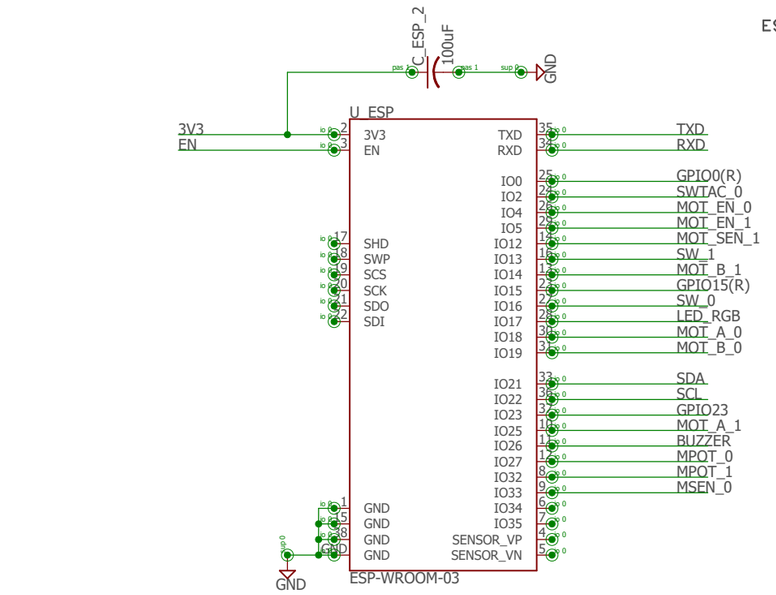
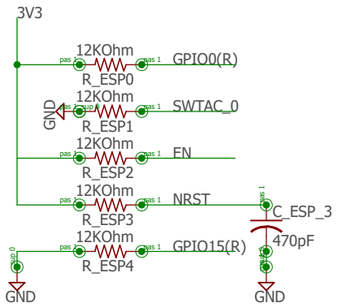
## ESP32




This Schematic is heavily based on:

https://dl.espressif.com/dl/schematics/ESP32-Core-Board-V2_sch.pdf

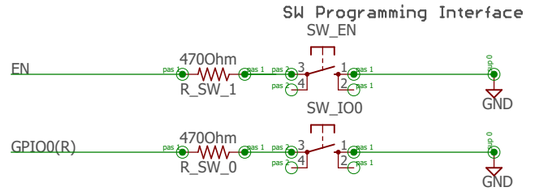
## ESP32 Pin Settings



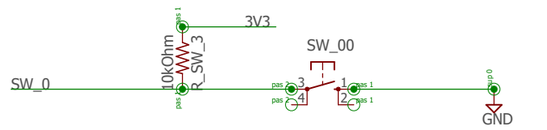

## Board Glossary

| GPIO/PIN: | Signal: |
|---|---|
| GPIO4 | MOT_EN_0 |
| GPIO18 | MOT_A_0 |
| GPIO19 | MOT_B_0 |
| GPIO27 | MPOT_0 |
| GPIO5 | MOT_EN_1 |
| GPIO25 | MOT_A_1 |
| GPIO14 | MOT_B_1 |
| GPIO32 | MPOT_1 |
| GPIO12 | MSEN_0 |
| GPIO33 | MSEN_1 |
| GPIO17 | LED_RGB |
| GPIO16 | SW_0 |
| GPIO13 | SW_1 |
| GPIO21 | SDA |
| GPIO22 | SCL |

