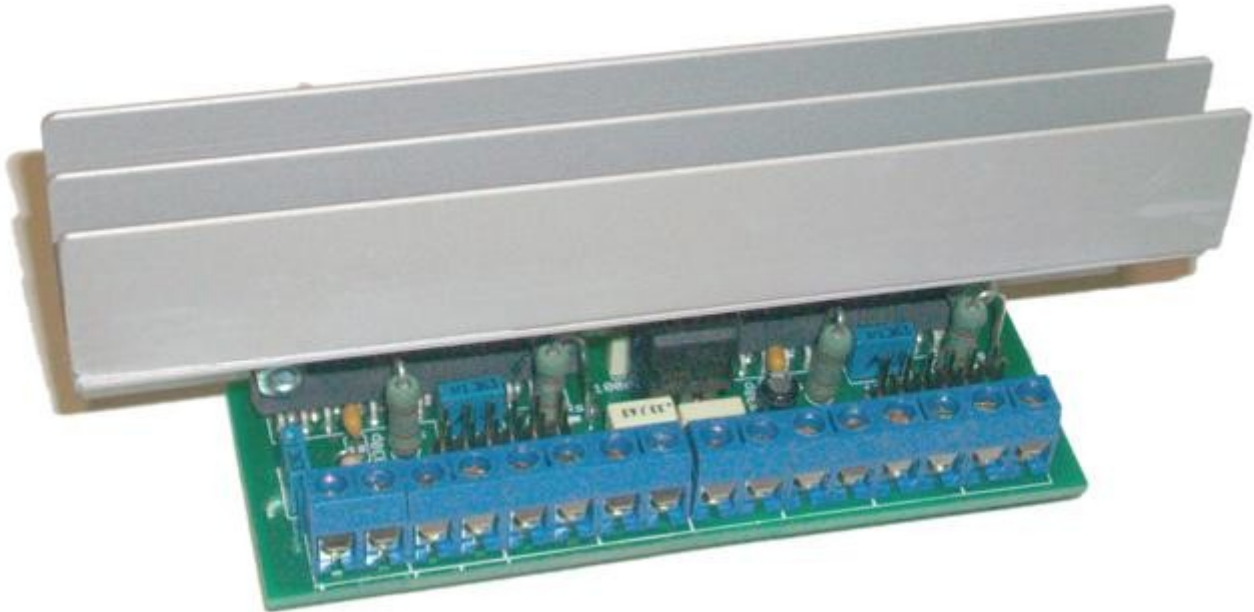


2 Axis bipolar Stepping Motors Driver



Features:

- Uses Toshiba TB6560AHQ or TB6560HQ Bipolar Stepping Driver, maximum 3.5A drive current
- 12 - 30V 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

