RiiO SUN II Inverter Program Update Guide

V1.0

Version Record

Date	Version	Remark	Author
2023/02/23	V1.0	First version	Allen Zeng Nikulas

1. Applicable Inverter Models

This guide applies to updating the Display software and Power Firmware of TBB RiiO Sun II all -in-one solar inverter series.

Notes:

a) You must use a TBB Link upper computer with version 1.13 or above (not including beta version, such as V1.11.T), otherwise the upgrade may fail (Note: TBB Link version used in this guide is V1.13.03);

b) The Display software must be upgraded first and then the Power firmware, otherwise the upgrade may fail;

c) Make sure that the setting item No.91 (Remote Control Enable) is set to 1-Enable (default is 1-Enable) and the setting item No.92 (Remote Upgrade Enable) is set to 1-Enable (default is 1-Enable) before upgrading.

2. List of Upgrade Tools

a) Computer with Windows system.
b) A TBB Link upper computer (please refer to the corresponding document for the installation of the TBB Link upper computer and the TBB Interface driver).
c) The new Display software and Power Firmware provided by TBB in PAC and PACX formats respectively. The program varies among each inverter series.
d) See Table 1 for a list of TBB Interface tools.

NO.	Image	Item	Description
1		TBB Interface	RS485 to A USB Converter
2		Inverter - TBB Interface communication cable	RJ45 8P8C communication cable
3		TBB Interface - computer communication cable	Type A + type B USB cable

Table 1

3. Upgraded Communication Connection

a) Please turn off the inverter and all switches before establishing the connection.
b) Remove the cover of the inverter wiring area.
c) When the system is connected in parallel, please disconnect parallel communication cables and then upgrade the inverter.
d) Use the TBB Interface tool to connect the ComMON port of the inverter to the USB port of the computer, as shown in Figure 1 and Table 2.

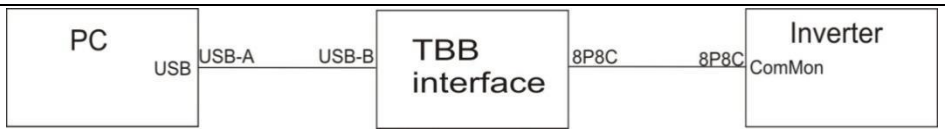


Figure 1

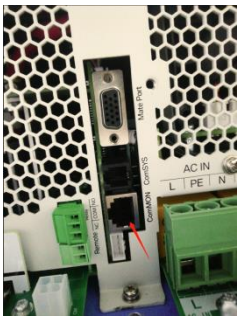
Applicability	Computer	TBB Interface	Inverter
RiiO Sun II Series Connection Diagram			

Table 2

4. Steps to Upgrade Display Software

a) Turn on the switch between the battery and the inverter;

b) Press the On/Off button to turn on the inverter and wait until it enters the standby mode;

c) Check whether the connections are correct;

d) Open the "TBB link.exe" upper computer and click the "Update" button;

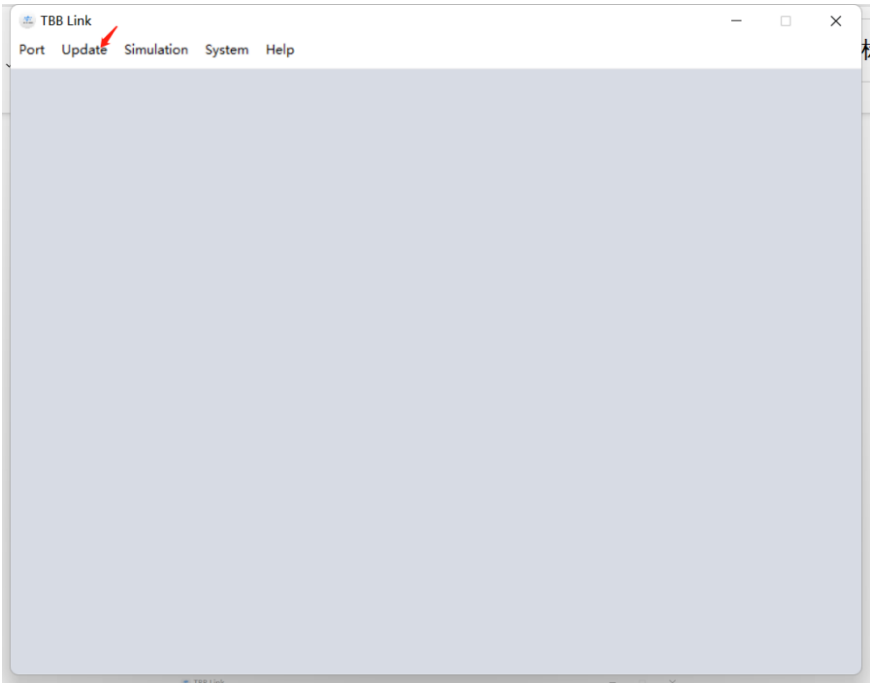


Figure 2

e) Select "Display Software" and click the "OK" button;

