Dediprog SF Software User Manual

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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

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,

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.



that means you are working on the chip 2 or flash card instead of chip1)

Fig. 2

2. Tool Bar Explanation



b) Toolbar for Memory Operations

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

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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.

Load File	
Unused Bytes Unused Bytes :	OFFh ○00h
Data Format Data Format :	● Binary
	O Intel-Hex
	O Motorola S-Rec
	OK Cancel



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

File and Mem Hex Ed

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 reconfigured.

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

					lex															AS	CII											Load Da	ta F	rom
Address	0	1	2	3	4	5	6	7	8	9	A	в	с	D	Е	F	0	1	2	3 4	1 5	6	7	8	9	A	в	СС	E	F		O File		\odot
0x000000	25	50	44	46	2D	31	2E	32	0D	25	E2	E3	CF	D3	0D	0A	%	Р	D	F-	1	÷ .	2		%	â	a	īć)		-			
0x000010	31	35	32	36	20	30	20	6F	62	6A	0D	ЗC	3C	20	0D	2F	1	5	2	6	0		0	ь	j		<	<		1		CRC16	-	0x95
0x000020	4C	69	6E	65	61	72	69	7A	65	64	20	31	20	0D	2F	4F	L		n	e a	r	i	z	е	d		1		1	0		Edit Sole	orter	
0x000030	20	31	35	33	30	20	0D	2F	48	20	5B	20	31	38	32	37		1	5	з ()		1	н		[18	2	7		Edic Dele		
0x000040	20	36	31	31	20	5D	20	0D	2F	4C	20	33	34	38	36	31		6	1	1]			1	L		3	48	6	1		Addr.		
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0x000090	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20																_		
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0x0000C0	30	30	30	31	36	20	30	30	30	30	30	20	6E	0D	0A	30	0	0	0	1 6	5	0	0	0	0	0		n		0				
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0x000120	30	30	30	30	30	32	36	38	37	20	30	30	30	30	30	20	0	0	0	0 0	2	6	8	7		0	0	0 0	0					
0x000130	6E	0D	0A	30	30	30	30	30	30	32	37	38	37	20	30	30	n			0 0	0 0	0	0	0	2	7	8	7	0	0				
0x000140	30	30	30	20	6E	0D	0A	30	30	30	30	30	30	32	38	38	0	0	0	r	1		0	0	0	0	0	0 2	8	8				
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0x000170	30	30	30	30	30	33	30	38	30	20	30	30	30	30	30	20	0	0	0	0 0) 3	0	8	0		0	0	0 0	0					
0x000180	6E	0D	0A	30	30	30	30	30	30	33	31	37	37	20	30	30	n			0 0	0 0	0	0	0	3	1	7	7	0	0				

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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.

Addr.	0x00000F
Value:	11
	Apply
	Chip File

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.

Compare Logs			
Addr.	File	Memory	
0×000000	5B	25	
0×000001	4D	50	
0×000002	6F	44	
0×000003	74	46	
0x000004	68	2D	
0×000005	65	31	
0×000006	72	2E	
0×000007	42	32	
0×000008	6F	D	
0×000009	61	25	
0×00000A	72	E2	
0×00000B	64	E3	
0×00000C	5D	CF	
0×00000D	3D	D3	
0×00000E	41	D	
0×00000F	53	A	
0×000010	55	31	
0×000011	53	35	
0×000012	20	32	
0×000013	50	36	
0×000014	35	20	
0×000015	50	30	
0x000016	38	20	
0×000017	30	6F	
0×000018	30	62	
0×000019	D	6A	
0×00001A	A	D	
0×00001B	5B	3C	
0×00001C	42	3C	[293]

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.

Currently working on: O Chip 1 O Chip 2 O Flash Card (i) History Prog 1,2007: == Target Changed == 1,2007: Current target: Flash Card. 1,2007: Select chip type 1,2007: Chip identified Memeory Info Type: EC32 = 32Mh Manufact: Dediprog Inc. Manu.URL: www.dediprog.com Programmer Info Type: SF100 F/W Version: 2.0.4 VCC Status: OFF File Info File Name : Check Sum :

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:

	ogramming card will copy contents a
8 Mbit	~
Please Specify sequences:	
🕑 Blank Check	
Erase	
Program	
Verify	
Protect	
Support VPP	
	OK Cancel

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



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

C:>> C:\>set path=%path%;"c:\program files\dediprog inc\dedipro programmer" C:\>dpcmd -uc:\4M_55.bin DpCmd 1.1.0, Engine Version: 2.0.33. Last Built on Nov 22 2006 Copyright (C) 2006 Dediprog. All rights reserved. M25PE80 detected. Auto sequences Operating, please wait ... Time elapsed: 26.608s Automatic program OK Checksum(file): 0000 C:\>dpcmd -pc:\1M.bin -a0x010 DpCmd 1.1.0, Engine Version: 2.0.33. Last Built on Nov 22 2006 Copyright (C) 2006 Dediprog. All rights reserved. M25PE80 detected. Reading, please wait ... Time elapsed: 4.596s Read OK Erasing, please wait ... Time elapsed: 15.422s Erase OK Programming, please wait ... Time elapsed: 8.573s Program OK Checksum(file): 00aa $C: \searrow$

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:

- dpcmd -r"f:\file.bin", reads the chip and save it into a file "file.bin"
 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

-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.

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