

# **NAND FLASH Utility Manual**

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## 1.Summary

This manual teaches user how to use NAND FLASH Image File System. There are 2 interfaces in this software.

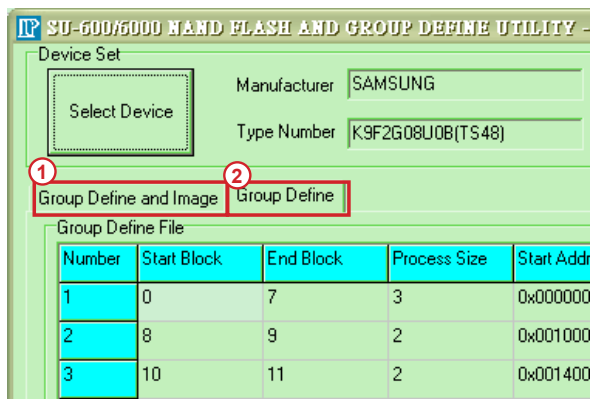
### <1> Group Define and Image :

Load different Image files (\*.bin) to software and then software generates a Group Define file (\*.def) and a combined Image file (\*.bin)

### <2> Group Define :

This function is to edit and generate a Group Define file (\*.def).

Software will automatically instruct to complete the mission step by step. When a necessary step is not completed, software will not go to the next step.



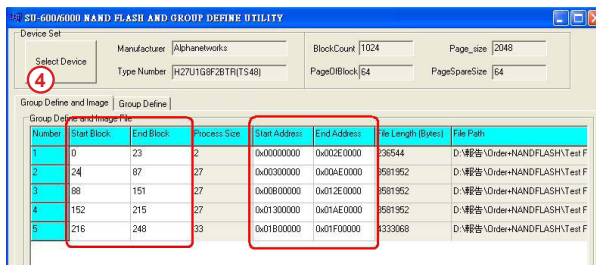
Number	Start Block	End Block	Process Size	Start Addr
1	0	7	3	0x000000
2	8	9	2	0x001000
3	10	11	2	0x001400





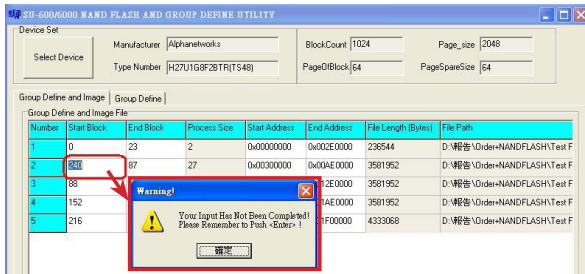
## 2.Introduction of Group Define and Image

< Step 4 > Set the Block according to user's data. User can edit the columns that are marked with red line. Just click the column to do edit. User can hover Mouse cursor on the column that needs to be edited. Software has auto-correction function. When user changes the parameter in a column other related parameter automatically changes as well.



User can select Block or Address to input the parameter because 『Start Block』 corresponds to 『Start Address』 and 『End Block』 corresponds to 『End Address』 . 『Process Size』 corresponds to 『File Length(Bytes)』 .

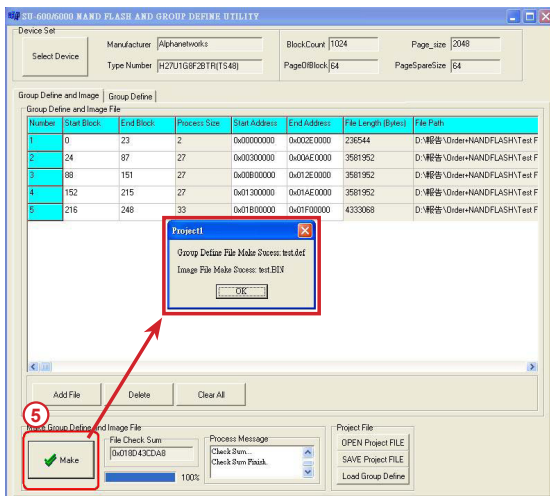
After inputting the parameter, user must press 『Enter』 . The software shows the following error message when user does not finish input.