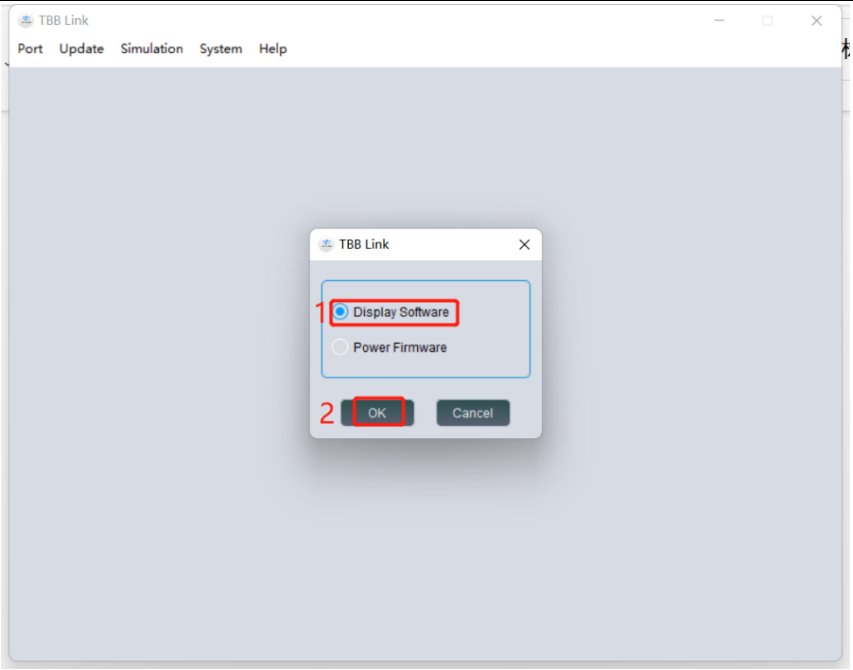


Figure 3

f) Please check the prompt message and click the "OK" button after confirmation.

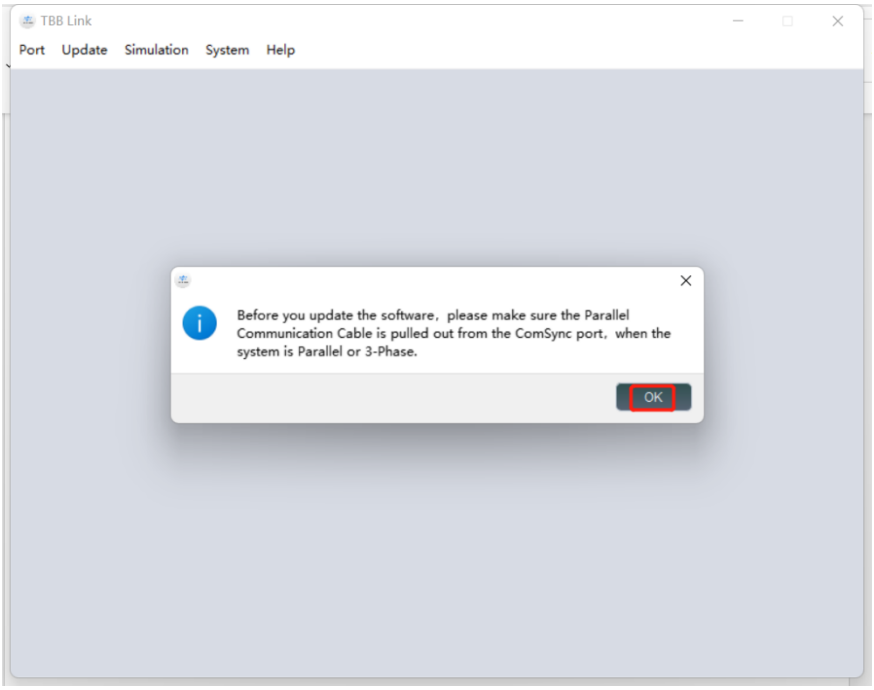


Figure 4

g) Part of the parameters' selections for Com Setup are shown in Table 3. Generally, the default value is the correct value. Only the PortNum parameter will be displayed with different COM ports on different computers;

