



Manual 3 ProMan Programmer User Guide

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1. Warranty

- 1) From the purchase date, warranty for free period: one year. Buyer will pay the shipping cost.
- 2) Over one year, still can repair, need to charge for material cost. Buyer will pay the shipping cost.
- 3) Warranty label: the label should be in good condition. If the label is damaged, cannot provide repair for free.

2. Lite package list:

(depends on the description on website)

programmer	x 1
adapter	x 1
USB cable	x 1
tweezers	x 1

3. Programmer Appearance



4. Operation instructions

4.1 Power

Using USB cable, connect one end of the cable to the programmer's USB port and the other end to computer's USB port.

4.1 Where is the PIN1 of chip placed

Please put the chip properly according to the following picture shows:

Please note: this is a PIN 1-to-PIN1 match, don't make a mistake with the location, otherwise, the chip may be damaged.



4.3 Programmer software and download link

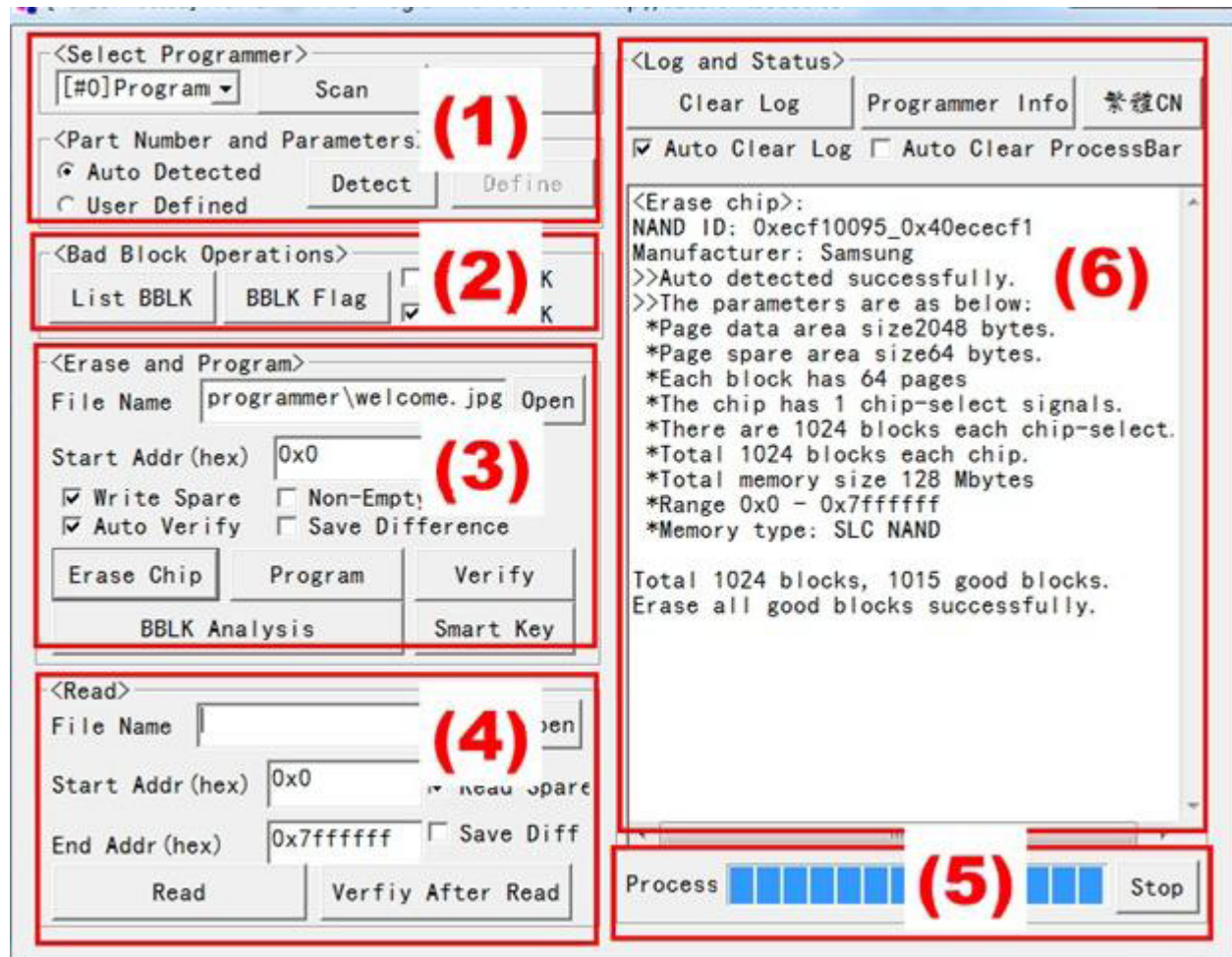
You don't need to install a driver, just download and install the software, that's ok.

You can find the download link on the description website or contact us to get the newest software and latest function.



4.4 Software instructions

4.4.1 Software interface and major function



On the software and there are six functions in the main interface.

(1) part number and parameters

Can check chip information, for example, manufacturer, capacity, page data area, spare area, blocks, MLC/SLC and so on. You can customize parameters for new chips.

(2) List BBLK and BBLK Flag

Bad blocks information can be found and printed out.

Can flag one block as bad, or re-mark one bad block as good if it is a pseudo-bad block.

(3) Erase and Program

Can erase chip, write data into chip, and verify the data.

(4) Read

Can read data from chip and save it to your computer.

(5) Process

Can display the current process and can stop the process.