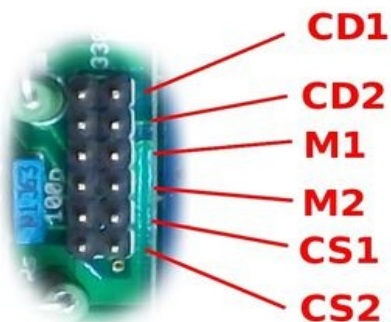
Clk

| 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

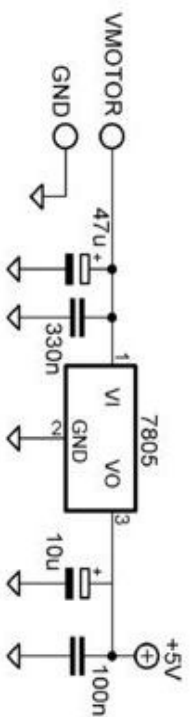
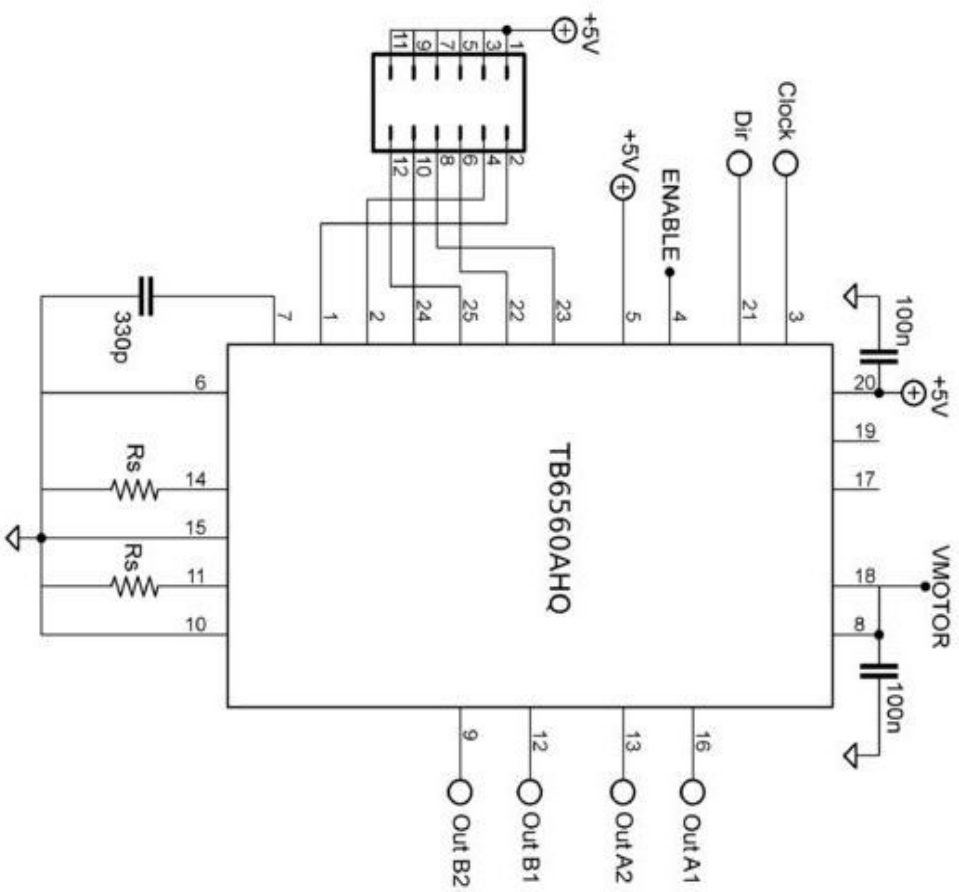
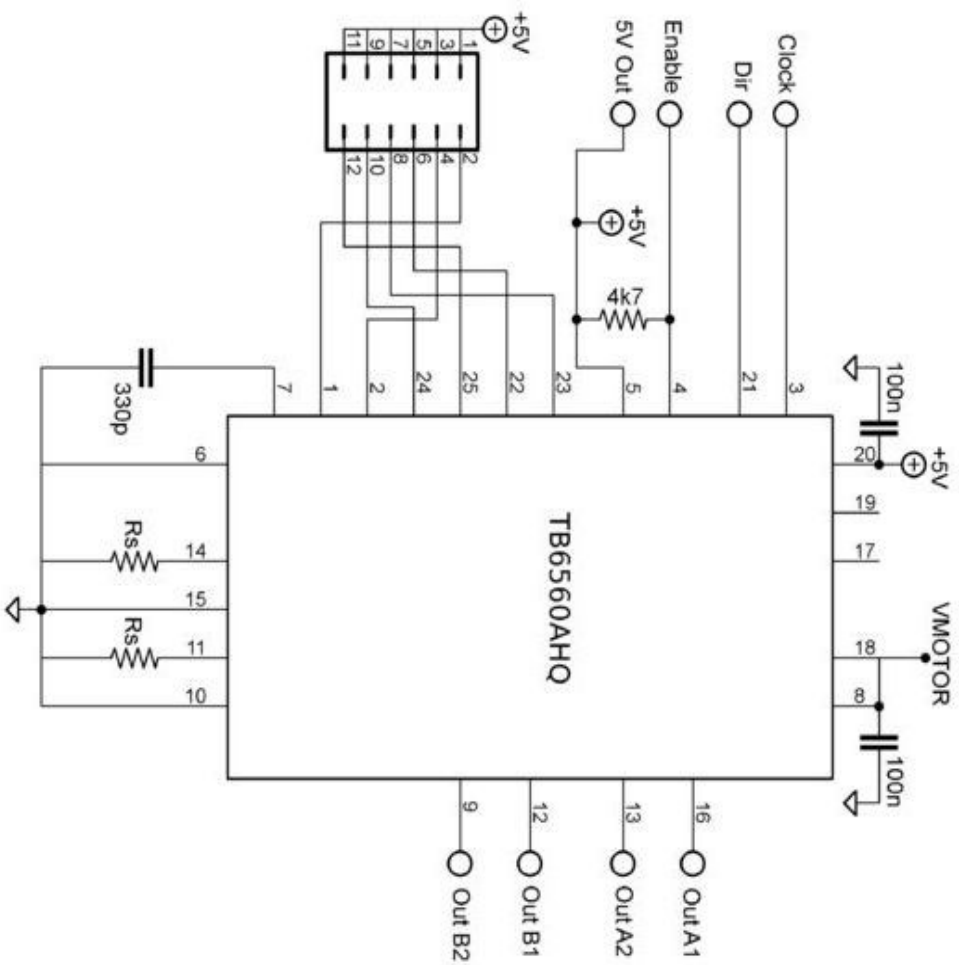
M1

