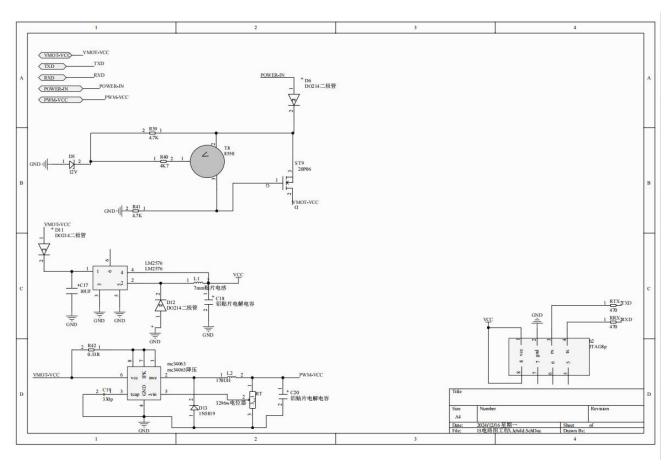


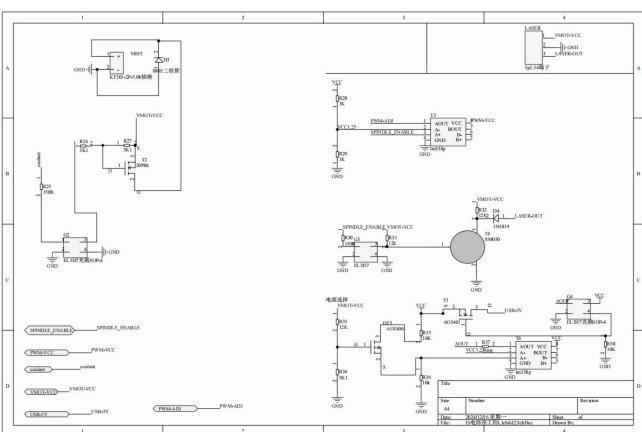
### **Features**

- ❖ Adopting ESP32 16-bit high-speed processor
- Compatible with GRBL software, Such as Candle, Bcnc, CNC3D COMMANDER...
- Support four stepper drivers, including X,Y,Z,A axis.
- Support Homing, software/hardware endstop, Z probe.
- Support hotspot, Wifi wireless to control
- Support 3pin laser.Adjustable voltage PWM output.
- Support 12-24V DC

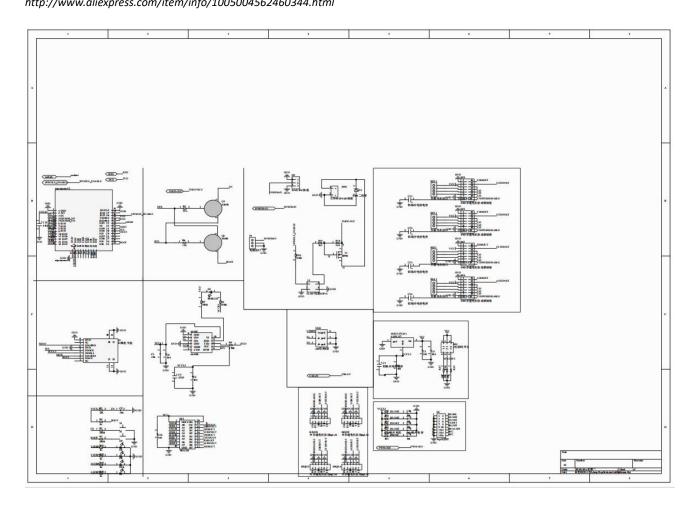
Auto-cut off power when voltage exceeding 30V.

Automatically select external power supply as the main control input power, and prevent reverse power transmission, protect USB port.

