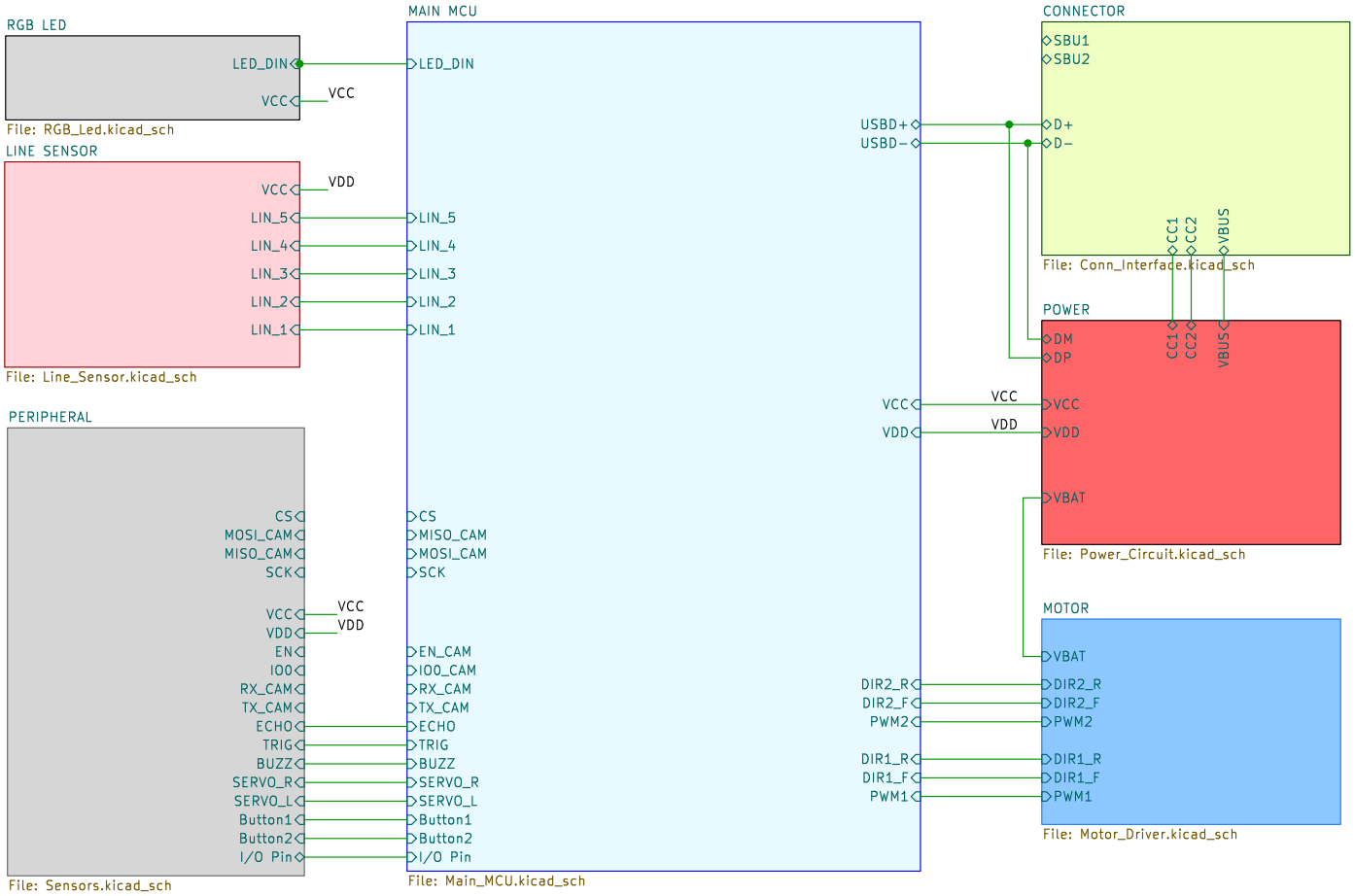

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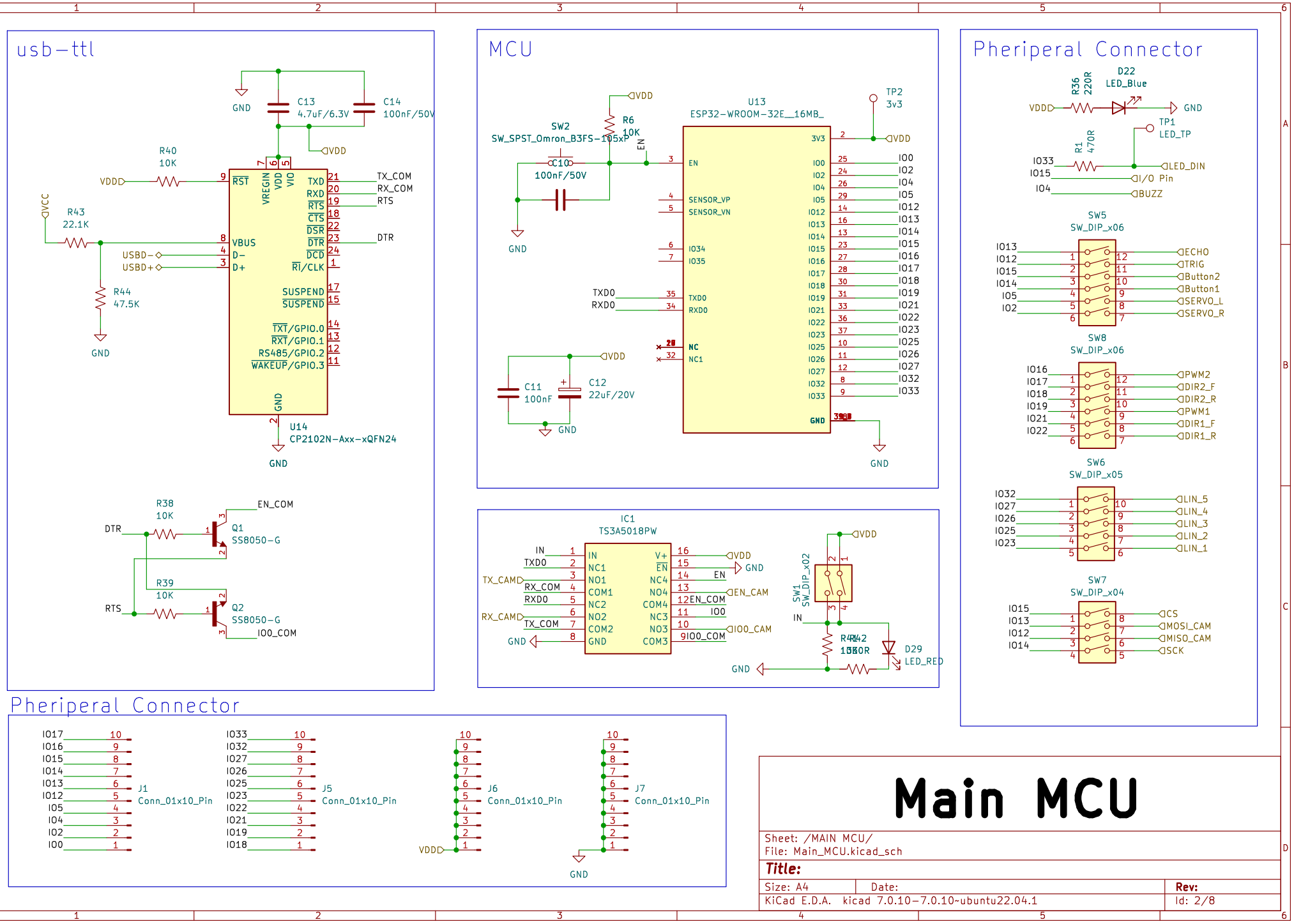