(6) Log and Status

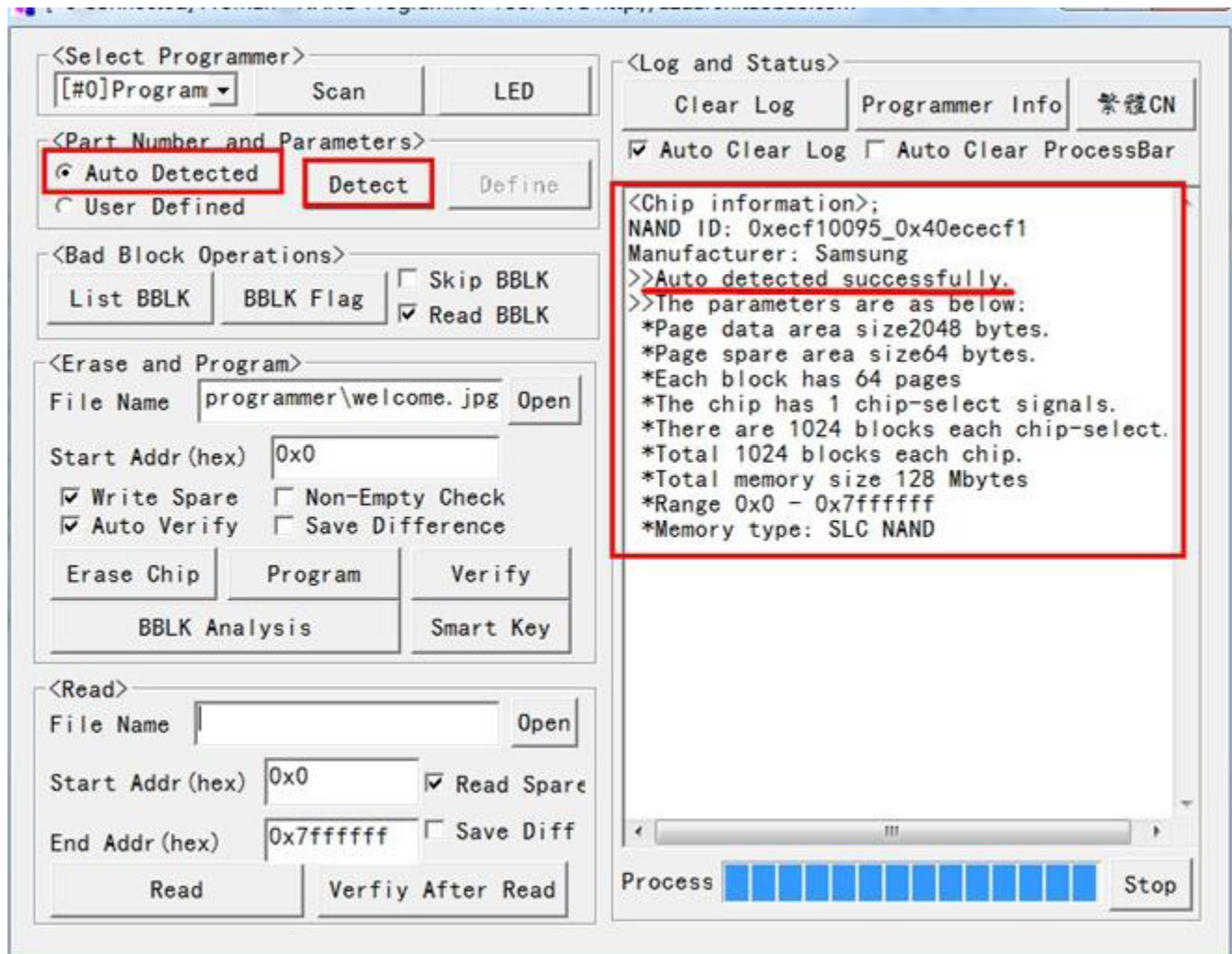
Here it will show the process information.

Please note: in software, all address is hexadecimal, it starts with the prefix 0x.



4.4.2 Detect Chip ID

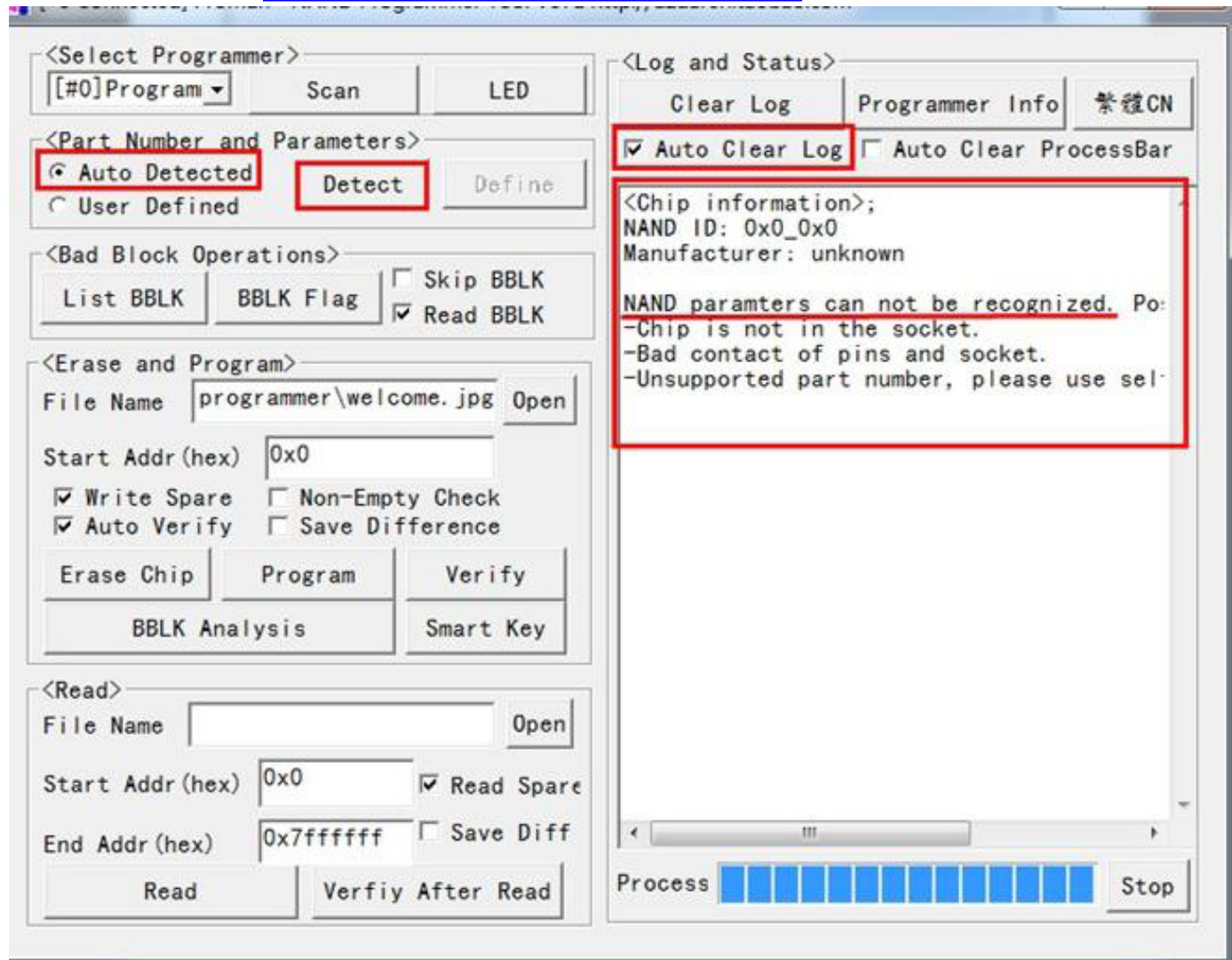
Check "Auto Detected" and click "Detect" button. If no problem, it will show "Auto detected successfully" and chip information as below:



