

Please make sure that your heating bed is in line with the voltage of your country or region. The high voltage version will heat very slowly when used at low voltage and may not reach the target temperature. The low-voltage version is used in the high-voltage version to heat up quickly, even exceeding the temperature you set, which is very dangerous.



**HOT SURFACE  
DO NOT TOUCH**

**AC Heating Bed 110/220V INPUT**

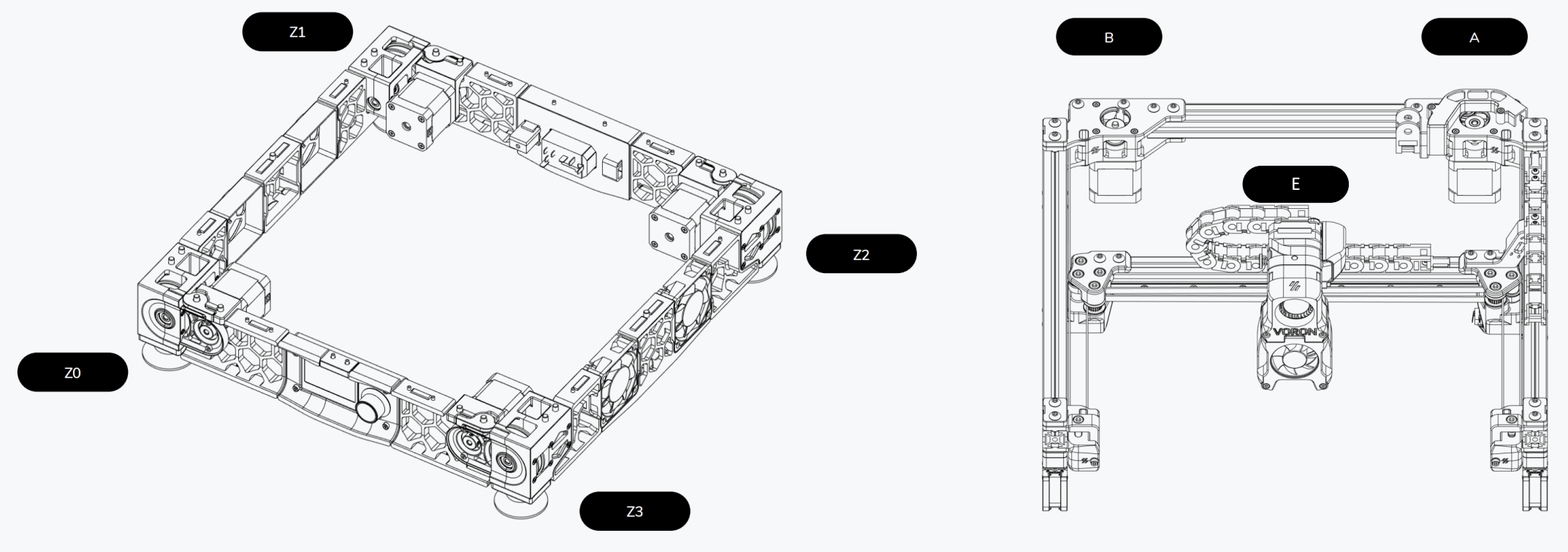
# Spider V2.2

## Wiring diagram

### For Voron V2.4

— By Eli Wong

For more board information, please refer to  
<https://wiki.fysetc.com/Spider/>  
Or  
<https://github.com/FYSETC/FYSETC-SPIDER>



**USE FYSETC TMC 2209 V3.1**

**PDN:** It is connected to TX for communication between TMC and MCU, using single wire. The jumper cap shown in the figure must be setted before the drive module install.

**DIAG:** It is used to go home without sensing, while ensuring that the jumper corresponding to the limit is in the closed state.

**USE FYSETC TMC5160/5161/2130**

(SPI4 used for TMC driver SPI, CS and PDN share pins)

**DIAG:** It is used to go home without sensing, while ensuring that the jumper corresponding to the limit is in the closed state.

**USE 4988 or 4988like driver**

**48V Driver Support (M1 & M2) :**

- 1.If you use 24V, you need to connect the 24V-PIN and 48V-PIN, and use the jumper plug that we provide.
- 2.If you use 48V, you need to connect an external power supply to the 48-PIN and GND-PIN using the connecting wires provided by us.

**Connect the Raspberry Pi to Spider**

The spider provides a serial port for connecting to the Raspberry Pi or WiFi module, and this interface has a strong enough (8A MAX) 5V power supply. In order to use the only hardware serial port of the Raspberry Pi, you need to disable the console function and map the hardware serial port to GPIO14 and GPIO15.

**You can refer here:**

```
sudo raspi-config  
=> Interfacing Option  
=> Serial  
=> NO  
=> YES  
sudo nano /boot/config.txt  
=> add this line :  
dtoverlay=pi3-disable-bt  
=> then  
sudo reboot  
sudo nano /boot/cmdline.txt  
=> remove the word phase  
"console=serial0,115200" or  
"console=ttyAMA0,115200"  
sudo reboot
```

**SD Pins Out:** You can use the SD Card in a farther position by the SD module, but it is not recommended to exceed 30cm.

The type-C USB socket is used by default, and type-A is also reserved. If you need it, you can Add it by yourself.

**USB Pins Out:** used to connect the Raspberry Pi inside the printer via USB.

**Z-Probe**  
NPN  
Normal Open

"Z+" can only be used as an input, because there is a conversion circuit that converts a high voltage signal (24V /5V) into a low voltage signal (3.3V), so it is recommended to connect a proximity sensor here, such as PL-08N.

**Notice:**  
Please select the voltage of your area before powering up.

**LED**

ADJ. +V

L N G V- V- V- V+ V+ V+ V+

If the total current of the fan you use is greater than 0.5A or more than 2 fans, it is recommended that you connect it to E1 OUT (PC8) to reduce the pressure on the fan MOSFET and avoid damaging the motherboard.

