I. Preface

This guide is for Isuna6000S firmware upgrade

II Preparation before upgrading

Preparation of tools: computer,Upgrade tool (see appendix for tool description)

Software preparation: UniFlash and GD-Link Programmer should be installed on the computer, and The firmware list is as follows

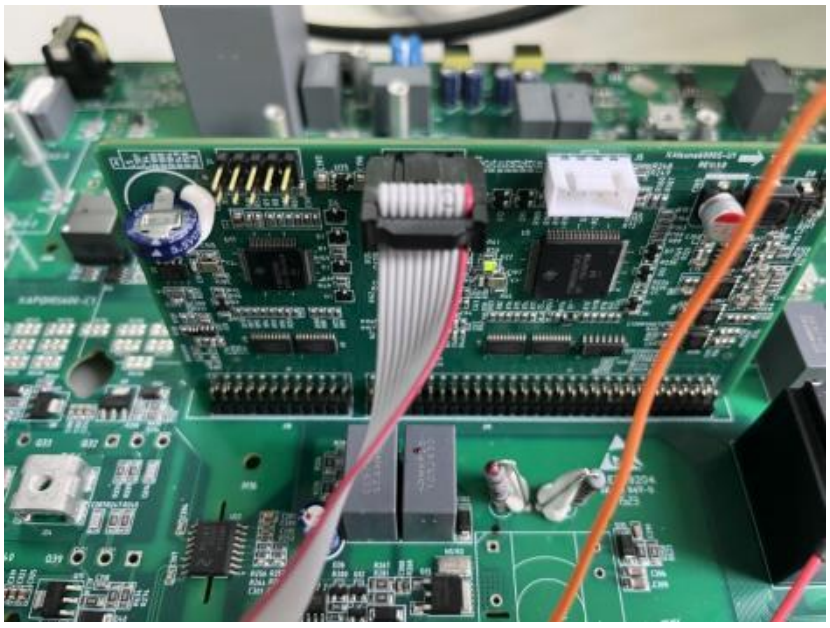
serial number	descriptive
1	Isuna6000S_DCAC_Bootloader.out
2	Isuna6000S_DCAC_App.out
3	Isuna6000S_DCDC_Bootloader.out
4	Isuna6000S_DCDC_App.out
5	Isuna6000S_ARM_Bootloader.bin
6	Isuna6000S_ARM_App.bin

Note: Please download the program locally, and the local path where the program is located cannot contain Chinese names.

III Firmware upgrade

3.1 DCAC Firmware upgrade

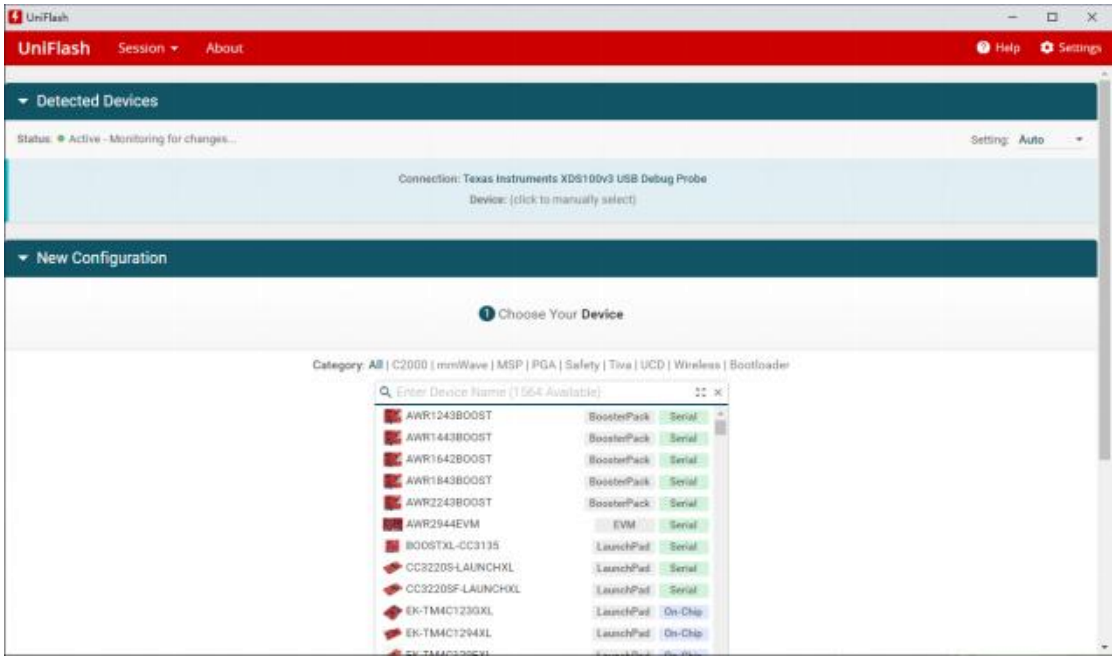
1. Insert the female connector of the DSP upgrade tooll into the position shown in the following figure (pay attention to prevent reverse insertion).



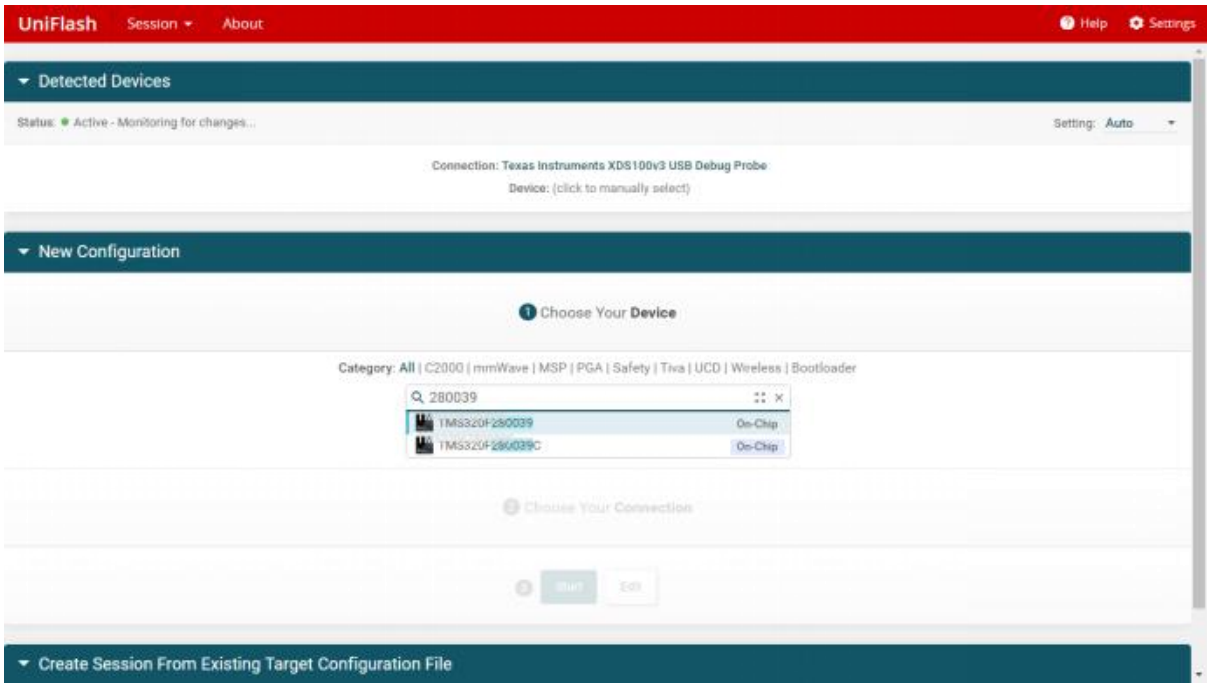
2. Plug the two USB ports of the upgrade tool into the USB port of your computer.

3. At this point, the red light of the emulator's POWER in the upgrade tooll is on.

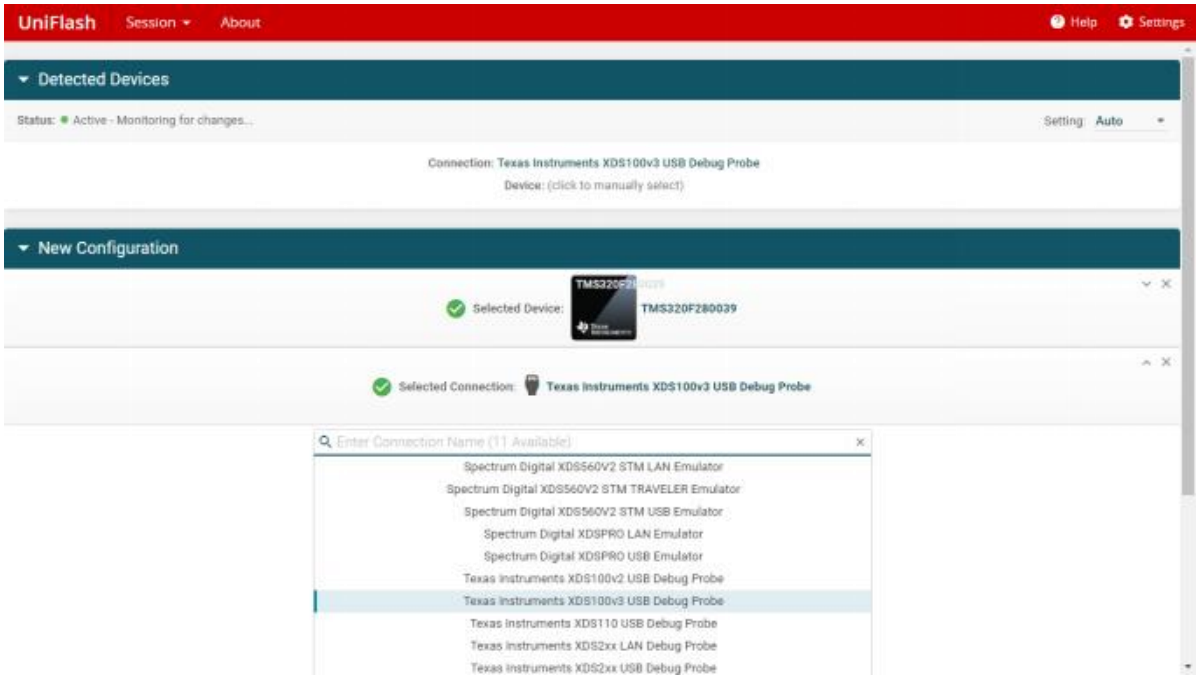
4. Double-click to open "Uniflash" (version 8.1.1 and above) on your computer as shown below.



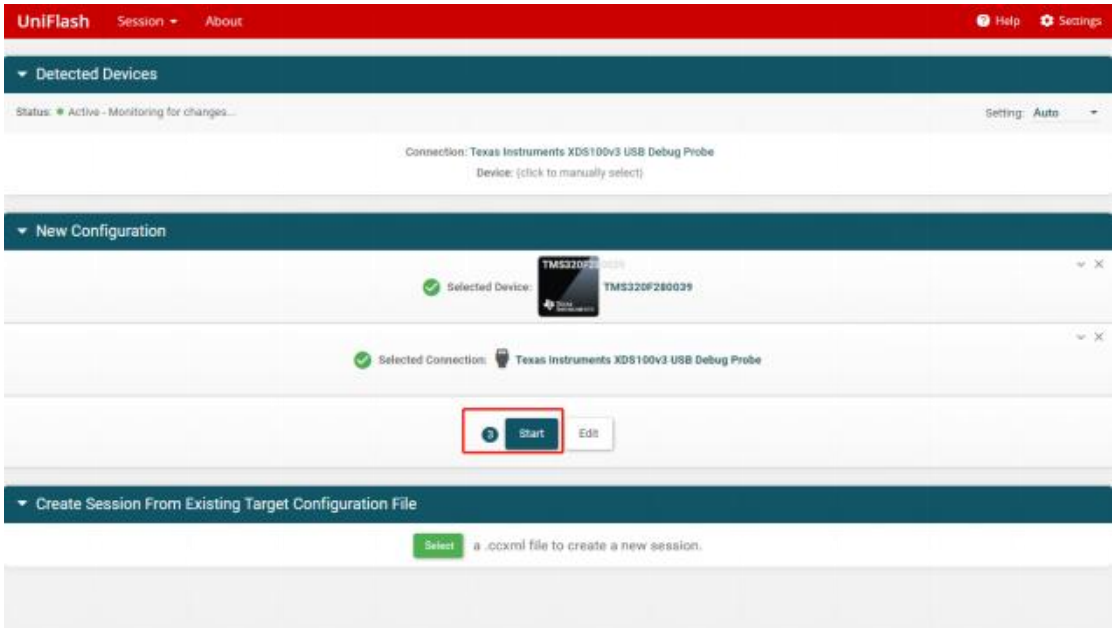
5. In New Configuration, enter "280039" in the "Choose Your Device" dialog box, and select the "TMS320F280039" option.