If no chip on ZIF socket or the chip don't put properly, information will show "...can not be recognized."

Common problems:

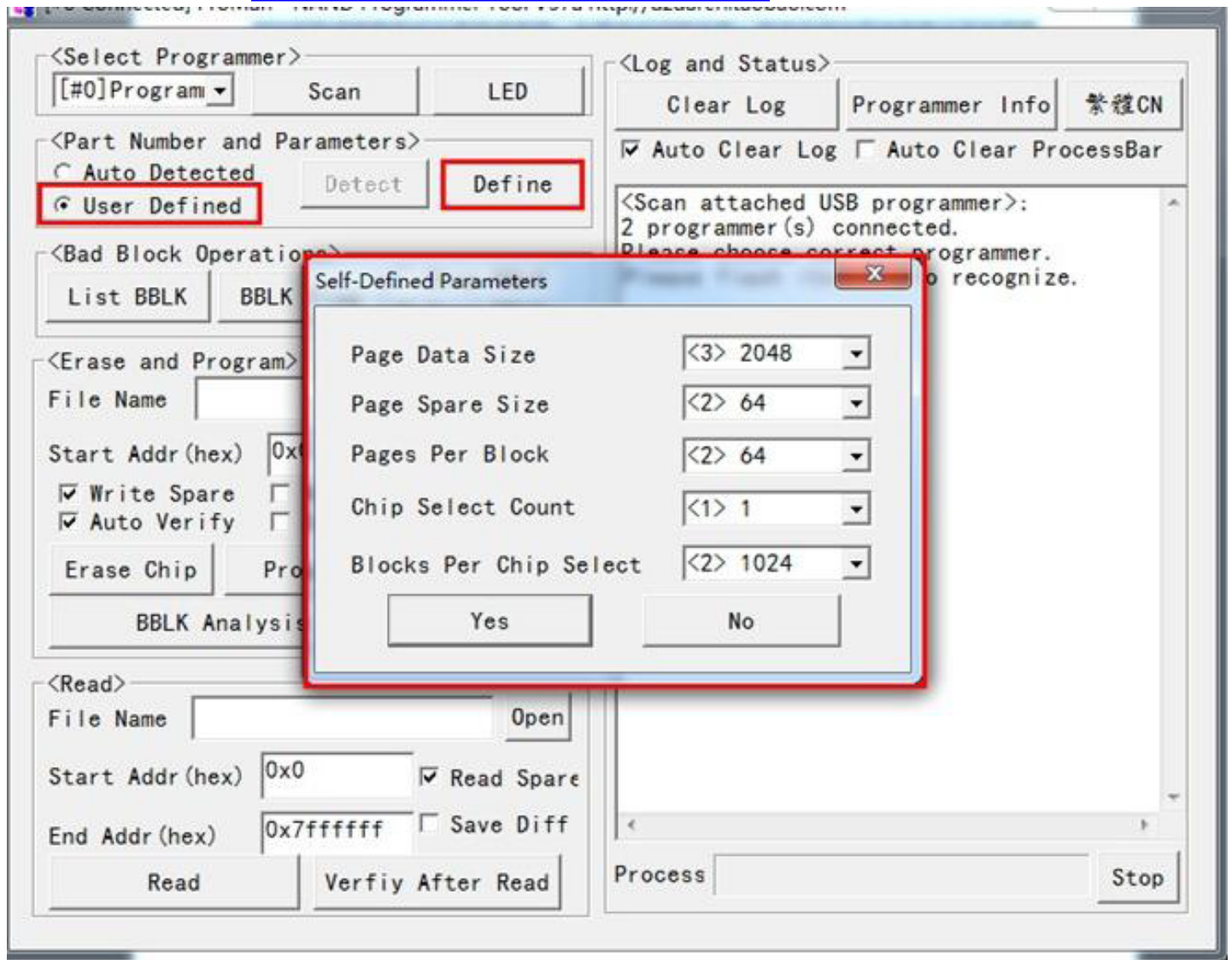
It shows "...can not be recognized.", that may due to poor contact between chip and ZIF socket. So please check whether you put the chip in the right place. If your chip is old, please make sure each pin is neat.



Check "Auto Clear Log": when you click "Detect" button, last information will be overwritten and only show the current information.

