

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>.

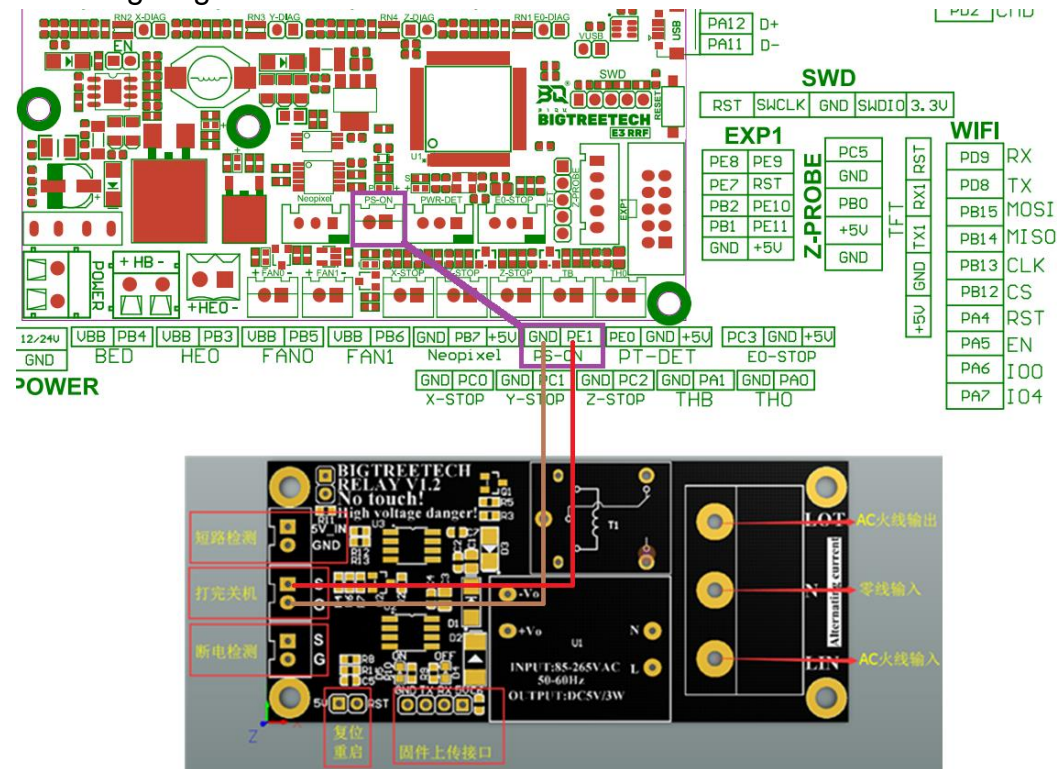
一、DWC(Duet Web Control)

BTT E3 RRF V1.1 > Firmware > RepRapFirmware > Ender3			
名称	修改日期	类型	大小
 filaments	2021/2/3 9:20	文件夹	
 gcodes	2021/3/15 19:51	文件夹	
 macros	2021/2/3 9:20	文件夹	
 sys	2021/3/15 19:46	文件夹	
 www	2021/3/15 19:46	文件夹	
 firmware.bin	2021/2/19 15:01	BIN 文件	496 KB

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

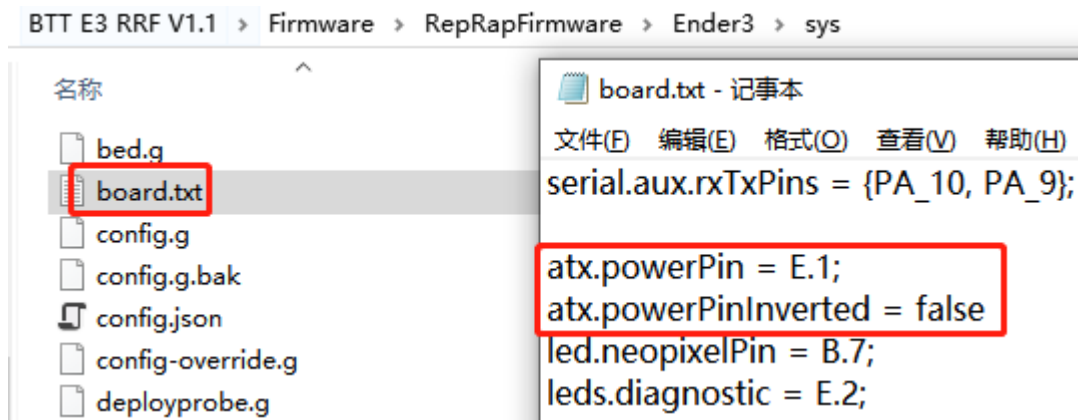
二、Power Monitoring Module (Relay V1.2)

