directory

1. introduce

1.1 Introduction to the PA-800 LITE UFS programmer

The PA-800LITE UFS programmer is designed to meet the engineering needs of data replication and verification of 1 to 8 UFS chips simultaneously. PA-800LITE UFS programmer speed can be set to Gear 1B, Gear2A. It can help you complete chip data copying and verification faster.

Our PA-800 LITE UFS programmer can be used with USB 3 without the need for a master as a source 0 The online mode reads data from the host PC, and you can also use the host computer to manage the project files.

PA-800LITE UFS Programmer also provides a convenient interface, just follow the steps, it will make your job easier than you think!

1.2 features

- Easy to operate, no master is required for operation. Save the parameters and data of the master card by creating a project, and engineer the production in the way of executing the project, so that the time of programming and calibration is shorter and easier to manage.
- 8 stations including a master station.
- Supports UFS 2.0, 2.1, 2.2, 3.0, 3.1.
- Controllable project setting, setting BootLun and Lun partitions based on the master card and writing data, controllable project setting, flexible project arrangement.
- Use Donghui's host computer software to control the programmer, perform engineering and project management.
- The PA-800Lite UFS programmer has a USB 3.0 port to connect to a standard Windows computer.
- Windows programs offer better user interface features and powerful features that make work easy.
- The copy speed can be set up to Gear2A with a throughput of approximately 180MB/s.

1.3 specification

Copy capacity	8 seats
power supply	75W 115V/240V
Computer interfaces	USB3. 0，180MB/s
size	260x169.5x50 mm
weight	2. 5 kg

2. Package contents

☑PA-800Lite UFS programmer 1/set

☑USB3.0 cable (1.5 m)..... 1/pcs

☑Power cord (1 5m) 1/pcs

☑UFS test mount (BGA153) / set

☑Handbook.. 1/pcs

3. Accessory selection

4. System settings

4.1 Hardware installation

The device needs to be linked to 220V power supplies, and the computer is connected to USB after startup

The device can be found in Serial Devices in Device Manager.

4.2 Software installation

Directly execute the installation package of the PA800lite.

4.3 Installation environment and system condition

Requires .NET4 7. 2 environment

5 Operation process

A. The programmer uses USB3.0 to link the PC and power boot.
B. If there are more than 2 programmers, use the host computer software to specify the programmer sequence, and do not specify the sequence for one programmer.
C. First use the master station setting of the main sequence to set the working environment.
D. A new project generated using the master of the master station on the programmer from the main sequence.
E. Confirm the project settings.
F. Confirm that the test stand is installed.
G. Start the project.
H. Put in the UFS chip.
I. Perform engineering
J. Confirm the quantity of work completed and remove the corresponding completed UFS chips.
K. Reinsert the UFS chip that needs to be engineered to continue the project.
L. The cycle repeats until the project is completed, and the chip is removed to finish the work.

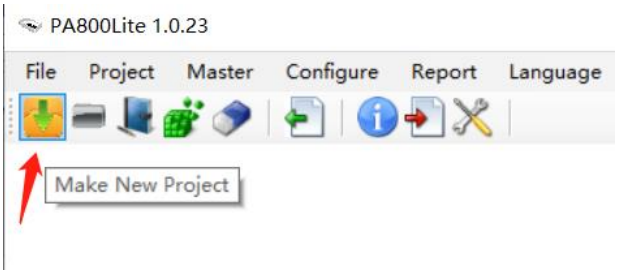
6 Operational considerations

Put the chip into the Master station, use the Master parameter setting to adjust the working environment of the device, it is recommended to use the settings in the IC list, if the chip model is not included in the list, first use the basic settings into the Partition wizard to test that there is no problem in reading and writing and then use the New Project to create a project to run.

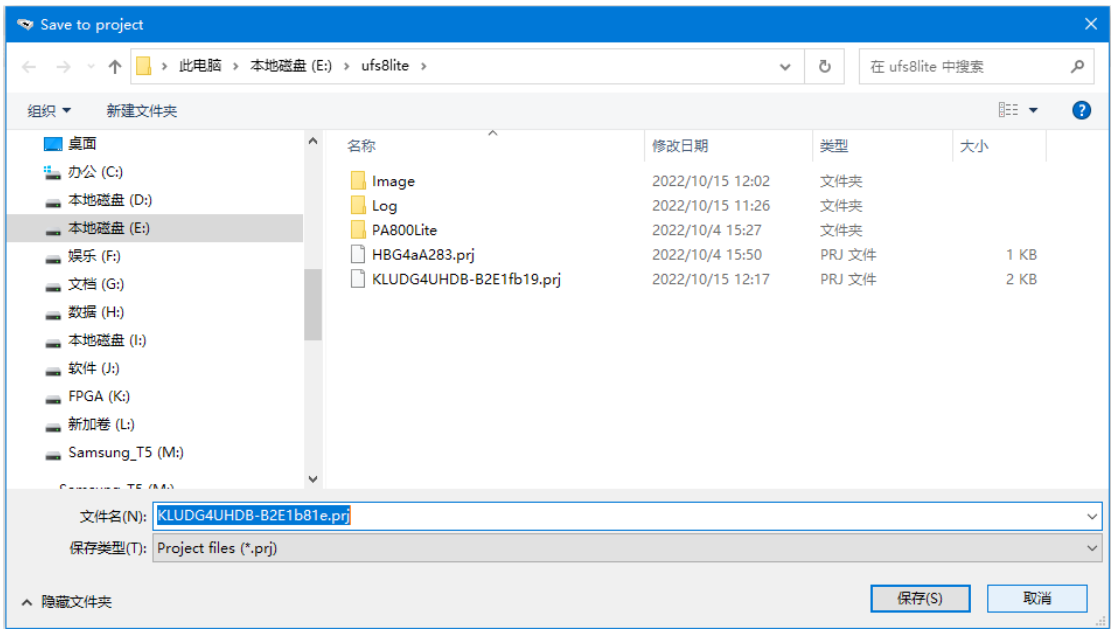
If there is a problem with the read and write test, use the master parameter setting to adjust the working environment and continue to enter the partition wizard to do the read and write test. Once everything is good, create a project with New Project to run.

7 Interface operation

Create a new project



点击 Make New project

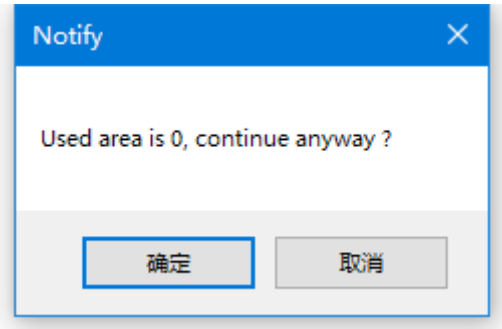


It will read the chip on the master station of the specified host, and then create a .prj file with the chip name to save the chip settings and the data in the chip.

The parameter setting of the New Project is based on the parameters of the Master station.

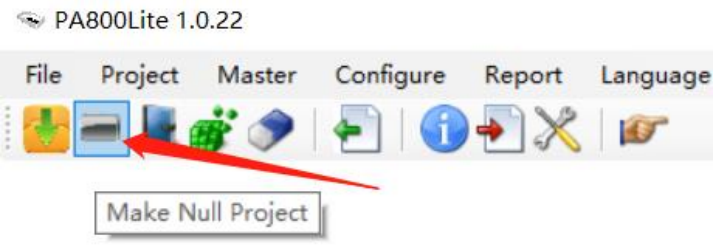
If the chip's bConfigDescrLock is started, the project is also set according to the chip settings, so it is recommended to use the Open Project to verify the settings once after the new project is completed. **bConfigDescrLock is a register that locks UFS settings at one time.**

If it is a blank master, only save the settings as an item, and a notification will pop up without data

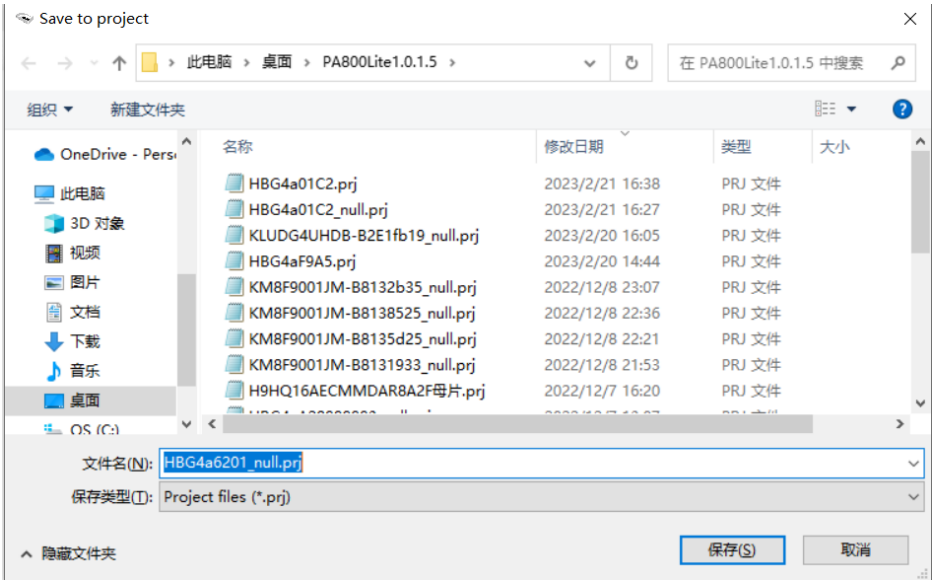


Press OK to finish saving the project.

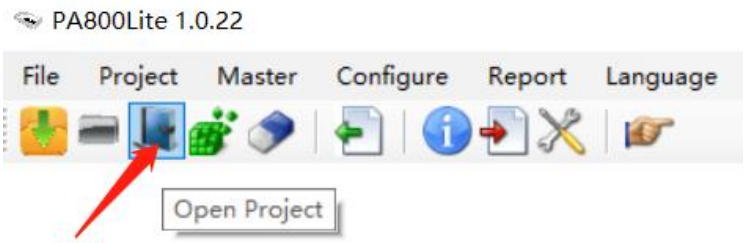
Make Null project



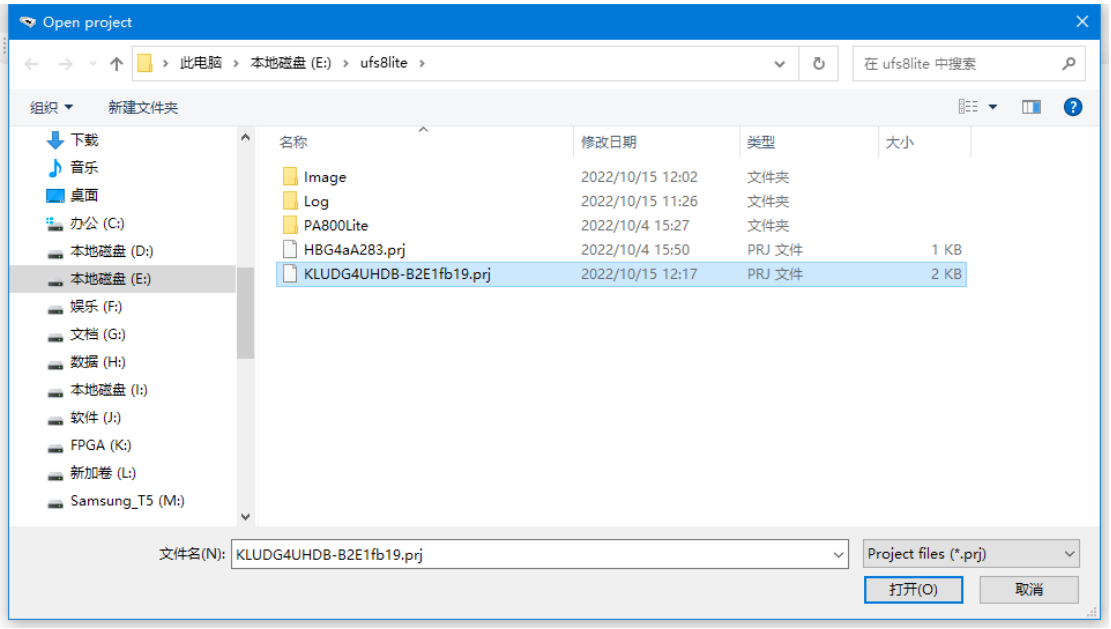
Save the settings of the chip into the project without saving the data



Open Project Settings



Click Open Project



Selecting the specified .prj file will bring up the settings

bConfigDescrLock is a register that locks UFS settings at one time.