4.4.3 User Defined

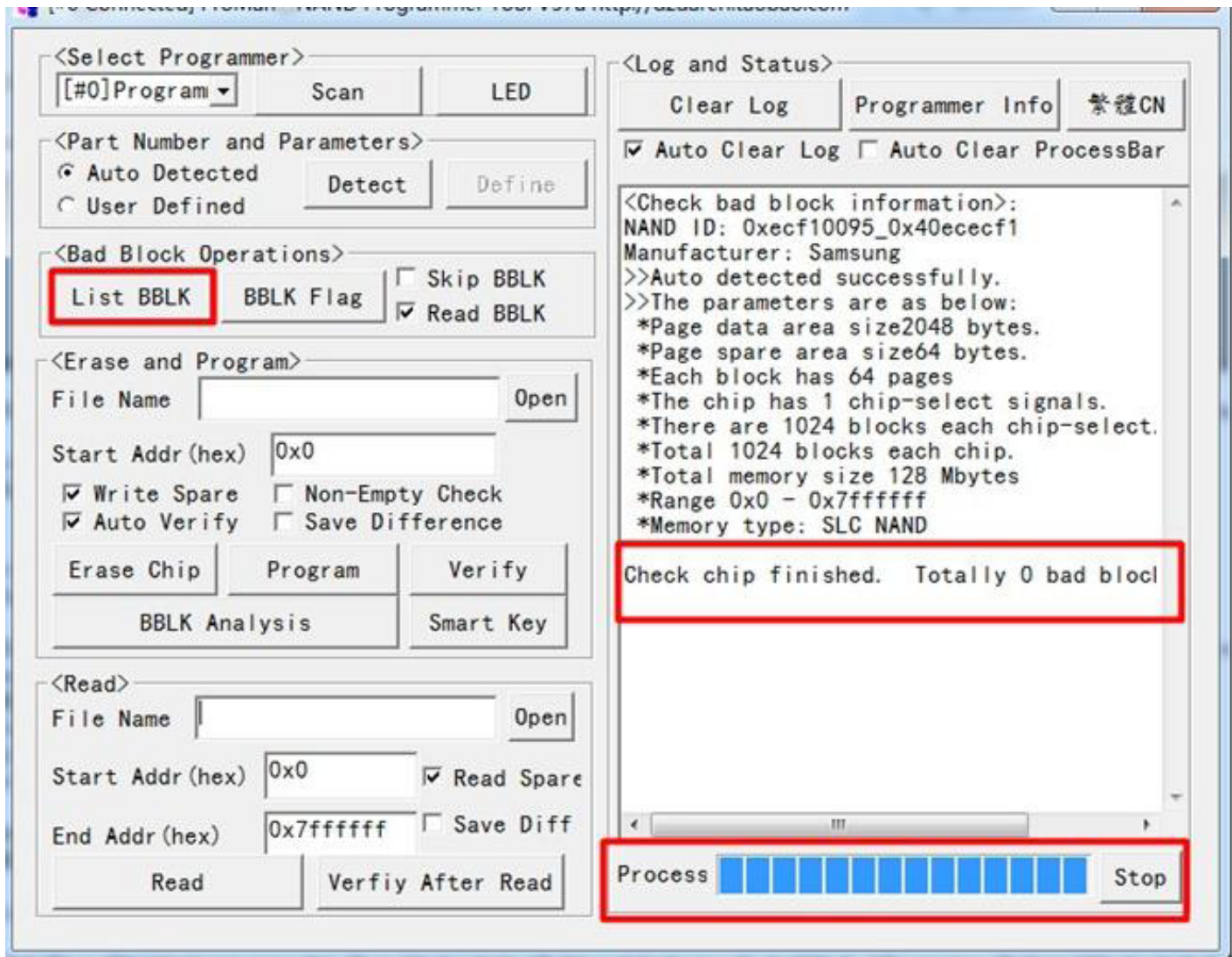
If "Auto Detect" is unsuccessful, you can click "User Defined" and do next steps, such as "Program", "Read", "Erase", etc. Via "User Defined" function, ProMan programmer can freely support more chips.



Check "User Defined" option and click "Define" button. Then there is the "Self-Defined parameters" dialog pops up. After setting parameters, click "Yes".

4.4.4Bad Block List

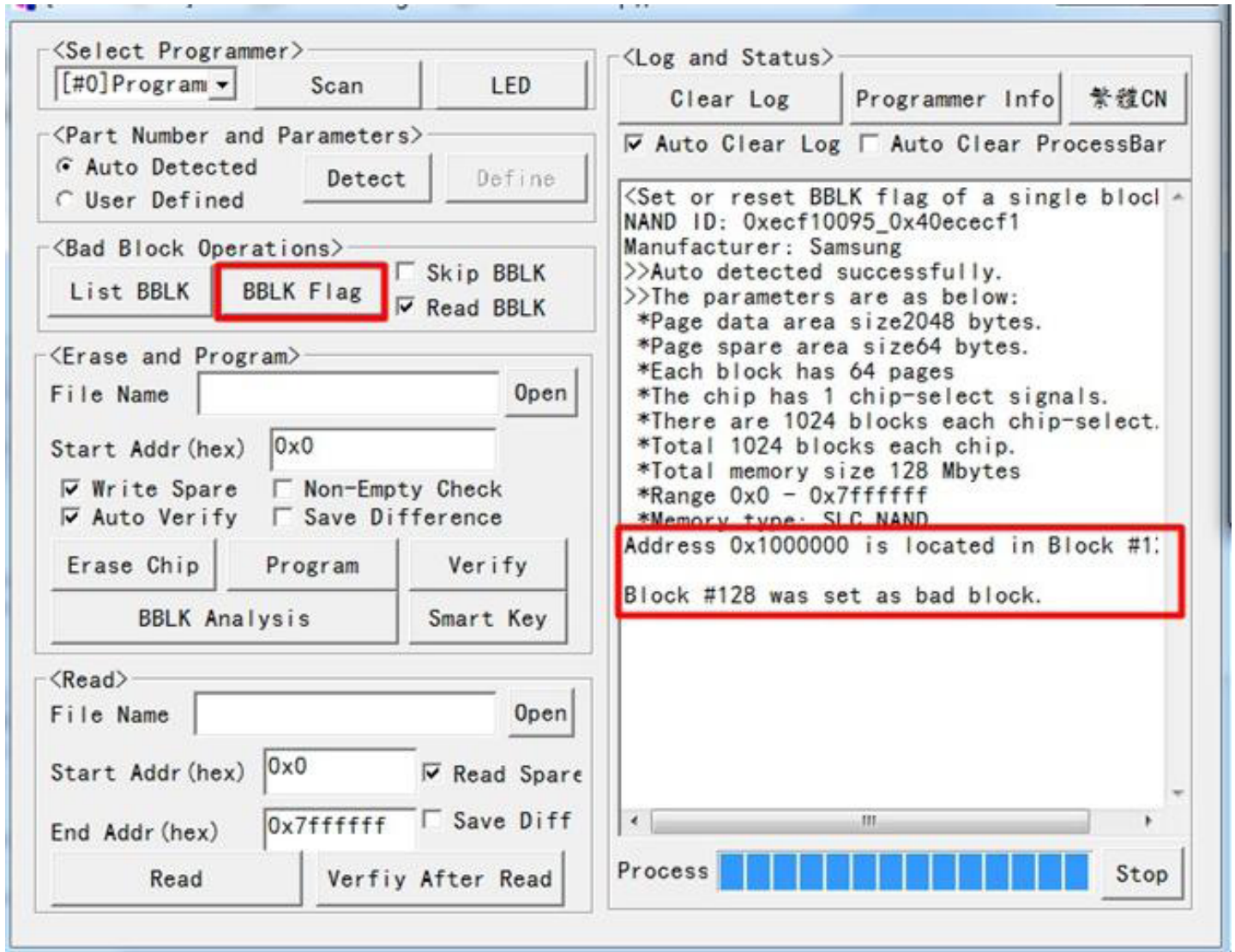
Click "List BBLK" button and will show chip's bad block information.



