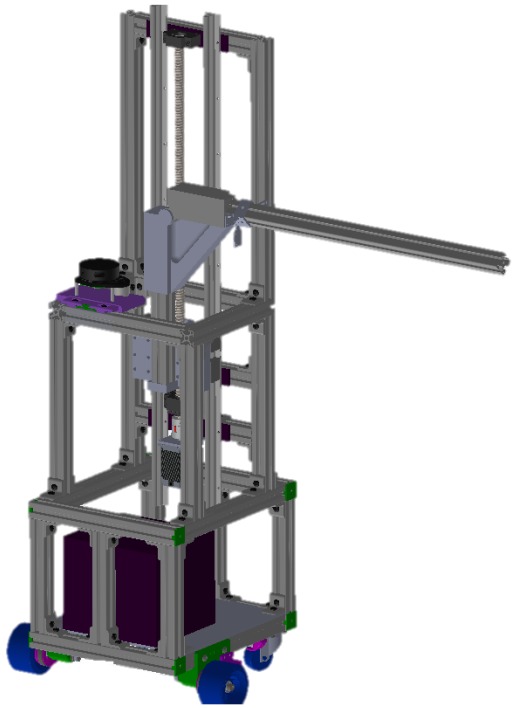
CAST Robot Wiring Guide

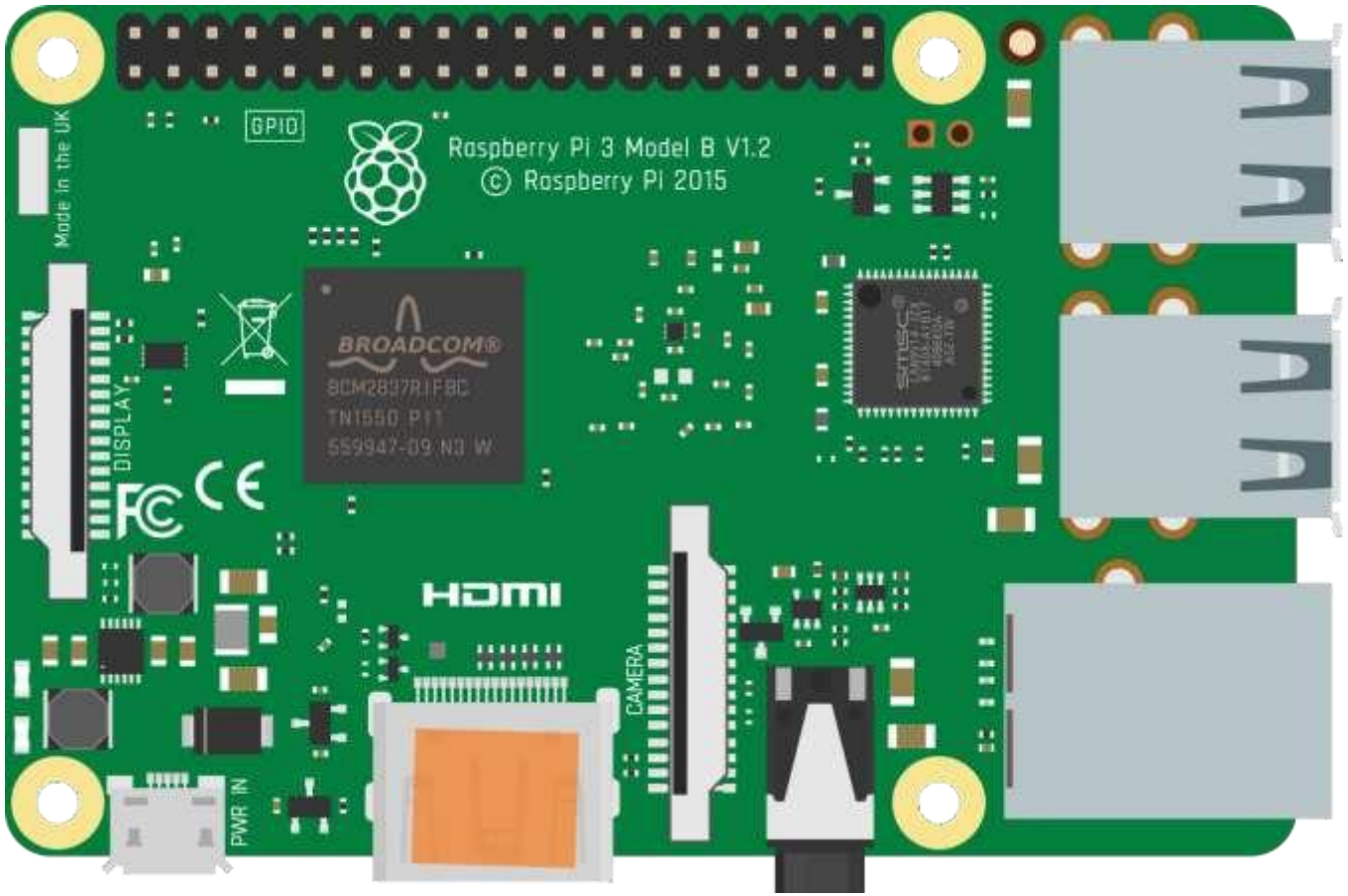
CAST Bot Contains one CPU

CAST Bot



Raspberry Pi 4

CAST Wiring For Raspberry Pi 4



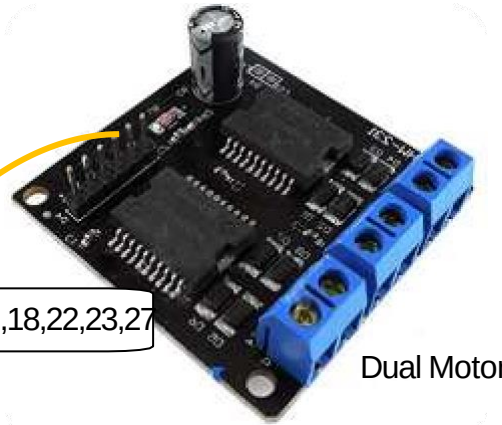