If the chip has problems writing, it is recommended to adjust the TX HS Sync (data checksum) option from 4 A to 4 F, with 4 A being the fastest 4F For the slowest, the write cache OutBuffer ranges from 8 000 to 1 000, 8000 is the fastest and 1 000 is the slowest and some UFS chips need to be slower to be stable.

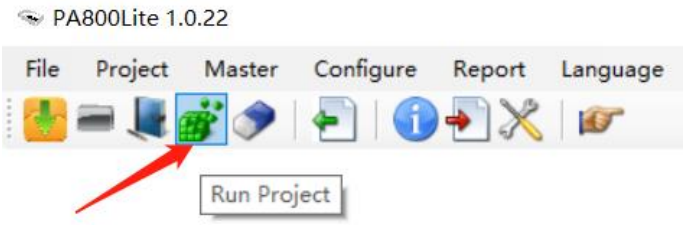
Press OK to complete the setup.

FUA bit is checked for some chips that cannot be written normally.

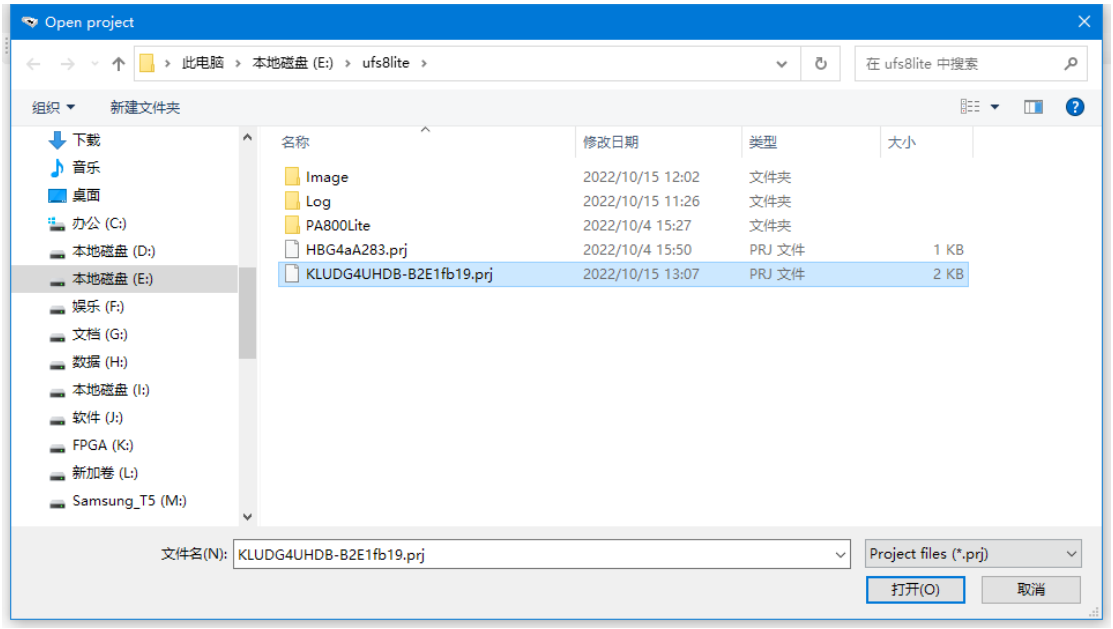
FUA bit: Write directly to memory without caching.

Execute the engineering plan

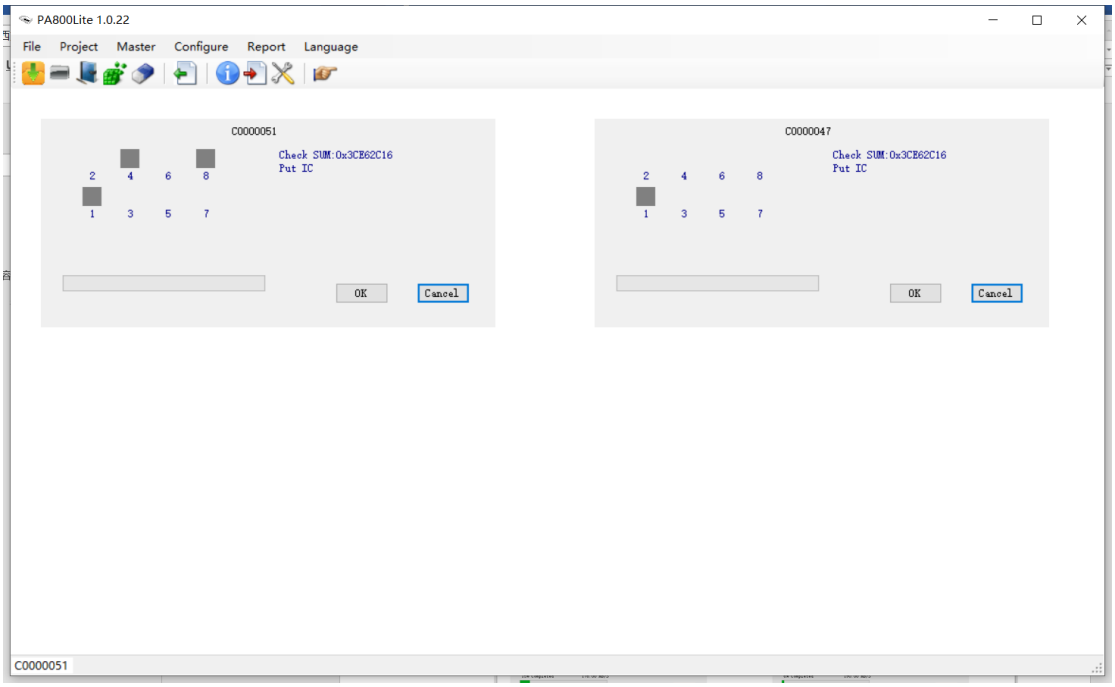
Click Run Project



Select Specify schedule



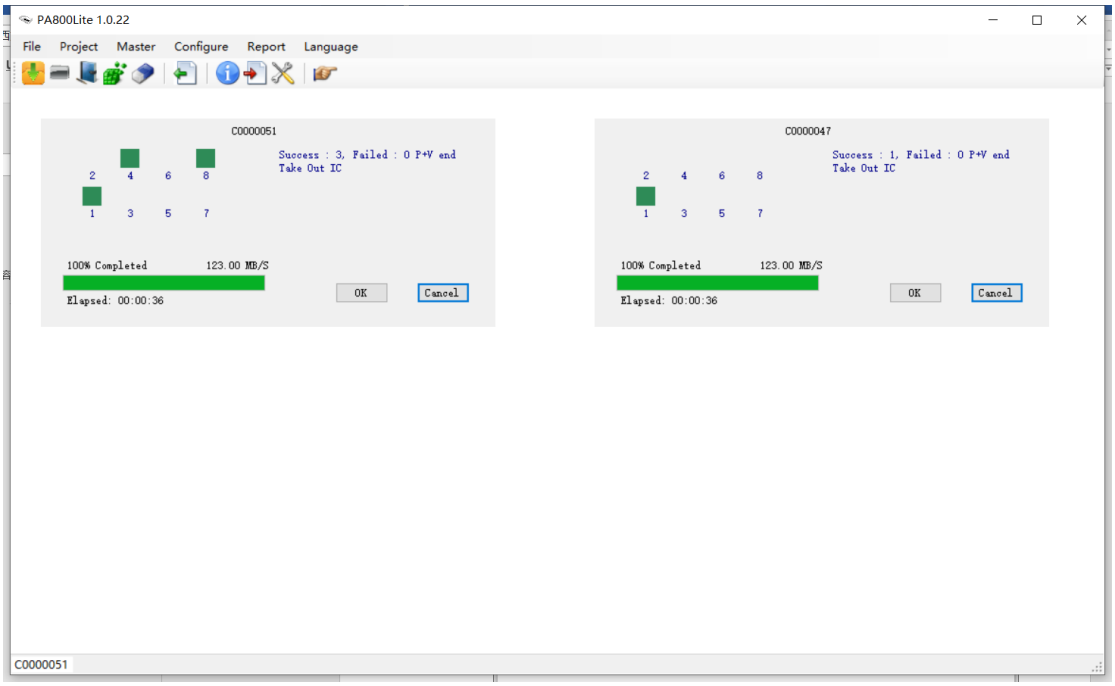
The Online Project interface then pops up



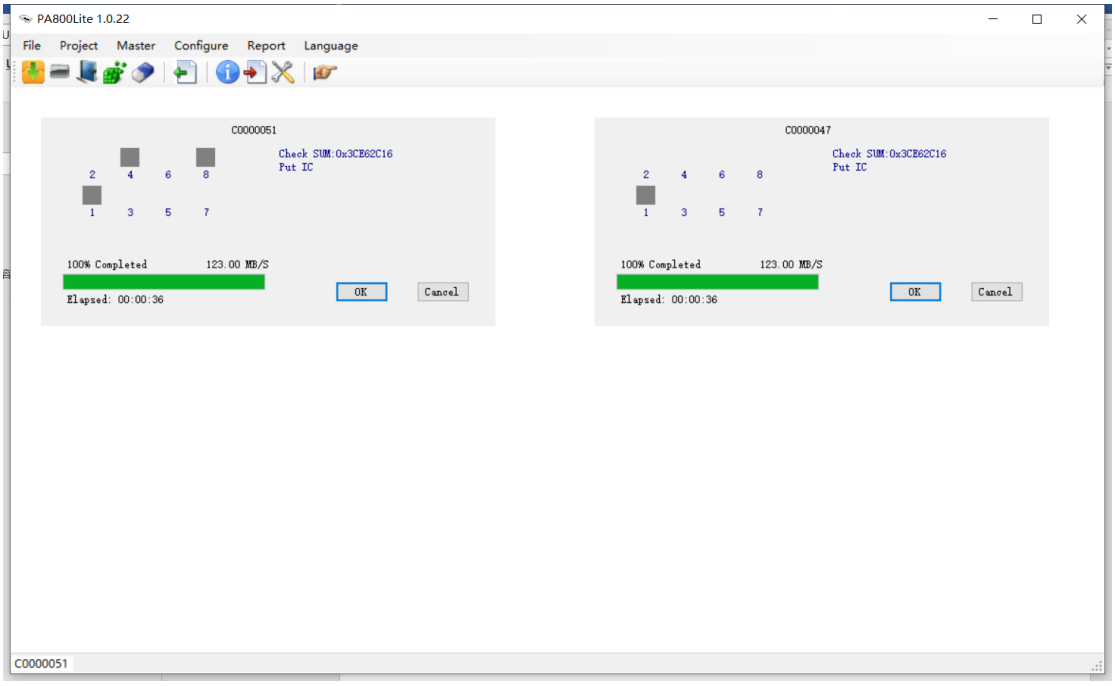
Click the OK button of the corresponding programmer interface to start the project.