4.4.5 Bad Block Flag

You can set bad block flag for a block and also can re-mark one bad block as good. ProMan can set flag of a single block or set flags of batch blocks.

Click "BBLK Flag" and the "Set/Reset Bad Block Flags" dialog pop up. You can enter target Address (hex). Then set bad block flag or remove bad block flag. There is the "CALC" button to confirm if address is right. For example, set address as below:

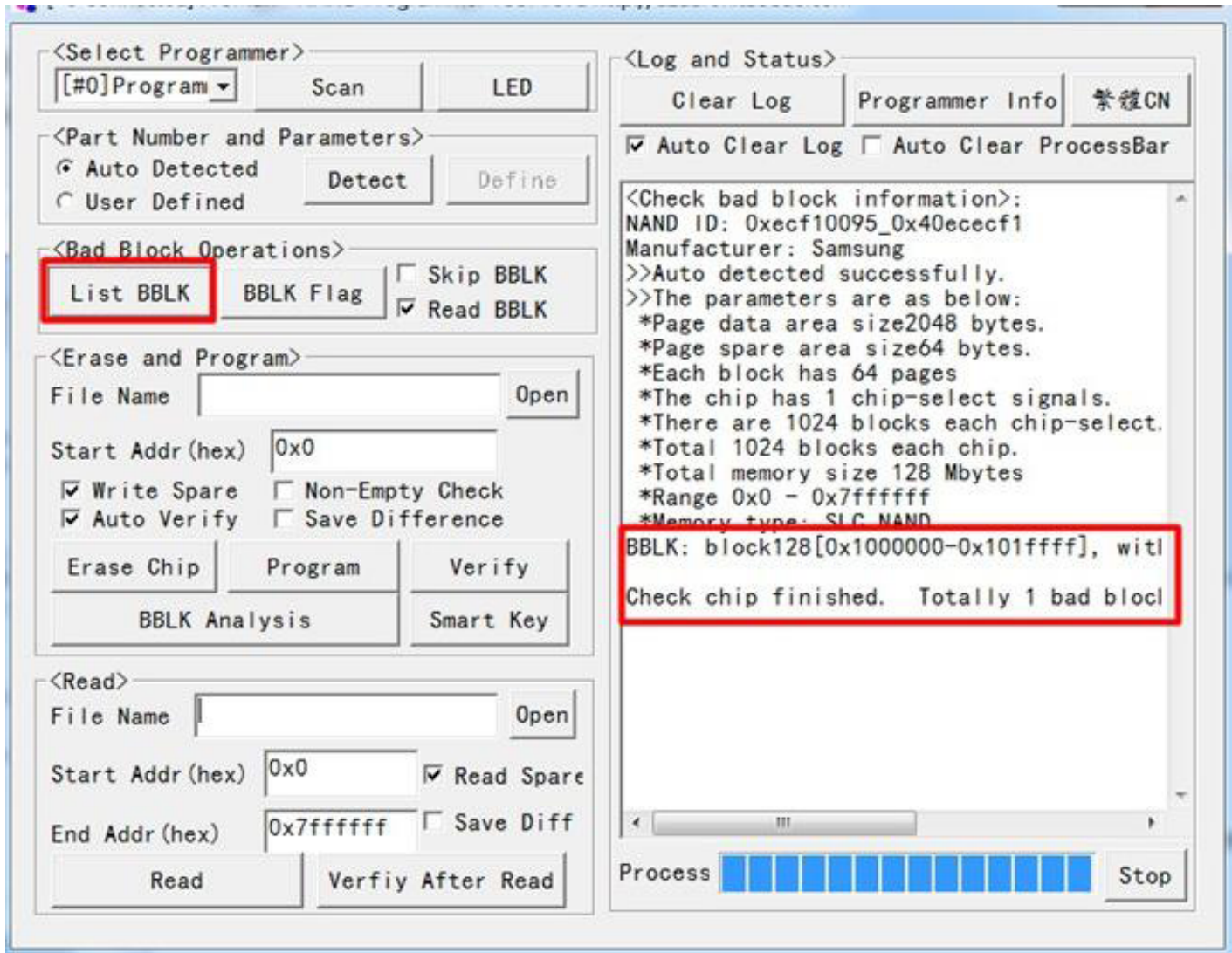


Common Problems:

Q: Can program one chip, but verify in the same address is always unsuccessful, why?