1. Wiring diagram



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

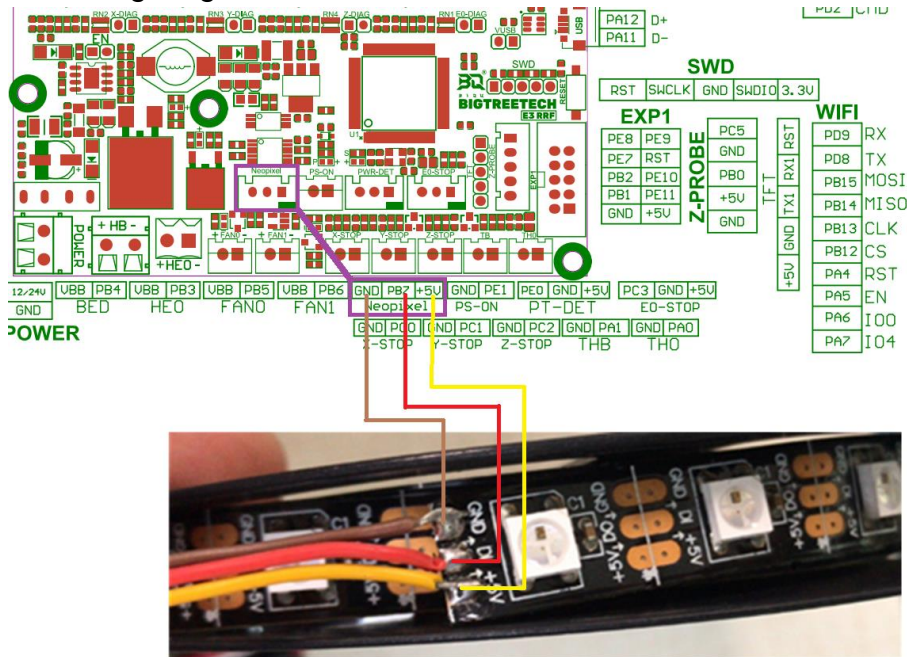
2. Firmware settings



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

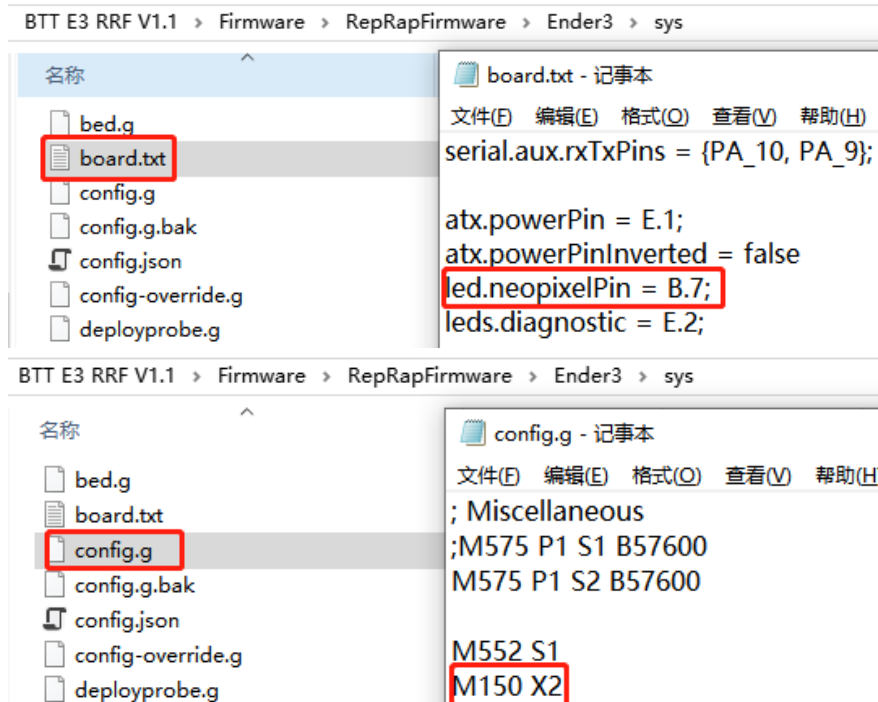
三、RGB strip (WS2812,etc)

