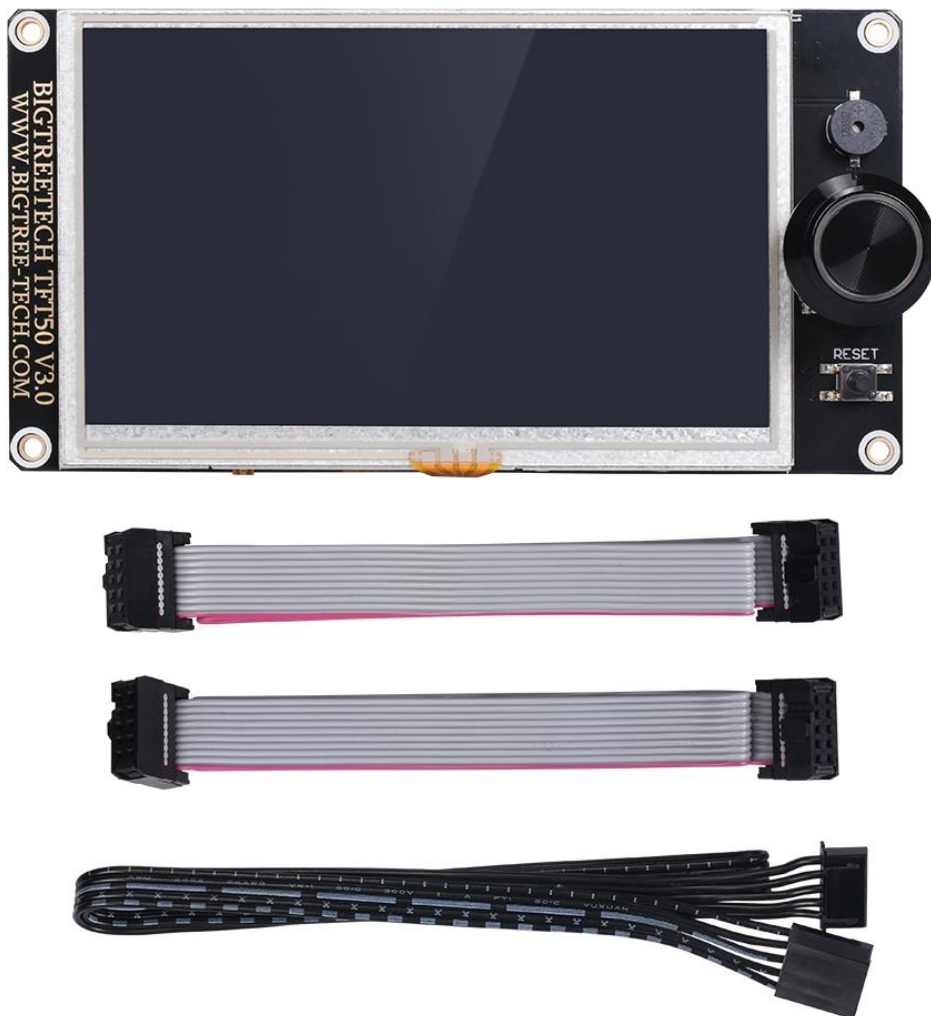


Shenzhen BIGTREE technology co., LTD.
BIG TREE TECH

BIGTREETECH

TFT50 V3.0

User Guide



I .Introduction

BIGTREETECH TFT50 V3.0 is a display screen with middle size, two operation mode and super clear launched by the 3D printing team of Shenzhen BIGTREE technology co., LTD., which can perfectly replace LCD12864.

1. Features:

1. MCU: ARM 32 bit and 120MHz STM32F205/207VCT6 of Cortex-M3 series.
2. More convenient operation: upgrading the firmware by SD card.
3. Stronger compatibility: two working model, UART screen and screen of 12864 types.
4. UART screen supporting SD card and U disk.
5. Having WIFI port, plugging WIFI module can achieve WIFI function.
6. Having filament runout detection function port (FIL-DET).
7. Having function port for automatic shutdown after printing(PS-ON);
8. LCD12864 mode including EXP1、EXP2、EXP3, EXP1and EXP2 is for LCD screen of ordinary motherboard, and EXP3 is for LCD screen of E3 series(like: SKR MINI E3、SKR E3 DIP etc.).
9. TFT touch screen: UART screen RS232 port.
10. Having 2 UART port for users DIY.