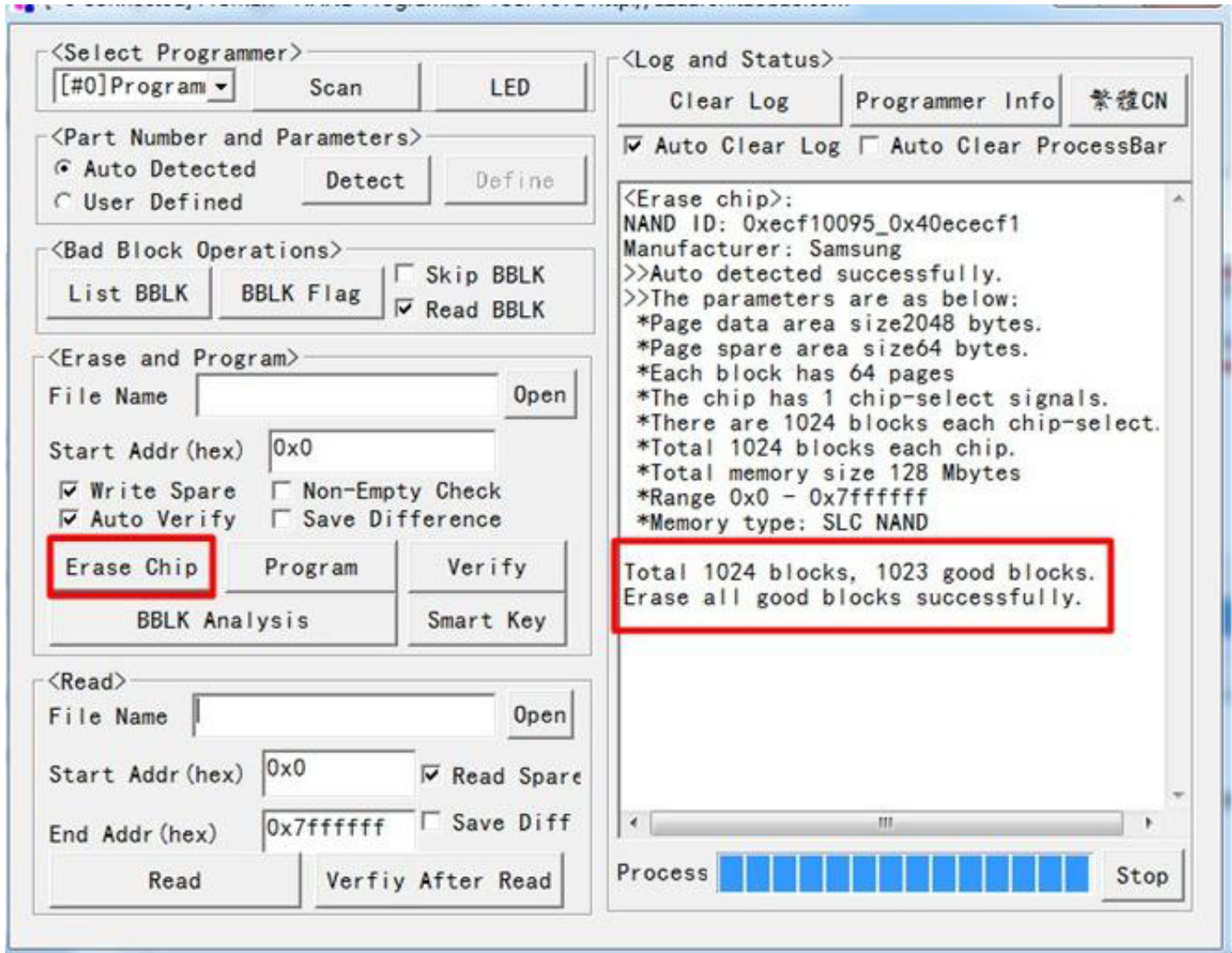
A: Storage Unit is bad in this address, here the block should be flagged as bad block.

Once you flag bad block, when click "List BBLK", the bad block you set will be displayed .



4.4.6Erase Chip

Click "Erase Chip" button to erase data. If one block is bad, the programmer will skip and will not erase the bad block. After erasing, all of good blocks (include spare area) will be restored to 0xFF. For example as below:



4.4.7 Program

For example as below, select one file and set start address to 0x200000 and then click "Program" button. When programming, the yellow light is on and green light rapidly flashes. After programming, the yellow light is off and green light is on. Then Process is 100% and it shows "programming finished successfully". If yellow light is always on and green light doesn't flash, that means programmer is in busy state. You need to remove USB cable and try to insert again.



<Select Programmer>
[#0]Program Scan LED

<Part Number and Parameters>
☒ Auto Detected Detect Define
☐ User Defined

<Bad Block Operations>
List BBLK BBLK Flag ☒ Skip BBLK ☐ Read BBLK

<Erase and Program>
File Name ND programmer\abit.bin Open
Start Addr (hex) 0x200000
☐ Write Spare ☒ Non-Empty Check
☐ Auto Verify ☐ Save Difference
Erase Chip Program Verify
BBLK Analysis Smart Key

