



Please read the instructions carefully before use.

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#### Important notice:

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# I. General Description

DediWare is dedicated programming software for StarProg engineering and ProgMaster, NuProgPlus mass production series programmers, providing the most user-friendly operation interface, users can easily perform engineering mode verification and mass production mode transfer under the same software environment.

In engineering mode, DediWare provides basic programming settings such as Read ID, Read, Blank check, Program, Verify, and Batch. It can also be made into a programming project file (Project File, \*.dprj) and loaded into the SD card, and converted to mass production mode. At the same time, it provides Standalone function. After loading the project file into the SD card, it allows you to program without a computer.

In mass production mode, DediWare provides three programming methods, including manual, auto detect and handler modes. It also can control several programming devices simultaneously and individually to achieve the best productivity. In addition, it also provides the function of Unique key, which can generate serial numbers by loading files or software to satisfy the needs of programming serial numbers. Or through ATE Port external signal control (only for StarProg-A), making the production line arrangement easier and smoother.

# **II. System Requirements**

#### 2.1 Hardware Support

- Dual-core CPU or above
- 100GB Hard drive or above
- 1GB of RAM or above
- USB 2.0

⅔ For eMMC or NAND IC programming , the faster hardware requirements the better.

#### 2.2 Operating System Requirements

- Windows 11
- Windows 10
- Windows 8.1
- Windows 8
- Windows 7
- Windows Server<sup>®</sup> 2008
- Windows Vista<sup>®</sup>
- Support both 32-bit and 64-bit OS



# **III. Programmer Information**

### 3.1 Support IC

DediWare software supports the following DediProg programmers.

| IC Kinds<br>Programmer<br>Model | SPI<br>Flash | SPI<br>NAND | Parallel<br>NOR/NAND<br>Flash | EEPROM     | MCU        | CPLD       | eMMC       | UFS        |
|---------------------------------|--------------|-------------|-------------------------------|------------|------------|------------|------------|------------|
| StarProg-U                      | $\bigcirc$   | $\bigcirc$  | $\bigcirc$                    | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |            |
| StarProg-A                      | $\bigcirc$   | $\bigcirc$  |                               | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |            |            |
| K110                            | $\bigcirc$   | $\bigcirc$  |                               | $\bigcirc$ |            |            |            |            |
| NuProg-E2                       | $\bigcirc$   | $\bigcirc$  | $\bigcirc$                    | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| ProgMaster-U4/8                 | $\bigcirc$   | $\bigcirc$  | $\bigcirc$                    | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |            |
| NuProgPlus-U8/U16               | $\bigcirc$   | $\bigcirc$  | $\bigcirc$                    | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |

Note: StarProg-U only supports eMMC in the Engineering Mode.

#### 3.2 Multi-programmers Capability

Same product model can be driven by one PC or notebook at the same time. The correct connection is shown in Fig. 3-1, the PC connected with all ProgMaster-U8 programmers. Fig 3-2 shown incorrect connection, since the StarProg and ProgMaster cannot be connected by 1 PC.



Fig. 3-1 same model programmers can be connected by one PC



Fig. 3-2 Different model programmers cannot be connected by one PC

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#### **3.3 Programmer and DediWare function**

According to different programmers, the function of DediWare is slightly different. Please refer the following table:

| Software<br>Programmer<br>Model | Engineering<br>mode | Production<br>mode | Unique<br>key | Stand<br>alone | LCD<br>Keypad | ATE Port   |
|---------------------------------|---------------------|--------------------|---------------|----------------|---------------|------------|
| StarProg-U                      | $\bigcirc$          | $\bigcirc$         | $\bigcirc$    | $\bigcirc$     |               |            |
| StarProg-A                      | $\bigcirc$          | $\bigcirc$         | $\bigcirc$    | $\bigcirc$     |               | $\bigcirc$ |
| K110                            | $\bigcirc$          | $\bigcirc$         | $\bigcirc$    | $\bigcirc$     |               | $\bigcirc$ |
| NuProg-E2                       | $\bigcirc$          | $\bigcirc$         | $\bigcirc$    | $\bigcirc$     |               |            |
| ProgMaster-U4/8                 | $\bigcirc$          | $\bigcirc$         | $\bigcirc$    | $\bigcirc$     | $\bigcirc$    |            |
| NuProgPlus-U8/U16               | 0                   | $\bigcirc$         | $\bigcirc$    | $\bigcirc$     | $\bigcirc$    |            |

Information:

- A. StarProg series does not support production mode for eMMC (except for StarProg-U).
- **B.** StarProg series can support Standalone, please contact with DediProg if needed.



# **IV. DediWare Installation**

Purchase of StarProg, ProgMaster, or NuProgPlus series programmer, it will come with a quick guide, please scan the QR code and click download to get the latest DediWare version.

#### 4.1 Run DediWare software



#### **4.2 Save the installation files, as shown below.** Path: C:\Program Files(x86)\DediProg

| 🛃 DediProg 3.17.4.1 Setup                                       |   | _   |   | ×    |
|---|---|---|---|------|
| Choose Components<br>Choose which features of Ded               | Prog 3.17.4.1 you want to install.                  |   |   | 17   |
| Check the components you wa install. Click Install to start the | nt to install and uncheck the comp<br>installation. | onents you do   | on't want i                               | to   |
| Select components to install:                                   |   | Description<br>DediWare 1<br>system will<br>following se<br>component | Installation<br>install<br>elected<br>is, | ſ    |
| Space required: 933.7MB   | DediWare Selector                                   |   |   |      |
| DediWare Installation system —                                  |   |   |   |      |
|   | < Back  | Install   | Ca  | ncel |



#### 4.3 Select the "Install USB Driver" and "Backup DediWare", as shown below.

It is recommended to check "Backup DediWare" option to save the current DediWare version in different location.

| 🔂 DediProg 3.17.4.1 Setup   |      | —      |     | $\times$ |
|---|------|--------|-----|----------|
| Post Installer<br>Install another feature                           |      |        |     | 12       |
| Please check checkboxes to install new features.                    |      |        |     |          |
| <ul> <li>✓ Install USB Driver</li> <li>✓ Backup DediWare</li> </ul> |      |        |     |          |
|   |      |        |     |          |
|   |      |        |     |          |
|   |      |        |     |          |
| DediWare Installation system — — — — — — — — — — — — — — — — — — —  | Back | Next > | Can | icel     |

As shown below, install the backup in C:\Program Files\DediProg, which is different path with the original installation.

| 🔂 DediProg 3.17.4.1 Setup  | _        |          | ×   |
|--|----------|----------|-----|
| Choose Backup Location<br>Chosse the folder in which to backup DediWare 3, 17, 4, 1.   |          |          | 1   |
| Setup will install DediWare 3, 17, 4, 1 to C:\Program Files (x86)\DediPro<br>DediWare 3, 17, 4, 1 to following directory.<br>Please select a folder for backup DediWare: | g\and du | pluicate | ]   |
| C:\Program Files\DediProg  | Brov     | wse      | )   |
| Space required: 933.7MB<br>Space available: 379.7GB  |          |          |     |
| DediWare Installation system   | xt >     | Can      | cel |



#### 4.4 Programmer driver and DediWare software are installed successfully.

| Welcome to Progmaster Driver<br>Installer!<br>This wizard will walk you through updating the<br>Progmaster. | drivers for                 |   |  |
|---|-----------------------------|---|--|
| 若要繼續,議按「下一步」。   | Progmaster Driver Installer | Congratulations! You<br>installing Progmaster<br>成功地在此電話上安裝了驅動<br>您現在可以達按該裝置到此間<br>式说明,請先閱讀該說明。 | u are finished<br>f drivers.<br>助程式。<br>截锯上。如果您的装置有使用方 |
| < 上一步(B) <b>トーオ(</b> (B) く  |                             | 驅動程式名稱<br>✔ DediFrog Technology C   | 狀態<br>可以使用   |
|   |                             | <上一歩(8)   | 完成 取消  |



# V. DediWare Introduction

Before open the Dediware, install the programmer and the socket adaptors properly, turn on the programmer power, and wait for the operation system to recognize it.

#### 5.1 Open DediWare

Choose the software according to your need, and double click the icon to start.

**A.** DediWare General is for programming EEPROM, MCU, Parallel\_NAND, Parallel\_NOR, SD, SD\_NAND, SPI\_NAND, SPI\_NOR.



B. DediWare eMMC\_UFS is for UFS and eMMC °



C. DediWare CLI is for R&D using Command Line to communicate with the Dediware.



Dialogue box will show the Client login message. Click OK to connect with Server. If an error message appears, please refer to VIII.FAQ





#### 5.2 Software Interface

| P DediWare   | Version:3.   | 16.6.3  |  |   |                  |  |                             |                                      |                       |  |   |  | _   |             |
|--|--|---|--|---|------------------|--|-----------------------------|--------------------------------------|-----------------------|--|---|--|---|-------------|
| Select   | ig Mode<br>PROJ<br>Load Prj                                | Doad 3  | ∠<br>Buffer<br>₩ <b>FF</b>                       | Çonfig  | PROJ<br>Save Prj | LC Info  | <b>W</b><br>DownPrj         | O Production N<br>SelectPrj          | <b>lode</b><br>BunPrj | StopPrj  |   |  | Powered by  | (j)<br>())) |
| ReadID<br>#01 ProgM<br>StartMode: E<br>S/N: F<br>F/W Ver: 2                    | ReadIC<br>asterU4<br>y Project<br>MU00114£<br>.2.66        | Blank   | Erase  | Program<br>Site #2<br>Pass: 0<br>fail: 0 ◀<br>N 005 | DLE              | Atto Batch<br>Site #3<br>Pass: 0 41<br>Fail: 0 41<br>N 00% | VA T                        | Site #4<br>Pass: 0 VIA<br>fai: 0 VIA |                       | Window<br>11:07:04:Dedii<br>11:07:04:Creat<br>11:07:04:Prog<br>11:07:06:Prog<br>11:07:06:Set 0<br>11:07:06:Set 1<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st]<br>11:07:06:Set[st] | Ware Versior<br>teTime:2021-d<br>rammer[01] c<br>chip does NO<br>peration:none<br>tartMode:nor<br>onBytes Check<br>CheckSum :0:<br>c to(SPLNOR: | n:3.16.6.3<br>01-13 15:0<br>PGA versii<br>T support 1<br>e<br>te<br>kSum :0x0<br>W25Q128 | 18:09.<br>5A exists.<br>on: 0x24.<br>Multi-Voltage<br>D<br>JVXXXIM[Wint | e Ver       |
| ChipInfo<br>Iype: SP<br>Manufact: Wi<br>Size: 0xt<br>Package: SO<br>PartNum: W | LNOR<br>nbond<br>11000340<br>P8 208mil<br>2 <b>25Q128J</b> | ID:<br>ADP P/I<br>ADP P/I<br>ADP P/I<br>VXXIM | ef 70 18<br>V1: SPI-127-S<br>V2: QSPI-SOP<br>V3: | OP008-207mil-0:<br>008207mil-001E                   | IFE              | Production<br>Success:<br>Failure:<br>Total:               | on Statistic<br>0<br>0<br>0 | ProjectName:                         | J Setting             | Check S<br>Chi<br>Ox0000<br>Opti<br>Ox   | Sum_<br>ipFile C<br>000000<br>ion<br>0  | heckSum<br>Proje   | File Name   | 0x00        |

#### 5.2.1 Main menu

| P    |                 |      |   |  |  |
|------|-----------------|------|---|--|--|
| Adva | nce             | Help |   |  |  |
|      | Language 🕨 🕨    |      |   |  |  |
|      | Log in          |      |   |  |  |
|      | General options |      |   |  |  |
|      | Sock            | et   |   |  |  |
|      | Add             | Dn   | • |  |  |

A. Language: English, simplified Chinese, traditional Chinese, and Korean.

P DediWare NuProgPlus Version:3.17.4.1

| dvance Help     |              |
|-----------------|--------------|
| Language        | English      |
| Log in          | 简体中文         |
| General options | 繁體中文         |
| Socket          | 한국어          |
| Normal mode     | rr \$FF      |
| AddOn           | ank Erase Pr |

B. Log in: The setting allows remote operation by the user.

| For Engineer |    | ×      |
|--------------|----|--------|
| PassWord:    | ОК | Cancel |



#### C. General Options:

- It can set up the path for Buffer. Especially for large volume IC (For example, eMMC), since it needs more Buffer. If the default C drive does not have enough space, then it can save to other temporary space.
- It can set up where to save the Log File. If you have any related questions during the programming process, please provide the Log information to DediProg FAE.
- Set up the Security according to the programming need. It can set up a password to avoid the Project file been modified or misused.
- Enable the Multi-Voltage Verification. If needed, please check with DediProg to see whether the IC that is going to be programmed is supported.
- Checksum enables the calculation check and function; it only supports Intel HEX.S19. For customized demands, please contact with DediProg.
- Production mode operation enables the work order and save it in the summary report.

| General options X  |
|--|
| Custom path  |
| Enable custom path for buffer file   |
| C: {Users \user2\AppData \Local\Temp\  |
| Enable custom path for log file  |
| C:\pedLog\   |
| Security  Enable checking authentication after selecting project Enable user level password function (form production mode switch to engineering mode) Require a password for selecting project (need a password when click on SelecPrj button) Delete programmer's default project file after project stoped. |
| Multi-Voltage verification Enable muti-voltage verification(Available in Engineering mode)   |
| Checksum<br>Cheble to calculate the continuous checksum(Now only support Intel HEX/S19 format)   |
| Production mode operation  |
| Enable work order (Save the work order in summary report)  |
| OK Cancel  |

- **D. Socket:** Set and check the number of times the socket adaptor has been used (Need to enter the password in order to search).
- **E.** Normal mode: When opening an Encrypted Project file, it will be required to enter the password in order to enter the edit mode.
- F. AddOn:

The Scan Bad Block function is for NAND flash use. User can check the Bad block location of NAND Flash (If there are more than 255 bad blocks. The status of total bad block will show "Too Many").

