



Download firmware and authorization code process

Device Development > Tuya Development Boards > Tuya Sandwich

Evaluation Kits > Development Guide

Version: 20200321

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1 Overview

The sandwich SoC main control board combined with the function board can be used to make various product prototypes. You can either use the official SoC-free development solution provided by Tuya without developing , or you can develop the SoC firmware yourself and download it to the sandwich SoC main control board.

For the former, you need to apply for an authorization code for the product of a certain SoC solution, and then use the authorization code in combination with the authorization code download software provided by Tuya to download the SoC solution firmware and related authorization information to your sandwich SoC main control board

For the latter, you still need to first download firmware to your sandwich SoC main control board according to the previous method to obtain the corresponding authorization. Subsequent firmware coverage). After that, you are free to download your own firmware.

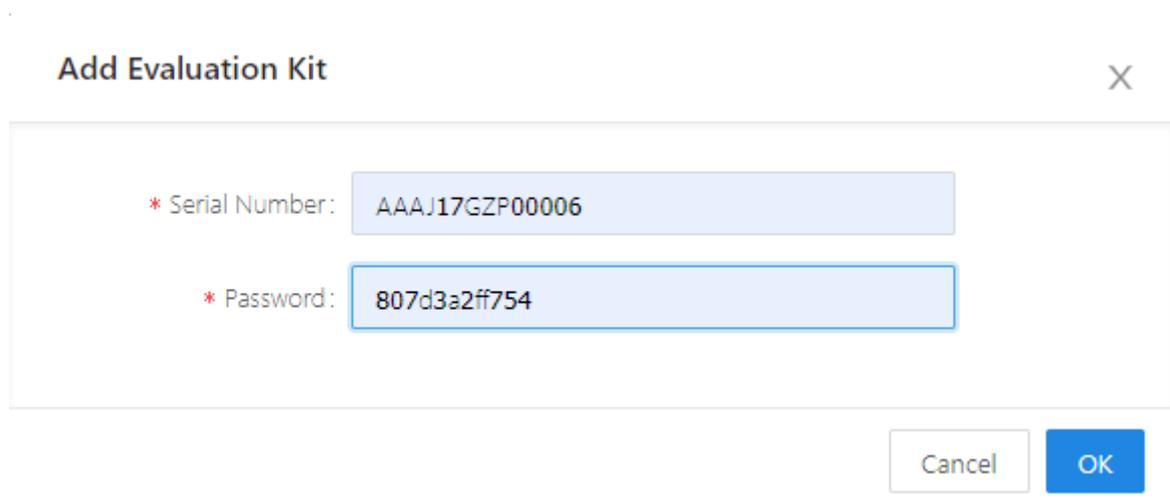
2 Get Authorization Code

2.1 Preliminary preparation

You need to follow the [SoC free development solution tutorial](#) Create a product that you need based on the SoC free development solution.

2.2 Step 1 Binding Your Sandwich Development Board

Open the Tuya IoT Workbench-[Sandwich Development Board Management Interface](#), click to add “Binding Development Board”, and enter the SN on the sandwich SoC main control board package ID and password, click OK, and you can see that your sandwich SoC main control board has been bound:



The screenshot shows a dialog box titled "Add Evaluation Kit" with a close button (X) in the top right corner. The dialog contains two input fields:

- * Serial Number: AA AJ17GZP00006
- * Password: 807d3a2ff754

At the bottom right of the dialog, there are two buttons: "Cancel" and "OK".

