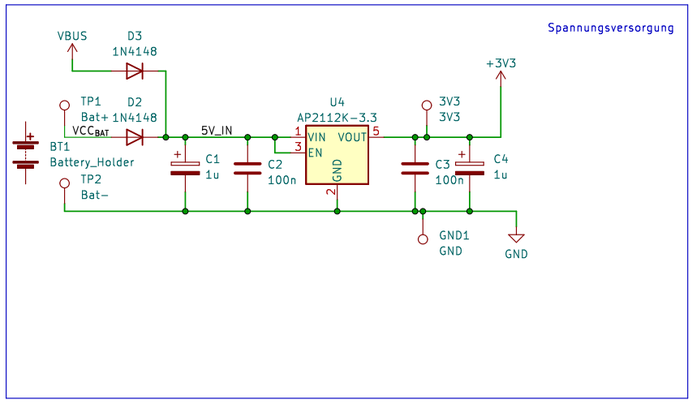
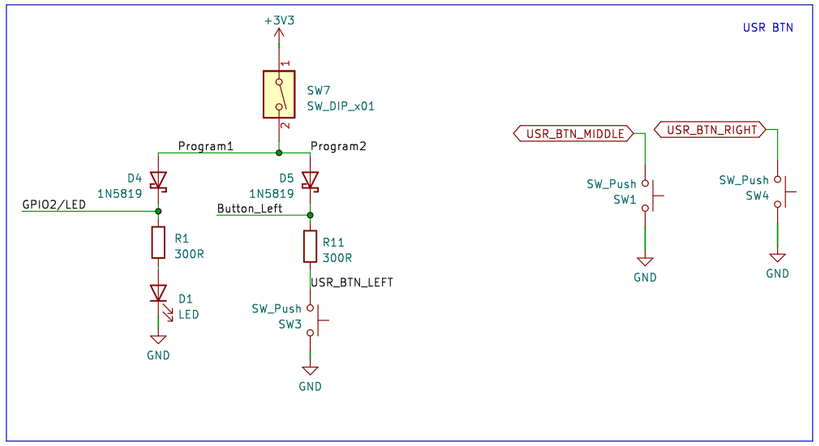
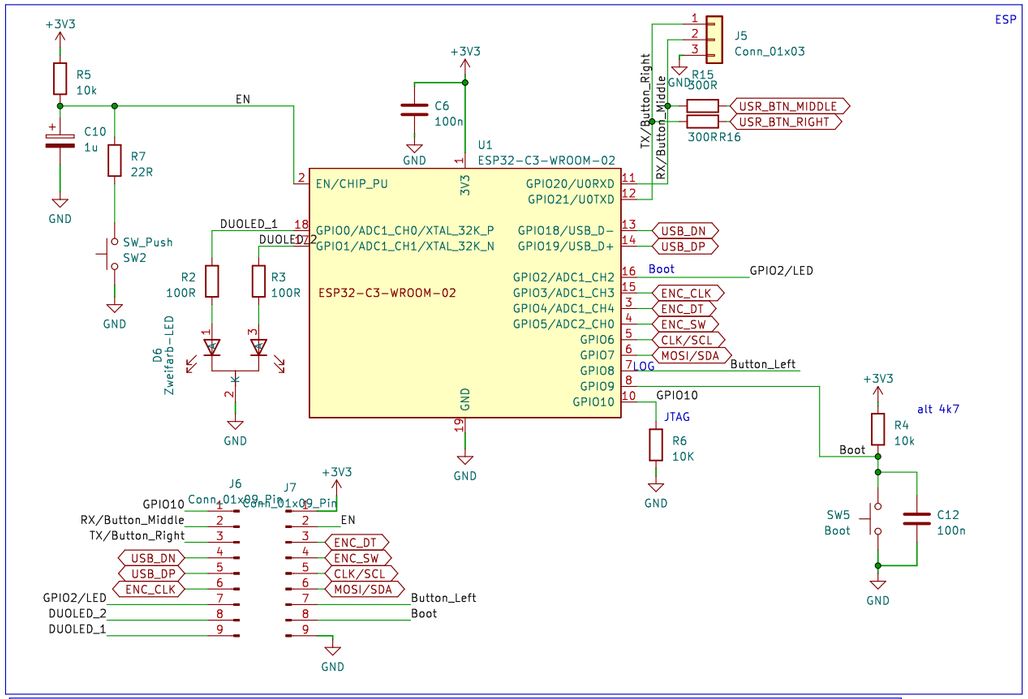
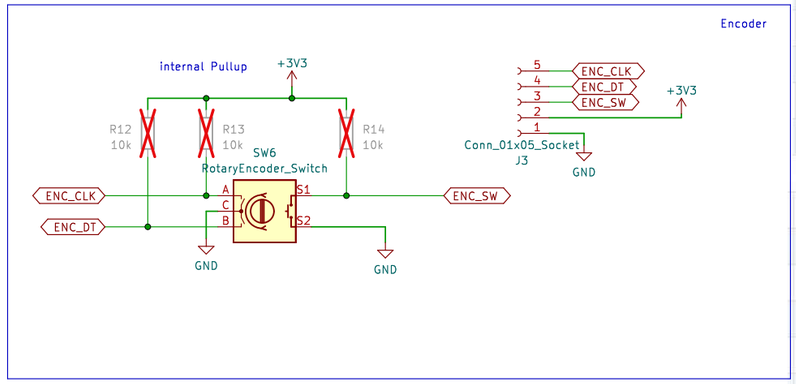