The shortcut keys for OK are 1, 2, 3, and 4 to start the project.

Once the work is done

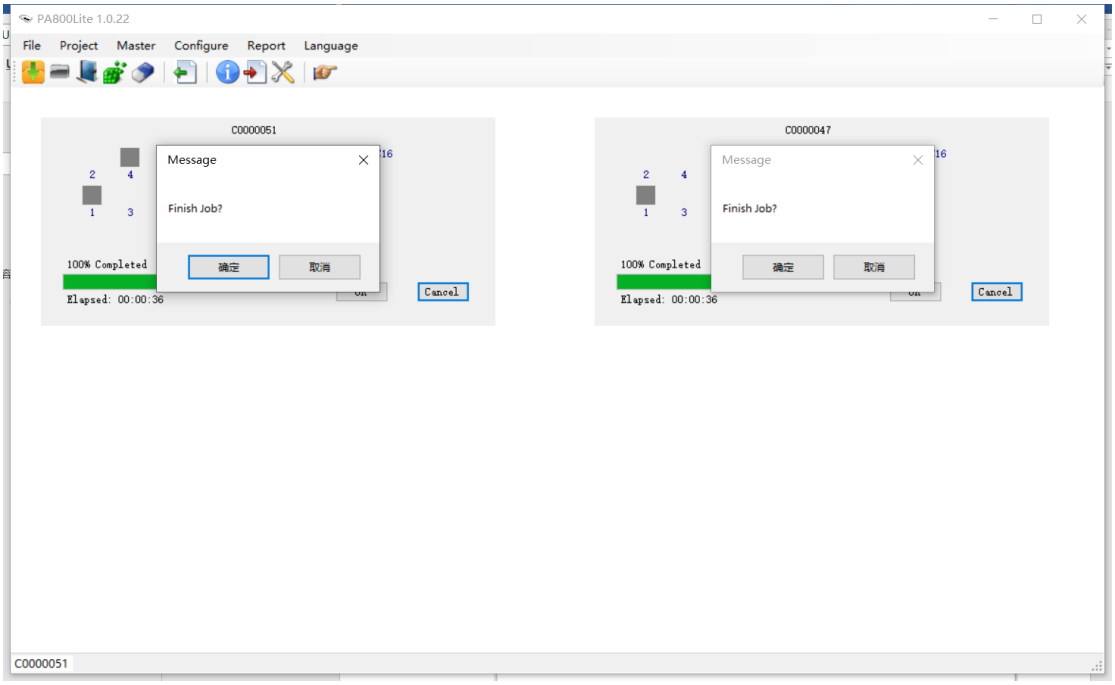


Remove the IC and click OK to go back



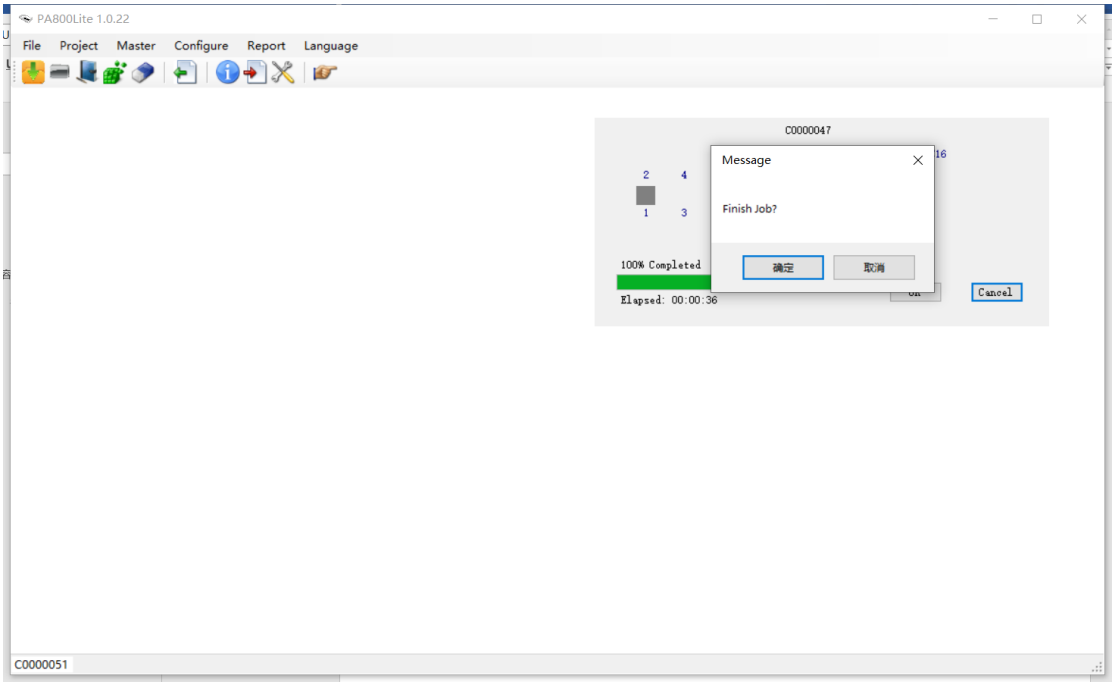
You can insert the chip and click OK to continue the next project.

Click Cancel

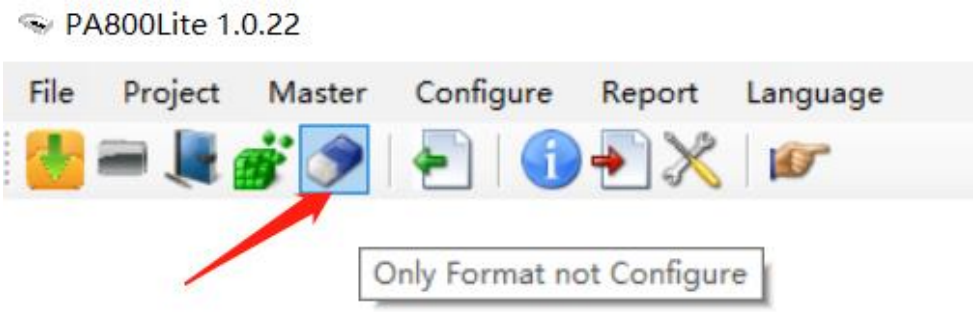


A Finish Job appears

Select OK or Cancel to turn off the corresponding programmer



Only format not configure

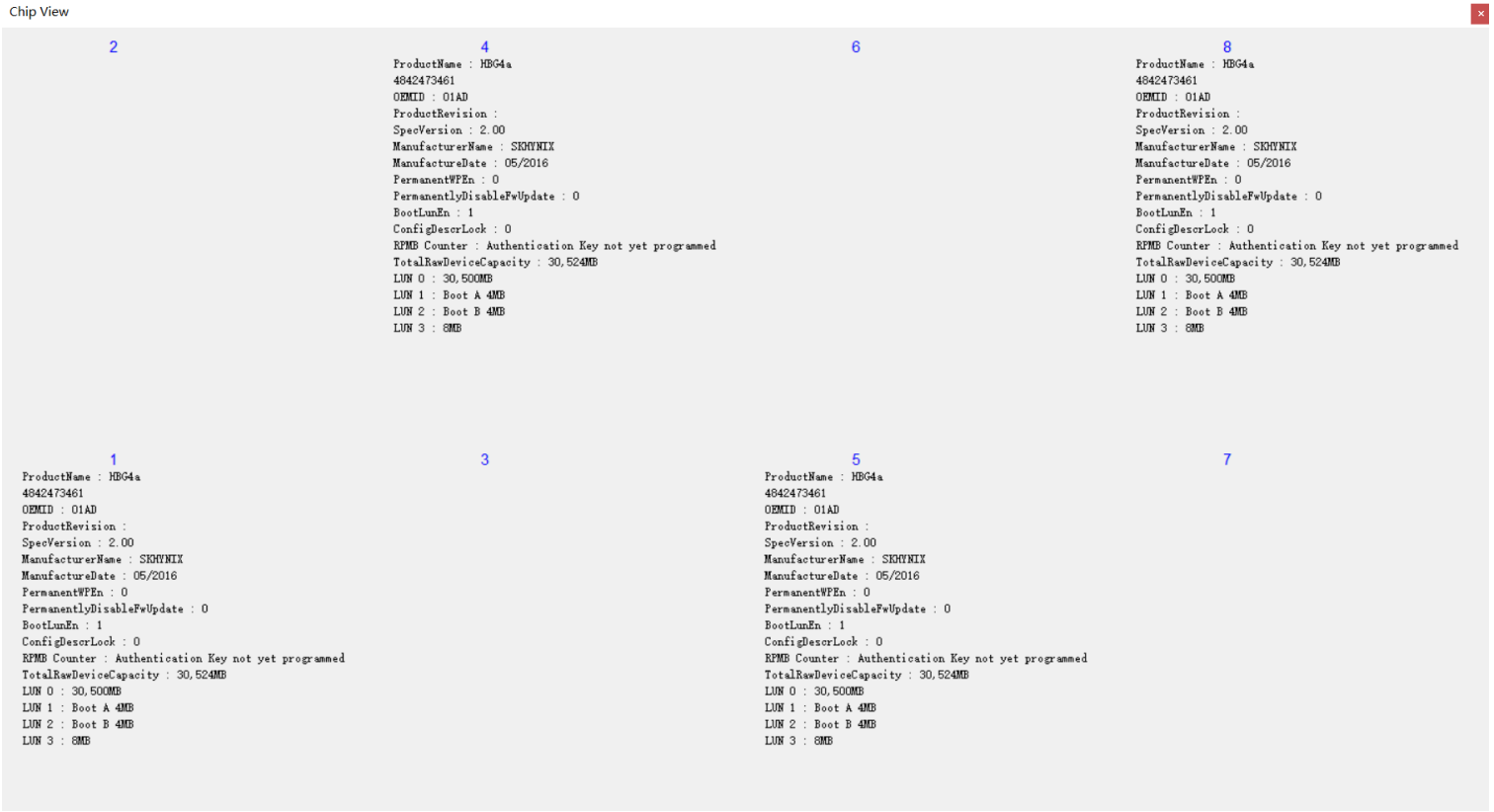


After selecting the same items as the chip, you can erase all LUNs that have been turned on

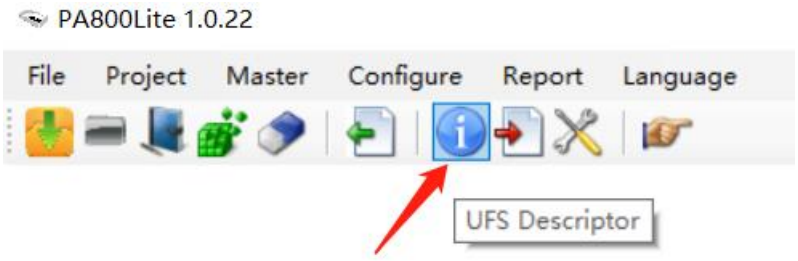
Chip View

The shortcut key Q opens Windows, ESC closes Windows.