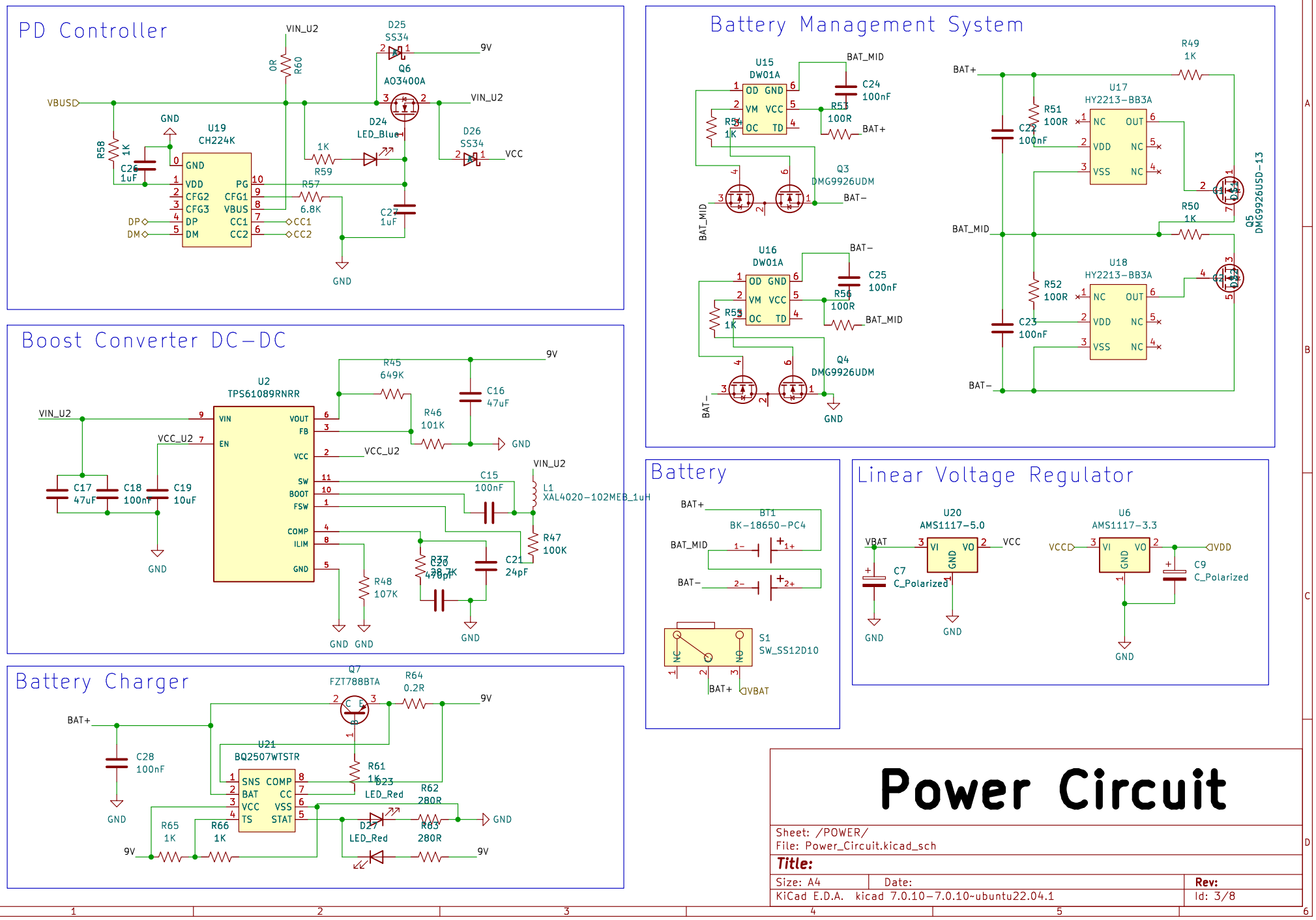
Size: A4	Date: 2023-11-14	**Rev: 2**
KiCad E.D.A. kicad 7.0.10-7.0.10~ubuntu22.04.1		Id: 1/8


