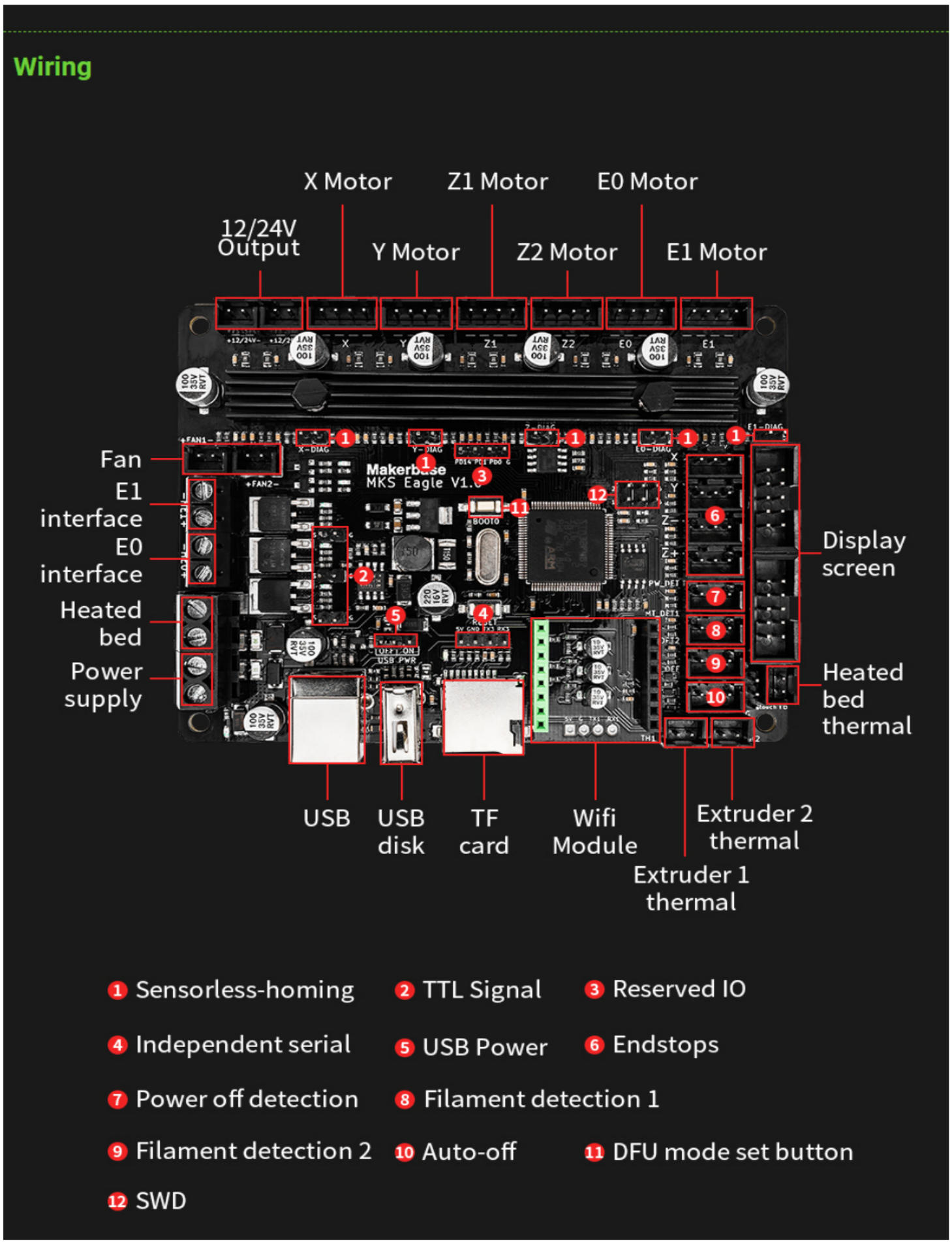
MKS EAGLE User Manual

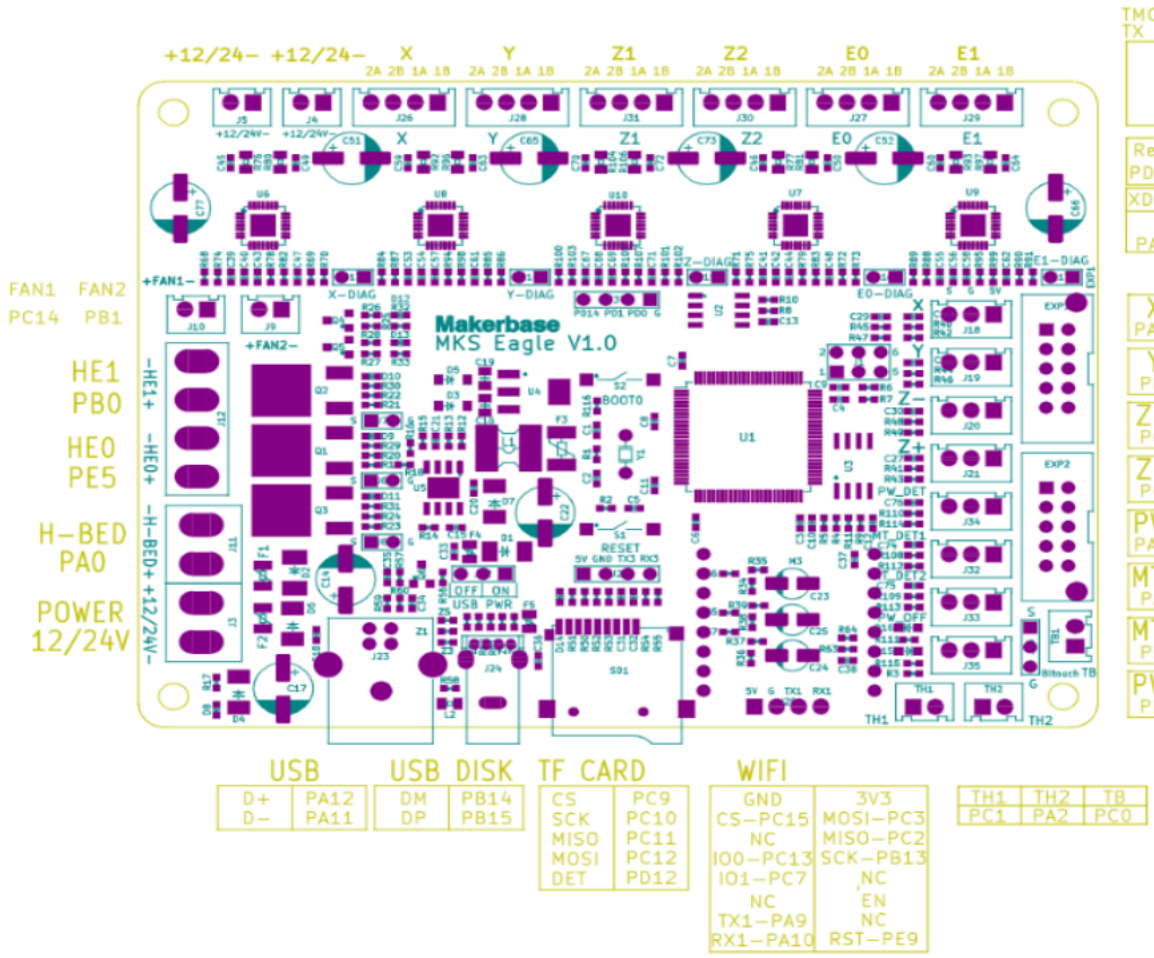
This document is the basic hardware and firmware description of MKS EAGLE, which is convenient for beginners or users who are not familiar with 3D printing.
If your question is deeper, or the documentation doesn't mention it.
Please don't worry, you can contact us through ***Makerbase.store*** *information or email (service@makerbase.store), we will try our best to help you solve the problem.*

This document is divided into 3 parts

MKS EAGLE Hardware Interface

Wiring ：





After you receive the motherboard, first check whether the appearance of the motherboard is complete. Then you can connect according to the interface marked in the picture according to the wiring of your printer.

