Shenzhen BIGTREE Technology co., LTD.
BIG TREE TECH

# BIGTREETECH

# UPS 24V V1.0

## Module Instruction

# Ⅰ、Introduction：

BTT UPS 24V V1.0 is an external module of 3D printer with the function of power off resume print, which was launched by 3D printing team of Shenzhen Big Tree Technology CO., LTD. It is applicable to all 3D printers powered by DC24V switch power, such as Ender 3 printer.

## 1. Feature：

1）Adopt voltage comparator LM393 chip, which can detect power failure sensitively;

2）Equipped with 9 2.7V 5F super capacitors to store electricity, so that there is sufficient power supply after detecting the power failure, then the printer can successfully complete the corresponding operation.

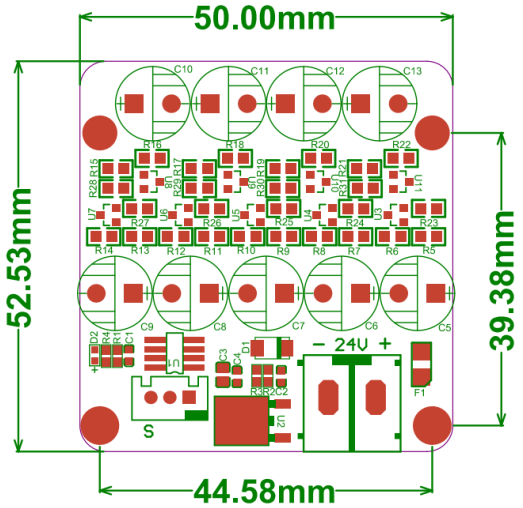
3）An anti-reverse protection circuit is added at the power interface to prevent irreversible damage caused by the reverse power supply, which greatly protects the circuit board;

4）The module is small and easy to install;

5）Main function: realize the power off resume print function;

## 2. Module parameters：

External dimension：52.53*50mm
Installation dimensions：44.58mm*39.38mm
Power input：DC24V
Logic voltage：3.3V or 5V
Support model：All DC24V powered 3D printers are available（like Ender3）
Item drawing：



# Ⅱ、Module power-on

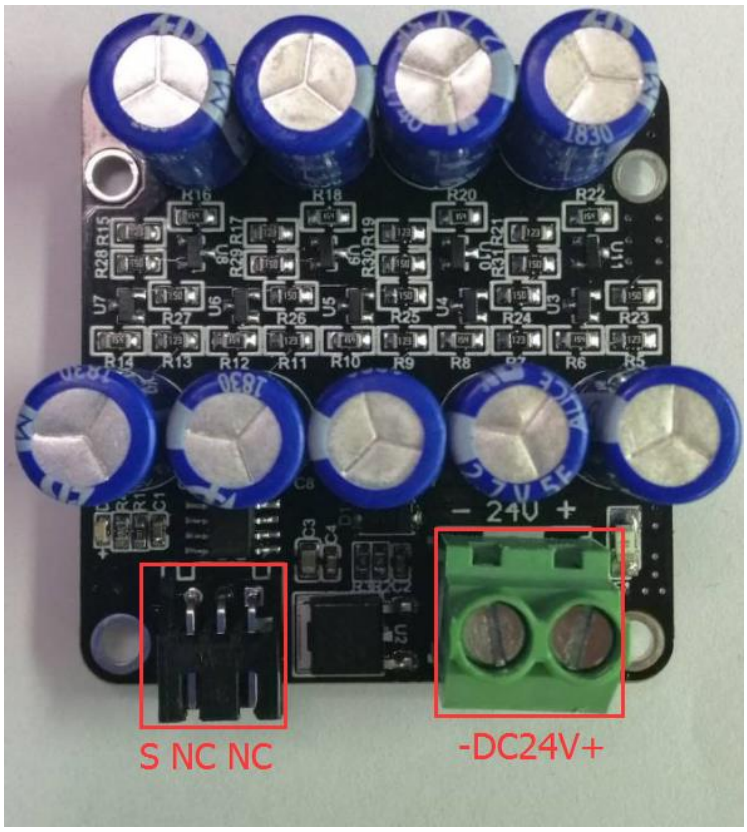
After BTT UPS 24V V1.0 power on, D2 red light in the lower left corner will go on, indicating normal power supply.