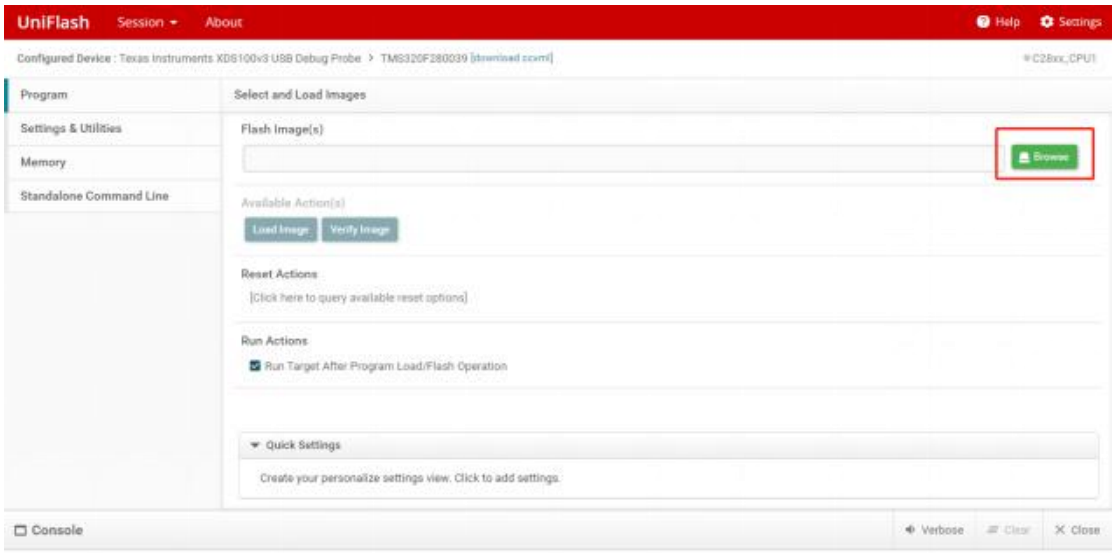
6. Select "Texas Instruments XDS100v3 USB Debug Prob" in the dialog box.



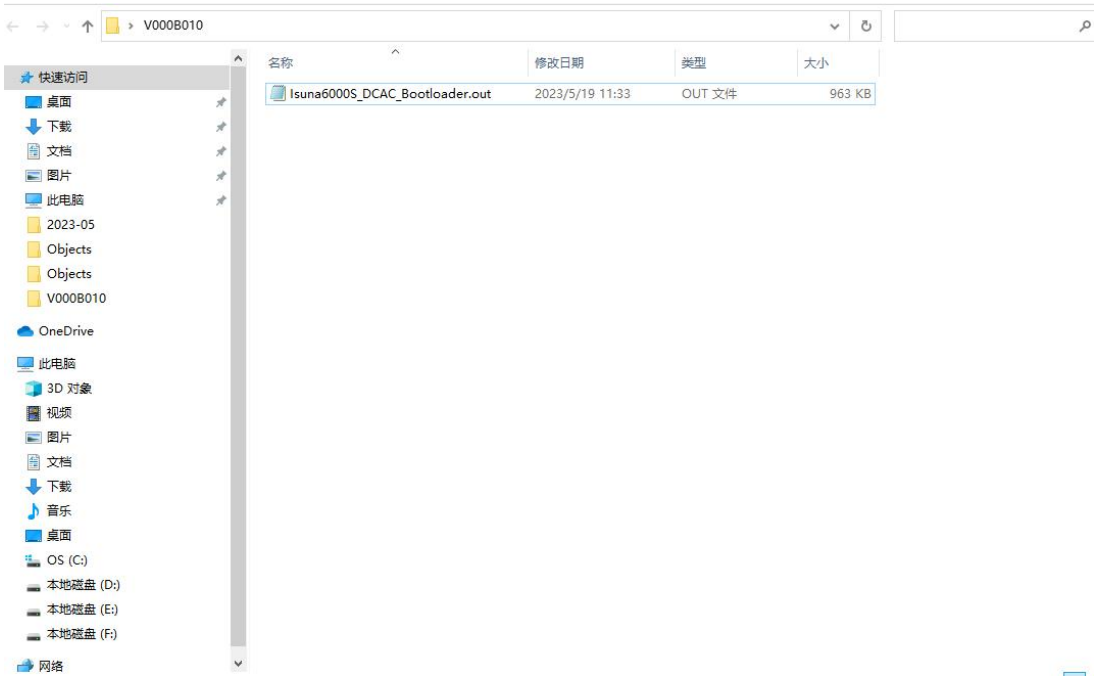
7. Click the "Start" button.



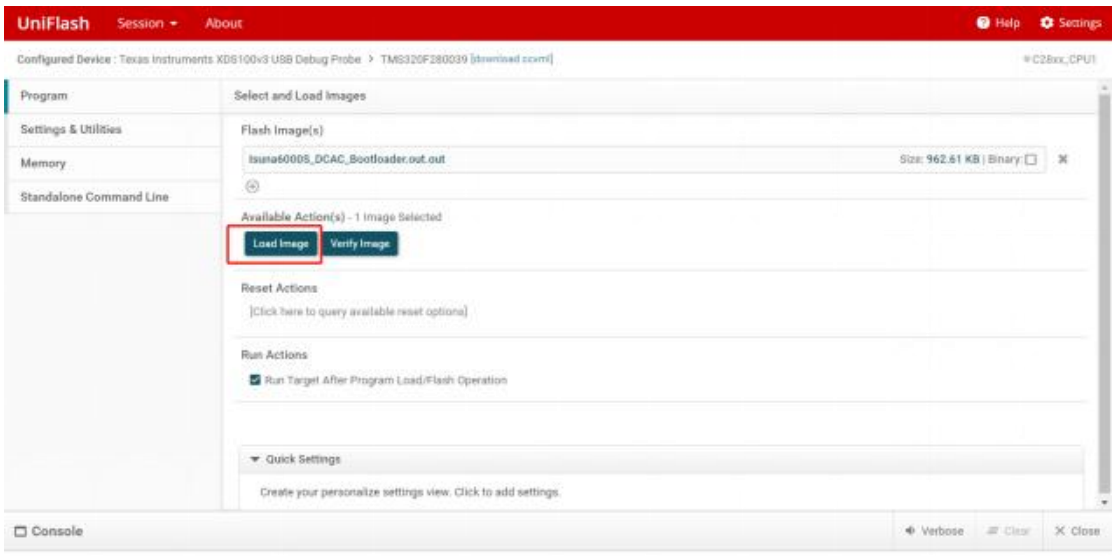
8. Click on "Program" on the left and then click on the "Browse" button next to the dialog box on the right.



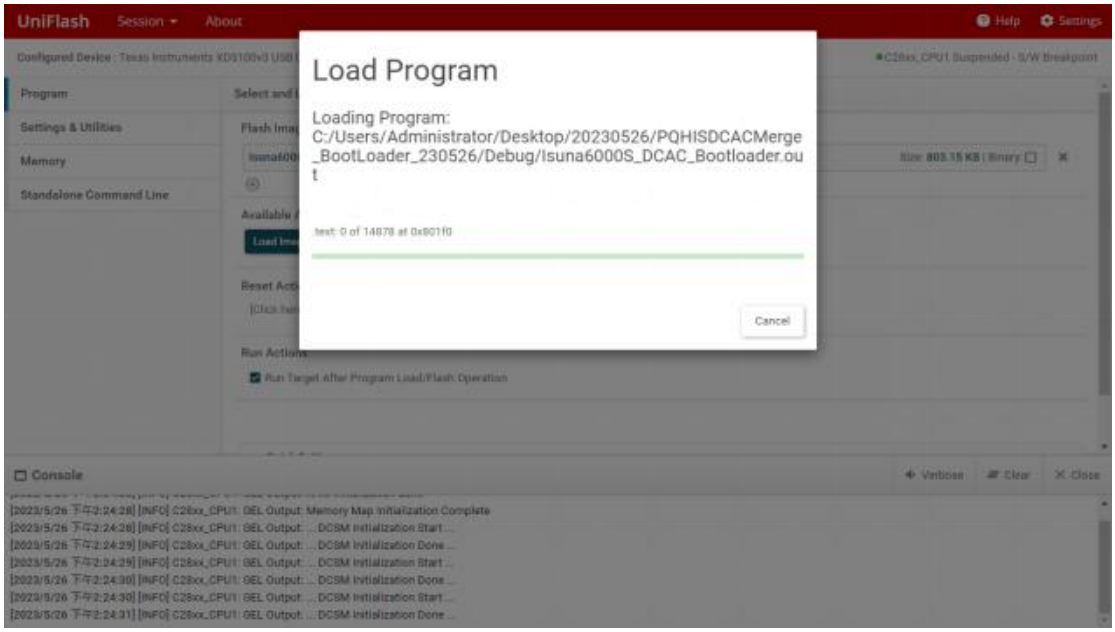
9. Select "Isuna6000S_DCAC_Bootloader.out" in the pop-up dialog box.



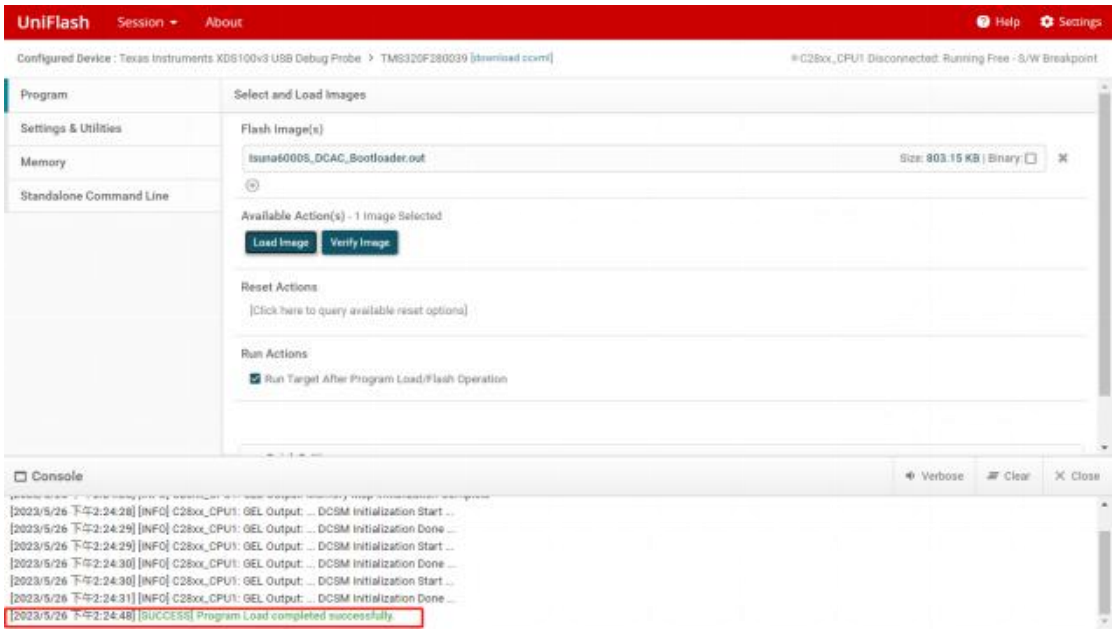
10. Click the "Load Image" button to upgrade.



