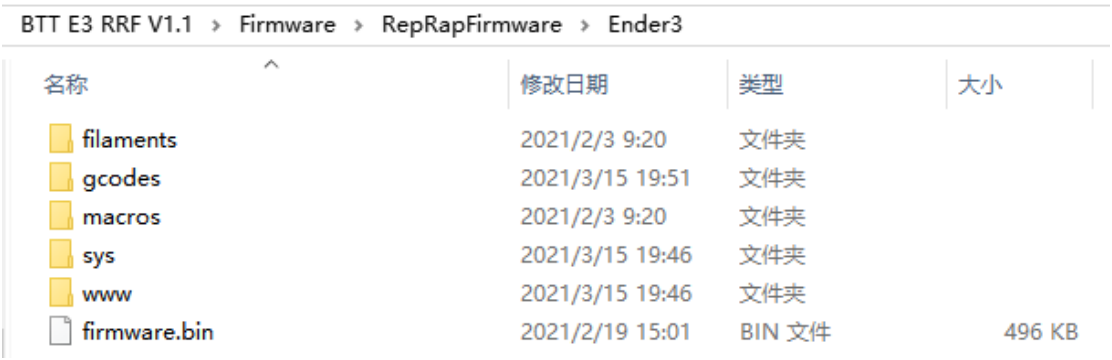
Preface

You just need to view this document if you need the DIY upgrade function. If you are a basic version machine, you can directly update the pre-compiled firmware.bin file in our github to use it normally. You can find all configuration details on the Duet3D official website, https://duet3d.dozuki.com/Wiki/Gcode。

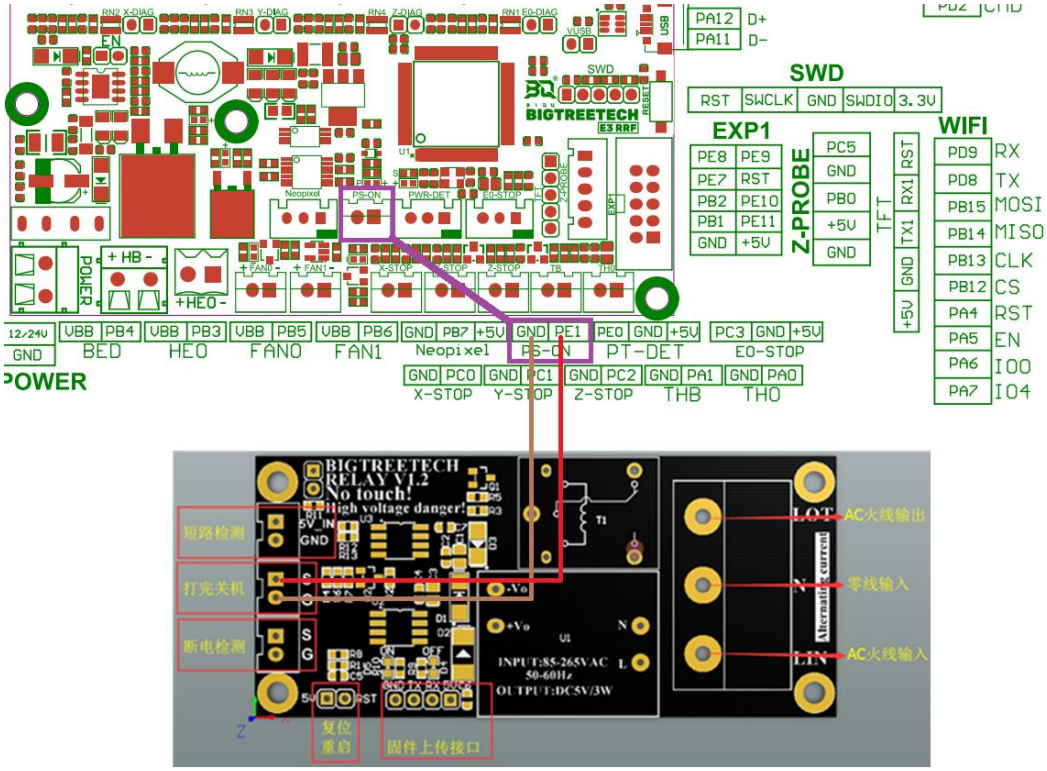
一、DWC(Duet Web Control)