Besides, DediWare will check the first spare area location on the first page of each block is Non-0xFF.



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|                             | Scan B | ad Block    | ×    |
|-----------------------------|--------|-------------|------|
| ProgrammerID:<br>SiteIndex: | 1      | <b>*</b>    | Scan |
| BlockIndex                  |        | BlockStatus | s    |
| 0                           |        | BAD BLOCK   | C    |
| 1                           |        | BAD BLOCK   | C    |
| 2                           |        | BAD BLOCK   | (    |
| 3                           |        | BAD BLOCK   | (    |
| 4                           |        | BAD BLOCK   | (    |
|                             |        |             |      |
|                             |        |             |      |
|                             |        |             |      |
|                             |        |             |      |
|                             |        |             |      |
|                             |        |             | /    |
| Total Block:                | 1024   |             |      |
| Total Bad Block:            | 5      |             | ОК   |

#### 5.2.2 Help

H

| elp |   |
|-----|---|
|     | Download Default FPGA(ALL)                |
|     | Base FPGA Manual Update(For Experts Only) |
|     | Firmware Manual Update(For Experts Only)  |
|     | LCD Firmware Update                       |
|     | Format Programmer's SD card               |
|     | Reset Programmer Order                    |
|     | Launch Calculater                         |
|     | User Manual                               |
|     | About DediProg                            |
|     |   |

- **A. Download Default FPGA:** It can improve the software speed when more than one programmer is connected to PC. The default has been set well before shipping to user.
- **B.** Base FPGA Manual Update(For Experts Only): Update the programmer (NuProgPlus) firmware, and the default path is C:\Program Files (x86)\DediProg\Firmware
- **C. Firmware Manual Update(For Experts Only):** The default path of firmware file: C:\Program Files (x86)\Dediprog\Firmware
- **D. LCD Firmware Update:** This function is for upgrading the LCD keypad firmware if user has standalone dongle.
- E. Format Programmer's SD card: It can format the content in the SD card without eject it.
- **F. Reset Programmer Order:** Reset the programming procedure.
- G. Launch Calculator: Opens Windows calculator.



- H. User Manual: Dediware user manual.
- I. About DediProg: Dediware version.

#### 5.2.3 Toolbar

|   | P DediWare V<br>Advance Hel | Version:3.16<br>p                 | i.6.3            |             |              |                         |                 |                | В            |                     |              |  |
|---|-----------------------------|-----------------------------------|------------------|-------------|--------------|-------------------------|-----------------|----------------|--------------|---------------------|--------------|--|
| A | Engineering                 | j Mode<br><b>PROJ</b><br>Load Prj | <b>)</b><br>Load | Z<br>Buffer | QQ<br>Config | <b>PROJ</b><br>Save Prj | LC Info         | <b>DownPrj</b> | O Production | Mode<br>®<br>RunPrj | )<br>StopPrj |  |
|   | Read ID                     | 4<br>ReadIC                       | Slank -          | Erase       | Program      | Verify •                | R<br>Auto Batch |                |              |                     |              |  |

#### A. Engineer Mode:

The toolbar includes icons for quick access to most of the functions. **Upper row**- Select, LoadPrj, Load, Buffer, Config, Save Prj, IC Info, DownPrj **Lower row**- Read ID, Read IC, Blank, Erase, Program, Verify, Auto Batch Please refer to <u>VI.Engineering Mode</u> for detail introduction.

#### B. Production Mode:

Select Prj, Run Prj and Stop Prj. Please refer to VII.Production Mode for detail introduction.



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#### 5.2.4 Programmer Status Window

This area indicates that the status of each programmer. As shown below, there are status of two ProgMaster-U8 which including model name, firmware version and serial number (S/N). Site #1~8 shows status of each programming site.



The **Blink** and **Start** function can only be set during production mode after downloading the project.

- **A.** Blink: All lights on the programmers will be on. Use when several programmers are connected.
- **B.** Up/down button Set the orders of programmers. The top one is the first programmer.
- **C.** Start: When Start Mode is in manual, click start button to start the production programming.



\*Please note that, DediWare software only accepts to connect the same programmer model at the same time.



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#### 5.2.5 Log Window

| Α                             | Log Window   |
|-------------------------------|--|
|                               | Area count:0   |
|                               | (i) 10:27:49:FileName:IC support評估流程-20201113.pdf,CheckSum:0x05        |
|                               | (i) 10:27:49:Chip CheckSum :0x00000000                                 |
|                               | ♦ 10:27:49:Load file success : 0.27 Sec.                               |
|                               | ♦ 10:28:18:Select Clock Adj.:25.0 MHz                                  |
|                               | ♦ 10:28:18:Select Read IO Mode:Single                                  |
|                               | ♦ 10:28:18:Select Program IO Mode:Single                               |
|                               | ♦ 10:28:18:Batch set success.  |
|                               | (i) 10:28:18:Set operation:Erase chip,Blank check,Program chip,Checksu |
|                               | (i) 10:28:18:Set StartMode:Start from Handler                          |
|                               | 10:28:36:Saving project to C:\Users\user2\Desktop\Work\7777.dprj       |
|                               | n  |
|                               | Save Log Clear Log   |
| Batch Config Setting          | B Check Sum  |
| StartMode: Start from Handler | Chio * File CheckSum File Size IC Partition File .                     |
| Erase chip                    | 0x00000000 0x059639A4 0xC6000 Flash/ IC s.                             |
| Program chip                  | 0x0  |
| Checksum verify               |  |
| ProjectName:                  | ProjectCheckSum:0x00   |

#### A. Log Window:

Log window records all progress information and steps, which will be saved to the installation folder automatically.

Click "Save Log "to save as a new file. Click "Clear Log" to clean the log window and record to a new file.

#### B. Check Sum:

It shows the chip checksum. (The function does not support NAND and eMMC)

- Chip Checksum: Calculate the Checksum values of the entire chip that is programmable.
- Option Checksum: Calculate the Option parameters.
- File Check Sum:

After downloading the programming file, the file checksum and file name will show in the table. Several files loaded at the same time will be shown in the table based on their priority.

#### C. ProjectName / ProjectCheckSum:

ProjectName is the name displayed after loading the project file; ProjectCheckSum is the project file Checksum calculated after loading the project file. When it is a project file, this information can be used for production management.



#### 5.2.6 Information window

|   | Α   |                                      |  |                                      | В  |             | C  |
|---|---|--------------------------------------|--|--------------------------------------|--|-------------|--|
|   | ChipInfo<br>Type:<br>Manufact:<br>Size:<br>Package: | EEPROM<br>TMC<br>0x80<br>DIP8 300mil | ID:<br>ADP P/N1:<br>ADP P/N2:<br>ADP P/N3: | EE 24<br>SPI-254-PDIP014-300mil-01B3 | Statistics<br>Success:<br>Failure:<br>Total: | 0<br>0<br>0 | Batch Config Setting<br>StartMode: Start from Manual Mode<br>Program chip<br>Checksum verify |
| D | ldle  | 24AU1                                |  |                                      |  |             | ProjectName:None   |

#### A. Chip Info:

- Type: IC type
- Manufact: IC manufacturer
- Size: Memory size
- Package: IC package
- PartNum: Part number
- ID: Chip ID
- ADP P/N1~3: Socket adaptor part number

#### B. Statistics:

Statistics Window indicates the number of successful, unsuccessful (Failure), and total programmed chips.

#### C. Batch Config Setting:

Batch Config Settings contain information of batch and start mode setting.

#### D. Software Status:

Show DediWare current status.



# **VI. Engineering Mode**

Engineering mode offers program, verify and test functions. Users can turn project file to the production mode for production.



**※**Before using the software, ensure the socket adaptor has been installed properly and assign the one that you want to control.

6.1 Select: Choose IC manufacturer/part number/package

- **A.** If the manufacturer is known, user can select the chip type and manufacturer directly. The related IC part numbers will show in the chip list.
- **B.** Search IC by typing IC part number in the field circled by the blue frame. It is recommended to choose "All" in the "Chip Type" and "Manufacture" to avoid limiting the search results.
- **C.** The input field has the memory function to store 5 sets of IC part number that can be selected by pressing the button on the right.
- D. Double-click selected IC in chip list.

| Select Chip  |  | ×      |                    |
|--|--|--------|--------------------|
| Chip Type  | All  | ~      |                    |
| Manufacture  | All  | ~      | Search Input Field |
| 0105TEA[SOP16]-N<br>08EMCP04-NL3DT2<br>08EMCP08-NL3DT2<br>08EP0P08-NL3DT22<br>10M02SCE144C86[<br>10M02SCU16917G[i<br>10M02SCU324C86]<br>10M02SCU324C86[<br>10M04DAF256C86]<br>10M04DAU324C86]<br>10M04DAU324C86]<br>10M04DAU324T76[i<br>10M04SAU324176[i<br>10M04SAU324176[i | IXP<br>27-A01[FBGA221]-Kingston<br>27[FBGA221]-Kingston<br>27-A01U[FBGA136]-Kingston<br>QFP144]-ALTERA<br>BGA169]-ALTERA<br>BGA324]-ALTERA<br>BGA324]-ALTERA<br>BGA324]-ALTERA<br>BGA324]-ALTERA<br>BGA324]-ALTERA<br>BGA324]-ALTERA<br>BGA324]-ALTERA<br>BGA169]-ALTERA<br>BGA324]-ALTERA<br>BGA324]-ALTERA<br>BGA169]-ALTERA<br>BGA324]-ALTERA<br>BGA324]-ALTERA | 1      |                    |
| OK   |  | Cancel |                    |





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E. The Log window will show the message as shown below after choosing the IC.

| Log Window   |
|--|
| 23:18:01:DediWare startup, Build Version: 3.3.0              |
| (i) 23:18:01:Server Version:3.3.0.2                          |
| 3:18:01:Config Version:3.00, Create Time:2014-11-14 16:46:51 |
| 3:18:01:Device1 default FPGA exists                          |
| 3:18:10:Select chip : type:{EEPROM},manufacture:{TMC}        |
| (i) 23:18:10:Select chip : partnum:{24A01[DIP8 300mil]}      |
|  |
|  |

**F.** IC information will also show in the ChipInfo window.

| ChipInfo  |            |           |             |
|-----------|------------|-----------|-------------|
| Type:     | MCU        | ID:       | 77 14 b1 0b |
| Manufact: | ST         | ADP P/N1: |             |
| Size:     | 0x00008010 | ADP P/N2: |             |
| Package:  | LQFP48     | ADP P/N3: |             |
| PartNum:  | STM32F030  | С6Т       |             |



#### 6.2 Load Prj

Able to load the Project File (\*.dprj) that was saved in the Dediware.





Select "Load" to load the file intended for the programmer. According to different IC type, the file settings will divide into normal IC, eMMC and NAND Flash.

#### 6.3.1 Normal IC Programming Settings

User can load one or several files at the same time, and set up the Buffer starting address, file offset starting address, and file length.

| File1 +  |  |                    |                      |                 |  |  |                                 | >                   |
|--|--|--------------------|----------------------|-----------------|--|--|---------------------------------|---------------------|
| FileFormat:<br>FileChecksu<br>FileOffset:<br>FilePath: | Binary(*.bin)<br>ByteAcc<br>0X0<br>C:\Users\user | 2\Desktop\E2EU     | _1.3.1(TRACE).bi     | n 🗸             | PartitionName:<br>ChipCheckSum:<br>StartProgAddr:<br>ProgramLen:<br>FillUnusedByte | EEPROM<br>ByteAcc<br>0X0<br>0X200<br>e: 0XFF | ~<br>~                          |                     |
| HideFileList<br>PartitionNa<br>EEPROM                  | StartProgAddr:<br>0X0                            | FileOffset:<br>0X0 | ProgramLen:<br>0X200 | FillUnusedByte: | FileFormat:<br>Binary(*.bin)   | FileChecksum:<br>ByteAcc                     | Cancel ChipCheckSum:<br>ByteAcc | OK<br>FileP<br>C:\U |
|  |  |                    |                      |                 |  |  |                                 |                     |

- A. File Format: The format of programming file.
- **B.** File Checksum: File checksum calculation method.
- C. File Offset: Set the address to start loading to buffer.
- **D.** File Path: Shows the path of programming file.
- E. Partition Name: If the IC has more than one memory that can be programmed, the partition names can be selected in this drop-down list (e.g. IC has Flash and OTP memory and the partition name list will have these two options).
- F. ChipCheckSum: Calculate method for the whole IC.
- **G. StartProgAddr:** Select the file to programmer Buffer. When loading several files to the same partition, make sure that the Memory Addr has been set well.
- H. ProgramLen: Set the file size for loading.
- I. FillUnuseByte: Check the box to assign Unused Byte. The default value is 0xFF.
- J. +: When the project file is bigger than one, click here to add and set up.
- K. ShowFileList/HideFileList: Open to search and close the file list.



