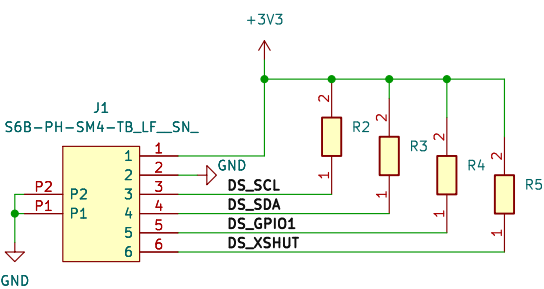
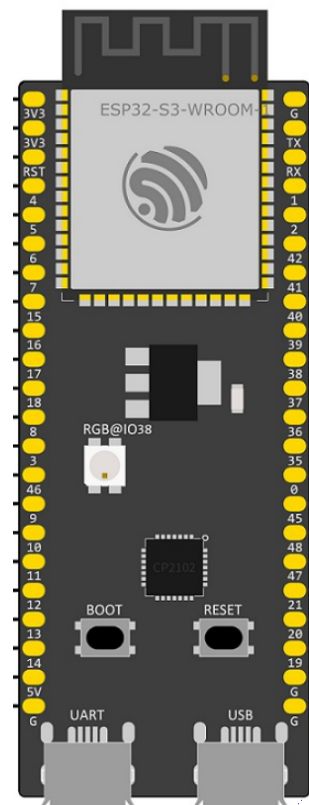


