



# **G+ Mass Production Tool For GPL329xx User Manual**

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## ***Revision History***

Revision	Date	By	Remark
1.0.1	07/18/2011	Phoebe	1. Support Lua Script. 2. Support the decimal or hex when putting. 3. Add auto mode, including 3 steps, Dram Calibration, Send nand database, app header parsing, will auto adjust related content when downloading.
1.0.0	05/12/2011	Eric	1st Version

## 1 Introduction

After the binary file or hdb file is generated, please use G+ Mass Production Tool For GPL329xx to download it to the selected Flash. However, user should make a configuration file for it.

So before executing download action, you will better to select corresponding configuration file which you made it at first. There are serval steps to use this tool. Following will make exhaustive description for you.

### 1.1 USB Port Mapping Dlg

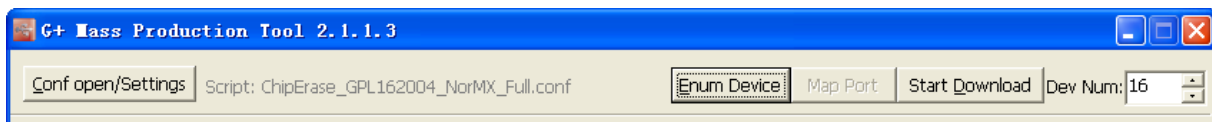
User can select the specific USB port to download in the USB port tree list, and then the main dialog will display the relevant hub and port number according to selected list tree item. When first time start excutive programe, if the configuration of port mapping information has not been setted and there is no GPL329xx device plug into PC, it will pop up this dialog on your sight. The USB port mapping dialog as shown below:



All the USB devices plug into PC will be shown in this dialog, you could make options on each item freely. After selecting, make sure to click the Set button. Otherwise, the options you just choose will not be valid.

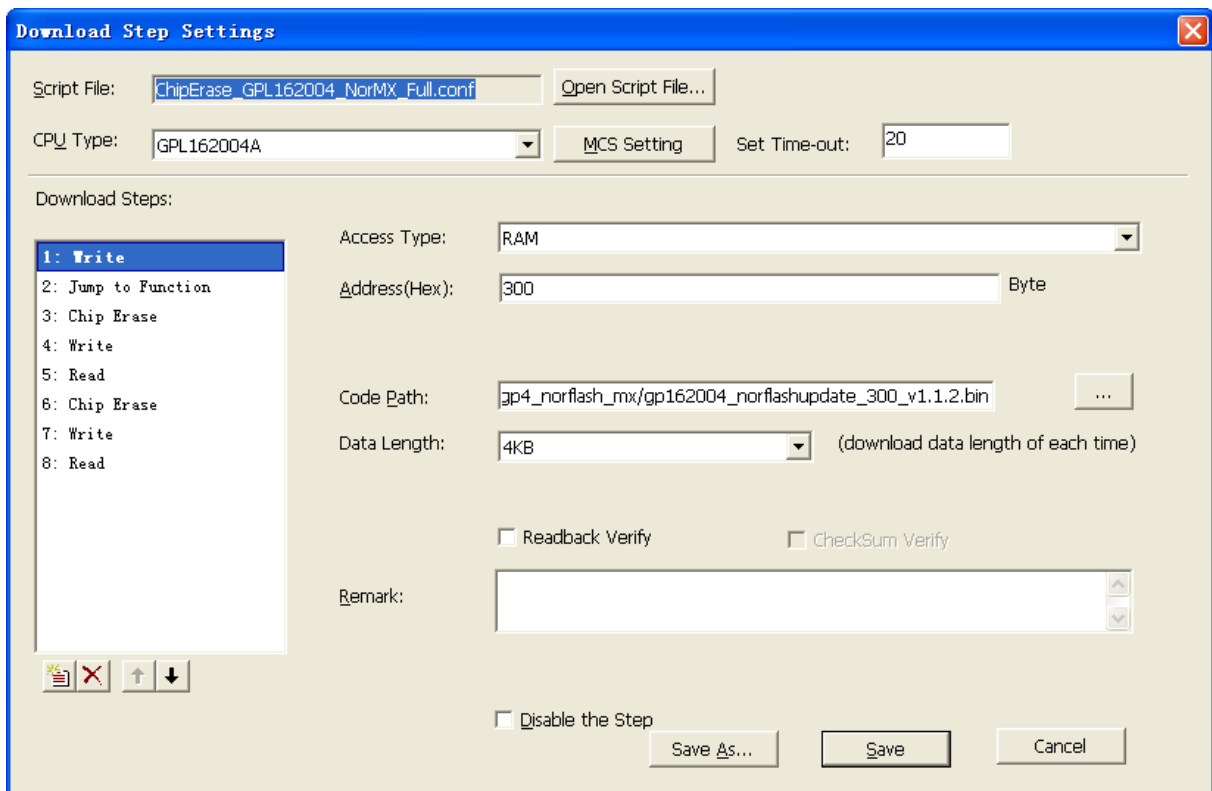
## 1.2 Main window

After selecting port mapping dialog, you will enter into main dialog. Following is the UI of main dialog:



### 1.2.1 Conf open/Settings

Click the Conf open/Settings button, will pop up the Download Step Settings dialog. You can view the download steps or create a new download steps.



**Open Script File:** Open a conf file.

**CPU Type:** Select the CPU type of the device.

**MCS Setting:** Setting the MCS.

**Download Steps:** Open an existed conf file, then you can view the download steps, or create a new conf file. Double click the step, you can rename it. The UI of a step will be displayed on the right.



: Add a download step.



: Delete the selected step.



: Adjust the order of the steps.

**Disable the Step:** Check it, the step will be skipped when downloading, and execute the next step directly.

**Save As:** Save the script to another file.

**Save:** Save the current script.

**Cancel:** Cancel this operation, return to the main dialog.

### 1.2.2 Enum Device

Usually, the MP Tool detects the device automatically when the device plugs in the USB port. But if you are not sure the tool has not found all devices, you can try to click this button.

### 1.2.3 Map Port

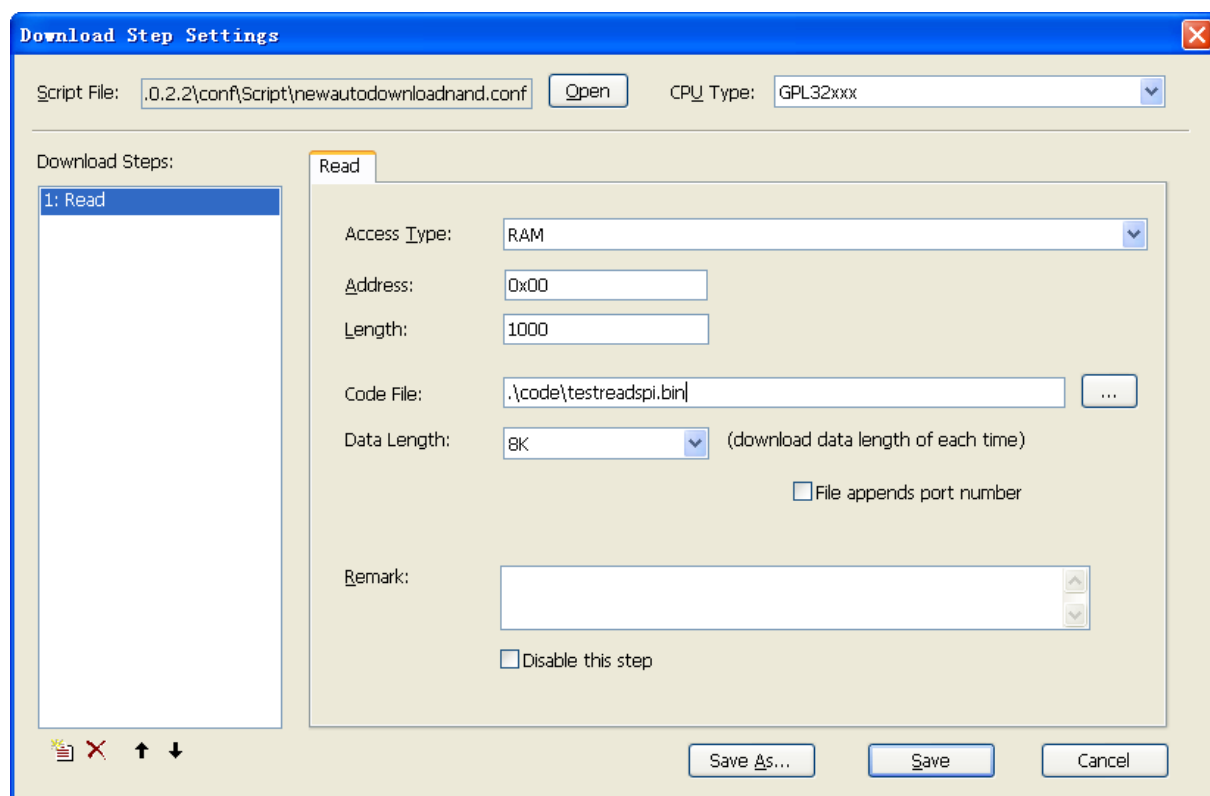
Pop up the USB Port Mapping dialog.

### 1.2.4 Start Download

Click this button will trigger the download event, every time plug in a GPL329xx device in the USB port which selected in USB port mapping, it will start download automatically. Then you will monitor the downloading progress and status for each devices. Of course, you will push down the enter key on the keyboard; it will be the same effect. If you want to view the log message, you can double-click the status bar or find the log folder in the installation directory of the tool to view it.

## 1.3 Action Configuration

### 1.3.1 Read action

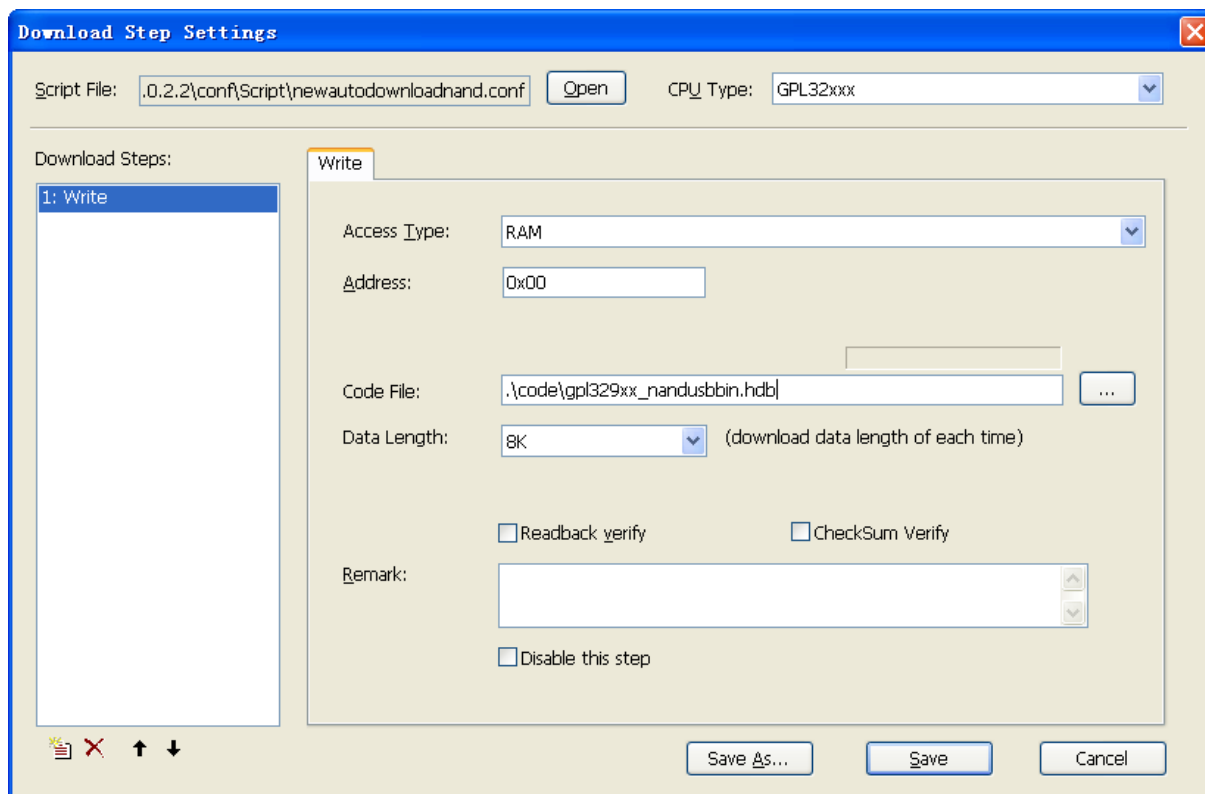


You may choose different memory type in the list when you would like to select read action. This version support five memory types, including RAM, SPI Flash, Nor Flash, Nand Flash App Area and Nand Flash Data Area. Different momroy type has different item to be contained in the combo Box. The details of columns as below:

- ✓ Access Type: choose the Flash type in Access Type list.
- ✓ Address: specify the start address for reading. You can input the address by Hex or Decimal. The unit is byte by default.

