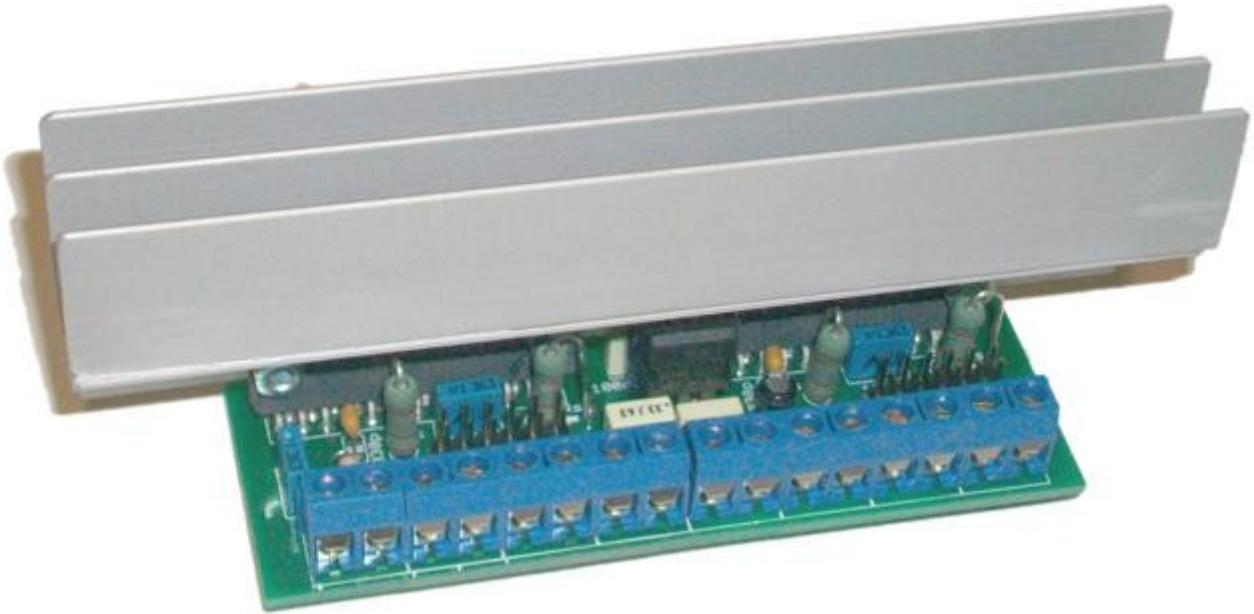


# 2 Axis bipolar Stepping Motors Driver



## Features:

- Uses Toshiba TB6560AHQ or TB6560HQ Bipolar Stepping Driver, maximum 3.5A drive current
- 12 - 35V supply
- Jumper selectable step resolution for full step, 1/2 1/4 1/8 (TB6560HQ) or full 1/2 1/8 1/16 (TB6560AHQ)
- Adjustable motor current at 100%, 75%, 50%, 20% of full current
- Adjustable current decay
- Built-in overheat protection
- Small form of 3.55"x1.3" board dimensions

## Parts List:

- 5x Polyester capacitor 100 nF
- 1x Polyester capacitor 330 nF
- 2x Ceramic capacitor 330 pF
- 1x Electrolytic Capacitor 10 uF 25 VDC
- 1x Electrolytic Capacitor 47 uF 50 VDC
- 1x Voltage regulator 7805
- 2x TB6560AHQ or TB6560HQ
- 1x 4K7 1/4w resistor
- 8x 2 Pin screw terminal block
- 2x 2PX6 pin header
- 4x 2 watt resistor (not wirewound) ohm=0.5/max current