## SW Programming Interface

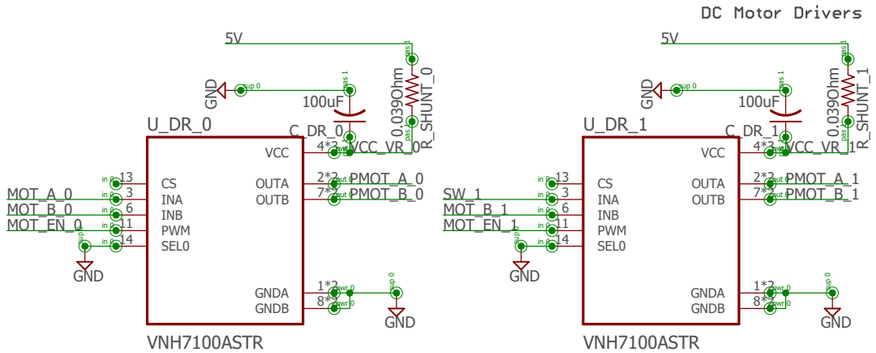



## SW Switch Interface

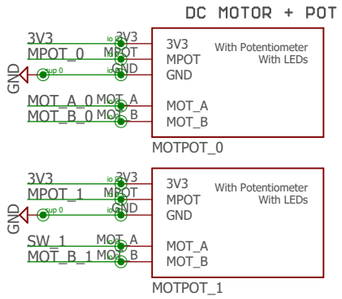



## Power Connector

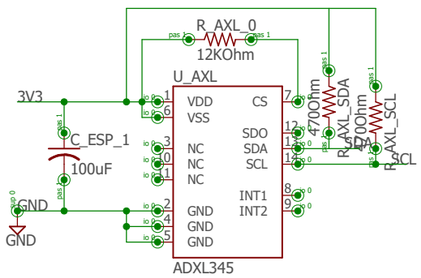

## DC Motor Drivers




## DC MOTOR + POT



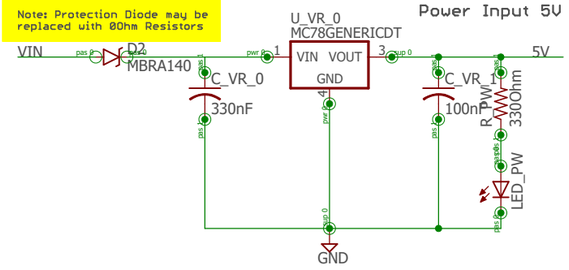

## ADXL245 ACC Circuit




Note: The ACC circuit may not be mounted due to it's footprint

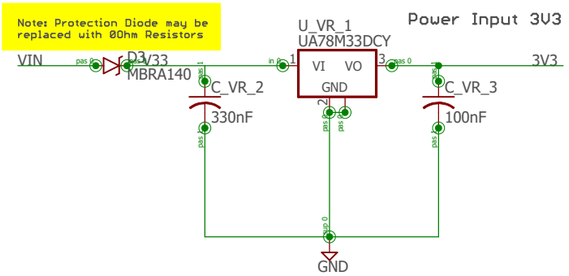
## Power Input 5V

Note: Protection Diode may be replaced with 0Ohm Resistors

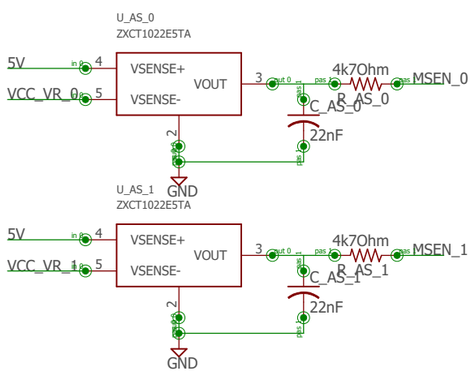



## Power Input 3V3

Note: Protection Diode may be replaced with 0Ohm Resistors




## Motor Current Sensors




CURRENT SENSOR:
Linear Operation up to:
Vsense = (Vin - 2)/100 = 30mV

Vout = 100 x Vsense
Vout MAX = 4V @Vin=5V
Vsense max ) = 40mV @Vin=5V

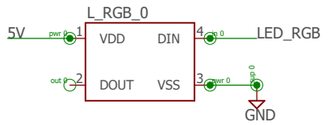
R SHUNT CALCULATION:
Vsense = 40mV @Isense = 1A
Rshunt = Vsense ✖ Isense = 0.040R

Max Motor Current = 1.6A
Absolute maz Vsense = 500mV
Max Power dissipated by Rshunt = 100mW

## UART Serial Adapter


Note: I really have no idea if this will work

## WS2812B RGB LEDs




MYO-HAND PROJECT
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REV: 1

Date: 24/01/2021 2:42