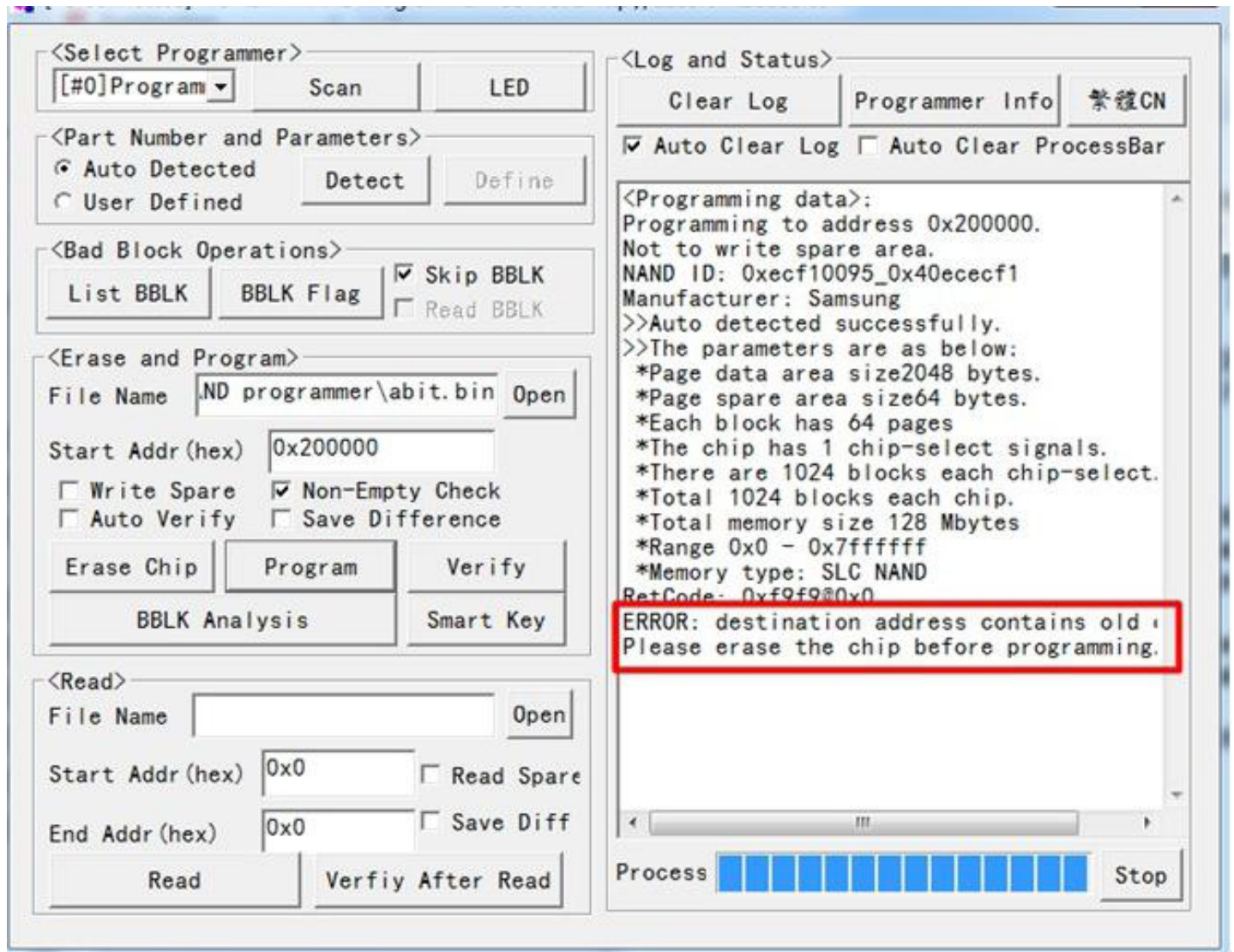
<Read>
File Name Open
Start Addr (hex) 0x0 ☐ Read Spare
End Addr (hex) 0x0 ☐ Save Diff
Read Verfiy After Read

<Log and Status>
Clear Log Programmer Info 繁體CN
☒ Auto Clear Log ☐ Auto Clear ProcessBar

<Programming data>
Programming to address 0x200000.
Not to write spare area.
NAND ID: 0xecf10095_0x40ecec1
Manufacturer: Samsung
>>Auto detected successfully.
>>The parameters are as below:
*Page data area size2048 bytes.
*Page spare area size64 bytes.
*Each block has 64 pages
*The chip has 1 chip-select signals.
*There are 1024 blocks each chip-select.
*Total 1024 blocks each chip.
*Total memory size 128 Mbytes
*Range 0x0 - 0x7ffffff
*Memory type: SLC NAND
Programming finished successfully. Total

Process [Progress Bar] Stop

You can check option "Non-Empty Check": if chip includes data in it, program will stop and remind that "please erase chip before programming." After erasing NAND chip, you can uncheck option "Non-Empty Check" and programming speed is faster. During programming, you can stop the process.



Common problems:

Q: when programming or verifying, the process looks like in idle state, why?

A: If programming file is larger and the process is slower. At this time, you can check the green light. If green light flashes, means it is programming.

4.4.8 Verify

After programming NAND chips, Verify is necessary. If verify successfully, programming is correct. Click "Verify" button.

When verifying, the yellow light is on and green light rapidly flashes. After verifying, the yellow light is off and green light is on. During this time, you can stop the process. For example as below:



The screenshot shows the TL86_PLUS programmer software interface. The 'Verify' button in the 'Erase and Program' section is highlighted with a red box. The 'Log and Status' window on the right shows the 'Verify' status, with the message 'Verify successfully. Total 1048576(0x100)' highlighted in red.

<Select Programmer>
[#0]Program Scan LED

<Part Number and Parameters>
☒ Auto Detected Detect Define
☐ User Defined

<Bad Block Operations>
List BBLK BBLK Flag ☐ Skip BBLK ☐ Read BBLK

<Erase and Program>
File Name .ND programmer\abit.bin Open
Start Addr(hex) 0x0
☐ Write Spare ☐ Non-Empty Check
☐ Auto Verify ☐ Save Difference
Erase Chip Program **Verify**
BBLK Analysis Smart Key

<Read>
File Name Open
Start Addr(hex) 0x0 ☐ Read Spare
End Addr(hex) 0x7fffffff ☐ Save Diff
Read Verfiy After Read

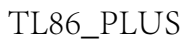
<Log and Status>
Clear Log Programmer Info 繁體CN
☒ Auto Clear Log ☐ Auto Clear ProcessBar