## Jumper settings



**Out B2**  
**Out B1**  
**Out A2**  
**Out A1**  
**Dir**  
**Clk**

**+5V Out**

**Gnd**

**24V**

**Enable**

**Out B2**

**Out B1**

**Out A2**

**Out A1**

**Dir**

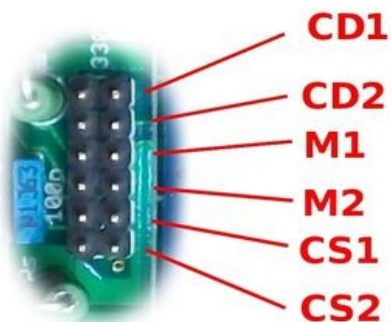
**Clk**

Current Setting	CS2	CS1
100%	open	open
75%	open	closed
50%	closed	open
20%	closed	closed

Microstep Mode	M2	M1
1/1	open	open
1/2	open	closed
1/4 (1/16)*	closed	open
1/8	closed	closed

\* 1/4 TB6560 - 1/16 TB6560A

Current Decay Mode	CD2	CD1
Normal	open	open
25%	open	closed
50%	closed	open
Fast	closed	closed



**CD1**

**CD2**

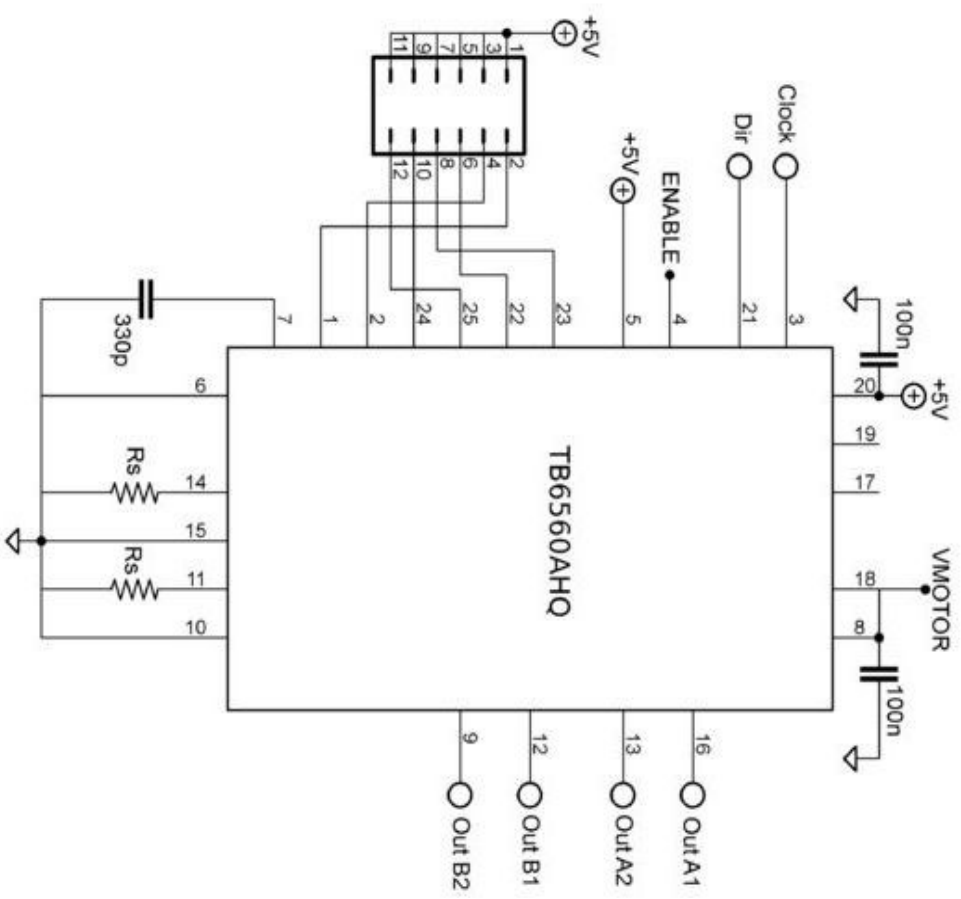
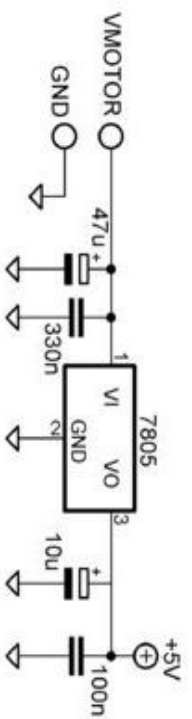
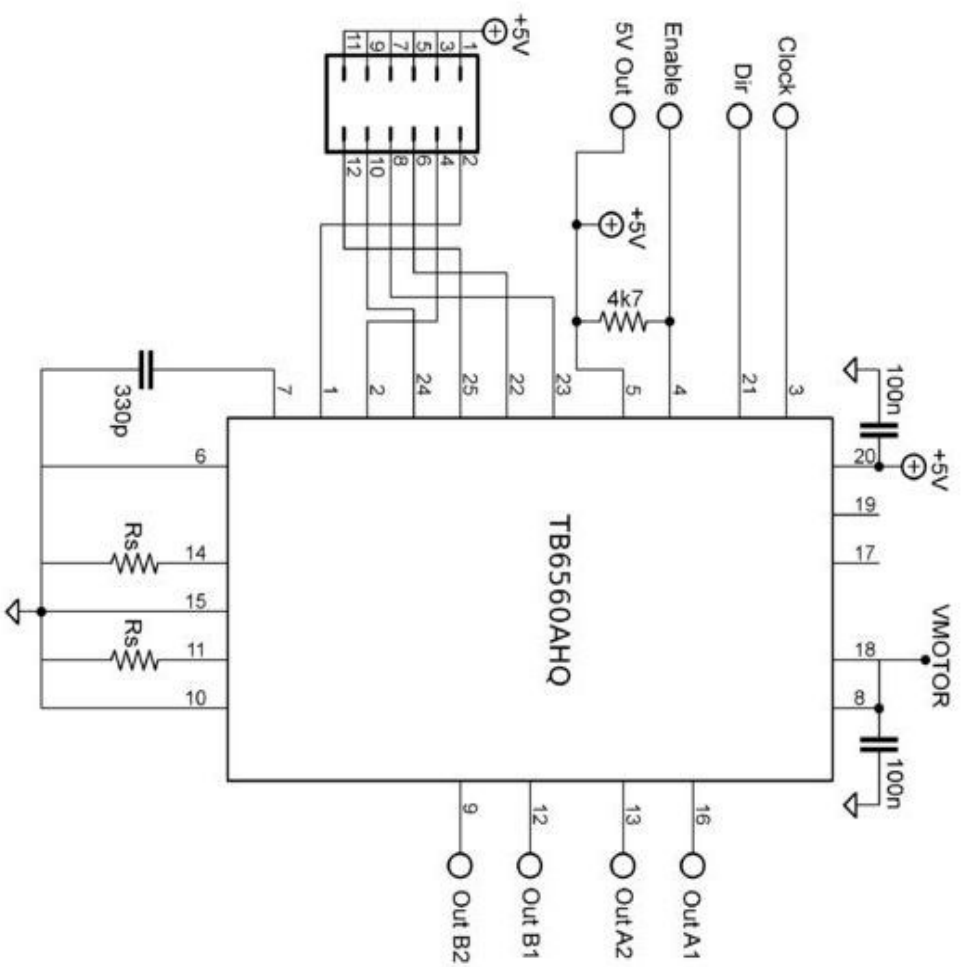
**M1**