11. The upgrade process is shown below.

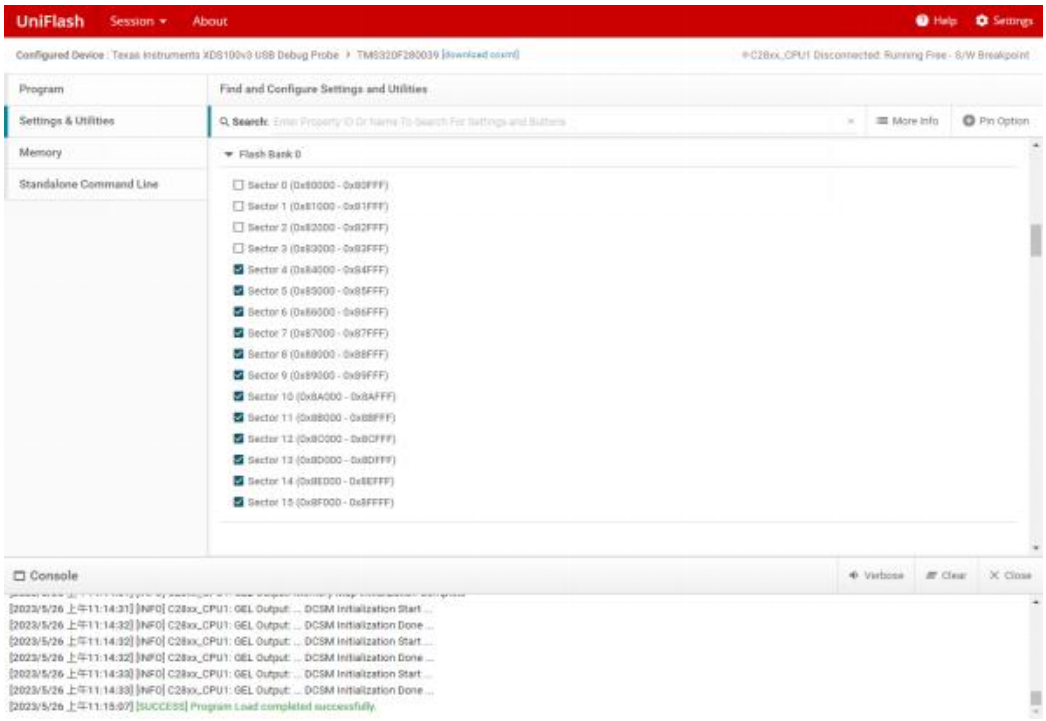


12. The program upgrade is completed, as shown below.

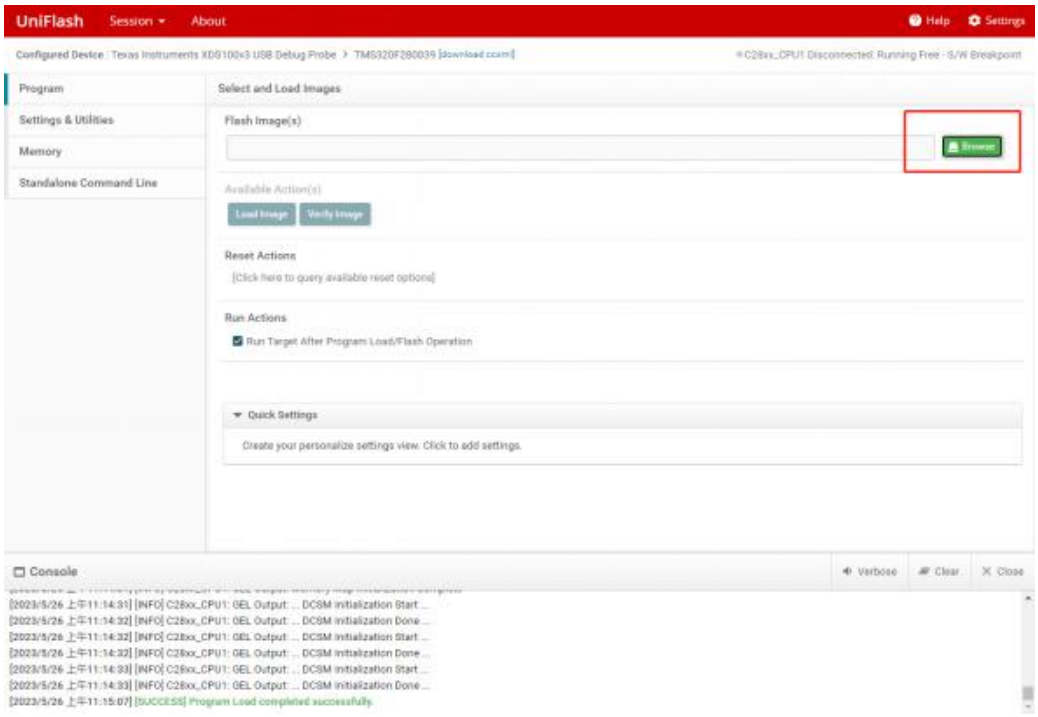


13. Next, click on "Settings & Utilities" on the left side.

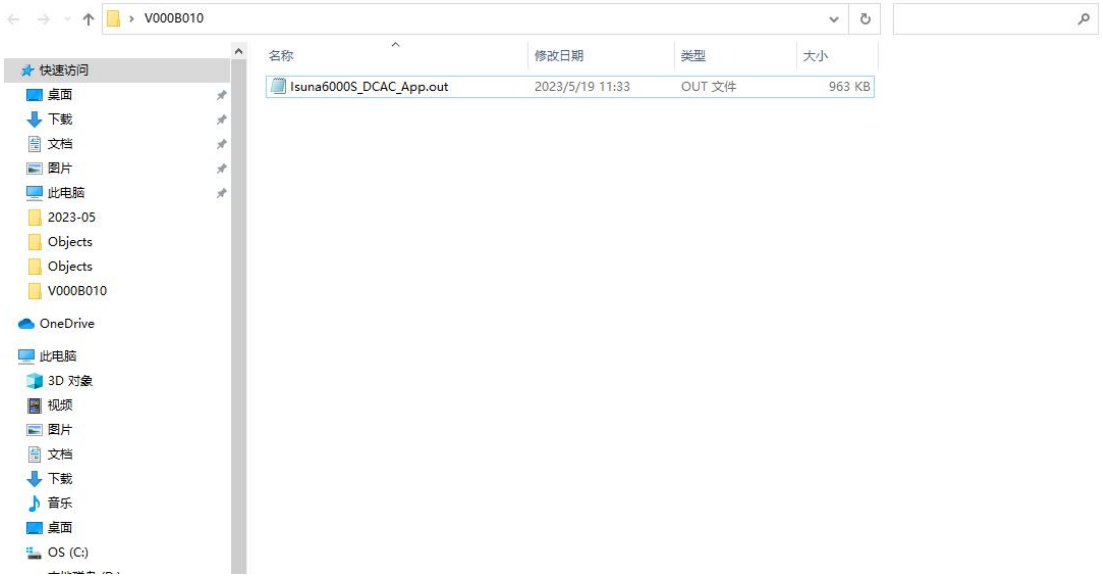
14. Select "Selected Sectors Only" in "Erase Settings" and uncheck Sector 0 to Sector 3 in “Flash Bank 0”



15. Click on "Program" on the left and then click on the "Browse" button next to the dialog box on the right.

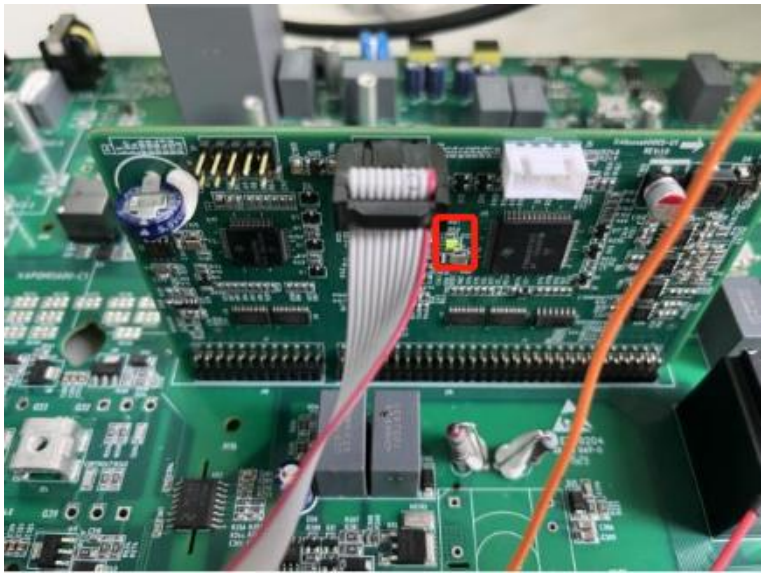


16. Select "Isuna6000S_DCAC_App.out" in the pop-up dialog box.



17. Repeat steps 10-12 for the upgrade.

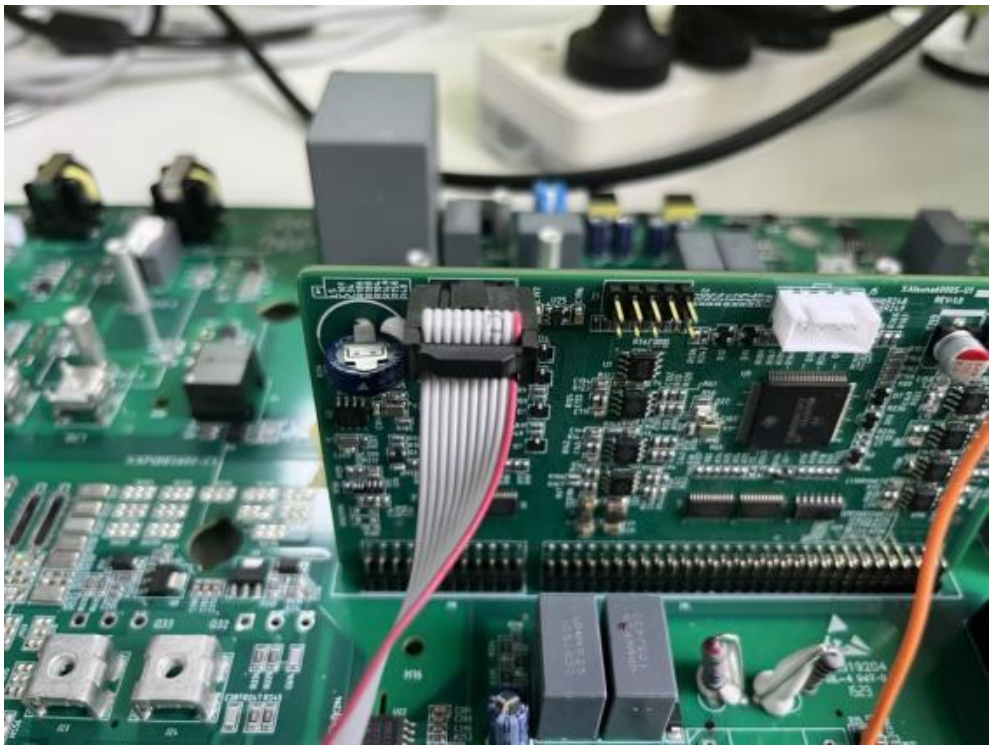
18. Disconnect the upgrade tool power supply USB port and then re-inserted, the single board LED D22 first fast flash about 10S after the slow flash that the program upgrade success.



19. Disconnect the upgrade tool from the power supply USB.

3.2 DCDC Firmware upgrade

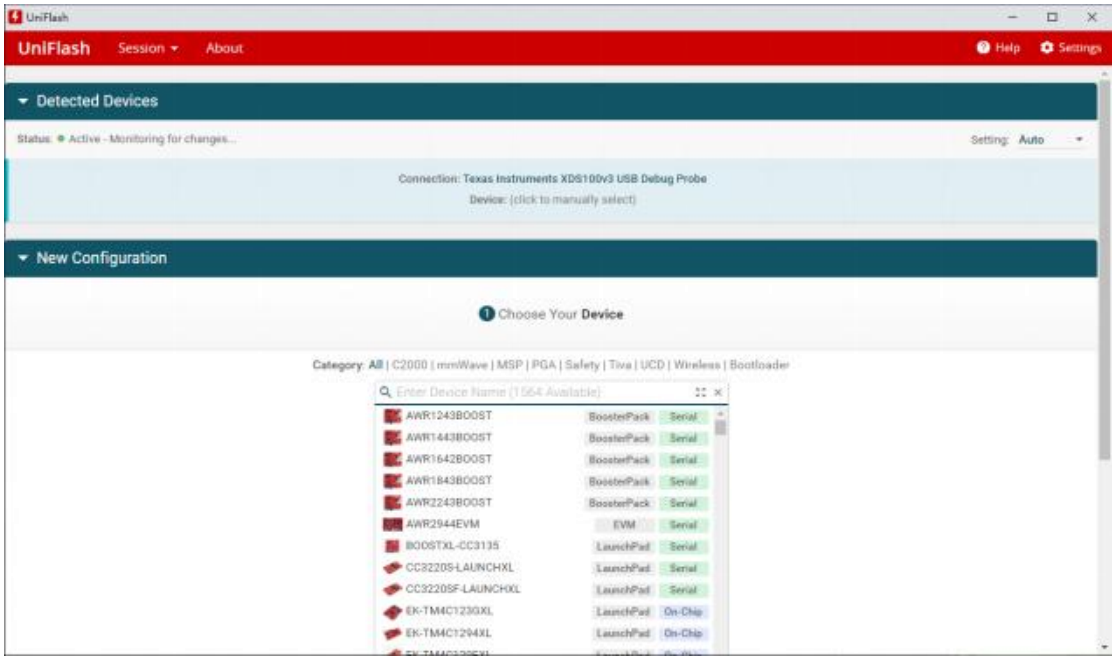
1. Connect the female connector of the upgrade tool to the position as shown in the figure (pay attention to prevent reverse plugging)



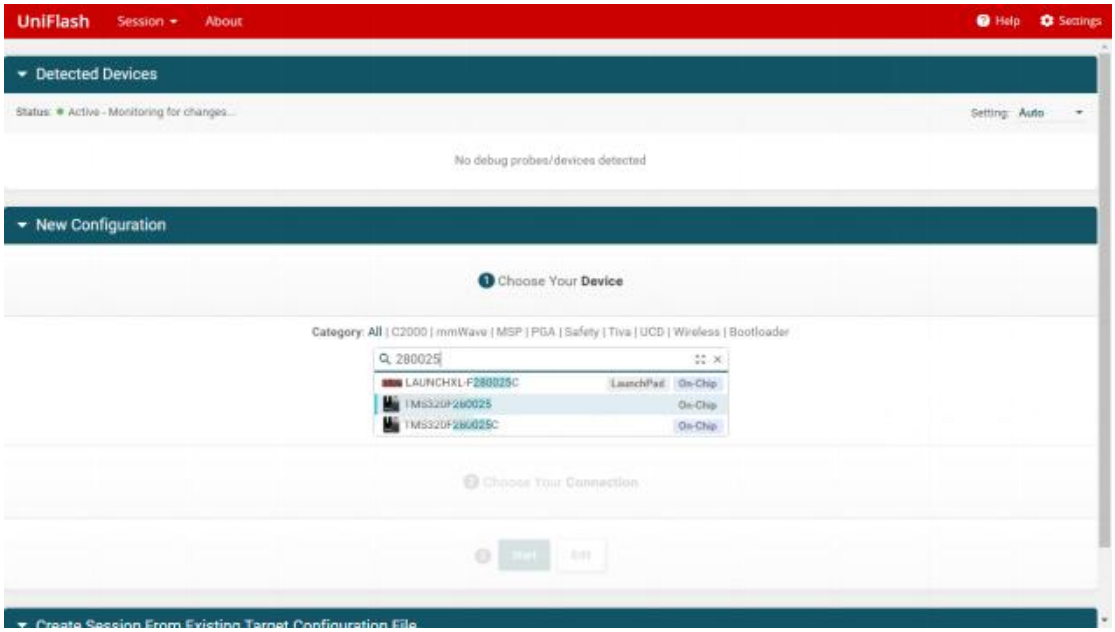
2. Re-insert the upgrade tool power supply USB port into the computer.