Put the configuration file in our github in the root directory of the SD card, insert the card into the motherboard and then Reset, the motherboard will automatically update the firmware, after the update is successful, send "M997 S1" to update the firmware in ESP8266. First send "M552 S0" to make ESP8266 enter idle mode, then send "M587 S"SSID" P"Password" to set the WIFI name and password to be connected, and then send "M552 S1" to enable network control, after ESP8266 is connected to WIFI Will return an IP address, other devices in the same LAN can directly enter this IP address in the browser to access the DWC interface

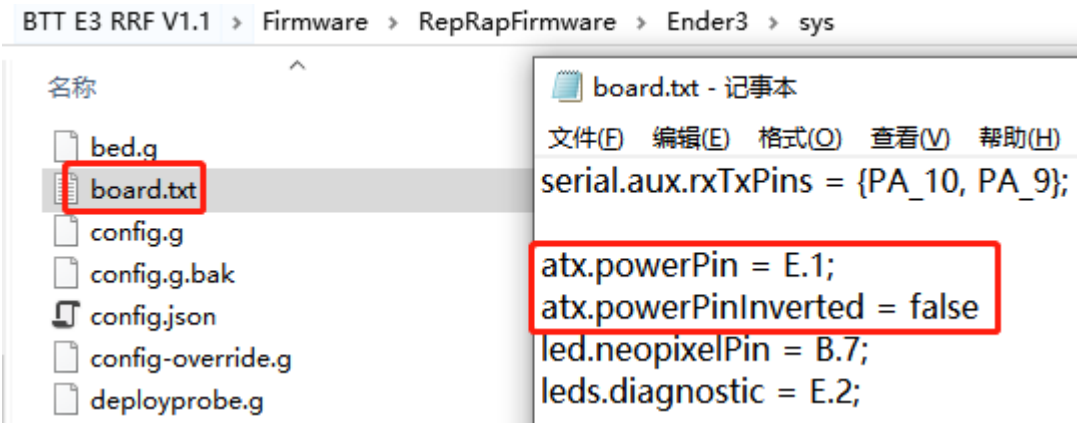
二、 Power Monitoring Module (Relay V1.2)

1. Wiring diagram



Insert the control signal line of the module into the PS-ON port of the motherboard

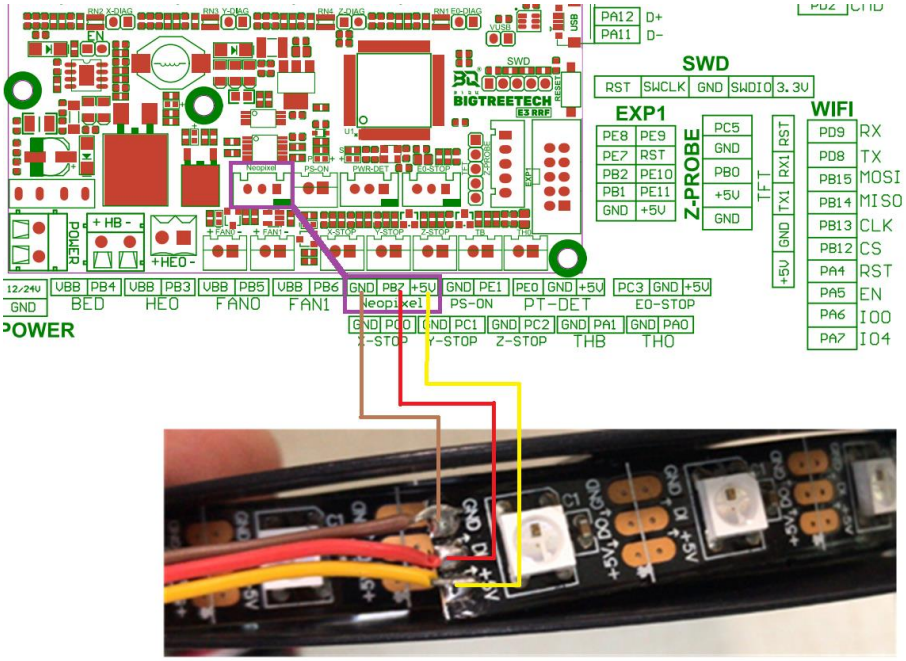
2. Firmware settings



atx.powerPin = E.1; // Configure the control signal line as PE1
atx.powerPinInverted = false // false Represents low-level shutdown , true Represents high-level shutdown
The firmware and configuration files on our github have been configured by default, just connect the module and send M81 to control the normal shutdown