**M2**

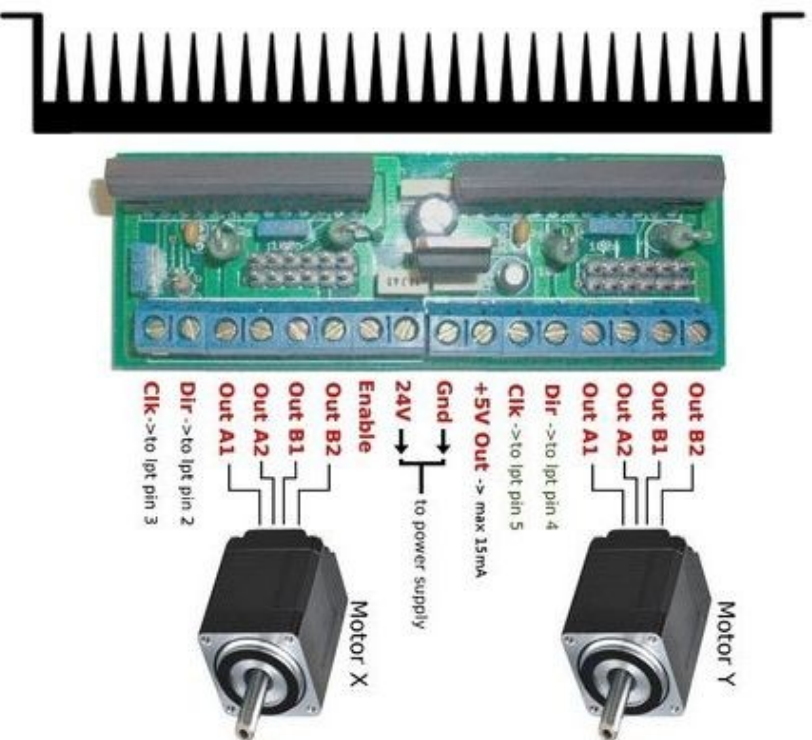
**CS1**

**CS2**

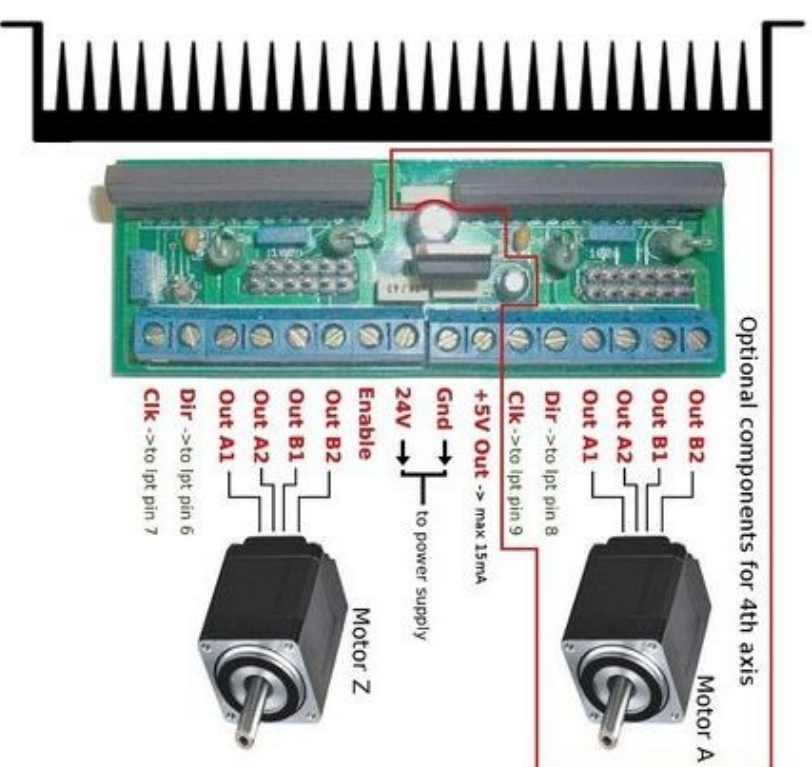
$R_s \text{ (ohm)} = 0.5 / \text{Max current}$   
 $W_R \text{ (watt)} = 0.5 * \text{Max current}$



# Minimal wiring for 3-4 axis cnc mill-router (2 PCBs needed)



- Enable input has an onboard pull-up resistor and can be left unconnected



- Connect heatsink to Gnd