3. At this point, the red light of the emulator's POWER in the upgrade tool is on.

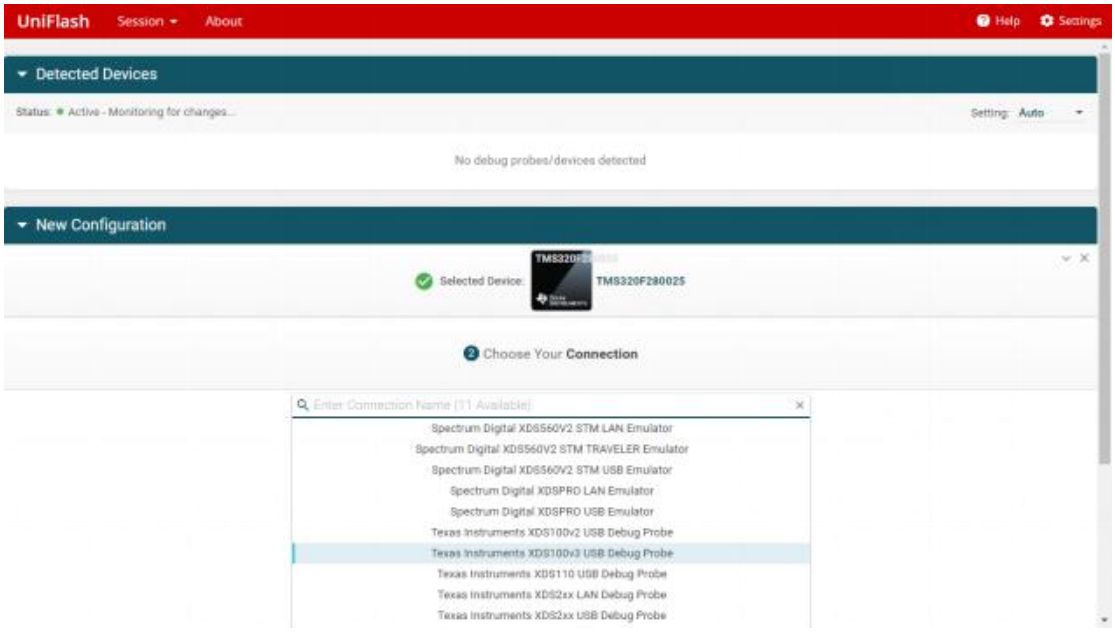
4. Double-click on the computer to open "Uniflash" (version 8.1.1 and above), as shown below.



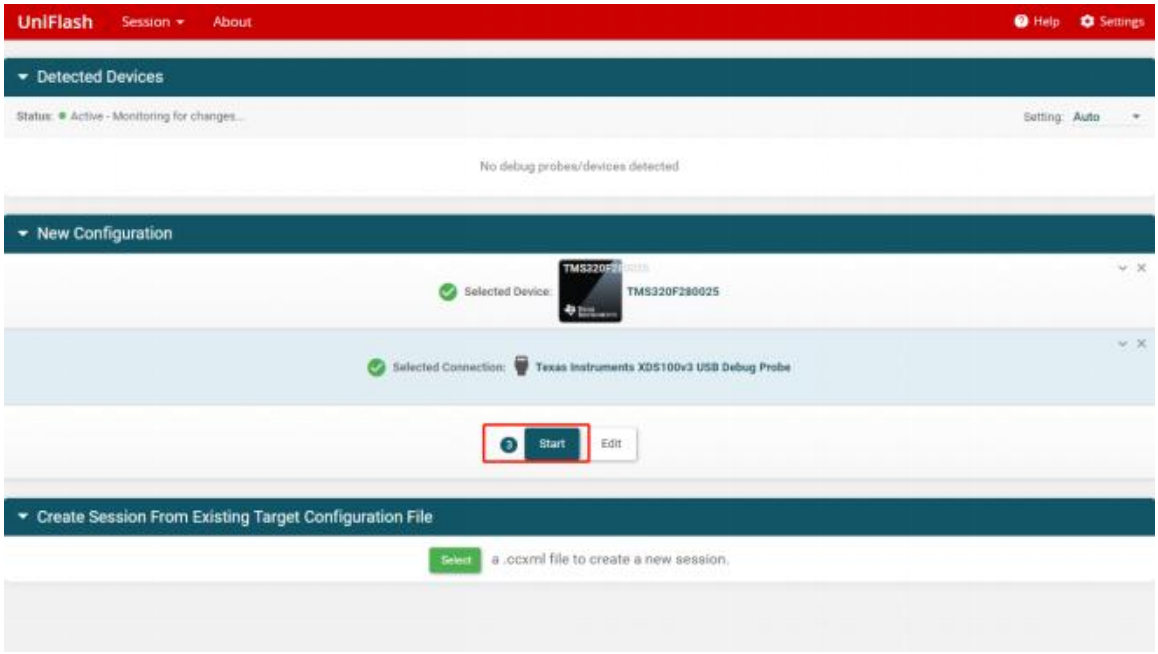
5. In New Configuration, enter "280025" in the "Choose Your Device" dialog box, and select the "TMS320F280025" option.



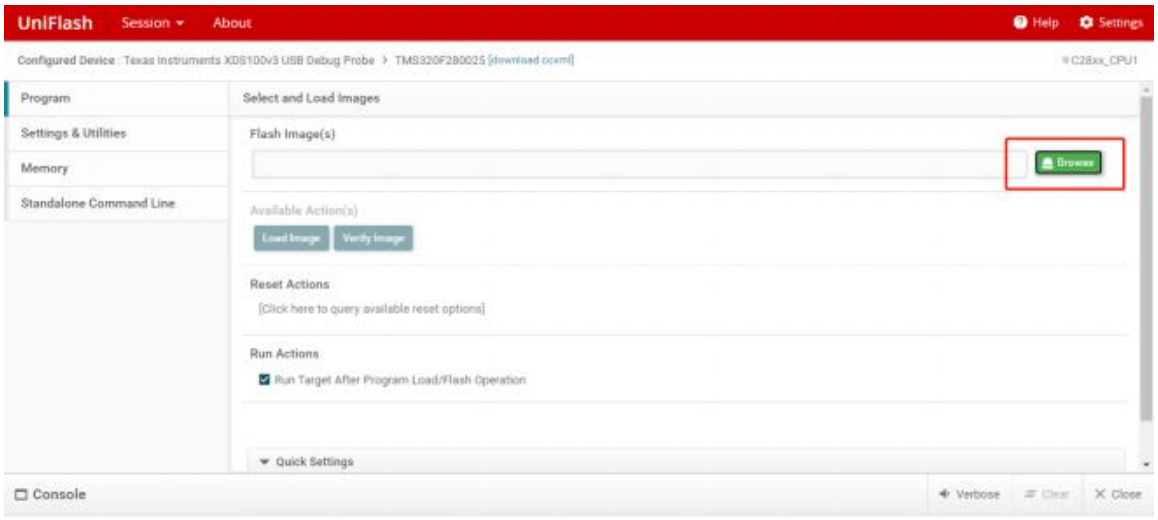
6. Select "Texas Instruments XDS100v3 USB Debug Prob" in the dialog box.



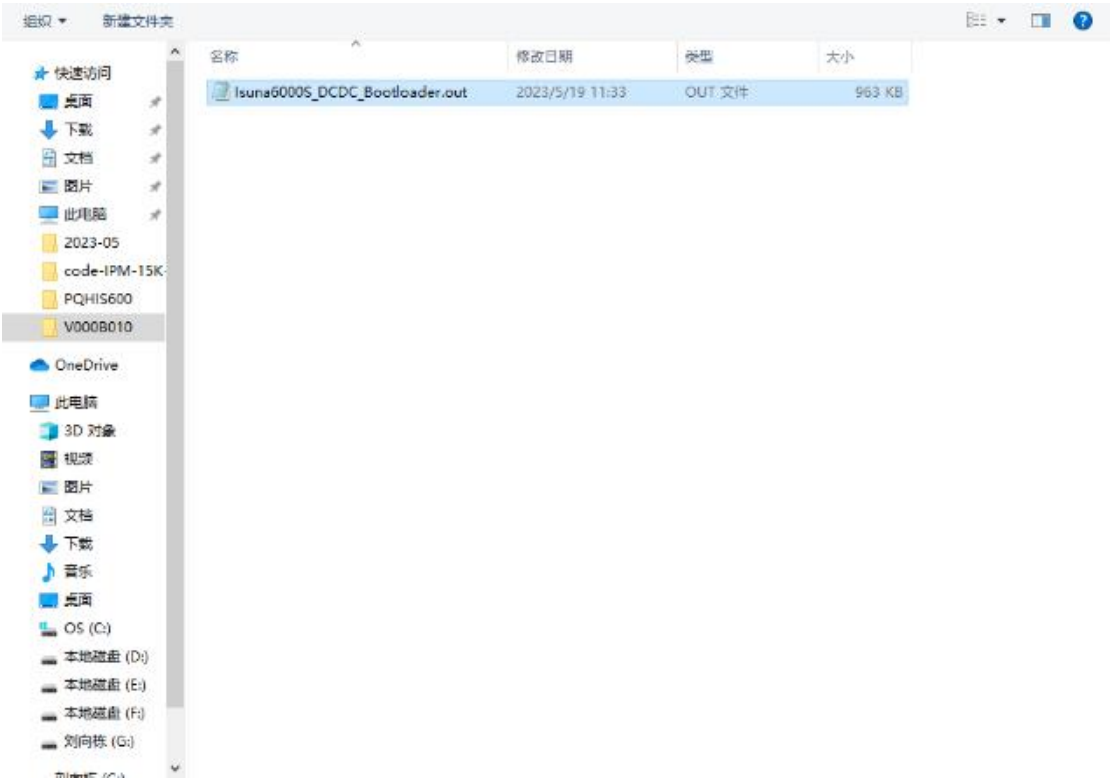
7. Click the "Start" button.



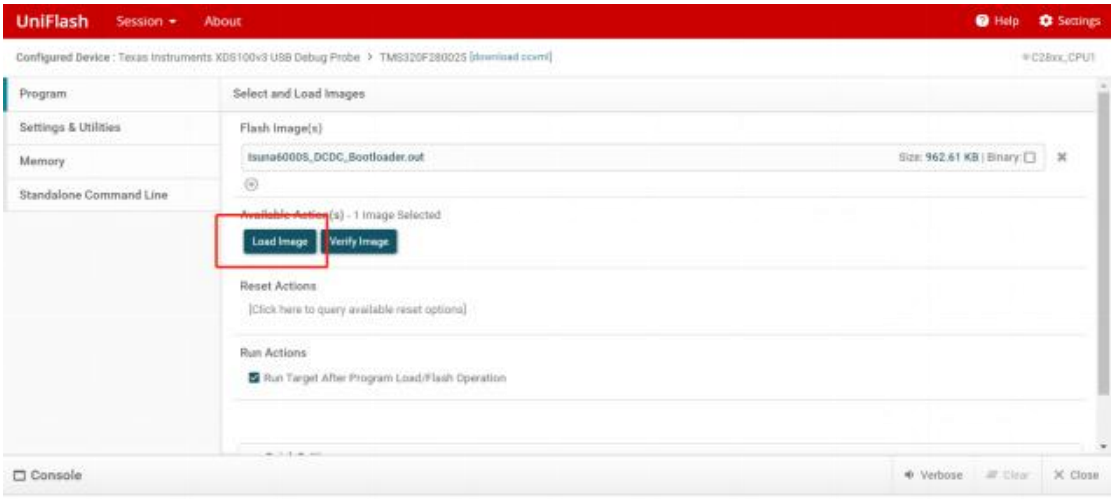
8. Click on "Program" on the left and then click on the "Browse" button next to the dialog box on the right.



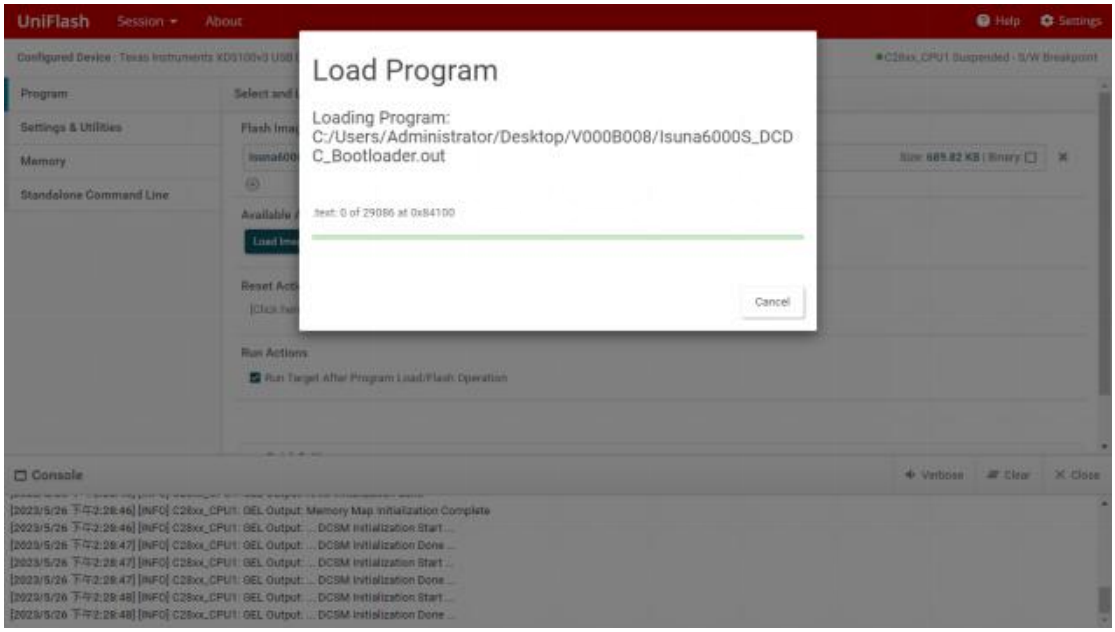
9 . In the pop-up dialog box select, "Isuna6000S_DCDC_Bootloader.out"