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



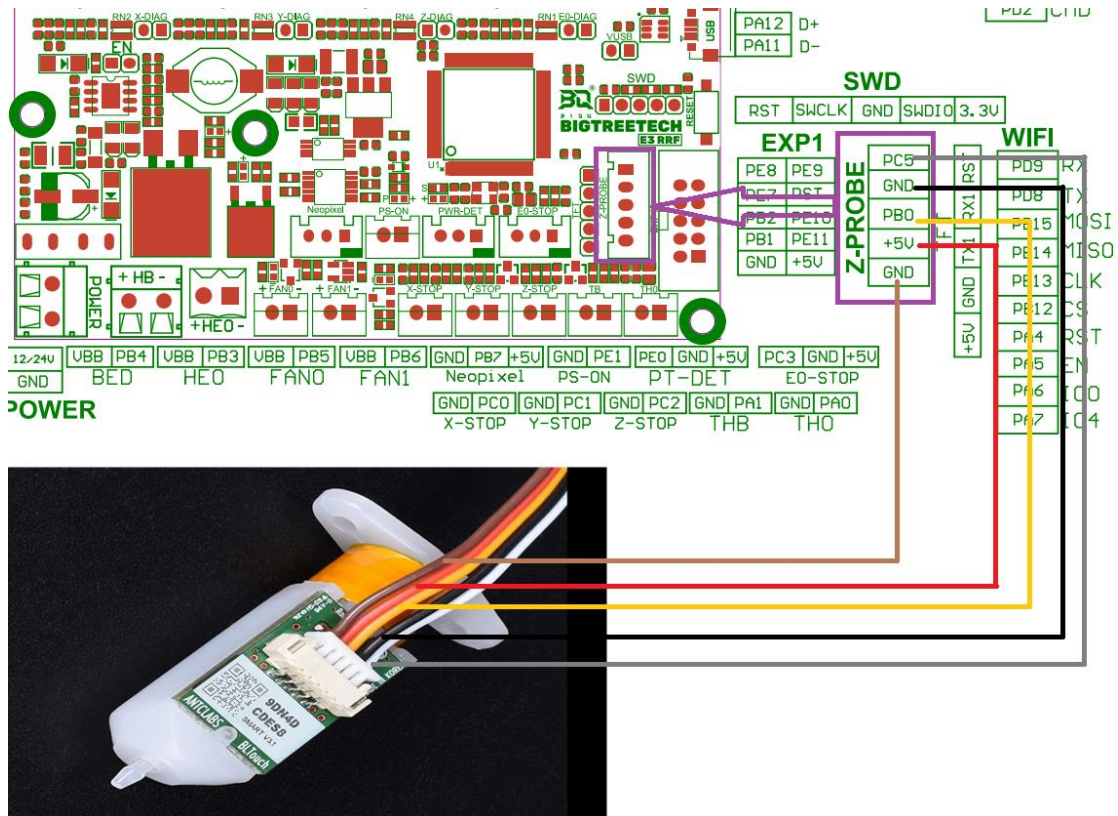
led.neopixelPin = B.7; //Configure the control signal line as PB7

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



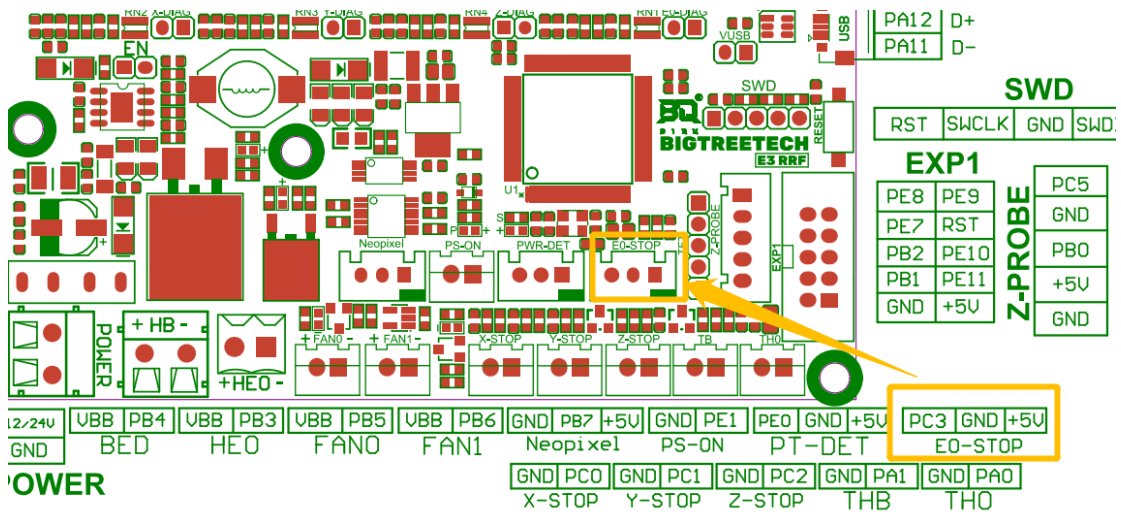
Plug a 3pin and a 2pin signal cable of Bltouch into the 5pin Z-PROBE port of the motherboard respectively