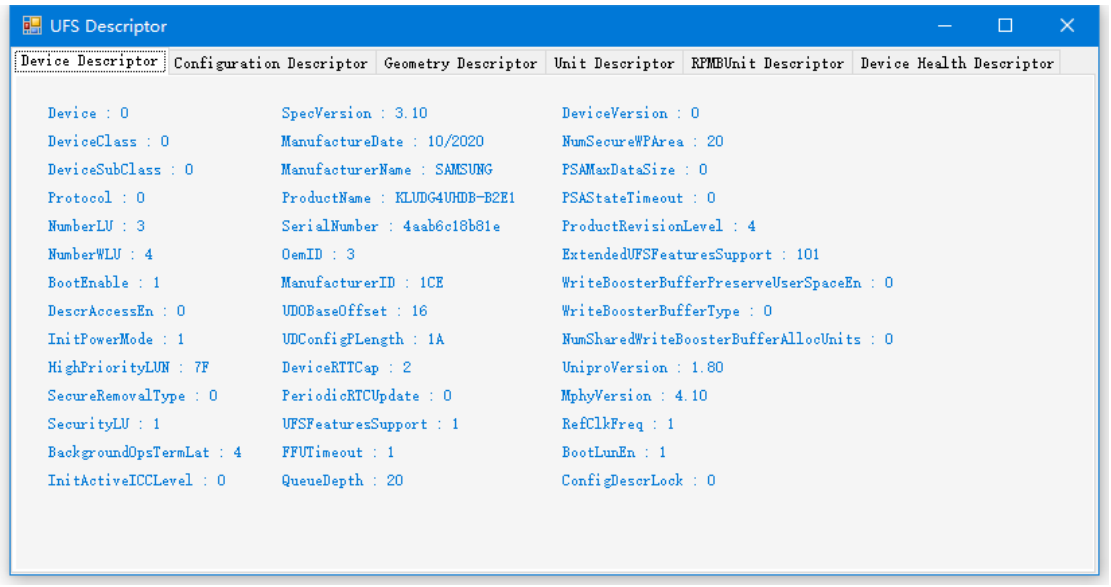
After clicking, a window will open showing the chip information of the 8 stations



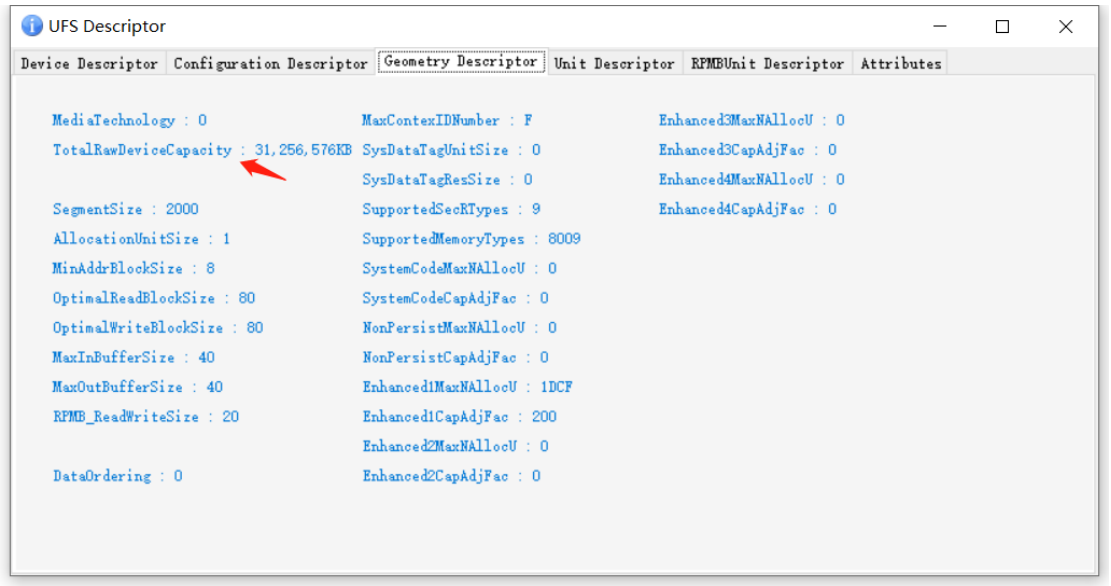
Click on UFS Descriptor



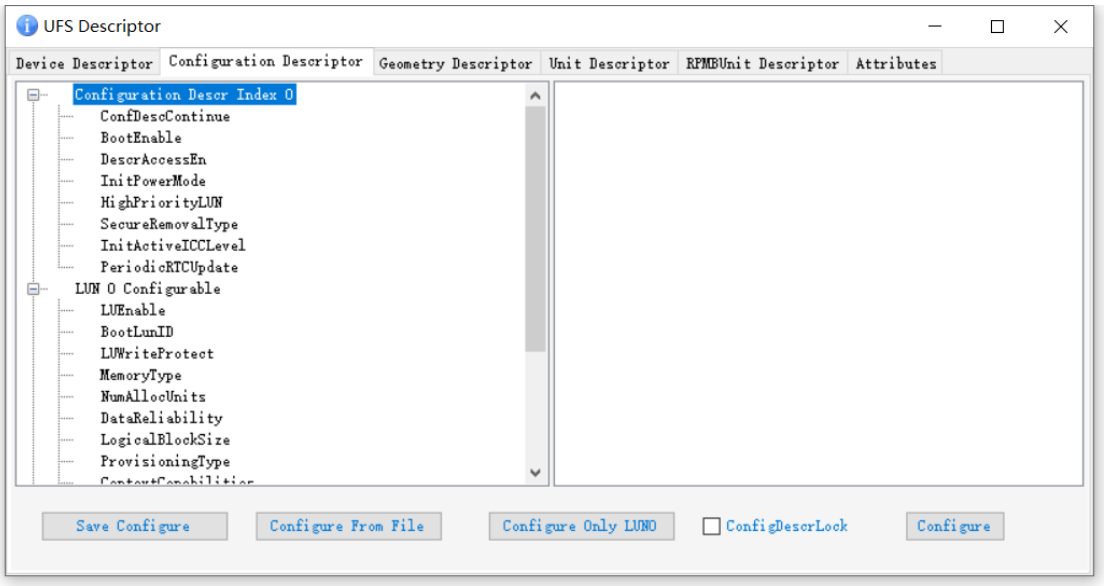
For chip information on the master station of the specified programmer, please refer to



the UFS datasheet for the specific effect of each register



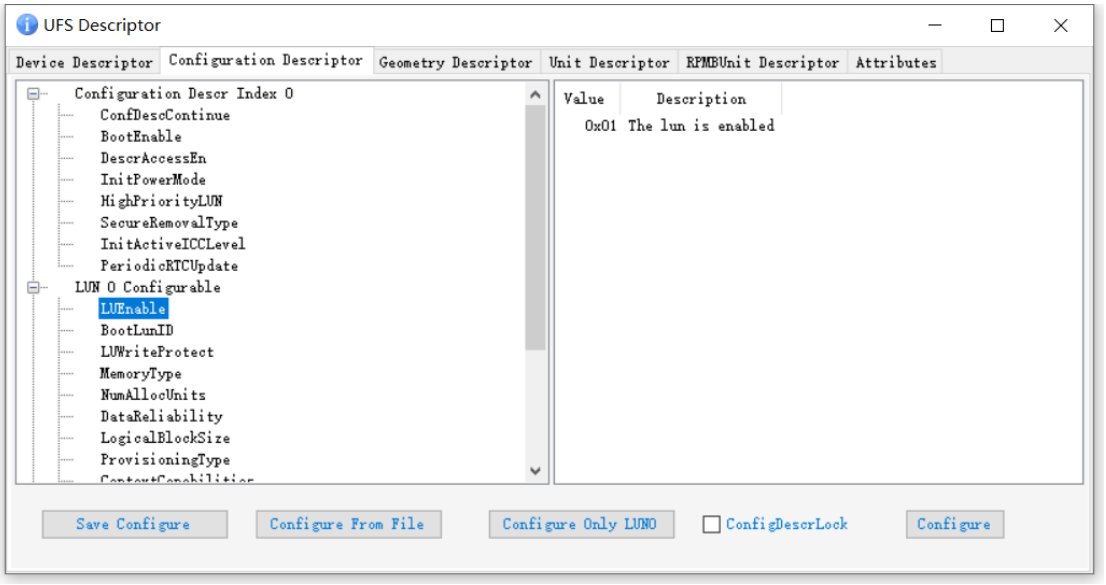
Click Configuration Descriptor



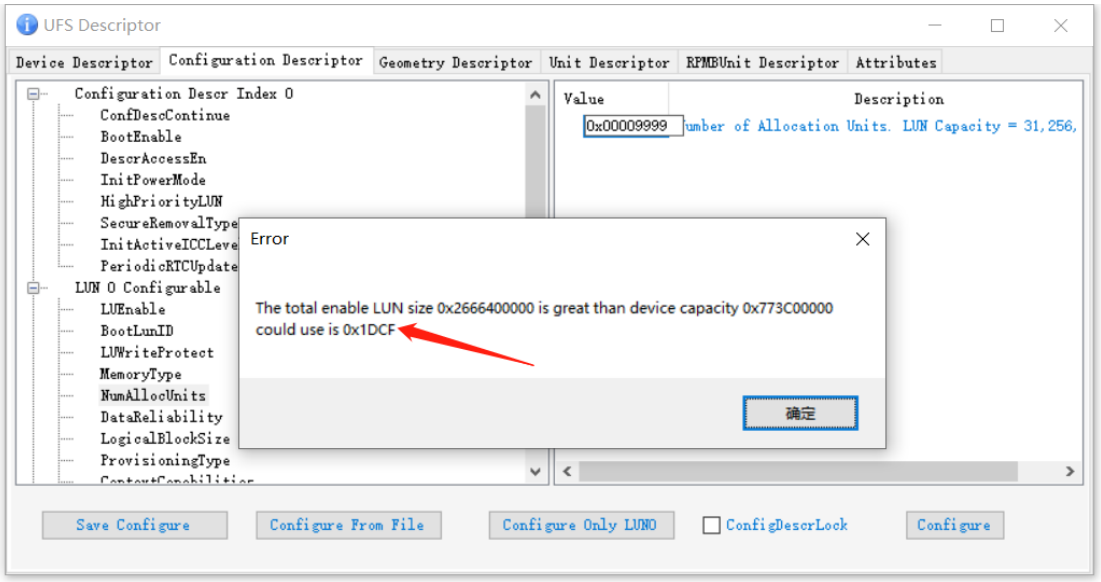
UFS settings can be modified via Configuration Descriptor, saved settings via Save Configura, and loaded via Configura From.

bConfigDescrLock is a register that locks UFS settings at one time.