Besides, the parameter in 『Start Block』 and 『End Block』 column should be an integer and the parameter must not be larger than 4 digit number. The software automatically corrects the parameter when it is larger than 4 digit number. When filling 『Start Address』 and 『End Address』 column, the parameter should start with 『0x』 . Otherwise, the software cannot tell the parameter. The maximum input digit of 『Start Address』 and 『End Address』 is 8 (not including 『0x』 ) .

## 2.Introduction of Group Define and Image

< Step 5> After filling all columns, press 『Make』 to generate a “Group Define file (\*.def) and a combined Image file (\*.bin). Software shows check sum after generating file. Software shows error message in 『Process Message』 when there' s an error during generating file.



## 2.Introduction of Group Define and Image

### 2.2 Additional instruction

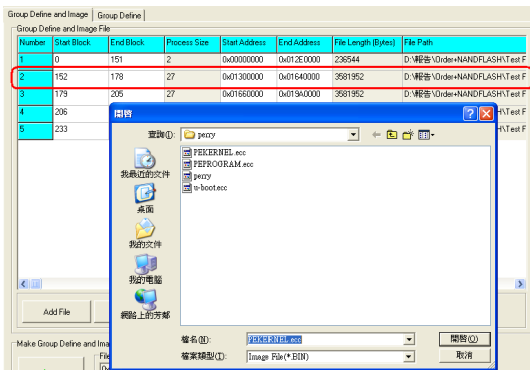
< Additional instruction 1 >

User can use Drag function on 『Number』 column. After dragging the block, parameter in the block will be automatically corrected.

Group Define and Image							
Group Define and Image File							
Number	Start Block	End Block	Process Size	Start Address	End Address	File Length (Bytes)	File Path
1	0	23	2	0x00000000	0x002E0000	236544	D:\報告\Order+NANDFLASH\Test F
2	24	87	27	0x00300000	0x00AE0000	3581952	D:\報告\Order+NANDFLASH\Test F
3	88	151	27	0x00B00000	0x012E0000	3581952	D:\報告\Order+NANDFLASH\Test F
4	152	215	27	0x01300000	0x01AE0000	3581952	D:\報告\Order+NANDFLASH\Test F
5	216	248	33	0x01B00000	0x01F00000	4333068	D:\報告\Order+NANDFLASH\Test F

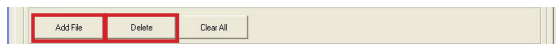
< Additional instruction 2 >

Double click the column to change Image file when editing Image file.



< Additional instruction 3 >

User can press keyboard's **Insert** to execute 『Add File』 and press keyboard's **Delete** key to execute 『Delete』.

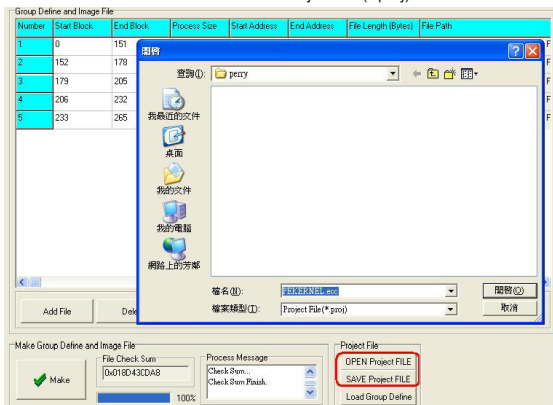




## 2.Introduction of Group Define and Image

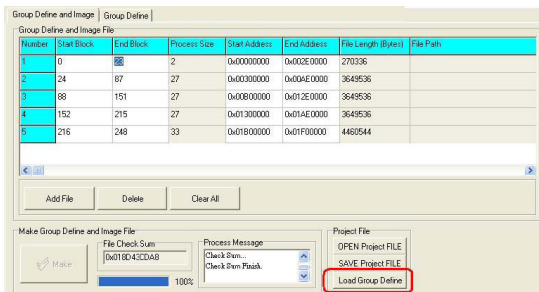
### < Additional instruction 4 >

This interface is able to load or store Project file (\*.proj).