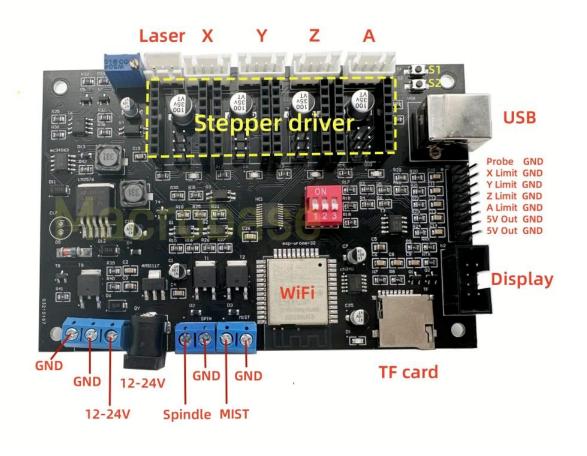




How to buy. http://www.aliexpress.com/item/info/1005004562460344.html



# Wiring



PROBE Z-probe

X-LIM X limit,Always on
Y-LIM Y limit,Always on
Z-LIM Z limit,Always on
GND XYZ axis com,Z probe

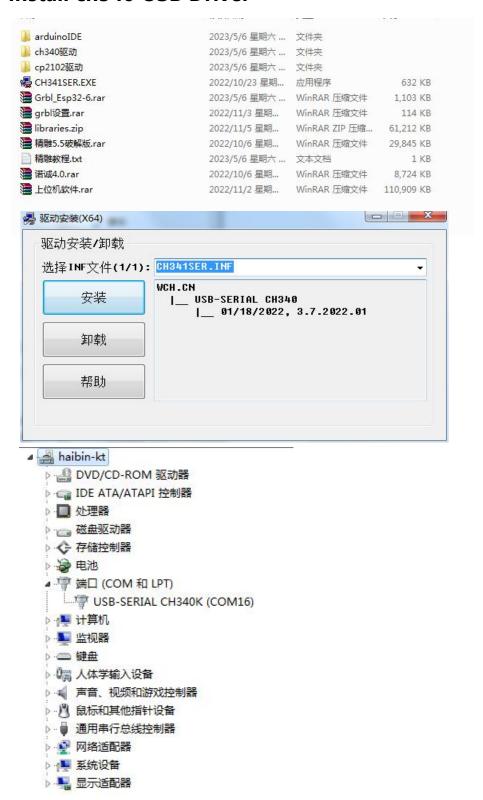
PWM-OUT PWM Output GND PWM ground

PWM-ADJ PWM voltage adjust

5v-out 5v Output spindle Spindle relay

mist Hydrocooling relay

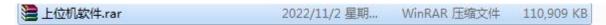
### Install ch340 USB Driver



Successfully install when CH340K comes up.

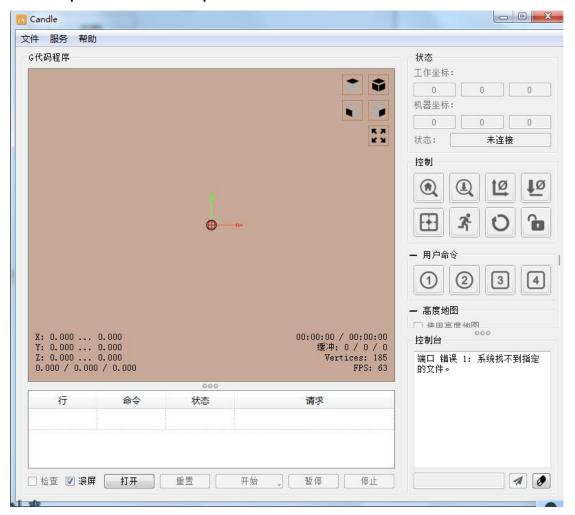
## **Software**

Candle, CNC3dCommander and Bcnc.