#### Load File Steps:

|  |  |   |  |                      |                 |                              |                          | Step 5   |                 |
|--|--|---|--|----------------------|-----------------|------------------------------|--------------------------|--|-----------------|
| File                                       | eFormat:   | Binary(*.bin)   | ~  |                      |                 | PartitionName:               | EEPROM                   | ~  |                 |
| File                                       | Checksum:  | ByteAcc   | ~  |                      |                 | ChipCheckSum:                | ByteAcc                  | ~  |                 |
| File                                       | eOffset:   | 020   |  |                      |                 | StartProgAddr:               | 0X0                      |  |                 |
|  |  | 0.00  |  |                      | Step 1          | ProgramLen:                  | 0X200                    |  |                 |
| File                                       | ePath:   | Files (x86) \De   | ediProg\Firmware\  | NPPG_1_2_1(DB        | 6).bin ~        | FillUnusedByte               | : OXFF                   |  |                 |
| lideF<br>artitic                           | Step 5   | artProqAddr:  | FileOffset:  | ProgramLen:          | FillUnusedBvte: | FileFormat:                  | FileChecksum:            | Step 6<br>Cancel O<br>ChipCheckSum:            | ж               |
| iideF<br>artitio                           | Step 5<br>FileList   | artProgAddr:  | FileOffset:<br>0X0   | ProgramLen:<br>0X200 | FillUnusedByte: | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Step 6<br>Cancel O<br>ChipCheckSum:<br>ByteAcc | ж<br>Fil<br>C:  |
| iideF<br>artitie<br>EPRC                   | Step 5<br>FileList<br>onNa St<br>OM 02   | artProgAddr:<br>(0  | FileOffset:<br>0X0   | ProgramLen:<br>0X200 | FillUnusedByte: | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Step 6<br>Cancel C<br>ChipCheckSum:<br>ByteAcc | Fil<br>C:       |
| iideF<br>artitic<br>EPRC                   | Step 5<br>FileList   | artProgAddr:<br>(0  | FileOffset:<br>0X0<br>×  | ProgramLen:<br>0X200 | FillUnusedByte: | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Step 6<br>Cancel C<br>ChipCheckSum:<br>ByteAcc | Fil<br>C:       |
| lideF<br>artitic<br>EPRC<br>vser<br>ation: | Step 5<br>FileList   | artProgAddr:<br>(0<br>SedfrogVirmaet  | FileOffset:<br>0X0<br>Size Date Modified<br>2020/01/10-514M  | ProgramLen:<br>0X200 | FillUnusedByte: | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Step 6<br>Cancel C<br>ChipCheckSum:<br>ByteAcc | File<br>C:      |
| lideF<br>artitic<br>EPRC<br>ston:          | Step 5           ileList           ionNa         St           DM         0X           C:(Program Files (del)()         Name           Bible_113.670.042         Interview (del)()           DM         DX  | artProgAddr:<br>(0<br>bdfrogVrmare)   | FileOffset:<br>0X0<br>222020110953M<br>23200110953M<br>989   | ProgramLen:<br>0X200 | FillUnusedByte: | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Step 6<br>Cancel C<br>ChipCheckSum:<br>ByteAcc | ж<br>Fil<br>C:  |
| lideF<br>artiti<br>EPRC<br>vser            | Step 5           FileList           IonNa           St           OM           DM   | artProgAddr:<br>(0<br>betrogYrmare)   | FileOffset:<br>0X0   | ProgramLen:<br>0X200 | FillUnusedByte: | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Step 6<br>Cancel C<br>ChipCheckSum:<br>ByteAcc | рк<br>Fil<br>C: |
| fideF<br>artitic<br>EPRC<br>stor:          | Step 5           FileList           onNa         St           DM         0X           Rese         0X           Base         2.3.1.4600.01           Base         1.3.4706.01           Base         1.3.4706.01           Base         1.3.4706.01           Base         1.3.4706.01           Base         1.3.4706.01  | artProgAddr:<br>(0  | FileOffset:<br>0X0   | ProgramLen:<br>0X200 | FillUnusedByte: | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Step 6<br>Cancel C<br>ChipCheckSum:<br>ByteAcc | DK<br>Fil       |
| lideF<br>artitic<br>EPRC<br>stor<br>c      | Step 5           FileList           onNa           St           OM           Date           C: Vrogram Files (dds)(V           Name           Date           Differing - 2018           Maree           Date           Differing - 2018           Maree  | artProgAddr:<br>(0<br>bedrogYremwert<br>ben<br>c2 bin<br>ben<br>c2 bin<br>ben<br>c<br>c<br>ben<br>c<br>c<br>ben<br>c<br>c<br>ben<br>c<br>c<br>ben<br>c<br>ben<br>c<br>c<br>ben<br>c<br>c<br>ben<br>c<br>c<br>c<br>ben<br>c<br>c<br>c<br>ben<br>c<br>c<br>c<br>c<br>c<br>c<br>ben<br>c<br>ben<br>c<br>c<br>c<br>c<br>ben<br>c<br>c<br>c<br>c<br>c<br>ben<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c<br>c | FileOffset:           0X0           Ster         Deb Molder           958         2022/02/11:0553 M           968         2022/02/11:0553 M           1128         2022/02/11:0553 M           1128         2022/02/11:053 M           1128         2022/02/11:053 M           1128         2022/02/11:053 M           1128         2022/02/11:053 M   | ProgramLen:<br>0X200 | FillUnusedByte: | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Step 6<br>Cancel C<br>ChipCheckSum:<br>ByteAcc | K<br>Fil        |
| HideF<br>artiti<br>EPRC<br>aton:           | Step 5           FileList           ionNa         St           DM         DX           Exa, 1,26(Rot, N)         DX           Image, 1/32,0422 brill         DX           Image, 1/32,0424 brill         DX           Image, 1/32,0424 brill         DX           Image, 1/32,0424 brill         DX           Image, 1/32,0424 brill         DX           Image, 1/32,044 brill         DX   | artProgAddr:<br>(0<br>bedProgYrmowre)<br>ben<br>n<br>ben<br>c2 ben<br>ben<br>ben<br>ben<br>ben  | FileOffset:<br>0X0<br>Sie Dak Midled<br>998 2022/0110453 M<br>998 2022/0110453 M<br>1128 2022/0110453 M<br>1128 2022/0110453 M<br>1128 2022/0110453 M<br>1128 2022/0110453 M   | ProgramLen:<br>0X200 | FillUnusedByte: | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Step 6<br>Cancel C<br>ChipCheckSum:<br>ByteAcc | File<br>C:      |
| HideF<br>artiti<br>EPRC<br>exton:          | Step 5           FileList           ionNa         St           DM         02           Ct*program Files (de8)%         02           Image: VML0422bit<br>Bits: VML042bit<br>Bits: VML042bit | artProgAddr:<br>(0<br>)ddProgVmmare(<br>)don<br>n<br>)don<br>Don<br>Don<br>Don<br>Don<br>Don<br>Don<br>Don<br>Don<br>Don<br>D   | FileOffset:<br>0X0<br>See Dea Modeal<br>37998 3222(7):1953 M<br>5222(7):1953 M<br>3222(7):1953 M | ProgramLen:<br>0X200 | FillUnusedByte: | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Step 6<br>Cancel C<br>ChipCheckSum:<br>ByteAcc | File<br>C:      |

Step1: Click the button to open the load file dialogue box.

Step2: Find the programming file.

Step3: Confirm the parameter setting.

Step4: Click "+" to add the file to the list. Repeat Step 1 to 4 to load more files.

Step5: The file information will be shown on the list, and if there are any issues, find the corresponding file for modification.

Step6: Click "OK" after checking all settings are correct.

% Once the error or warning message appears, please refer to VIII. FAQ



#### 6.3.2 Load File Setting for eMMC

User can load one or several files at the same time.

| FileDat           | th:                       | ^.\Ilsers\user2\Γ   | )eskton\test        | bin               |                              | ~                         |                             | Dartition N:       | amo.              | UserArea              | ~            |
|-------------------|---------------------------|---------------------|---------------------|-------------------|------------------------------|---------------------------|-----------------------------|--------------------|-------------------|-----------------------|--------------|
| rilerat           | un                        | $2 \cos (2 \sin 2)$ | vesktop (test.)     |                   | 0×00                         |                           | r                           | SectorInde         | ame.              | 0                     |              |
| FileFor           | rmat:                     |                     |                     |                   | Value                        |                           |                             |                    | AutoSe            | t FileOffset:0x       | 00           |
| FlieCh            | ecksum:                   | Jience              |                     |                   | value                        |                           | 5                           | SectorCou          | nt:               | 6                     |              |
| Partition Ta      | able Expor                | t Impo              | rt                  |                   |                              | □ <mark>Che</mark><br>(Un | eck Preload<br>it: Sector C | Max Size<br>Count) | <b>0</b> x        |                       |              |
| Hide Ima <u>c</u> | ges                       |                     |                     |                   |                              |                           |                             |                    |                   | ОК                    | Cance        |
| #<br>Image 01     | PartitionName<br>UserArea | SectorIndex:<br>0   | FileOffset:<br>0x00 | SectorCount:<br>6 | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc  | Skip Blank<br>SkipBlank     | k Value            | FilePat<br>C:\Use | th:<br>ers\user2\Desk | top\test.bin |
| andge 01          |                           |                     |                     |                   |                              |                           |                             |                    |                   |                       |              |
|                   |                           |                     |                     |                   |                              |                           |                             |                    |                   |                       |              |
|                   |                           |                     |                     |                   |                              |                           |                             |                    |                   |                       |              |
|                   |                           |                     |                     |                   |                              |                           |                             |                    |                   |                       |              |

- File Format: The format of programming file. Α.
- File Checksum: File checksum calculation method. Β.
- File Offset: Set the start address to start loading to buffer C.
- File Path: Shows the path of programming file. D.
- Skip Blank Value: Check the box to check the blank data and skip the blank when programming. Ε. Reduce the programming time.
- F. Partition Name: eMMC offers UserArea, Boot1Area and Boot2Area.
- Sector index: Set the start address of eMMC sector. G.
- **Sector count:** The total number of programming sector. Н.
- AutoSetFileOffset: When setting the Sector index, if you wish the File offset auto calculates, then you Ι. can select this function.
- +: When the project file is larger than one, then click "+" to add it to the setting list. J.
- К. Partition Table: You can use Partition Table to load multiple files for programming, but this is customized, please provide the IC Partition Table Specification to DediProg if needed.
- L. Export: Save various project file format, Checksum, path, and programming address as loadfilecfg file (Not include the file content).
- M. Import: Import loadfilecfg file, avoid entering the same programming file.
- N. **Check Preload Max Size:** Compare the total data size of all loaded file(s) with the expected data size. (This is customized, not recommended for general users)
- Show Images and Hide Images: Open to search and close the file list. Ο.



Load File Steps for eMMC:

| au me   |   |  |  |                                       |                              |                          |                         |            |                    |                           |                         |
|---|---|--|--|---------------------------------------|------------------------------|--------------------------|-------------------------|------------|--------------------|---------------------------|-------------------------|
| ile1 +  | + Step 4  |  |  |                                       |                              |                          |                         |            |                    |                           | Step 3                  |
| FilePat   | th:   | C:\Users\user2\[   | Desktop\test   | .bin                                  |                              | ~ <u>.</u>               | . Pi                    | artitionNa | ame:               | UserArea                  | ~                       |
| FileFor   | rmat:   | Binary(*.bin)  | $\sim$   | FileOffset:                           | 0x00                         | Step 1                   | . S                     | ectorInde  | ex:                | 0                         |                         |
| FileChe   | ecksum:   | ByteAcc  | $\sim$   | 🔽 Skip Blank                          | Value                        |                          |                         | A          | AutoSet            | FileOffset:0              | x00                     |
|   |   |  |  |                                       |                              |                          | S                       | ectorCour  | nt:                | 6                         |                         |
| lide Imag   | ges Step 5  |  |  |                                       |                              |                          |                         |            |                    | OK                        | Cancel                  |
| lide Imag<br>nage 01  | ges Step 5<br>PartitionName<br>UserArea   | :: SectorIndex:<br>0   | FileOffset:<br>0x00  | SectorCount:<br>6                     | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Skip Blank<br>SkipBlank | Value      | FilePatl<br>C:\Use | OK<br>h:<br>rrs\user2\Des | Cancel<br>ktop\test.bin |
| ide Imag<br>nage 01   | PartitionName<br>UserArea   | : SectorIndex:<br>0  | FileOffset:<br>0x00  | SectorCount:<br>6                     | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Skip Blank<br>SkipBlank | Value      | FilePatl<br>C:\Use | OK<br>h:<br>rs\user2\Des  | Cancel<br>ktop\test.bin |
| lide Imag<br>nage 01<br>Browser<br>Location:                      | PartitionName<br>UserArea   | :: SectorIndex:<br>0   | FileOffset:<br>0x00  | SectorCount:<br>6<br>×                | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Skip Blank<br>SkipBlank | Value      | FilePatl<br>C:\Use | OK<br>h:<br>rs\user2\Des  | Cancel                  |
| Iide Imagenage 01 Browser Location:                               | Dest Dest Dest Dest Dest Dest Dest Dest   | 2: SectorIndex:<br>0<br>Size Date Medi<br>2022/00/0<br>9688 2022/00/2                  | FileOffset:<br>0x00  | SectorCount:<br>6<br>×                | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Skip Blank<br>SkipBlank | Value I    | FilePatl<br>C:\Use | OK<br>h:<br>rs\user2\Des  | Cancel                  |
| iide Imag<br>nage 01<br>Browser<br>Location: [<br>RC<br>RC        | Dest OPA<br>Name<br>DESKTOPA<br>Name<br>DEZEU_1.3.1(TRACE).bin<br>DEZEU_1.3.1(TRACE).bin            | 2: SectorIndex:<br>0<br>5122 Date Medi<br>2022/07/<br>9688 2022/02/<br>288 2022/02/    | FileOffset:<br>0x00  | SectorCount:<br>6<br>×                | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Skip Blank<br>SkipBlank | Value      | FilePatl<br>C:\Use | OK<br>h:<br>rs\user2\Des  | Cancel                  |
| Hide Image<br>nage 01<br>Browser<br>Location: [<br>RC<br>Desktop  | Step 5       PartitionName<br>UserArea       DEscrop       Name<br>@BWork<br>@EZEU_1.3.1(TRACE).bin | 2: SectorIndex:<br>0<br>Size Date Medi<br>2022/03/0<br>9688 2022/02/1<br>288 2022/02/1 | FileOffset:<br>0x00<br>International States<br>International | SectorCount:<br>6<br>×<br>•           | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Skip Blank<br>SkipBlank | Value      | FilePatl<br>C:\Use | OK<br>h:<br>rs\user2\Des  | Cancel                  |
| Hide Imag<br>mage 01<br>PBrowser<br>Location: [<br>PC<br>Desktop  | Destropy<br>Work<br>DESELLAISIGNACELE   | 2: SectorIndex:<br>0<br>5222002<br>988 2022002<br>288 2022021                          | FileOffset:<br>0x00<br>icd Type<br>2 Folder<br>3 File<br>1 File  | SectorCount:<br>6<br>×                | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Skip Blank<br>SkipBlank | Value 1    | FilePatl<br>C:\Use | OK<br>h:<br>rs\user2\Des  | Cancel                  |
| Hide Image<br>mage 01<br>BBrowser<br>Location: [<br>RC<br>Desktop | DestitionName<br>UserArea   | 2:: SectorIndex:<br>0<br>Size Date Medi<br>2022/02/<br>9688 2022/02/<br>288 2022/02/   | FileOffset:<br>0x00  | SectorCount:<br>6<br>×<br>•           | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Skip Blank<br>SkipBlank | Value I    | FilePatl<br>C:\Use | OK<br>h:<br>rs\user2\Des  | Cancel<br>ktop\test.bin |
| Hide Image<br>mage 01<br>BBrowser<br>Location: [<br>RC<br>Desktop | DestitionName<br>UserArea   | 222002<br>2389 2022/021  | FileOffset:<br>0x00  | SectorCount:<br>6<br>×<br>•<br>•<br>• | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | Skip Blank<br>SkipBlank | Value      | FilePatl<br>C:\Use | OK<br>h:<br>rs\user2\Des  | Cancel<br>ktop\test.bin |

Step1: Click button to open load file dialogue box.