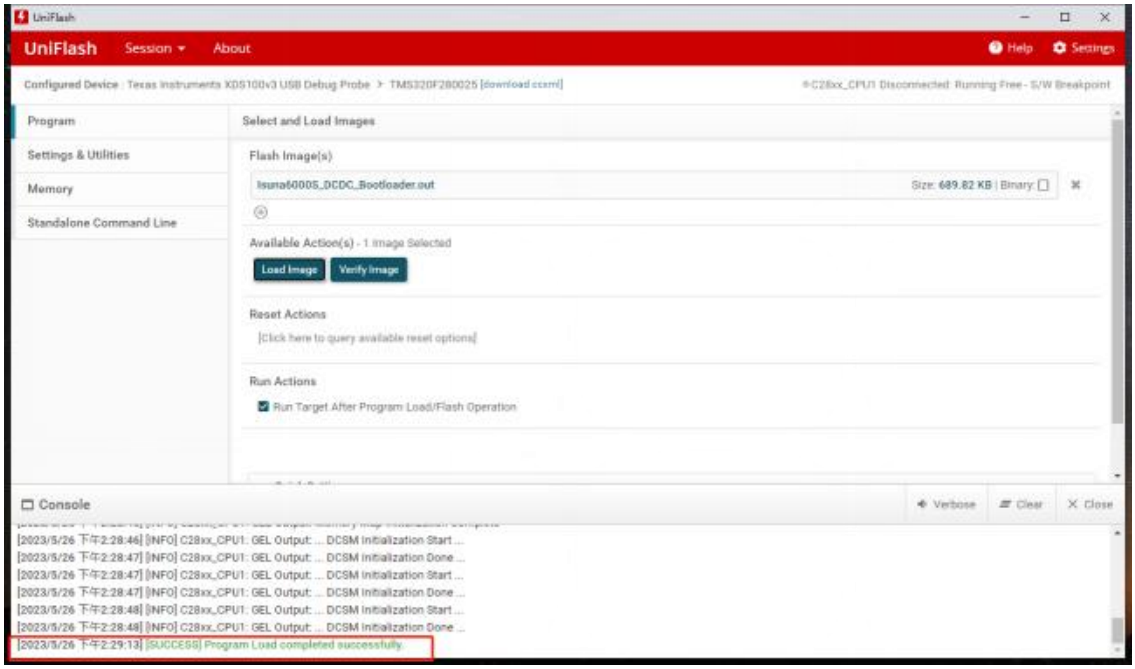
10. Click the "Load Image" button to upgrade.



11. The upgrade process is shown below.

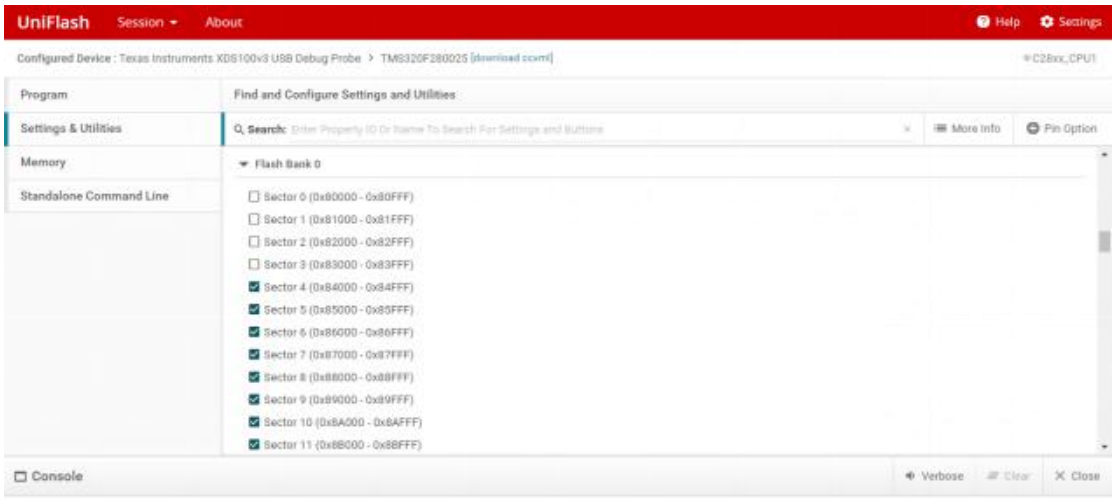


12. The program upgrade is completed, as shown below.

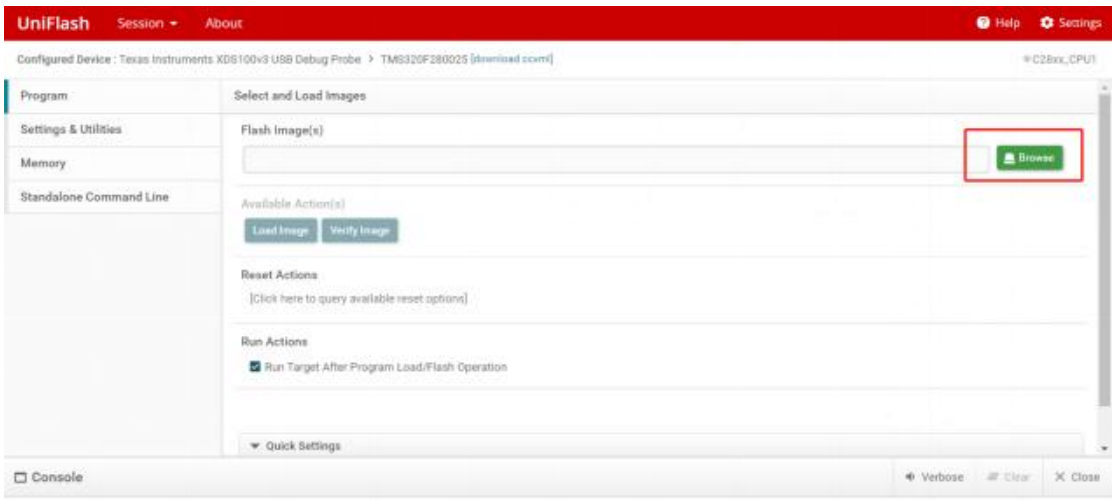


13. Next, click on "Settings & Utilities" on the left side.

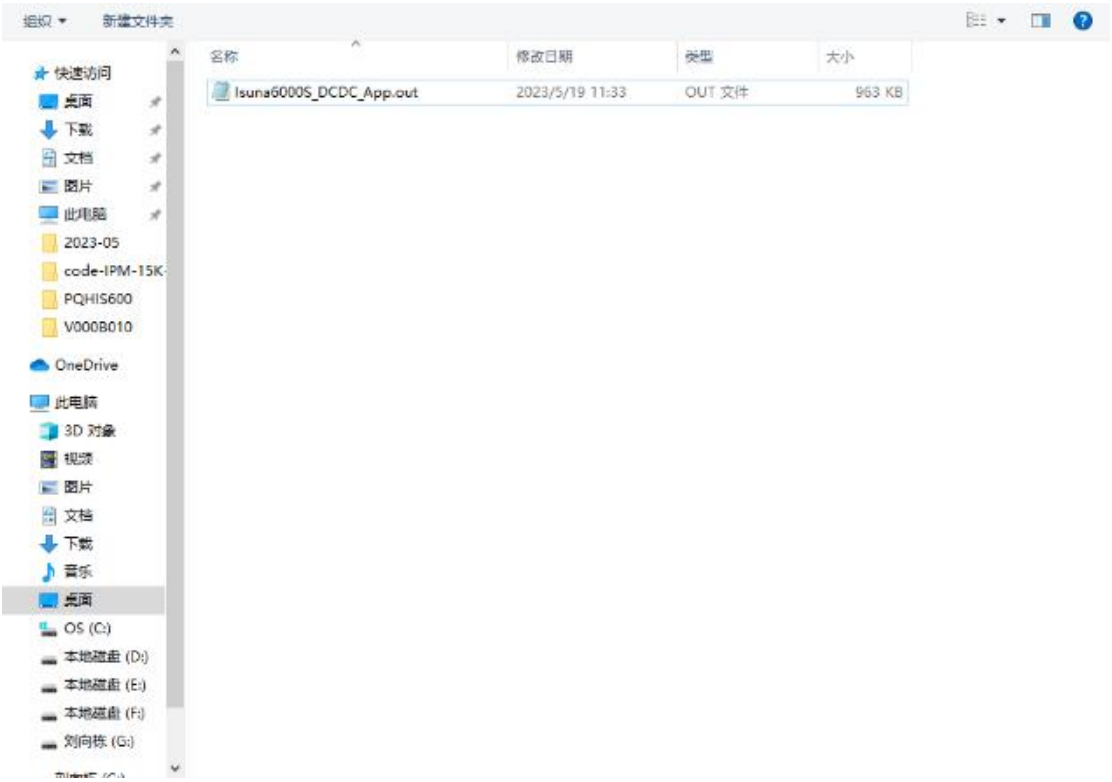
14. Select "Selected Sectors Only" in "Erase Settings" and uncheck Sector 0 to Sector 3 in “Flash Bank 0”



15. Click on "Program" on the left and then click on the "Browse" button next to the dialog box on the right.

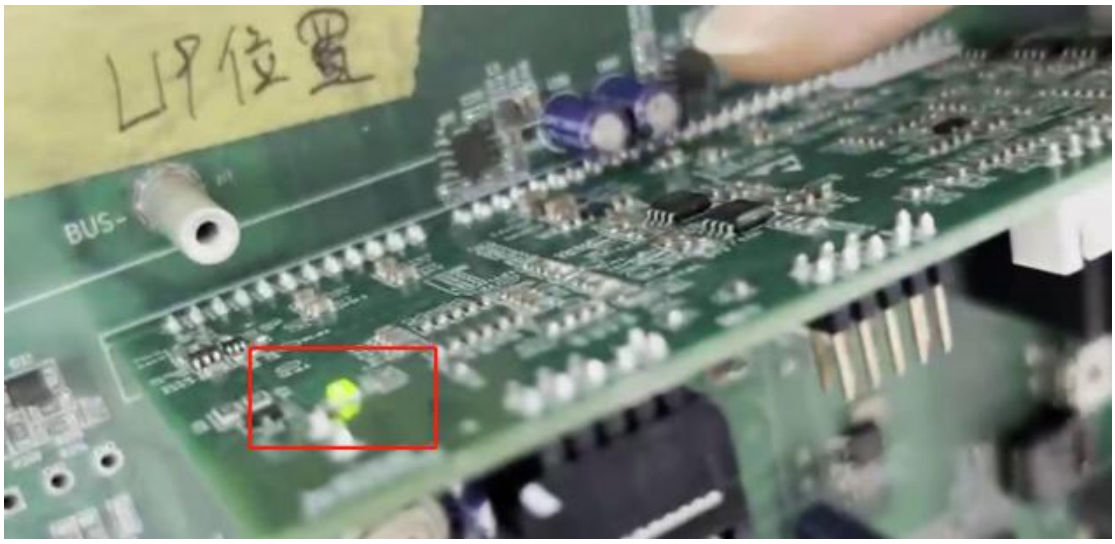


16. Select "Isuna6000S_DCDC_App.out" in the pop-up dialog box.



17. Repeat steps 10-12.

18. Disconnect the upgrade tool power supply USB after re-insertion, single board LED D23 first fast flash about 10S after the slow flash program upgrade success.