To set LUNs, toggle LUNs



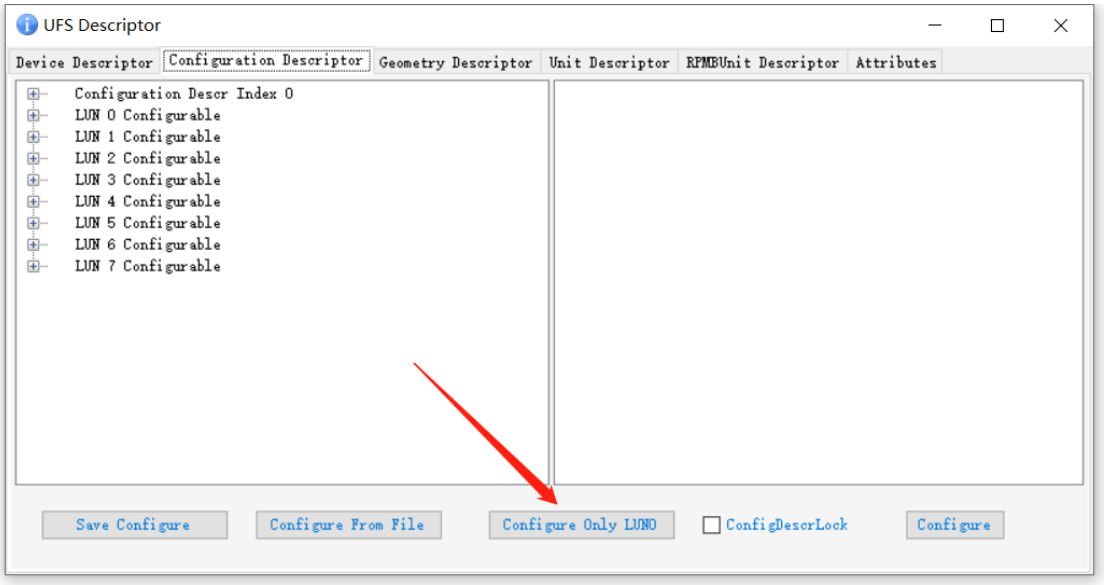
When you resize Lun, if you exceed the maximum value that can be set, you will be prompted for the maximum value available.



Note: After all settings are adjusted, click the Configura button to write the settings into the UFS chip.

Clicking Configure Only Lun0 button,will turn on only Lun0 to the maximum capacity of the chip.

Before using this function, it is best to use Save Configure to save the original settings of the chip in use, so as not to be unable to restore.

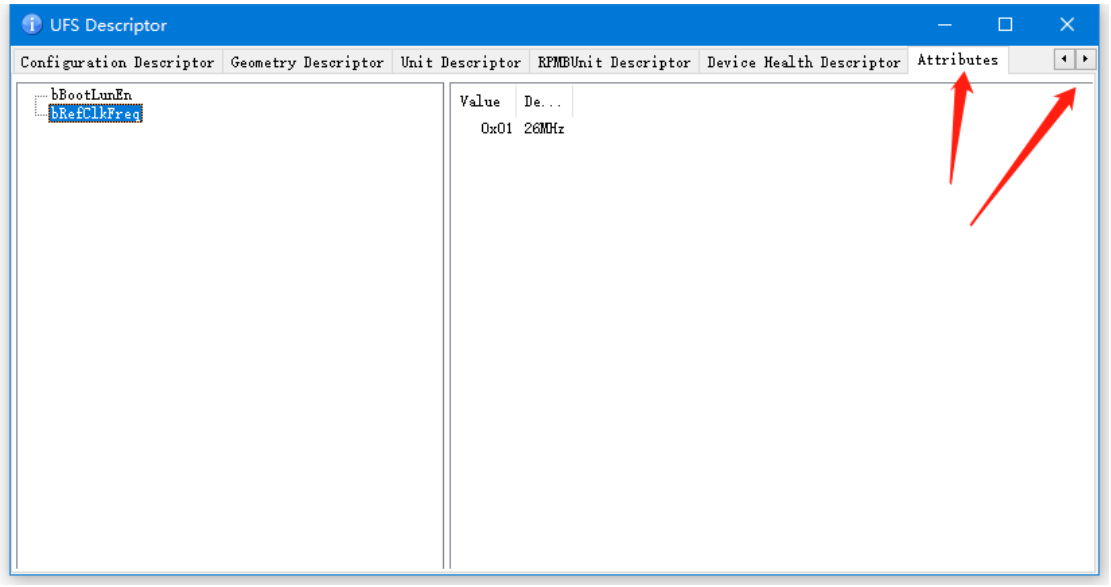


For the specific effect of each register, please refer to UFS datasheet

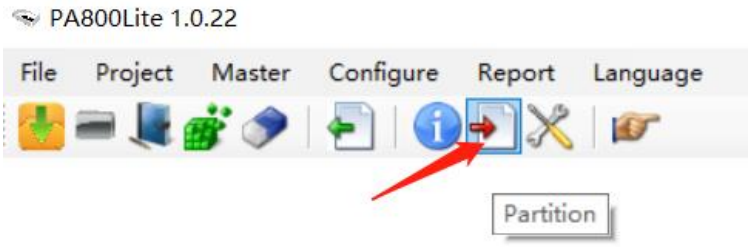
Attributes page

You can adjust the chip operating frequency and other settings, enter the corresponding value and enter to complete the setting