Step2: Find the programming file.

Step3: Confirm the parameter setting.

Step4: Click "+" to add the file to list. Repeat Step 1 to 4 to load more files.

Step5: Files information will show in the "Image List" window, if not, click "Del" or "Reset" to restart setting.

Step6: Click "OK" after checking all settings are correct.

X Once the error or warning message appears, please refer to VIII. FAQ



#### 6.3.3 NAND Flash Programming Settings

#### A. Use Partition File:

Support CSV, DEF and MBN formats. CSV is Comma Separated Values Format, DEF is Group Define File Format, and MBN is Qualcomm Multiply Partition Format. If your partition file is one of these formats, you can choose this option for image file and partition file loading setting.

#### B. Custom:

Fully set up manually.

| Please select a part | r NAND          | or solution file | also you can ch | oose custom. |  |  |  |  |
|----------------------|-----------------|------------------|-----------------|--------------|--|--|--|--|
|                      |                 |                  |                 |              |  |  |  |  |
| ⊖ Use                | se Partition Fi | le               |                 |              |  |  |  |  |
| -0                   | Partition Fi    | le               |                 |              |  |  |  |  |
| File                 | ileFormat:      | CSV              |                 |              |  |  |  |  |
| File                 | ilePath:        |                  |                 |              |  |  |  |  |
|                      |                 |                  |                 |              |  |  |  |  |
|                      | 🔵 Image File    | includes Part    | tion Table      |              |  |  |  |  |
| File                 | ilePath:        |                  |                 |              |  |  |  |  |
|                      |                 |                  |                 |              |  |  |  |  |
|                      |                 |                  |                 |              |  |  |  |  |
| 🔾 Cus                | ustom           |                  |                 |              |  |  |  |  |
|                      |                 |                  |                 |              |  |  |  |  |
|                      |                 |                  |                 |              |  |  |  |  |
|                      |                 |                  |                 |              |  |  |  |  |
|                      |                 |                  |                 |              |  |  |  |  |
|                      |                 |                  |                 |              |  |  |  |  |
|                      |                 |                  |                 |              |  |  |  |  |

#### a) Select "Custom" to set programming file.

**b)** Load File for NAND Flash (From left to right):

| This is your image | informations. |   |             |         |                       |                |                   |   |  |
|--------------------|---------------|---|-------------|---------|-----------------------|----------------|-------------------|---|--|
| FilePath:          |               |   |             |         | v                     | PartitionName: | Flash             | ~ |  |
| FileFormat:        | Binary(*.bin) | ~ | FileOffset: |         |                       | BlockIndex:    |                   |   |  |
| FileChecksum:      | ByteAcc       | ~ | SpareArea U | UseFile | Skip Last Empty Block | AutoSet        | t FileOffset:0x00 |   |  |
|                    |               |   |             |         |                       | BlockCount:    |                   |   |  |
|                    |               |   |             |         |                       |                |                   |   |  |
|                    |               |   |             |         |                       |                |                   |   |  |
|                    |               |   |             |         |                       |                |                   |   |  |
|                    |               |   |             |         |                       |                |                   |   |  |
|                    |               |   |             |         |                       |                |                   |   |  |
|                    |               |   |             |         |                       |                |                   |   |  |
|                    |               |   |             |         |                       |                |                   |   |  |
|                    |               |   |             |         |                       |                |                   |   |  |
| how Images         |               |   |             |         |                       |                |                   |   |  |
| how Images         |               |   |             |         |                       |                |                   |   |  |

ii. File Checksum: File checksum calculation method.



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- iii. File Offset: Set the address to start loading to buffer
- iv. File Path: Shows the path of programming file.
- v. SpareArea UseFile: Check the function to enclose the SpareArea with file.
- vi. Skip Last Empty Block: If the Block values are FFh continuously, then it will not load these Blocks if this option is selected.

For example, there are 1024 Blocks ( $0^{1023}$ ) in the chip, the Block Count of the loaded project file will be 1024.

1. When Skip Last Empty Block is selected, and the Block 1000~1023 are all FFh, then it will not load these Blocks.

2. When Skip Last Empty Block is selected, and the block 1000~1022 are all FFh, but Block 1022 is a non-FFh value, then it will not skip Block 1000~1022.

- vii. Partition Name: Only Flash option can be selected.
- viii. Block index: Setting the start of block.
  - ix. Block count: Total block numbers for programming.
  - **x. AutoSetFileOffset:** When setting the Block index, if you wish the File offset auto calculates, then you can select this function.
  - **xi.** +: When the project file is bigger than one, click here to add and set up.
- xii. ShowFileList/HideFileList: Open to search and close the file list.

#### c) NAND Load File Steps:

| Load File Fo                              | or NAND<br>e informations.   |    |
|---|--|----|
| FilePath:<br>FileFormat:<br>FileChecksum: | Step 3         C:\Users\user2\Desktop\000.loadfilecfg       PartitionName:       Flash         Binary(*.bin)       FileOffset:       0x00       Step 1       BlockIndex:       0         ByteAcc       SpareArea UseFile       Skip Last Empty Block       AutoSet FileOffset:0x00       BlockCount:       1 |    |
| Step 5<br>Show Images                     | FileBrowser         X           Location:         DESKTOP\   |    |
|   | Step 6           < 上一步(B)  | 取消 |



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| nage 01 | PartitionName:<br>Flash | BlockIndex:<br>0 | FileOffset:<br>0x00 | BlockCount:<br>1 | FileFormat:<br>Binary(*.bin) | FileChecksum:<br>ByteAcc | EccUseFile<br>not use | FilePath:<br>C:\Users\user2\D |
|---------|-------------------------|------------------|---------------------|------------------|------------------------------|--------------------------|-----------------------|-------------------------------|
|         |                         |                  |                     |                  |                              |                          |                       |                               |
|         |                         |                  |                     |                  |                              |                          |                       |                               |
|         |                         |                  |                     |                  |                              |                          |                       |                               |
|         |                         |                  |                     |                  |                              |                          |                       |                               |
|         |                         |                  |                     |                  |                              |                          |                       |                               |

Step1: Click on the button to open the load file dialogue box.

Step2: Find the programming file.

Step3: Confirm the parameter settings.

Step4: Click "Add" to add the file to list. Repeat Step 1 to 4 to load more files.

Step5: Files information will show in the "Image List" window, if not, click "Del" or "Reset" to restart setting.

Step6: Click "Next" after checking all settings are correct.

X Once the error or warning message appears, please refer to VIII. FAQ

Step7: BBM Settings

Load File For NAND set bad block management or choose the default value BBM Configuration Α Block\_Index FCC DataLayout Block\_Count EccAlgorithm RRM Datal InitSize MaxErrorBit(0-255) IMG0 Skip Bad Block 0 NotUse Mode3 528 2 Mode3 Mode3 528 528 IMG1 10 NotUse Skip Bad Block ~ 4 v 4 IMG2 183 NotUse Skip Bad Block NotUse NotUse Skip Bad Block Skip Bad Block IMG3 192 Mode3 528 IMG4 201 Mode3 528 ~ 4 ~ 4 IMG5 208 NotUse Skip Bad Block Mode3 528 IMG6 215 NotUse Skip Bad Block Mode3 528 ~ 4 223 4 IMG7 Mode3 528 NotUse Skip Bad Block IMG8 231 54 Skip Bad Block Mode3 NotUse 528 BBM Layout Guarded Area Count: 0 · Load Guarded Area Table Save Partition Table < 上一步(B) 完成 取消 Guarded Area Count: 0 Load Guarded Area Table Save Partition Table B Guarded\_Area\_Index Start End Bad\_Block\_Allowed



#### A. BBM Configuration:

Set it according to the number specified at Load File. As the above figure shown, there are multiple Image files need to set up EccAlgorithm, BBM, EccDataLayout, DataUnitSize, and MaxErrorBit.

- EccAlgorithm: ECC calculation.
  - If the "SpareArea UseFile" is selected on the "Load File-IMAGE" page, it will show:
    - Use File: It means the Image File has SpareArea data.
  - If the "SpareArea UseFile" is not selected on the "Load File-IMAGE" page, it will show:
    - It means the Image File does not have SpareArea data, and not using the ECC algorithm.
      - BCH8 MDM: This ECC algorithm is customized and protected by the NDA, therefore, the detail information cannot be provided.
- BBM: Bad block management.

• EccDataLayout: Provides 4 kinds of data layout.



Use Page 2048+48 as an example Mode 0: 2048 + 64 Mode 1: 512 + 16 + 512 + 16 + 512 + 16 + 512 + 16 Mode 2: 512 + 512 + 512 + 512 + 16 + 16 + 16 + 16 Mode 3: 2112

#### **X** Note: If the Mode0~2 ECC area appears Bit Error, the orange block, then verify will fail.

- DataUnitSize: According to the data layout to set the data unit size. In this case, 2112 Byte is used as the unit.
- MaxErrorBit: According to the data unit to set the maximum error bit of each unit. In this case, for 2112 Bytes, 1 bit error is allowed.

EccDataLayout, DataUnitSize, and MaxErrorBit are for verification, which will analyze the data accuracy and filter Bit Error to ensure the IC will work normally on board. For example, when ECC needs 528/2bit for CPU, then set EccDataLayout as Mode 3, DataUnitSize as 528Bytes, and MaxErrorBit as 2bit. If you want to filter the NAND Flash more strictly, set the MaxErrorBit to 1 bit. The default setting will depend on the Datasheet definition.

**%**Note: If the part number is XXXX\_Ecc (IC number with \_ECC), then IC will turn on the Internal ECC, which should not have Bit Error. Therefore, MaxErrorBit will be invalid.



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#### B. Guarded Area Configuration:

For setting NAND Flash bad block. In this case, first, Guarded Area Index is 0; Block0 to Block9 do not allow bad block. Second, Block 10 to Block 999 can allow 10 bad blocks. If one of these two conditions is met in the programming process, this IC will be considered as a failed IC.

| Guarded_Area_Index | Start | End | Bad_Block_Allowed |
|--------------------|-------|-----|-------------------|
| )                  | 0     | 9   | 0                 |
| 1                  | 10    | 999 | 10                |
|                    |       |     |                   |

• Load Guarded Area Table: Able to load the Guarded Area Table in Qualcomm Multiply Partition Format.

#### Note:

NAND Flash programming function includes the BBM and ECC setting. If user cannot find the suitable BBM and ECC for programming setting, please contact DediProg.



#### 6.4.2 Option Setting

- A. Default Check (Please contact DediProg): It is to confirm whether the IC has been programmed depends on the IC kinds. Please contact DediProg if needed.
- B. StartMode Setting: To meet user needs, DediWare offers three production modes.
  - Start from Manual Mode:

Production mode will be activated by click "Start" on GUI or press the start button on programmer.

• Start from Auto Detection:

DediWare will detect inserted chip and start to program automatically after running the RunPrj.

X StarProg-ATE / NAND / eMMC does not support this function.

- Start from Handler: This function is suitable for DediProg automatic system.
- C. Main Clock: SPI Clock speed
- **D. Read IO Mode:** SPI Protocol's IO Mode (Default Single). If you need Dual or Quad, please contact DediProg.
- E. Program IO Mode: SPI Protocol's IO Mode (Default Single). If you need Dual or Quad, please contact DediProg.

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#### Note:

Programmer has the auto IC contact testing function in manual and auto detection mode. Users must take out the IC from the socket adaptor after programming. Please refer to <u>VIII. FAQ</u>

#### 6.4.3 Unique Key Setting

DediWare has two kinds of Unique key for programming the key in the IC. One is loading the serial numbers file to program; another is to give the random key from DediWare automatically. **%Please note the Unique key only can be used in production mode.** 

| Config<br>Batch | Unique Kay & Savid Num  |
|-----------------|---|
| Unique          | Enable program unique key to different chips PartitionName: EEPROM      Address Mode     StartAddress: 0x     O     Length: 0x     O     Sbit 16bit |
|                 | From Unique Key File     Sample key file:      Reuse the failed keys  |
|                 | From serial number Byte Order Byte Grder Big Endian(MS Byte first) Little Endian(LS Bytes first) Enable roll serial number function                 |
|                 | From serial number for multi-address Byte Order Big Endian(MS Byte first) Little Endian(LS Bytes first)      step:0x                                |
|                 | Multi-Address OK Cancel   |

- **A. Enable program unique key to different chips:** The Unique key will be activated automatically in the production mode.
- B. Partition Name: Assign the partition of programming.
- C. Start Address: Assign the start address of programming (Hexadecimal).
- **D.** Length: The length of unique key.
- E. Address Mode: Choose 8bit or 16bit for the address.
- F. From unique key File:
  - Sample key file: Read the length of key after load the file.
  - Reuse the failed keys: Reuse the failed key when the unique key programming failed.
- G. From serial number:
  - Byte Order: Select the key number order is by Big Endian or Little Endian.
  - Step: The serial number cumulative value. Default is 1, ex: 0000, 0001, 0002, etc.
  - Enable roll serial number function: If the numbers over the setting range, reuse from the first number again.
- H. From serial number for muti-address:
  - Byte Order: Select the key number order is by Big Endian or Little Endian.



