Dediprog SF Software User Manual

V1.3
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Rorixwell Inc.

Authorized distributor by Dediprog Technology Co., Ltd
10 Electro Road, Toronto, ON, M1R 2A7, Canada
Tel: +1 (416) 757 0764
Fax: +1 (416) 757 0764
E-mail: sales@Rorixwell.com
http://www.Rorixwell.com

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Rorixwell Incorporation 10 Electro Road, Toronto, ON, Canada Tel: +1 (416) 7570764 Email: sales@rorixwell.com Website: www.Rorixwell.com

I. GENERAL INFORMATION

A.Introduction

This user manual only illustrates the usage of Dediprog SF Software. The device connected when using this software can be SF100, SF100+, SF200, SF200+, Backup Boot Flash kit. In this document it does not explain when and how different Deidprog products are used under different scenario.

II. Dediprog SF Software User Guide

A.Environment Preparation

Dediprog SF software is used together with SF100, SF100+, SF200, SF200+, or Backup Boot Flash Kit. The software can be used to program serial flash memory as well as the flash card used for standalone mode. After the software and USB driver are installed, please follow the following steps before running the software.

1. Program the serial flash memory(chip 1)

1. Connect the programmer to the PC through a USB cable.
2. For SF100(+), connect the ISP cable to SF100+ as well as the application. For SF200(+), put the appropriate adaptor on the DIP socket located on the top of the SF200 and put a serial flash in the socket. Double click on the Dediprog software icon on your desktop.

2. Program the flash card

1. Connect the programmer to the PC through a USB cable.
2. Insert the flash card (face in when inserting) into the flash card header on the programmer.

B.Program Application Memory

1. Memory Detection

Double Click on the Dediprog software icon on your PC desktop. You will see the following pop-up window in Fig 1.
The default mode for memory detection is "automatic detect". Click on ok.

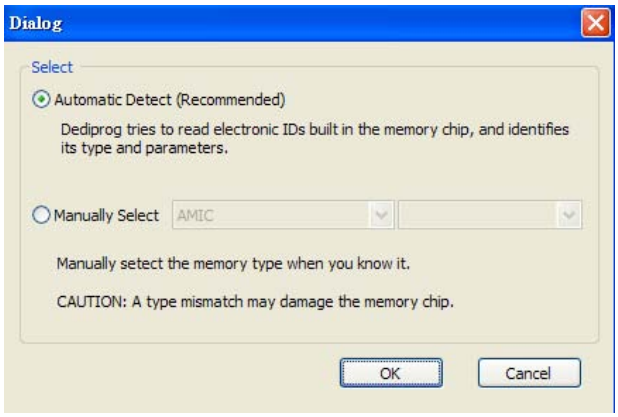


Fig. 1

When the memory is detected by the programmer, you will see the screen in fig. 2 and the detected memory information as well as the programmer information will be shown on the right side of the screen. The "chip1" button on the top right corner of the window is marked by default. (If chip 2 button or flash card button are marked, that means you are working on the chip 2 or flash card instead of chip1)