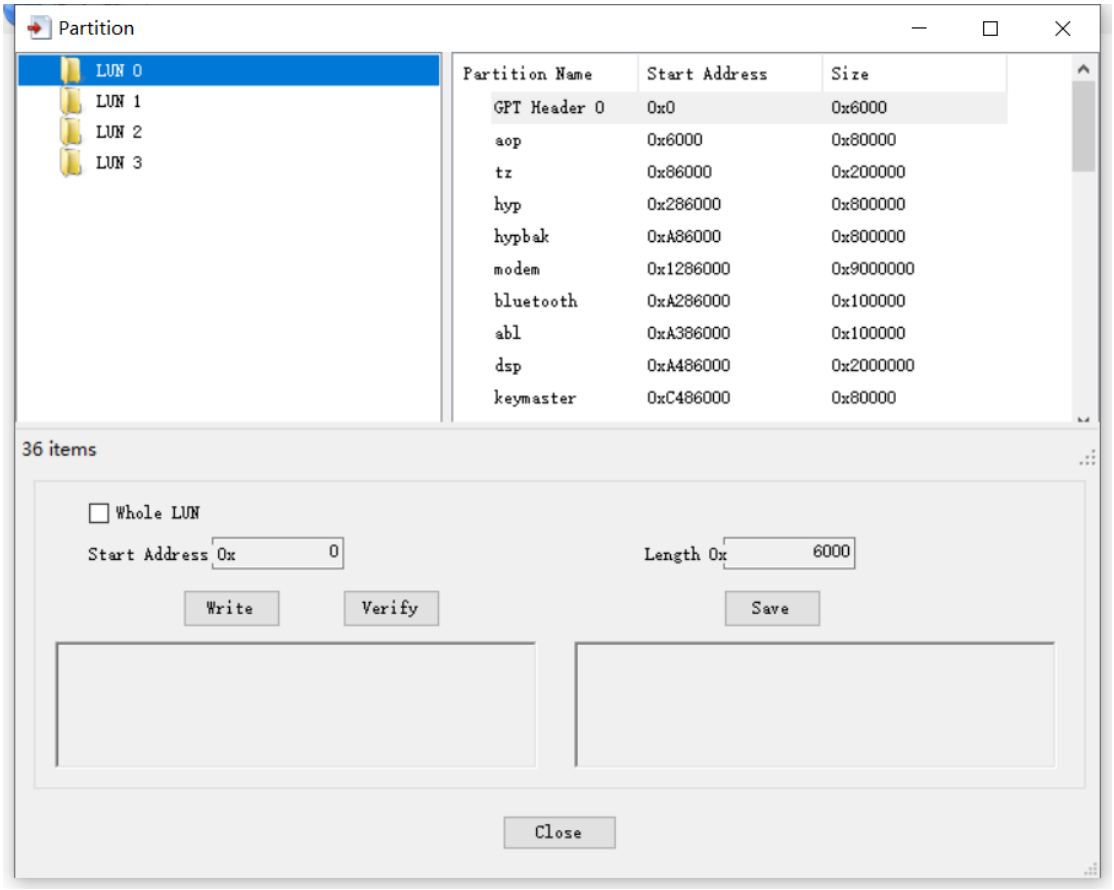
0x00=19.2Mhz , 0x01=26Mhz



Click partition



There will be Lun and partition within UFS



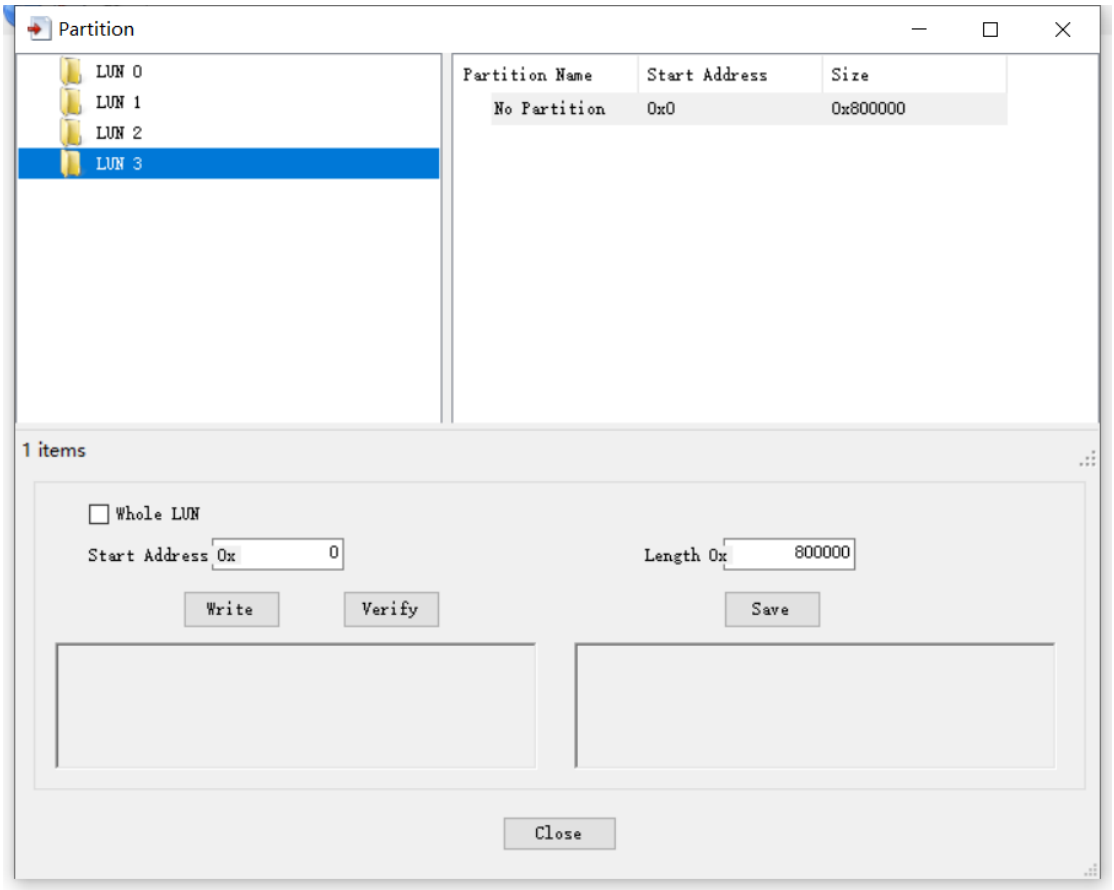
The partition partition in Lun is divided according to the GPT header, the GPT header indicates the size of the partition (the beginning and end of the data position), and if there is a compliant GPT header in Lun , Partition Wizard will parse the GPT header so that the corresponding partition can be read and written.

Check Read the entire LUN from Address 0 or Write a file from Address0 to Lun.

Writing and checking based on the bin file is based on the selected or consecutive address start and address length in the partition partition, otherwise the selected Partition Name will be used The starting address and length of are primary

Save a single bin file radio Partition Name and save it, if you want to save a bin starting to a certain address length file, use SHIFT+left-click to directly select Start Partition Name, and then select End with SHIFT+left-click Partition Name

can be saved after consecutive selection, **or use CTRL+left-click to check that the address must be consecutive**



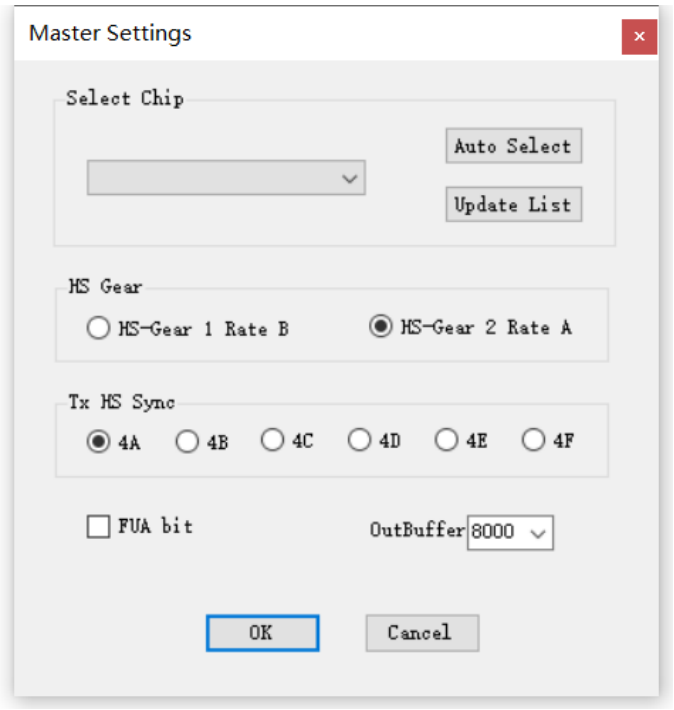
In the absence of a GTP header, select the write address by selecting the start address through the Start Address, and fill in Length. **The start address cannot exceed Lun's** Size, **if the data written exceeds the** set Size, the **software will automatically help you intercept the part that does not exceed** the **set Size (starting from the head of the written data) and ask whether to write.**

Tip: Start Address and Length are filled in in 16 decimals open with 0x.

1MB=0x100000，1GB=0x40000000

Click Parameter

Parameter Settings appear



Click Auto Select If the UFS chip on the Master station is a model that we have known to have tested, it will be automatically put into our recommended machine operating environment settings.

Press OK to complete the setup.

FUA bit: Write directly to memory without caching.

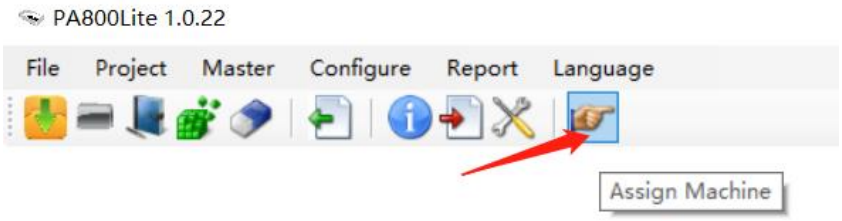
FUA bit is checked for some chips that cannot be written normally.

Clicking the upgrade list will update the settings of the chip model to the IC list, and if the same model is the same, the settings in the original IC list will be overwritten.

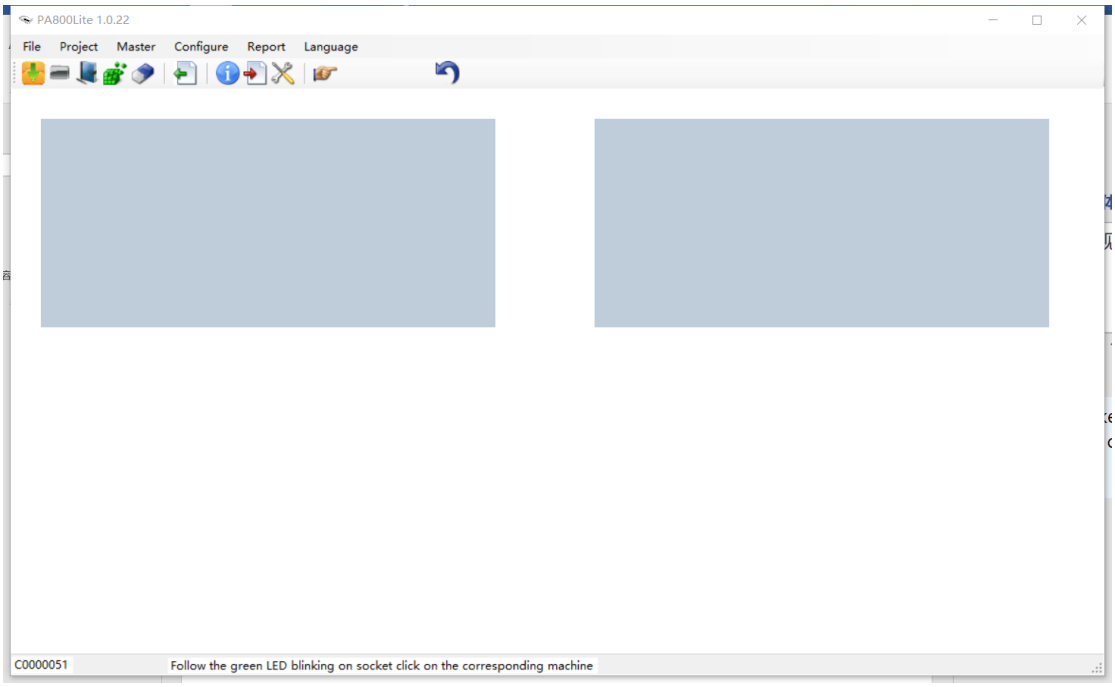
The selection parameters are different to determine the working mode of the master station.

The parameter setting of the New Project is based on the parameters of the Master station.

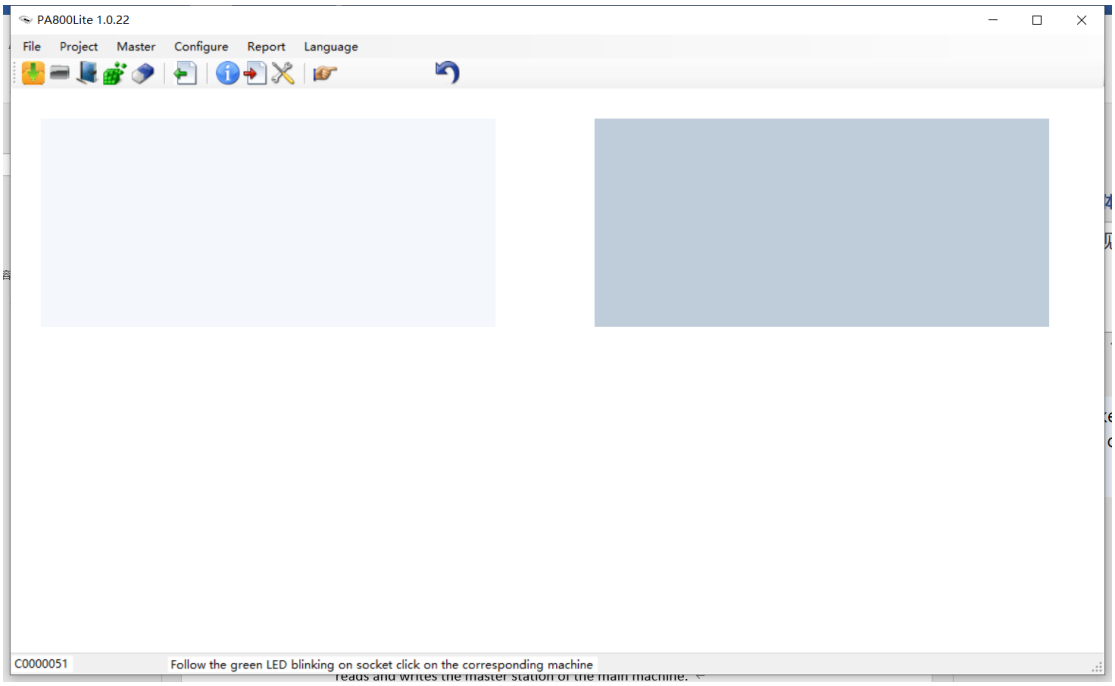
Click Assign Machine



The Specify Machine Sequence screen appears

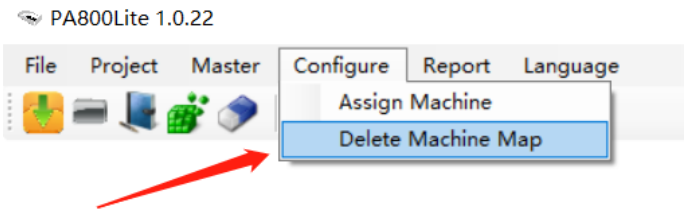


At the same time, the green light of the programmer's station will flash to confirm the specific programmer, and click the window to specify the information window of the equipment work.



