ESP32 DEV KIT DOIT 30-pin
U1

+5V

Pin	Left side
16	EN
17	RTC_GPIO0/SENSOR_VP/ADC1_CH0/GPIO36_IN
18	RTC_GPIO3/SENSOR_VN/ADC1_CH3/GPIO39_IN
19	RTC_GPIO4/ADC1_CH6/GPIO34_IN
20	RTC_GPIO5/ADC1_CH7/GPIO35_IN
21	RTC_GPIO9/TOUCH9/ADC1_CH4/GPIO32
22	RTC_GPIO8/TOUCH8/ADC1_CH5/GPIO33
23	RTC_GPIO6/DAC1/ADC2_CH8/GPIO25
24	RTC_GPIO7/DAC2/ADC2_CH9/GPIO26
25	RTC_GPIO17/TOUCH7/ADC2_CH7/GPIO27
26	RTC_GPIO16/HSPI_CLK/TOUCH6/ADC2_CH6/GPIO14_BOOT_PWM
27	RTC_GPIO15/HSPI_MISO/TOUCH5/ADC2_CH5/GPIO12_OUT
28	RTC_GPIO14/HSPI_MOSI/TOUCH4/ADC2_CH4/GPIO13
29	GND
30	VIN

Pin	Right side
15	GPIO23/VSPI_MOSI
14	GPIO22/I2C_SCL
13	CP2102_GPIO1/UART0_TX
12	CP2102_GPIO3/UART0_RX
11	GPIO21/I2C_SDA
10	GPIO19/VSPI_MISO
9	GPIO18/VSPI_CLK
8	BOOT_PWM_GPIO5/VSPI_CS0
7	GPIO17/UART2_TX
6	GPIO16/UART2_RX
5	GPIO4/ADC2_CH0/TOUCH0/RTC_GPIO10
4	LED_GPIO2/ADC2_C2/TOUCH2/RTC_GPIO12
3	BOOT_PWM_GPIO15/ADC2_C3/HSPI_CS0/RTC_GPIO13
2	GND
1	3V3

MOT_FG_LEFT
MOT_CW_LEFT
MOT_PWM_LEFT
MOT_CW_RIGHT
MOT_FG_RIGHT
LDS_MOT_EN
MOT_PWM_RIGHT

LDS_RX
LDS_TX
BAT_ADC
LDS_MOT_PWM

GND
GND

MH-KC24
USB Step Down Module 24V Dual Output
https://www.aliexpress.us/item/3256802247317350.html

+24V   U2   +5V

1 VIN VOUT 2

3 GND

GND

Motors CHR-GM25-BLDC2418
Type BLDC
Voltage 24V, I/O 5V
Diameter 25mm
Weight 69g
Rated RPM 190
Rated torque 1.1Kg*cm
Max power 2.5W
Stall torque 3.5Kg*cm
Stall current 0.35A
https://www.aliexpress.us/item/2251832633601682.html

+24V

J2
JST XH 5-pin male

1
2   MOT_PWM_LEFT
3
4   MOT_CW_LEFT
5   R3
    10k
         MOT_FG_LEFT

GND

+24V

J5
JST XH 5-pin male

1
2   MOT_PWM_RIGHT
3
4   MOT_CW_RIGHT
5   R1
    10k
         MOT_FG_RIGHT

GND

Laser Distance Sensor
YDLidar X4

VCC 5V
TX all I/O 3.3V
RX
GND
M_SCTR speed
DEV_EN N/C
M_EN
N/C

https://www.ydlidar.com/

+5V

J1
JST PH 8-pin male

1
2   LDS_TX
3   LDS_RX
4
5   LDS_MOT_PWM
6
7   LDS_MOT_EN
8

GND

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https://www.aliexpress.us/item/2251832807355213.html

BATTERY PACK CONNECTOR

+24V   +24V

J3   R5
                             200k   BAT_ADC
1
2   R6
                             100k
Deans T-Plug Male

GND   GND