted and all contents will lost. Press Enter to continue.



You are now prompted that the system will restart, press Enter to continue and keep Disk 1 in the drive.



VEPD-ES-DB-0002

MS Dos will check the configuration. And then continue to setup and format the drive using Fat16.

C). Confirm your country and keyboard settings.

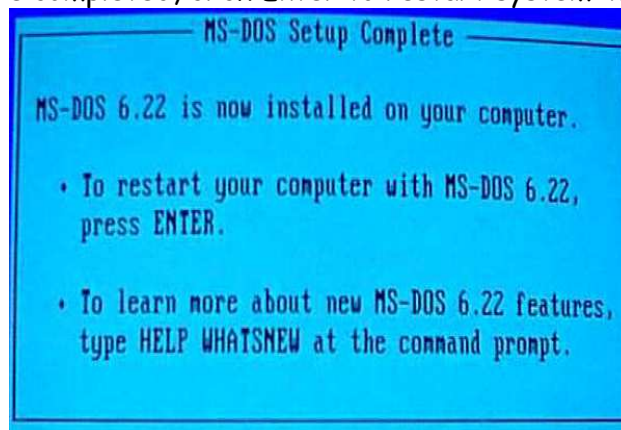
Use arrow keys to highlight what needs to be changed and press Enter, then select a different option to install.

Once changes have been made, press Enter once you highlight "The Settings are Correct".

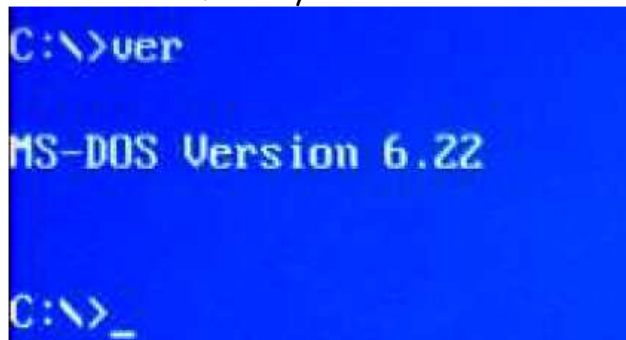
D). You will be asked where you want to install MS-DOS, leave defaults and Press enter. MS-DOS will start to copy files.

At the following prompt insert disk 2 and disk 3 and press Enter .MS-DOS will continue to copy files.

After all the steps are completed, click Enter to restart system in MS-DOS



Command "ver" will show the version of the system.



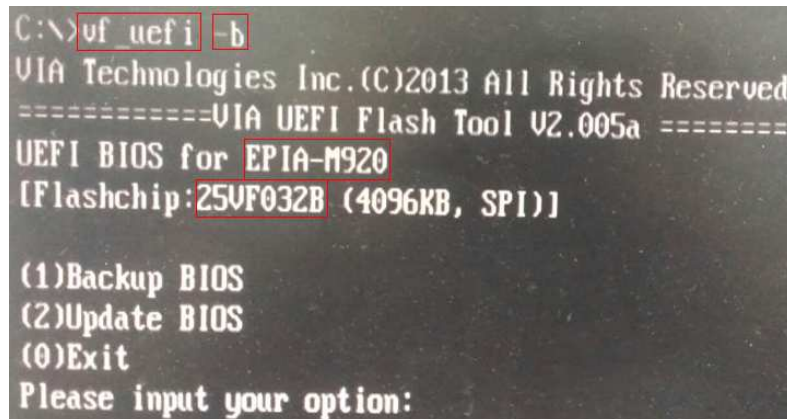
3. Boot up & Copy file

- (A). Connect HDD to the target board.
- (B). Turn on the computer
- (C). Copy the tool (vf_uefi.exe) and BIOS files to PATA-HDD (or SATA-HDD) which have DOS environment (win98 DOS/DOS6.22). Make sure BIOS file and tool (vf_uefi.exe) are in the same directory.

4. Execute

A. Execute "vf_ufefi -b" to show the user menu. You would see the flash ROM type/Board name/Tools version of the board as below. If the flash ROM type/Board name/Tools version of the board is not correct, please use "-b" to programming boot block.

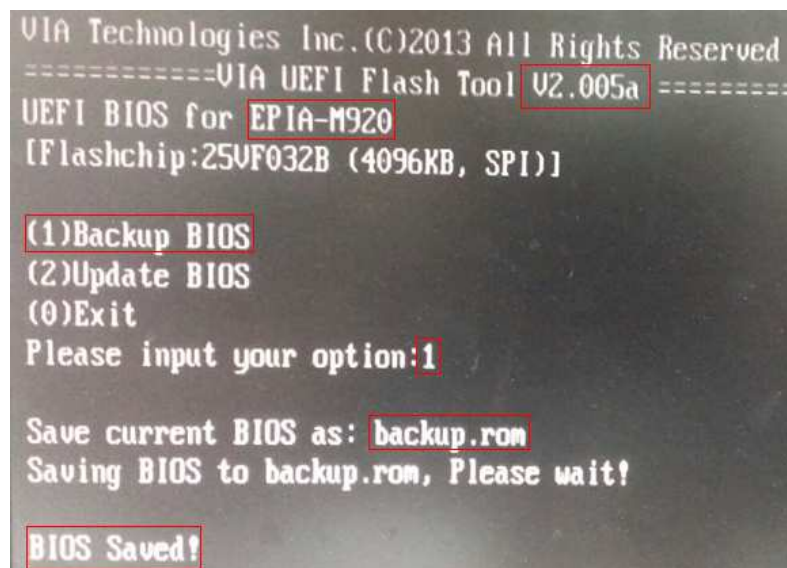
Notice: Please follow our normal BIOS programming procedure to program the BIOS. If BIOS fails caused by wrong programming procedure, VIA will not take responsibility for the RMA cost.



```
C:\>vf_ufefi -b
VIA Technologies Inc.(C)2013 All Rights Reserved
=====VIA UEFI Flash Tool V2.005a =====
UEFI BIOS for EPIA-M920
[Flashchip:25VF032B (4096KB, SPI)]

(1)Backup BIOS
(2)Update BIOS
(0)Exit
Please input your option:
```