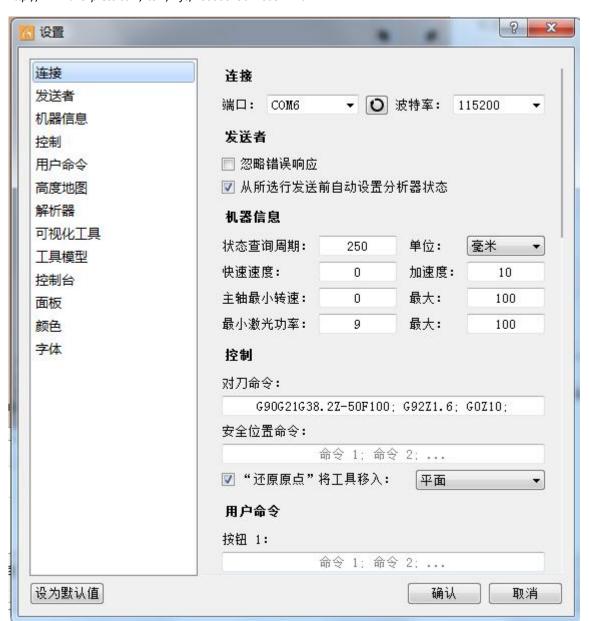
## 1.Candle

Unzip candle and open candle.exe



#### How to buy.

http://www.aliexpress.com/item/info/1005004562460344.html





### 2.BCNC

Plug control board to PC via USB cable, and enter bcnc.exe



# Click CAM, select language.



# Enable 6 axis displays, then reboot software.



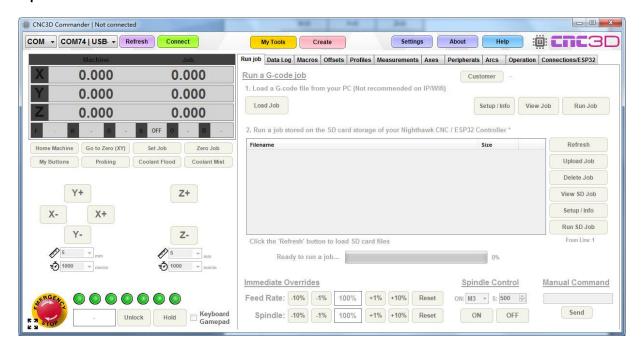
# Click file, select COM and open it.



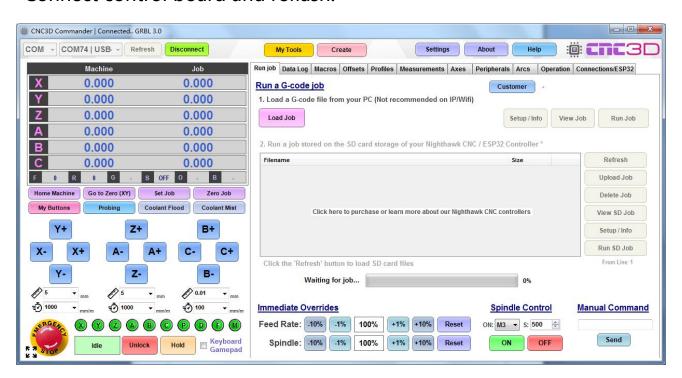


### 3.CNC3d Commander

# Open CNC3dcommander as below

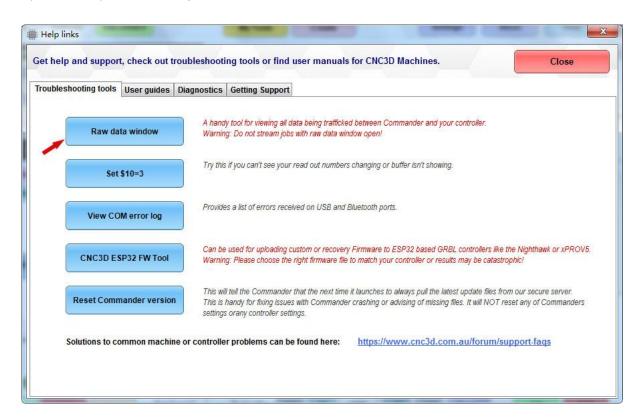


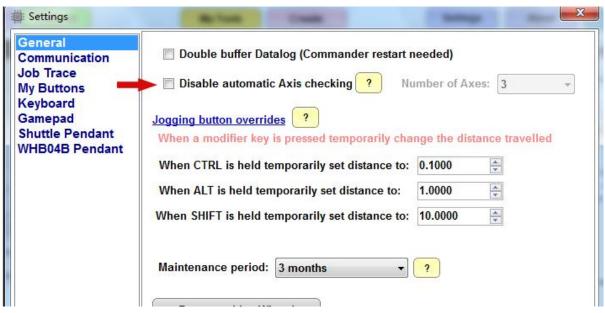
### Connect control board and reflash.