Figure 1: 1.png

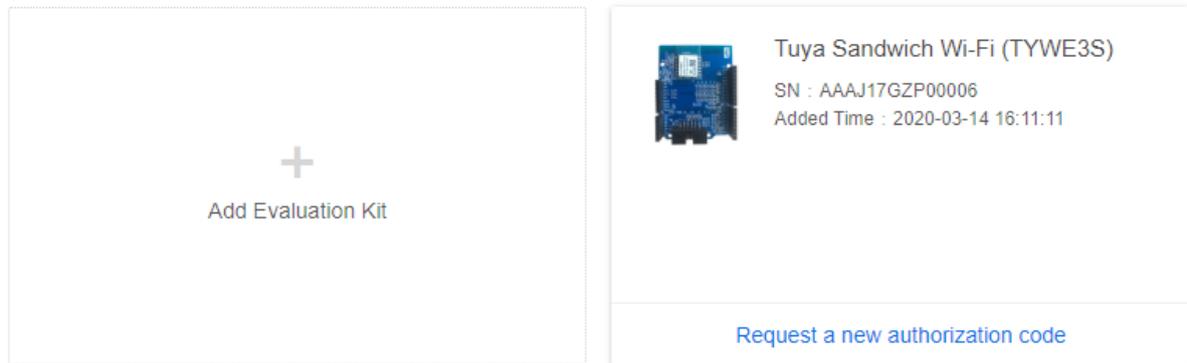


Figure 2: 2.png

Note: The characters in parentheses after the name of each sandwich SoC main control board represent the model of the networking module in it. For example, the model of the networking module in the figure above is: TYWE3S. When creating a product based on the SoC free development solution mentioned in the “Preliminary Preparations”, the third step: When selecting the module for hardware development, please choose the same module as the module type of your SoC main control board So, if you bought the sandwich Wi-Fi SoC main control board, then you should choose the model of model TYWE3S at this step, as shown in the figure below:

2.3 Step 2 Apply for authorization code

Click “Apply for a new authorization code” in the figure above to open the interface as shown in the figure, select the product you want to burn, click OK, and the corresponding authorization code will appear in the card.

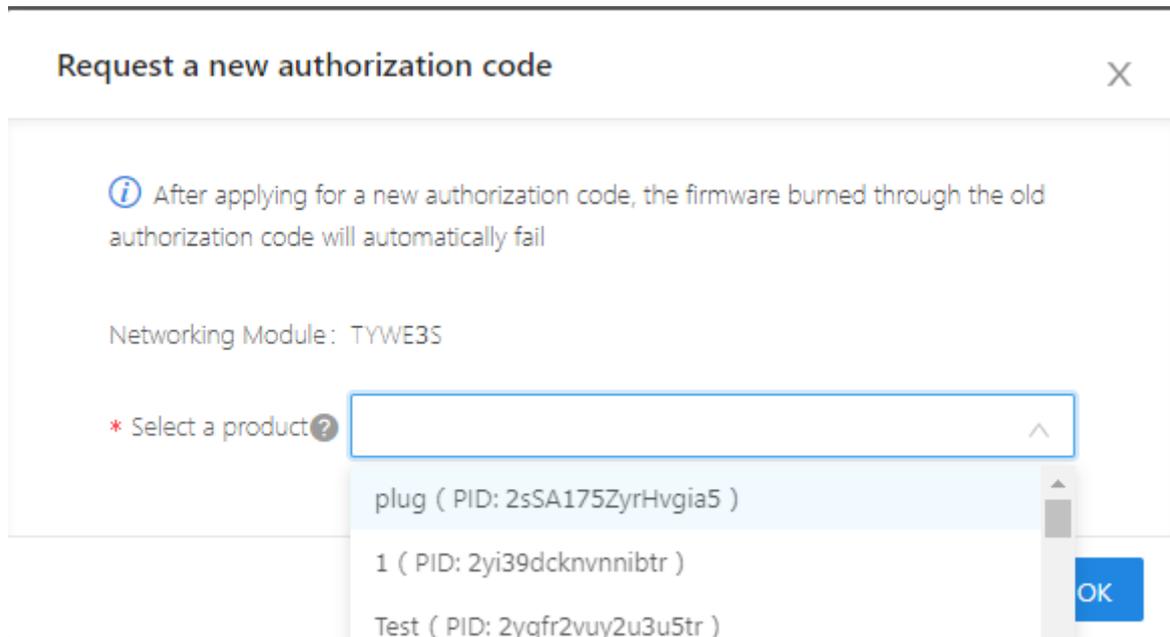


Figure 3: 3.png

2.4 Step 3 Apply for a unique account of the graffiti burning authorization software

Click the “Burn Authorized Software Account Application” button in the same interface, follow the prompts, and the account will be sent to you via email.

Tuya Sandwich Evaluation Kits

Tuya Sandwich Evaluation Kit has four major panels: the central panel, the wireless communication panel, the function panel, and the power panel. With this development technique, you can compose a complete IoT product prototype by stacking up panels of different functions, just like making a sandwich. Tuya Sandwich Evaluation Kit is compatible with Arduino's open source standard, which allows you to use Arduino's accessories to create various product prototypes.