### < Additional instruction 5 >

User can load Group Define file (\*.def) but software will not show Image file information after loading.





## 2.Introduction of Group Define and Image

< Additional instruction 6 >

Add File: Added file is under the column that Mouser cursor hovers.

Example:

Mouse cursor hover the 2nd file.

Group Define and Image		Group Define					
Group Define and Image File							
Number	Start Block	End Block	Process Size	Start Address	End Address	File Length (Bytes)	File Path
1	0	1	2	0x00000000	0x00020000	236544	D:\NANDFLASH\合併系統檔案開發\Test File\perny\lu-boot.ecc.bin
2	2	28	27	0x003A0000	0x003B0000	3681952	D:\NANDFLASH\合併系統檔案開發\Test File\perny\PEXERNEL.ecc.bin
3	29	61	33	0x003A0000	0x007A0000	4333068	D:\NANDFLASH\合併系統檔案開發\Test File\perny\PEPROGRAM.ecc.bin

After adding 『perny.bin』, added file is under the 2nd column.  
(Refer to the photo below)

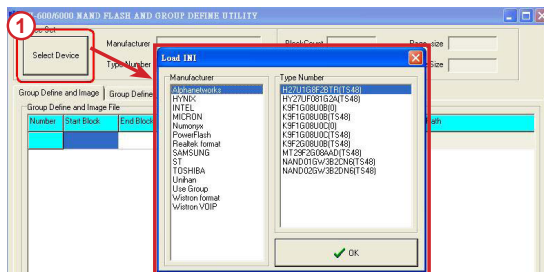
Group Define and Image		Group Define					
Group Define and Image File							
Number	Start Block	End Block	Process Size	Start Address	End Address	File Length (Bytes)	File Path
1	0	1	2	0x00000000	0x00020000	236544	D:\NANDFLASH\合併系統檔案開發\Test File\perny\lu-boot.ecc.bin
2	2	28	27	0x003A0000	0x003B0000	3681952	D:\NANDFLASH\合併系統檔案開發\Test File\perny\PEXERNEL.ecc.bin
3	29	308	280	0x003A0000	0x02680000	37847040	D:\NANDFLASH\合併系統檔案開發\Test File\perny\perny.bin
4	309	341	33	0x026A0000	0x02AA0000	4333068	D:\NANDFLASH\合併系統檔案開發\Test File\perny\PEPROGRAM.ecc.bin

### 3. Instruction of Group Define

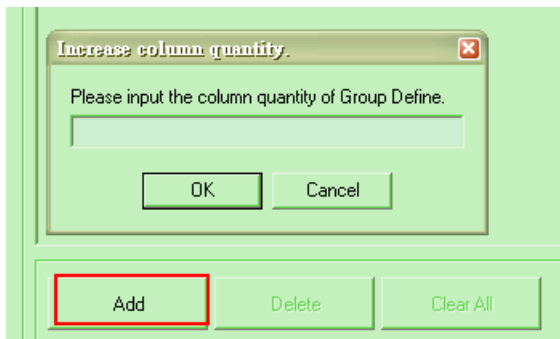
This function is simply to generate a “Group Define file”. No need to work with Image.

#### 3.1 Operating procedure

Select IC manufacturer and P/N.



<Step 2> Add the quantity of column. Maximum quantity is 256 !