- ✓ Length: specify length for reading .
- ✓ Read to File: Specify the readback file path and name after readback the memory content.
- ✓ Data Length: identify that tool will read same size from device each time

## 1.3.2 Write action



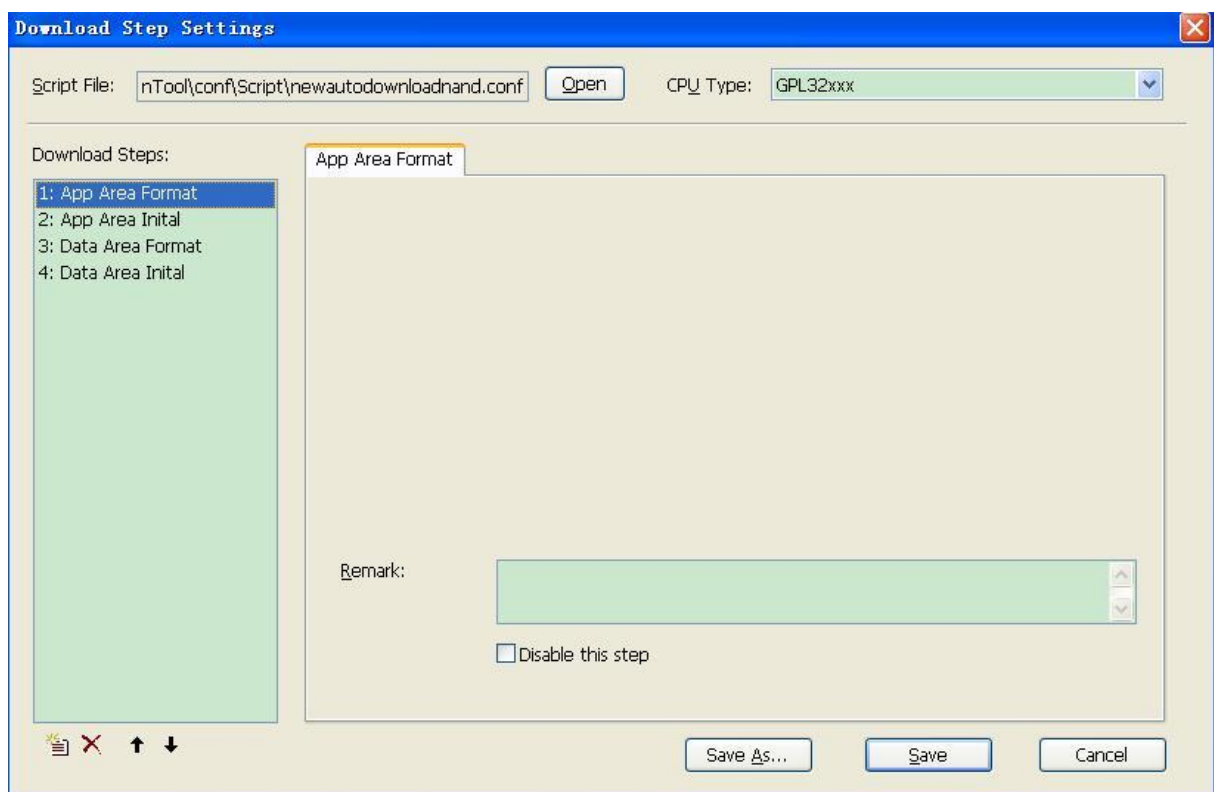
The screenshot shows the 'Download Step Settings' dialog box with the 'Write' tab selected. The 'Script File' is set to '.\0,2,2\conf\Script\newautodownloadnand.conf' and the 'CPU Type' is 'GPL32xxx'. The 'Download Steps' list on the left contains '1: Write'. The 'Write' tab settings include: 'Access Type' set to 'RAM', 'Address' set to '0x00', 'Code File' set to '.\code\gpl329xx\_nandusbbin.hdb', 'Data Length' set to '8K' (with a note '(download data length of each time)'), and checkboxes for 'Readback verify', 'Checksum Verify', and 'Disable this step'. A 'Remark' text box is also present. At the bottom are 'Save As...', 'Save', and 'Cancel' buttons.

The accessed memory type is the same with read action, so there are five memory types to select. Additionally, the code file may be hdb file, if it is hdb file, tool will get the informations of file such as software ID and software tool version, and display on the user interface. Furthermore, tool will extract bin file from HDB file when performing download.

- ✓ Access Type: choose the Flash type in Access Type list.
- ✓ Address: specify the start address for writing. It Supports both decimal and hexadecimal input mode.

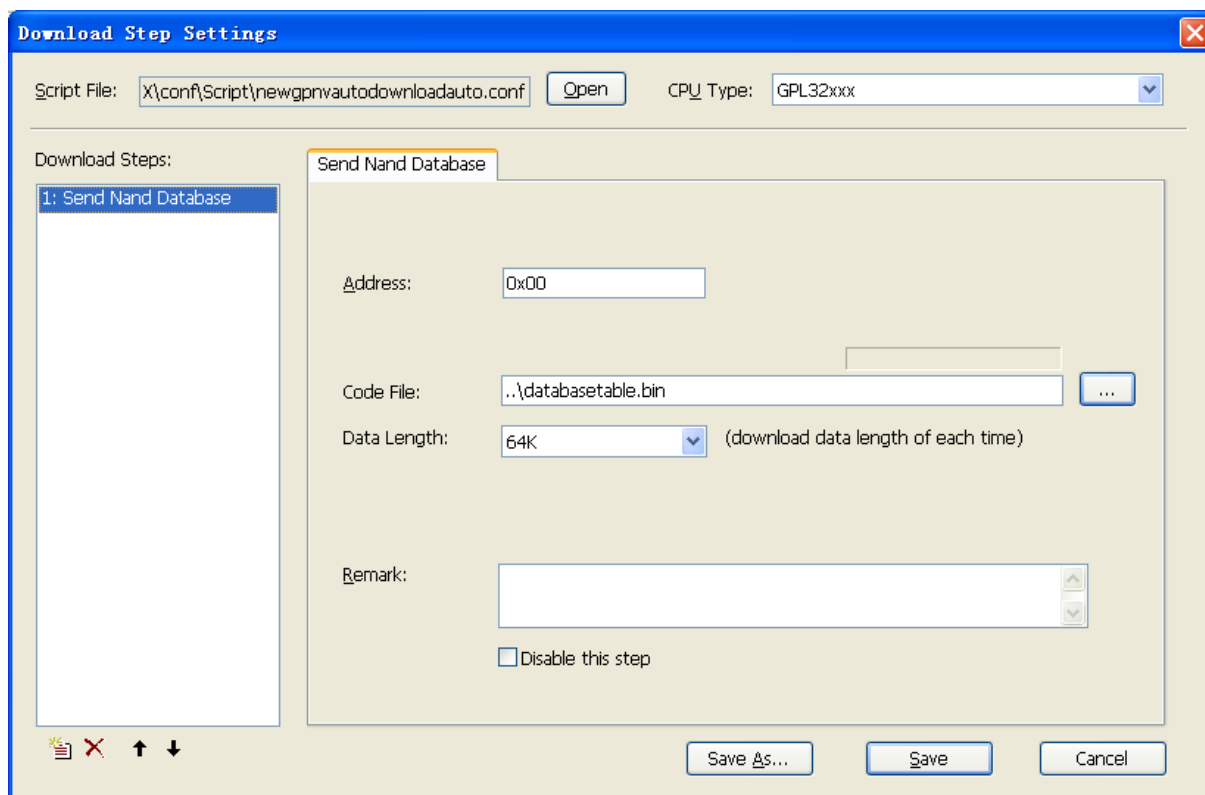
- ✓ Code File: Specify the file path that you want to write.
- ✓ Code File: Specify the file path that you want to write.
- ✓ Data Length: Download data size of each time.
- ✓ Readback option: decide to verify or not when download file,

### 1.3.3 App Area and Data Area Actions



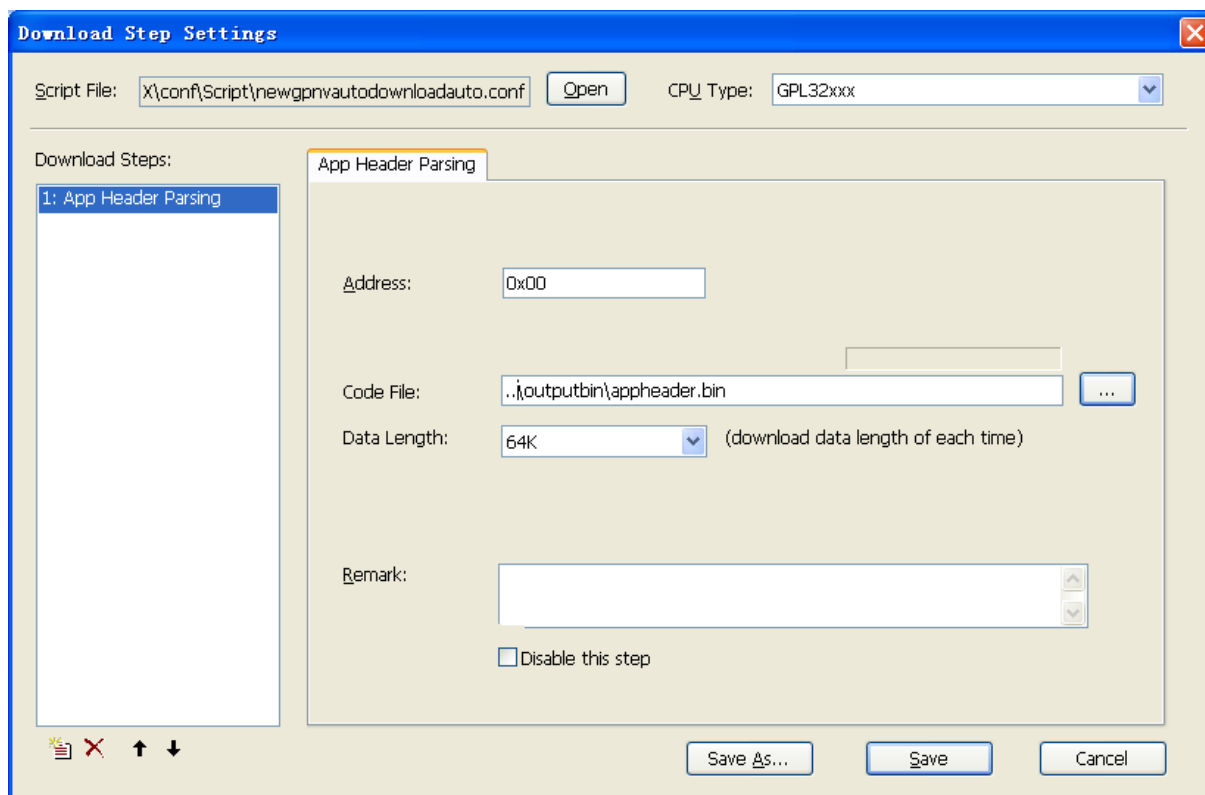
These actions are for initializing and formatting Nand Flash area. They belong to step command. Each step command may have the same user interface, but has different function. Step commands perform action with polling status from device, in order to make sure the action had been executed properly.