Figure 4: 4.png

3 Use of authorization code: firmware burning and authorization

3.1 Preliminary preparation

1. Download and install the [Serial Transfer Driver](#)
2. Download and install [Tuya Cloud Module Burning Authorization Platform]
3. A 12-pin USB serial cable is required to connect the Sandwich SoC main control board to your Windows computer. If the connection is correct, you will see such a device:

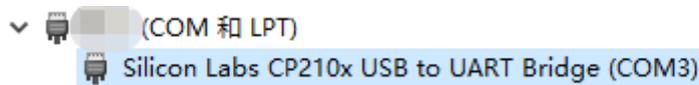


Figure 5: 14.png

3.2 Step 1 Setup

As shown in the figure below, enter the setting interface and set the baud rate to 1500000

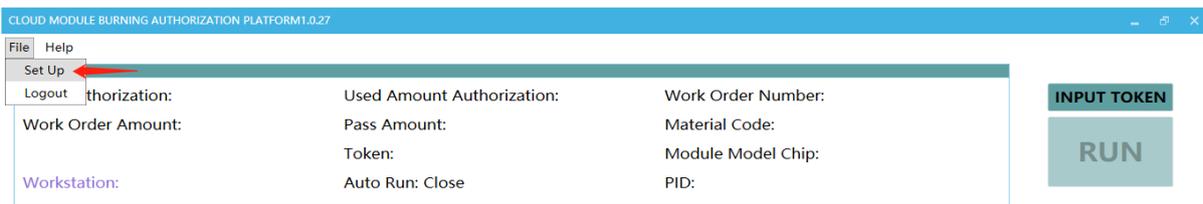


Figure 6: 13 2.png

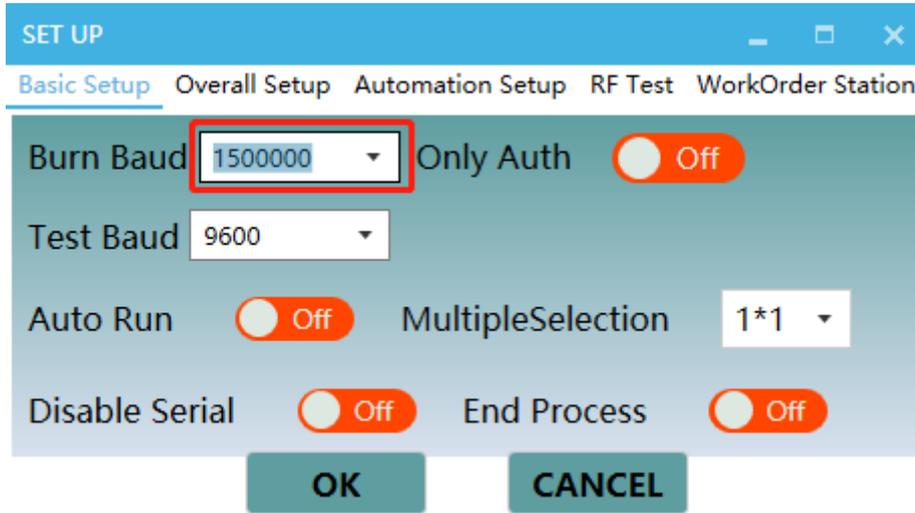


Figure 7: 12.png

3.3 Step 2 Select the correct port number

Select the port number of the USB serial cable you connect to the computer. In this example, it is COM3. Generally, there is only one option.