Note: The input power only supports DC24V. Please pay attention to distinguish the positive and negative poles when wiring. The wiring process must be carried out in the state of power failure and confirm the wiring is correct before power on. Our company will not be responsible for any loss caused by wiring.

# Ⅲ、Module communicates with the printer's motherboard

BTT UPS 24V V1.0 communicates with the motherboard through XH2.54mm 3P plug-in wire. Please identify the position of signal line "S" when wiring. Only when the signal line and the motherboard signal line interface are properly connected can the power off resume print function be realized.

Wiring picture：



# Ⅳ、Firmware description

Firmware acquisition mode:

1. Ask customer service or technical staff to get it;

2. Log in the original website of our company to download : https://github.com/bigtreetech

The firmware modification is consistent with MINI UPS V2.0:

Download the Marlin 2.0:

https://github.com/bigtreetech/Marlin/tree/marlin-2.0-mini-ups

Please modify the parameters according to the printer and then add the function of this power

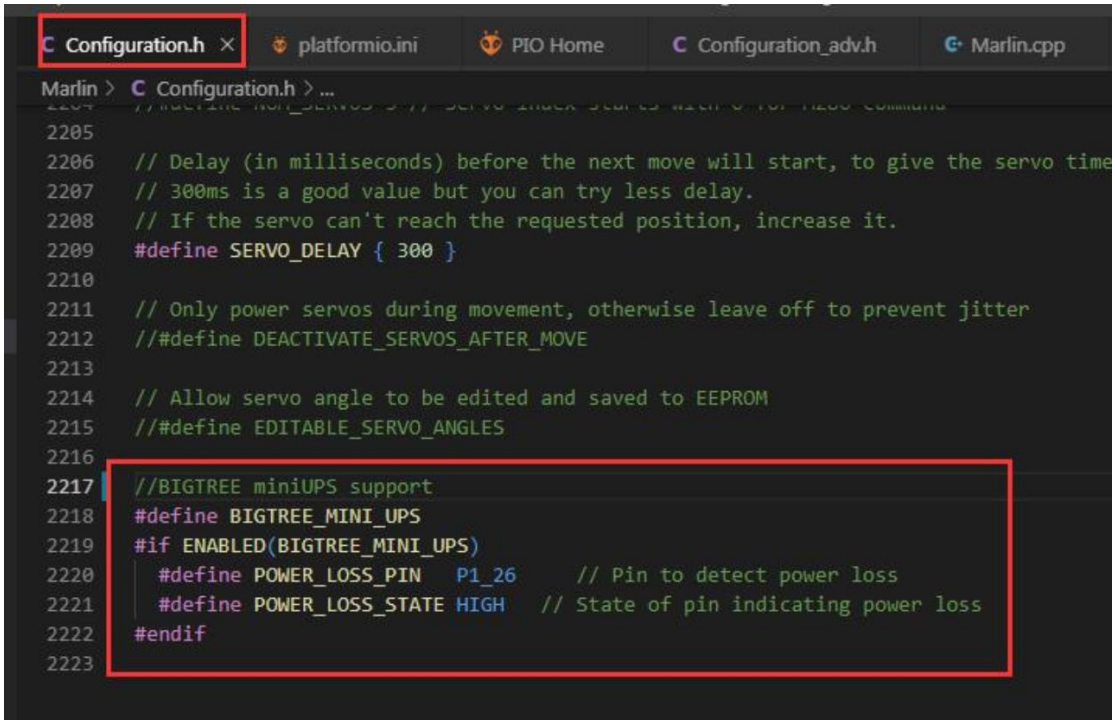
failure module.

BIGTREETECH touchscreen series:

The BIGTREETECH touchscreen series have the function of saving print progress, just add

BIGTREE_MINI_UPS support in the file configuration.h, the picture as shown below.