Validated Sensors & Actuators

Relay

GPIO13,19,26

GPIO 4

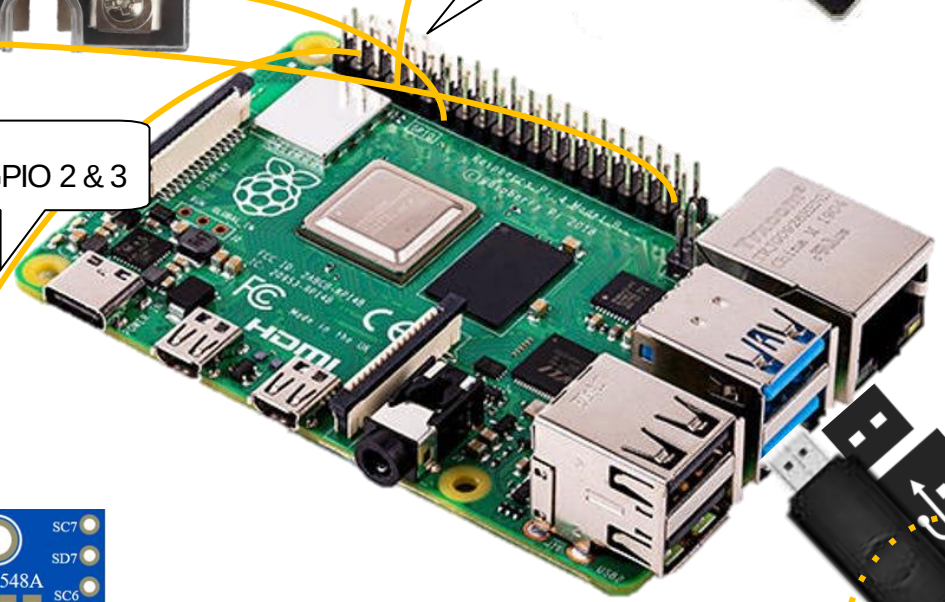
GPIO 17,18,22,23,27



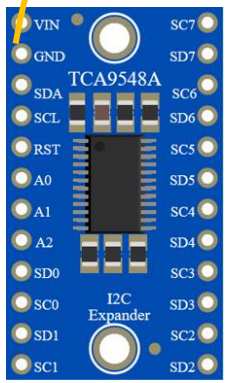
Dual Motor Driver

Arm Motor Driver

GPIO 2 & 3