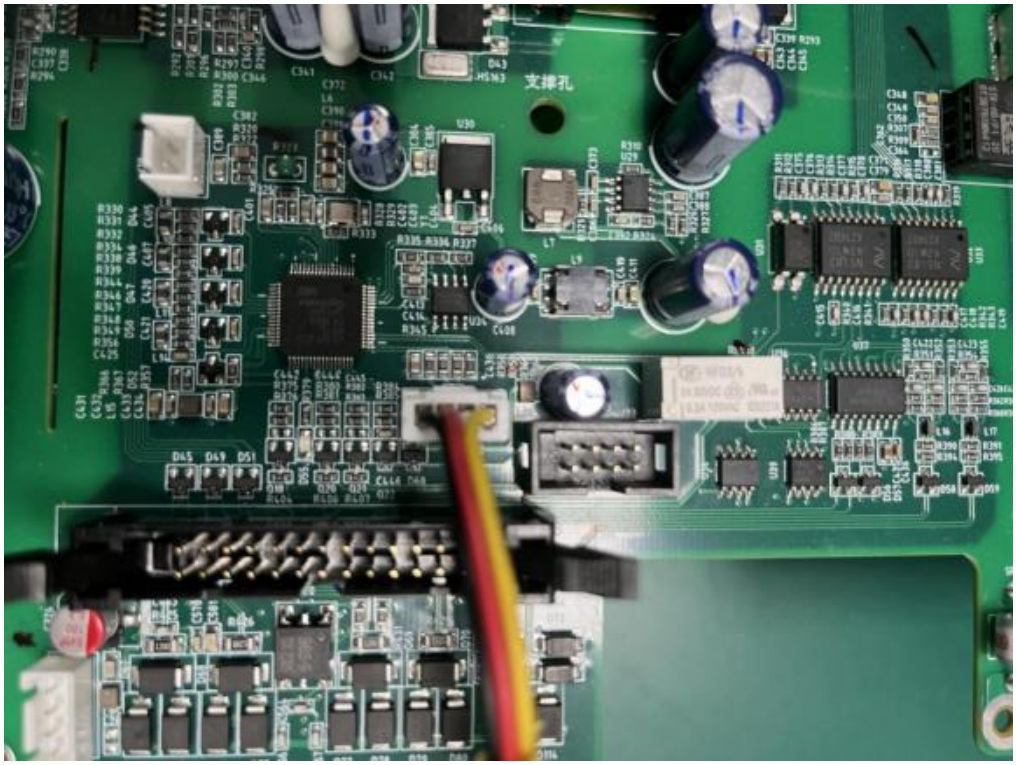


19. Disconnect the upgrade tool from the power supply USB.

20. Disconnect the female connector of the upgrade tool from the U1 control board; DSP firmware upgrade completed.

3.3 ARM firmware upgrade

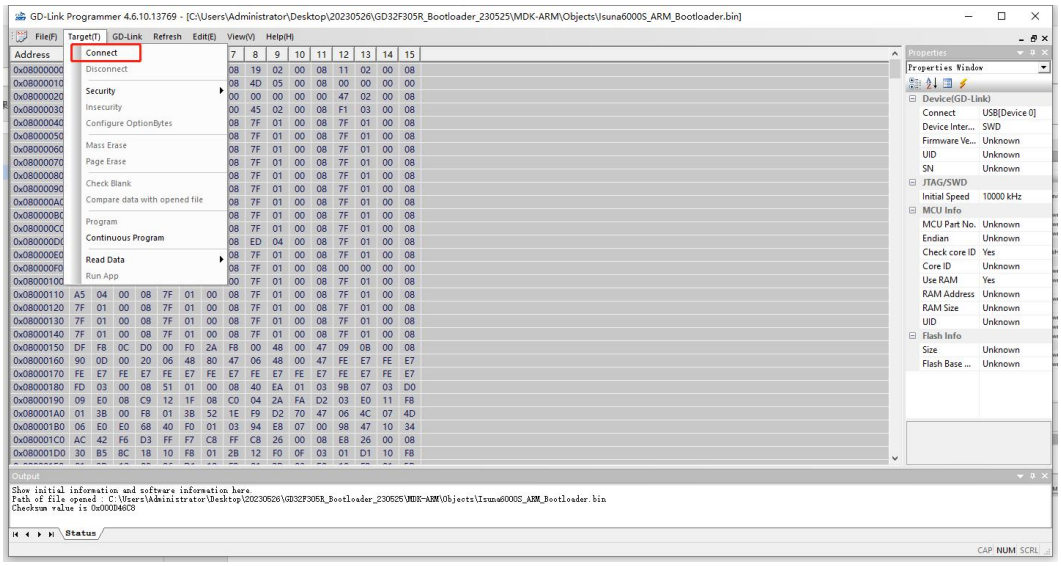
1. Insert the ARM upgrade tool into J32 of the M1 control board (be careful to prevent reverse insertion).



2. Plug the USB port of the ARM upgrade tool into the USB port of your computer.

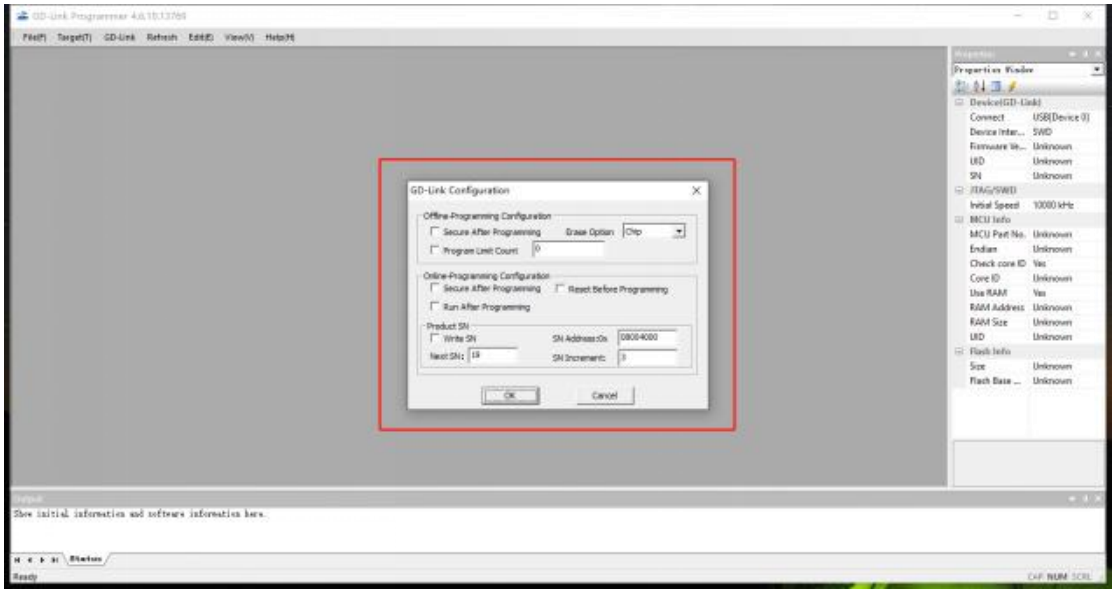
3. Open the GD-Link Programmer software.

4. Click Target-Connect

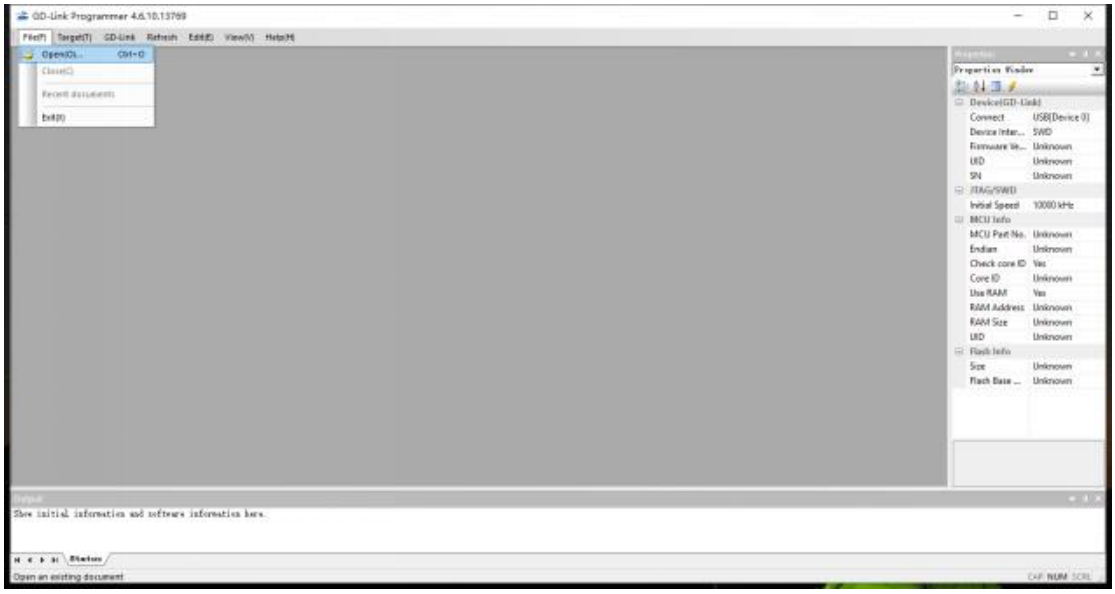


5. Click GD-Link --> Configuration.

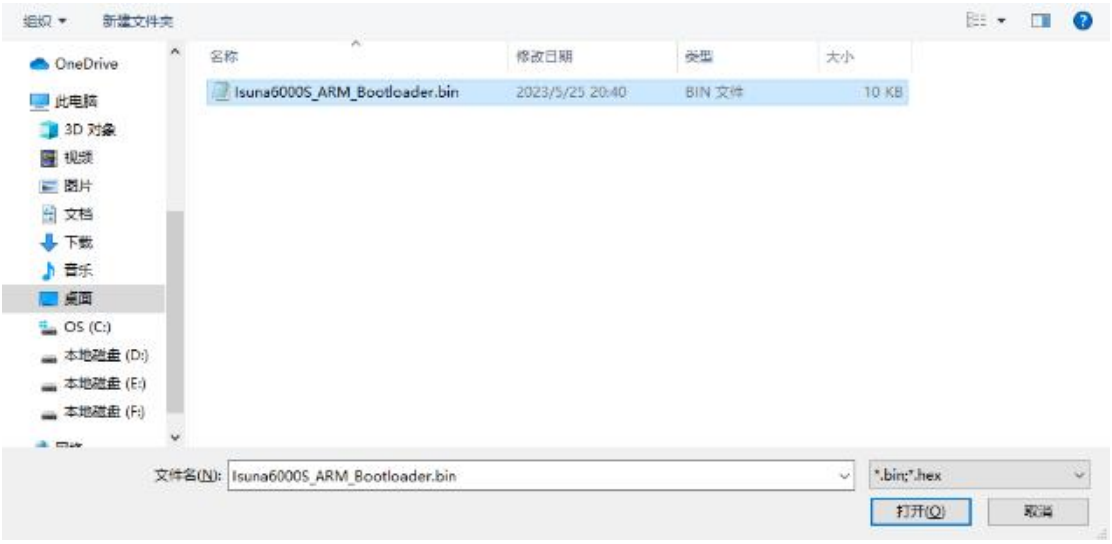
6. Configure the pop-up interface as shown in the figure, and click OK when finished.



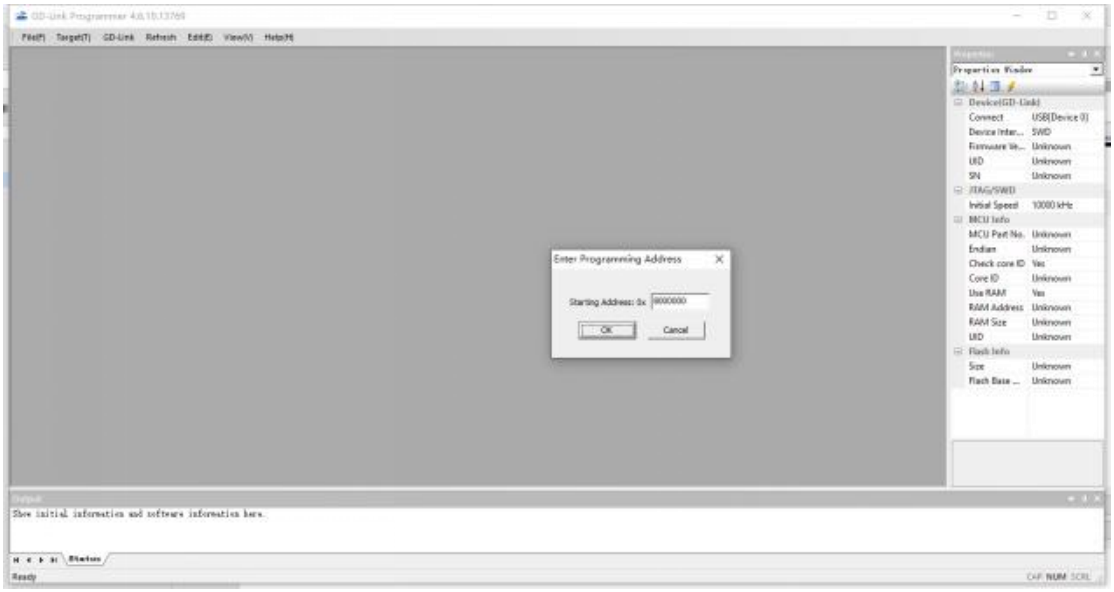
7. Click File ->Open in the upper left corner.



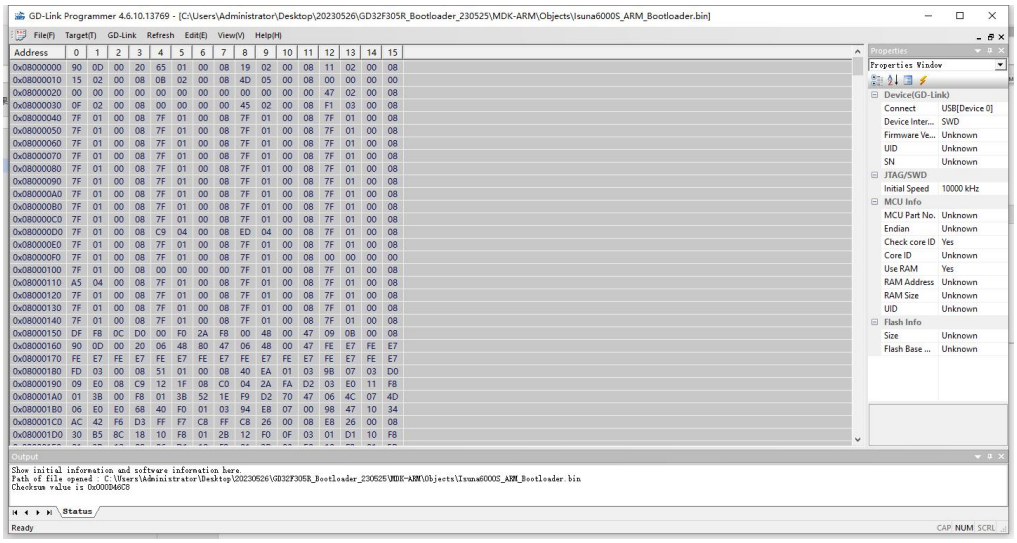
8. Select "Isuna6000S_ARM_Bootloader.bin" in the pop-up dialog box.