### 1.3.4 Send Nand Database



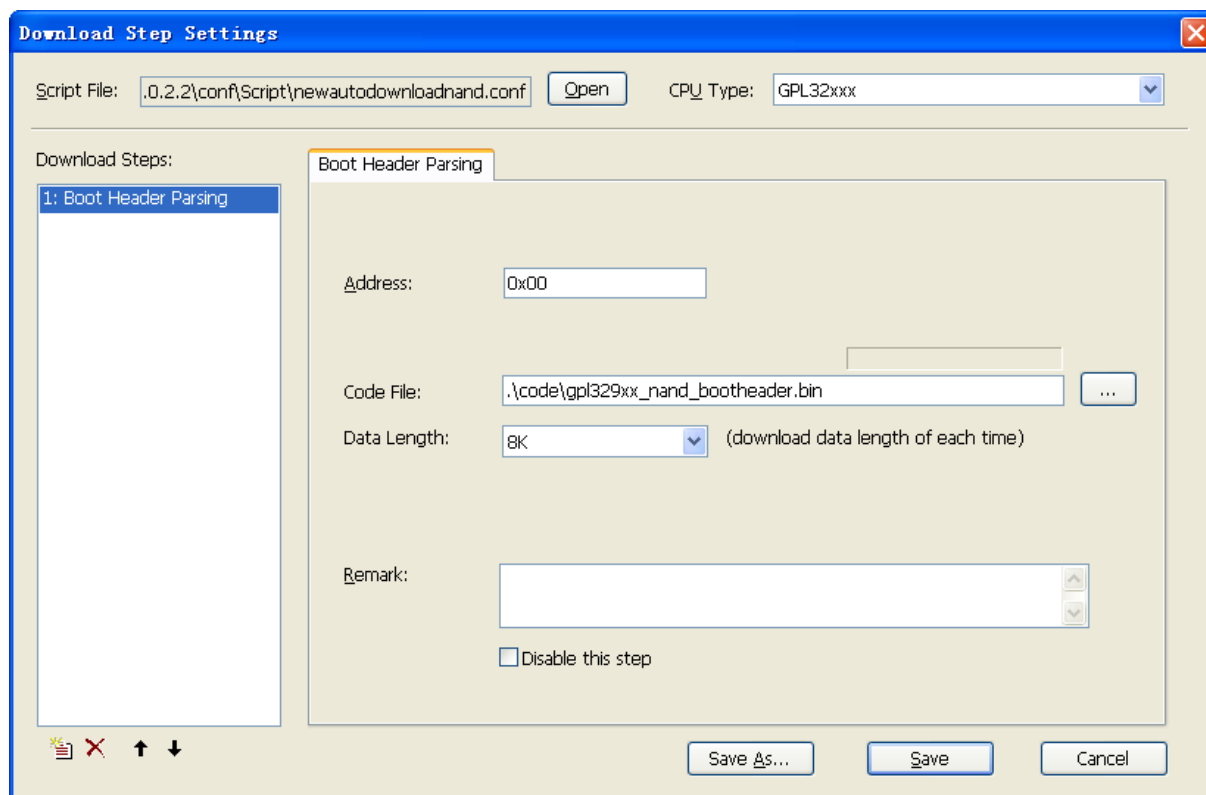
This step will send data base table file to device with command 0xFF55, the device will according the current nand type, query and access to relevant information automatically after parsing the bin file.

### 1.3.5 App Header parsing Action



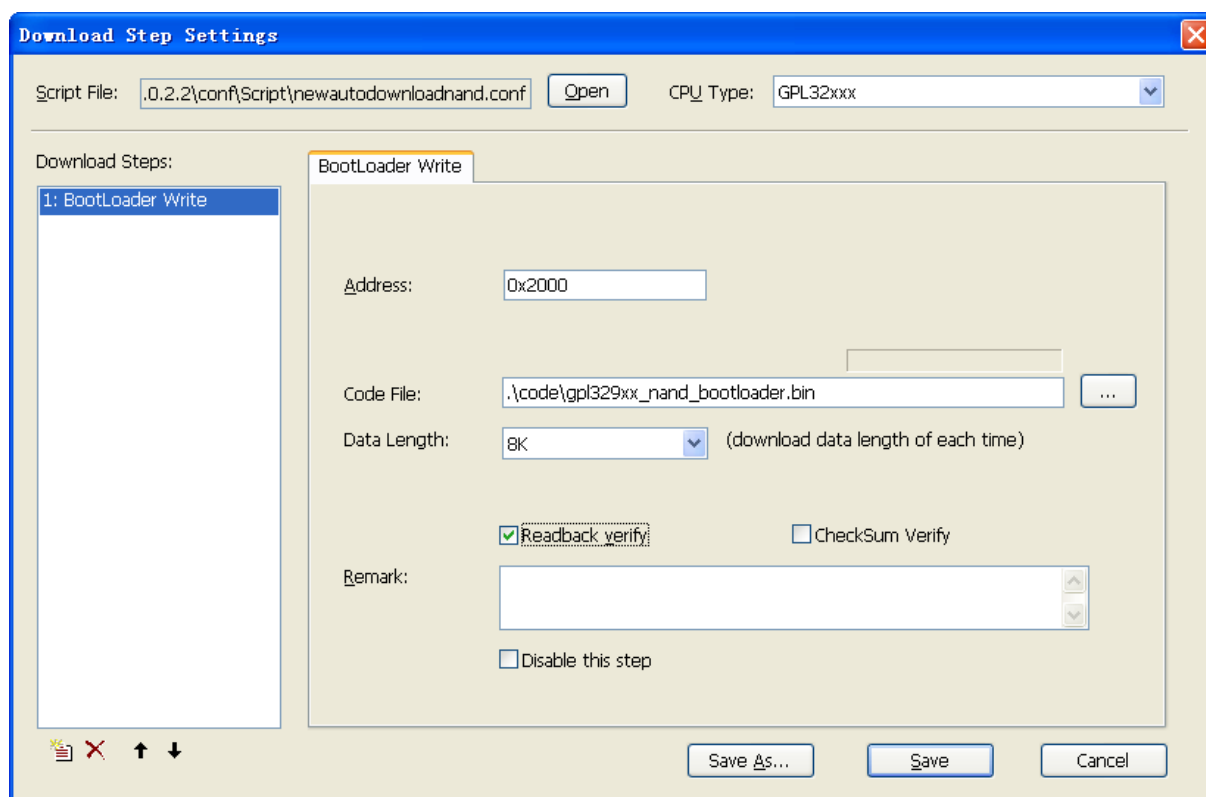
This step will send AppHeader file to device with command 0xFF56, the device will parsing the bin file, and according to the result to automatically adjust the related information when writing app area.

### 1.3.6 Boot Header parsing Action



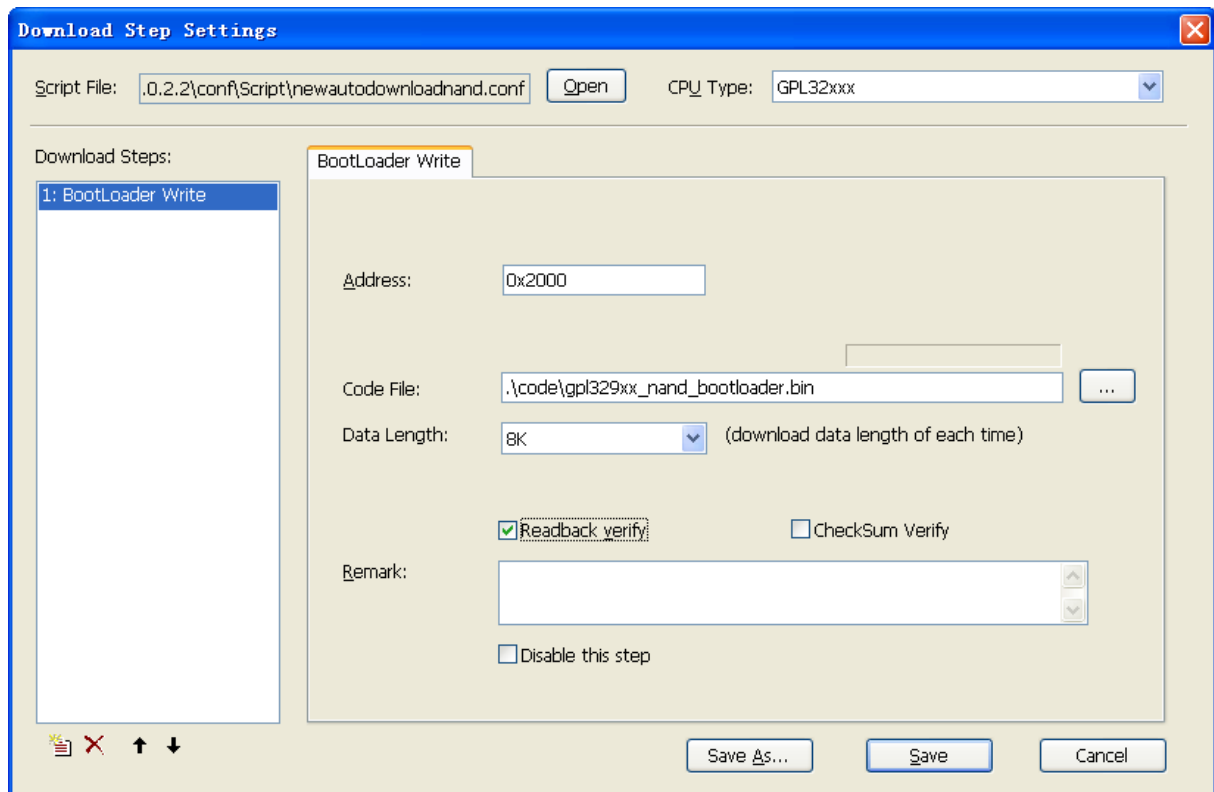
This step will send boot header file to device with command 0xFF51, so the device will get some parameters from this header file.