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- Step: The serial number cumulative value. Default is 1, ex: 0000, 0001, 0002, etc.
- Multi-Address: Able to choose multiple starting address.
- Enable roll serial number function: If the numbers over the setting range, reuse from the first number again.
- I. From Others: This is a customized option, please contact DediProg if needed.

**※** For more Unique key instructions ,please download the Unique key user manual from DediProg website.

#### 6.4.4 Other functions of Config 6.4.4.1 Enable Force Erase only for NAND Flash

| Option Setting                |   |                |                |                            |        |
|-------------------------------|---|----------------|----------------|----------------------------|--------|
| Default Che                   | ck(Please contact DediProg)                           |                |                |                            |        |
| StartMode                     | Start from Handler                                    | ~              |                |                            |        |
| Main Clock                    | 25.0 MHz 🗸 🗸  |                |                |                            |        |
| Enable Force<br>block marking | e Erase.(caution: except the or<br>ng will be erased) | ginal manufact | ture OTP bad b | lock marking, all other al | ll bad |

In order to fix the bad block issue of NAND Flash. If Batch setting includes Erase Blank, Program and Verify then the software will show the check box asking for force erase.

- A. Disable Force Erase: Read ID→ Software produce BBT (Bad Block Table) →Erase and Blank will do "SKIP" by BBT →Program and Verify will process based on BBM setting. (Default value is "SKIP")
- B. Enable Force Erase: Read ID→ Erase all (include Bad Block) → Software produce BBT (Bad Block Table) → Blank will do "SKIP" by BBT→ Program and verify will process based on BBM setting. (Default value is "SKIP")



#### 6.4.4.2 Option Setting

**A.** Config will offer optional settings base on different IC types. In this case, it is showing the option setting for MCU (STM32F030CT6).

| Write Option Bytes         |                        |        |               |                 |           |          |
|----------------------------|------------------------|--------|---------------|-----------------|-----------|----------|
| User and read protection   | option bytes:          |        | Write protect | ion option byte | es:       |          |
| BOOT_SEL (Bit 23):         |                        |        | Sector 0      | Sector 1        | Sector 2  | Sector 3 |
| 1: BOOT0 defined by        | nBOOT0 bit             | $\sim$ | Sector 4      | Sector 5        | Sector 6  | Sector 7 |
| RAM_PARITY_CHECK (         | Bit 22):               |        | Sector 8      | Sector 9        | Sector 10 | Sector ' |
| 1: disable                 |                        | ~      | Sector 12     | Sector 13       | Sector 14 | Sector ' |
| VDDA MONITOR (Bit          | 21):                   |        | Sector 16     | Sector 17       | Sector 18 | Sector ' |
| 1: enable                  | - /                    | ~      | Sector 20     | Sector 21       | Sector 22 | Sector   |
| nBOOT1 available who       |                        |        | Sector 24     | Sector 25       | Sector 26 | Sector 2 |
| 1. Customer available with | 511150010=0 (bit 20).  |        | Sector 28     | Sector 29       | Sector 30 | Sector 3 |
| 1: System memory           |                        | ~      | Sector 32     | Sector 33       | Sector 34 | Sector 3 |
| nBOOT available when       | h BOOT_SEL=0 (Bit 19): |        | Sector 36     | Sector 37       | Sector 38 | Sector : |
| 1: Main Flash memory       | /                      | $\sim$ | Sector 40     | Sector 41       | Sector 42 | Sector 4 |
| nRST_STDBY (Bit 18):       |                        |        | Sector 44     | Sector 45       | Sector 40 | Center 4 |
| 1: No reset generated      | 1                      | ~      | Sector 48     | Cector 52       | Sector 50 | Sector : |
| nRST_STOP (Bit 17):        |                        |        | Sector 56     | Sector 57       | Sector 58 | Sector 5 |
| 1: No reset generated      | 1                      | ~      | Sector 60     | Sector 61       | Sector 62 | Sector 6 |
| WDG_SW (Bit 16):           |                        |        |               |                 | New       |          |
| 1: Software watchdog       | 1                      | ~      |               | ~               | - None    |          |
| RDP(Read protection        | byte) (Bit 0~15):      |        |               |                 |           |          |
| 0xAA: Level 0 (ST pro      | duction configuration) | $\sim$ |               |                 |           |          |
| User data option by        | es (00~FF):            |        |               |                 |           |          |
| Data0: 0x FF               | Data1: 0x FF           |        |               |                 |           |          |

**B.** For eMMC type of IC, set up ExtCSD in the Config Option, for example, the below is THGAMRT0T43BAIR from TOSHIBA.

| extCSE  | 7 File                   |       |                     |           |                    |             |
|---------|--------------------------|-------|---------------------|-----------|--------------------|-------------|
| General | Advance                  |       |                     |           |                    |             |
| BYTES   | Name                     | Туре  | Chip Value<br>(Hex) |           | Buffer Value (Hex) | Check S     |
| [175]   | ERASE_GROUP_DEF          | R/W/  |                     |           | 00                 | Unchec      |
| [139:1  | ENH_START_ADDR           | R/W   |                     |           | 0000000            | <br>Check A |
| [142:1  | ENH_SIZE_MULT            | R/W   |                     |           | 000000             | <br>Unchec  |
| [145:1  | GP_SIZE_MULT_1           | R/W   |                     |           | 000000             | <br>onenee  |
| [148:1  | GP_SIZE_MULT_2           | R/W   |                     |           | 000000             |             |
| [151:1  | GP_SIZE_MULT_3           | R/W   |                     |           | 000000             | Read        |
| [154:1  | GP_SIZE_MULT_4           | R/W   |                     |           | 000000             | Clone.      |
| [53:52] | EXT_PARTITIONS_ATTRIBUTE | R/W   |                     |           | 0000               |             |
| [156]   | PARTITIONS_ATTRIBUTE     | R/W   |                     |           | 00                 |             |
| [160]   | PARTITIONING_SUPPORT     | R     |                     |           | 00                 |             |
| [155]   | PARTITION_SETTING_COMPL  | R/W   |                     |           | 00                 |             |
| [17]    | PRODUCT_STATE_AWARENES   | R/W/E |                     |           | 00                 |             |
| [25:22] | PRE_LOADING_DATA_SIZE    | R/W/  |                     |           | 0000000            |             |
| [133]   | PRODUCTION_STATE_AWARE   | R/W/E |                     |           | 00                 |             |
| [183]   | BUS WIDTH                | W/F P |                     | $\square$ | 00                 |             |



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| n Config RPMB          | ×         |
|------------------------|-----------|
| Batch RPMB Key Setting |           |
| Set RPMB Key           |           |
| RPMB Key Content (HEX) |           |
| Load K Save K          |           |
|                        |           |
|                        |           |
|                        |           |
|                        |           |
|                        | OK Cancel |

#### **6.5 Programming function**

In the Engineer Mode, no matter how many socket adaptors on the programmer, it only can set one programmer in the same time. Please make sure the programming site is specified for use. (e.g. site#2).

| ingineering Mode  |  |             |                  |               |                | Mode |
|---|--|-------------|------------------|---------------|----------------|------|
| 😴 📩 ≽   | 🗹 🔇  | ➡ 📊<br>PROJ |                  | a.            | EV -           |      |
| Select Load Prj Load  | Buffer Config  | Save Prj    | IC Info          | DownPrj       | SelectPrj      | RunH |
| 🛃 🕹 🛃   | •FF 🕌  | <u> </u>    | R                |               |                |      |
| eadID ReadIC Blank  | Erase Program  | Verify      | Auto Batch       |               |                |      |
| ProgMasterU4<br>tMode: By Project<br>: PMU001148 Pass: 0<br>Fail: 0   | N/A Fait 0   |             | ite #3           | A Fail        | te #4          | 1    |
| tMode:         By Project         Pass:         0           :         PMU001148         Pass:         0           'Ver:         2.2.66         N         0.0% | Pass:         0           Fail:         0           N         0.0% |             | ass: 0<br>ail: 0 | A Pas<br>Fail | ss: 0<br>: 0 1 | A    |

#### 6.5.1 Function for single Socket Adaptor

- **Read ID:** If IC has ID can be read and shows in Log windows and the ID can shows in ChipInfo. Α.
- Read IC: Read the IC data and compare with the file data. Β.
- C. Blank Check: Check if the target chip is blank or not.
- Erase: Erase whole IC or specific area If IC has several partitions. D.
- Ε. Program: Write the selected file data into the chip.
- Verify: Content verification between chips and loaded file. F.
- G. Auto Batch: Run the programming settings of batch in Config.



#### 6.5.2 Function Activation Timing

| Action<br>Function | Not select IC | Selected IC  | Selected IC<br>And load project | Selected IC, load<br>project, setting<br>Config/Batch |
|--------------------|---------------|--------------|---------------------------------|---|
| Read ID            | ×             | ✓            | $\checkmark$                    | ~   |
| Read Memory        | ×             | ✓            | $\checkmark$                    | $\checkmark$  |
| Erase Whole Chip   | ×             | $\checkmark$ | ~                               | $\checkmark$  |
| Blank Check        | ×             | $\checkmark$ | ~                               | $\checkmark$  |
| Program Chip       | ×             |              | ~                               | $\checkmark$  |
| Checksum Verify    | ×             |              | ✓                               | $\checkmark$  |
| Auto Batch         | x             |              |                                 | $\checkmark$  |

When running the project programming, the single socket function will be disabled.

# 6.5.3 Read IC

Windows is shown below. It's the example for eMMC programming.

