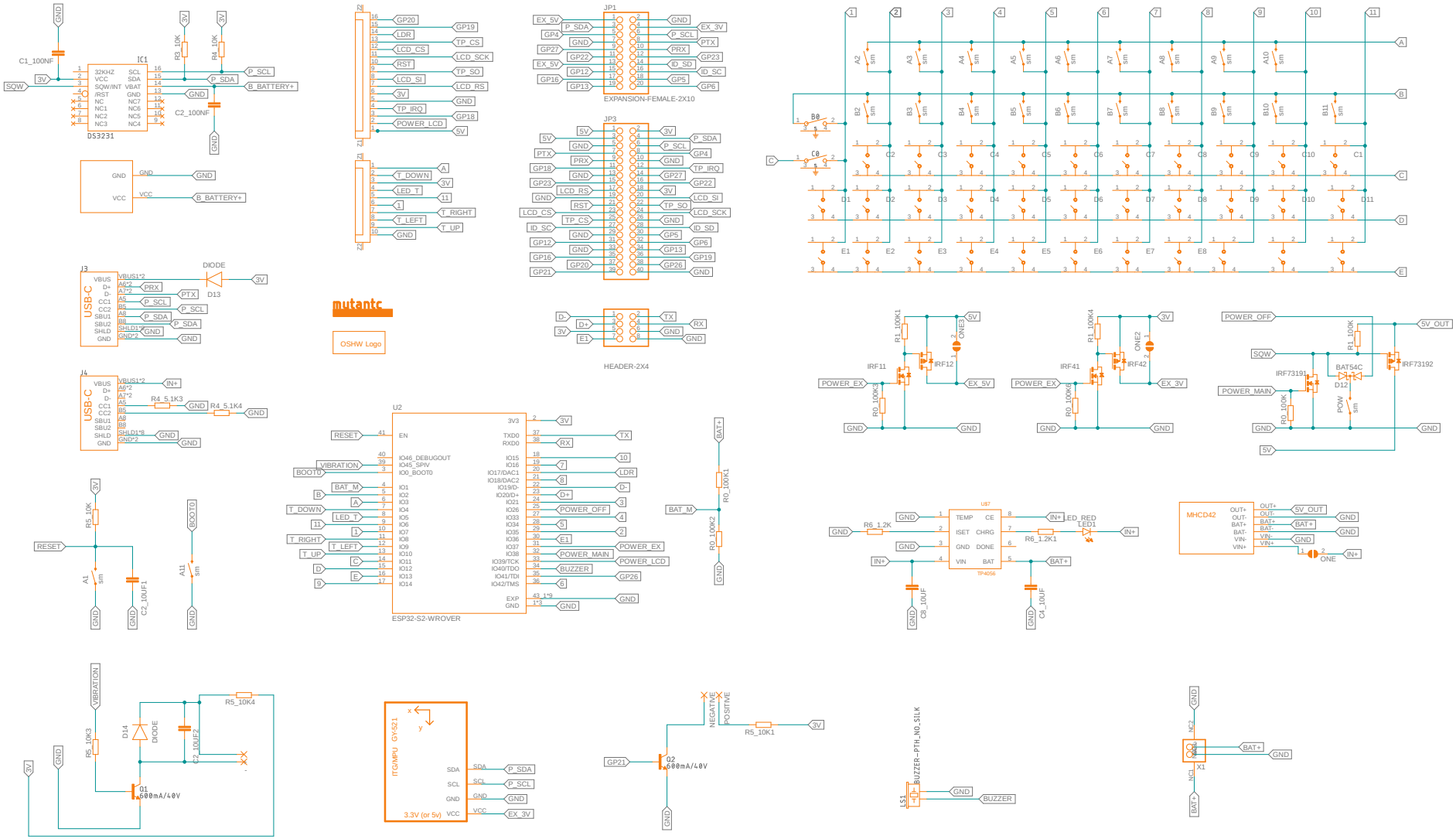
C1_100NF
IC1
32KHZ
SCL
VCC
SDA
SQW/INT
VBAT
/RST
GND
NC
NC7
NC1
NC6
NC2
NC5
NC3
NC4
DS3231
R3_10K
R4_10K
C2_100NF
P_SCL
P_SDA
B_BATTERY+
SQW
3V
GND
VCC
B_BATTERY+
J2
GP20
GP19
LDR
TP_CS
LCD_CS
LCD_SCK
RST
TP_SO
LCD_SI
LCD_RS
3V
GND
TP_IRQ
GP18
POWER_LCD
5V
J1
A
T_DOWN
3V
LED_T
11
1
T_RIGHT
T_LEFT
T_UP
GND
JP1
EX_5V
P_SDA
GND
P_SCL
EX_3V
GP4
GP27
GP22
PRX
PTX
GP23
EX_5V
GP12
ID_SD
ID_SC
GP16
GP13
GP5
GP6
EXPANSION-FEMALE-2X10
JP3
5V
3V
GND
P_SDA
PTX
P_SCL
GP4
PRX
GND
TP_IRQ
GP18
GP27
GP23
GP22
LCD_RS
3V
GND
LCD_SI
RST
TP_SO
LCD_CS
LCD_SCK
TP_CS
GND
ID_SD
ID_SC
GP5
GP12
GP6
GP16
GP13
GP20
GP26
GP19
GP21
GND
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
B2
B3
B4
B5
B6
B7
B8
B9
B10
B11
B0
C0
C2
C3
C4
C5
C6
C7
C8
C9
C10
C1
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
E1
E2
E3
E4
E5
E6
E7
E8
sm
J3
USB-C
VBUS
D+
D-
CC1
CC2
SBU1
SBU2
SHLD
GND
VBUS1*2
A6*2
A7*2
A5
B5
A8
B8
SHLD1*2
GND*2
PRX
PTX
P_SCL
P_SDA
DIODE
D13
3V
J4
IN+
R4_5.1K3
R4_5.1K4
