

A

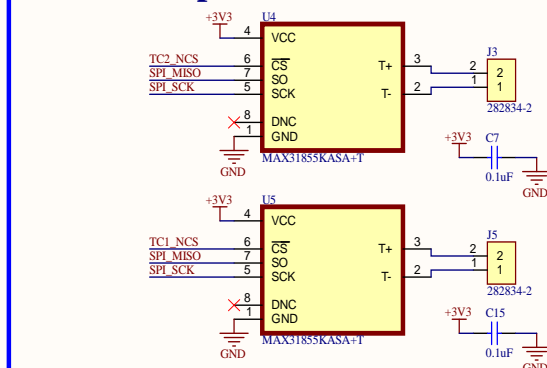


D

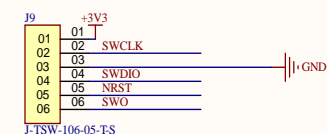
Radio



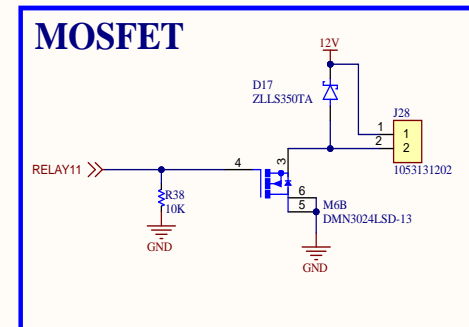
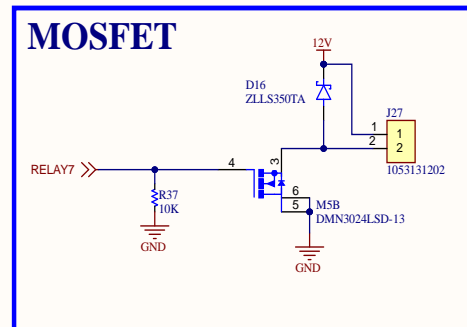
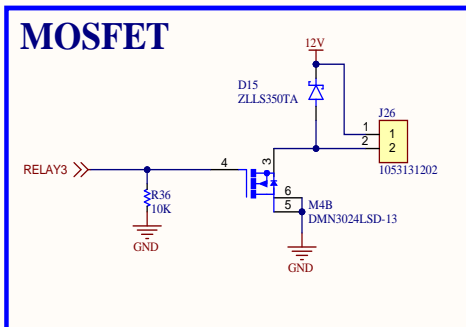
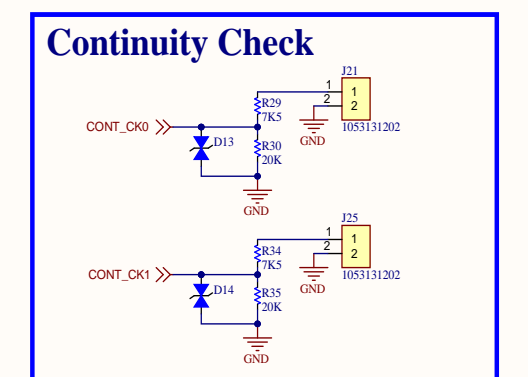
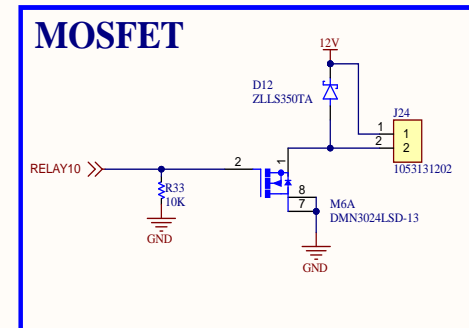
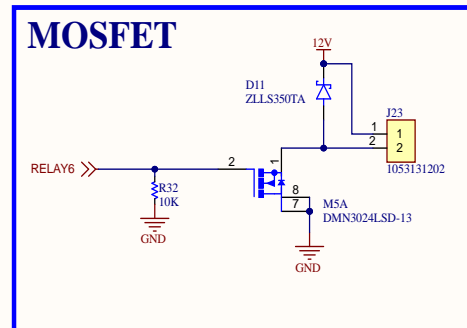
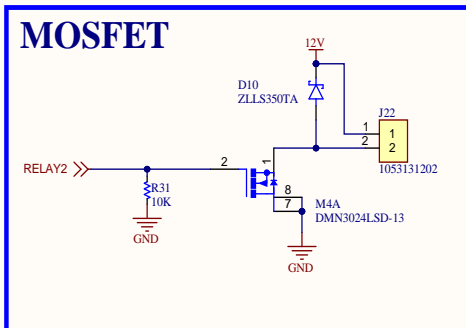
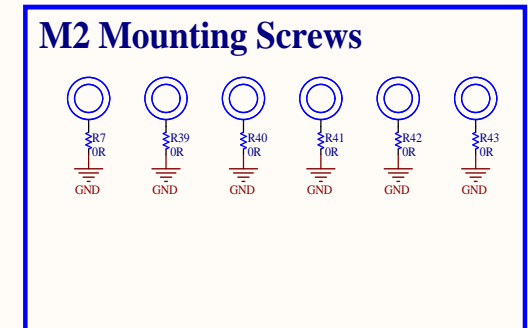
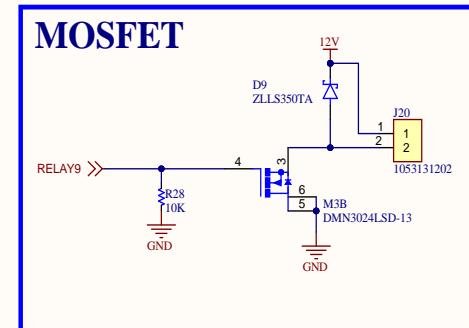
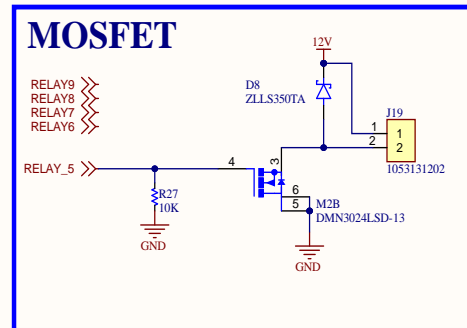
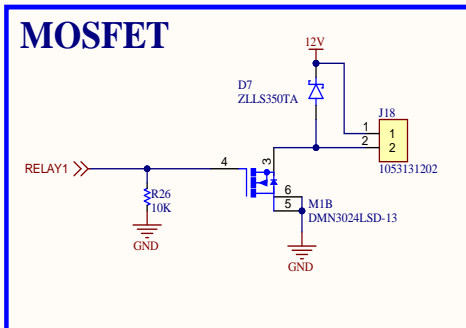
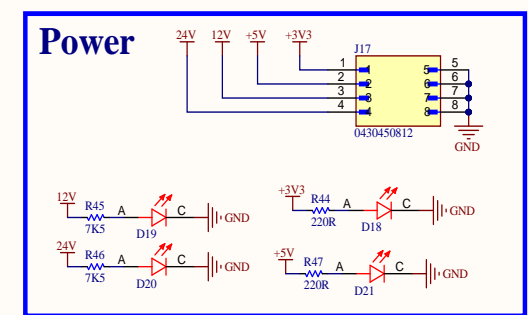