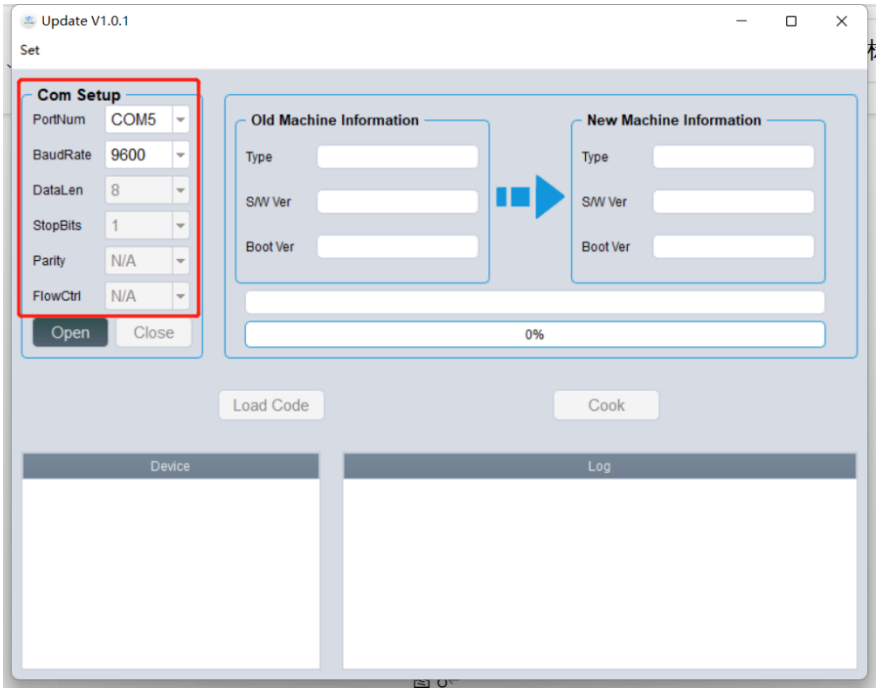


Figure 5

Item	Parameter Selection	Item	Parameter Selection
PortNum	Based on the actual COM port	BaudRate	9600
DataLen	8	StopBits	1
Parity	N/A	FlowCtrl	N/A

Table 3

h) Click the "Open" button, and you will see the information of the old version in the "Old Machine Information" box;

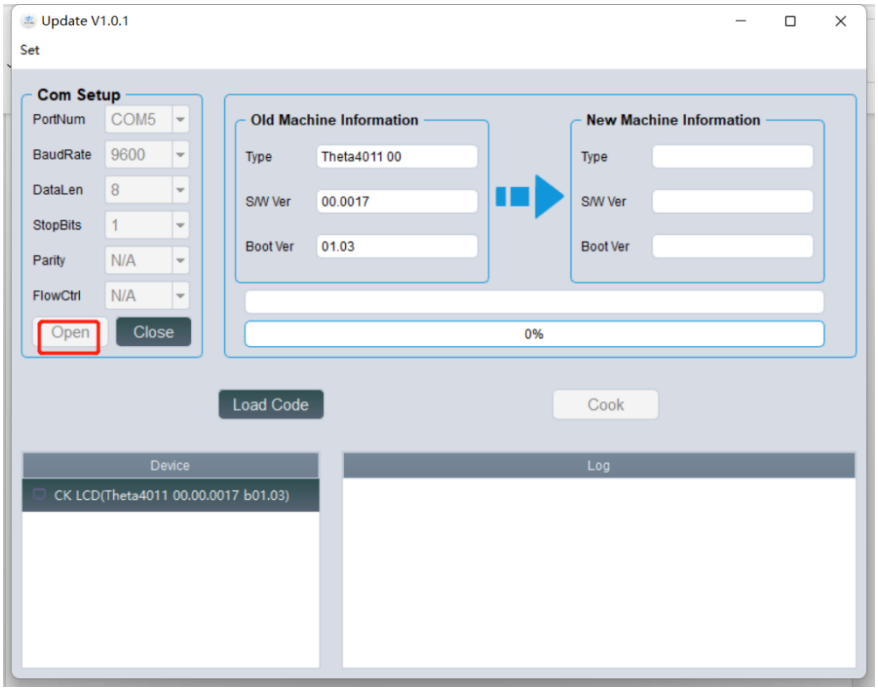


Figure 6

i) Click the "Load Code" button, select the new Display Software provided by TBB in pac format. If the new software is successfully read, the information of the new version will be displayed in the "New Machine Information" box;