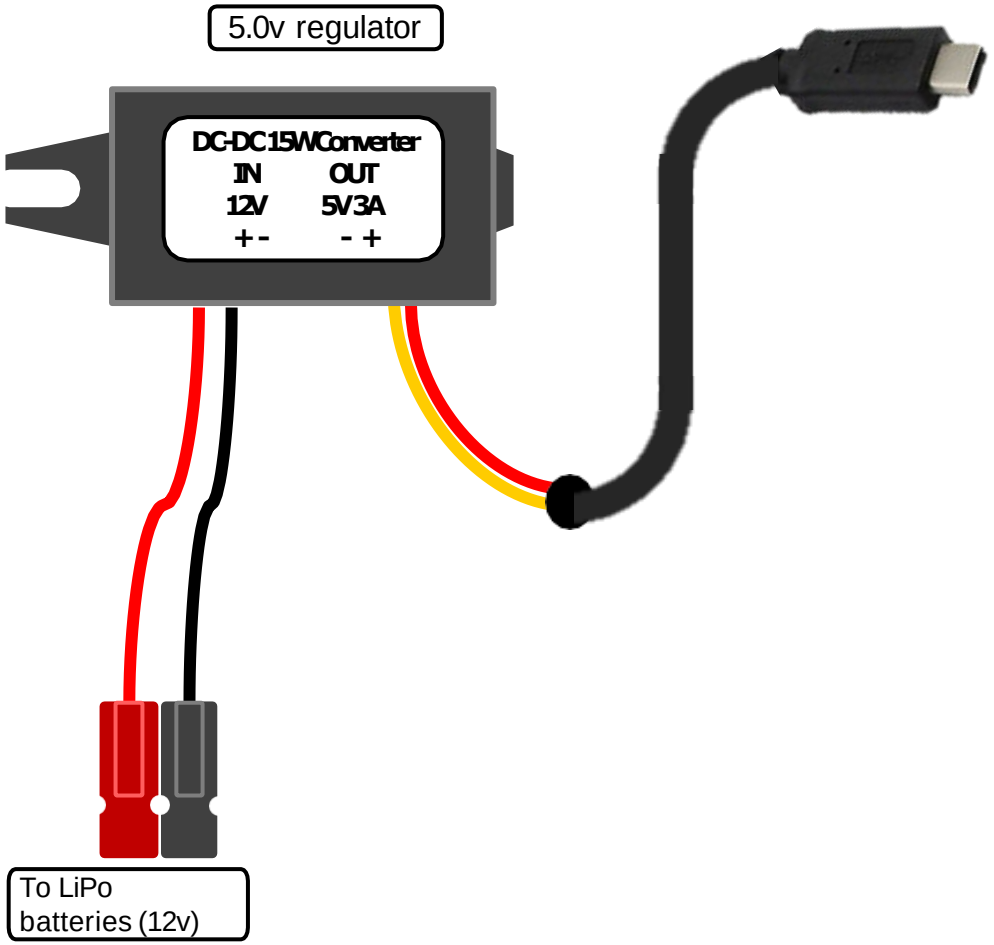
LiDAR

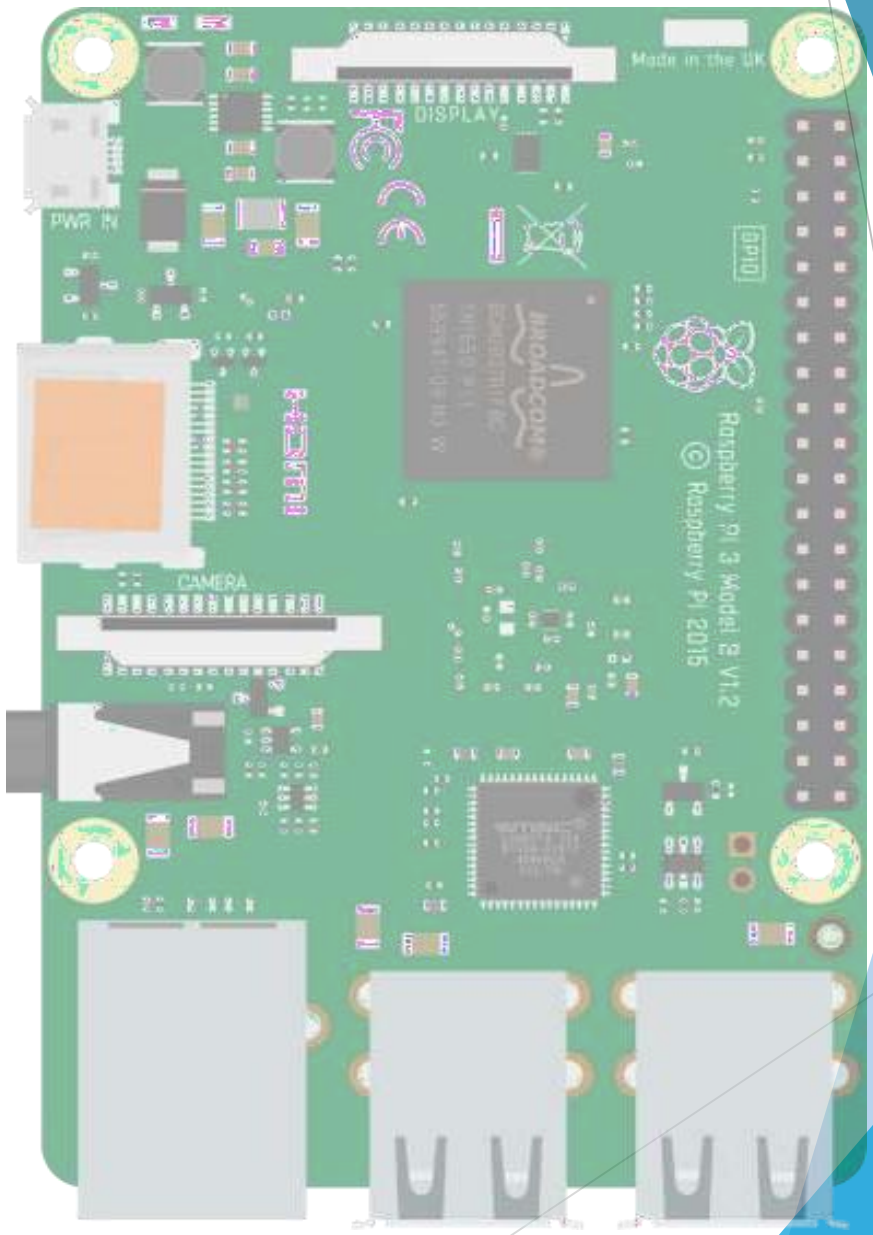


Multiplexer

Gamepad Controller

Pi - Power Supply

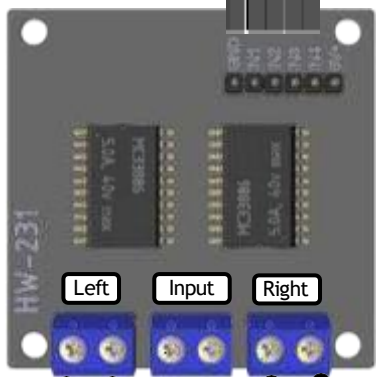


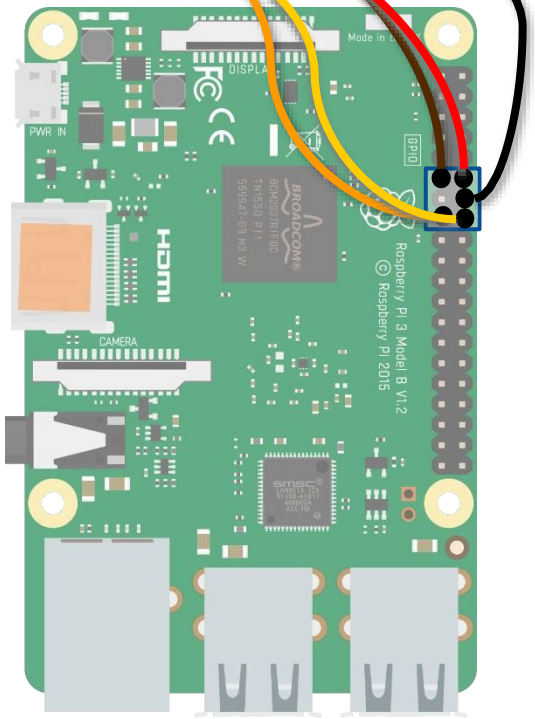