usb—ttl
GND
C13
4.7uF/6.3V
C14
100nF/50V
VDD
R40
10K
VCC
R43
22.1K
R44
47.5K
USBD—
USBD+
U14
CP2102N—Axx—xQFN24
TX_COM
RX_COM
RTS
DTR
R38
10K
R39
10K
Q1
SS8050—G
Q2
SS8050—G
EN_COM
IO0_COM
MCU
SW2
SW_SPST_Omron_B3FS—105xP
R6
10K
C10
100nF/50V
U13
ESP32—WROOM—32E__16MB_
TP2
3v3
C11
100nF
C12
22uF/20V
TXD0
RXD0
IC1
TS3A5018PW
SW1
SW_DIP_x02
R42
150R
D29
LED_RED
Pheriperal Connector
R36
220R
D22
LED_Blue
R1
470R
TP1
LED_TP
LED_DIN
I/O Pin
BUZZ
SW5
SW_DIP_x06
ECHO
TRIG
Button2
Button1
SERVO_L
SERVO_R
SW8
SW_DIP_x06
PWM2
DIR2_F
DIR2_R
PWM1
DIR1_F
DIR1_R
SW6
SW_DIP_x05
LIN_5
LIN_4
LIN_3
LIN_2
LIN_1
SW7
SW_DIP_x04
CS
MOSI_CAM
MISO_CAM
SCK
Pheriperal Connector
J1
Conn_01x10_Pin
J5
Conn_01x10_Pin
J6
Conn_01x10_Pin
J7
Conn_01x10_Pin
Main MCU
Sheet: /MAIN MCU/
File: Main_MCU.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad 7.0.10—7.0.10~ubuntu22.04.1
Id: 2/8