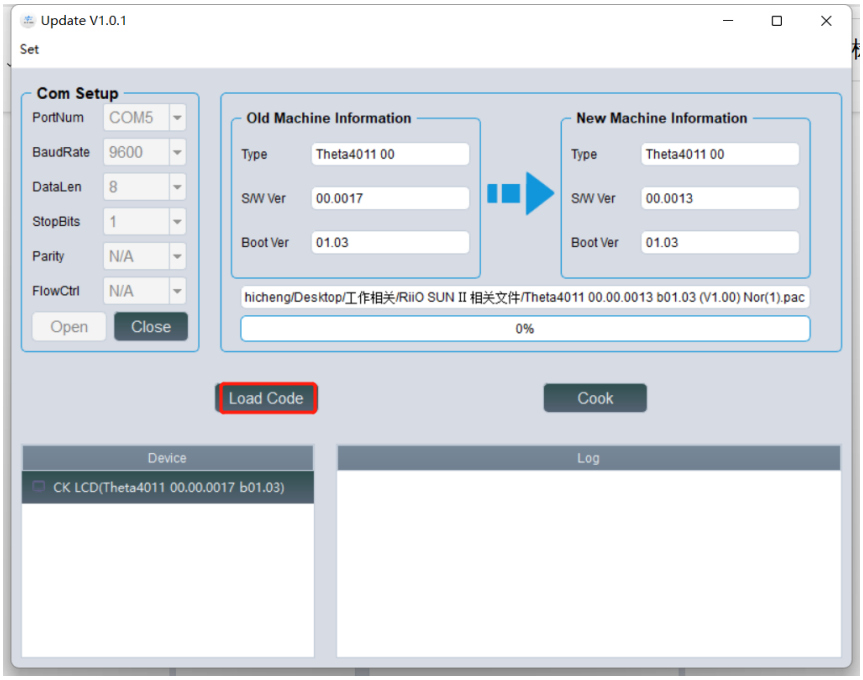


Figure 7

j) Click the "Cook" button and wait until the upgrade completes;

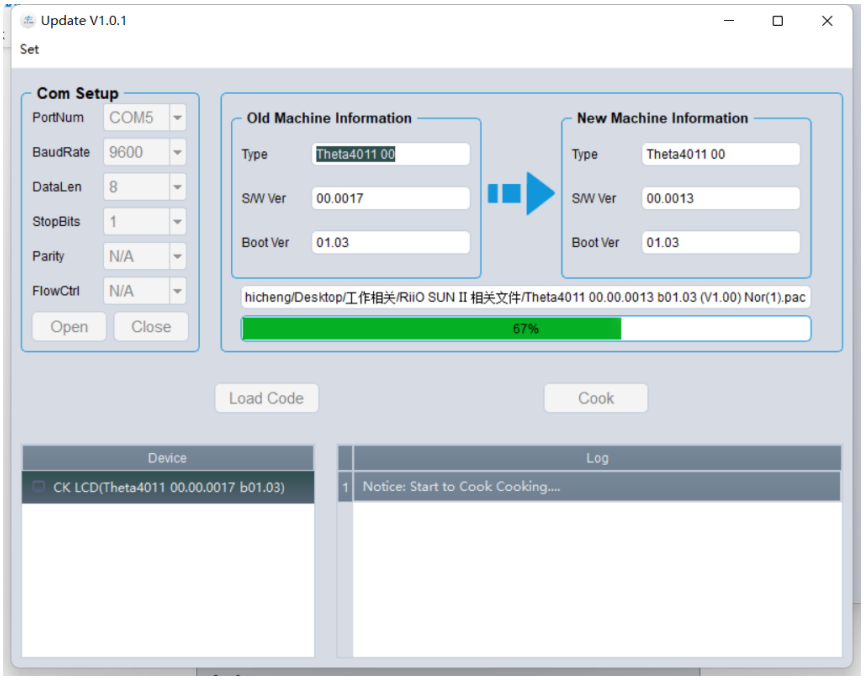


Figure 8

k) If the upgrade is successfully executed, a pop-up prompt will appear as shown below, then click the "OK" button;

