

**Please note the positive and negative poles, make the right connection.**

Grbl Wiki

<https://github.com/gnea/grbl/wiki>

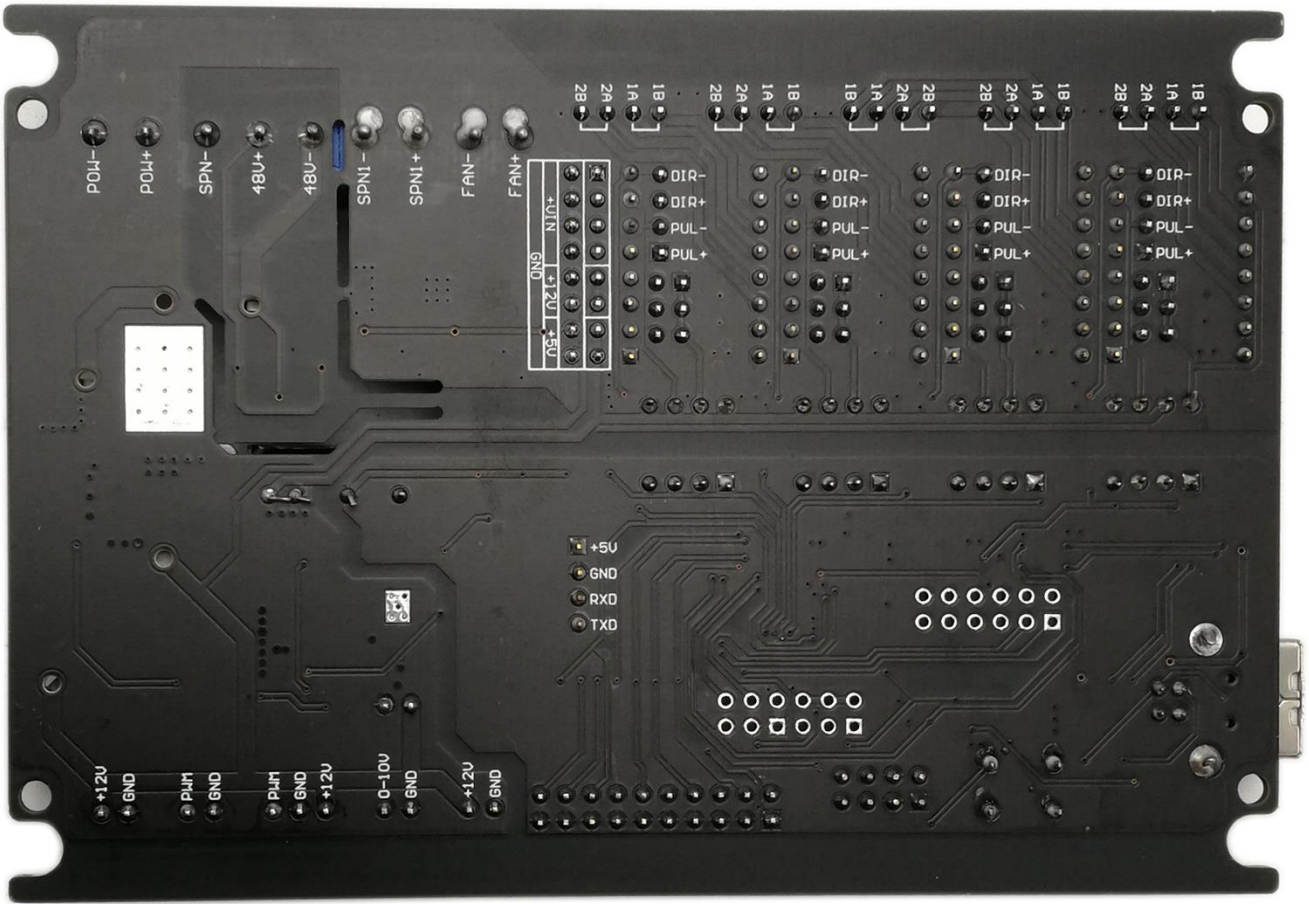
Recommended Control Software

<https://github.com/Denvi/Candle>

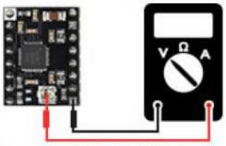
CH340 Driver

<http://www.wch-ic.com/search?t=all&q=USB+to+serial+port>

Current adjustment method: multimeter measures the voltage between potentiometer center and GND, A4988 only needs to plug in USB, DRV8825 and TMC2208 need to plug in 24V, Non professionals, please do not adjust at will.



Factory default current : 1.0A  
Maximum drive current : 2.0A



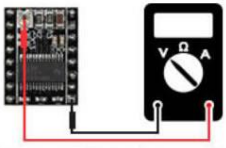
The current setting reference voltage measurement diagram is shown as above  
 $I_{tripmax} = V_{ref}/(8 * R_{cs})$   $R_{cs}=0.1\Omega$

**A4988**

ENABLE	VIMOT
MS1	GND
MS2	2B
MS3	2A
RESET	1A
SLEEP	1B
STEP	VDD
DIR	GND

Microstep	MS1	MS2	MS3
Full Step	Low	Low	Low
1/2 Step	High	Low	Low
1/4 Step	Low	High	Low
1/8 Step	High	High	Low
1/16 Step	High	High	High

Factory default current : 2.5A  
Maximum drive current : 2.5A



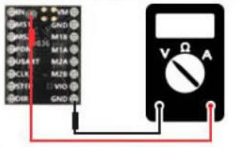
The current setting reference voltage measurement diagram is shown as above  
 $I_{tripmax} = V_{ref} * 2.0$

**DRV8825**

ENABLE	VIMOT
MS1	GND
MS2	2B
MS3	1B
RESET	1A
SLEEP	2A
STEP	VDD
DIR	GND

Microstep	MS1	MS2	MS3
Full Step	Low	Low	Low
1/2 Step	High	Low	Low
1/4 Step	Low	High	Low
1/8 Step	High	High	Low
1/16 Step	Low	Low	High
1/32 Step	High	Low	High
1/32 Step	Low	High	High
1/32 Step	High	High	High

Factory default current : 1.0A  
Maximum drive current : 1.4A



The current setting reference voltage measurement diagram is shown as above  
 $I_{tripmax} = V_{ref}/1.4$

**TMC2208**

EN	VM	VM
MS1	MS1	GND
MS2	MS2	M1B
PND	PDN	M1A
USART	USART	M2A
CLK	CLK	M2B
STEP	STEP	VIO
DIR	DIR	GND

Microstep	MS1	MS2
1/2 Step	High	Low
1/4 Step	Low	High
1/8 Step	Low	Low
1/16 Step	High	High

