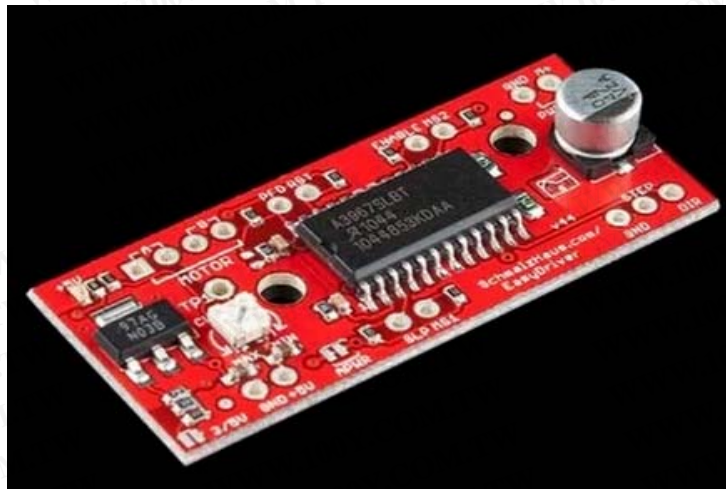


A3967

Arduino A3967 步進電機驅動板

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
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步進電機通常定義有步距角或者步數參數，一般的電機一轉都是分為 200 步，也就是步距角為 1.8 度，EasyDriver 具有步距細分功能，這款驅動板的細分為 8 細分，也就是將電機的每一步再細分為 8 小步，這樣能夠得到更精確的控制，也就是說 EasyDriver 需要 1600 步來完成一個完整的 360 度旋轉。

ms1 和 ms2 是步進電機細分分辨率選擇的邏輯輸入口；

dir 是電機運轉方向的選擇口；

reset 用於重置芯片初始值，屏蔽所有外部輸出；

step 為脈沖輸入端口；

out1a、out1b、out2a、out2b 為 h 橋的兩對輸出端口；

enable 為使能端；

sleep 為睡眠模式；

sense1、sense2 為 h 橋的電流檢測電阻；

ref 為參考電壓；

gnd 為邏輯地和電源地；

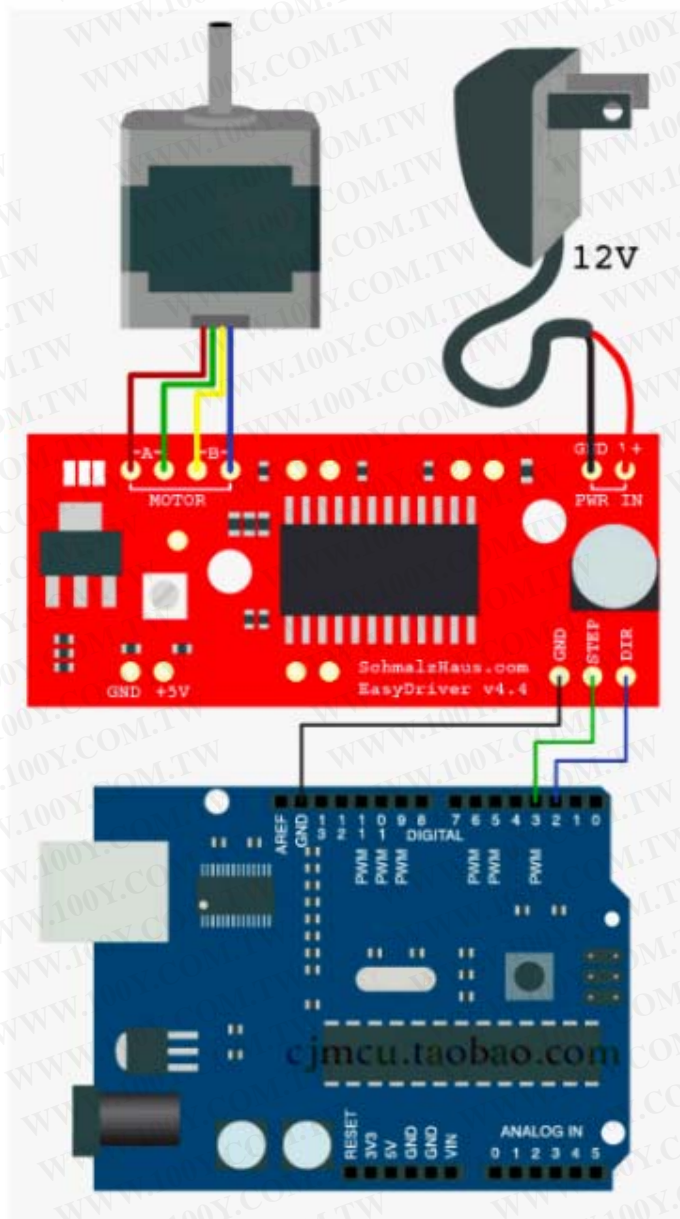
rc1、rc2 為 h 橋固定截止時間模擬輸入。

a3967slb 是美國 allegro 公司生產的 pwm 恒流控制微步距驅動二相步進電機專用驅動器。它的

工作電壓可達 30v，驅動電流達 750ma，一個 a3967slb 即可驅動一台二相步進電機，可實現 8 細分驅動。芯片內部的 pwm 電流控制電路可通過加在 pfd 的電壓設置為慢、快、混合三種電流衰減模式，如果 pfd 端的電壓高於 0.6v_{dd}，則選擇慢衰減方式。若低於 0.21v_{dd}，則選擇快衰減模式。處於兩者之間為混合衰減模式。另外，a3967slb 還能提供完善的保護措施，包括抑制瞬態電壓，過熱保護、防止電流直通、欠電壓自鎖等功能。

a3967slb 和微處理器之間不需要附加其他的接口電路，該芯片採 easystepper 接口，將 8 條控制線減少了 2 條（步長和方向），只要簡單地輸入控制步進電機的脈沖，其內嵌的轉換器就可以實現對步進電機的控制。

a3967slb 還需要一些電阻、電容來調整其工作參數，整個驅動電路非常簡單。



EasyDriver-Stepper-Motor

Description: The EasyDriver is a simple to use stepper motor driver, compatible with anything that can output a digital 0 to 5V pulse (or 0 to 3.3V pulse if you solder SJ2 closed on the EasyDriver). EasyDriver requires a 7V to 30V supply to power the motor and can power any voltage of stepper motor. The EasyDriver has an on board voltage regulator for the digital interface that can be set to 5V or 3.3V. Connect a 4-wire stepper motor and a microcontroller and you've got precision motor control! EasyDriver drives bi-polar motors, and motors wired as bi-polar. I.e. 4,6, or 8 wire stepper motors. On this version (v4.4) we fixed the silk error on the min/max adjustment.

This is the newest version of EasyDriver V4 co-designed with Brian Schmalz. It provides much more flexibility and control over your stepper motor, when compared to older versions. The microstep select (MS1 and MS2) pins of the A3967 are broken out allowing adjustments to the microstepping resolution. The sleep and enable pins are also broken out for further control. cjmcu made.

Note: Do not connect or disconnect a motor while the driver is energized. This will cause permanent damage to the A3967 IC.

Note: This product is a collaboration with Brian Schmalz. A portion of each sales goes back to them for product support and continued development.

Features:

A3967 microstepping driver

MS1 and MS2 pins broken out to change microstepping resolution to full, half, quarter and eighth steps (defaults to eighth)

Compatible with 4, 6, and 8 wire stepper motors of any voltage

Adjustable current control from 150mA/phase to 750mA/phase

Power supply range from 7V to 30V. The higher the voltage, the higher the torque at high speeds

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