|   |       |        |       |        | 1     | Buffe  | r     |          |          |    |    |     |          |       |      |    |     |   |        |        |        |        |        | Chip  |        |       |       |        |       |       |       |    |    |      | L |  |
|---|-------|--------|-------|--------|-------|--------|-------|----------|----------|----|----|-----|----------|-------|------|----|-----|---|--------|--------|--------|--------|--------|-------|--------|-------|-------|--------|-------|-------|-------|----|----|------|---|--|
| Idress                                  | +     | 0 +    | 1 +   | 2 +    | 3 .   | +4     | +5    | +6       | +7       | +8 | +9 | +A  | +B       | +C    | +D   | +E | +   |   | +0     | +1     | +2     | +3     | +4     | +5    | +6     | +7    | +8    | +9     | +A    | +B    | +C    | +D | +E | +F   | Ĥ |  |
| 000000000000000000000000000000000000000 | 0 0   | 0 0    | 2     | 9 8    | E     | 73     | 0C    | 5A       | 82       | E6 | 18 | CF  | 96       | 95    | 14   | BC | 9/  |   | 00     | 00     | 29     | 8E     | 73     | 0C    | 5A     | 82    | E6    | 18     | CF    | 96    | 95    | 14 | BC | 9A   |   |  |
| 000000000000000000000000000000000000000 | 0 0   | C 3    | 1 E   | 5 B    | FI    | BF     | 3D    | 96       | B3       | 2A | 29 | 03  | A7       | 59    | 25   | 70 | A   | 1 | CC     | 31     | E5     | BF     | BF     | 3D    | 96     | B3    | 2A    | 29     | 03    | A7    | 59    | 25 | 70 | AB   |   |  |
| 000000000000000000000000000000000000000 | 9     | 8 6    | B B   | 1 E    | DI    | EB     | 6F    | C2       | E1       | 7E | 7B | 57  | F5       | 0D    | 77   | 24 | FS  |   | 98     | 63     | B1     | ED     | EB     | 6F    | C2     | E1    | 7E    | 7B     | 57    | F5    | 0D    | 77 | 24 | F9   |   |  |
| 000000000000000000000000000000000000000 | 0 5   | 4 5    | 2 7   | DD     | DC I  | 27     | 5E    | OE       | D0       | B2 | 4A | 9B  | C4       | C1    | 46   | E8 | C   |   | 54     | 52     | 7D     | DC     | 27     | 5E    | OE     | D0    | B2    | 4A     | 9B    | C4    | C1    | 46 | E8 | C8   |   |  |
| 0000000000000040                        | 0 3   | 0 C    | 7 1   | 9 4    | 9 .   | 43     | CB    | 6A       | 45       | D6 | DF | FF  | 51       | A5    | D3   | 80 | 50  |   | 30     | C7     | 19     | 49     | 43     | CB    | 6A     | 45    | D6    | DF     | FF    | 51    | A5    | D3 | 80 | 5D   |   |  |
| 00000000000000050                       | 0 F   | C F6   | 5 D   | 5 7    | 8     | 8F     | FA    | A6       | 74       | 1A | EE | 33  | 60       | 69    | E2   | 40 | 60  |   | FC     | F6     | D5     | 78     | 8F     | FA    | A6     | 74    | 1A    | EE     | 33    | 60    | 69    | E2 | 40 | 6C   |   |  |
| 000000000000000000000000000000000000000 | D A   | 8 A    | 4 8   | 1 2    | A     | DB     | A8    | F2       | 26       | 4E | BC | 67  | 32       | 3D    | BO   | 14 | 38  | 1 | A8     | A4     | 81     | 2A     | DB     | A8    | F2     | 26    | 4E    | BC     | 67    | 32    | 3D    | BO | 14 | 3E   |   |  |
| 000000000000000000070                   | 0 6   | 4 9    | 5 4   | D 1    | B     | 17     | 99    | 3E       | 17       | 82 | 8D | AB  | 03       | F1    | 81   | DB | OF  |   | 64     | 95     | 4D     | 1B     | 17     | 99    | 3E     | 17    | 82    | 8D     | AB    | 03    | F1    | 81 | D8 | OF   |   |  |
| 000000000000000000000000000000000000000 | 0 4   | 1 9    | E 6   | 8 1    | 0     | 32     | 92    | 18       | 10       | A7 | 86 | 8E  | 08       | D4    | 8A   | FD | 04  |   | 41     | 9E     | 68     | 10     | 32     | 92    | 18     | 10    | A7    | 86     | 8E    | 08    | D4    | 8A | FD | 04   |   |  |
| 000000000000000000000000000000000000000 | 8 0   | DA     | FA    | 4 2    | 1 1   | FE     | A3    | D7       | 2D       | 68 | 87 | 42  | 39       | 18    | BB   | 31 | 35  |   | 8D     | AF     | A4     | 21     | FE     | A3    | D7     | 20    | 68    | 87     | 42    | 39    | 18    | BB | 31 | 35   |   |  |
| 000000000000000000000000000000000000000 |       | 9 FL   | J H   |        | 3 /   | AA     | F1    | 83       | /F       | 31 | E5 | 10  | 68       | 40    | E9   | 65 | 6   |   | 09     | FD     | FO     | 13     | AA     | F1    | 83     | /F    | 31    | ED     | 16    | 68    | 40    | E9 | 65 | 6/   |   |  |
| 000000000000000000000000000000000000000 | 0 7   |        |       | 0 0    | 2 1   | 00     | 55    | 4F<br>2P | 4E       | 07 | 44 | DA  | CE       | 50    | 40   | AS | 50  |   | 74     | EO     | 50     | 42     | 00     | 66    | 46     | 46    | 07    | 41     | DA    | CE    | 50    | 40 | Ag | 50   |   |  |
|   |       |        | 9 0   | 4 5    | 6     | 02     | 55    | 20       | DD<br>EA | 50 | 70 | 72  | CF<br>CF | 20    | 40   | 01 | E 1 |   |        | 59     | 04     | 56     | CE     | 55    | 20     | EA    | 50    | 70     | 72    | CF    | 20    | 40 | 01 | 52   |   |  |
| 000000000000000000000000000000000000000 |       | 0 3    |       | + E    | 4 4   |        | 36    | 83       | RR       | OF | 22 | 26  | AC       | 70    | 2E   | 55 | A(  |   | FQ     | 34     | 0      | R4     | QA     | 36    | 83     | RR    | OF    | 22     | 26    | AC    | 70    | 2E | 55 | 40   |   |  |
| 000000000000000000000000000000000000000 | 2 2   | 5 0    | 8 0   | C 8    | 5     | 56     | 07    | 7F       | 89       | C3 | 13 | FA  | 90       | BO    | 15   | 99 | 91  |   | 25     | OB     | 00     | 85     | 56     | 07    | 7F     | 89    | C3    | 13     | FA    | 90    | BO    | 15 | 99 | 91   |   |  |
| 000000000000000000000000000000000000000 |       | 3 20   | 2 8   | A A    | 2 1   | DO     | 20    | F9       | AE       | 45 | 34 | 60  | BA       | 36    | 38   | 1F | Bé  |   | A3     | 2C     | 8A     | A2     | DO     | 20    | F9     | AE    | 45    | 34     | 60    | BA    | 36    | 38 | 1F | B6   |   |  |
| 00000000000000110                       | 6     | F 1    | D 4   | 6 9    | 3     | 1C     | 11    | 35       | 9F       | 89 | 05 | A0  | 88       | FA    | 09   | DB | 87  |   | 6F     | 1D     | 46     | 93     | 10     | 11    | 35     | 9F    | 89    | 05     | AO    | 8B    | FA    | 09 | D3 | 87   |   |  |
|   |       |        |       | -      |       | 12     |       | -        | -        | -  | -  |     | -        |       | - 22 |    |     |   |        | 17     | 12     |        |        | - 12  | -      | -     | 00    | 57     | -     | - 05  | -     | 50 | 07 | - 00 |   |  |
| uffer Checksum Ox                       | 0000  | 000    |       |        |       |        |       |          |          |    | 08 | bit | 016      | 5 bit |      |    |     | 1 | IC     | Che    | ckeun  |        | 0x0    | 00000 | 000    |       |       |        |       |       |       |    |    |      |   |  |
| Cata                                    | 000   | 00000  |       |        |       |        |       |          |          |    |    |     |          |       |      |    |     |   |        |        |        |        |        |       |        |       |       |        |       |       |       |    |    |      |   |  |
| GOLO                                    |       |        | _     |        |       |        |       |          |          |    |    |     |          |       |      | F  |     |   | ave in | e      |        |        |        |       |        |       | 2.00  |        |       |       |       |    |    |      |   |  |
| ive file                                |       |        |       |        |       |        |       |          |          |    |    |     |          |       |      |    |     | L | Save   | Mem    | iory F | orm    | UX     | 0000  | 0000   |       | Len   | 3th:0  | хш    | 02000 | 0000  | _  |    |      |   |  |
| Next Different                          |       |        |       |        |       |        |       |          |          |    |    |     |          |       |      |    |     |   | Not    | tinclu | ude s  | pare i | area ( | Note: | The la | ength | doesr | 't ind | ude s | pare  | area) |    |    |      |   |  |
| not nouse spare are                     | a (No | te: Th | e len | gth de | oesni | 't ind | ude s | pare     | area)    |    |    |     |          |       |      |    |     |   |        |        |        |        |        |       |        |       |       |        |       |       |       |    |    |      |   |  |
|   |       |        |       |        |       |        |       |          |          |    |    |     |          |       |      |    |     |   |        |        |        |        |        |       |        |       |       |        |       |       |       |    |    |      |   |  |
| BYTE swap                               | V     | /ORD   | swap  |        |       | DV     | VORD  | ) swap   | 2        |    |    |     |          |       |      |    |     |   |        |        |        |        |        |       |        |       |       |        |       |       |       |    |    |      |   |  |
|   |       |        |       |        |       |        |       |          |          |    |    |     |          |       |      |    |     |   |        |        |        |        |        |       |        |       |       |        |       |       |       |    |    |      |   |  |

A. Area Select OextCSD OCID OCSD

If the selected IC has parts of memory, the user can switch the memory area after Read memory. The area function is eMMC in this case.

#### B. File Window (Buffer)

Files contents will be displayed in this area.

#### C. Chip Window

Chip contents will be displayed in this area. The data will automatically compare with file data and show the differences in red color.



#### D. Buffer Checksum and Chip Checksum

Provide the Buffer Checksum and Chip Checksum functions for the assigned Partition, which makes verify easier.

| -  | Cata | Goto | 0x | 00000000 |
|----|------|------|----|----------|
| E. | GOTO |      |    | 1-1-1-   |

User can assign DediWare go to the address that user wants to examine by entering line number into the column.

#### F. Save

Save the chip data for each partition.

#### G. Next Different

DediWare will indicate the differences between the loaded file and edited file.



Data will be saved in the buffer after loading file. Check the data is correct address here.

| Address                | +0    | +1   | +2 | +3  | +4     | +5 | +6    | +7  | +8 | +9 | +A  | +B  | +C    | +D | +E | +F |  |
|------------------------|-------|------|----|-----|--------|----|-------|-----|----|----|-----|-----|-------|----|----|----|--|
| 0x00000000000001E0     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x00000000000001F0     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x0000000000000200     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x0000000000000210     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x0000000000000220     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x000000000000230      | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x000000000000240      | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x0000000000000250     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x0000000000000260     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x0000000000000270     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x0000000000000280     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x0000000000000290     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x00000000000002A0     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x00000000000002B0     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x00000000000002C0     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x00000000000002D0     | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x0000000000002E0      | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x0000000000002F0      | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
| 0x00000000000000300    | FF    | FF   | FF | FF  | FF     | FF | FF    | FF  | FF | FF | FF  | FF  | FF    | FF | FF | FF |  |
|                        |       |      |    |     |        |    |       |     |    |    |     |     |       |    |    |    |  |
| Buffer Checksum 0x00   | 0000  | 00   |    |     |        |    |       |     |    | 08 | bit | 016 | 5 bit |    |    |    |  |
| e.t.                   | 00000 | 000  |    |     |        |    |       |     |    |    |     |     |       |    |    |    |  |
| GOLD UX                | 00000 |      | _  |     |        |    |       |     |    |    |     |     |       |    |    |    |  |
| Save file              |       |      |    |     |        |    |       |     |    |    |     |     |       |    |    |    |  |
| Save File Data From 0x | 000   | 0000 | 0  | Ler | ngth:( | Dx | 08400 | 000 |    |    |     |     |       |    |    |    |  |
| 0                      | A     | -    |    |     |        |    |       |     |    |    |     |     |       |    |    |    |  |





After Load File, Config settings and verification, DediWare is ready to save the project for production usage. Click **SavePrj** and the window shows below, click OK to save the file.

| coston:       DESKTOP\       Size       Date Modified         PC       Work       2022/03/02.10:28 /         Work       2022/03/03.01:46 /         Work       2022/03/03.01:46 /         Weakbop       Image: Size       2022/03/03.01:46 /         Weakbop       FileType:       Project File(".dprj)       OK         Cancel       Project Password&Notepad       >         Project Password&Notepad       >         Project protection settings       OK         Cancel       Password       Cancel         Password confirm:       Password       Password         Password confirm:       Password       Password         Project notepad       SoftWare Info:<br>-volid version:3.17.4<br>-release version:0.202/02-11 09:53:17<br>Project Info:<br>-onfig version:3.00<br>-oonfig version:3.00<br>-oonfig version:3.00<br>-oonfig version:1<br>-PartNum:FS32X148HETOMLQ<br>-Chip version:1<br>-  |   |   |  |                   |   | >              |
|---|---|---|--|-------------------|---|----------------|
| Name       Size       Date Modified         PC       Work       2022/03/02 10:28 / 2022/03/03 01:46 / 2022/03/03/03 01:46 / 2022/03/03/03/03/03/03/03/03/03/03/03/03/03/ | cation:   | DESKTOP\  |  |                   | ~   | Ť              |
| FileName:       HEST       OK         FileType:       Project File(".dprj)       Cancel         Project Password&Notepad       >         Project protection settings       Set Protected mode of software after loading of this project file         Password       Password:         Password confirm:       Password:         Project notepad       Project notepad         SoftWare Info:       Password:         -voinfg version:3.10       -confg version:3.17.4         -release version:DediWare NuProg-E2 Version:3.17.4.1       -confg version:3.00         -confg version:3.00       -confg version:1.3.00         -confg version:1.3.00       -confg version:1.3.00         -confg version:1.3.00       -confg version:1.1.7.4         -release version:1.00       -confg version:1.00         -roype: MCU       -PartNum:FS32X:148HETOMLQ         -Ohksum:0x3203       -Path:desktop.ini         File Info:       -Chksum:0x3203         -Path:desktop.ini       File Info:         -Chksum:       -Chksum:         -Path:desktop.ini       -Path:desktop.ini   | PC<br>sktop   | Name<br>Work<br>twst.dprj   |  | Size<br>13312KB   | Date Modified<br>2022/03/02 10:2<br>2022/03/03 01:4 | 18 AN<br>16 PN |
| FileName:       EST       OK         FileType:       Project File(*.dpr;)       Cancel         Project Password&Notepad       >         Project protection settings       Set Protected mode of software after loading of this project file         Password:   | rammer  |   |  |                   |   |                |
| FileType:       Project File(*.dprj)       Cancel         Project Password&/Notepad       >         Project protection settings   | l   | FileName:   | tEST   |                   | ~ ок  |                |
| Project Password&Notepad >> Project protection settings  Project protected mode of software after loading of this project file Password: Password confirm: Password confirm: Password confirm: Project notepad  Project notepad  Project notepad  SoftWare Info: -build version:3.17.4 -release version:DediWare NuProg-E2 Version:3.17.4.1 -config version:3.00 -config version:3.00 -config version:3.00 -config version:3.00 -config version:1 -Type:MCU PartNum:F332K148HETOMLQ -Chip version:1 -Manufact:NVP File Info: -Chksum: Path:desktop.ini File Info: -Chksum: Path:desktop.ini   |   | FileType:   | Project File(*.dprj)   |                   | <ul> <li>Cance</li> </ul>                           |                |
|   | Passwe  | ord confirm:  |  |                   |   |                |
| Password:<br>Password confirm:<br>Project notepad<br>Project notepad<br>SoftWare Info:<br>-build version: 3.17.4<br>-release version:DediWare NuProg-E2 Version: 3.17.4.1<br>-config version: 3.00<br>-config version: 3.00<br>-config version: 1.00<br>-config version: 1.00<br>-7ype:MCU<br>-PartNum:FS32K148HET0MLQ<br>-Chip version: 1.<br>-Manufact:NXP<br>File Info:<br>-Chksum:<br>-Path:desktop.ini<br>File Info:<br>-Chksum:<br>-Path:desktop.ini  | Enc   | rypt project f  | ile(with password)   |                   |   |                |
| Password confirm:<br>Project notepad SoftWare Info:<br>-build version:3.17.4<br>-release version:DediWare NuProg-E2 Version:3.17.4.1<br>-config version:3.00<br>-config create time:2022-02-11 09:53:17<br>Project Info:<br>-Type:MCU<br>-PartNum:FS32K148HET0MLQ<br>-Chip version:1<br>-Manufact:NXP<br>File Info:<br>-Chksum:X3203<br>-Path:desktop.ini<br>File Info:<br>-Chksum:<br>-Path:desktop.ini  |   | Password:   |  |                   |   |                |
| Project notepad SoftWare Info: -build version:3.17.4 -release version:DediWare NuProg-E2 Version:3.17.4.1 -config create time:2022-02-11 09:53:17 Project Info: -Type:MCU -PartNum:FS32K148HET0MLQ -Chip version:1 -Manufact:NXP File Info: -Chksum: -Path:desktop.ini File Info: -Chksum: -Path:desktop.ini  | Passw   | ord confirm:  |  |                   |   |                |
| SoftWare Info:<br>-build version:3.17.4<br>-release version:DediWare NuProg-E2 Version:3.17.4.1<br>-config version:3.00<br>-config create time:2022-02-11 09:53:17<br>Project Info:<br>-Type:MCU<br>-PartNum:FS32K148HET0MLQ<br>-Chip version:1<br>-Manufact:NXP<br>File Info:<br>-Chksum:0x3203<br>-Path:desktop.ini<br>File Info:<br>-Chksum:<br>-Path:desktop.ini  | Project   | notepad   |  |                   |   |                |
|   | SoftW<br>-build<br>-relea<br>-confi<br>-confi<br>Projec | /are Info:<br>version: 3. 17.<br>se version: De<br>g version: 3. 00<br>g create time:<br>ct Info:<br>:MCU | 4<br>diWare NuProg-E2 Ver:<br>0<br>2022-02-11 09:53:17<br>SHETOMLQ | sion: 3. 17. 4. 1 |   |                |



#### 6.7.1 Set up password for the project file.

#### A. Set protected mode of software after loading of this project file:

The encrypted project file can only be modified after entering the password in Advance-> Normal mode

| Lan | guage        | > |    |
|-----|--------------|---|----|
| Log | in           |   | 5  |
| Gen | eral options |   | T. |
| Soc | ket          |   | D. |
| Nor | mal mode     |   | -  |
| Add | lOn          | > | an |

#### B. Encrypt project file (with password):

Please enter the password for the encrypted project file in order to view the content.