### 1.3.7 Boot Header Write Action



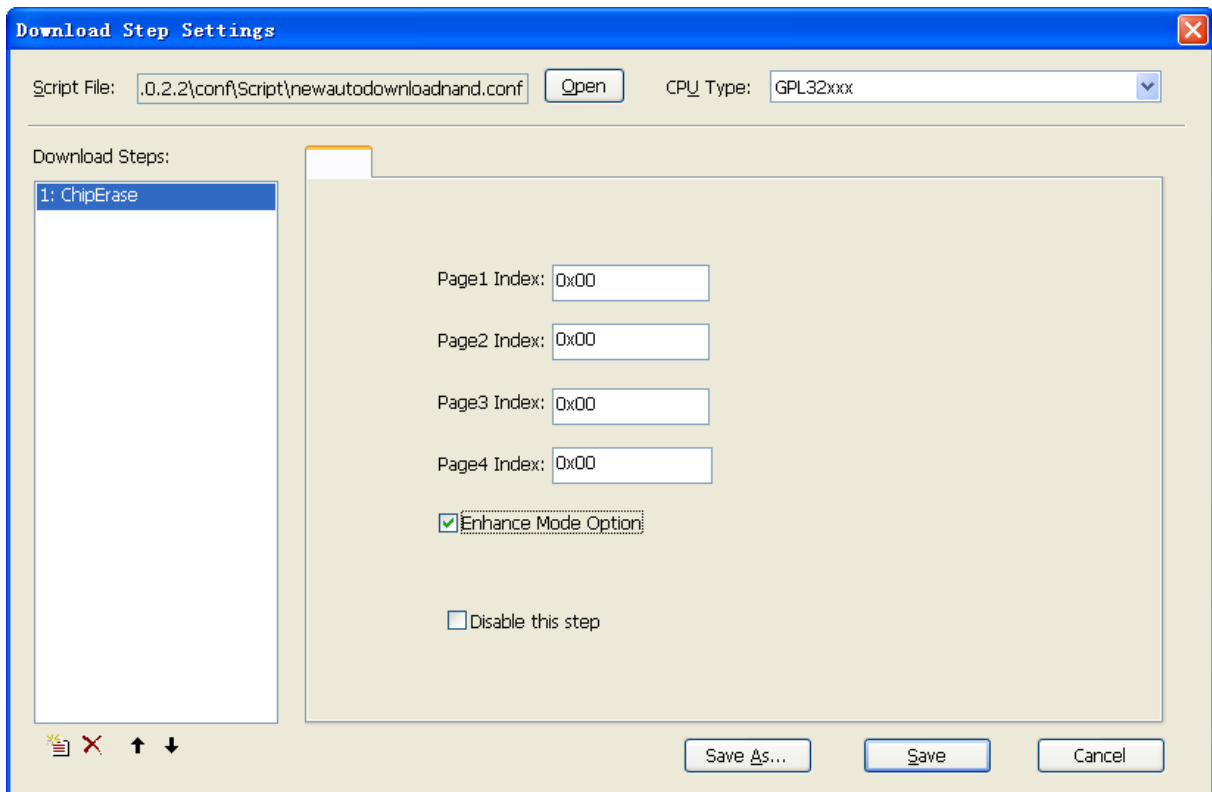
In this step, we will provide two verification modes. One is the readback verify, and the other is checksum verify. Both may check the correctness of the file you download, besides, it belongs to the step command.

### 1.3.8 Boot Loader Write Action



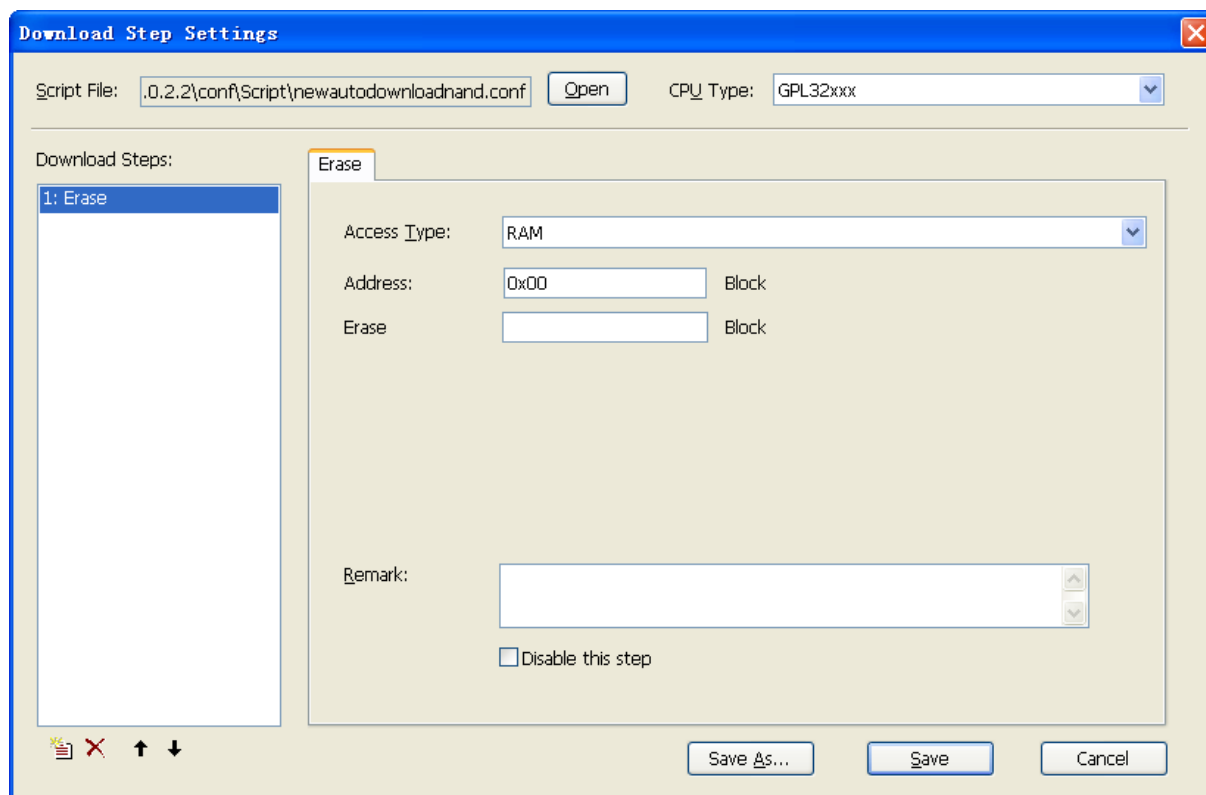
This step is the similar with boot header write action. It also belongs to the step command.

### 1.3.9 Chip Erase Action



- ✓ This action is used to erase all blocks of the Nand Flash. There have two modes: general mode and enhance mode. General Mode is the default mode.
- ✓ Check "Enhance Mode Option", input the page number that you want to erase, will erase the specified page by enhance mode.

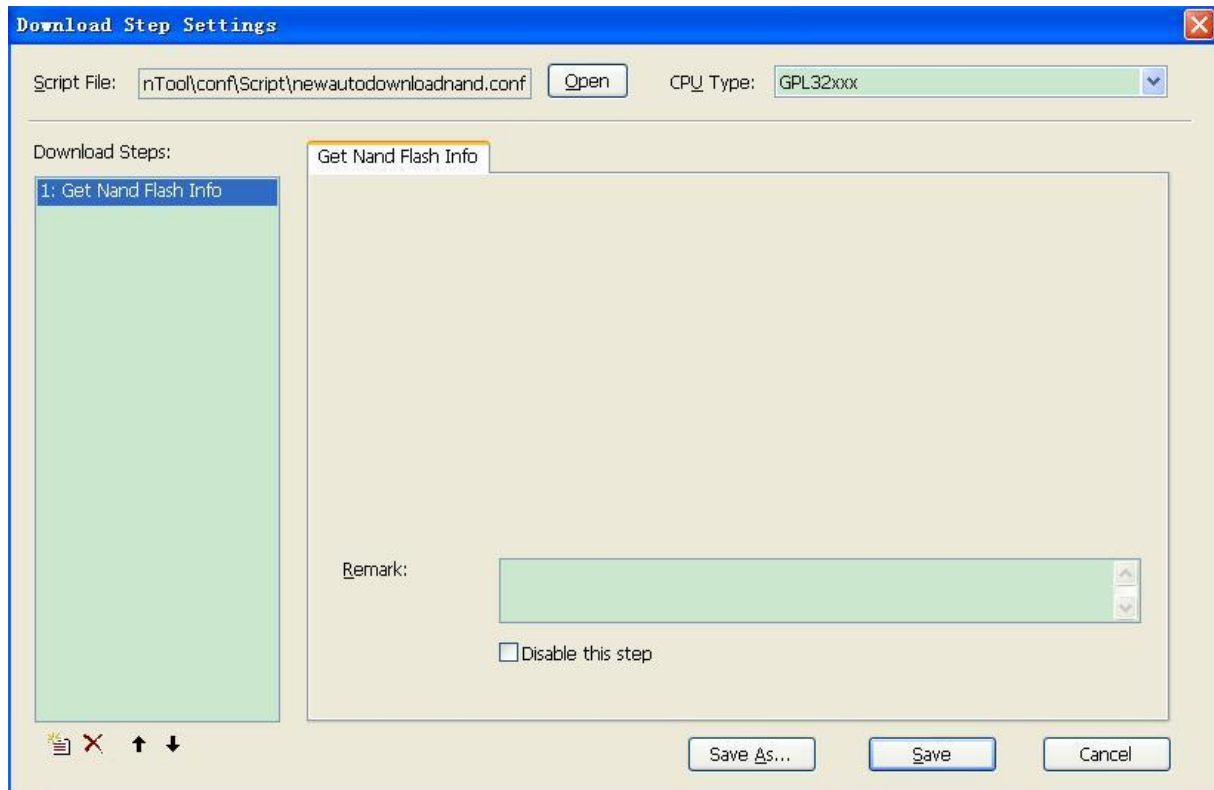
### 1.3.10 Erase Action



The screenshot shows the 'Download Step Settings' dialog box with the 'Erase' tab selected. The 'Script File' is set to '.0.2.2\conf\Script\newautodownloadnand.conf' and 'CPU Type' is 'GPL32xxx'. The 'Download Steps' list on the left contains '1: Erase'. The 'Erase' tab has the following fields: 'Access Type' (RAM), 'Address' (0x00), 'Erase' ( ), and 'Remark' ( ). There is a 'Disable this step' checkbox and buttons for 'Save As...', 'Save', and 'Cancel'.

- ✓ Access Type: Choose the Flash type in Access Type list.
- ✓ .Address: Input the start block that will be erased.
- ✓ Erase: Input the block number that will be erased.

