MAIN MODULE

File: MAINMODULE.kicad_sch

Relay + Light

File: RelayLight.kicad_sch

VCC

J5
Input_Voltage

GND

SW1
SW_Boot

BOOT

C1
100nF

GND

SW2
SW_Reset

RESET

C5
100nF

GND

+3V3

R15
10K

C6
100nF

GND

C2
100nF

+3V3

GND

U1
ESP32-S3-WROOM-1

RESET 3 EN   3V3 —
BOOT   27 IO0   TXD0 37
       39 IO1   RXD0 36
       38 IO2   IO17 10 CAM_PIN_D6
       15 IO3   IO18 11 CAM_PIN_D5
CAM_PIN_SIOD 4 IO4   IO19 13
CAM_PIN_SIOC 5 IO5   IO20 14
CAM_PIN_VSYNC 6 IO6   IO21 23
CAM_PIN_HREF 7 IO7   IO35 28
CAM_PIN_D2 12 IO8   IO36 29
CAM_PIN_D1 17 IO9   IO37 30
CAM_PIN_D3 18 IO10   IO38 31 CAM_PIN_PWDN
CAM_PIN_D0 19 IO11   IO39 32
CAM_PIN_D4 20 IO12   IO40 33
CAM_PIN_PCLK 21 IO13   IO41 34
          22 IO14   IO42 35
CAM_PIN_XCLK 8 IO15   IO45 26 PWM
CAM_PIN_D7 9 IO16   IO46 16 SOLENOID_CTRL
                       IO47 24 BUZZER_CTRL
                       IO48 25 SER_EN
                  PSRAM
                  GND 1

GND

C4
15pF

C3
100nF +3V3

+1V2

+2V8

R11
10K

U3
CAM_CONNECTOR

1 D0   PAD MP
2 D1
CAM_PIN_D2 3 D4
CAM_PIN_D1 4 D3
CAM_PIN_D3 5 D5
CAM_PIN_D0 6 D2
CAM_PIN_D4 7 D6
CAM_PIN_PCLK 8 PCLK
CAM_PIN_D5 9 D7
           10 DGND
CAM_PIN_D6 11 D8
CAM_PIN_XCLK 12 XCLK
CAM_PIN_D7 13 D9
           14 DOVDD
           15 DVDD
CAM_PIN_HREF 16 HREF
           17 PWDN
CAM_PIN_VSYNC 18 VSYNC
CAM_RST   19 RESET
CAM_PIN_SIOC 20 SIOC
           21 AVDD
CAM_PIN_SIOD 22 SOID
           23 AGND
           24 STROBE PAD MP

MP PAD

GND

U8
MT1470

VCC

R18
200K

22uF
C8

3 VIN   BS
5 EN   SW 2
  GND   FB 4

C7
100uF

L1
10uF

R16 10K

R17 10K

+5V

22uF
C10

22uF
C11

GND

U7
CH340K

+5V

0 G
1 UD+   V3 10
2 UD-   RXD 9 USB_RX
3 GND   TXD 8 USB_TX
4 DTR# VCC 7
  CTS# RTS# 6

C9
100nF/16v

GND

R20
10K

Q11
MMBT3904

RESET

R19
10K

Q12
MMBT3904

BOOT

GND

D+
D-

GND

J1
USB_C_Receptacle_USB2.0_16P

Vbus

VBUS A4
CC1   A5
CC2   B5
D-   A7
D-   B7
D+   A6
D+   B6
SBU1 A8
SBU2 B8
SHIELD S1
GND   A1

D7
SS14

+5V

R21 4k7
R22 4k7

GND

D-
D+

GND

+5V

U4
AMS1117-3.3

22uF
C12

3 VI   VO 2
  GND 1

C13
100uF

Q9
PMOS
S D
G

R12
1M

R14
10K

U5
XC6206PxxxMR

3 VI   VO 2
  GND 1

GND

+2V8

GND

CAM_PIN_PWDN

R13
1K

Q10
MMBT3904

U6
XC6206PxxxMR

3 VI   VO 2
  GND 1

GND

+1V2

GND

+5V   Q4   +5P
       PMOS
        S   D
        1M
        R7
        G
SER_EN 1K
        R5   Q3
              MMBT3904
              R6
              10K
              GND

+5V
        1   J6
        2   BUZZER
BUZZER_CTRL 1K
        R3   Q2
              MMBT3904
              R4
              1K
              GND

+12V
        D1   1   J4
        1N4007   2   SOLENOID
SOLENOID_CTRL 2K
        R1   Q1
              MMBT3904
        R2
        1K
              GND

+5V   U2A
                                       LM358_DFN
R8
220
        D2   D3   D6   D5
        LED   LED   LED   LED
GND
        Q5   Q6   Q7   Q8
        KPS-3227 KPS-3227 KPS-3227 KPS-3227
                                       +5V
                                       U2B
                                       LM358_DFN
        R9 RV1
        10K 10K   U2C
                                       LM358_DFN
        GND   GND   R10
                                       220
                               D4
                               LED
                               GND

Sheet: /Relay + Light/
File: RelayLight.kicad_sch
Title:
Size: A4   Date: Rev:
KiCad E.D.A. 8.0.3   Id: 3/3