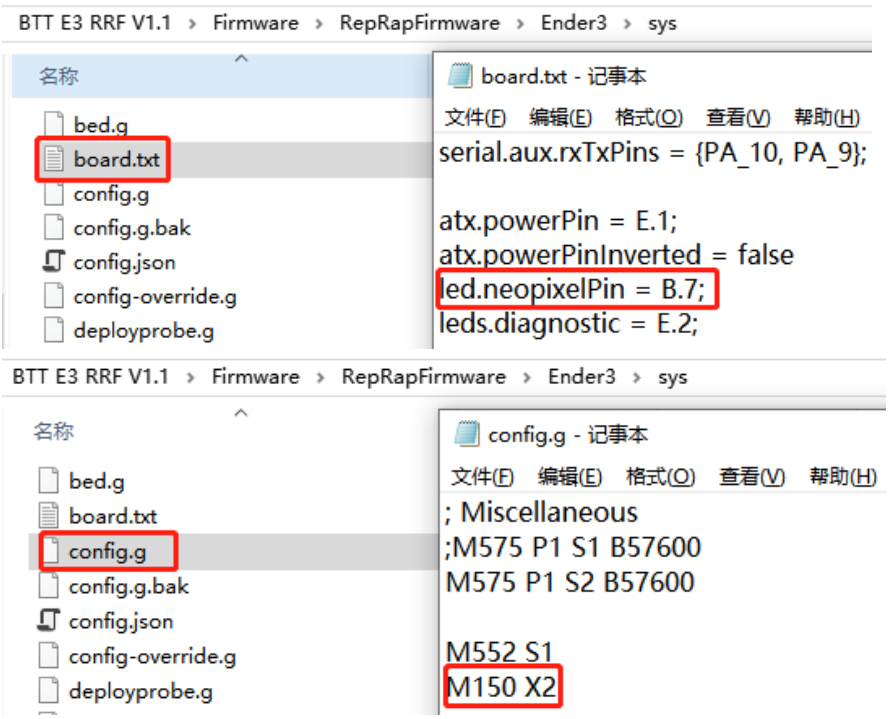
三、 RGB strip (WS2812,etc)

1. Wiring diagram



Insert the LED strip into the Neopixel port of the motherboard, and note that the wiring sequence of the port is GND ground wire, signal wire, +5V power wire

