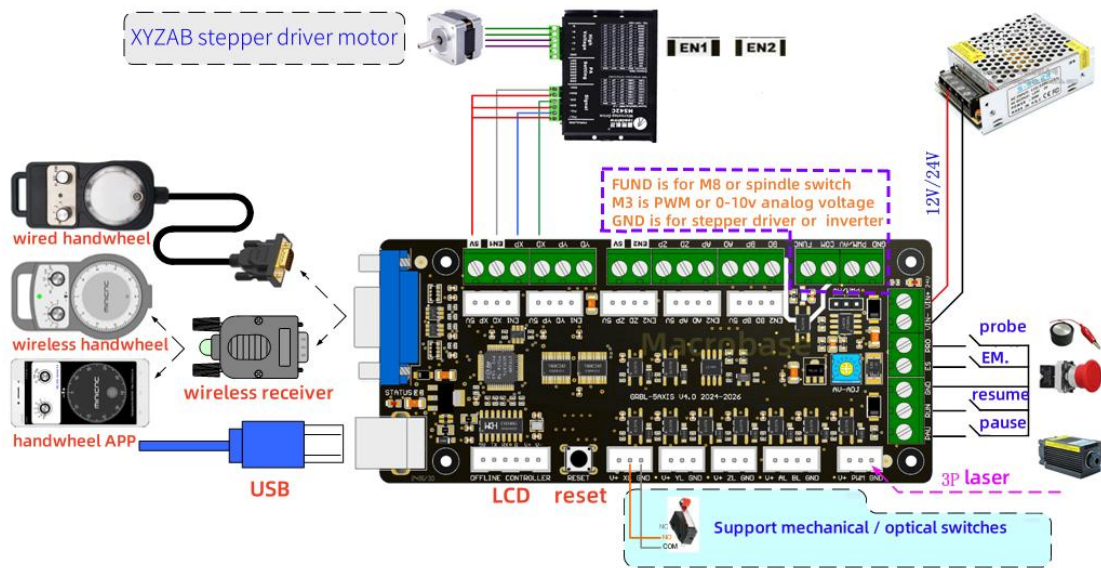
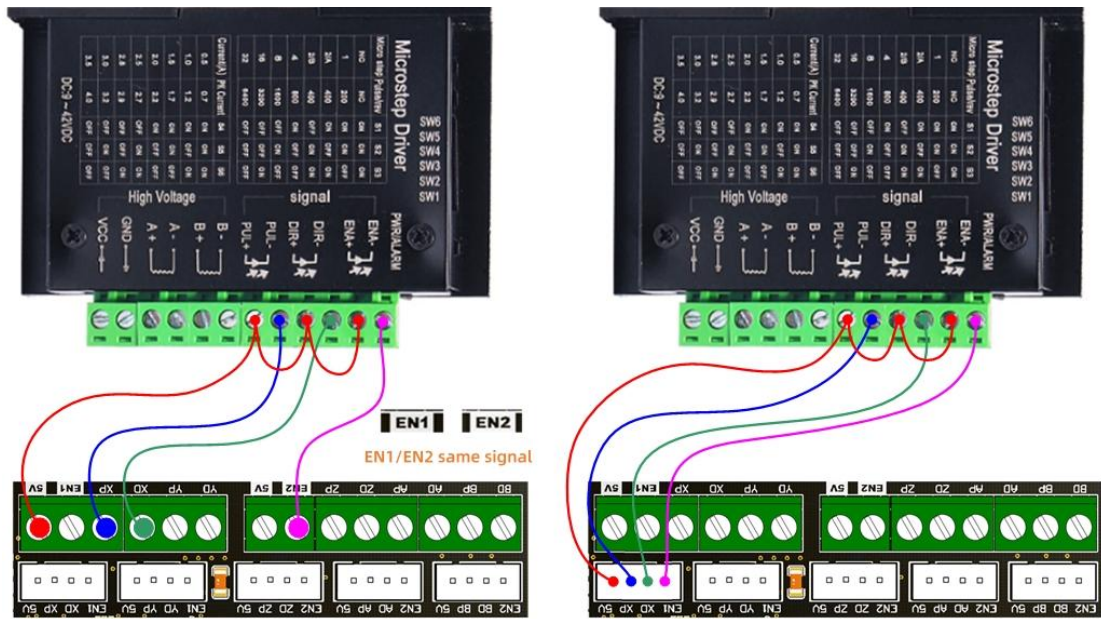