2. Parameters:

Appearance size: 149*77.5mm

Installation size: 141*69.5mm

More details from BTT TFT50 V3.0 -SIZE-TOP.pdf and BTT TFT50 V3.0 -SIZE-BOT.pdf documents

MCU: STM32F205/207VCT6

Screen display area: 110.88*62.832mm

Display resolution: 480 (RGB) *272

Backlight: 12 white LED lights

Power input: DC 5V

Logic voltage of SD card: 3.3V and 5V (like: supporting motherboard with control chip MEGA2560, with stronger compatibility)

II. Description of motherboard indicators

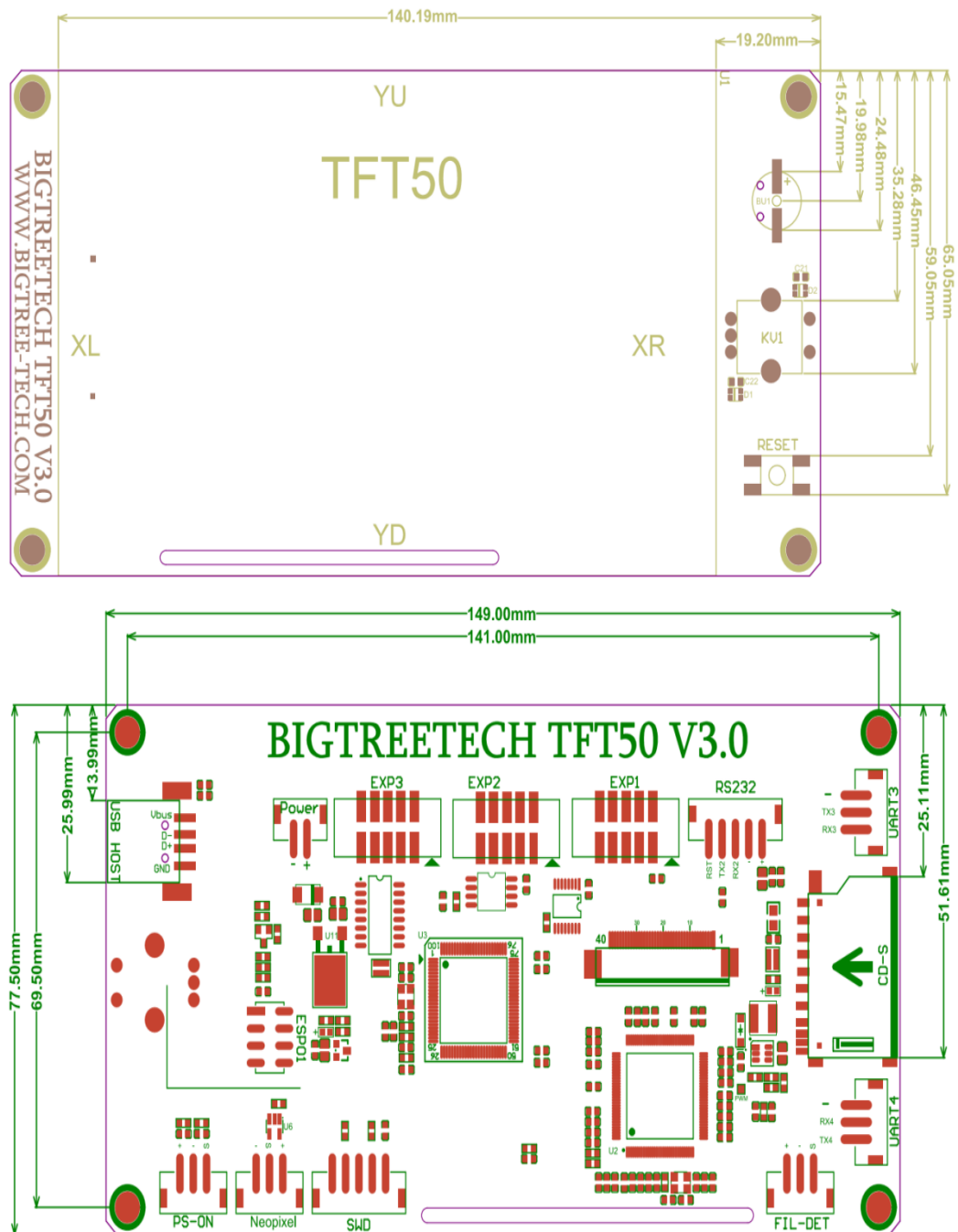
Motherboard with power:

D6 red light is power indicator: the red light is on, indicating power supply.