Pi - Motor Driver Signals

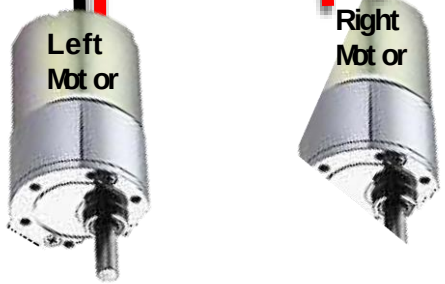
Keepthe wires bonded to each other, if possible.

Top View
HW-231 Motor Driver





Ground is *optional* if the Pi and Motor Driver have *a commonground to the battery pack*.



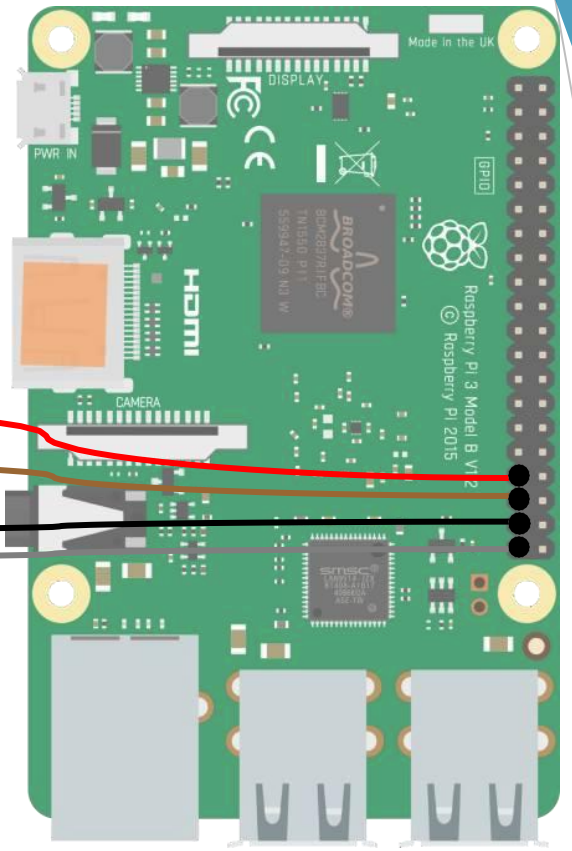
Pins on RasPi

PI - Stepper Driver - ST-M5045

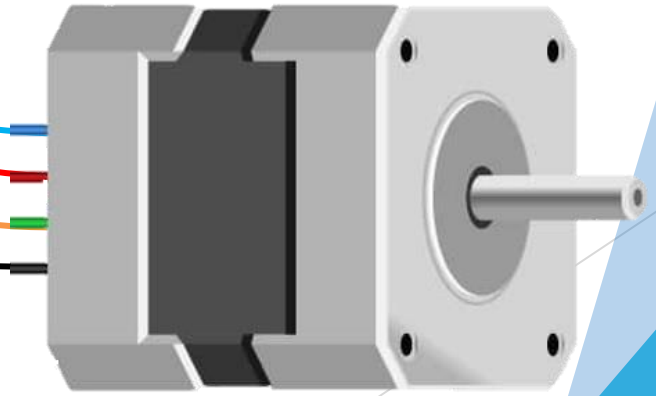
Top View
ST-M5045 Motor Driver

Short by solder

Keep the wires bonded to each other, if possible.