Feature	GRBL 5Axis
CPU	32bits ARM-M3
USB driver	CH340
Stepper motor	5 axis,XYZAB
Stepper driver	TB6600/TMC2160/TMC5160...
Offline LCD	Support
Handwheel	Support
Power	12v-24v (3A-15A)
Z probe	√
Emergency stop	√
Laser	3pin
Pause	√
Spindle	PWM/0-10V(inverter)
Hole size	105*45mm
PCB size	125*55mm
Upgrade	Online



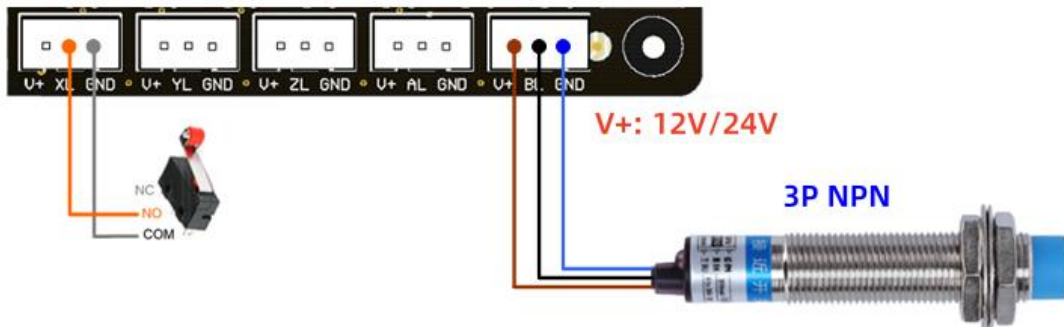
Connect Stepper Driver

This board output Pulse, Direction and Enable signal, it's common anode connection.



Connect Limit Switches

Support mechanical/proximity/photoelectric limit switches.



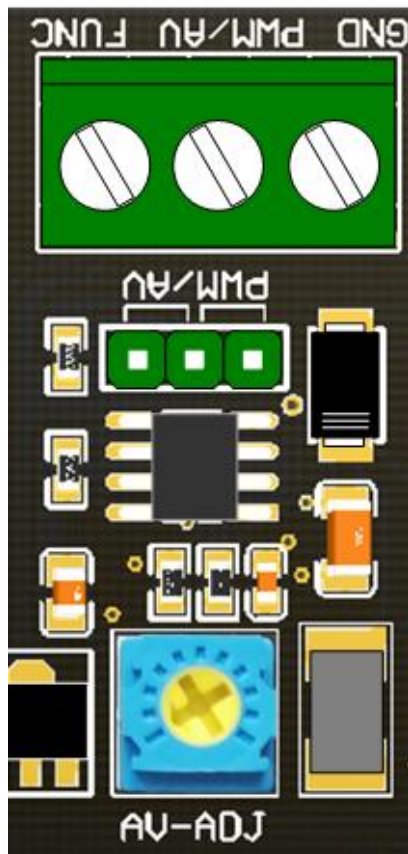
Connect Spindle/inverter/Cooling Fan

This board output 5V PWM or 0-10V analog signal, set by jumpers.

Adjust AV-ADJ potentiometer when output 0-10v.

FUNC defaults M8 command, to control fan, M8 is on, M9 is off.

Set \$64 to enable spindle and control inverter.