Note:

1.During the connection process, you need to pay attention to the power supply, hotbed, hotend, fan and other interfaces, all of which have a distinction between "+" and "-", so you must pay attention to the wiring process to prevent the positive and negative connections from being reversed, resulting in damage to the motherboard.

2.By default, the motherboard needs to update the marlin firmware before it can be used normally. Therefore, you can also perform wiring after updating the firmware of your own parameters.

3.Any wiring or adjustment operation, please do it when the power is off.

If you need information such as the schematic diagram of MKS EAGLE, you can download it from this website：

https://github.com/makerbase-mks/MKS-EAGLE

MKS EAGLE Configuration and update of firmware

Download Marlin

MKS EAGLE uses Marlin2.0 firmware.

You can go to our MKS github to download：

https://github.com/makerbase-mks/Mks-Robin-Nano-Marlin2.0-Firmware

Or download it from the official github of malrin. (recommended marlin2.0.9 and above)

Install Visual Studio Code

Before starting to edit Marlin, we recommend that you install a good code editor - Visual Studio Code. You can even compile Marlin directly from it.

Visual Studio Code can be freely downloaded, after you have edited Marlin and the necessary parameters,you can compile it and upload your new firmware to the printer.

How to install Visual Studio Code and PlatformIO,edit and compile marlin,you can find from：

https://marlinfw.org/docs/basics/install_platformio_vscode.html

Configure and compile

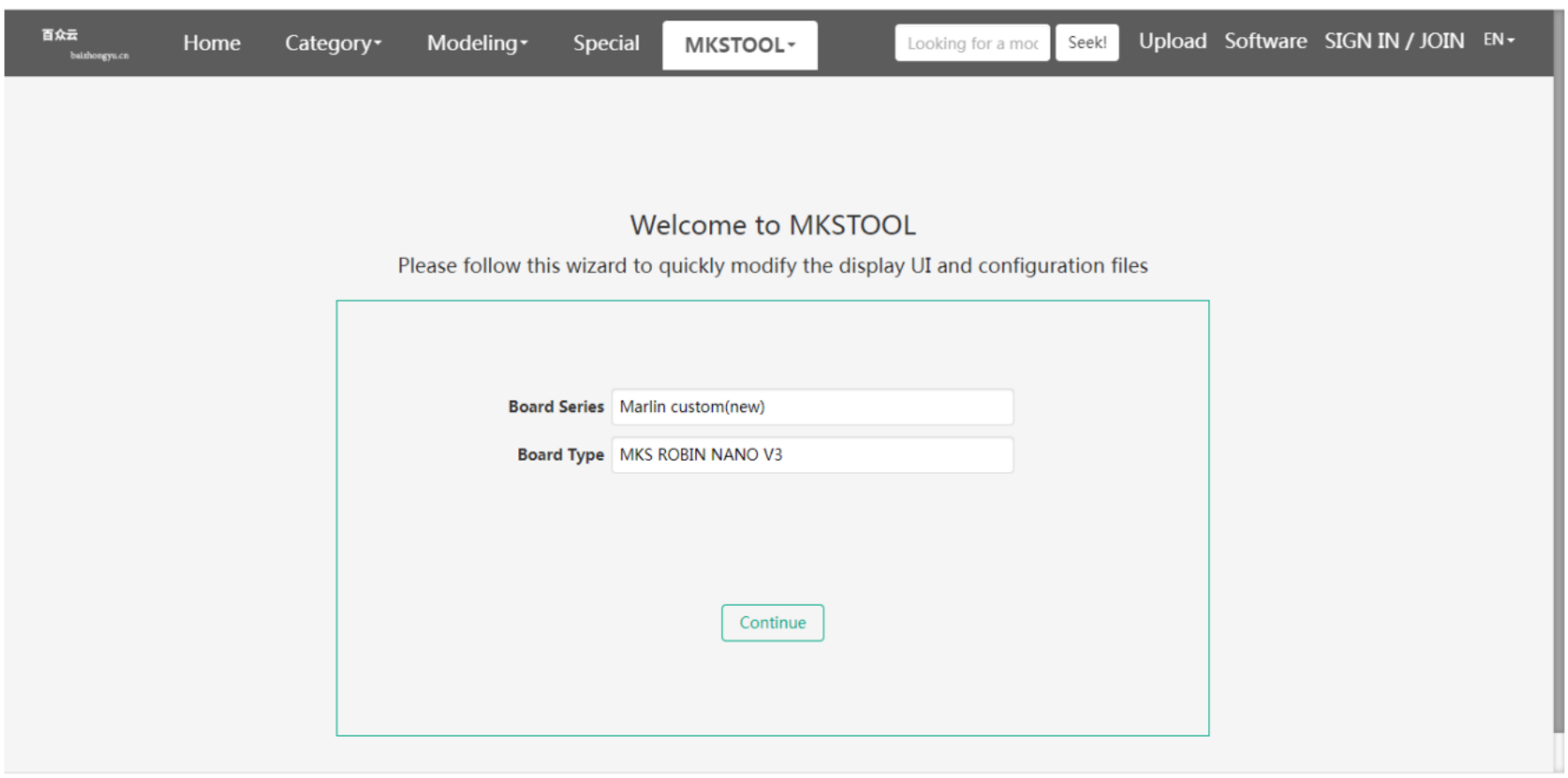
For parameter configuration of MKS EAGLE
You can refer to github-wiki for settings:

https://github.com/makerbase-mks/MKS-Robin-Nano-V3.X/wiki/Marlin_firmware

The hardware and interfaces of the MKS EAGLE motherboard are basically the same as those of the MKS ROBIN NANO V3. The firmware settings are basically universal.

For quick configuration, you can use our MKS TOOL for configuration. (MKS TOOL can only perform common parameter configuration, and special function configuration still needs to be modified in vscode)

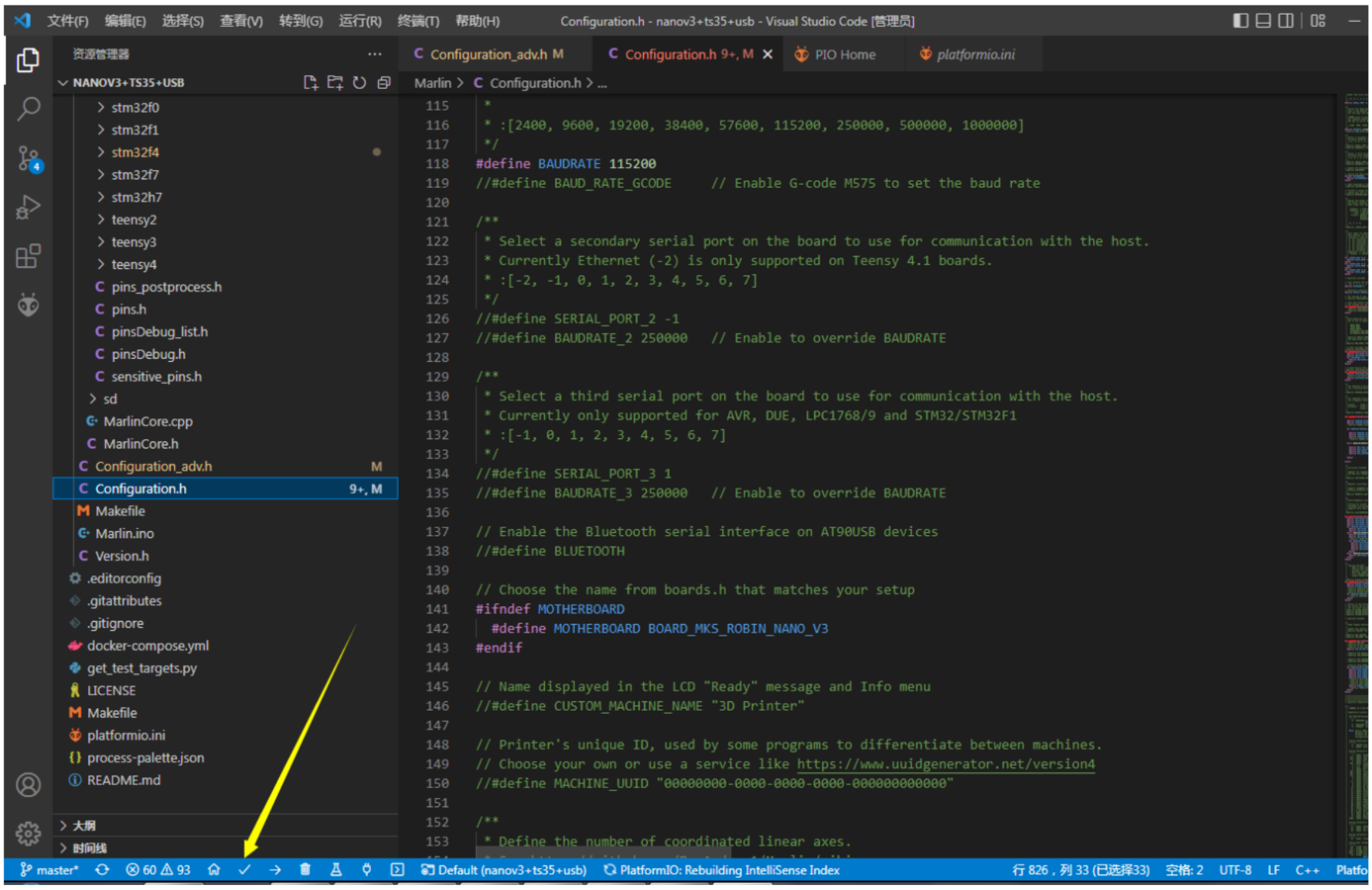
https://www.baizhongyun.cn/home/mkstoolview



MKS TOOL tutorial can refer to youtube:

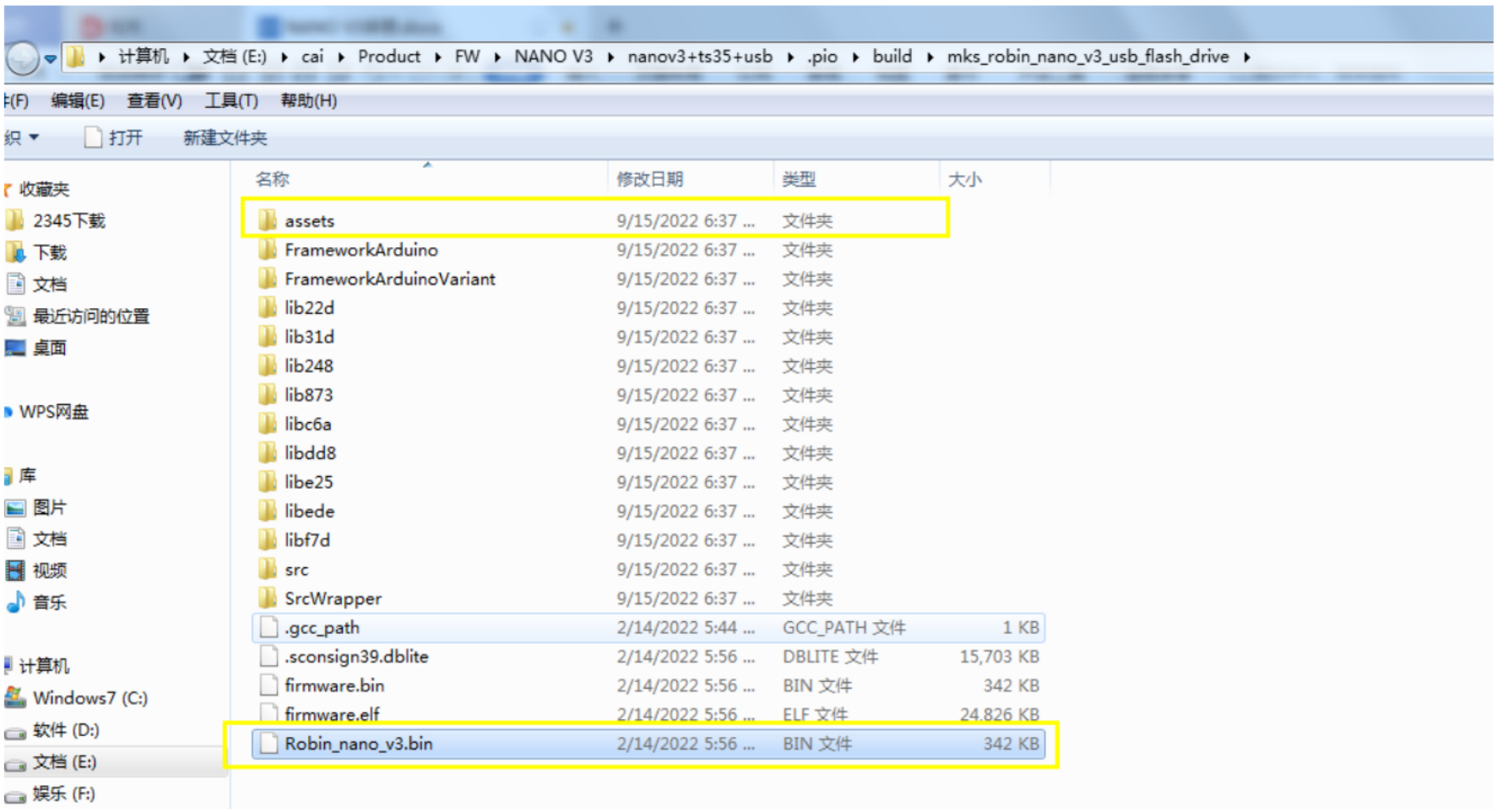
https://www.youtube.com/watch?v=8-90xcU-tuY