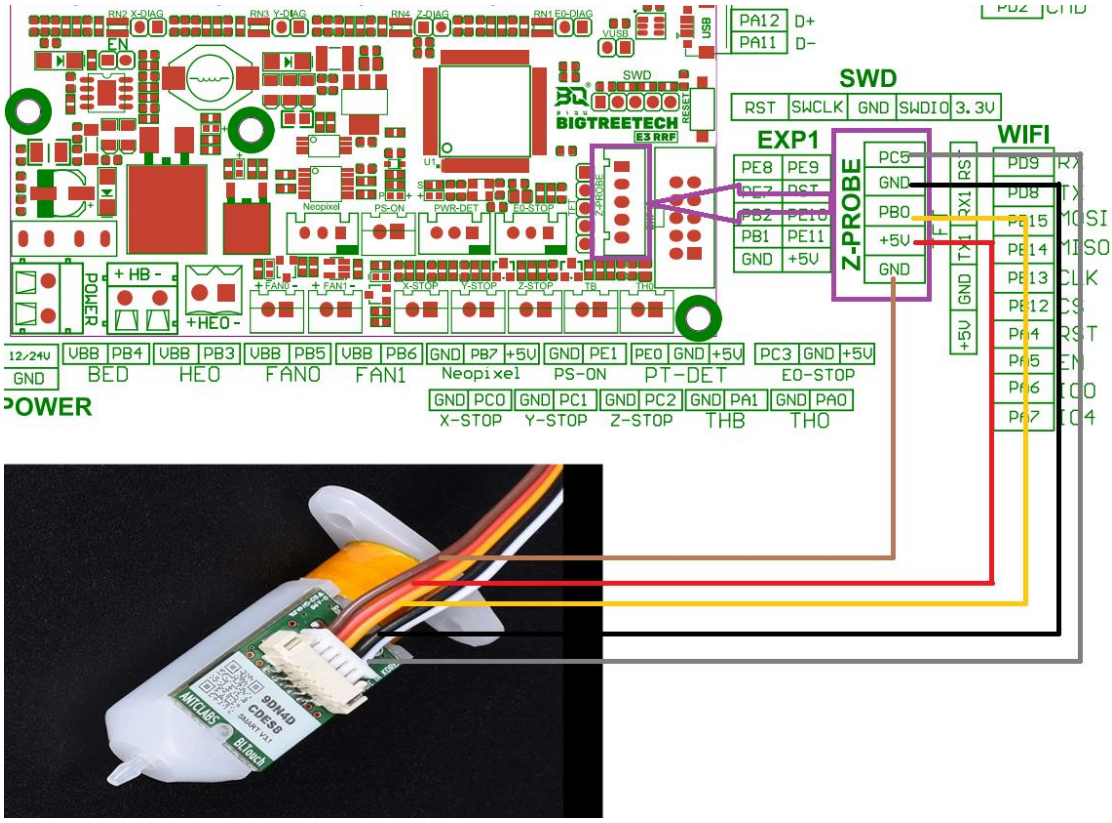
2. Firmware settings



led.neopixelPin = B.7; //Configure the control signal line as PB7
M150 X2 // Configure the LED type as Neopixel
The firmware and configuration files on our github have been configured by default, just connect the LED strip and send M150 to control the color of the LED strip

四、**Bltouch**

1. Wiring diagram

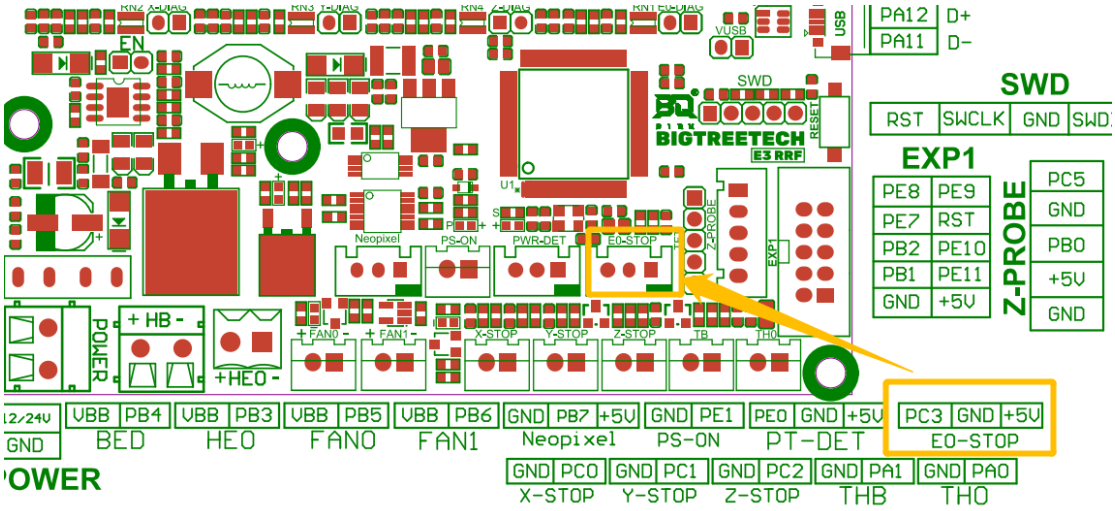


Plug a 3pin and a 2pin signal cable of Bltouch into the 5pin Z-PROBE port of the motherboard respectively

2. **Firmware settings**

五、 **Filament Detection Module**

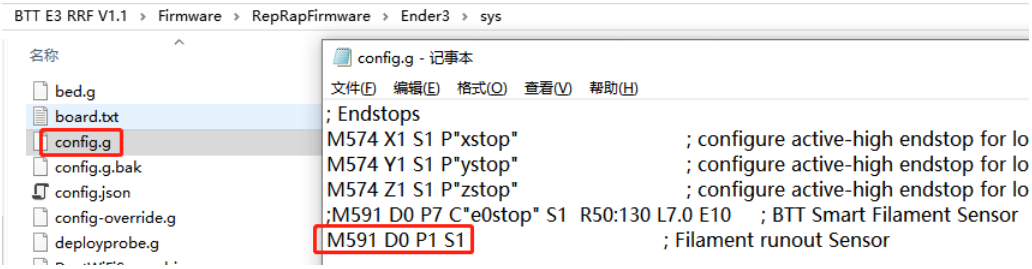
1. Wiring diagram



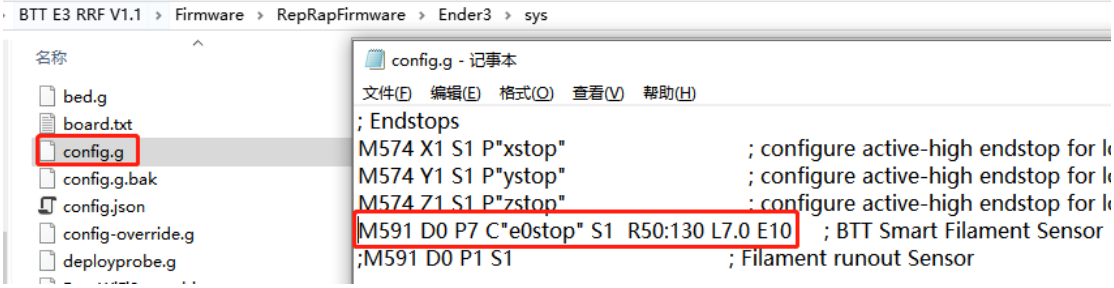
2. Firmware settings

This motherboard currently supports two filaments detection modules, as details below :
https://duet3d.dozuki.com/Wiki/Gcode#Section_M591_Configure_filament_sensing