a). Choose "1" to backup BIOS. Then enter the filename you want to backup. Please see the example shown in picture below.



```
VIA Technologies Inc.(C)2013 All Rights Reserved
=====VIA UEFI Flash Tool V2.005a =====
UEFI BIOS for EPIA-M920
[Flashchip:25VF032B (4096KB, SPI)]

(1)Backup BIOS
(2)Update BIOS
(0)Exit
Please input your option:1

Save current BIOS as: backup.rom
Saving BIOS to backup.rom, Please wait!

BIOS Saved!
```

b). Choose "2" to flash new BIOS. Then enter the filename you want to update. In this situation, the tool will update Boot Block. Please see the example below. "it don't need to clear *CMOS*" and program boot block after writing new BIOS. In this case, it is equivalent to execute command "`vf_ufi -p newbios.bin -b`".

[illegible]

c). Choose "0" to return to DOS.

```
VIA Technologies Inc.(C)2013 All Rights Reserved
=====VIA UEFI Flash Tool V2.005a =====
UEFI BIOS for EPIA-M920
[Flashchip:25VF032B (4096KB, SPI)]

(1)Backup BIOS
(2)Update BIOS
(0)Exit
Please input your option:0

Thank you choose VIA, Bye bye!
```


d). If choose wrong option (except "0", "1" and "2") in option menu, it will display warning message to remind user enter unsupported option.

```
VIA Technologies Inc.(C)2013 All Rights Reserved
=====VIA UEFI Flash Tool V2.005a =====
UEFI BIOS for EPIA-M920
(Flashchip:25VF032B (4096KB, SPI))

(1)Backup BIOS
(2)Update BIOS
(0)Exit
Please input your option:4
Your choice is not 1, 2 or 0. Please reinput your option: _
```

B. Execute vf_ufefi -h, with the following command line parameters.

```
C:\>vf_ufefi -h

usage: C:\VF_UEFI.EXE [-s backup.bin] [-p newbios.bin] [-r] [-b]
-s:      read flash and save into file
-p:      write file into flash
-r:      reboot after programming
-b:      update BootBlock when programming
```

Example:

a) vf_ufefi -s bak.rom -p xxx.rom -b

It means after flash new BIOS which first will use "-s" to save the backup ROM file after to program boot block, and don't need to clear CMOS, the parameter "p" is attended bios file name into to the tools vf_ufefi, if add "p" of parameter after then don't need key bios file name again, the parameter "r" will reboot the computer automatically.

```
C:\>vf_ufefi -s bak.rom -p i22t1202.rom -b
VIA Technologies Inc.(C)2013 All Rights Reserved
=====VIA UEFI Flash Tool V2.005a=====
UEFI BIOS for EPIA-M920
[Flashchip:25VF032B (4096KB, SPI)]

Saving BIOS to bak.rom, Please wait!

BIOS Saved!
Programming now, Please wait!
Warning: Do NOT turn off/reboot your computer!
Bootblock will be updated.
!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!
100 % finished.
BIOS Updated!
Please power off or reset system!!!
```

PS: You will see all @ change to # that means we update boot block, so which is full update at ROM storage!!

VEPD-ES-DB-0002

If the bios image is upload finish then reboot can see as below boot logo!!



5. Notes

(1) **Some board** have WP (write protect) pin on the board, If you found cannot update BIOS, please make sure WP jumper is right. And please also pay attention in CMOS Setup, Advanced BIOS Features → Flash ROM Write Protect [Disable] **<Update>**

6. Known issues/limitations

(1) The flash tool is used for VIA boards, it utilizes VIA protect functions to check whether the board is made by VIA.
If it is VIA board, then can use the flash tool, otherwise would not use the flash tool and exit. No matter the BIOS is AMI, the flash tool would divided into three steps to check whether the board is the VIA. First check permit code in BIOS, then check "VIA VEPD" Signature in BIOS, finally check board name. Any one of these three conditions is meet means the board is VIA. So, before using flash tool please make sure these protection data is in BIOS.

(2) **Some board** have WP (write protect) pins on the board, If BIOS can not be updated, please make sure WP jumper is set properly. And pay attention Settings in CMOS:
Advanced BIOS Features -> Flash ROM Write Protect [Disable] **<Update>**

(3) **Some board** may select LPC Flash ROM or SPI Flash ROM by setting "SW1" on the board.
So when updating BIOS, please pay attention to the Flash ROM type on the screen
After run vf_uefi, it would show the board boot from LPC BIOS or SPI BIOS. If it use LPC flash ROM, please choose LPC BIOS file to flash. And if it use SPI flash ROM, Please select proper SPI BIOS file to flash. **<Update>**

(4) VT6075 is need special bios version like H34T1003.rom; VT6072-M is need special bios version like H30V009.003, for customization bios can by pass from string "VIA VEPD"!! **<New>**

(5) For SMBIOS of UEFI BIOS data is saving to BIOS Flash ROM, so it is don't need to Clear CMOS!! **<New>**