PD Controller
VIN_U2
D25
SS34
9V
R60
0R
Q6
AO3400A
VBUS
VIN_U2
GND
U19
CH224K
D24
LED_Blue
D26
SS34
VCC
R58
1K
C26
1uF
1K
R59
R57
6.8K
C27
1uF
DP
DM
CC1
CC2
GND
Boost Converter DC-DC
U2
TPS61089RNRR
9V
R45
649K
C16
47uF
R46
101K
GND
VIN_U2
VCC_U2
C17
47uF
C18
100nF
C19
10uF
C15
100nF
L1
XAL4020-102MEB_1uH
R47
100K
R48
107K
R37
28.7K
C20
470pF
C21
24pF
GND GND
GND
Battery Charger
Q7
FZT788BTA
R64
0.2R
9V
BAT+
C28
100nF
U21
BQ2507WTSTR
R61
1K
D23
LED_Red
R62
280R
R65
1K
R66
1K
D27
LED_Red
R63
280R
GND
9V
9V
Battery Management System
U15
DW01A
BAT_MID
C24
100nF
R53
100R
BAT+
R54
1K
Q3
DMG9926UDM
BAT_MID
BAT-
U16
DW01A
BAT-
C25
100nF
R56
100R
BAT_MID
R55
1K
Q4
DMG9926UDM
BAT-
GND
BAT+
R49
1K
U17
HY2213-BB3A
R51
100R
C22
100nF
R50
1K
BAT_MID
Q5
DMG9926USD-13
U18
HY2213-BB3A
R52
100R
C23
100nF
BAT-
Battery
BAT+
BT1
BK-18650-PC4
BAT_MID
BAT-
S1
SW_SS12D10
NC
COM
NO
BAT+
VBAT
Linear Voltage Regulator
U20
AMS1117-5.0
VBAT
VCC
C7
C_Polarized
GND
GND
U6
AMS1117-3.3
VCC
VDD
C9
C_Polarized
GND
Power Circuit
Sheet: /POWER/
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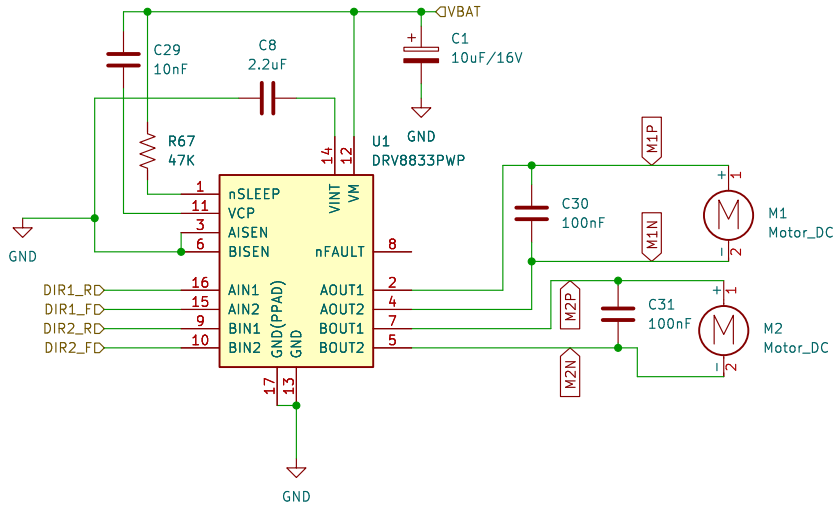
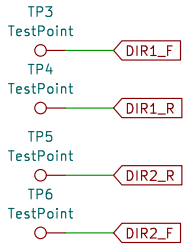
Size: A4
Date:
Rev:
KiCad E.D.A. kicad 7.0.10-7.0.10~ubuntu22.04.1
Id: 3/8