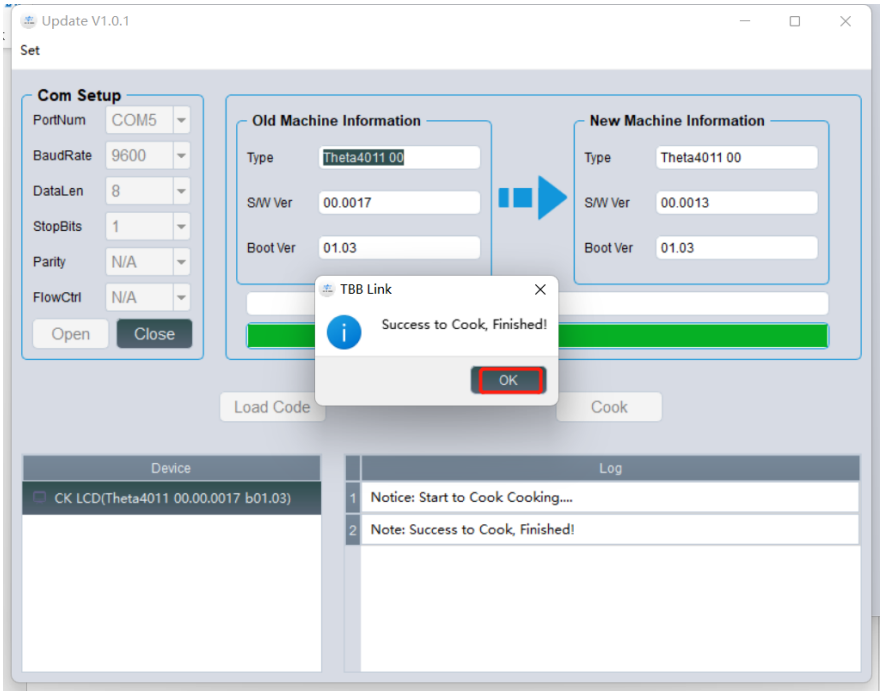


Figure 9

l) If you still need to upgrade the Power Firmware, please go to Section 5;

m) If you only need to upgrade the Display Software, please turn off the inverter after the upgrade has been completed and then unplug the TBB Interface tool;

n) After restarting the inverter system, you are required to reset all inverters to their factory

settings and then reconfigure the system parameters. For more details, please refer to the corresponding manual;

5. Steps to Upgrade Power Firmware

a) Keep the communication cables connected and keep the inverter in the standby mode;

b) Turn off the screen for updating display and click the "Update" button again;

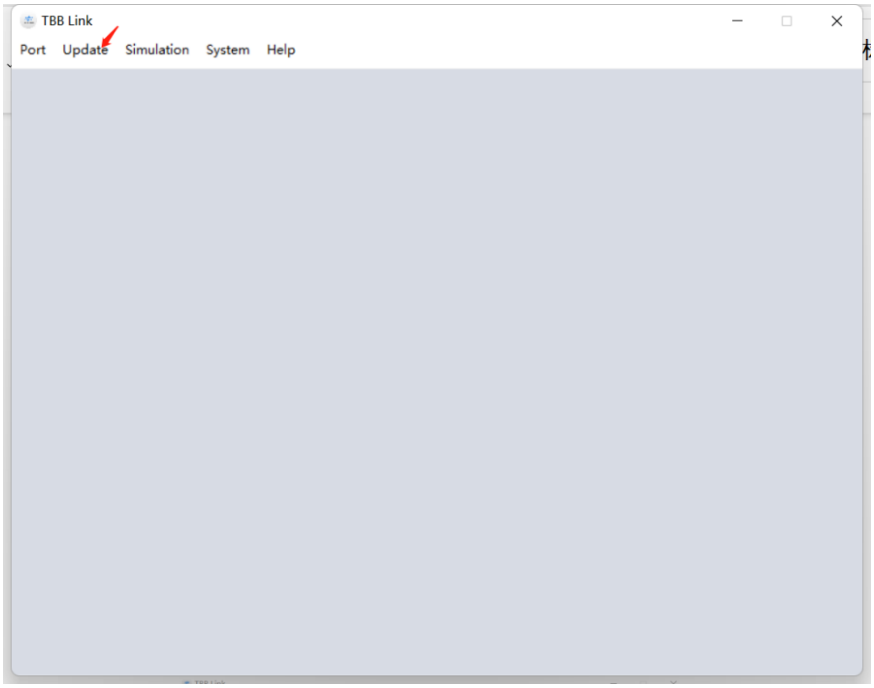


Figure 10

c) Select "Power Firmware" and click the "OK" button;