M2

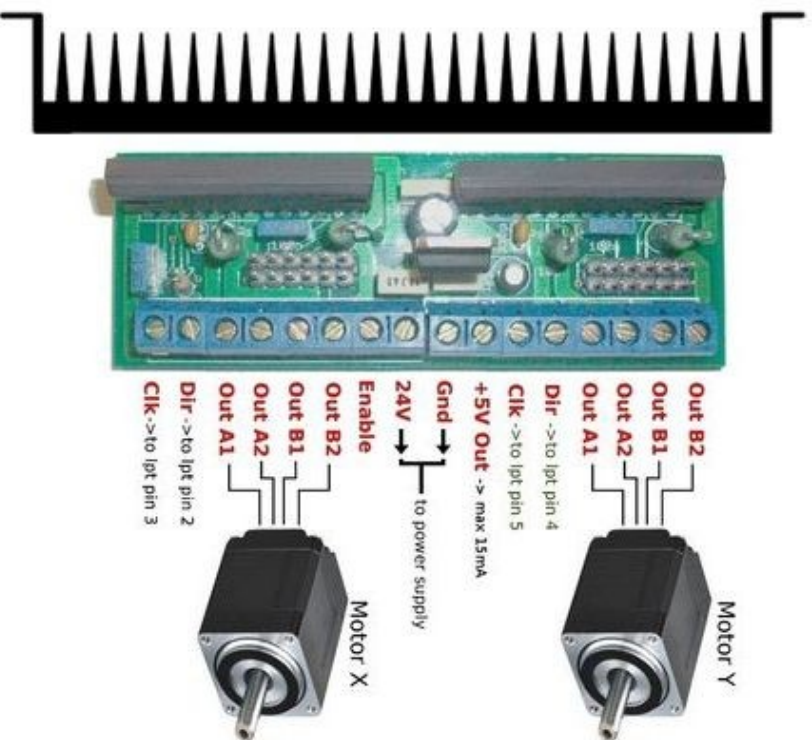
CS1

CS2

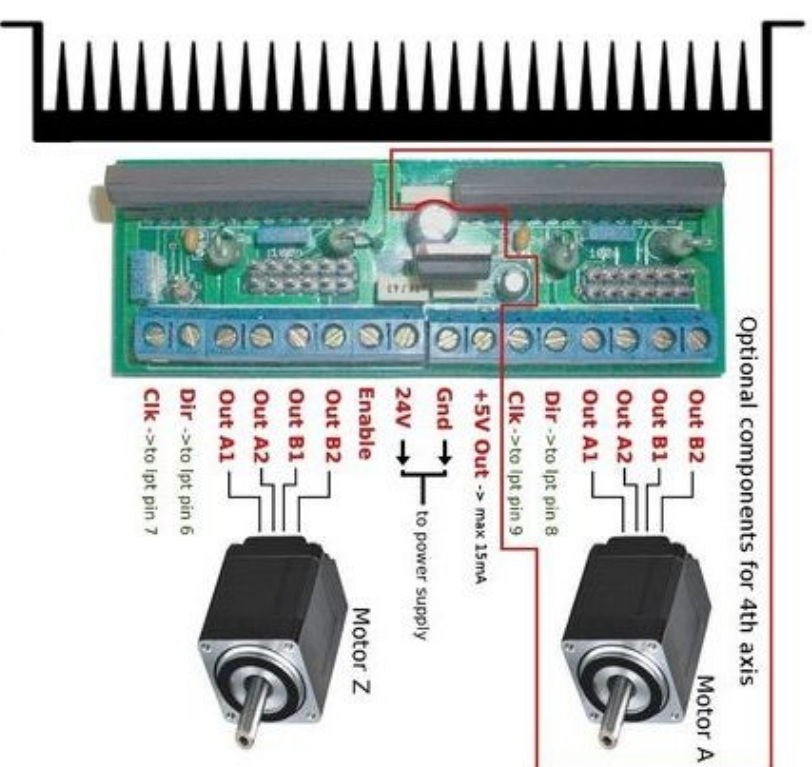
$R_s \text{ (ohm)} = 0.5 / \text{Max current}$
 $W_R \text{ (watt)} = 0.5 * \text{Max current}$



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