Check and Set parameters



Homing

//4 axis Back to origin(0: not return to origin; 1-4: follow order to return origin)

\$140=2 (x homing order, 0-4)

\$141=2 (y homing order, 0-4)

\$142=1 (z homing order, 0-4)

\$143=0 (a homing order, 0-4)

\$144=0 (b homing order, 0-4)

Set Axis Signal

\$68 is to set A axis mode, \$69 is B axis mode.

\$68=0 (a axis follow, 0-A/1-X/2-Y/3-Z)

// A axis follow 0-unfollow 1-follow X 2-follow Y 3-follow Z

\$69=0 (b axis follow, 0-B/1-X/2-Y/3-Z)

// B axis follow 0-unfollow 1-follow X 2-follow Y 3-follow Z

Parameters for Reference

\$0=5 (step pulse, usec)

\$1=25 (step idle delay, msec)

\$2=0 (step port invert mask:00000000)

\$3=0 (dir port invert mask:00000000)

\$4=0 (step enable invert, bool)

\$5=0 (limit pins invert, bool)

\$6=0 (probe pin invert, bool)

\$10=3 (status report mask:00000011)

\$11=0.010 (junction deviation, mm)

\$12=0.002 (arc tolerance, mm)

\$13=0 (report inches, bool)

\$20=0 (soft limits, bool)

\$21=1 (hard limits, bool)

\$22=1 (homing cycle, bool)

\$23=0 (homing dir invert mask:00000000)

\$24=500.000 (homing feed, mm(or degree)/min)

\$25=1000.000 (homing seek, mm(or degree)/min)

\$26=250 (homing debounce, msec)

\$27=5.000 (homing pull-off, mm(or degree))

\$30=10000 (spindle max rpm)

\$31=0 (spindle min rpm)

\$32=0 (laser mode, bool)

\$61=5 (axis nums)

\$62=0 (core xy, bool)

\$63=1 (homing force set origin, bool)

\$64=0 (func pin set, 0-M8/1-SpindleEn)

\$65=1 (weak laser percent, 0-100)

\$66=0 (laser effect adjust, 0-255)
\$67=0 (spindle soft start, bool)
\$68=0 (a axis follow, 0-A/1-X/2-Y/3-Z)
\$69=0 (b axis follow, 0-B/1-X/2-Y/3-Z)
\$70=0 (limit pins disable mask:00000000)
\$100=80.000 (x, step/mm)
\$101=80.000 (y, step/mm)
\$102=80.000 (z, step/mm)
\$103=80.000 (a, step/mm)
\$104=80.000 (b, step/mm)

\$110=10000.000 (x max rate, mm/min)
\$111=10000.000 (y max rate, mm/min)
\$112=10000.000 (z max rate, mm/min)
\$113=10000.000 (a max rate, mm/min)
\$114=10000.000 (b max rate, mm/min)

\$120=50.000 (x accel, mm/sec²)
\$121=50.000 (y accel, mm/sec²)
\$122=50.000 (z accel, mm/sec²)
\$123=50.000 (a accel, mm/sec²)
\$124=50.000 (b accel, mm/sec²)

\$130=1000.000 (x max travel, mm)
\$131=1000.000 (y max travel, mm)
\$132=1000.000 (z max travel, mm)
\$133=1000.000 (a max travel, mm)
\$134=1000.000 (b max travel, mm)

\$140=2 (x homing order, 0-4)
\$141=2 (y homing order, 0-4)
\$142=1 (z homing order, 0-4)
\$143=0 (a homing order, 0-4)
\$144=0 (b homing order, 0-4)

\$150=0.000 (x origin offset, mm(or degree))
\$151=0.000 (y origin offset, mm(or degree))
\$152=0.000 (z origin offset, mm(or degree))
\$153=0.000 (a origin offset, mm(or degree))
\$154=0.000 (b origin offset, mm(or degree))