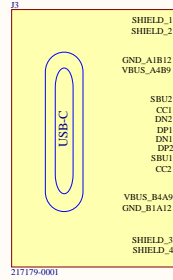
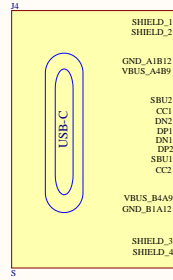


ESP32 WITH USB-C

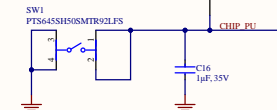
USB-C CONNECTOR 1



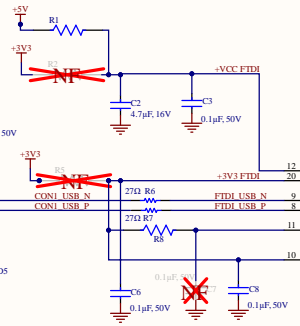
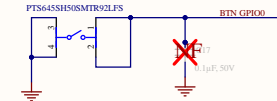
USB-C CONNECTOR 2



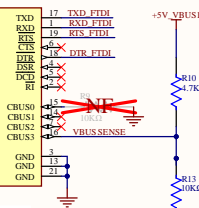
RESET BUTTON



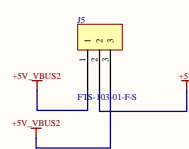
BOOT/USER BUTTON



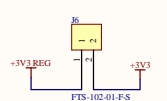
USB TO UART



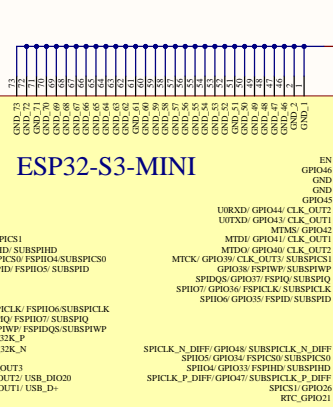
5V POWER SELECTION



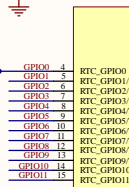
3V3 POWER SELECTION



ESP32 MODULE

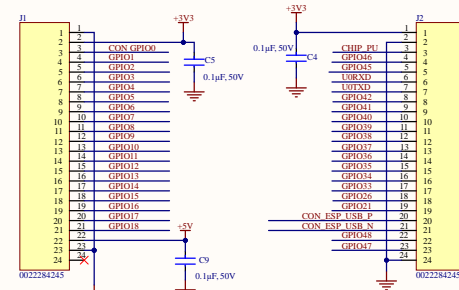


ESP32-S3-MINI



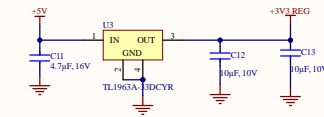
U1
ESP32-S3-MINI-1-N8

HEADERS

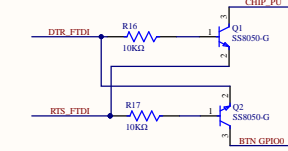


Design Note:
+5V and/or +3V3 can be possibly used as an input power (if configured correctly)