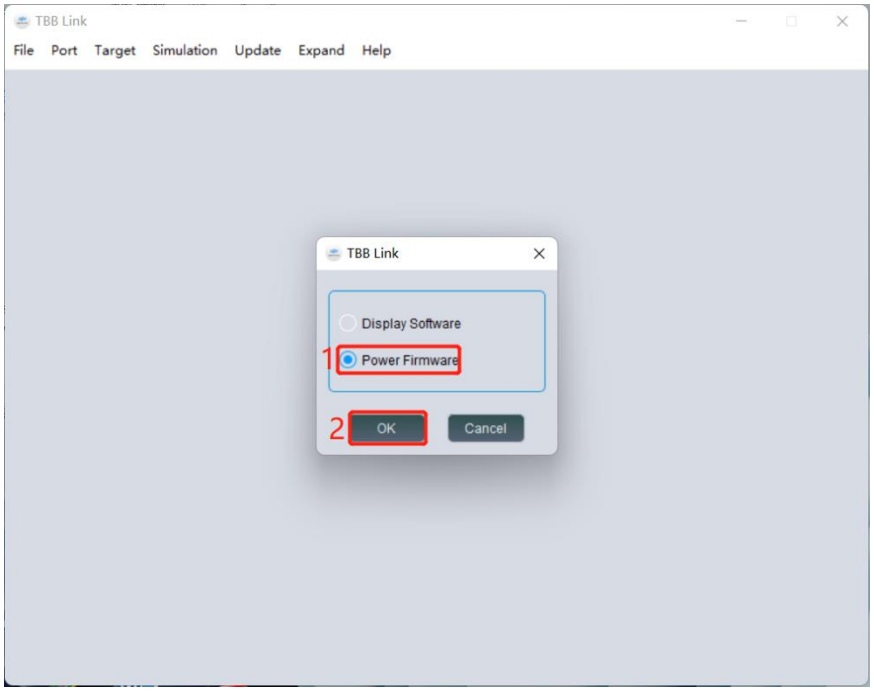


Figure 11

d) Please check the prompt message and click the "OK" button after confirmation;

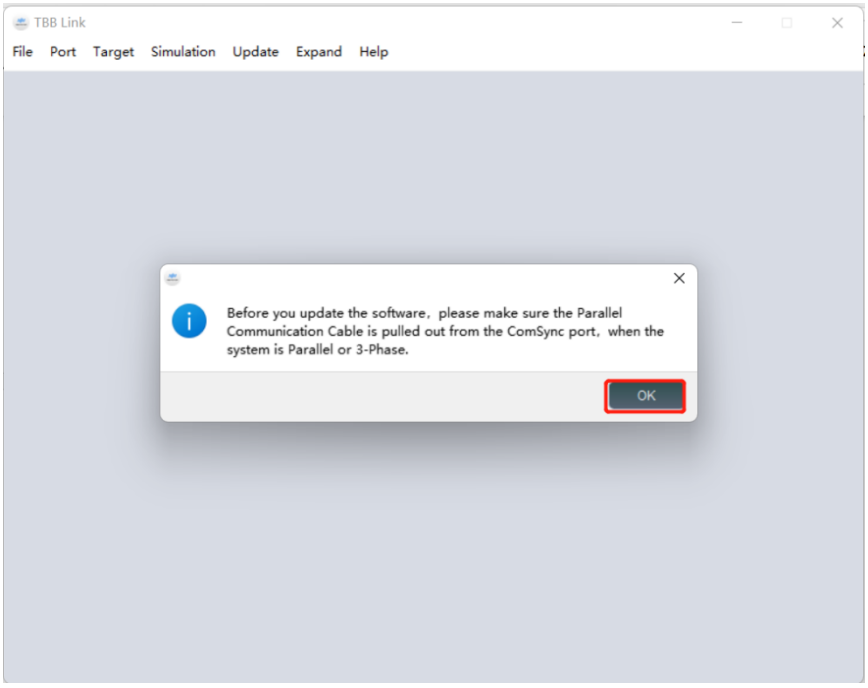


Figure 12

e) Select the correct COM port, which is usually the default value, and then click the "Start" button;