After the parameter modification is completed, it is to compile

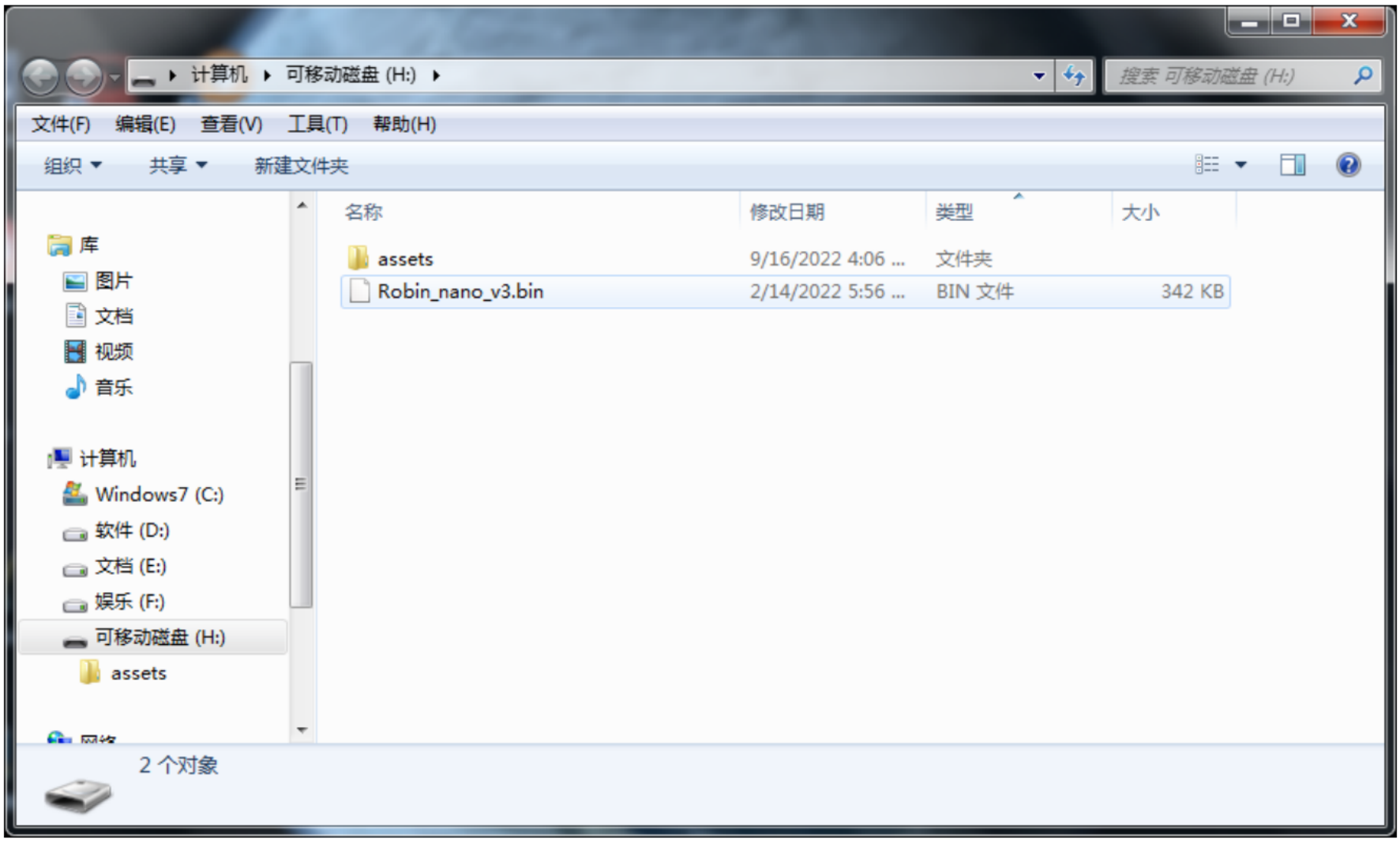


After the compilation is successful.