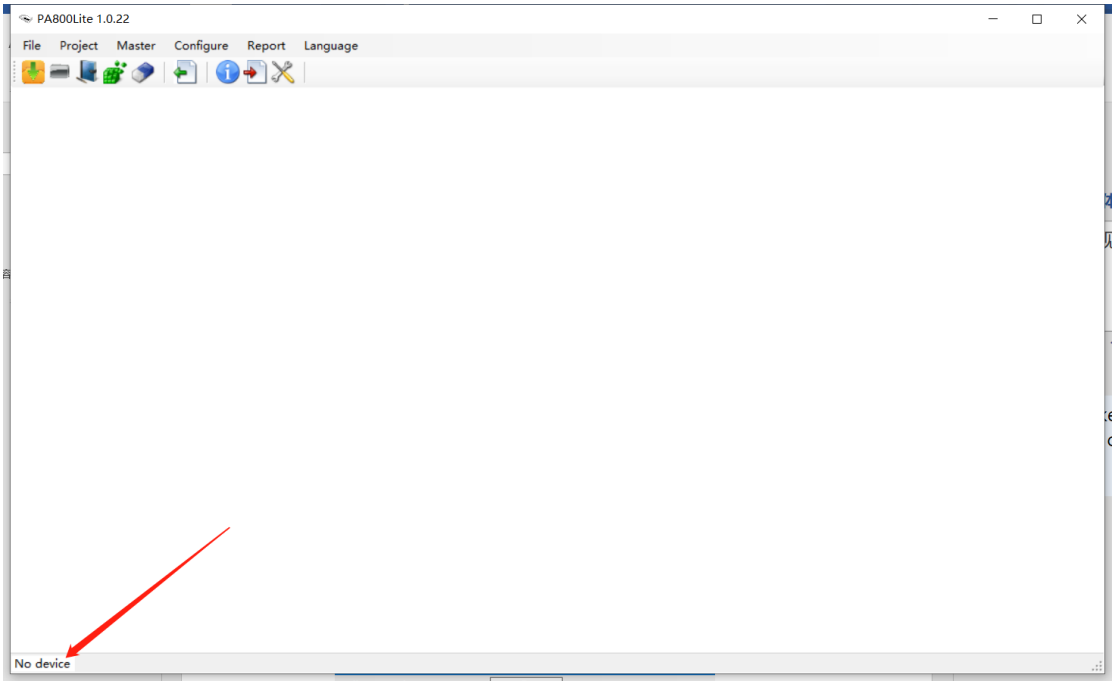
The programmer designated as the upper left window is the main machine, and the chip that wants to read and write the master station is the chip that reads and writes the master station of the main machine.

Delete the device assignment



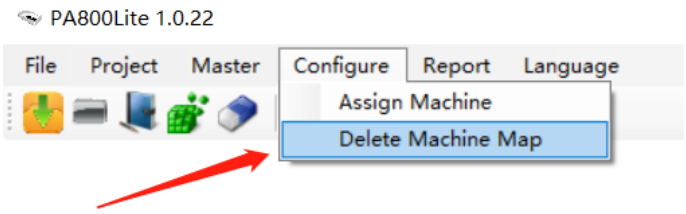
Click to delete the specified sequence, and then execute the project, the device sequence is randomly assigned.

If you set an over-programmer sequence, then plug in an programmer that is not outside the sequence number



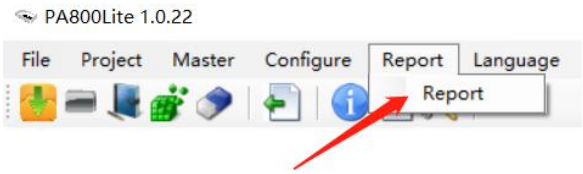
No device appears

Click

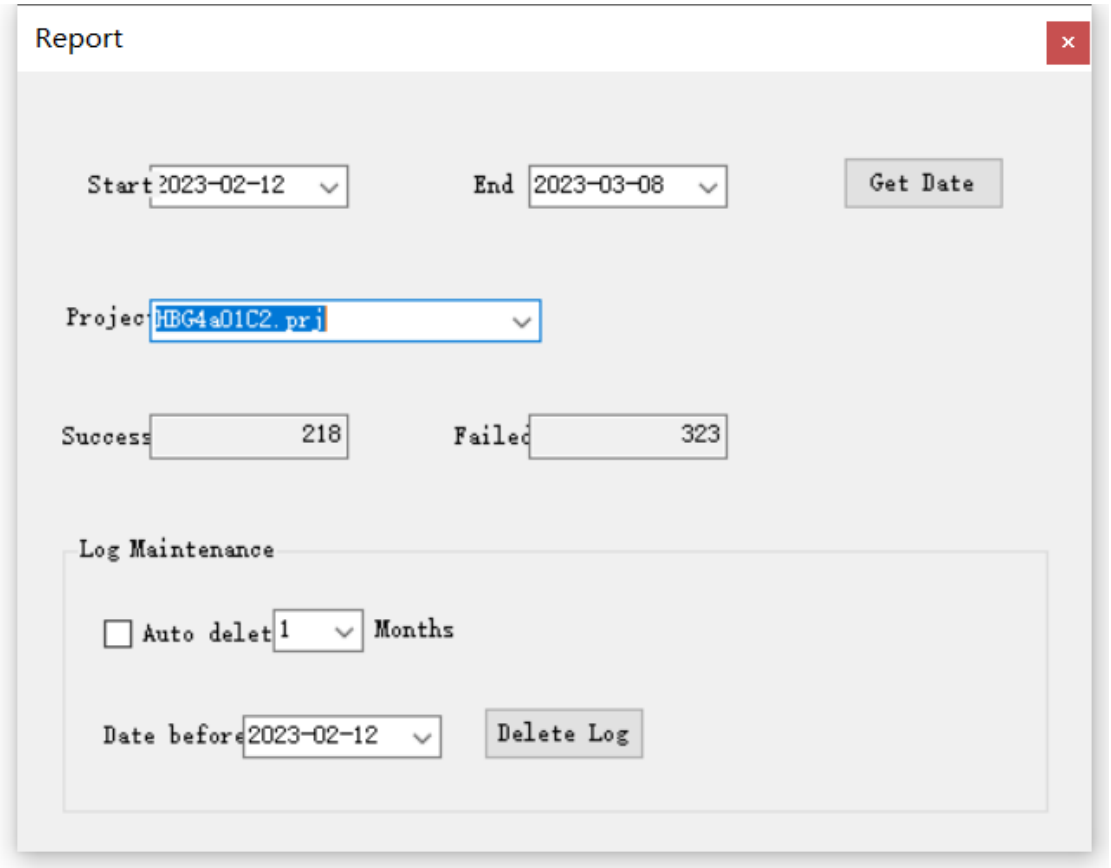


Can be connected to devices outside the sequence

Click Report



The Report will appear

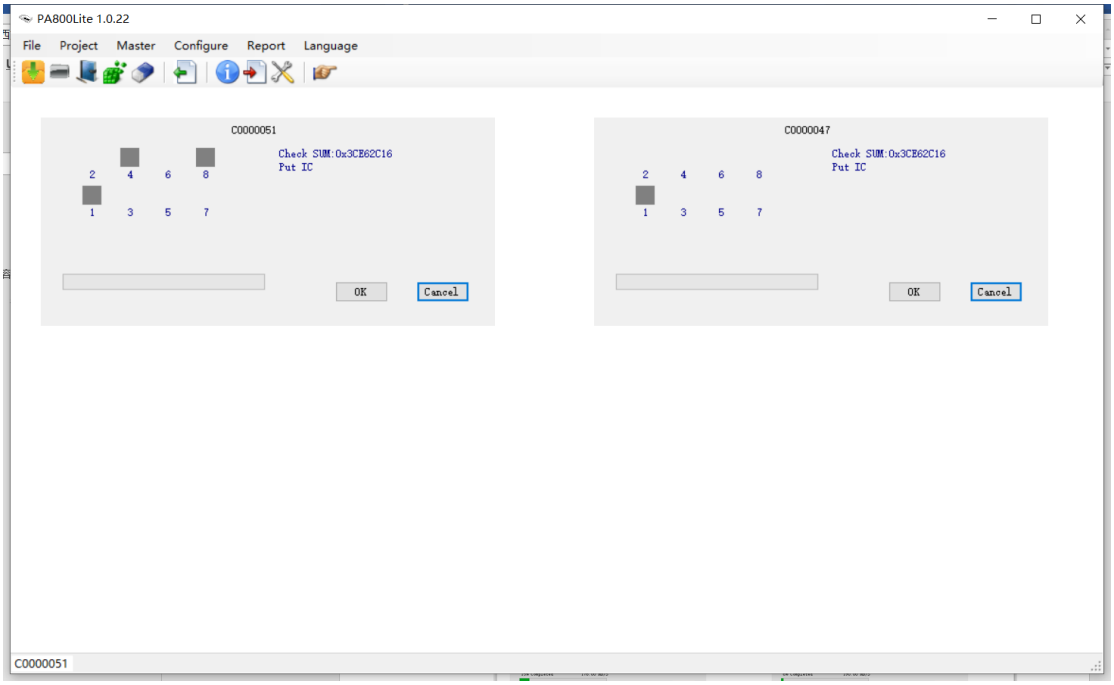


Auto Delete deletes logs from 1, 3, and 6 months ago the next time the software is started, according to the current system time.

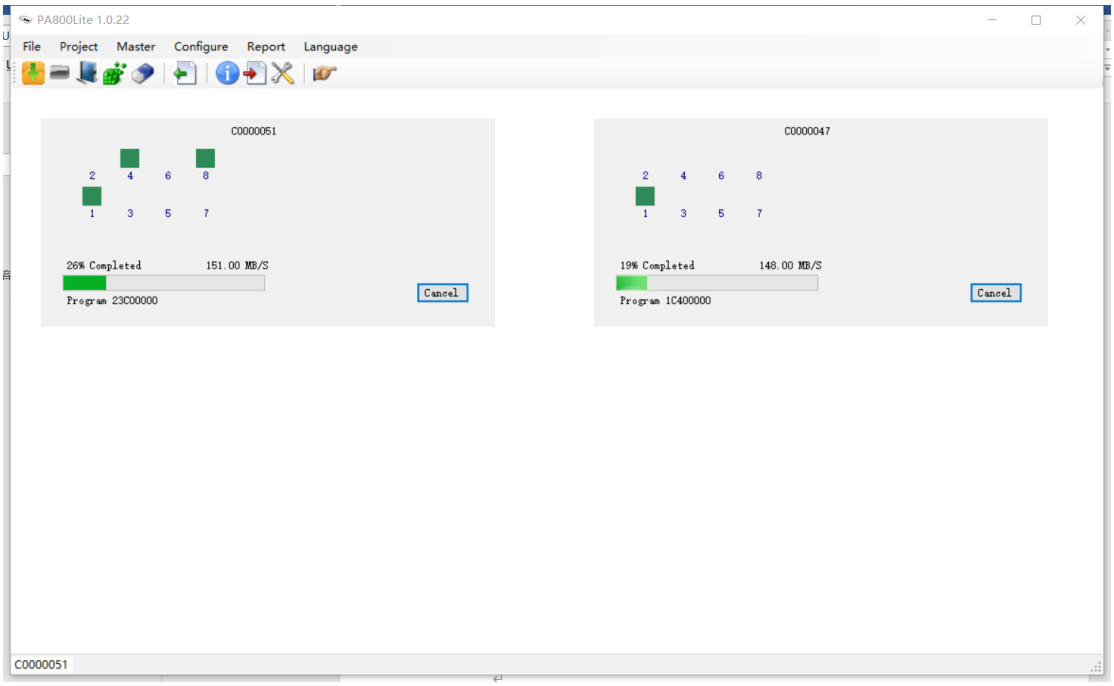
Data before is to select a time of logs and then delete all logs before that time.