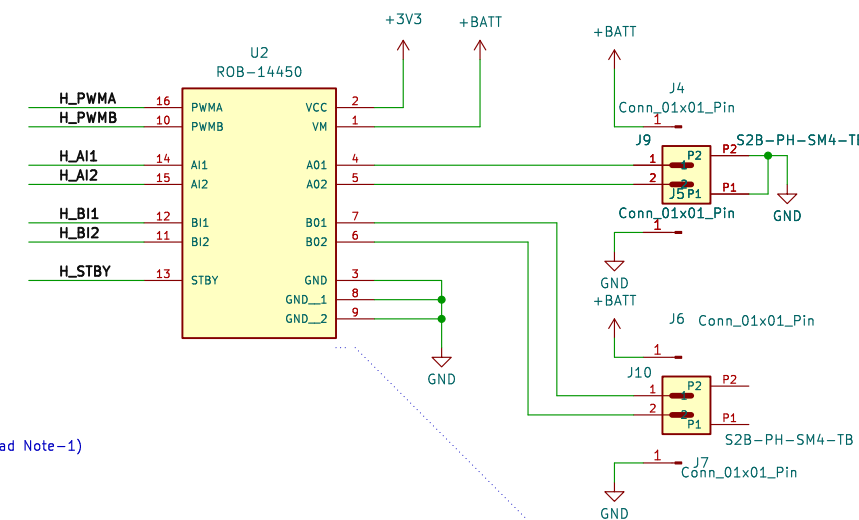
# Distance Sensor



# ESP32-S3 DevKit



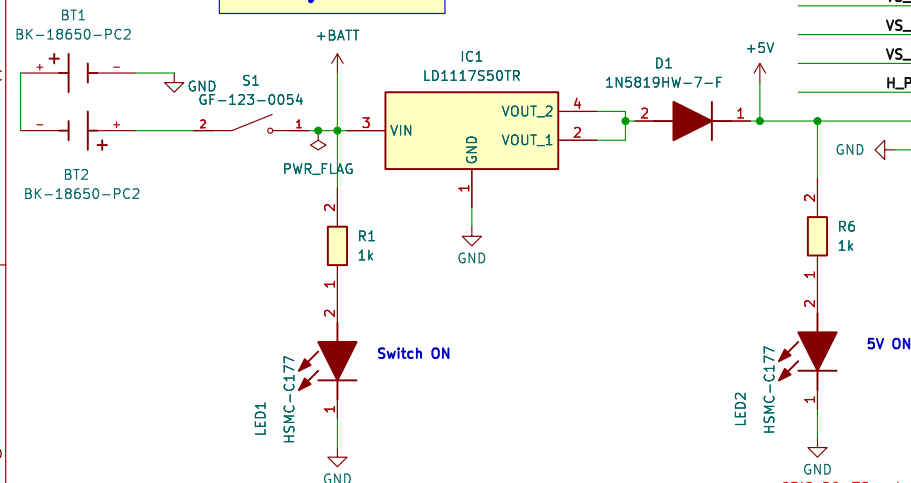
# H-Bridge



# DC Motor

# Battery

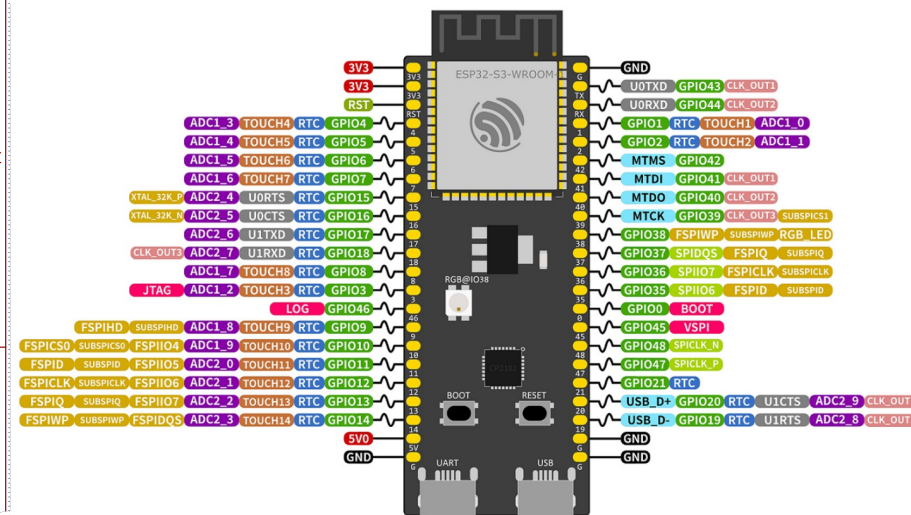
## On/Off



## H-Bridge

## Distance Sensor

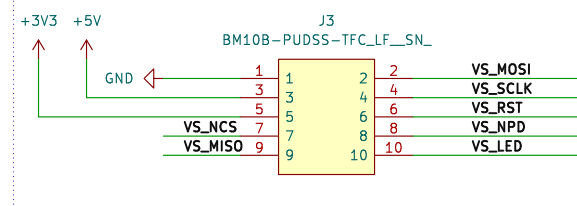
# Pin Layout



Datasheet ESP32-S3 Series Chip  
Technical Reference Manual  
Pin Layout  
Schematic

- PWM Capable Pin
- GPIOX GPIO Input and Output
- JTAG/USB JTAG for Debugging and USB
- ADCX\_CH Analog-to-Digital Converter
- TOUCHX Touch Sensor Input Channel
- OTHER Other Related Functions
- SERIAL Serial for Debug/Programming
- STRAP Strapping Pin Functions
- RTC RTC Power Domain (VDD3P3\_RTC)
- GND Ground
- PWD Power Rails (3V3 and 5V)
- MISC Miscellaneous SPI/Functions
- CLK\_OUTX Clock Output

# Velocity sensor



# Mechanical

- H1 MountingHole
- H2 MountingHole
- H3 MountingHole
- H4 MountingHole

Note-1  
For boards with Octal SPI flash/PSRAM memory embedded  
ESP32-S3-WROOM-1/1U modules, and boards with  
ESP32-S3-WROOM-2 modules, the pins GPIO35, GPIO36 and GPIO37 are  
used for the internal communication between ESP32-S3 and SPI  
flash/PSRAM memory, thus not available for external use.

# Motor Driver

Board Overview  
Schematic SparkFun PCB  
Datasheet Chip TB6612FNG  
<https://www.sparkfun.com/products/14451>

## Control Function

Input				Output		
IN1	IN2	PWM	STBY	OUT1	OUT2	Mode
H	H	H/L	H	L	L	Short brake
L	H	H	H	L	H	CCW
H	L	L	H	L	L	Short brake
H	L	L	H	L	L	CW
L	L	H	H	OFF (High impedance)	OFF (High impedance)	Stop
H/L	H/L	H/L	L	OFF (High impedance)	OFF (High impedance)	Standby

Sheet: /  
File: PL\_Toon.kicad\_sch

Title: PL-Toon (ESP32-S3 version)

Size: A3  
KiCad E.D.A. 8.0.0

Rev:  
Id: 1/1