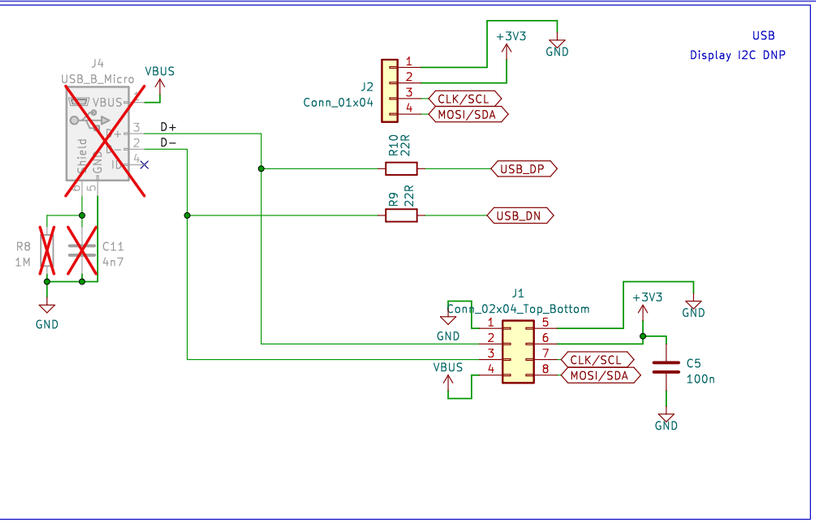
Standard SPI Protocol		Extended SPI Protocol
Full-Duplex SPI Signal	Half-Duplex SPI Signal	FSPI Bus Signal
MOSI	MOSI	FSPID 7
MISO	(MISO)	FSPIQ 2
CS	CS	FSPICS0 ~ 5 10
CLK	CLK	FSPICLK 6
—	—	FSPIWP
—	—	FSPIHD

Name	Type [1]	Function
G	G	Ground
3V3	P	3.3 V power supply
3V3	P	3.3 V power supply
RST	I	CHIP_PU
G	G	Ground
4	I/O/T	GPIO4, ADC1_CH4, FSPIHD, MTMS
5	I/O/T	GPIO5, ADC2_CH0, FSPIWP, MTDI
6 CLK	I/O/T	GPIO6, FSPICLK, MTCK
7 MOSI	I/O/T	GPIO7, FSPID, MTDO
G	G	Ground
8	I/O/T	GPIO8 [2], RGB LED
9	I/O/T	GPIO9 [2]
5V	P	5 V power supply
5V	P	5 V power supply
G	G	Ground





Name	Type [1]	Function
G	G	Ground
0	I/O/T	GPIO0, ADC1_CH0, XTAL_32K_P
1	I/O/T	GPIO1, ADC1_CH1, XTAL_32K_N
2 MISO	I/O/T	GPIO2 [2], ADC1_CH2, FSPIQ
3	I/O/T	GPIO3, ADC1_CH3
G	G	Ground
10 CS	I/O/T	GPIO10, FSPICS0
G	G	Ground
RX	I/O/T	GPIO20, U0RXD
TX	I/O/T	GPIO21, U0TXD
G	G	Ground
18	I/O/T	GPIO18
19	I/O/T	GPIO19
G	G	Ground
G	G	Ground



6 Peripheral Schematics

This is the typical application circuit of the module connected with peripheral components (for example, power supply, antenna, reset button, JTAG interface, and UART interface).

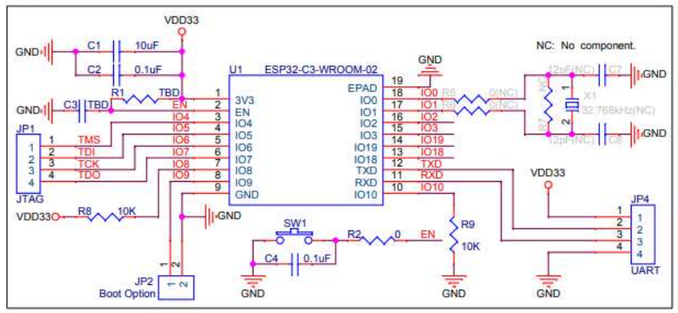
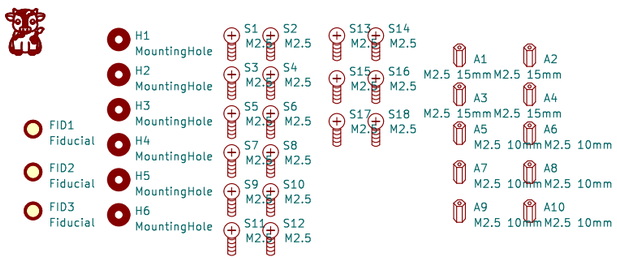


Figure 4: Peripheral Schematics

- Soldering the EPAD to the ground of the base board is not a must, though doing so can get optimized thermal performance. If you do want to solder it, please ensure that you apply the correct amount of soldering paste.
- To ensure the power supply to the ESP32-C3 family chip is stable during power-up, it is advised to add an RC delay circuit at the EN pin. The recommended setting for the RC delay circuit is usually R = 10 kΩ and C = 1 μF. However, specific parameters should be adjusted based on the power-up timing of the module and the power-up and reset sequence timing of the chip. For power-up and reset sequence timing diagram of the ESP32-C3 family chip, please refer to Section *Power Scheme* in *ESP32-C3 Family Datasheet*.



Spotify Controller V0.91 Pia Piekarek