WLED-Controller-S2-v1.0
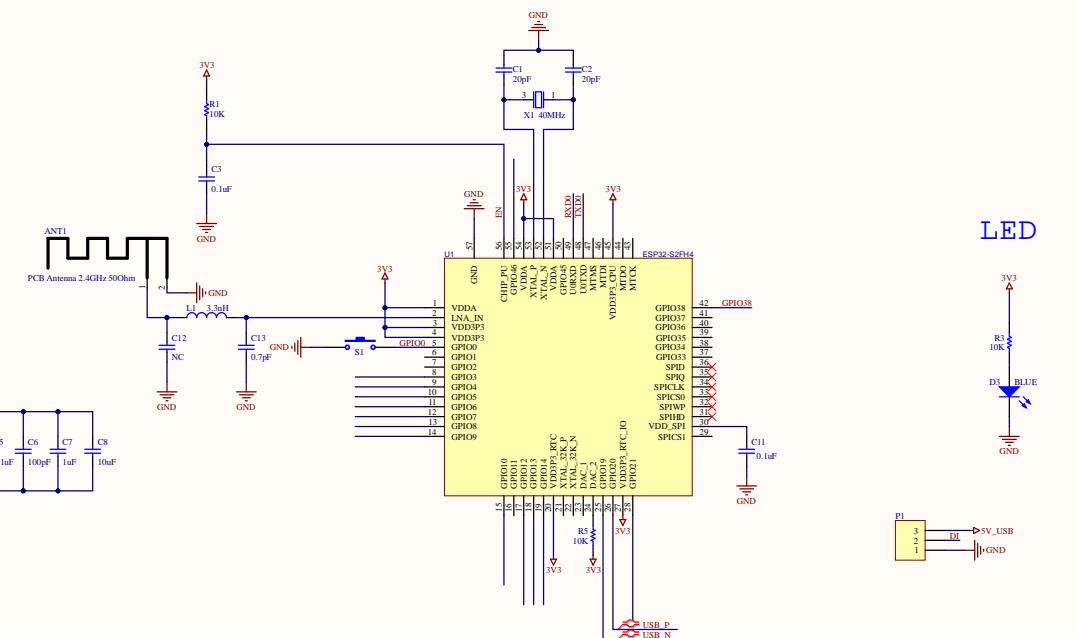
GND

C1 20pF   C2 20pF

X1 40MHz

3V3
R1 10K

C3 0.1uF
GND

GND   3V3   RXD0 3V3
EN   TXD0

ANT1
PCB Antenna 2.4GHz 50Ohm

LED

3V3
R3 10K
D3 BLUE
GND

L1 3.3nH

C12 NC   C13 0.7pF   GND   S1   GPIO0

GND   GND   GND

U1   ESP32-S2FH4

GND
CHIP_PU
GPIO46
VDDA
XTAL_P
XTAL_N
VDDA
GPIO45
U0RXD
U0TXD
MTMS
MTDI
VDD3P3_CPU
MTDO
MTCK

VDDA   GPIO38   42   GPIO38
LNA_IN   GPIO37   41
VDD3P3   GPIO36   40
VDD3P3   GPIO35   39
GPIO0   GPIO34   38
GPIO1   GPIO33   37
GPIO2   SPID   36
GPIO3   SPIQ   35
GPIO4   SPICLK   34
GPIO5   SPICS0   33
GPIO6   SPIWP   32
GPIO7   SPIHD   31
GPIO8   VDD_SPI 30
GPIO9   SPICS1   29

C11 0.1uF
GND

P1
3
2   DI   5V_USB
1   GND

GPIO10
GPIO11
GPIO12
GPIO13
GPIO14
VDD3P3_RTC
XTAL_32K_P
XTAL_32K_N
DAC_1
DAC_2
GPIO19
GPIO20
VDD3P3_RTC_IO
GPIO21

R5 10K   3V3
3V3   3V3

USB_P
USB_N

3V3   5V_USB
R8 10K   R9 10K
GPIO38   DI
Q1 BSS138

POWER

5V_USB   F1   5V

J1
A12B1   GND
A9B4   VBUS
B5   CC2
A8   SBU1
B6   DP2
A7   DN1
A6   DP1
B7   DN2
A5   CC1
B8   SBU2
A4B9   VBUS
A1B12   GND

R2 5.1K

USB_N   R4 22R   USBx_N
USB_P   R6 22R   USBx_P

R7 5.1K

GND   GND

C14 100uF
GND

GND
U2   ME6211C33M5G
VIN VOUT   5   3V3
VSS
CE   NC   4   C9 22uF
GND

C4 1uF   C5 0.1uF   C6 100pF   C7 1uF   C8 10uF
3V3
GND