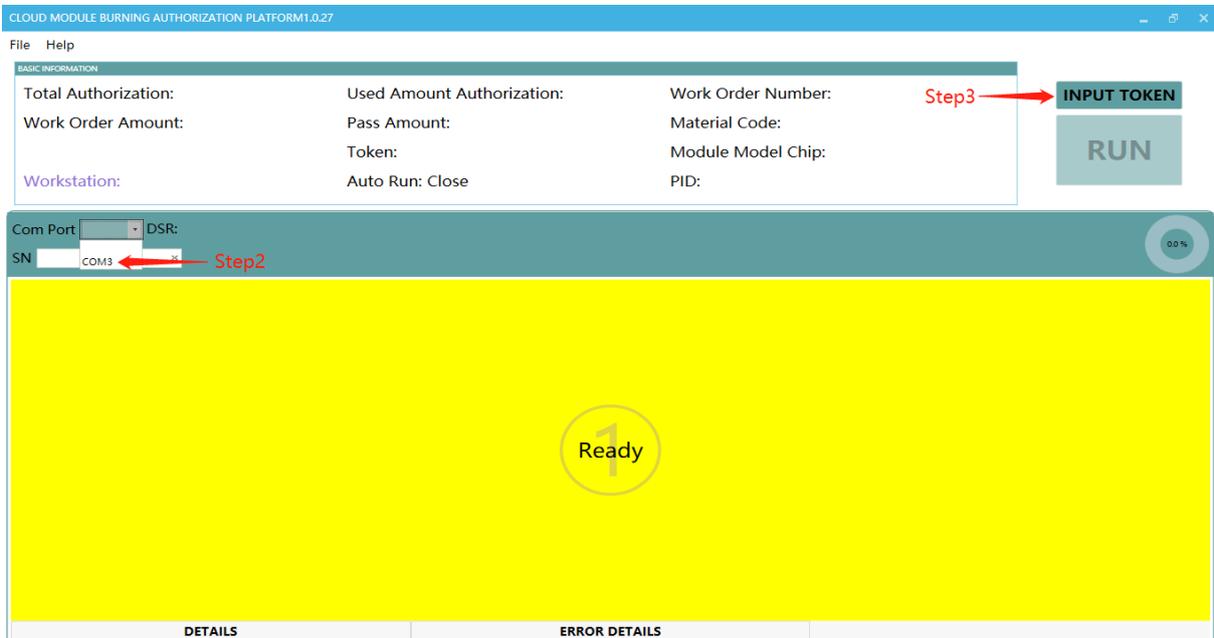


Figure 8: 11.png

3.4 Step 3 Enter the authorization code

Click the “Enter Authorization Code” button on the right to open the following configuration interface, as shown in the figure, click “Authorization Code”, then enter the authorization code you applied in the input box below, and select “Burn” in the selection box below Authorization “, and finally click” OK ”.

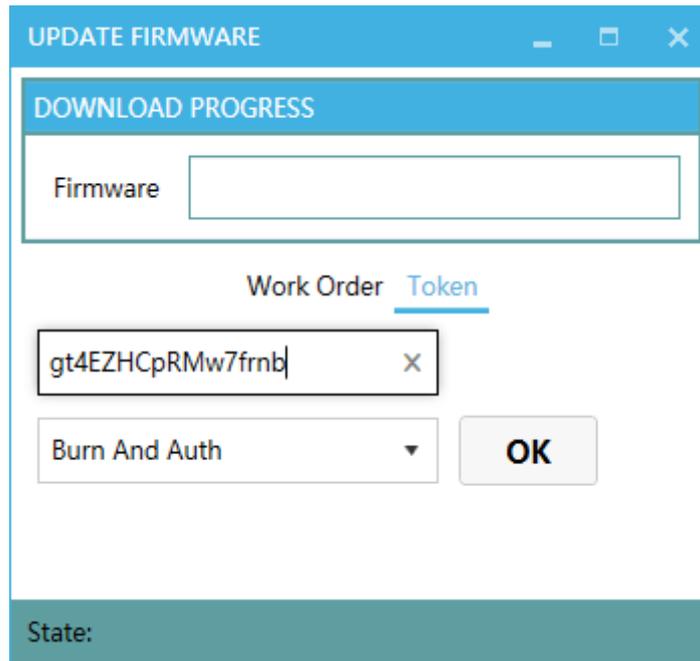


Figure 9: 7.png

3.5 Step 4 Burn and Authorize

Everything is ready, click the “Run” button to start authorizing and burning the firmware