mutantc
OSHW Logo
D-
D+
3V
E1
TX
RX
GND
HEADER-2X4
U2
ESP32-S2-WROVER
EN
IO46_DEBUGOUT
IO45_SPIV
IO0_BOOT0
IO1
IO2
IO3
IO4
IO5
IO6
IO7
IO8
IO9
IO10
IO11
IO12
IO13
IO14
3V3
TXD0
RXD0
IO15
IO16
IO17/DAC1
IO18/DAC2
IO19/D-
IO20/D+
IO21
IO26
IO33
IO34
IO35
IO36
IO37
IO38
IO39/TCK
IO40/TDO
IO41/TDI
IO42/TMS
EXP
GND
RESET
VIBRATION
BOOT0
BAT_M
B
A
T_DOWN
LED_T
11
1
T_RIGHT
T_LEFT
T_UP
C
D
E
10
LDR
8
D-
D+
3
POWER_OFF
4
5
2
E1
POWER_EX
POWER_MAIN
POWER_LCD
BUZZER
GP26
6
R5_10K
C2_10UF1
A1
A11
BOOT0
R0_100K1
R0_100K2
BAT+
LED_RED
R6_1.2K
R6_1.2K1
C6_10UF
C4_10UF
U57
TEMP
CE
ISET
CHRG
GND
DONE
VIN
BAT
TP4056
MHCD42
OUT+
OUT-
BAT+
BAT-
VIN-
VIN+
5V_OUT
ONE
R1_100K1
R0_100K3
ONE3
IRF11
IRF12
EX_5V
R1_100K4
R0_100K6
ONE2
IRF41
IRF42
EX_3V
POWER_OFF
5V_OUT
SQW
R1_100K
BAT54C
IRF73191
IRF73192
D12
POWER_MAIN
R0_100K
POW
5V
R5_10K4
R5_10K3
D14
DIODE
C2_10UF2
Q1
600mA/40V
ITG/MPU_GY521
x
y
SDA
SCL
GND
VCC
3.3V (or 5v)
P_SDA
P_SCL
EX_3V
NEGATIVE
POSITIVE
R5_10K1
Q2
BUZZER-PTH_NO_SILK
LS1
BUZZER
NC2
NC1
X1