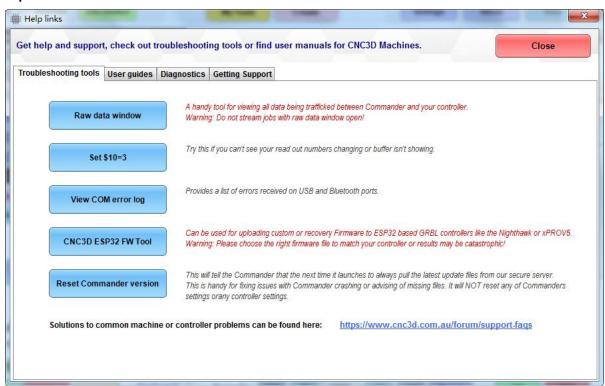
#### How to buy.

http://www.aliexpress.com/item/info/1005004562460344.html





# Update and connect

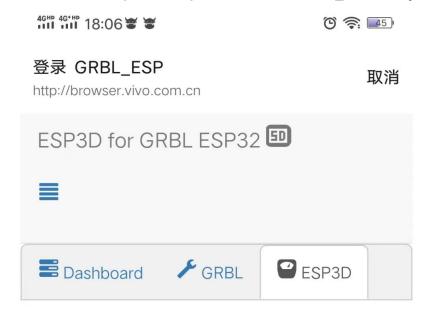


## Raw data window

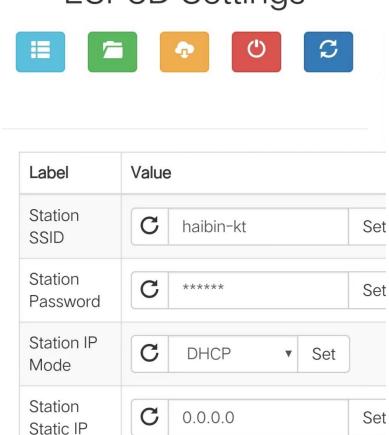


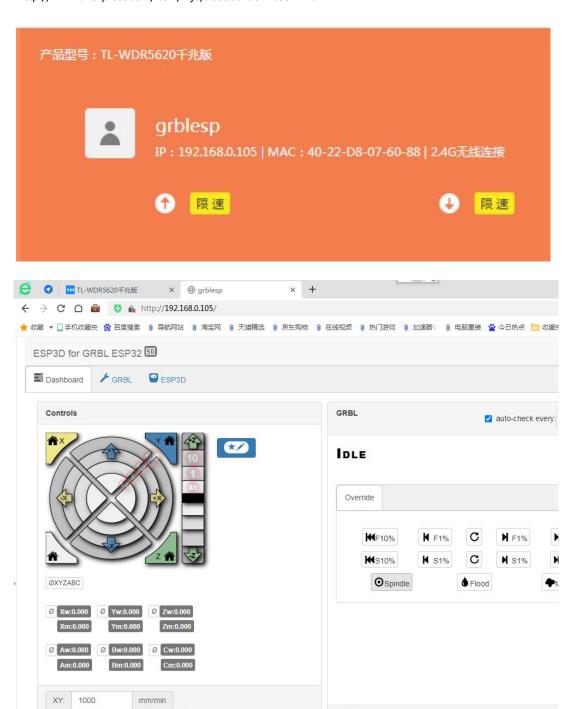
### WiFi

It will come up a Hotpot, Name:GRBL\_ESP, Keyword:12345678.



# **ESP3D Settings**





Restart to change Radio mode. Restart ESP32 and enable Bluetooth.

When in BT mode, switch back to WiFi from Bluetooth console by \$Radio/mode=STA or \$Radio/Mode=AP, and then restart.

0

Install Grbl-Controller. apk file.

mm/min

Axis: Z 🕶 100

Enable Bluetooth, find ESP32 BT device and pair it.

Open Grbl-Controller software and operate the control board on phone.