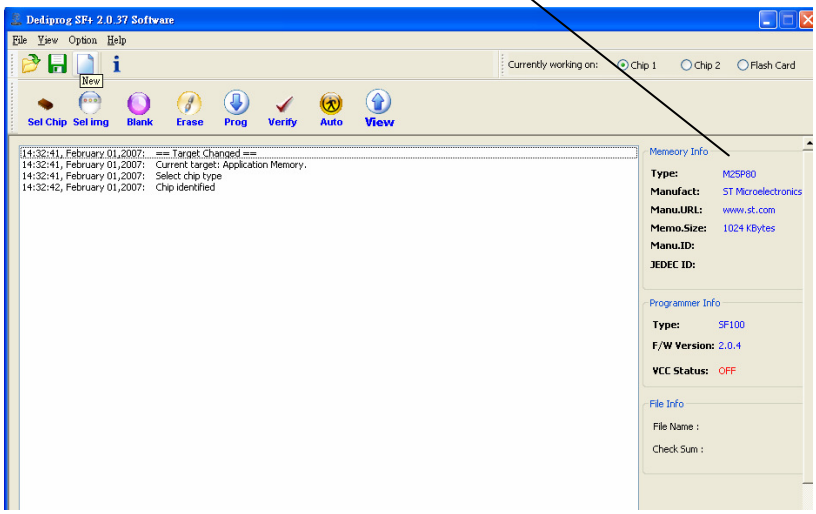


Fig. 2

2. Tool Bar Explanation

a) Toolbar for Project Operations

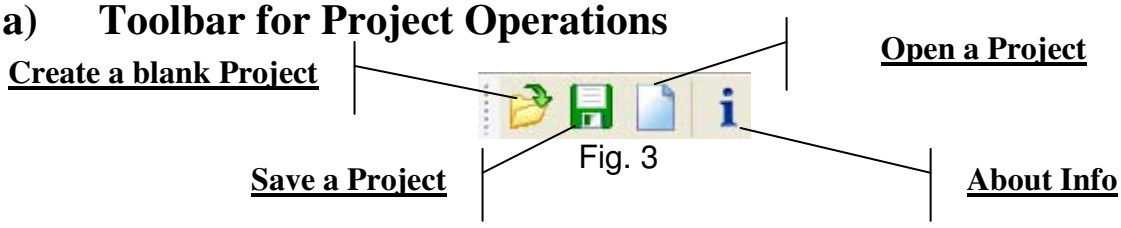


Fig. 3

b) Toolbar for Memory Operations

This tool bar provides all memory operations in a customized or automated way

Fig 4

Sel Chip
Select chip: when there is a new chip in the application, you have to click on this button before the following operations.

Sel Img
Select image: load the file you intend to program. The loaded file size can not be larger the application memory size.

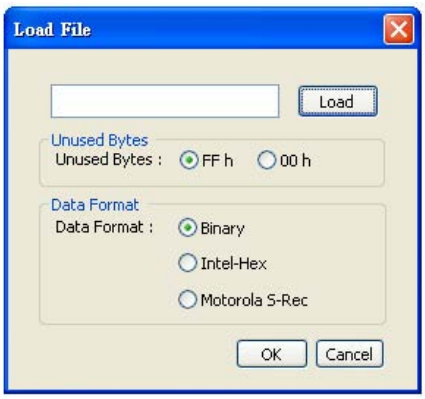


Fig 5

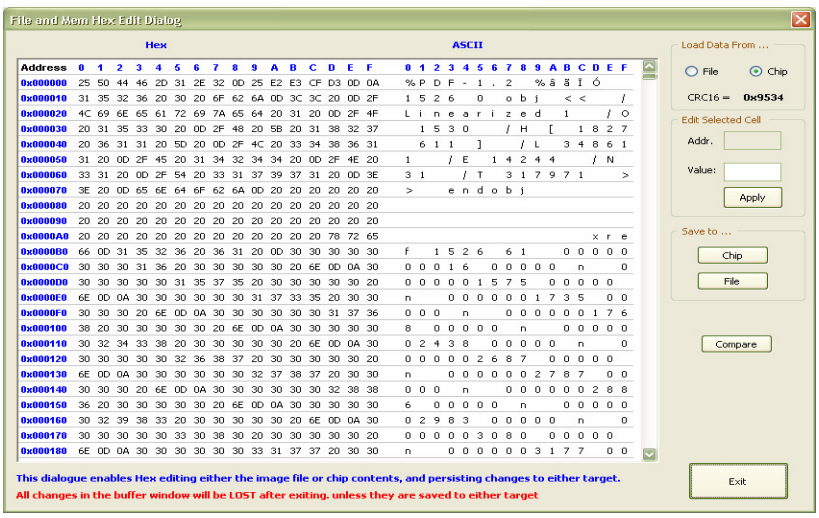
Blank
Blank check: check the application to see whether it is blank.

Erase
Erase memory: Erase the full content in a memory. After “Erase” the application memory shall be blank.