DC Motor Driver

Sheet: /MOTOR/
File: Motor_Driver.kicad_sch

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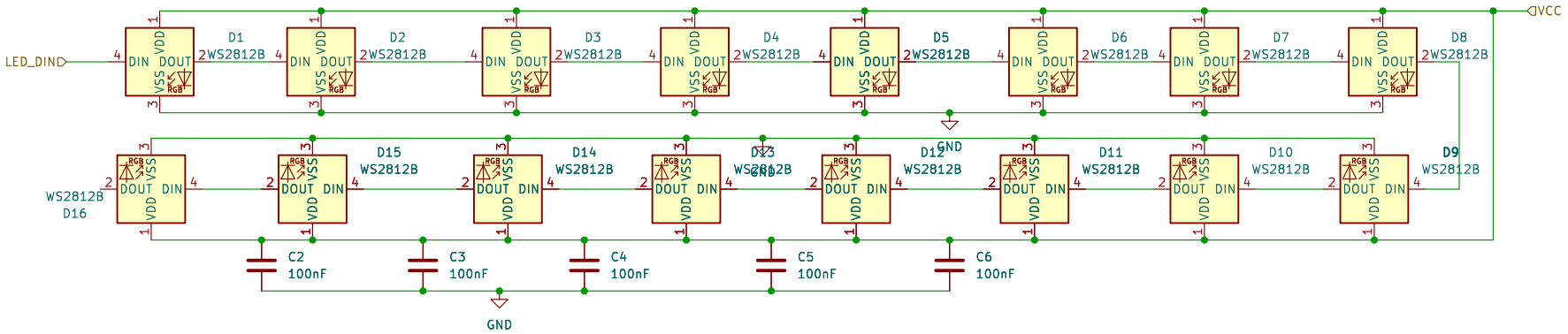
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10-7.0.10~ubuntu22.04.1		Id: 4/8