GND
24V

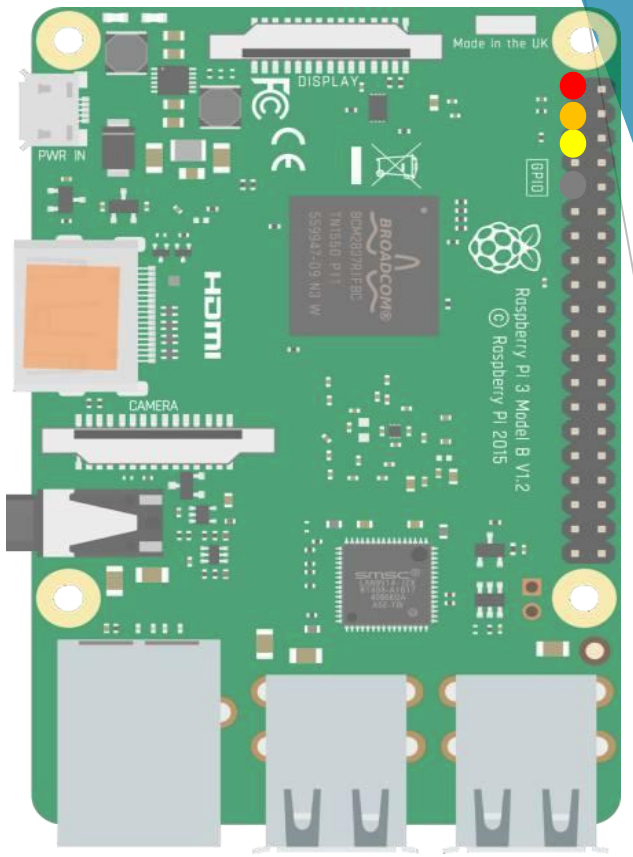


The order on the motor may not be the same.