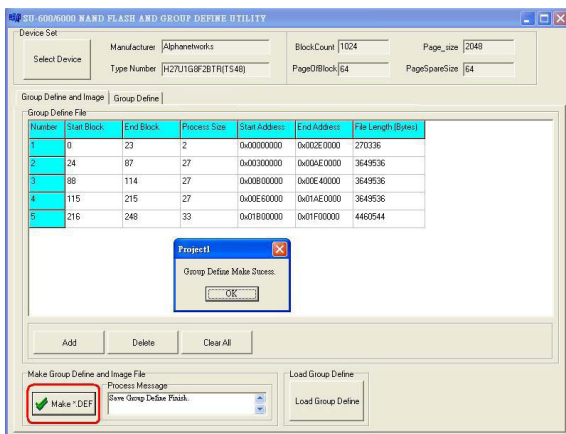
### 3. Instruction of Group Define

<Step 3> User can hover Mouse cursor on the item that needs to be edited.  
The software has auto-correction function. When user change the parameter in a column other related parameter will be automatically changed as well. User can select Block or Address to input the parameter because 『Start Block』 corresponds to 『Start Address』 and 『End Block』 corresponds to 『End Address』. 『Process Size』 corresponds to 『File Length(Bytes)』.

Group Define File						
Number	Start Block	End Block	Process Size	Start Address	End Address	File Length (Bytes)
1	0	23	3	0x00000000	0x002FFFFF	403504
2	24	50	27	0x00300000	0x0079FFFF	3649536
3	51	171	27	0x007A0000	0x0157FFFF	3649536
4	172	206	27	0x01580000	0x019DFFFF	3649536
5	207	237	31	0x019E0000	0x01DBFFFF	4130208

Besides, the parameter in 『Start Block』 and 『End Block』 column should be an integer and the parameter must not be larger than 4 digit number. The software automatically corrects the parameter when it is larger than 4 digit number. When filling 『Start Address』 and 『End Address』 column, the parameter should start with 『0x』. Otherwise, the software cannot tell the parameter. The maximum input digit of 『Start Address』 and 『End Address』 is 8 (not including 『0x』).

<Step 4> After filling all columns, press 『Generate \*.DEF』 to generate a "Group Define file (\*.def)".



## 3. Instruction of Group Define

### 3.2 Additional Instruction

<Additional Instruction 1> User can use Drag function on 「Number」 column. After dragging the block, parameter in the block will be automatically corrected. Please note that Drag function is invalid when the column is empty.

Group Define File						
Number	Start Block	End Block	Process Size	Start Address	End Address	File Length (Bytes)
1	0	21	2	0x00000000	0x002A0000	270336
2	22	87	27	0x002C0000	0x00AE0000	3649536
3	88	151	27	0x00B00000	0x012E0000	3649536
4	152	215	27	0x01300000	0x01AE0000	3649536
5	216	248	33	0x01B00000	0x01F00000	4460544

< Additional Instruction 2> User can load a “Group Define file ” and then revise it.

AddDeleteClear All

Generate Group Define File

☒ Generate \*.DEF

Process Message

Load Group Define

Load Group Define

< Additional Instruction 3> Add column: Added column is under the column that Mouser cursor hovers.

Example: Mouse cursor hover the 2nd column.

Group Define File

Number	Start Block	End Block	Process Size	Start Address	End Address	File Length (Bytes)
1	0	23	3	0x00000000	0x002FFFFF	405504
2	24	60	27	0x00300000	0x0079FFFF	3649536
3	61	171	27	0x007A0000	0x0157FFFF	3649536
4	172	206	27	0x01580000	0x019DFFFF	3649536
5	207	237	31	0x019E0000	0x01DBFFFF	4190208

Increase column quantity.

Please input the column quantity of Group Define.

3

OKCancel



### 3. Instruction of Group Define

After adding 3 columns, added columns is under the 2nd column.  
(Refer to the photo below)

Group Define File						
Number	Start Block	End Block	Process Size	Start Address	End Address	File Length (Bytes)
1	0	23	2	0x00000000	0x002E0000	270336
2	24	87	27	0x00300000	0x00AE0000	3649536
3	88			0x00B00000		
4						
5						
6	88	151	27	0x00B00000	0x012E0000	3649536
7	152	215	27	0x01300000	0x01AE0000	3649536
8	216	248	33	0x01B00000	0x01F00000	4460544