RGB Led

Sheet: /RGB LED/ File: RGB_Led.kicad_sch		
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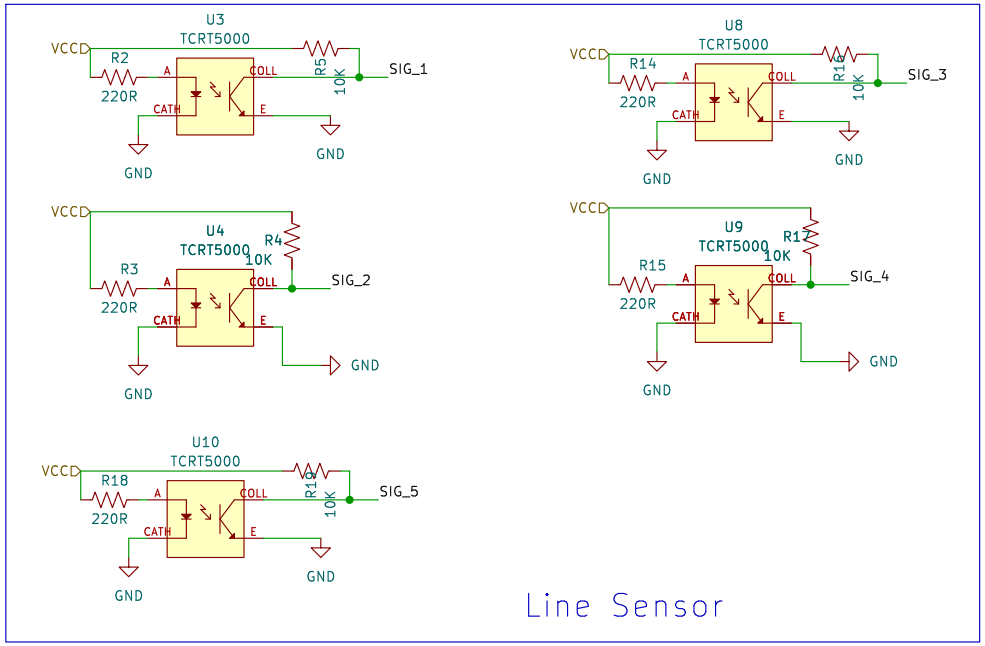
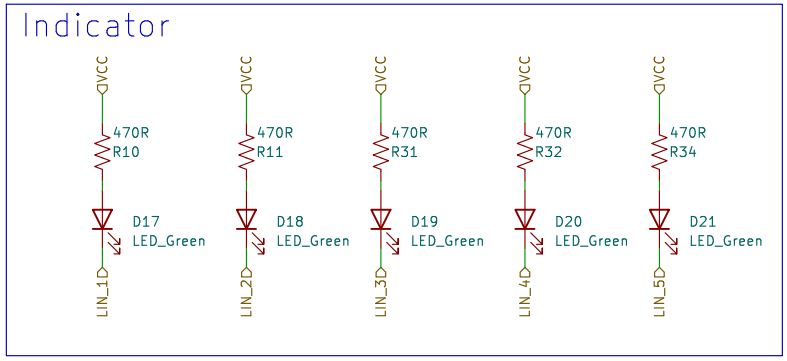
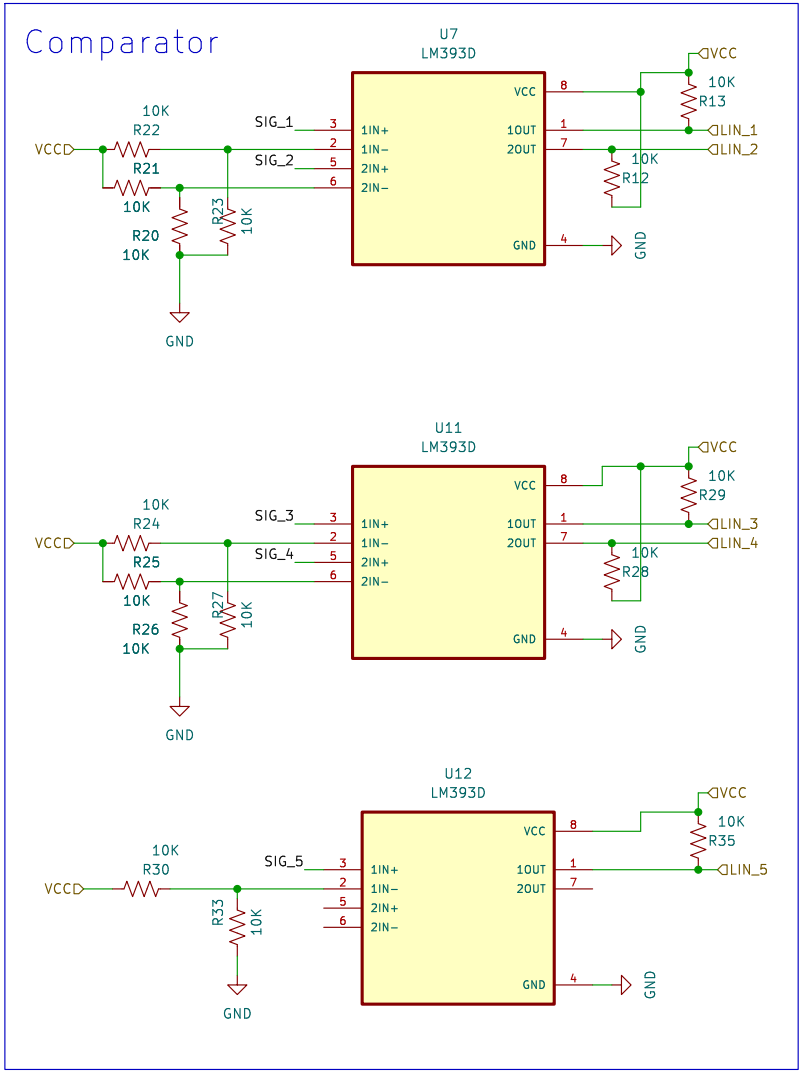
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10-7.0.10~ubuntu22.04.1		Id: 5/8