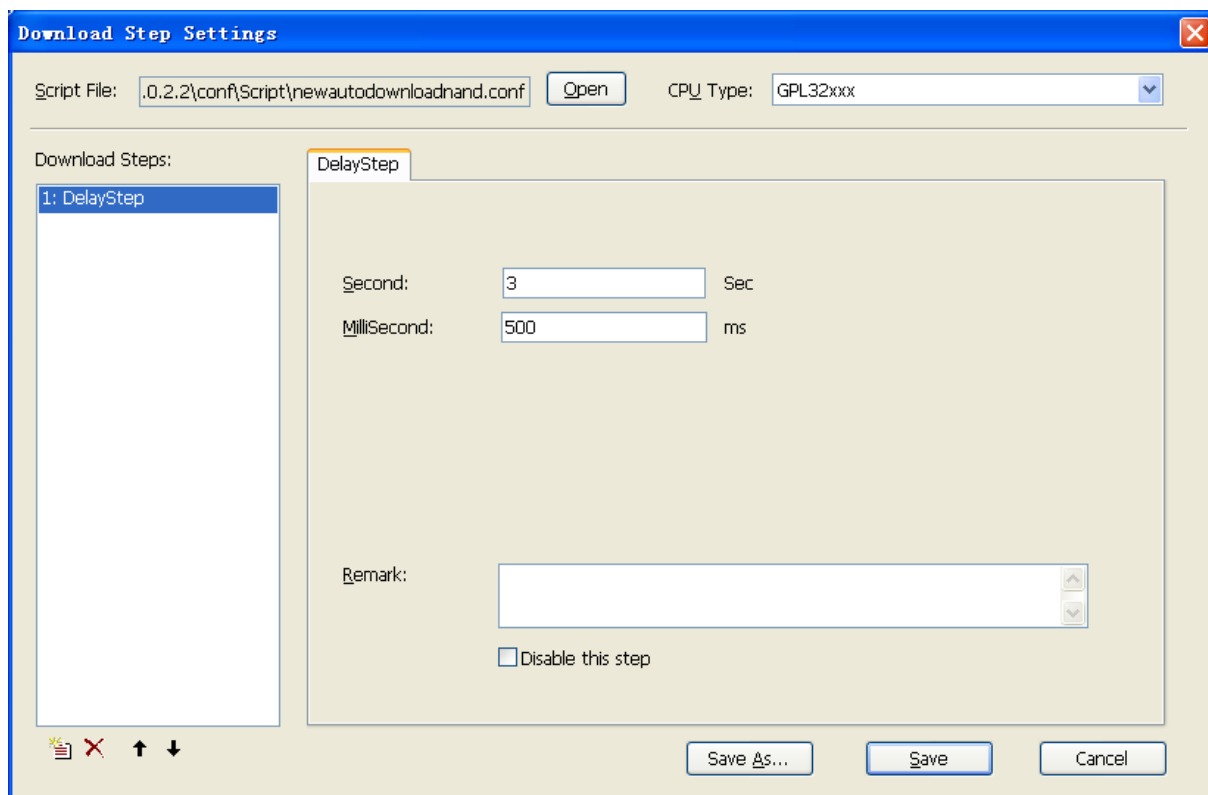
### 1.3.11 Get Nand Info Action



When device execute this step, it will output nand flash information to uart debug tool.

In other words, we can monitor the nand flash information when the host communicates with device.

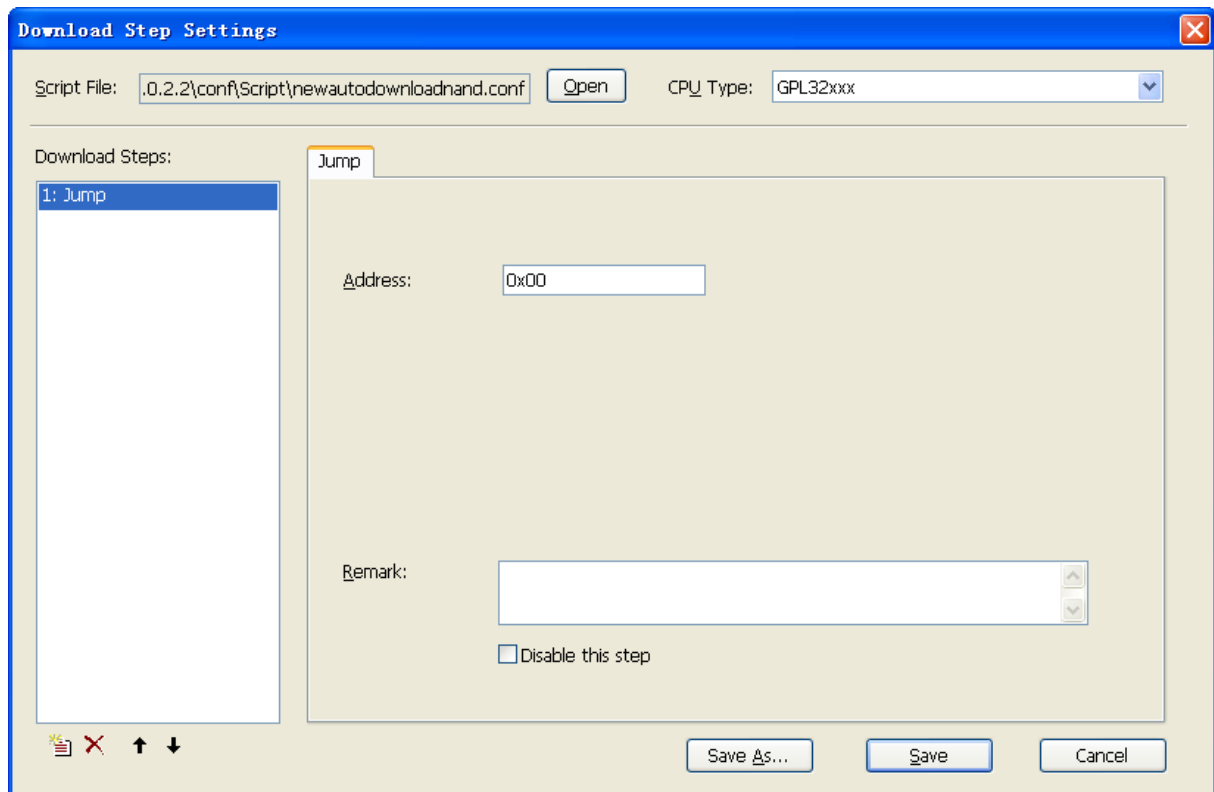
### 1.3.12 Host Command Delay Action



This Command is just for pc side, it do not communicate with device.

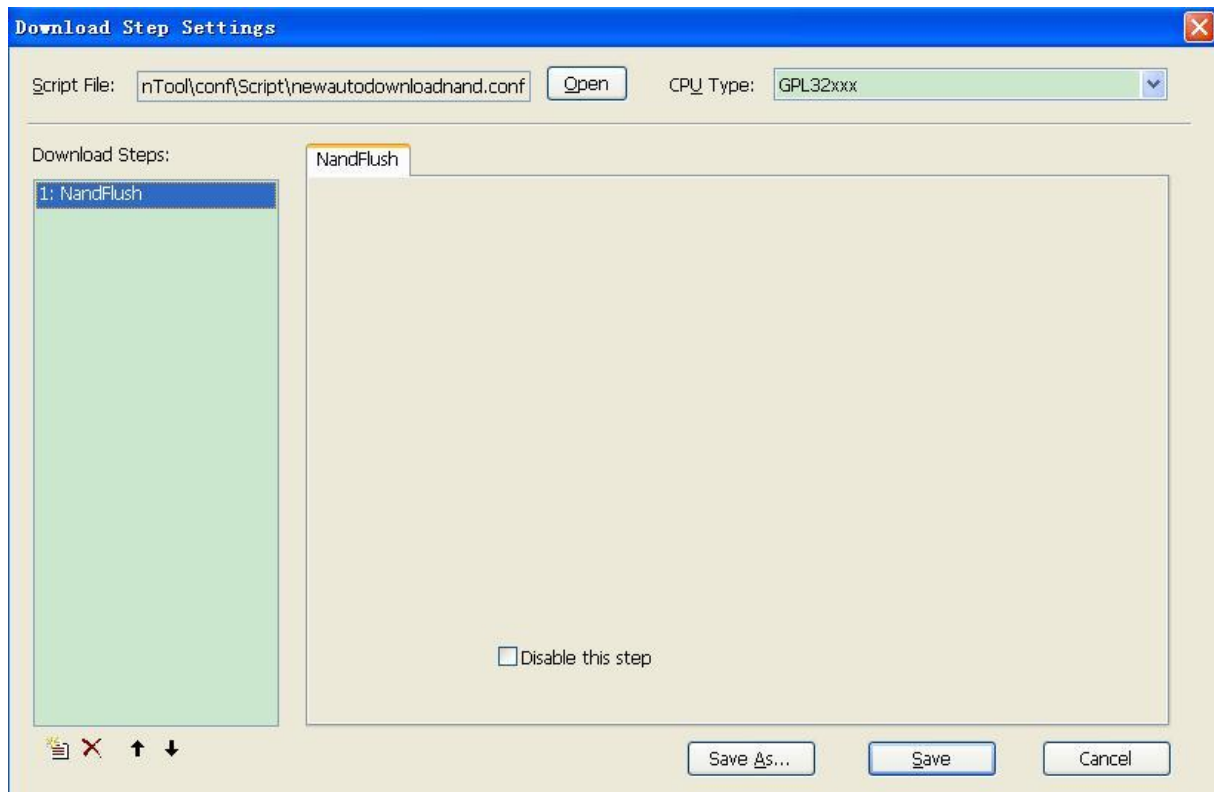
- ✓ Specify the delay time that you want.

### 1.3.13 Jump Action



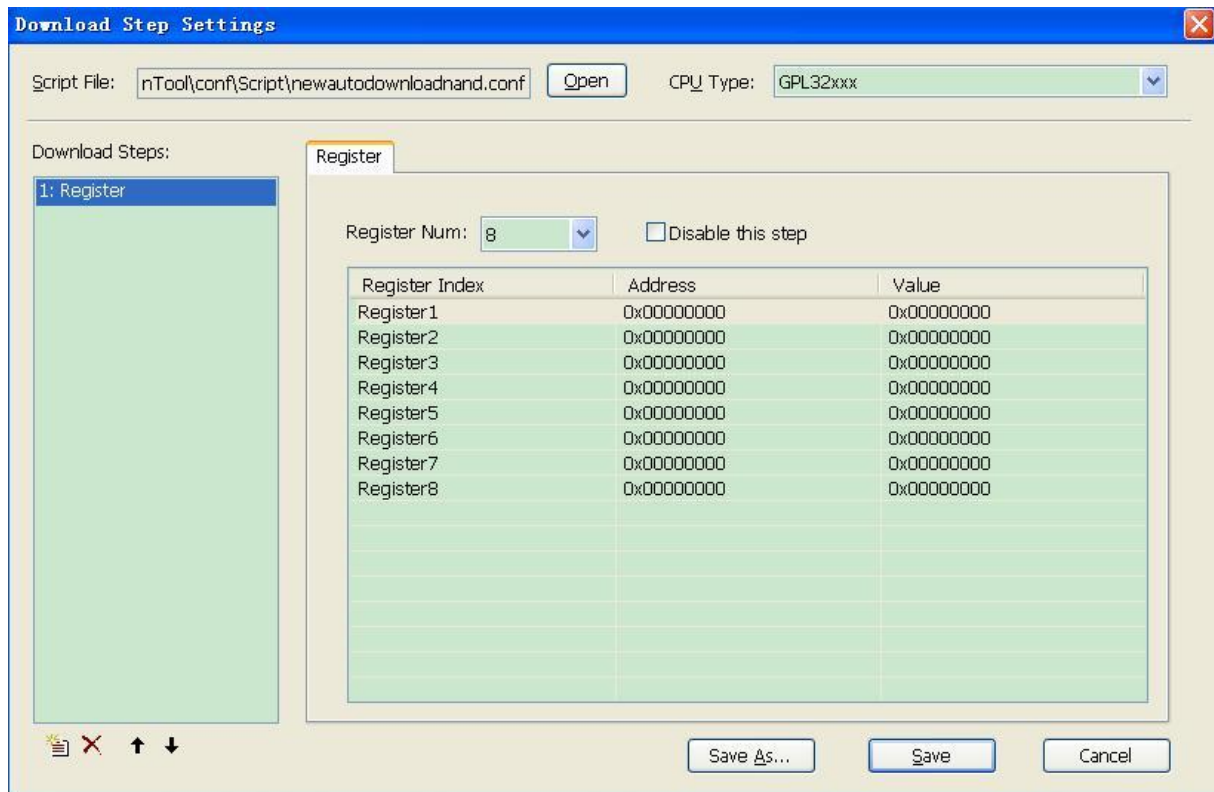
This action will tell device to jump to the specified ram address.