3 USE OF AUTHORIZATION CODE BURNING AND AUTHORIZATION

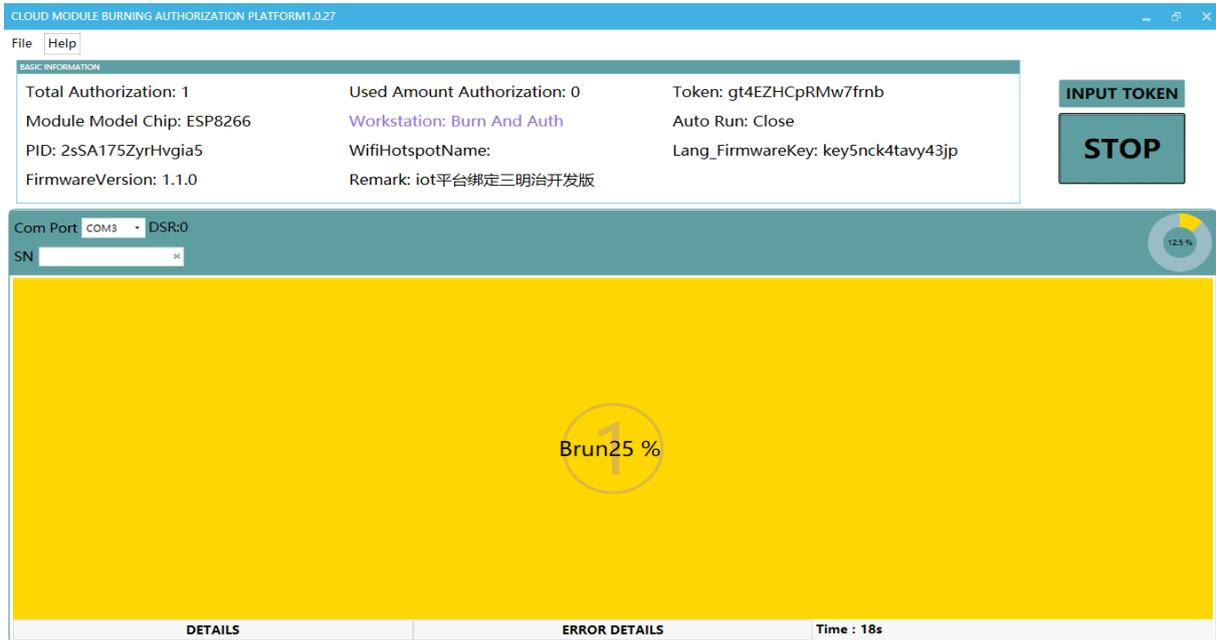


Figure 10: 9.png

3.6 Step 5 Burning and authorization completed

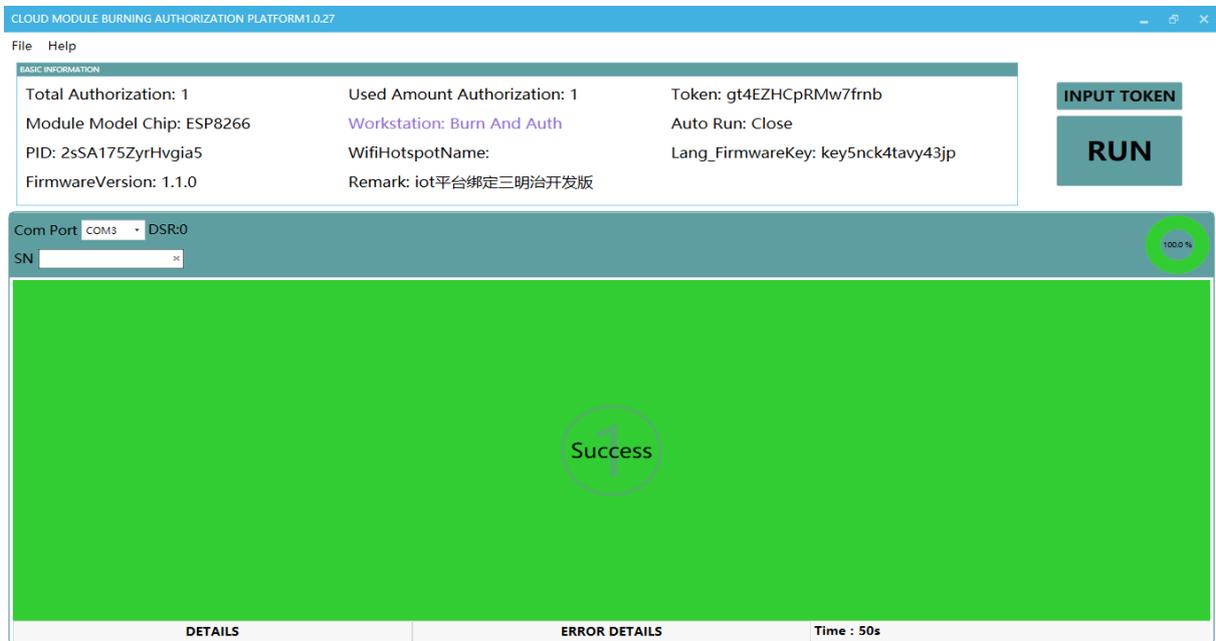


Figure 11: 10.png