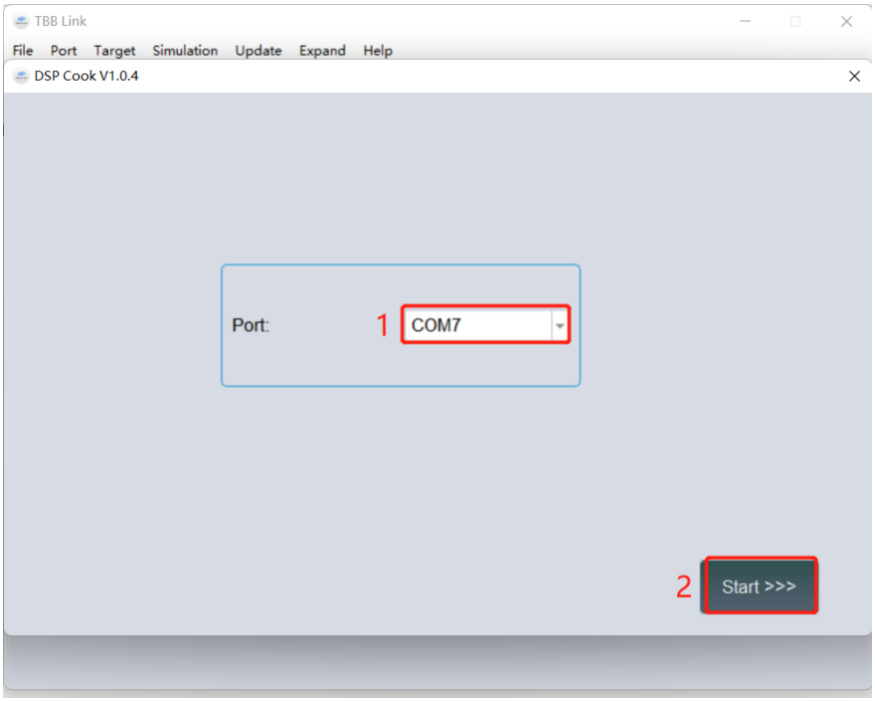


Figure 13

f) Click the "Load Code" button, select the new Power Firmware provided by TBB in pax format. If the new software is successfully read, you can see the path of the new version;

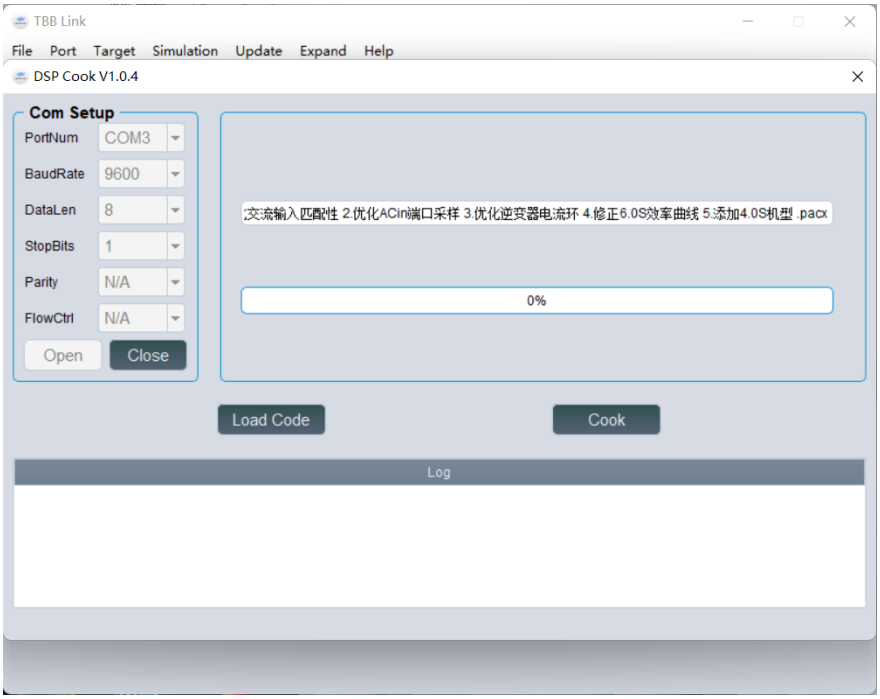


Figure 14

g) Click the "Cook" button and wait until the upgrade completes;

