

VIA Flash tool User Guide

Version 1.02

2009/11/18

Copyright © 2009 VIA Technologies, INC.

Version	Date	Modification	Writer	Reviewer
V1.00	2009/08/12	1. Initial Version.	Caroline Gao	Gang Wang
V1.01	2009/09/29	1. Add the updating BIOS method which can run "vf-101 -b -c" then enter menu UI to select update BIOS. It means after flash new BIOS, clear CMOS and program bootblock. 2. Add notes should be pay attention to when update AMI BIOS	Caroline Gao	Daniel Yu
V1.02	2009/11/18	1. Update to vf-102	Leon Feng	Gang Wang

1. Operating environment

OS	Win98 DOS/DOS 6.22
Support BIOS	Award BIOS/ AMI BIOS

2. Set up the DOS Environment

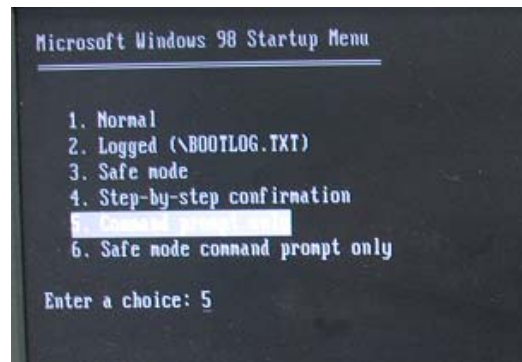
(1) Install Win98 DOS on HDD

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.

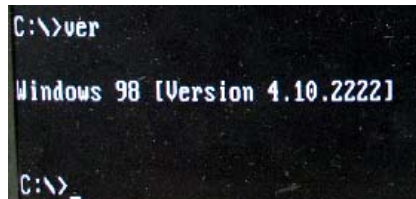
The FAT16 file system has a maximum of 2 gigabytes (GB) for each allocated space, or drive letter. The FAT32 file system supports drives up to 2 terabytes in size. The FAT32 file system does not support drives that are smaller than 512 MB.

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.

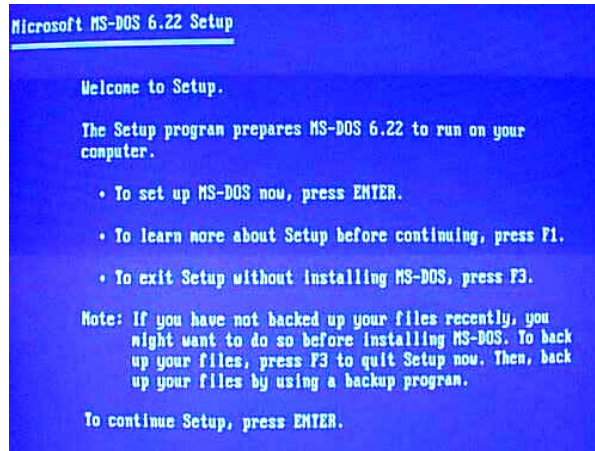


(2) Install DOS 6.22 on HDD

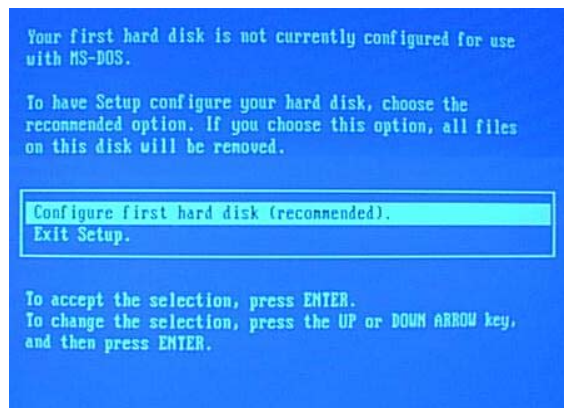
Install Microsoft Dos 6.22:

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

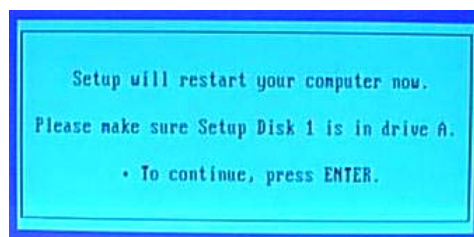
The following screen will now appear. Press Enter to continue.



- B. Then, you will be prompted to configure the Hard Drive, this means it will be formatted and all contents will be 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.