Pins on RasPi

GPIO13	33
GPIO19	35
GPIO26	37
GND	39

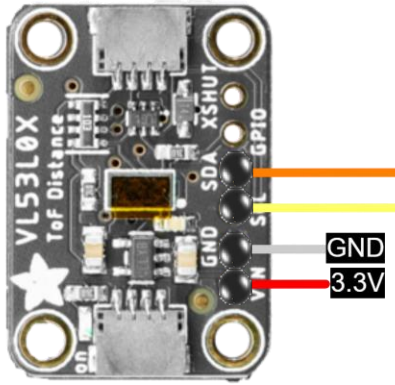
PI - Multiplexer – TCA9548A



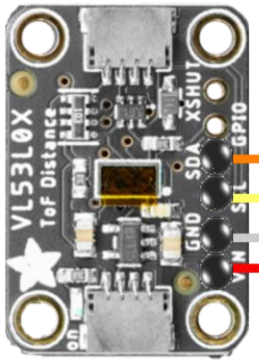
Pins on RasPi

3.3V	1
GPIO2	3
GPIO3	5
GND	9

Top View
VL53L0X TOF Sensors

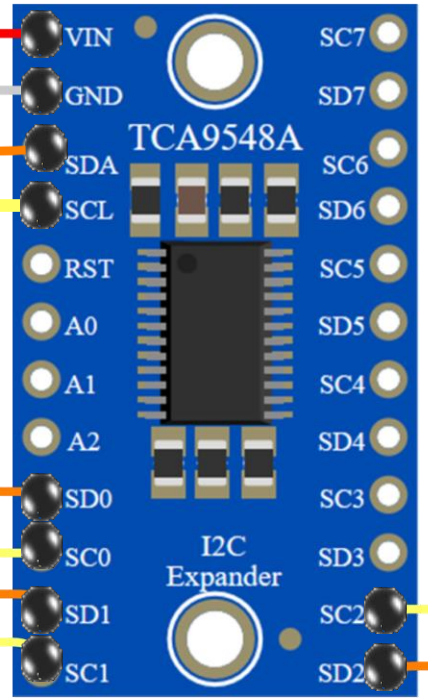


GND
3.3V

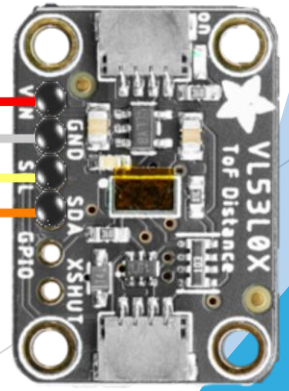


GND
3.3V

Top View
TCA9548A Multiplexer

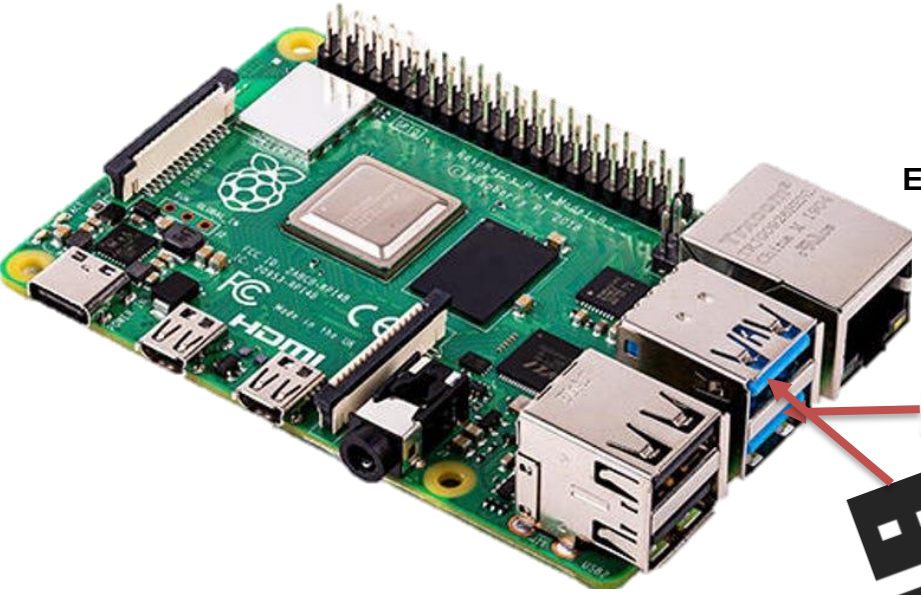


3.3V
GND
GPIO2
GPIO3



3.3V
GND

PI - RPLiDAR and Gamepad