Prog
Program: Program the selected image into the memory

Verify
Verify the checksum value of the selected image and the programmed image

Auto
Auto operation: The programmer will perform a pre-configured set of operations such as (reload file+blank check+erase+program+verify) all together in one click. The configuration can be done by clicking on the “option” on the top of the screen menu. The configuration will not be changed until it is re-configured.



View (View and Edit)
When click on View, the programmer will read both the content of the selected image and the content in the application memory.

View the chip content
Click on the “chip” button on the top right corner. You will see the

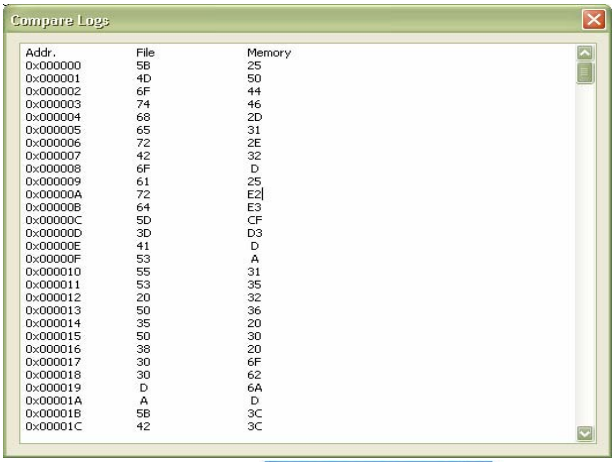
content of the application chip in both Hex view and ASCII view. The checksum value is also displayed below the “chip” button.

View the loaded image content
Click on the “file” button on the top right corner of the display screen. You will see the content of the selected image in both Hex view and ASCII view. The checksum value is also displayed below the “chip” button.

Edit content and save
Step1
Locate your mouse to the location where you want to change the content. You will see the address and value of the selected contents shown in the right frame of the content screen.

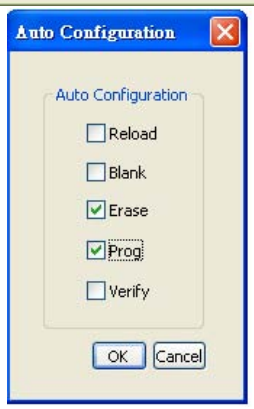
Step 2
Change the value in the value box and click on apply. The content now is changed in the computer buffer and you will see the value is changed also in the content screen.

Step 3
In order to save the changed contents into a file or back to the application memory, you will need to further click on save to chip or file otherwise the content will be the same as the original file.



Compare the content of the loaded image and the application memory
This function enables a byte by byte comparison between the selected image and the application memory. It will only display the difference between the selected image and the application memory.

Option
By clicking on the option you will be able to configure the set of operations perform by a single click on “auto” button.