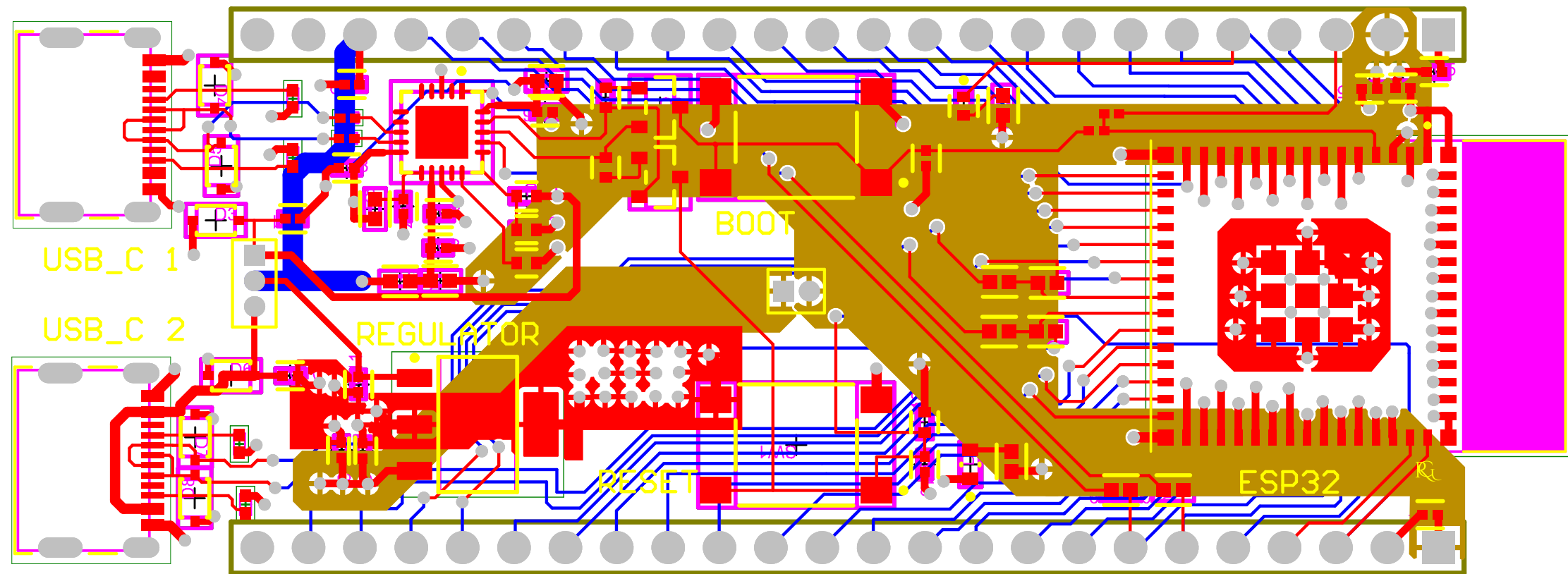
5V TO 3V3 REG



SERIAL SIGNALS HANDLING



Title	ESP32 WITH USB-C	DESIGNED BY ROOPA GHATKE
Size	Number	Revision
A2		v1.0
Date	7/27/2025	Sheet of
File	C:\Users\Roopa\OneDrive\Desktop\ESP32_USB_C_SchDoc	Drawn By: ROOPA GHATKE



Comment	Description	Designator	Footprint	LibRef	Quantity
0.1μF, 50V	Cap Ceramic 100nF 50V X7R ±10% SMD 0402 +125°C Paper T/R	C1, C3, C4, C5, C6, C8, C9, C10, C15	FP-CL779-IPC_C	CMP-13271-002336-1	9
4.7μF, 16V	Cap Ceramic 4.7uF 16V X5R ±20% SMD 0402 +85°C Paper T/R	C2, C11	FP-CL829-IPC_C	CMP-13271-001468-1	2
10μF, 10V	Cap Ceramic 10uF 10V X5R ±20% SMD 0402 +85°C Paper T/R	C12, C13, C14	FP-CL07-IPC_C	CMP-13271-002778-1	3
1μF, 35V	Cap Ceramic 1uF 35V X5R ±10% SMD 0402 +85°C Paper T/R	C16	FP-CL440-IPC_C	CMP-13271-000031-1	1
GREEN	LED GREEN 0603 SMD	D1	FP-6_541-5056_01-4- MFG	CMP-02520-000009-1	1
RED	LED RED CLEAR 0402 SMD	D2	FP-SML-P1-MFG	CMP-08952-000002-1	1
SD36C-01FTG	TVS DIODE 36V 60V SOD323	D3, D4, D5, D6, D7, D8	FP-SD-C-MFG	CMP-08607-000051-1	6
0022284245	CONN HEADER VERT 24POS 2.54MM	J1, J2	HRD_1X24_2.54MM	0022284245	2
217179-0001	USB Connector, USB Type C, USB 2.0, Receptacle, 16 Ways, Surface Mount, Through Hole Mount	J3	MOLEX_2171790001	217179-0001	1
S	USB Connector, USB Type C, USB 2.0, Receptacle, 16 Ways, Surface Mount, Through Hole Mount	J4	MOLEX_2171790001	217179-0001	1
FTS-103-01-F-S	CONN HEADER VERT 3POS 1.27MM	J5	HRD_1X3_1.27MM	FTS-103-01-F-S	1
FTS-102-01-F-S	CONN HEADER VERT 2POS 1.27MM	J6	HRD_1X2_1.27MM	FTS-102-01-F-S	1
SS8050-G	NPN TRANSISTOR 1.5A 40V SOT-23 R	Q1, Q2	FP-SS8050-G-MFG	CMP-20235-000001-1	2
RC0402FR-070RL	RES SMD 0 OHM JUMPER 1/16W 0402	R1, R8, R19, R20, R23, R24	FP-RC0402-0_4-IPC_A	CMP-2002-07342-2	6
1KΩ	RES 1K OHM 1% 1/16W 0402	R3, R4	FP-RC0402-0_4-IPC_A	CMP-2002-07472-3	2
27Ω		R6, R7, R21, R22	RESC1005X40X25LL05 T10	CMP-2002-07055-1	4
4.7K	RES SMD 4.7K OHM 0.1% 1/16W 0402	R10	FP-RT0402-MFG	CMP-03412-002579-1	1
5KΩ		R11, R12, R14, R15	RESC1005X40X25NL05 T10	CMP-2002-07753-1	4
10KΩ	RES 10kΩ ±1% 0.063W 0402	R13, R16, R17, R18	FP-AC0402-MFG	CMP-2002-01790-3	4
PTS645SH50SMTR92L FS	SWITCH TACTILE SPST- NO 0.05A 12V	SW1, SW2	FP- PTS645SH50SMTR92L FS-MFG	CMP-10040-000028-1	2
ESP32-S3-MINI-1-N8	SMD module, ESP32- S3FN8, 8 MB SPI flash, PCB antenna	U1	XCVR_ESP32-S3-MINI- 1-N8	ESP32-S3-MINI-1-N8	1
FT231XQ-R	IC USB SERIAL FULL UART 20QFN	U2	FP-QFN-20-MFG	CMP-0248-00001-3	1
TL1963A-33DCYR	Single Output Low Noise LDO, 1.5 A, Fixed 3.3 V Output, 2.1 to 20 V Input, 4- pin SOT-223 (DCY), - 40 to 125 degC, Green (RoHS & no Sb/Br)	U3	DCY0004A_N	CMP-0395-00535-2	1