### 1.3.14 Nand Flush Action



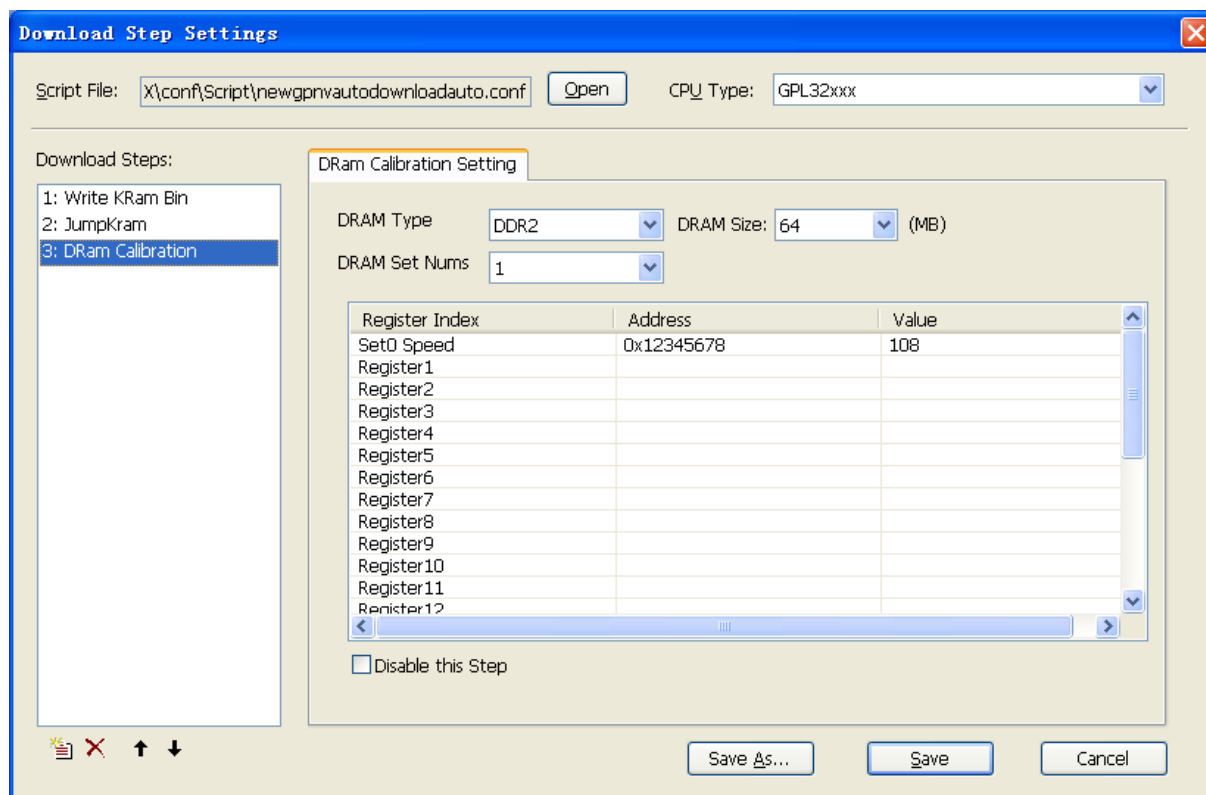
This action is used to flush nand flash, move the data in the butter to Nand.

### 1.3.15 Register Action



This action is used to send the value to specified register. We will provide 31th items to configure. Besides, there is another action name read register. It is the similar with write pre-register action on the user interface. It primarily used to read register value. these value will be now written back into log file for each device. User just specify the number items and the each register address they would like to read . when the device was completely finished executing tasks. User can view these value Information in the log file under the folder of the executable file.

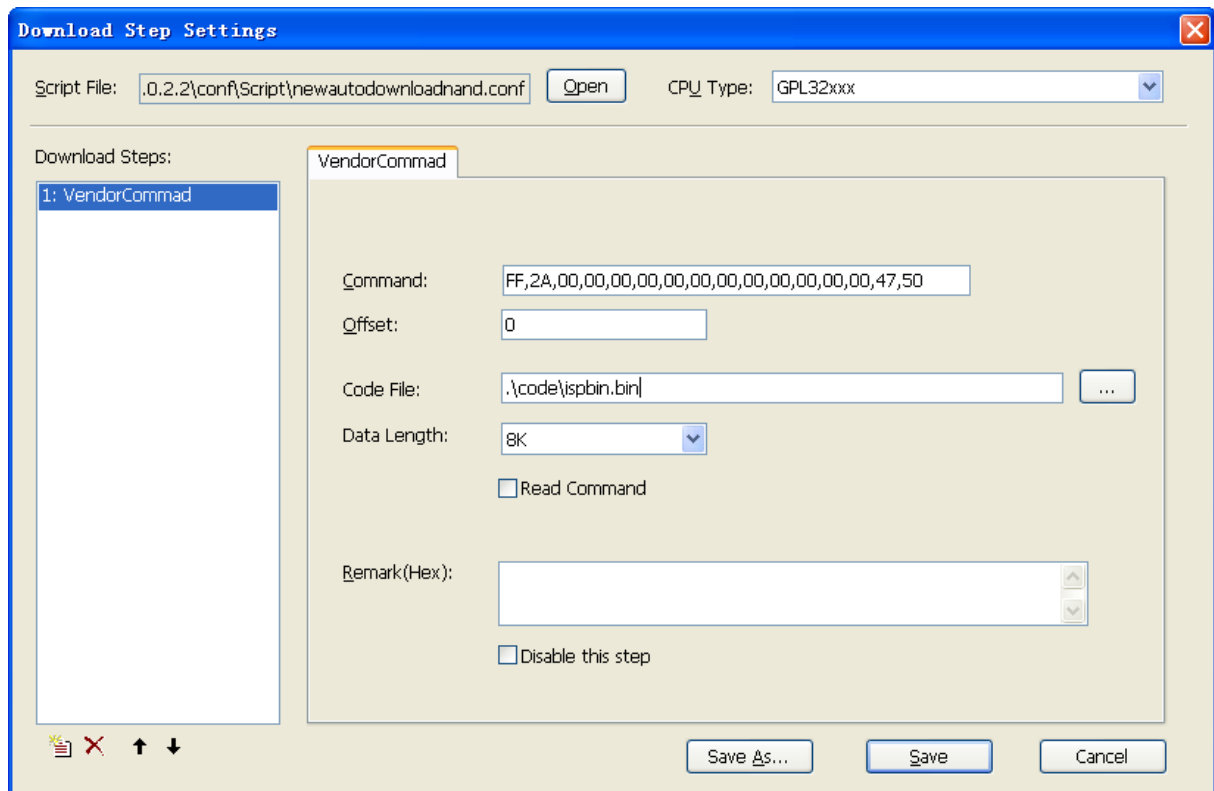
### 1.3.16 Dram Calibration



According to writing a bin file and jump step, then send the DRAM type、DRAM size and SRAM set nums to the device, the device will do the DRAM calibration operation automatically. Finally, the MP tool will read the related register and value to display on the interface.

### 1.3.17 Vendor Command Action

Vendor Command Write:

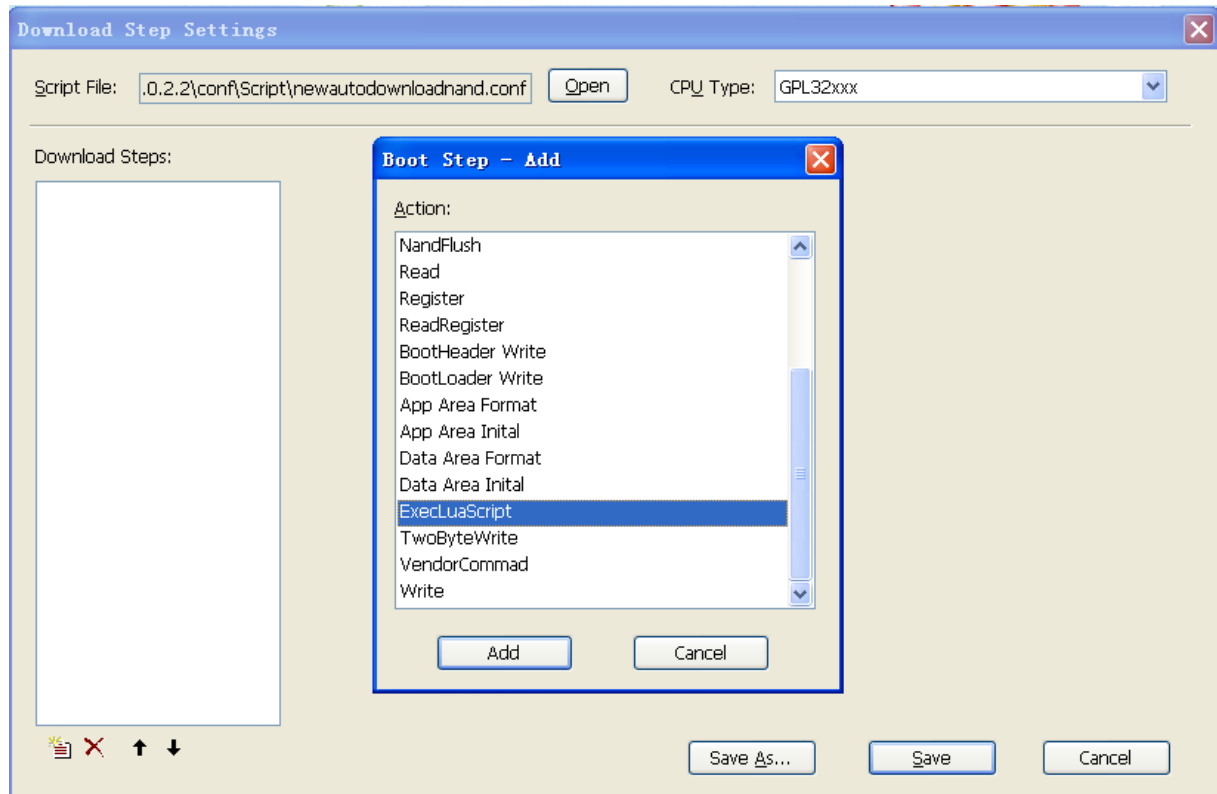


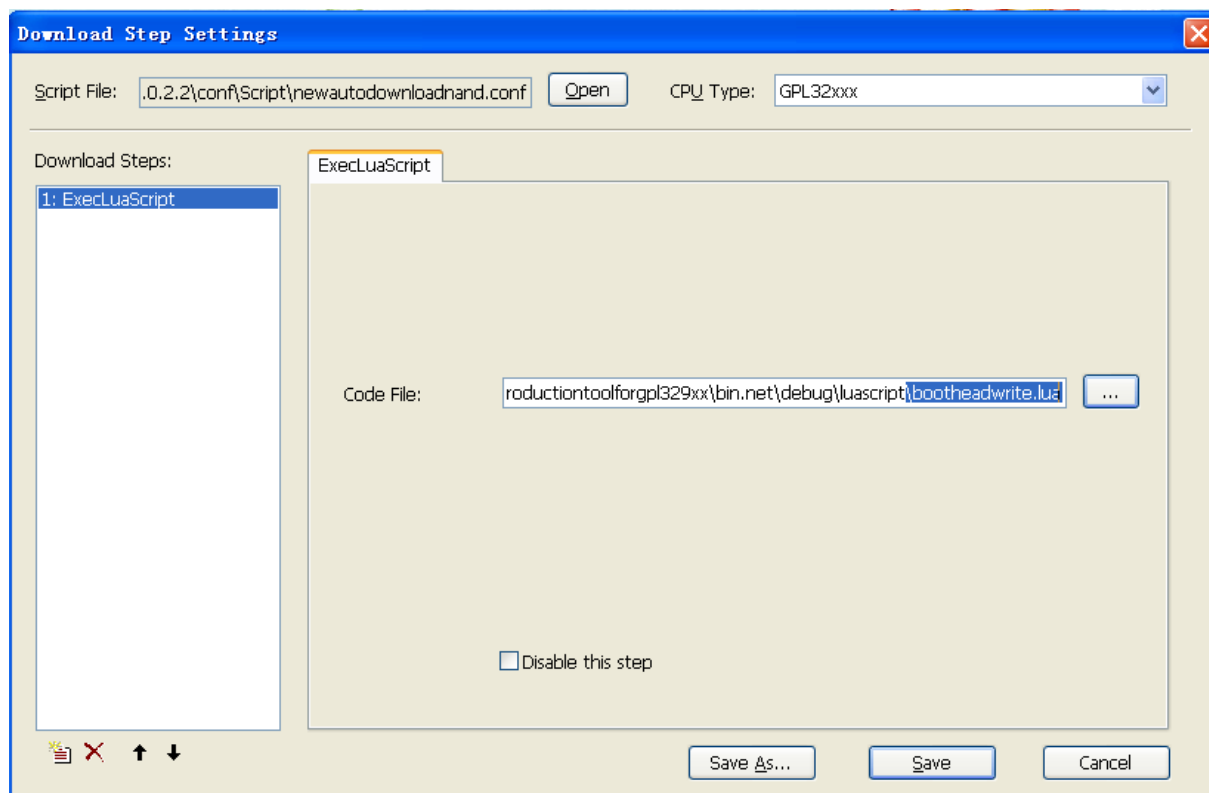
You may customized the command protocol, if you do not select the read command option, it indicates write Command default. There are some parameters in the remark, if the code file is not empty, the previous four bytes are the offset of the code file, and the next four bytes are the data length begins from this offset. Of course, if the code file is empty, the command protocol will send to device directly. Additionally, if the remark is no content, and the code file is not empty, it indicates that the code file will be transmitted to device with command protocol.

- ✓ Command: Specify the command that you want to send to device. The command input has a limited format, the correct input way is: Move your mouse cursor to the beginning position where you want to input the command, then enter your command in turns. Note: You can't use the mouse to select a byte command to enter; Also, you can't copy one byte command to paste to a different location.
- ✓ Offset: Specify the offset value.
- ✓ Code file: Specify the code file that you want to write. If you check "Read Command", it will save the data to the defined code file.
- ✓ Data Length: Specify the data length per time when writing or reading.
- ✓ Read Command: Will read back the data and saved in the code file that you defined.

### 1.3.18 Lua Script

We supported the Lua script from this version, the user can define the steps by lua script, and add to the download steps, the MP Tool will parse the script to finish the download.



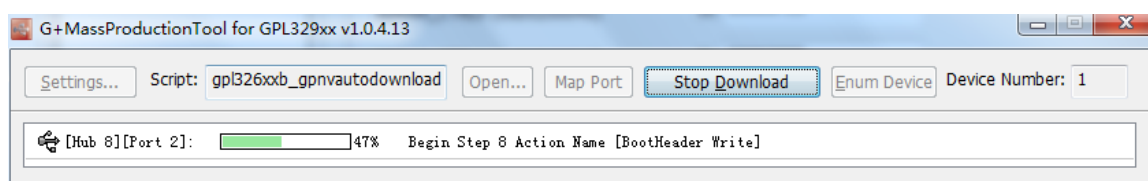


## 1.4 Execution(Download)

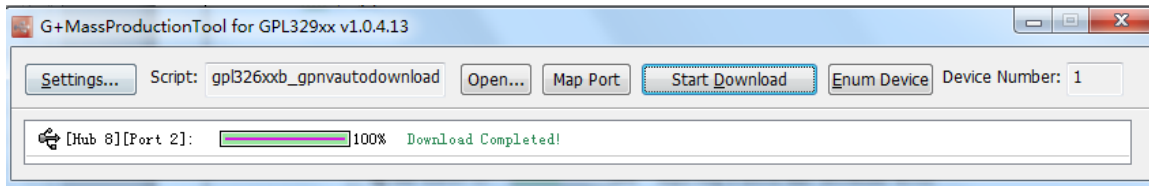
### 1.4.1 Single Device download

Click “Start Download” and the status bar will keep updated until it finishes.

You can click “stop download” to stop it when it’s downloading.



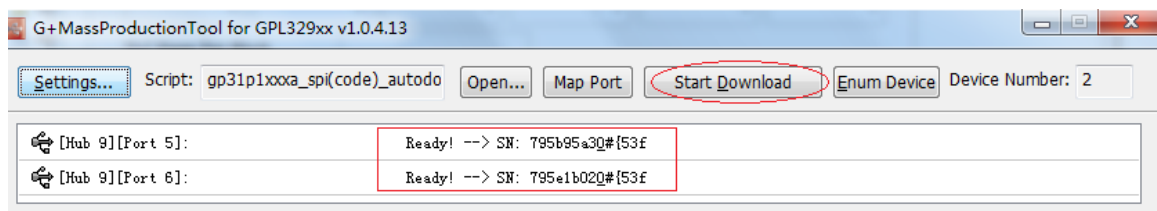
After finished ,it will show 100% to us,and “Stop Download” also change to “Start Download”.If you want to download to another device,you just change the device and do again



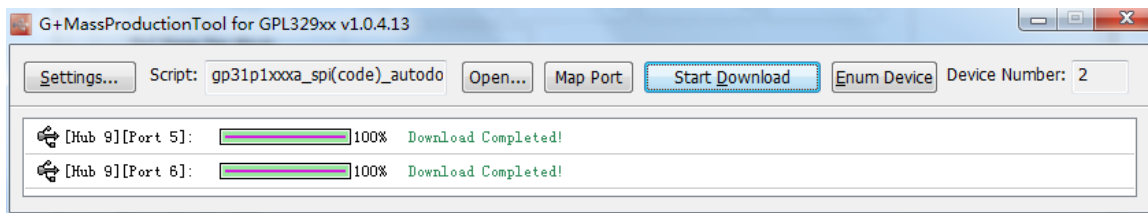
## 1.4.2 Mutiple Devices download

If user want to download more than one devices at the same time, You must do like this.

1. After the binary file or hdb file is generated by G+Code packer, then click “download” button ,it will pop up the interface of “ G+ Mass Production Tool For GPL329xx “,Mutiple devices download steps is:
  - (1) Open G+Code packer , then DRAM calibration
  - (2) After setting the correct parameters,and click “pack “successfully
  - (3) Click “Download” button to pop up G+ Mass Production Tool For GPL329xx Tool
  - (4) Access the GP USB device one by one to a Hub,and then turn on power for each device (Don’t access Hub to another Hub,Hub can provide 2A current itself )
  - (5) After MP Tools UI display all devices, and then click “StartDownload”,when it’s in downloading,” StartDownload” will change to “StopDownload”



- (6) After all devices download completed , “StopDownload” will change to “StartDownload” again, and also show to us 100%,turn off the power of all devices , repeat Step 4 to download other devices



Don't plug any USB bus when it is in downloading.

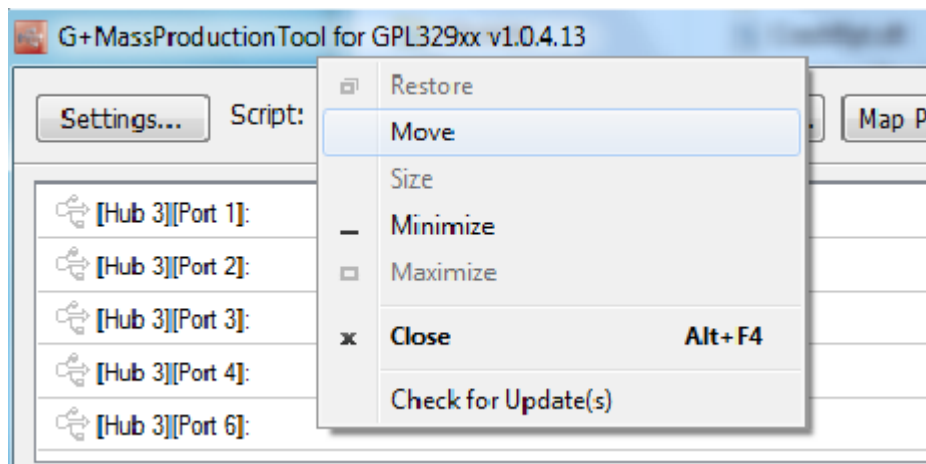
If there have some devices download completed or failure before all completed, Please wait for all devices completed , and then you can turn off or plug device.

2. If user already has conf or bin file , and open “ G+ Mass Production Tool For GPL329xx” by double-click “USBMassProductionTool\_For\_GPL329XX \G+MassProductionTool For GPL329xx.exe”, you can directly begin at Step 4

## **1.5 Check for Update(s)**

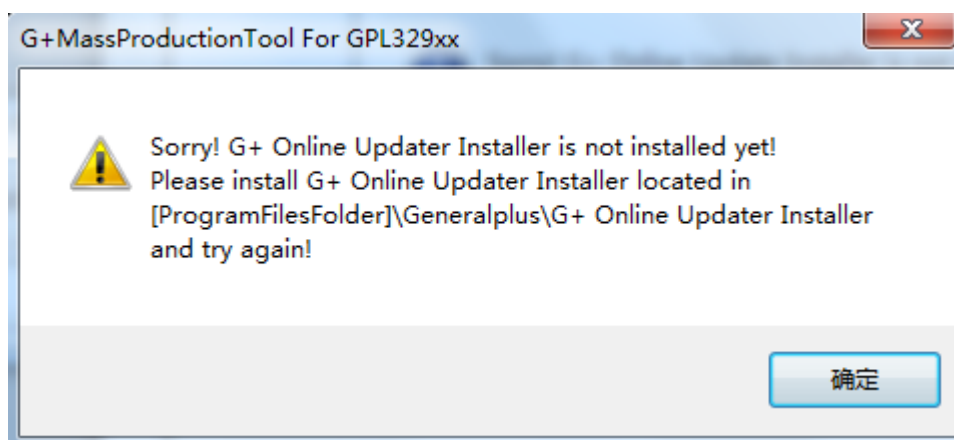
The “Check for Update(s)” button will be seen when user click right button on the G+MassProductionTool For GPL329xx icon in taskbar. The function is used to check the tool version is newest or not. It also allows the user which has A-Key to download the newest version directly. The operation of the function is described below :

1. The “Check for Update(s)” button will be seen when user click right button on the G+MassProductionTool For GPL329xx in taskbar.