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

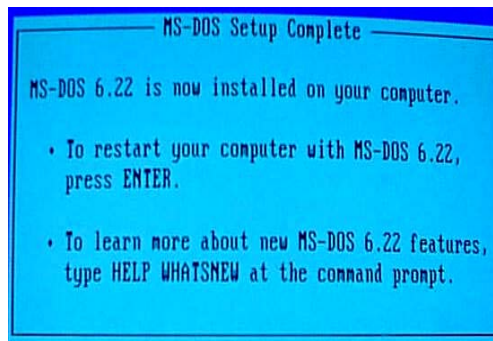
select a different option to install.

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

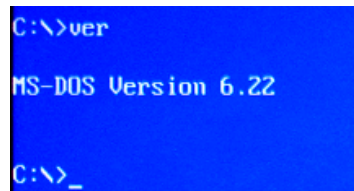
- D. You will be asked where you want to install MS-DOS, leave defaults and Press enter. MS-DOS will start to copy files.

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-102.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-102.exe) are in the **same** directory.

4. Execute

- A. Execute **vf-102** to show the user menu. You would see the chipset and flash ROM type of the board as below.

```
C:\TEST>vf-102
VIA Technologies Inc.(C)2009 All Rights Reserved
===== VIA Flash Tool V1.02 =====
[Chipset:VIA UX800/UX820 Flashchip:M25P40 (512KB, 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

```
C:\TEST>vf-102
VIA Technologies Inc.(C)2009 All Rights Reserved
===== VIA Flash Tool V1.02 =====
[Chipset:VIA UX800/UX820 Flashchip:M25P40 (512KB, SPI)]

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

Save current BIOS as: bak1.bin

Saving now, Please wait!

BIOS Saved!

C:\TEST>
```

- b. Choose “2” to flash new BIOS. Then enter the filename you want to update. In this situation, the tool will not update Boot Block. Please see the example below


```

C:\TEST>vf-102
VIA Technologies Inc.(C)2009 All Rights Reserved
===== VIA Flash Tool V1.02 =====
[Chipset:VIA VX800/VX820 Flashchip:M25P40 (512KB, SPI)]

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

File Name to update: i1d00101.bin

Programing now, Please wait!

BIOS Updated!
Please power off or reset system!!!

C:\TEST>

```

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

```

C:\TEST>vf-102
VIA Technologies Inc.(C)2009 All Rights Reserved
===== VIA Flash Tool V1.02 =====
[Chipset:VIA VX800/VX820 Flashchip:M25P40 (512KB, SPI)]

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

Thank you choose VIA, Bye bye!

C:\TEST>

```

- B. Execute **vf-102**, **with** the following command line parameters.

```

vf-102 [-s backup.bin] [-p newbios.bin] [-r] [-c] [-b]

-s | --read:          read flash and save into file
-p | --write:         write file into flash
-r | --reboot:        reboot after programming
-c | --clear cmos:    clear CMOS after programming
-b | --update bootblock: update BootBlock when programming

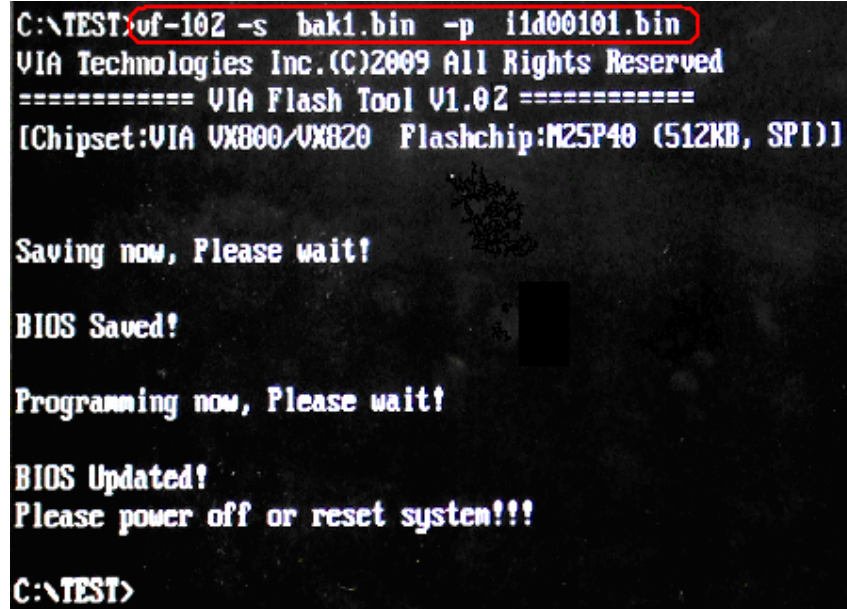
```

Note: When update AMI BIOS, you should add parameter '-b -c'!

Example:

- a. `vf-102 -s bakup.bin -p newbios.bin.`

It will backup onboard BIOS and then flash new bios.