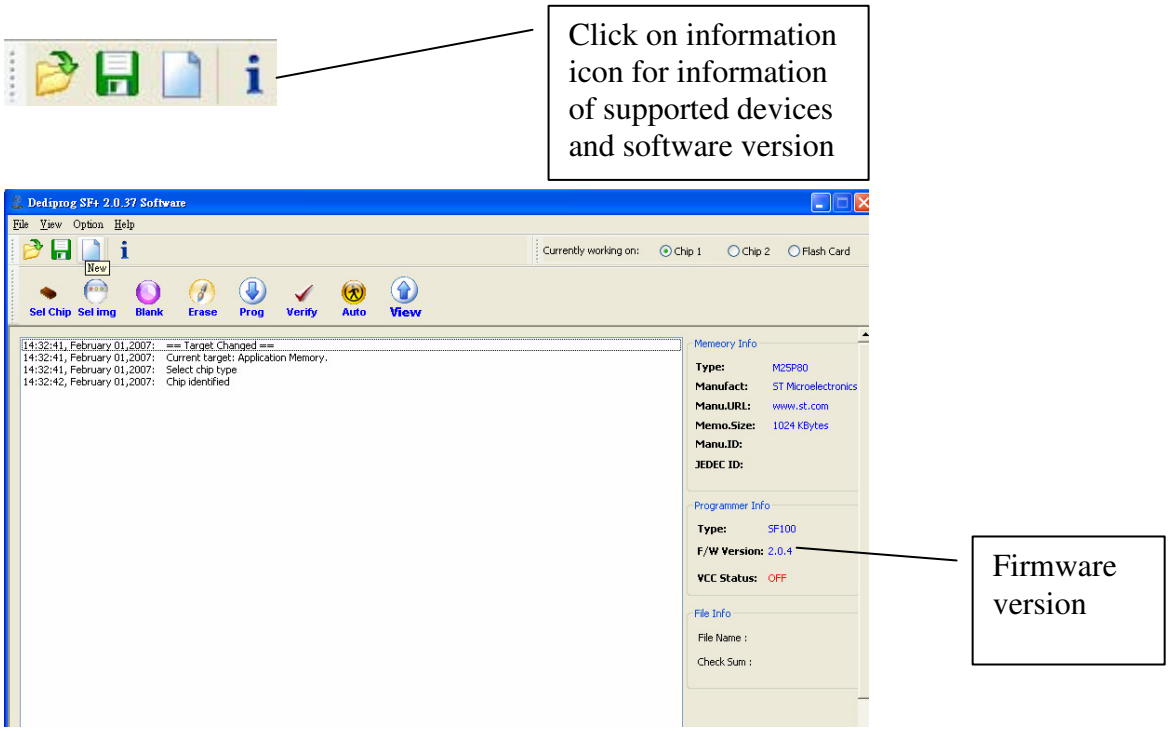
Chip 1, Chip 2, Flash Card
Chip 1 is the default chip of operations. You are also able to work on a second chip or flash card.

3. Update Firmware

Note: if you need to update the firmware to a higher version, please contact Dediprog at **support@dediprog.com** for the updated firmware.

Step 1: connect the programmer to the PC
Step 2: open the Dediprog software
Step 3: click on “help” on the menu bar
Step 4: click on “update firmware” option
Step 5: select the location (folder) where the firmware is located
Step 6: click on “ok” when you see the pop-up window says “it takes about 15 seconds to update, click ok to continue.”
Step7: click on “ok” and wait for the “update complete” message

4. Supported devices, Software version, Firmware version



C. flash card operations

1. Operations to prepare the flash card

The flash Card is used to store the reference code to be copied to the application memories and also to define the Stand Alone operation sequences. The flash card are manufactured and commercialised by DediProg and are available in different densities (128Mb, 64Mb, 32Mb) according to your code size. Each Flash Card can be used to program equal or smaller size codes.

For example: the 64Mb Flash Card can be used to program the following Serial Flash densities:

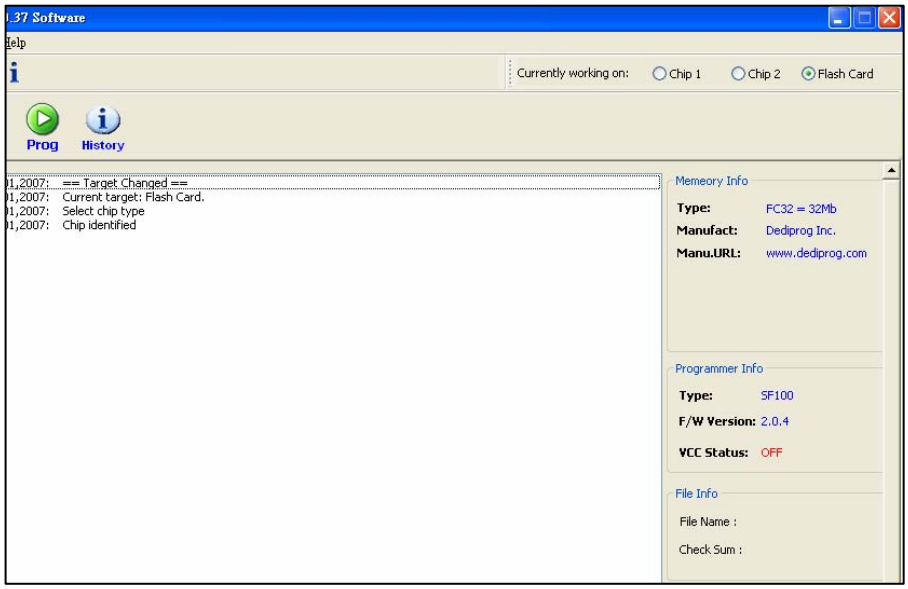
- 64Mb
- 32Mb
- 16Mb

- 8Mb
- 4Mb
- 2Mb
- 1Mb
- 512Kb

Step 1:
Connect SF100+ or SF200+ to a computer via the USB cable.

Step 2:
Insert the flash card into the flash card header on the programmer (face in the flash card when inserting)

Step 3:
open the Dediprog SF software. Click on "ok" when it asks auto select or manual select device.

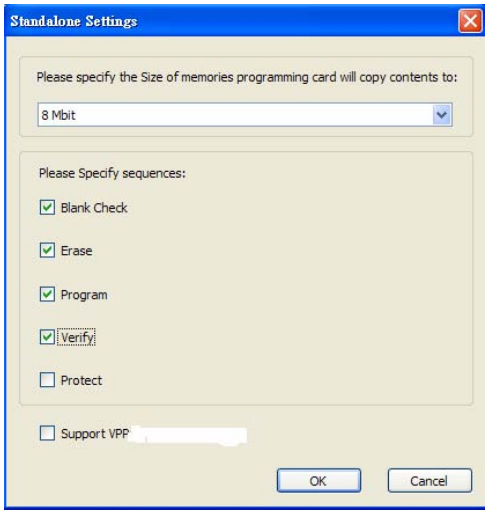


Step 4:
User must select the "Flash Card" mode on the Top Right corner of the window. The DediProg tool will then detect automatically the Flash Card.

Note: the default mode of the Dediprog SF software is Chip1. Therefore you will not see anything if there is nothing in chip1.

Note: please make sure whether you are doing the programming to the application memory or to the flash card.

Step 4:
Select a file image (reference code to be copied in stand alone mode) by clicking the "Sel Img" button and launch the programming operation by clicking the "Update" button.



Step 5:
select the configurations which will be used by the flash card during standalone programming.

-Select the memory density of the target memory:

please make sure that it is the density size of the target memory not the density of the flash card to be selected
- Blank Check option: to check in Stand Alone if all the application memory is erased.
- Erase: to Erase in Stand Alone all the target memory. If the previous "Blank Check" option has been selected then the erase operation will be performed only if the memory is not blank.
- Program: To program in Stand Alone mode, the reference code stored in the Flash Card to the target memory.
- Verify: To check if the target memory content has been well programmed
- Protect: To protect the memory by setting the protection bit
- Vpp: To apply the Vpp high voltage on the Wp pin of the Serial Flash and speed up the programming and erasing operation. To be selected only if the target memory can support it.

Example:
Scenario
1. Flash card density: 64M bit
2. Application memory size: STM 32M bit
3. Application memory supports Vpp capability
4. Application memory does not need to be protected after programming
5. Application Memory is all blank