Either can be top or bottom USB

LiPo Battery– Step Up & Step Down

Step-Up Converter

12V

GND

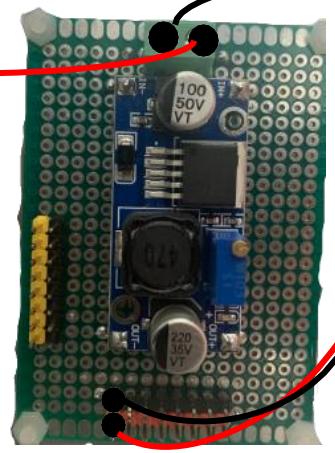
GND

24V

12V

GND

Relay



Step-Down Converter

PCB LED Panel

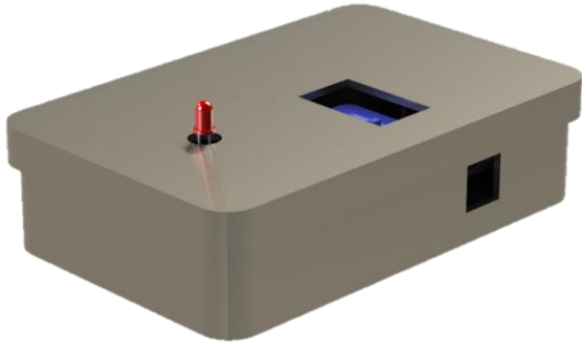
9V

GND

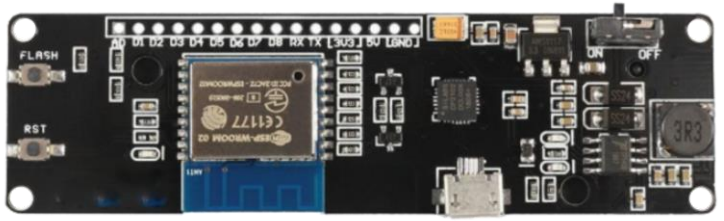
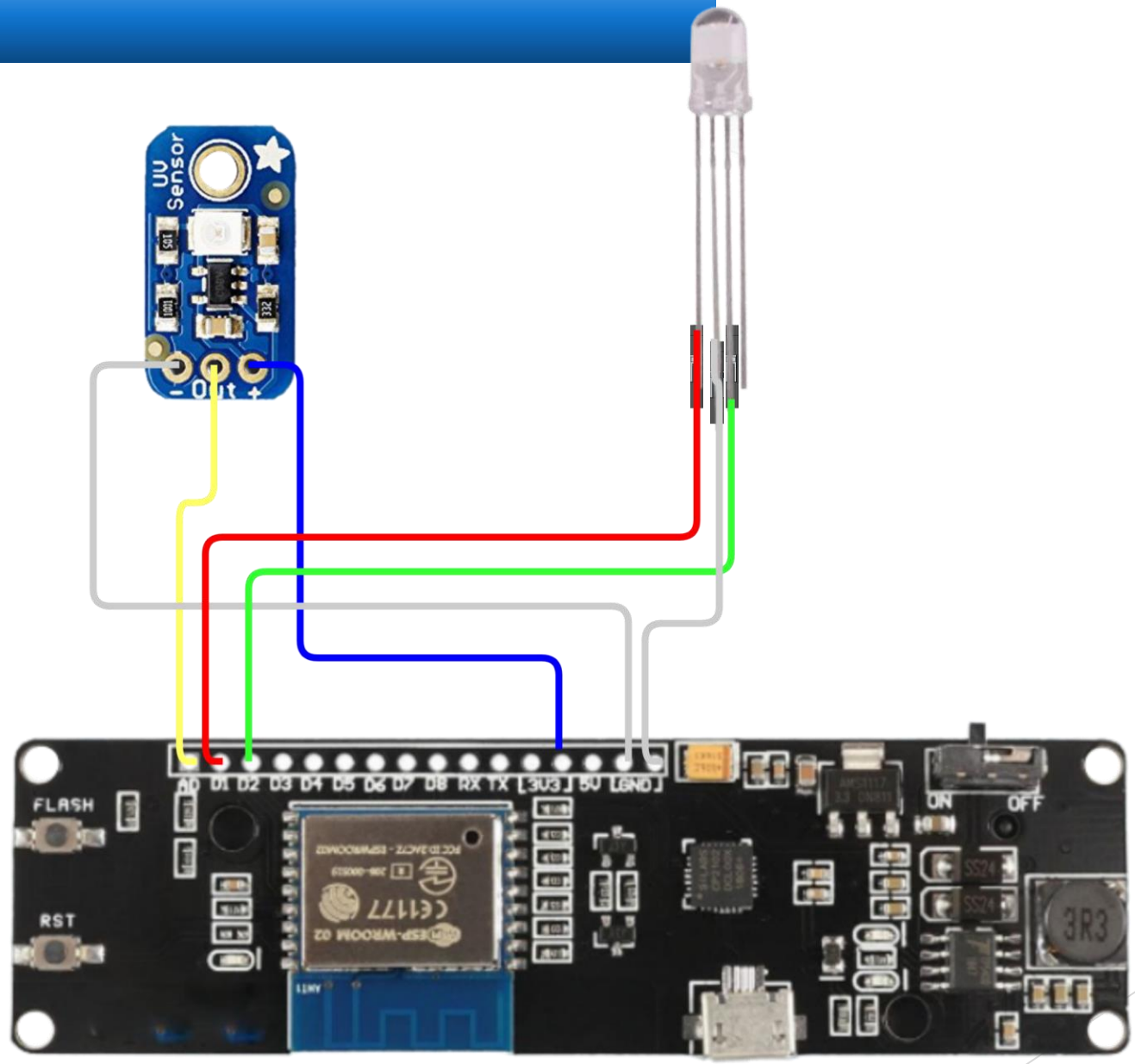
Bacteria Killed Indicator Wiring Guide

Bacteria Killed Indicator Contains one CPU

Bacteria Killed Indicator



Wemos D1



Wemos D1 - Wiring