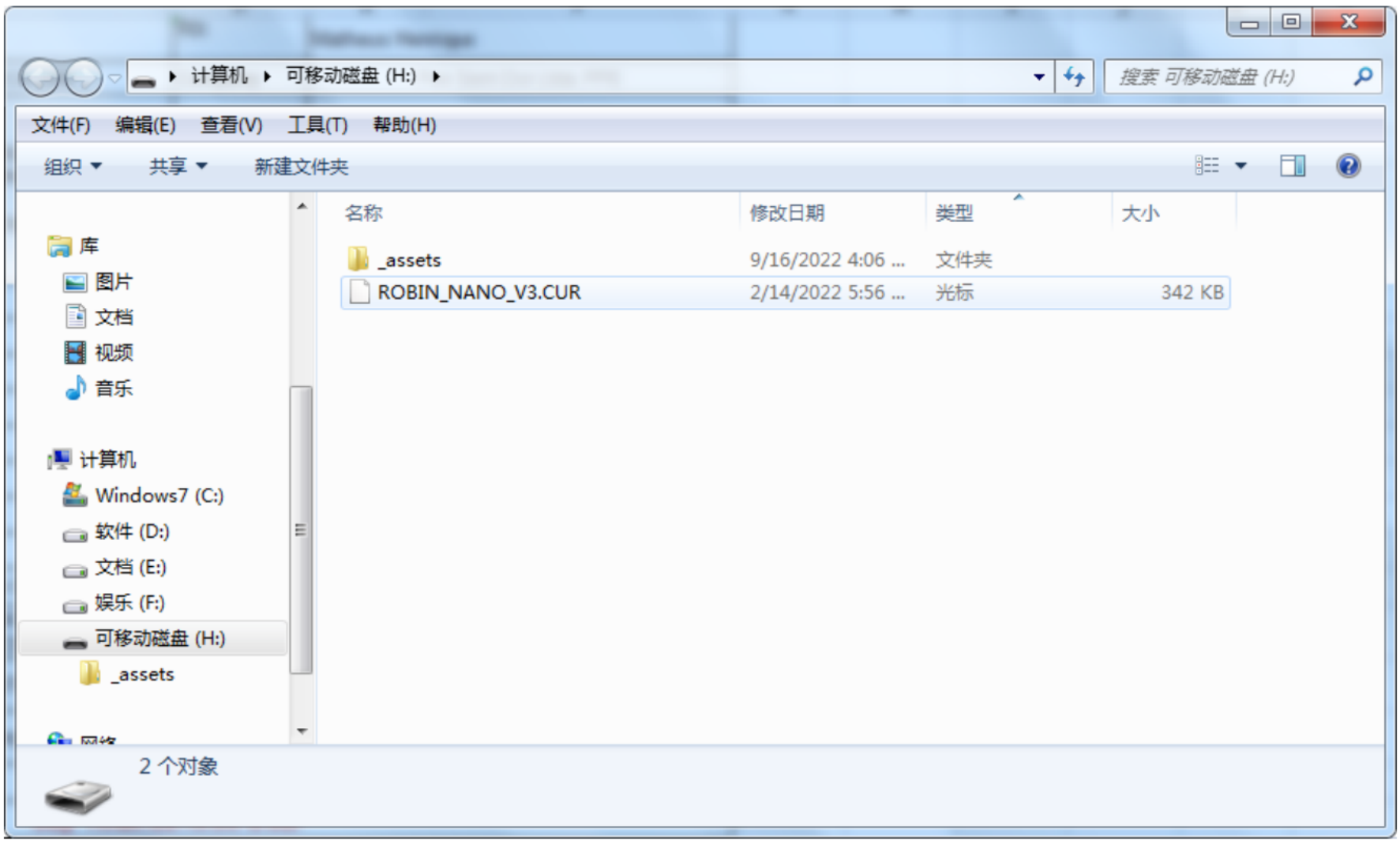
Rename the robin-nano v3.bin file to mks eagle.bin. Then copy mks eagle.bin and asset folder to sd card root directory, and then connect to the motherboard for updating.



The directory of the sd card before the update，Rename the robin-nano v3.bin file to mks eagle.bin



The directory of the sd card after the update completed， mks eagle.bin become the mks eagle.cur



Q&A of MKS EAGLE

Q1:Why does the TS35 display a white screen after powering on?

A1： The reason why the TS35 displays a white screen may be that the firmware update is incorrect, or the screen is not enabled in the firmware. Check the firmware settings, then recompile and upload the firmware.

Q2: Why didn't the file format change after updating the bin file and asset folder of the firmware? (update unsuccessful)

A2： Replace the sd card or reformat the sd card. Update again. (The format required by the SD card is fat32)

Q3:Why is connecting usb cable to pc not recognized

A3:Check the jumper cap setting in front of the usb interface. It needs to be set to yes, and the usb interface will supply power to the motherboard. If you select "no", the motherboard needs to be connected to 12-24v for power supply.

Q4:Why after connecting the motor, the motor can only have noise and vibration, but does not rotate?

A4:1.In this case, the phase wiring of the motor may be incorrect, you can try to adjust the order of the motor wires。

2.The MKS EAGLE motherboard integrates the tmc2209 driver. The driver type you set in the marlin firmware must be TMC2209. If the driver signal you set does not match the actual one, tmc err may occur and the motor cannot be controlled normally.

Q5:what if my question is not covered in this one?

A5:You can contact us directly through makerbase.store.

Or send questions to our email, or leave a message on our github

Email： service@makerbase.store

Github： https://github.com/makerbase-mks