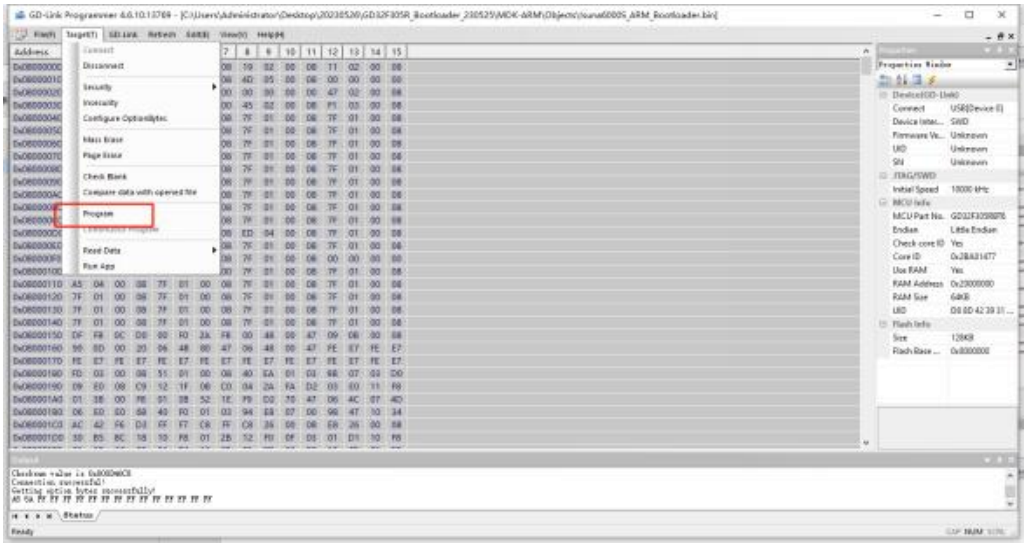
9. In the pop-up dialog box, select: "8000000".



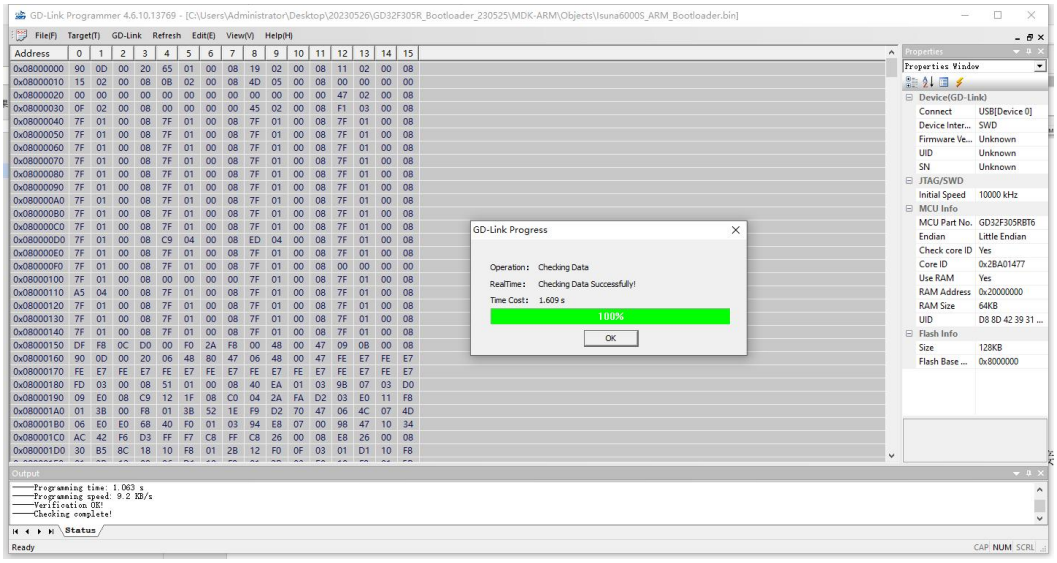
10. Click OK



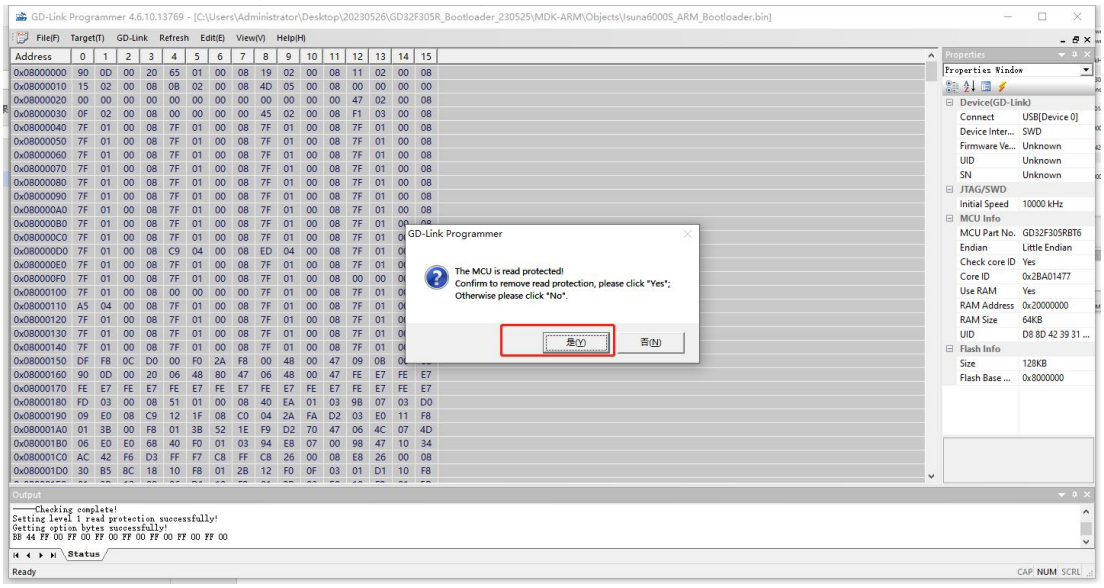
11. Click on Target-Program.

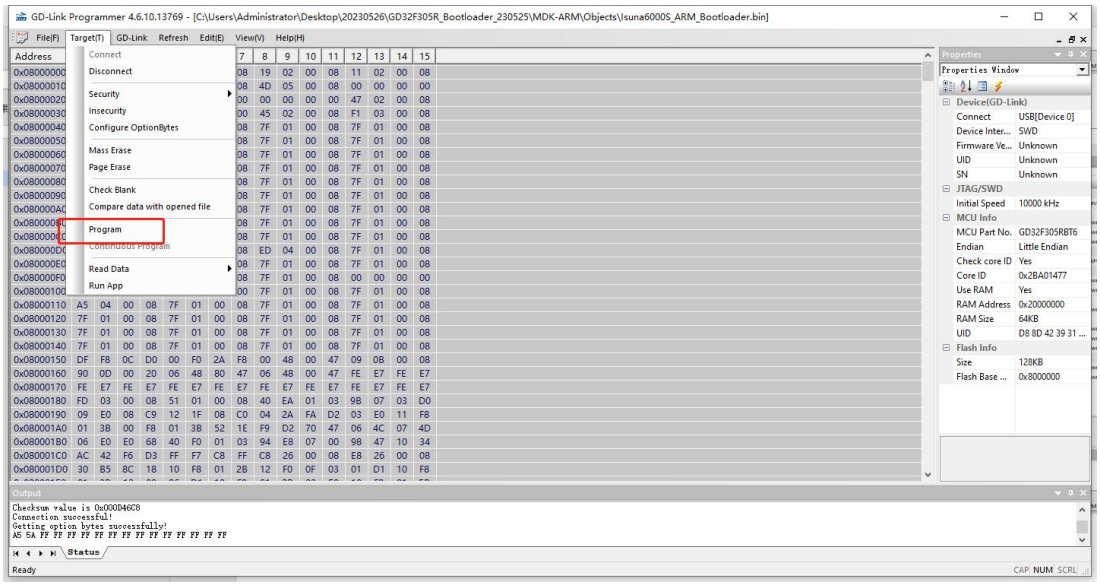


12. If the following screen appears, it means that the upgrade is successful

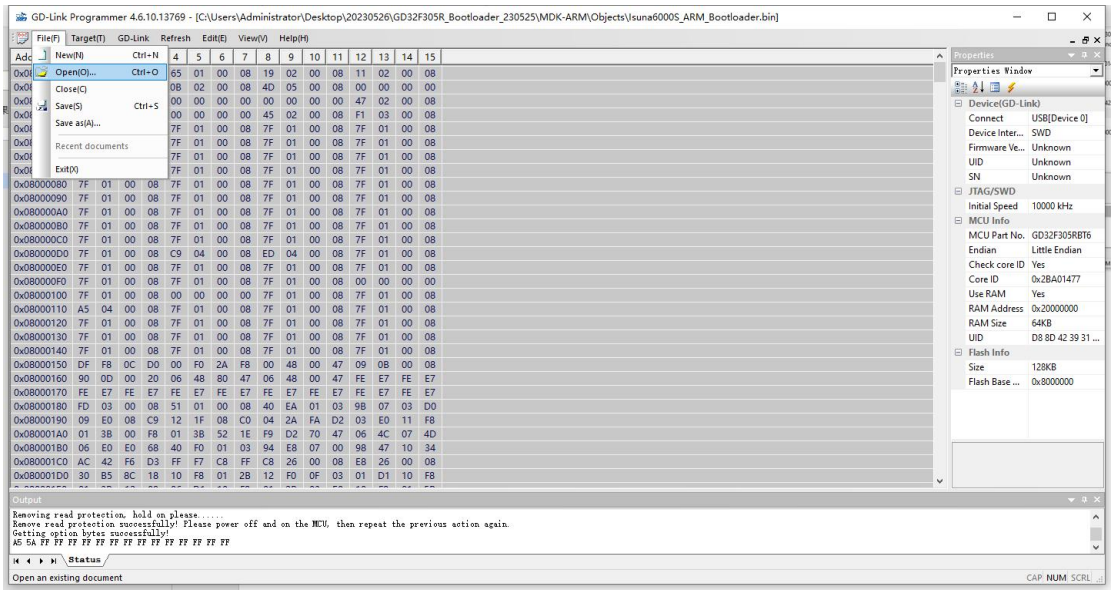


13. If the following screen appears, click "Yes", and then click Target-Program to re-upgrade.

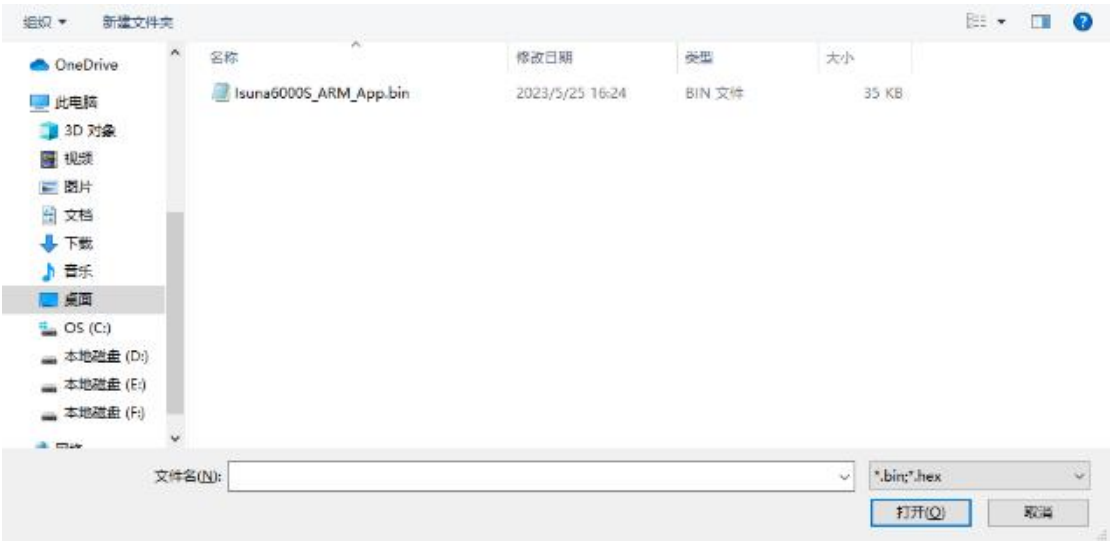




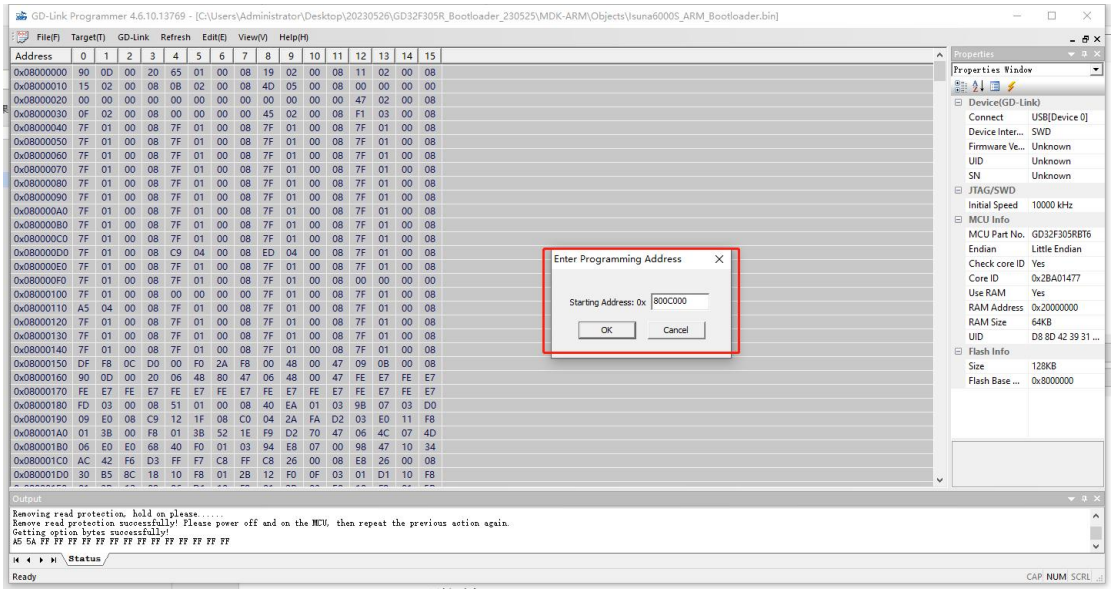
14. After the bootloader has finished upgrade, click File ->Open in the upper left corner again.