Flash card configuration: STM 32M, Program, Verify, support VPP

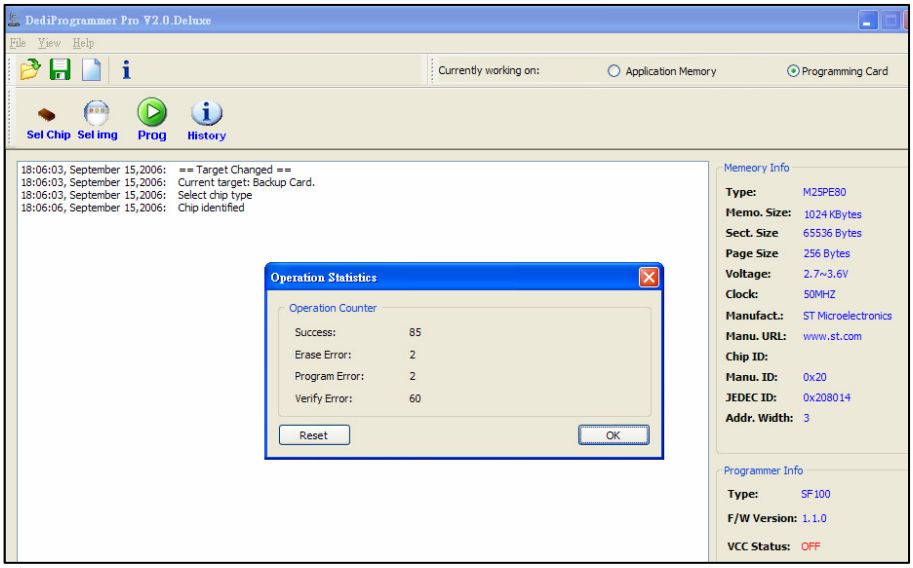
Step 6:
Click ok after you have done your selection in step 5 and then wait for the completion message. All the standalone operations with this flash card will be based on the selections you have made in step 5.

Your Flash Card is now ready to be used in Stand alone mode. It is advised to mark the code revision on the Flash Card to not make any mixing in production. You can then prepare all the Flash Cards needed by each programmer used in production.

2. Read Programming History

Step 1: insert the flash card into the programmer and connect the programmer to a PC.
Step 2: open Dediprog SF+ software and select "flash card" on the top right corner when entering into the main screen

Step 3: click on "History" button on the tool bar and you will see the operation statistics pop-up window shown in the right.
Step 4: click on ok if you want to keep the statistics and continue to use the flash card. Click on reset if you want to