2. Firmware settings



五、Filament Detection Module

1. Wiring diagram

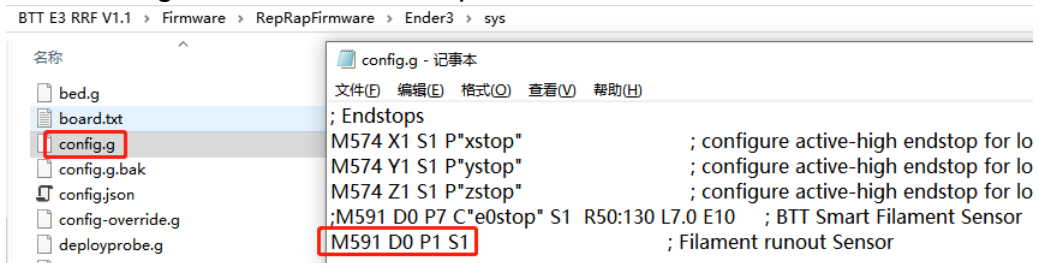


2. Firmware settings

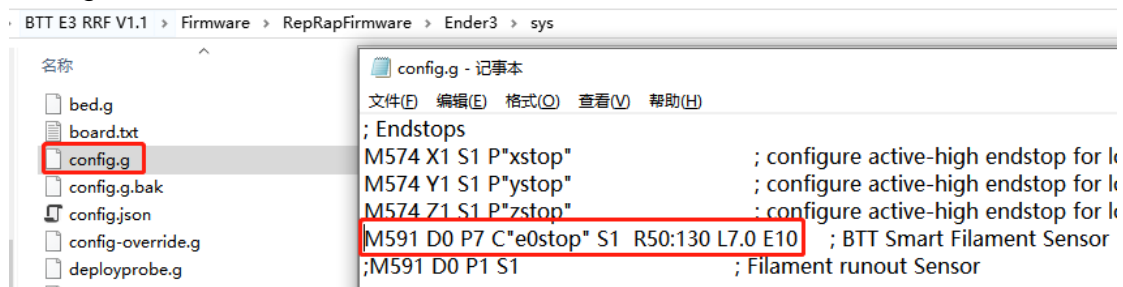
This motherboard currently supports two filaments detection modules, as details below :

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

```
config.ini x
C: > Users > Administrator > Desktop > config.ini
77 ##### Baudrate / Connection speed
78 # This baudrate setting is used for serial connection to the printer and other serial hosts like ESP8266.
79 # Options: [2400: 0, 9600: 1, 19200: 2, 38400: 3, 57600: 4, 115200: 5, 250000: 6, 500000: 7, 1000000: 8]
80 baudrate:4
81
```

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

```
config.ini x
C: > Users > Administrator > Desktop > config.ini
305 ##### Onboard / Printer SD Card Support
306 # On Marlin firmware, the TFT will auto-detect Onboard SD Card.
307 # Auto-detect is not available for other firmwares like Smoothieware.
308 # Options: [enable: 1, disable: 0, auto-detect: 2]
309 onboard_sd_support:1
310
```

Support onboard SD card

```
config.ini x
C: > Users > Administrator > Desktop > config.ini
214 #-----
215 # RRF Mode Settings
216 #-----
217
218 #####
219 # Options: [default Custom Menu: 0, RRF Macros Menu: 1]
220 rrf_macros_on: 1
221
```

Macros interface