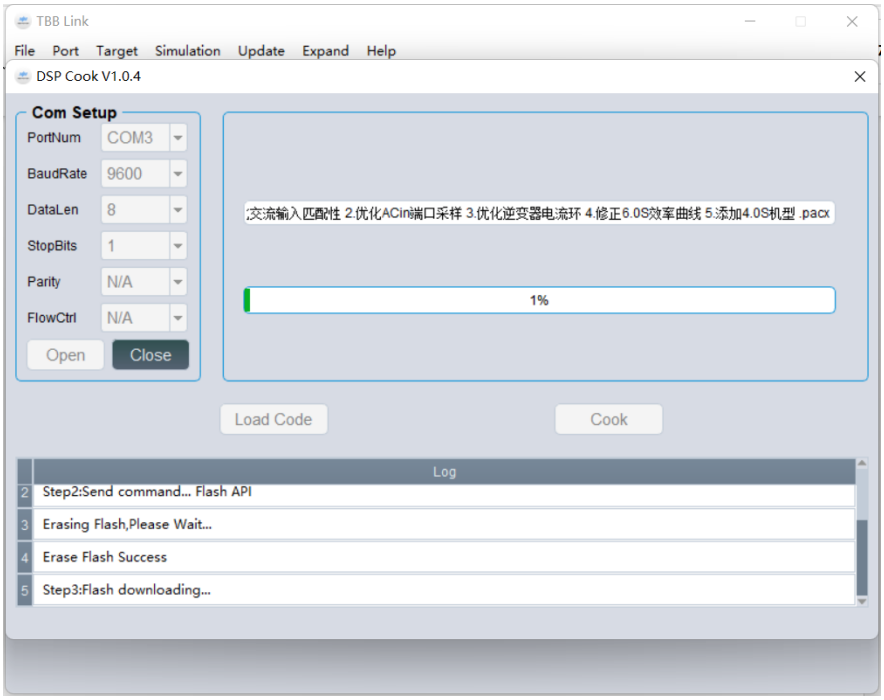


Figure 15

h) If the upgrade is successfully executed, a pop-up prompt will appear as shown below, and then

click the "OK" button;

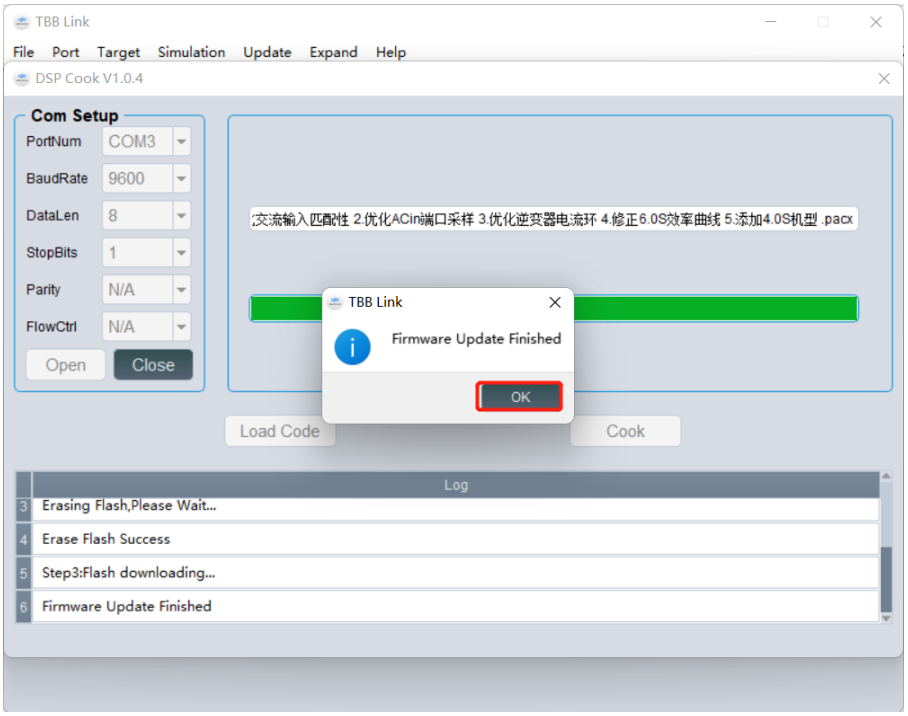


Figure 16

i) After the upgrade has been completed, please turn off the inverter and unplug the TBB Interface tool;

j) After restarting the inverter system, you are required to reset all inverters to their factory settings and then reconfigure the system parameters. For more details, please refer to the corresponding manual.

6. Note on Abnormal Upgrade

If the upgrade fails due to the weak connection of communication cables or power failure of the inverters during the upgrade process, you are recommended to repeat the steps instructed in Section 4 or Section 5 separately.