The POWER_LOSS_PIN in the figure is the GPIO port to which the module is connected.

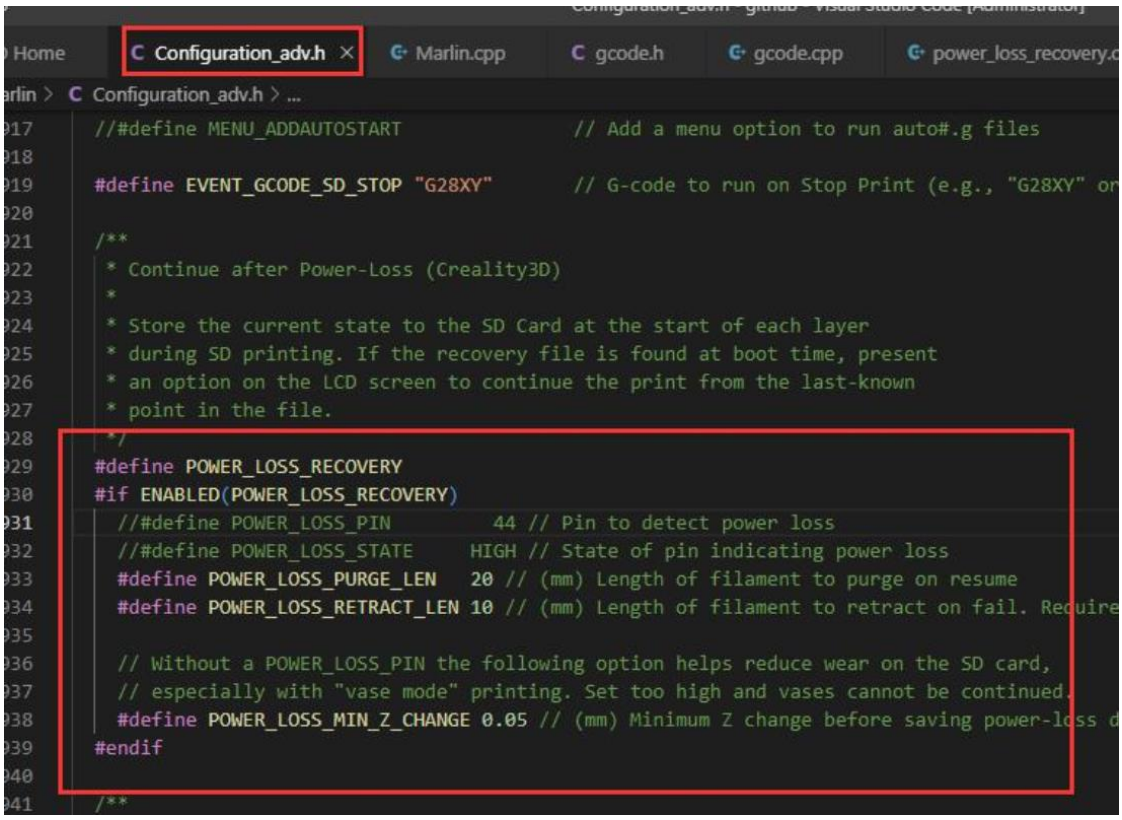



Modify P1_26 to the GPIO to which the module is actually connected.

Reprap LCD12864/LCD2004/CR10_STOCKDISPLAY:

If user uses a Reprap LCD12864/LCD2004 or other similar display, you will also need to enable

saving data (saving print progress) in the file configuration_adv.h, as shown below




# V、Notes

1. This module only supports DC24V power supply. Please confirm that your printer is powered by DC24V power supply before installation;

2. When connecting the power cord, please distinguish the positive and negative poles; when connecting the signal line "S", connect the signal lines on the motherboard correctly.;

3. All wiring must be done in case of power failure. Only after all wiring is confirmed to be correct can power on.

If you encounter other problems, please contact us, we will definitely answer your questions patiently; If you have any good suggestions on our products, please give feedback to us, we will consider them. Thank you for choosing BIGTREETECH products!