# **VII.** Production Mode

After setting up the related settings in engineering mode, it can be created as a project file for production. The Production functions are as below:



Α. SelectPrj: Select the project in the SD Card.

- RunPrj: Run the project. Β.
- StopPrj: Stop the project. С.

General Steps: Load project > Select Project > Run Project > Stop Project

### 7.1 SelectPrj: Download and select project. SelectPrj

\*Ensure SD card is inserted to the SD card slot before downloading the project file. Strongly recommends use the Industrial SD card with high reliability and Stability from DediProg.

|                                   | Con State |                                   | •          |                                    |
|-----------------------------------|-----------|-----------------------------------|------------|------------------------------------|
| Select the file from the computer | PC        | or the SD card in the programmer  | PROGRAMMER | , and click OK. The project on the |
| computer can be loaded to the SD  | carc      | l in the programmer. Please ensur | e the SD   | card is inserted in the programmer |
| correctly before executing.       |           |                                   |            |                                    |

\*\*\*\*

| Select Project |           |                      |         | ×                          |
|----------------|-----------|----------------------|---------|----------------------------|
| Location:      | DESKTOP\  |                      |         | ✓ ↑                        |
|                | Name      |                      | Size    | Date Modified              |
| PC             | Work      |                      |         | 2022/03/02 10:28 AM        |
|                | tEST.dprj |                      | 13312KB | 2022/03/03 04:13 PM        |
| <b>N</b>       | twst.dprj |                      | 13312KB | 2022/03/03 01:46 PM        |
| Desktop        |           |                      |         |                            |
|                |           |                      |         |                            |
| Programmer     |           |                      |         |                            |
|                |           |                      |         |                            |
|                |           |                      |         |                            |
|                |           |                      |         |                            |
|                | FileName: |                      |         | ~ Ок                       |
|                | FileType: | Project File(*.dprj) |         | <ul> <li>Cancel</li> </ul> |



After selecting the file, the window will show IC information, batch setting, Start Mode, File Checksum, ProjectName and ProjectCheckSum.

| dvance He  | Version:3.1  | 6.6.3                                |   |  |                  |  |                              |   |  |  | - 🗆  |
|--|--|--------------------------------------|---|--|------------------|--|------------------------------|---|--|--|--|
|  | P Mode   |                                      |   |  |                  |  |                              | Production  | Mada   |  |  |
| Select   | PROJ<br>Load Prj                                     | <b>E</b> Load                        | <br>Buffer                                      | Config                                 | PROJ<br>Save Prj | IC Info                                      | DownPrj                      | SelectPrj   | RunPrj   | )<br>StopPrj   | Powered by   |
| or and the sead ID sead ID sead ID sead ID sead sead sead sead sead sead sead sead | <b>L</b><br>ReadIC                                   | Sin -                                | Erase   | Program •                              | Verify -         | Auto Batch                                   |                              |   |  |  |  |
| 01 ProgM<br>tartMode: E<br>/N: F<br>/W Ver: 2<br>BLink St                          | asterU4<br>by Project<br>MU001146<br>2.2.66<br>art 😧 | Site #1<br>Pass: 0<br>Fail: 0        | N/A   | Site #2<br>Pass: 0<br>fail: 0<br>N 00% | WA               | Site #3<br>Pass: 0<br>Fail: 0 4              | V/A<br>N                     | te #4<br>ss: 0<br>1: 0 N/A<br>00%   | Log W<br>File<br>File<br>G 1<br>0 | ndow Format=Binary( Format=Binary( Format=Binary( CheckSumMeth CheckSumMeth CheckSumMeth CheckSumMeth CheckSumMeth Citl:29:FileNan 1:11:29:FileNan 1:11:29:FileNan 1:11:40:Select C 1:11:40:Select C 1:11:40:Set ope 1:11:40:S | (*.bin)<br>tod=ByteAcc<br>thod=ByteAcc<br>user\Desktop\bin file\1Mbit.bin<br>ne:1Mbit.bin,CheckSum:0x00FE05A8<br>teckSum:0xFE0302A8<br>le success: 0.65 Sec.<br>Clock Adj.:25.0 MHz<br>Read IO Mode:Single<br>et success: 0.65 Sec.<br>clock Adj.:25.0 MHz<br>Read IO Mode:Single<br>et success.<br>tration:Erase chip,Blank check,Program<br>rtMode:Start from Handler<br>Bytes CheckSum:0xFFFF |
| ChipInfo<br>Type: SP   | L_NOR<br>nbond<br>01000340                           | ID:<br>ADP P/N<br>ADP P/N<br>ADP P/N | ef 70 18<br>1: SPI-127-S0<br>2: QSPI-SOP0<br>3: | DP008-207mil-0:<br>008207mil-001E      | IFE              | Production<br>Success:<br>Failure:<br>Total: | on Statistics<br>0<br>0<br>0 | Batch Confi<br>StartMode: Star<br>Erase chip<br>Blank check<br>Program chip | a Settina<br>t from Handler  | Check Su<br>Chip<br>0xFE0302<br>Option<br>0xFFFF   | File CheckSum File Name<br>0x00FE05A8 1Mbit.bin  |
| Size: 0x0<br>Package: SO<br>PartNum: W   | P8 208mil  | /XXIM                                |   |  |                  |  |                              | Checksum verify   | /  |  |  |

Click "Blink" to check the programmer order is correct.

#### Note:

If the project file that you are going to use is already in the SD card, then you don't need to select it from the PC again, simply need choose it from the SD card. Because, if you choose it from the PC, it will transfer through the USB, which will waste a lot of time, especially for large volume IC.

BLink

Start



### 7.2 Run Project RunPrj

DediWare will detect each programming site status after clicking "Run Prj". If there is no socket adaptor on the site, the log window will show in yellow color. When programmer is ready for production, DediWare will program as user setting before.



#### A. Start from Manual Mode:

Production mode will be activated by click "Start" on GUI or press the start button on programmer.

| #01 ProgMasterU8<br>StartMode: Handler<br>F/W Ver: 2.1.3<br>S/N: PMO21336<br>BLink Start | Site #1<br>Pass: 0<br>Fail: 0          | Site #2<br>Pass: 0<br>Fail: 0<br>N 00%   | Site #3<br>Pass: 0<br>Fail: 0<br>N 00% | Site #4<br>Pass: 0<br>Fail: 0<br>N 00%  |
|--|--|--|--|---|
|  | Site #5<br>Pass: 0<br>Fail: 0<br>N 00% | Site #6         Pass:         0         IDLE           Fail:         0         IDLE         N         00%         IDLE         N         00%         IDLE         N         N         00%         IDLE         N | Site #7<br>Pass: 0<br>Fail: 0<br>N 00% | Site #8         IDLE           Pass:         0           Fail:         0           N         0.0% |

#### B. Start from Auto Detection:

DediWare will detect inserted chip and start to program automatically after running the RunPrj. (This function does not support eMMC and NAND Flash)

C. Start from Handler: This function is suitable for DediProg automatic system.



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Image of Start from manual mode for production

| <ul> <li>Engineer</li> </ul> | ing Mode            |           |             |               |                  |            |            | O Production    | Mode          |            |            |               |           |              |   |
|------------------------------|---------------------|-----------|-------------|---------------|------------------|------------|------------|-----------------|---------------|------------|------------|---------------|-----------|--------------|---|
| Select                       | PROJ<br>Lord Prj    | Load      | Baffer      | (Q)<br>Config | PROJ<br>Save Prj | IC Info    | DownPrj    | E/<br>SelectPrj | )<br>RunPrj   | StopPrj    |            |               |           |              | Powered   |
| ReadID                       | Eed N               | Sin .     | Ense        | Program -     | Senty -          | Auto Batch |            |                 |               |            |            |               |           |              |   |
|                              |                     |           |             |               | 4                |            |            | 4               |               |            | 4          |               |           | Log Window   |   |
| tartMode                     | By Project          | Site #1   |             |               | Site #           | 2          |            | Site #3         |               |            | Site #4    |               |           | 09:17:53     | :Programmer[04] Start Program   |
| /N:<br>/W Ver:               | PMU003058<br>2.2.66 | Fail: 0   | -           |               | Fail:            | 0          |            | Fail: 0         |               |            | Fail: 0    |               |           | (1) 09:17:53 | Programmer[04],chip[1] Wait Start success   |
|                              |                     |           | -           | PASS          |                  | 4          | N/A        |                 |               | N/A        |            | < N/          | A         | 09:17:53     | Programmer[04],chip[1] Contact  |
| BLink                        | Start :             |           |             |               |                  |            |            |                 |               |            |            |               |           | 09:17:55     | Programmer[04],chip[1] Contact success  |
|                              |                     | V         |             |               |                  | 0.0%       |            | 1               | 6.05          |            | . 0.05     |               |           | Brogramme    | (04) chip(01)Crap Rad Blook   |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | Programme    | r[04], chip[01]Bad Block Index: 159, 256, 512   |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | Programme    | r[04], chip[01]Total Block: 1024  |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | Programme    | r[04], chip[01]Total Bad Block: 3   |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | () 09:17:55  | Programmer[04],chip[1] Flash Post Init success  |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | 09:17:55     | Programmer[04],chip[1] Flash Erase  |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | (1) 09:17:57 | Programmer[04],chip[1] Flash Erase success  |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | (1) 09:17:57 | :Programmer[04],chip[1] Flash Blank   |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | 09:19:07     | :Programmer[04],chip[1] is blank  |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | (1) 09:19:07 | :Programmer[04],chip[1] Flash Program   |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | (1) 09:19:07 | Programmer[04],chip[1] Flash Program success  |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | 09:19:07     | :Programmer[04],chip[1] Flash Verify  |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | ♦ 09:19:07   | :Programmer[04],chip[1] Hash Verity success<br>:Programmer[04],chip[1] batch success,takes 73.341 |
|                              |                     |           |             |               |                  |            |            |                 |               |            |            |               |           | Save Log     | Clear Log   |
| hipInfo                      |                     |           |             |               |                  | Production | Statistics | Batch Cont      | ia Settina    |            | Check Sum  |               |           |              |   |
|                              | PI_NAND             | ID:       | bc c1       |               |                  | Success:   | 1          | StartMode:      | Start from Ma | anual Mode | Chip *     | File Ched/Sum | File Size | IC Partition | File Name   |
| ype:                         |                     | ADP P/N1: | QNAND-WSOF  | 4008060080-0  | 01D              |            | 22.0       | Frase chin      |               |            | 0x00000000 | 0-00005-000   | 0x21000   | Elarb/       | 20220214年起 +++  |
| ype:<br>lanufact:<br>ize:    | 1W1M                | ADP P/N2: | NAND-127-WS | ON008-06008   | 0-001D           | Falure:    | 0          | Clock dap       |               |            | Outer      | 0X000002400   | 044.1000  | 1 made by    | AVALUE I THE BUILT  |

### 7.3 Stop Prj StopPrj

Click "Stop Prj" to stop project programming. The programing result will show in Log window as below.

| Socket #7 Pass: 0 Fail: 0                                      |         |
|--|---------|
| * Socket #8 Pass: 0 Fail: 0                                    |         |
| <sup>r</sup> Device #1 Type:ProgMasterU8 SN:PMU25336 FW versio | n:2.1.3 |
| * Socket #1 Pass: 2 Fail: 0                                    |         |
| Socket #2 Pass: 2 Fail: 0                                      |         |
| Socket #3 Pass: 0 Fail: 0                                      |         |
| Socket #4 Pass: 0 Fail: 0                                      |         |
| Socket #5 Pass: 0 Fail: 0                                      |         |
| Socket #6 Pass: 0 Fail: 0                                      |         |
| Socket #7 Pass: 0 Fail: 0                                      |         |
| Socket #8 Pass: 0 Fail: 0                                      |         |
| ***************************************                        | ******  |
| ☆ 14:06:55:Stop Project success!                               |         |
|  |         |

**※** When it is finished, DediWare will automatically generates a summary report in the Log File, which helps to manage the production easily.



#### 7.4 Use unique key in production

If user need to program unique key when production. Must set and enable the unique key in Config setting before make a project file. The advance setting menu will show up when user selects the project file and run project.

DediWare provides three methods to use the unique key.

#### 7.4.1 Unique key Mode: Use the unique key file.

The information and parameter of Config unique key setting will show here. Only need to select the path of file.

| Config |  | × |
|--------|--|---|
| Batch  | Unique Key & Seriel Nom                      |   |
|        | Enable program unique key to different chips |   |
| Unique | PartitionName: EEPROM ~                      |   |
| Î.     | StartAddress: 0x 4 Length: 0x 0 Sbit 16bit   |   |
|        | • From Unique Key File                       |   |
|        | Sample key file:                             |   |
|        | □ Reuse the failed keys                      |   |
|        |  |   |

Besides, there are three folders will be installed here automatically after select key file.