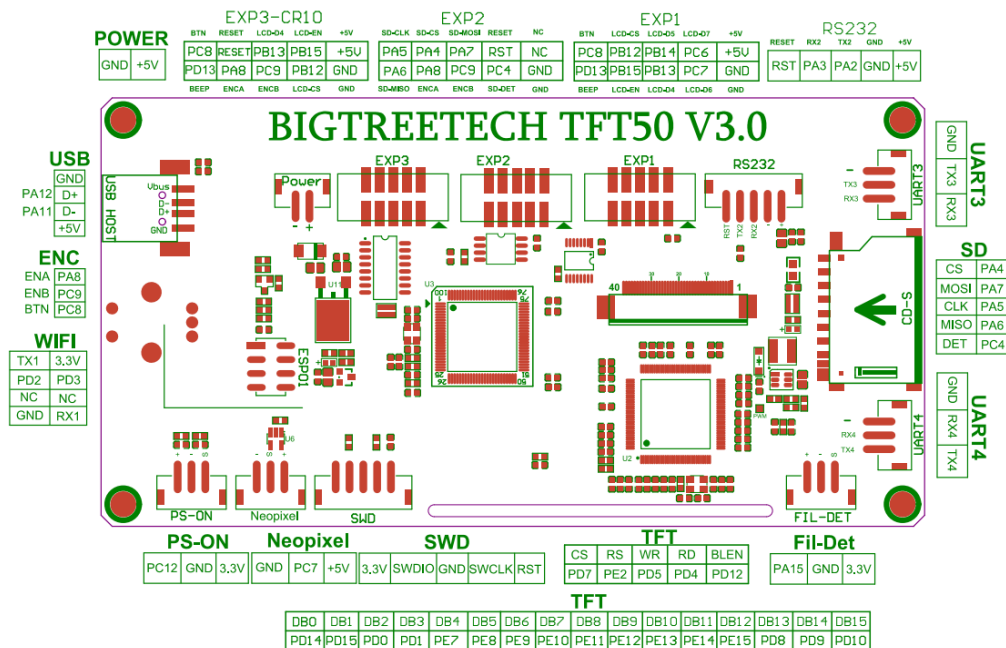
D4 red light is SD card indicator: the light is on when plug SD card, go out after pulling out.

IV. Interface Instruction

1. Picture of Size



2. Picture of PIN



Explanation:

1. Connecting EXP1 and EXP2 on motherboard when using screen of 12864 types.
2. Connecting the TFT or AUX-1 on motherboard by RS232 when using UART screen mode.
3. Two model switch: press the encoder about 3S until the mode selection page appears, then select the mode and press it.

V. The firmware description of motherboard

There is firmware in the motherboard which set in factory for testing. You can use it directly or can upgrade it through our open source website.

1. Ways of getting firmware

Connecting customer service or technicians.

Log in the open source website: <https://github.com/bigtreotech>

2. Method of firmware upgrade

Name form of firmware file as following:

BIGTREE_TFT50_V3.0.version number.bin

Please copy the firmware into the root directory of SD card. Then, plug it into the interface of screen. Next, power it and press the RESET button. Last, it will successfully copy in 10S

3. Please refer to BTT TFT50 V3.0-PIN.pdf for firmware of motherboard DIY

VI. Notes

1. The name of firmware in SD card can't Change. (Including the letters)
2. We should pull the plug before connecting the screen to printer for ensuring safety and avoiding damage of module. Please check cables and drivers in correct place before plugging it in. It may cause burning and damage if cables are wrong connecting.
3. Please do not connect the wrong interface when wiring. You can get more detail from PIN document.

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 us feedback. We will consider them seriously. Thank you for choosing BIGTREETECH products!