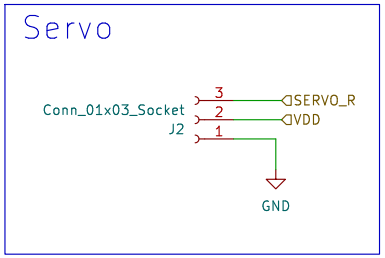


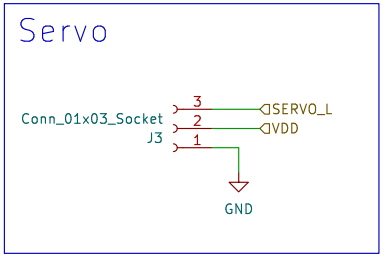


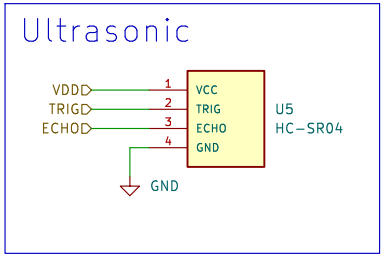


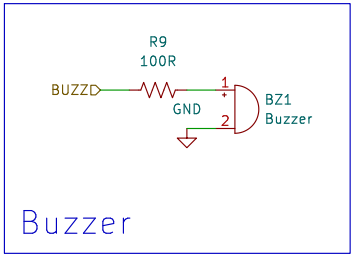
Line Sensor

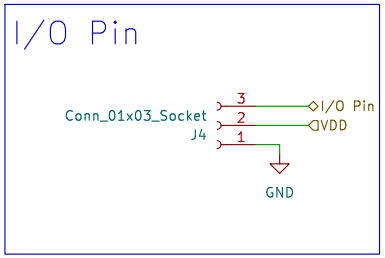
Sheet: /LINE SENSOR/		
File: Line_Sensor.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10-7.0.10~ubuntu22.04.1		Id: 6/8

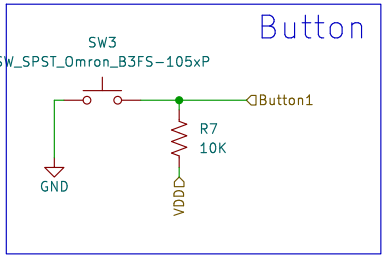


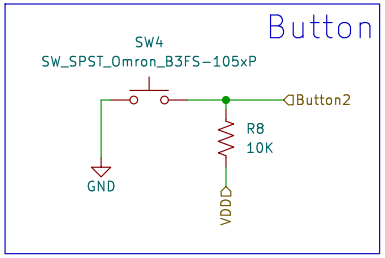


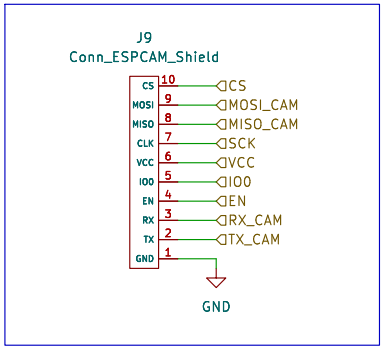












Peripheral

Sheet: /PERIPHERAL/
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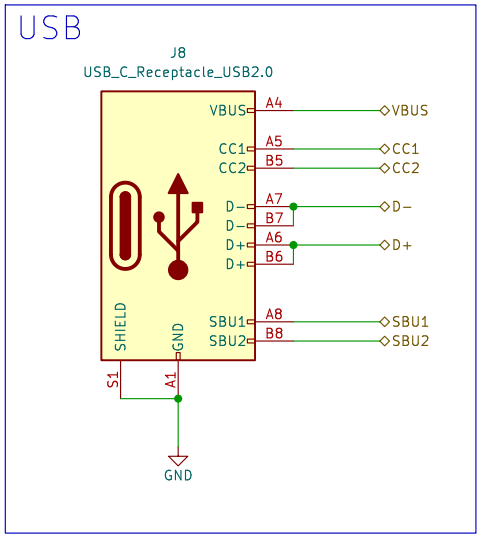

Interface

Sheet: /CONNECTOR/
File: Conn_Interface.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.10−7.0.10~ubuntu22.04.1		Id: 8/8