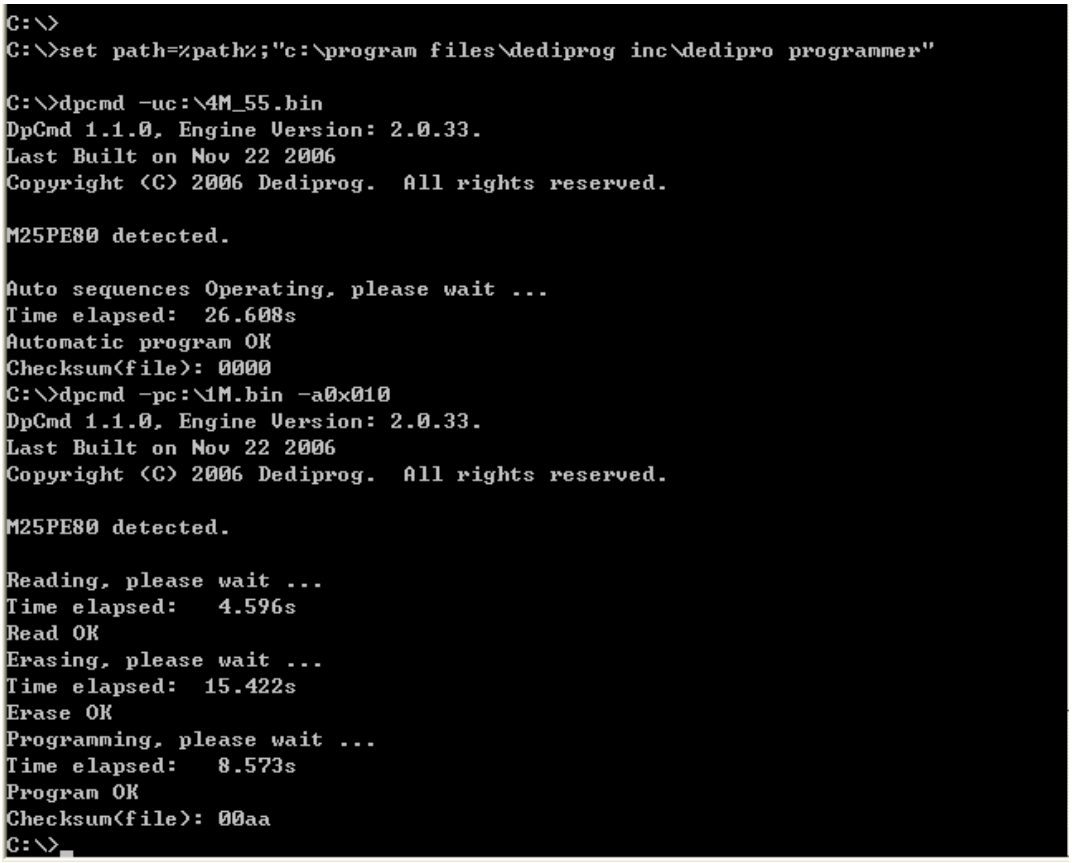


erase the statistics and continue to use the card and restart to count the statistics.

Note: the standalone programming statistics can only be erased here. Erase the statistics here will not erase the flash card content and its operation configuration you have done in section “program the flash card.” By re-program the flash card, it does not erase or reset the statistics stored in the flash card.

III. Dediprog Windows DOS Command Line Software User Guide

A.Dediprog Windows DOS Command Line Support Display



B.How to Start

Dediprog window dos command line software is executed by the file “dpcmd.exe.” There are three different ways to run the dos command line.

1. double click on the “dpcmd” icon on your desktop and type in dpcmd and enter.
2. change your dos directory to the same location where “dpcmd.exe” is located. C:\program files\dediprog inc\dedipro programmer
3. or type in the following command to auto direct the dpcmd command to the “dpcmd.exe” location.

Set path=%path%;”c:\program files\dediprog inc\dedipro programmer”

C.Basic Usages:

Dpcmd -uxxx
Dpcmd /uxxx
Dpcmd --auto=xxx
(space is not needed between the switches parameters. E.g. dpcmd -ubio.bin)

D.Usage Examples:

1. dpcmd -r"f:\file.bin",
   reads the chip and save it into a file "file.bin"
2. dpcmd -rSTDOUT -a0x100 -l0x23,
   reads 0x23 bytes starting from 0x100 and display it on the screen
3. dpcmd -ufile.bin,
   erases and then program file.bin into the serial flash
4. dpcmd -pfile.bin -a0x100,
   writes file.bin into the serial flash starting from address 0x100
5. dpcmd -pfile.bin -x0xaa,
   programs file.bin into the serial flash and fill the rest area with 0xaa

Remarks: -a, -l only works with -p, -r, -s
Remarks: -x only works with -p

E.Basic Switches:

-? [--help] show the help message with examples
-d [--detect] detect chip
-b [--blank] blank check
-e [--erase] erase entire chip
-r [--read] arg read chip contents and save to a bin/hex/s19 or STDOUT to the console.
-p [--prog] arg program chip without erase
-u [--auto] arg automatically run the following sequence:
- check if the chip is blank or not);
- erase the entire chip(if not blank);
- program a whole file starting from address 0

-s [--sum] display chip content checksum
-f [--fsum] arg display the file checksum(needs to work with a file)

F.Optional Switches

(specify the following switches to change default values):
-x [--fill] arg fill the rest of the chip with an hex value,
- works with --prog only

-a [--addr] arg starting address(e.g. 0x1000),
- works with --prog, --read and --sum only
- defaults to 0, if omitted.

-l [--length] arg length to read/program in bytes,
- works with --prog, --read and --sum only
- defaults to whole file if omitted

-t [--timeout] arg (=300) Timeout value in seconds

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-g [--target] arg (=1) Target Options

Available values:

1. chip 1(Default)
2. chip 2
0. flash card

For more information please contact us or your motherboard suppliers.

We also recommend motherboard makers to enter in contact with our technical team to create a dedicated document that will take into consideration all your motherboard updating constraints and references. This documentation will then be very helpful to simplify the Bios update and avoid any mistake in the field.