<Verify>
NAND ID: 0xecf10095_0x40ecec1
Manufacturer: Samsung
>>Auto detected successfully.
>>The parameters are as below:
*Page data area size2048 bytes.
*Page spare area size64 bytes.
*Each block has 64 pages
*The chip has 1 chip-select signals.
*There are 1024 blocks each chip-select.
*Total 1024 blocks each chip.
*Total memory size 128 Mbytes
*Range 0x0 - 0x7ffffff
*Memory type: SLC NAND
Reading data from 0x0 to 0xffff.
Not to verify spare area data.
Verify successfully. Total 1048576(0x100)

Process [Progress Bar] Stop

4.4.9 Read

At first user needs to set Start address and End address and open the file. Then click "Read" button. When reading, the yellow light is on and green light rapidly flashes. After reading, the yellow light is off and green light is on. For example as below:



<Select Programmer>

[#0]Program ▾ Scan LED

<Part Number and Parameters>

☒ Auto Detected Detect Define
☐ User Defined

<Bad Block Operations>

List BBLK BBLK Flag ☐ Skip BBLK
☐ Read BBLK

<Erase and Program>

File Name .ND programmer\test.bin Open

Start Addr(hex) 0x200000
☐ Write Spare ☐ Non-Empty Check
☐ Auto Verify ☐ Save Difference

Erase Chip Program Verify

BBLK Analysis Smart Key

<Read>

File Name .ND programmer\test.bin Open

Start Addr(hex) 0x200000 ☐ Read Spare
End Addr(hex) 0x1169fae ☐ Save Diff

Read Verfiy After Read

<Log and Status>

Clear Log Programmer Info 繁體CN

☒ Auto Clear Log ☐ Auto Clear ProcessBar

```

<Read data>;
NAND ID: 0xecf10095_0x40ececfc1
Manufacturer: Samsung
>>Auto detected successfully.
>>The parameters are as below:
 *Page data area size2048 bytes.
 *Page spare area size64 bytes.
 *Each block has 64 pages
 *The chip has 1 chip-select signals.
 *There are 1024 blocks each chip-select.
 *Total 1024 blocks each chip.
 *Total memory size 128 Mbytes
 *Range 0x0 - 0x7ffffff
 *Memory type: SLC NAND
Reading data from 0x200000 to 0x1169fae.
Not to read spare area data.
Read data finished. Total 16162735(0xf69'
To make sure data are correct,
please verfiy these data after read.
```

Process [Progress Bar] Stop



The screenshot displays the TL86_PLUS software interface with several sections:

- <Select Programmer>**: Includes a dropdown menu for "[#0]Program", a "Scan" button, and an "LED" button.
- <Part Number and Parameters>**: Features radio buttons for "Auto Detected" (selected) and "User Defined", along with "Detect" and "Define" buttons.
- <Bad Block Operations>**: Contains buttons for "List BBLK" and "BBLK Flag", and checkboxes for "Skip BBLK" and "Read BBLK".
- <Erase and Program>**: Includes a "File Name" field with ".ND programmer\test.bin" and an "Open" button. Below are fields for "Start Addr (hex)" set to "0x200000" and checkboxes for "Write Spare", "Non-Empty Check", "Auto Verify", and "Save Difference". Buttons for "Erase Chip", "Program", "Verify", "BBLK Analysis", and "Smart Key" are also present.
- <Read>**: Similar to the Erase and Program section, it has a "File Name" field with ".ND programmer\test.bin" and an "Open" button. It includes fields for "Start Addr (hex)" set to "0x200000" and "End Addr (hex)" set to "0x1169fae", with checkboxes for "Read Spare" and "Save Diff". Buttons for "Read" and "Verfiy After Read" (highlighted with a red box) are shown.
- <Log and Status>**: Contains buttons for "Clear Log", "Programmer Info", and "繁體CN". It has checkboxes for "Auto Clear Log" (checked) and "Auto Clear ProcessBar". A large text area displays the following log:

```
<Verify After Read>:
NAND ID: 0xecf10095_0x40ecec1
Manufacturer: Samsung
>>Auto detected successfully.
>>The parameters are as below:
*Page data area size2048 bytes.
*Page spare area size64 bytes.
*Each block has 64 pages
*The chip has 1 chip-select signals.
*There are 1024 blocks each chip-select.
*Total 1024 blocks each chip.
*Total memory size 128 Mbytes
*Range 0x0 - 0x7ffffff
*Memory type: SLC NAND
Reading data from 0x200000 to 0x1169fae.
Not to verify spare area data.
Verify successfully. Total 16162735(0xf6'
```

The last line of the log is highlighted with a red box. Below the log is a "Process" bar with blue segments and a "Stop" button.

Recommend you to read twice. If it is same, that means read correctly.

If read spare area, start addr should be aligned to the page of start address. Otherwise, shows information as below:



<Select Programmer>

[#0]Program Scan LED

<Part Number and Parameters>

☒ Auto Detected Detect Define
☐ User Defined

<Bad Block Operations>

List BBLK BBLK Flag ☐ Skip BBLK
☐ Read BBLK

<Erase and Program>

File Name .ND programmer\test.bin Open

Start Addr (hex) 0x200000

☐ Write Spare ☐ Non-Empty Check
☐ Auto Verify ☐ Save Difference

Erase Chip Program Verify

BBLK Analysis Smart Key

<Read>

File Name .ND programmer\test.bin Open

Start Addr (hex) 0x200000 ☒ Read Spare
End Addr (hex) 0x1169fae ☐ Save Diff

Read Verfiy After Read

<Log and Status>

Clear Log Programmer Info 繁體CN

☒ Auto Clear Log ☐ Auto Clear ProcessBar

Read data>
AND ID: 0xecf10095_0x40ecec1
anufacturer: Samsung
>Auto detected successfully.
>The parameters are as below:
*Page data area size2048 bytes.
*Page spare area size64 bytes.
*Each block has 64 pages
*The chip has 1 chip-select signals.
*There are 1024 blocks each chip-select.
*Total 1024 blocks each chip.
*Total memory size 128 Mbytes
*Range 0x0 - 0x7ffffff
*Memory type: SLC NAND
eading data from 0x200000 to 0x1169fae.
hen accessing spare area,
start addr should be aligned to page sta
Quit operation.

Process Stop

<the end>