Choose carefully

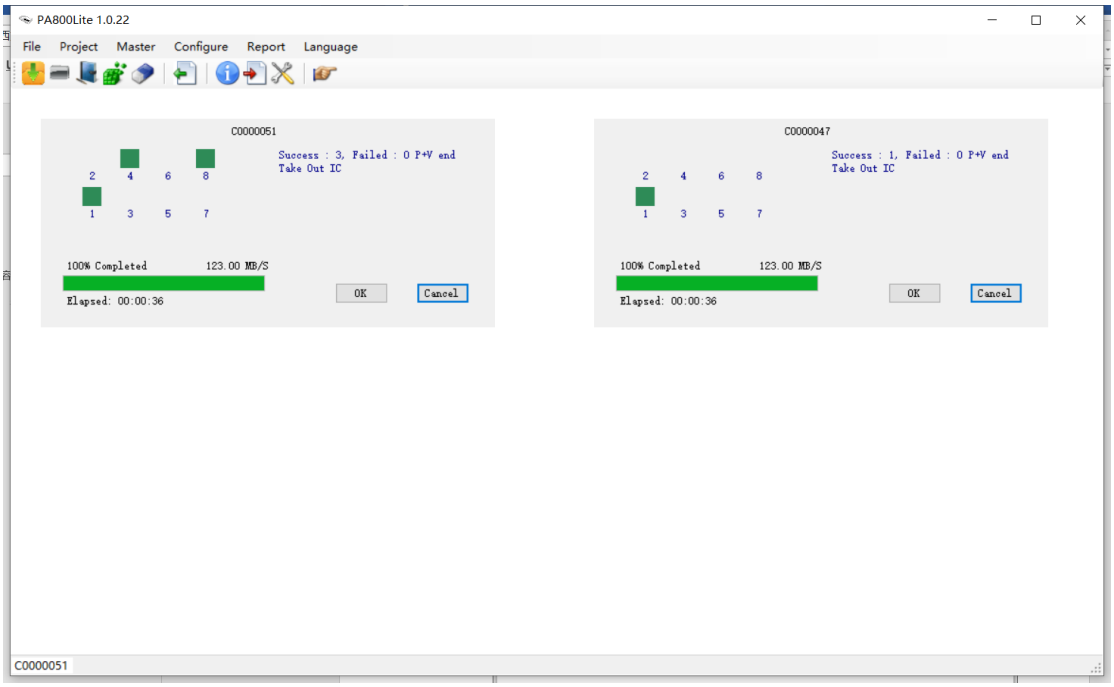
8 Repeat the steps



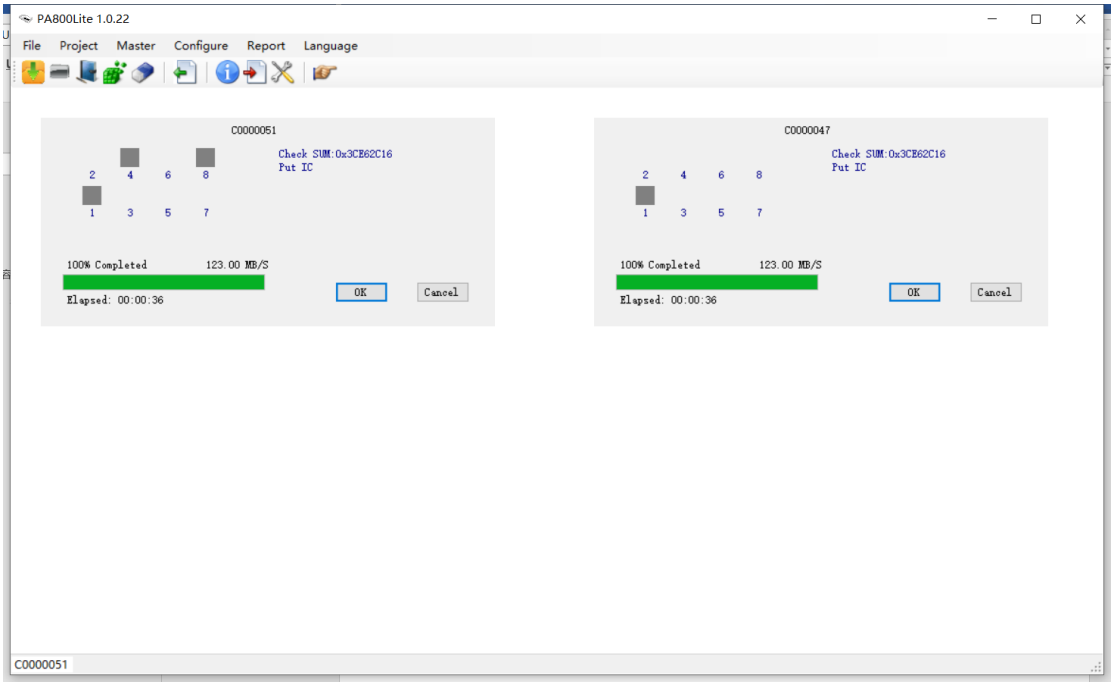
Click OK to start the project



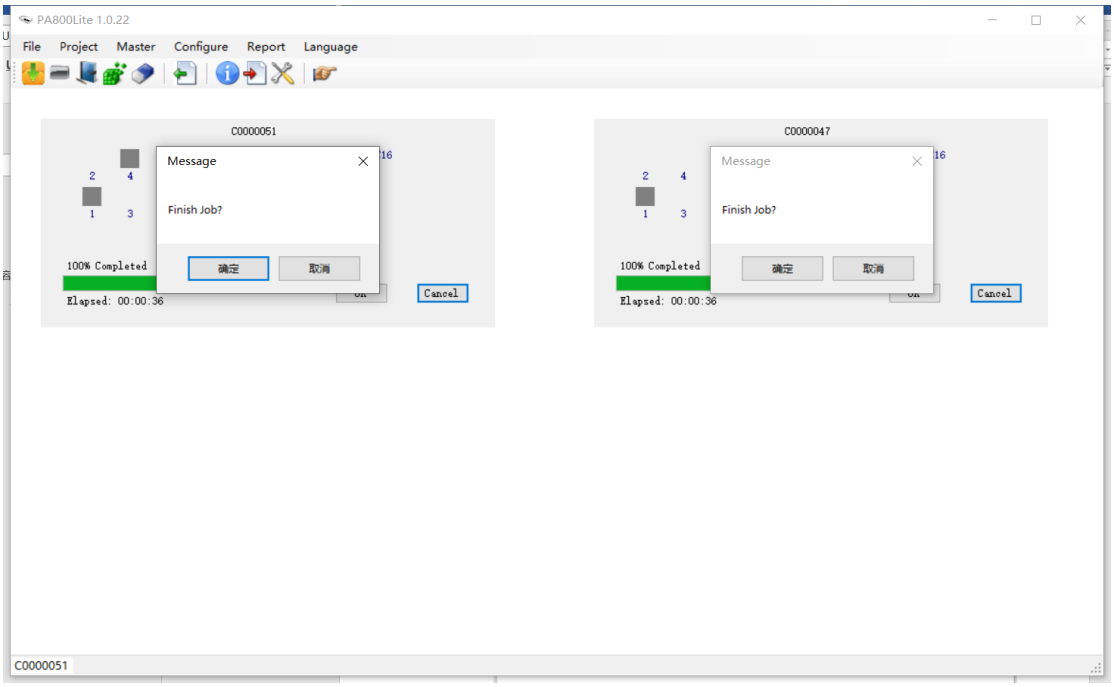
After the project is completed, remove the chip and press OK



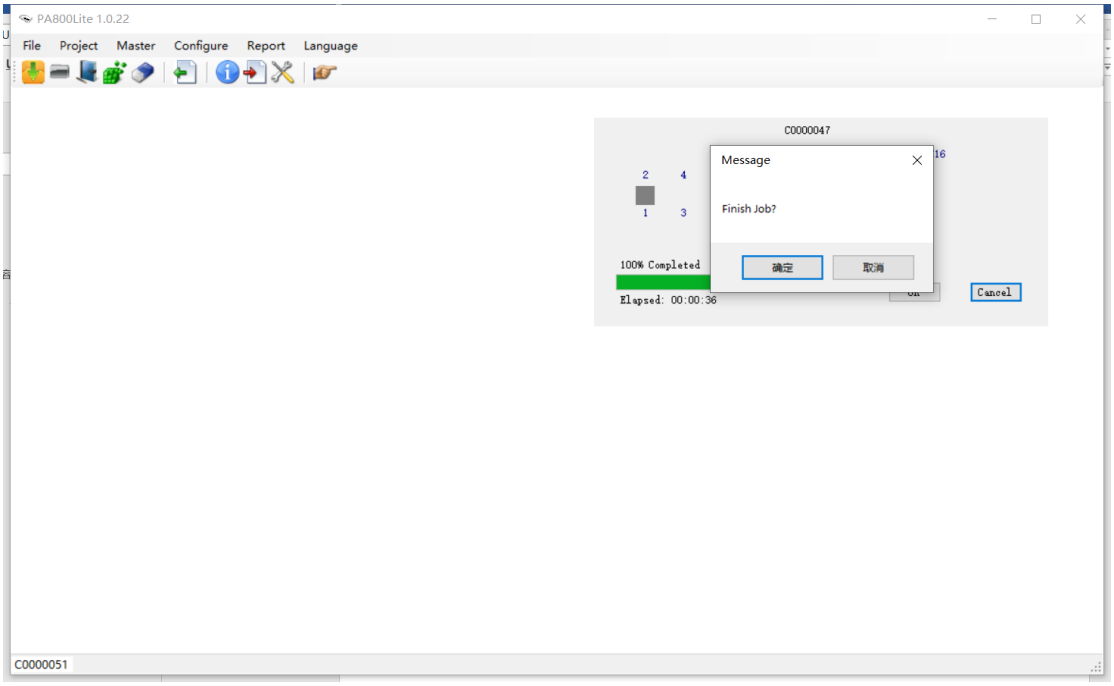
Put in the chip and press OK to continue the project, and the cycle is repeated until the chip that needs to be worked is completed.



After completing the project, press Cancel to pop up the End Work window, press End Work to close the project interface.



After pressing Cancel, the End Work window pops up, and pressing End Work closes the project interface.



Close the program, turn off the programmer power to finish.