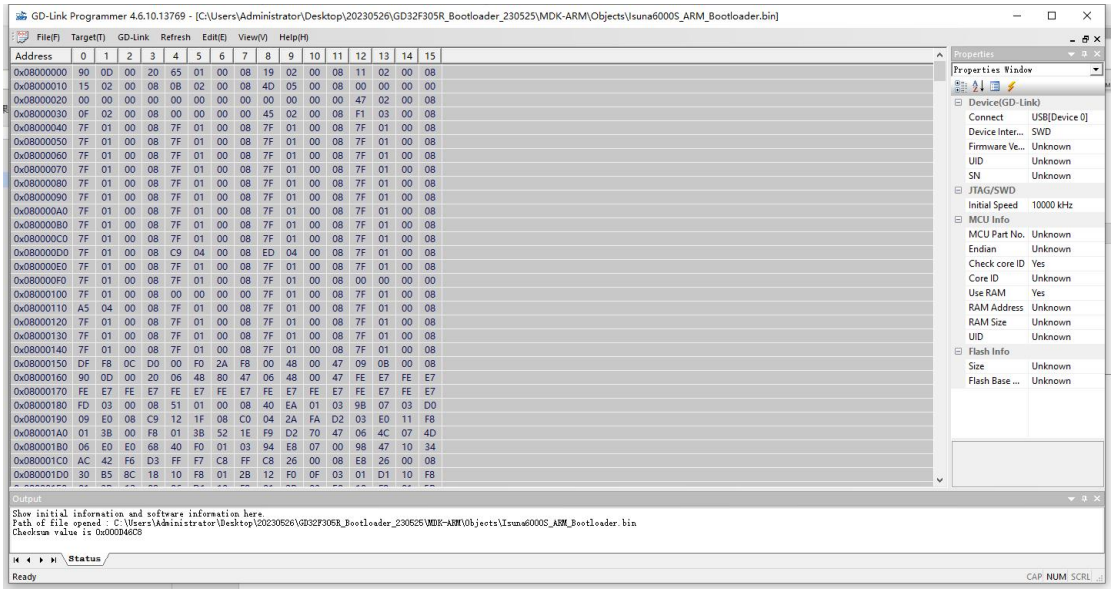
15. Select "Isuna6000S_ARM_App.bin" in the pop-up dialog box.



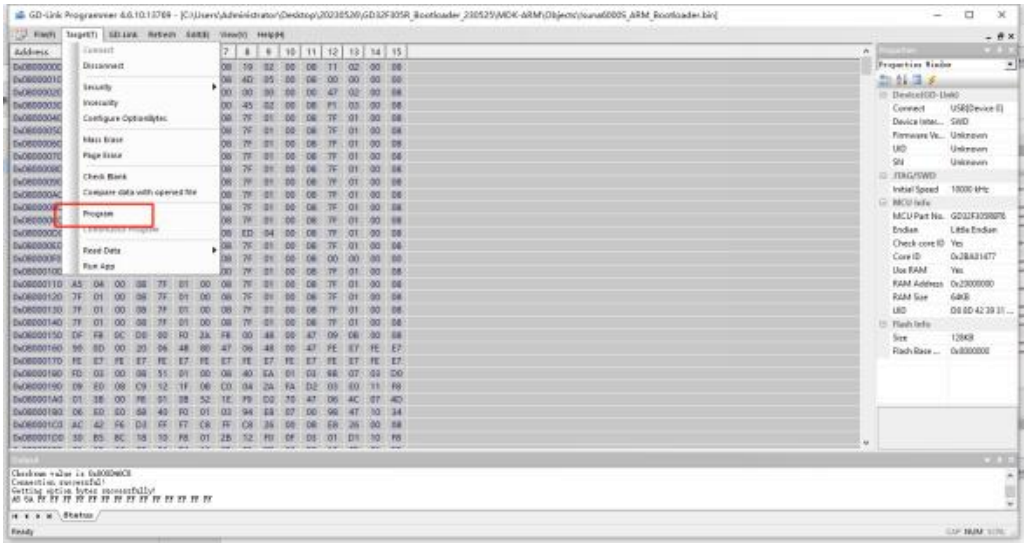
16. Change "8000000" to "800C000" in the pop-up dialog box.



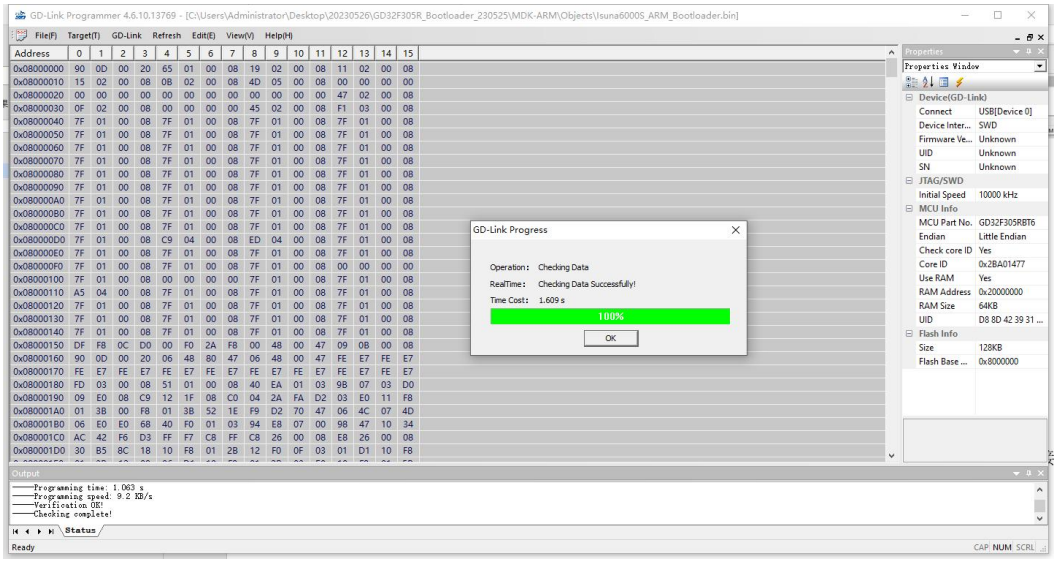
17. Click "OK"



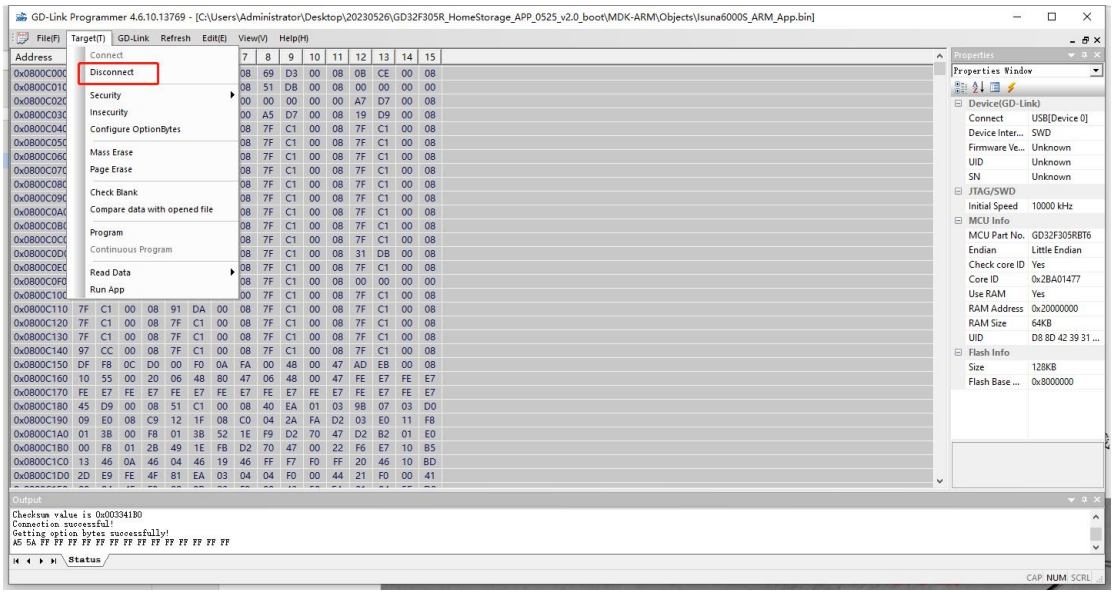
18. Click Target-Program.



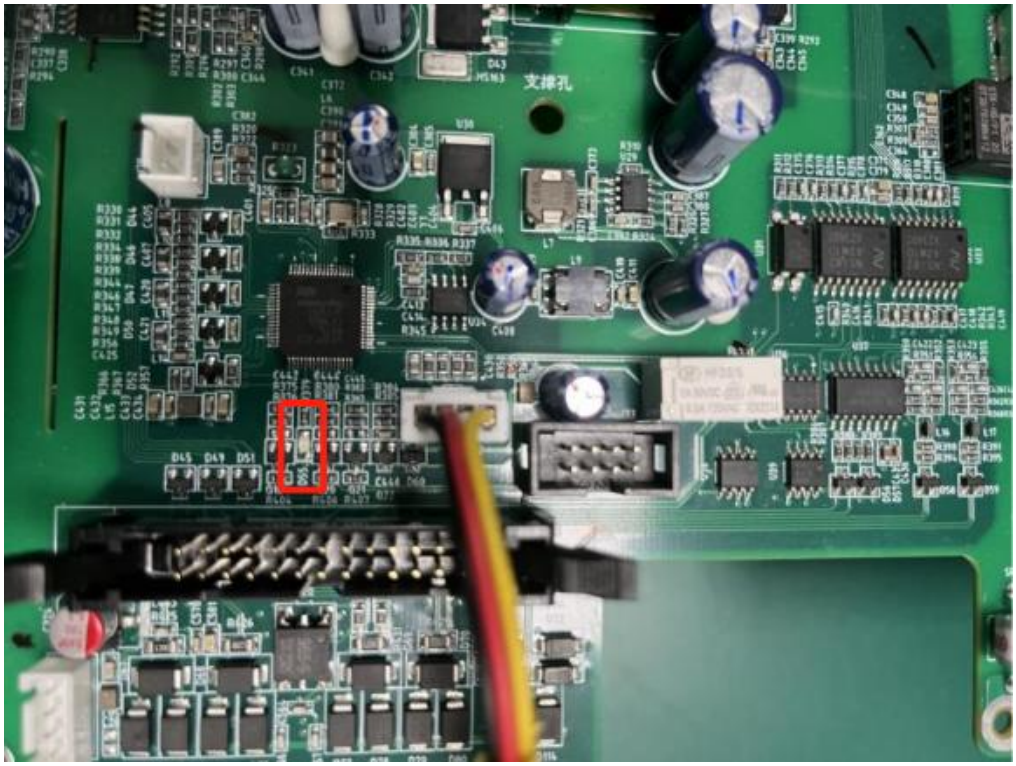
19. If the following screen appears, it means that the upgrade is successful



20. Click Target-Disconnect



21. Disconnect the upgrade tool USB interface and reconnect, the single board LED D55 first fast flash about 10S and then slow flash that the program upgrade success.



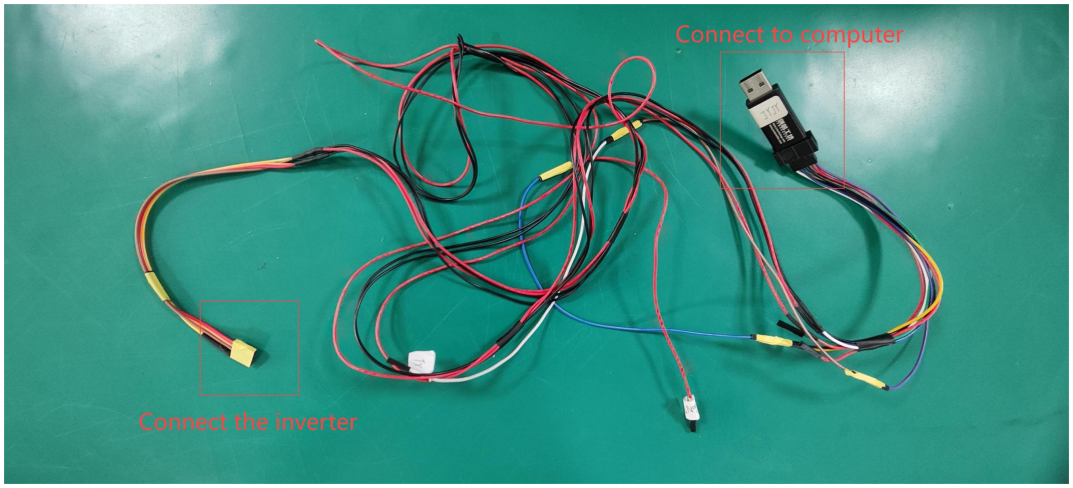
22. Disconnect the upgrade tool USB port.

IV Appendix

4.1 Introduction to upgrade Tools

DSP upgrade tool

ARM upgrade tool



4.2 Upgrade Tools Models

1, DSP emulator model: YXDSP-XDS100V3 EMULATOR USB2.0.

2.GD Emulator Model: PWLINK2