- A. Failed: Unique key programming failed folder.
- **B.** Uc-log: Save log file when program Unique key.
- C. Used: Unique key programming successful folder.

#### 7.4.2 Serial number mode: The unique keys will be produced by DediWare

The information and parameter of Config unique key setting will show here. Only need to set the format (HEX / DEC / BCD) of serial numbers, start and end number.

| Serial Number M                             | ode   | ×   |
|---|---|---|
| PartitionName:                              | EEPROM  |   |
| StartAddress:                               | 0x7   |   |
| Length:                                     | 0x2   |   |
| Enable roll se<br>ByteOrder<br>Big Endian(1 | rial number function Step: 0x1 AS Byte first) OLittle Endian(LS Byte first) | Range Radix <ul> <li>HEX</li> <li>DEC</li> <li>BCD</li> </ul> |
| Range Begin:                                | 0x0   |   |
| Range End:                                  | 0x0   |   |
|   |   | OK Cancel   |



# VIII. FAQ

#### Q1. What to do if these messages appear when opening DediWare?

1. There are several reasons might cause "Plug in new programmer or the order has changed".



- The orders of programmers may have been changed, restart DediWare.
- Computer does not detect any programmer, check the power of the computer.
- USB disconnected.
- 2. If it appears "Query Device info failed or count is zero", please check the below items.

|          | DediProg   | × |
|----------|--|---|
| <u>^</u> | Query Device info failed or count is zero, please check if the progmaster has plug in. | - |
|          | ОК   |   |

- Check the power of the programmer.
- Computer does not detect any programmer, check the power of computer.
- USB disconnected.
- Check if the USB driver has been installed.
- Programmer firmware does not match DediWare software. Please update the DediWare version.
- 3. If it appears "DediNet\_SetChipInfo failed, err:Alloc memory fail", Please contact DediProg.





4. This means the programmer Firmware only supports older DediWare version. Please upgrade the Firmware and restart the DediWare.

| Log Window   |  |
|--|--|
| 15:32:13:DediWare startup,Build Version:3.3.1                |  |
| 15:32:13:Query Server Info failed:have not log in            |  |
| 15:32:13:Query Config Info failed:have not log in            |  |
| 15:32:13:Current server version: is incorrect.               |  |
| 15:32:13:Please make sure that your server version is 3.3.1. |  |
|  |  |
|  |  |

# Q2. After insert the socket adaptor, the programmer cannot detect the adaptors nor execute any programming function.

The socket adaptor might have crashed, please select <u>Advance > Socket > Socket count</u> to confirm the socket adaptor information. If socket adaptor does not show any following information, that means it is disconnected or the control IC of the socket adaptor has been damaged. Please contact DediProg.

|                 |           | Socke | t Info |       |   |
|-----------------|-----------|-------|--------|-------|---|
| ProgrammerIndex | SiteIndex | Pass  | Failed | Limit |   |
| 1               | 1         | 63    | 13     | 60000 |   |
| 1               | 2         | 107   | 45     | 60000 |   |
| 1               | 3         | 67    | 17     | 60000 |   |
| 1               | 4         | 34    | 28     | 60000 |   |
|                 |           |       |        |       |   |
|                 |           |       |        | C     | ж |

#### Q3. Programmer doesn't detect the socket adaptor on the programming site after running project?

Please refer to Q2 to check the socket information. Maybe socket adaptor is disconnected or control IC is broken.

#### Q4. Do I have to pay extra fee to upgrade my DediWare or programmer firmware?

DediProg offers **FREE** software and firmware update once user bought StarProg, ProgMaster, or NuProgPlus series programmers. User can download the latest software on DediProg website. StarProg-ATE, which has been EOL, only provides online programming functions, please contact DediProg if needed.

#### Q5. How to upgrade my programmer firmware?

New DediWare version (3.x.x) must be used with 2.x.x firmware version.

1. If firmware version is  $\underline{1.x.x}$ , please refer to the following steps for update.

Step 1: Install the new version of DediWare and the firmware (2.x.x) will be in the installation folder. (Default path: C:\Program Files (x86)\Dediprog\Firmware)



- Step 2: Close the new version of the DediWare and open the **<u>old version</u>**.
- Step 3: Go to Menu > Help > Firmware Manual update the firmware to 2.x.x version.
- Step 4: Turn off the programmer for about five seconds and restart it, and open the new DediWare to confirm the firmware version.
- 2. If the firmware version is <u>2.x.x</u> already.

The pop-up message shown below occurs when user opens DediWare after installing the new version of DediWare. Please update firmware with the following steps.



- Step 1: Go to <u>Menu > Help > Firmware Manual Update</u> and select firmware (2.x.x) to update. The new firmware file will be saved to the installation folder.
- Step 2: Turn off the programmer for about five seconds and restart it, and open the new DediWare to confirm the firmware version.

#### Q6. Warning message appears when loading files?

1. It means the selected file size is bigger than partition size. Press OK will truncate the file to fit the partition space. However, DediWare does not check the data importance.



2. When the user loads several files that will overwrite the old files, please make sure the size and memory address of each file will not overlap each other.





#### Q7. "Download Project failed, error:sdcard not plug in" appears when running production mode?

Log Window -



- 1. Please check if the SD card is installed in the SD card slot properly.
- 2. Check if the SD card is broken.
- 3. Please turn off the power before inserting the SD card.

\* Strongly recommends use the Industrial SD card with high reliability and Stability from DediProg.

#### Q8. About contact testing

DediWare supports contact testing when using auto detection or manual mode for project programming. Contact testing can reduce the mistake made by the operator. The operation steps are showed below.

- Step 1: The lights of original programmer status are all off.
- Step 2: Start programming. The orange light turns on.
- Step 3: One of the successful green light or fail red light will turn on after programming. If the user presses the start button by accident, the programmer will not work while the IC is still in the socket.
- Step 4: All lights will turn off after picking up the IC.



Contact testing will start working after executing the "RunPrj".

#### Note:

If user only press the socket down, but not picking up the IC (Step 3), the programmer will determine that IC has been picked. Contact testing only checks the IC and socket connection, but not detecting if the IC has been programmed or not. User can use DediWare to check the IC programming status.



#### Q9. Log shows "Contact Fail" when programming?

- 1. Check IC number and manufacturer is correct.
- 2. Check socket adapter model name is correct.
- 3. Confirm the socket adaptor connection.
- 4. Update the software version.

#### Q10. Log shows "Erase Fail" when erase NAND Flash?

Too many bad blocks may cause this issue. Please go Config>Batch>Erase>Enable Force Erase. Use batch to do all erase and check the log. Nand Flash user manual is available on DediProg Website.

#### Q11. Programming succeeded, but cannot work on the motherboard?

Exclude the cold solder problem on motherboard, you can also check software setting:

- 1. Check programming file, unused byte setting, file format and offset address.
- 2. If IC has multiple partitions, make sure do not miss any partition hat needs programming.
- 3. Check if there are any missing settings for the Option.

#### Q12. About Checksum?

DediWare has four kinds of Checksum, File Checksum, Chip Checksum, Option Checksum, and Project Checksum.

There are twelve types of File Checksum can be selected when setting the "load file".

| ad Hie-IMAGE  |   |             |                      |  |  |  |
|---|---|-------------|----------------------|--|--|--|
| Load File For NAND     This is your image informations. |   |             |                      |  |  |  |
| File1 +<br>FilePath:<br>FileFormat:<br>FileChecksum:    | Binary(*.bin)<br>ByteAcc<br>ByteAcc<br>ByteAcc<br>Crc16<br>Crc15<br>Crc26<br>MDS<br>UseSurceFile<br>WoldArc1E<br>DWoldArc1E<br>DWoldArc1E | FileOffset: | Skp Last Empty Block |  |  |  |
|   | SHA1<br>SHA256  |             |                      |  |  |  |

The red frame as below shows the File Checksum after loading file. The blue frame is Chip Checksum. The green frame is the Option Checksum, and the orange frame is the Project Checksum.

| C | heck Sum                          |               |           |              |               |  |
|---|-----------------------------------|---------------|-----------|--------------|---------------|--|
|   | Chip *                            | File CheckSum | File Size | IC Partition | File Name     |  |
|   | 0x00000000                        | 0x0E91A17E    | 0xD89000  | Flash/       | 20220310.dpri |  |
|   | Option                            |               |           |              |               |  |
|   | 0x0                               |               |           |              |               |  |
| - |                                   |               |           |              |               |  |
|   | ProjectName: ProjectCheckSum:0x00 |               |           |              |               |  |

Chip Checksum is the calculation of total IC memory that can be programmed. If IC has Flash and EEPROM, Chip Checksum will make summary of those contents. Please notice the file size and format for Chip Checksum, Binary data are connected but Hex/S19 are decentralized data. Therefore, setting Unused Byte will affect the summary of Chip Checksum.

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DediProg

# 岱鐠科技股份有限公司 DediProg Technology Co., Ltd.



Setting the Unused Byte when Load File. The default value is "0xFF" if user did not set the Unused Byte.

0XFF

FillUnusedByte:

Other than programming the IC memory, there are special Options available (Ex: Config setting for SPI NOR), and for the correctness of the production, DediWare also provides Option Checksum (Green Frame) for comparison and Project Checksum (Orange Frame) to verify the Project File that was used in the production in order to reduce the risk.

#### Q13. What to do if it shows "Login failed, please try again"?



This could happen when the computer has low efficiency, since Dediware is Server/Client structure, combination of two executable files. When this warning appears, go to the installation directory

- The Server is in the installation directory, DediProg > Server > DediProg\_bg.exe
- The Client is in the installation directory, DediProg > Client > DediProg.exe

#### Q14. How to add the newly supported IC without update the software?

Please contact DediProg for "DediProg Config Update" file. When executing this file, it will update the latest supported IC to the software.





#### Q15. How to use DediWare Selector?

If you want to use different DediWare version, there is a DediWare Selector, shown as below. The file location is C:\Program Files(x86)\DediProg\ DediWare Selector

| DediProg   |  |  |        |  |
|--|--|--|--------|--|
| ⊕ 新増 ~   |  | ⑩ ↑↓ 排序 ֊ 三 檢視 ֊                         |        |  |
|  |  |  |        |  |
| $\leftrightarrow \rightarrow \checkmark \uparrow$  | 📄 > 本機 > Windows (C:) > Progr                | am Files (x86) > DediProg                |        |  |
| ✔ 🔶 快速存取 📗   | 名稱 ^   | 修改日期                                     | 類型     |  |
| ■ 桌面 →   | 🚞 Client                                     | 2022/3/11 上午 11:57                       | 檔案資料夾  |  |
| ↓<br>下載 ◆  | 📁 DediWare Selector                          | 2022/3/11 上午 11:58                       | 檔案資料夾  |  |
| □ 文件 🖌   | Firmware                                     | 2022/3/11 上午 11:31                       | 檔案資料夾  |  |
|  | Server 🔁                                     | 2022/3/11 上午 11:58                       | 檔案資料夾  |  |
| 2207.2112222                                       | 📒 User Manual                                | 2022/3/11 上午 11:31                       | 檔案資料夾  |  |
| Dediware 軟體  | WinUSB_Driver                                | 2022/3/11 上午 11:29                       | 檔案資料夾  |  |
| 📒 DediWare Selector                                |  |  |        |  |
| ⊕ 新増 ~   |  | ↑↓ 排序 ~                                  |        |  |
| $\leftarrow$ $\rightarrow$ $\checkmark$ $\uparrow$ | <mark>]</mark> > 本機 > Windows (C:) > Program | Files (x86) > DediProg > DediWare Select | tor    |  |
| 🛄 桌面   🖈 👖   | 名稱   | 修改日期                                     | 類型     |  |
| 🛓 下載 🔹 🖈   | DediWare Selector CLI                        | 2022/2/11 上午 09:53                       | 應用程式   |  |
| 📑 文件 🛷   | DediWare Selector                            | 2022/2/11 上午 09:53                       | 應用程式   |  |
| 🔀 園片 🔹 🖈   | Selector DLL.dll                             | 2022/2/11 上午 09:53                       | 應用程式擴充 |  |
| - 2207 2442222                                     |  |  |        |  |

Choose Dediware Backup path, and it will show the backup DediWare version. Choose the needed version, click OK and open DediWare.

| 😰 DediWare Selector - 🗆  |                |  |    | ×   |     |
|--|----------------|--|----|-----|-----|
| DediWare backup directory:   |                |  |    |     |     |
| C:\Program Files\DediProg\C  | ediWare_backup |  |    |     |     |
| DediWare project file()  |                |  |    |     |     |
|  |                |  |    |     |     |
| DediWare Version<br>DediWare_3.16.17.17<br>DediWare_3.16.32.1<br>DediWare_3.17.4.1 | Remark         |  |    |     |     |
|  |                |  | ОК | Can | cel |



Note: The software is backward compatible only, for example: If the software is 3.17.4.1, and then it can open the 3.16.32.1 version file, but if the software is 3.16.32.1, it can't open 3.17.4.1 version file.

# **IX.** Revision History

| Date       | Version | Change  |
|------------|---------|---|
| 2013/08/28 | 1.0     | Initial release   |
| 2014/05/26 | 1.1     | <ul> <li>Remove MCU Prog / StarProg ATE(Flash)</li> <li>Separate StarProg to StarProg-F and StarProg-U</li> </ul> |
| 2014/07/29 | 2.0     | New DediWare software release   |
| 2014/11/28 | 2.1     | Update the GUI.   |
| 2015/04/07 | 2.2     | Remove 7.4 CLI & API Control  |
| 2022/03/30 | 3.0     | <ol> <li>Layout Arrangement</li> <li>Add new function</li> </ol>  |

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