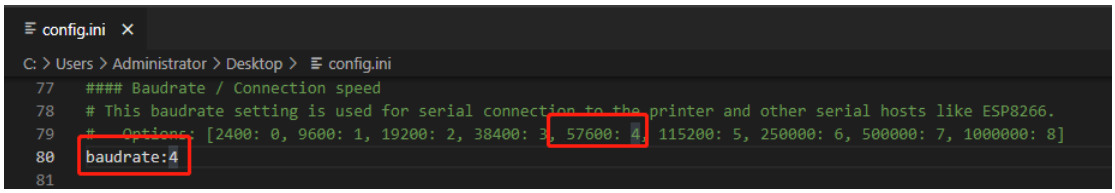
1) Ordinary filament detection module, this type of module is generally designed by mechanical switches, the module gives the main board a constant high and low level to represent the status of consumables



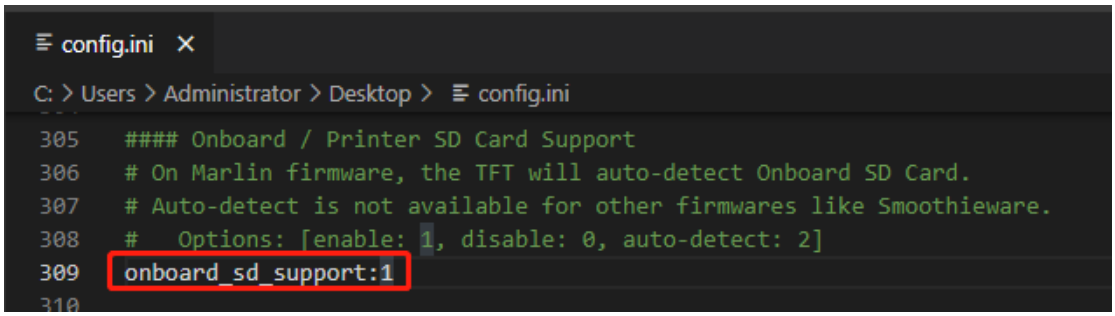
2) Bigtreetech Smart Filament Sensor (SFS)，This module will continuously send out jump level signals when the consumables pass normally. When abnormal conditions such as material blockage/breaking occur, and the filaments cannot pass SFS normally, the module cannot send out the jump signal to the main board, so we can know the filaments' abnormal



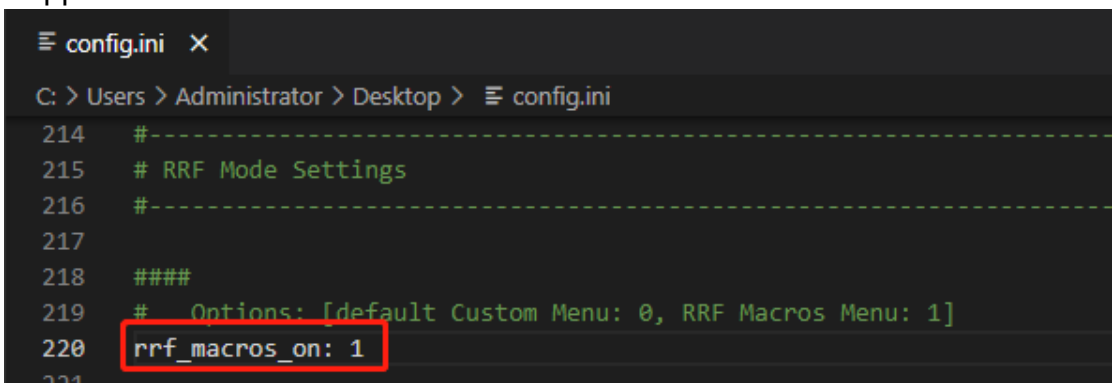
六、Serial touch screen



Set the baud rate of the screen to 57600(Same as RRF)



Support onboard SD card



Macros interface