```
C:\TEST>vf-102 -s bak1.bin -p i1d00101.bin
VIA Technologies Inc.(C)2009 All Rights Reserved
===== VIA Flash Tool V1.02 =====
[Chipset:VIA VX800/VX820 Flashchip:M25P40 (512KB, SPI)]

Saving now, Please wait!

BIOS Saved!

Programming now, Please wait!

BIOS Updated!
Please power off or reset system!!!

C:\TEST>
```

- b. `vf-102 -b -c.`

If running “vf-102 -b -c” and enter menu UI to select update BIOS, it would clear CMOS and program bootblock after writing new BIOS. In this case, it is equivalent to execute command “vf-102 -p newbios.bin -b -c”.

If running “vf-102 -b -c” and enter menu UI to select backup BIOS, it has no effect on backing up BIOS.


```
C:\TEST>vf-102 -b -c
VIA Technologies Inc.(C)2009 All Rights Reserved
===== VIA Flash Tool V1.02 =====
[Chipset:VIA VX800/VX820 Flashchip:M25P40 (512KB, SPI)]

(1)Backup BIOS
(2)Update BIOS
(0)Exit
Please input your option:2
File Name to update: i1d00101.bin
Programing now, Please wait!

BIOS Updated!
Clear CMOS!
Please power off or reset system!!!

C:\TEST>
```

- c. `vf-102 -p newbios.bin -b -c`

It means after flash new bios, clear CMOS and program bootblock.

```
C:\TEST>vf-102 -p i1d00101.bin -b -c
VIA Technologies Inc.(C)2009 All Rights Reserved
===== VIA Flash Tool V1.02 =====
[Chipset:VIA VX800/VX820 Flashchip:M25P40 (512KB, SPI)]

Programing now, Please wait!

BIOS Updated!
Clear CMOS!
Please power off or reset system!!!

C:\TEST>
```

- d. `vf-102 -p newbios.bin -c -r.`

It will first write new BIOS, then clear CMOS and reboot the computer.

```

C:\TEST>vf-102 -p i1d00101.bin -c -r
VIA Technologies Inc.(C)2009 All Rights Reserved
===== VIA Flash Tool V1.02 =====
[Chipset:VIA VX800/VX820 Flashchip:M25P40 (512KB, SPI)]

Programming now, Please wait!

BIOS Updated!
Clear CMOS!
Reboot.....

```

- e. vf-102 -s bakup.bin -p newbios.bin -c -b -r

It will backup onboard BIOS and then write in new BIOS. After that, clear CMOS, program boot block and reboot the computer.

```

C:\TEST>vf-102 -s bak1.bin -p i1d00101.bin -c -b -r
VIA Technologies Inc.(C)2009 All Rights Reserved
===== VIA Flash Tool V1.02 =====
[Chipset:VIA VX800/VX820 Flashchip:M25P40 (512KB, SPI)]

Saving now, Please wait!

BIOS Saved!

Programming now, Please wait!

BIOS Updated!
Clear CMOS!
Reboot.....

```

- f. vf-102 -p newbios.bin -f

It will flash BIOS **without** check whether it is a VIA board. When enter bootblock, you can update BIOS by adding command line parameter '**-f**'.

For example, when your onboard BIOS is corrupt and fallback to Boot Block code as showing below:

```
Award BootBlock BIOS v1.0
Copyright (c) 2000, Award Software, Inc.

BIOS ROM checksum error

Detecting floppy drive A media...
Drive A error. System halt
```

If you want to flash new BIOS to recovery system, you can boot from floppy with DOS environment, and execute vf-102 with command parameter '-f' as below showing:

```
Award BootBlock BIOS v1.0
Copyright (c) 2000, Award Software, Inc.

BIOS ROM checksum error

Detecting USB floppy drive media...
Starting Windows 98...

Microsoft(R) Windows 98
(C)Copyright Microsoft Corp 1981-1999.

A:\>vf-102 -p i1d00101.bin -f
VIA Technologies Inc.(C)2009 All Rights Reserved
=====VIA Flash Tool V1.02=====
[Chipset:VIA VX800/VX820 Flashchip:M25P40 (512KB, SPI)]

Programming now, Please wait!

BIOS Updated!
Please power off or reset system!!!

A:\>
```

After finish updating BIOS in Bootblock, you can reboot and start system normally.

5. Notes

- (1) [EPIA-EN/NAS7800/MMC-7010/COME7N80](#) 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**]

- (2) For CLE266 board (EPIA-M/EPIA-ML/EPIA-PD/EPIA-PE), they are not support boot block function.
- (3) To **AMI BIOS**, it is suggest that add command line parameter "**-b -c**" (which is update boot block and clear CMOS) when update BIOS. Otherwise, AMI BIOS would be updated incompletely.