2. Click button to execute the function of “Check for Update(s)”.

2.1 It will pop up following message if the tool “GP SW Tool Online Updater” is not installed.

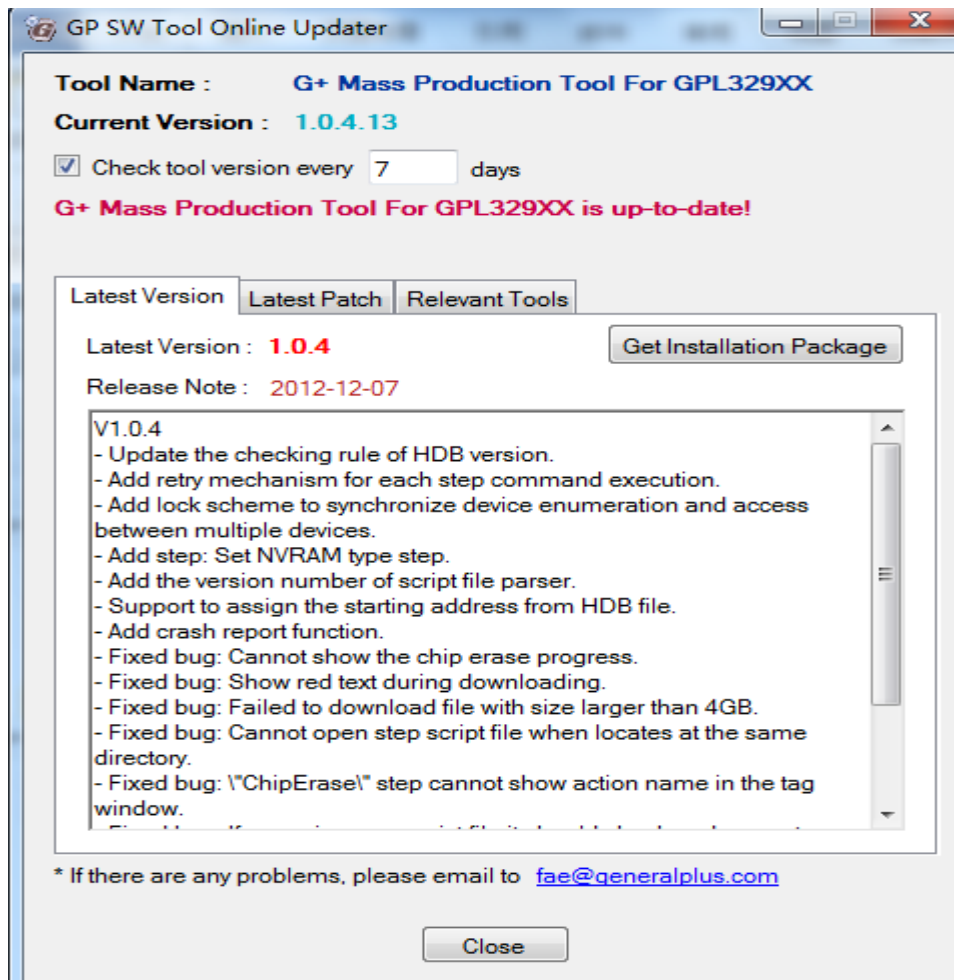


You can execute “G+ Online Update Installer.exe ” in the folder mentioned in the message to install the tool “GP SW Tool Online Updater”.

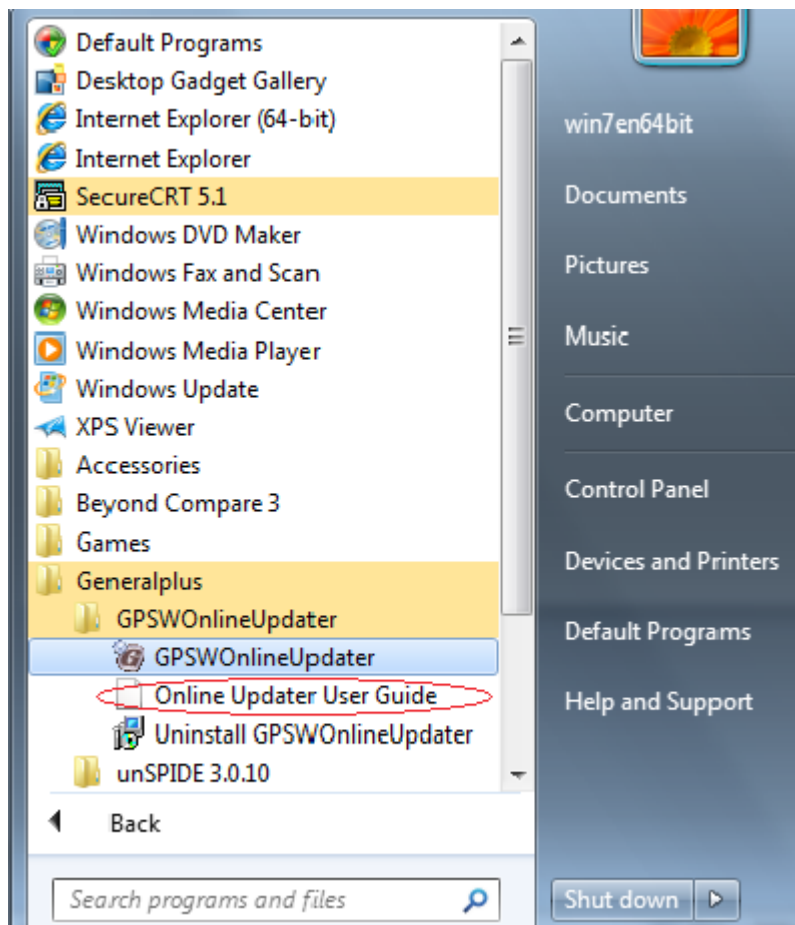
 [G+ Online Update Installer.exe](#)

2.2 It will pop up the user interface of “GP SW Tool Online Updater” if the tool is installed. You can get the information of current tool version 、latest version 、latest release date ... and so on. You can also set the auto check version period. The user

which has A-Key can press “Get Installation Package” button to download the newest version when the current tool version is out of date.



2.3 If you want to know more about the “G+ Online Updater”, After the “GP SW Tool Online Updater” tool is installed, you can read the guide of “Online Updater User Guide.pdf”. (The Path: All Programs-> Generalplus -> GP SW Online Updater -> Online Updater User Guide.pdf )



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## 2 DownloadFile Stored rules( conf/ bin / hdb)

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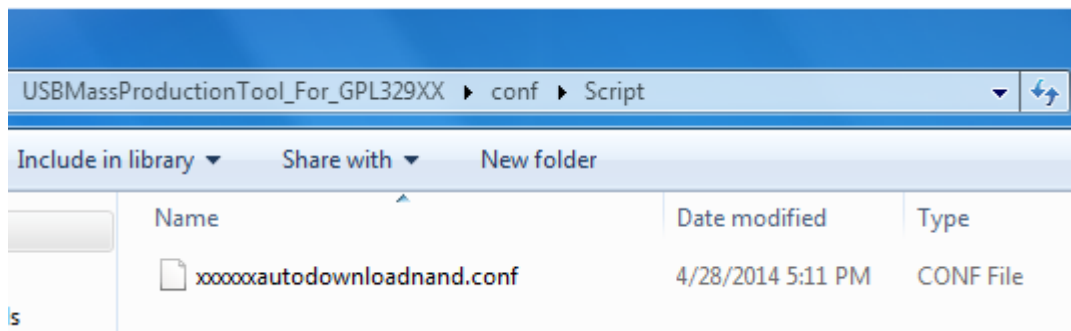
After the binary file or hdb file is generated by G+Code packer, user may need to move the files to other location or computer to download, It is very easy to bring some problems:G+ Mass Production Tool For GPL329xx can't find these files (.conf/ .bin / .hdb) when download.To avoid this happened, it is recommended to store files using the following rules

### 2.1 “. Conf” file stored rules

Rules: Stored the Conf(ScriptFile) to the directory of  
“USBMassProductionTool\_For\_GPL329XX\conf\Script”

Example:

”xxxxxautodownloadnand.conf “ will be used to Mass Production Tool For  
GPL329xx to download, so move it to  
“USBMassProductionTool\_For\_GPL329XX\conf\Script”

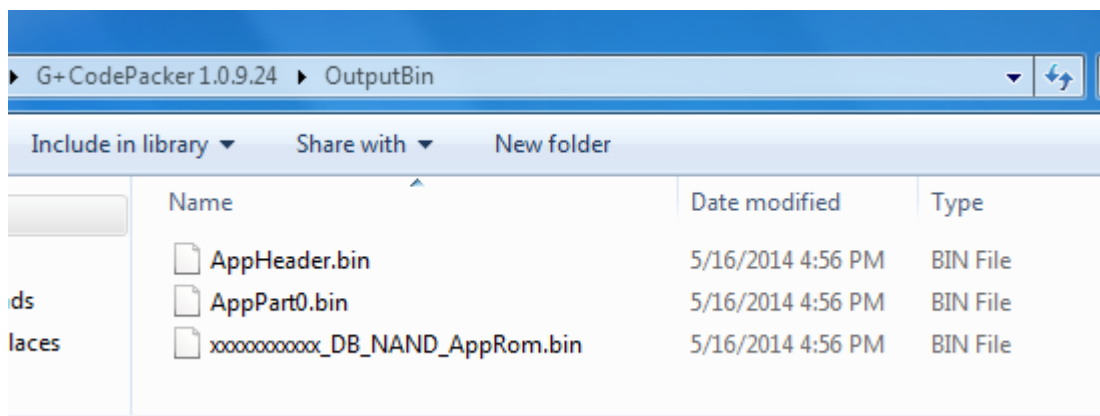


### 2.2 “.bin/.hdb” stored rules

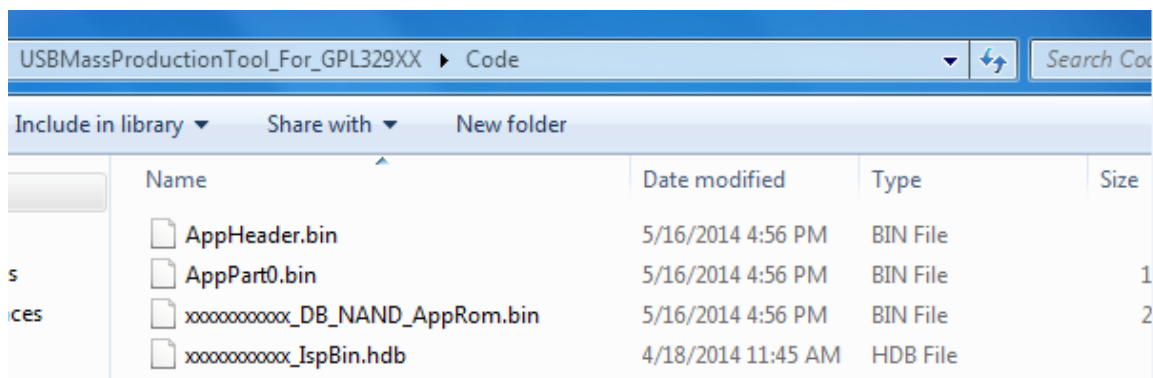
Rules: Copy the binary file or hdb file which is generated by G+Code packer to  
the directory of “USBMassProductionTool\_For\_GPL329XX\Code”

Example:

Step 1: Binary file (.bin) which is generated by G+Code packer will be stored in the directory of “G+CodePacker 1.0.9.24\OutputBin” first



Step 2: Copy the Step 1 binary file (.bin) or some other binary file the user downloading will be used to directory “USBMassProductionTool\_For\_GPL329XX\Code”, and it also needs to copy HDB file(.hdb) to this directory



Description: hdb file (.hdb) which is generated by G+Code packer will be stored in the directory of “G+CodePacker 1.0.9.24\USBMassProductionTool\_For\_GPL329XX\Code” first. If



hdb in other directory, please copy it to " USBMassProductionTool\_For\_GPL329XX\Code"