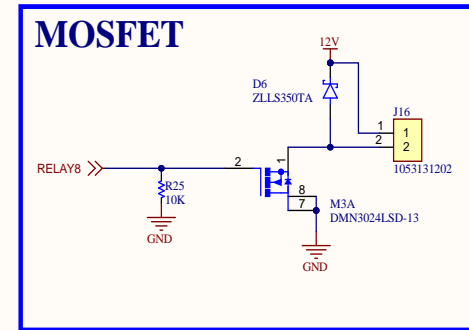
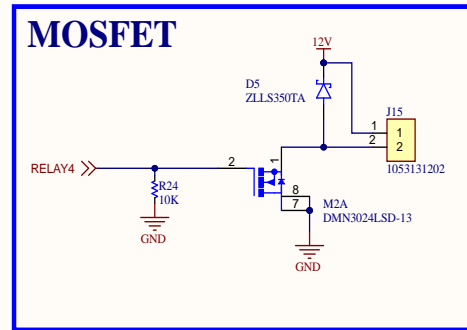
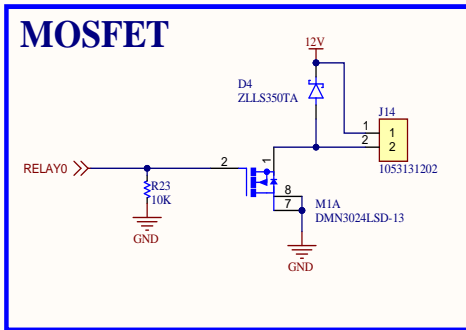
Thermocouple Interface



SWD Connector



Title			RCU Main		
Size	Number	Revision			
A3		rev 1.0			
Date:	1-21-2023	Sheet of			
File:	C:\Users\...RCU Main.SchDoc	Drawn By:		James Chen	
7			8		



Title RCU Relays		
Size A3	Number	Revision rev 1.0
Date: 1-21-2023	Sheet of	
File: C:\Users\...RCU Relays.SchDoc	Drawn By: James Chen	

Raspberry Pi

STM PRGM

Radio

RCU Board rev1.0

SOAR

Unbilical

SOB

Power

ADC 4

ADC 1

ADC 2

ADC 9

ADC 3

ADC 10

Relay 0

Relay 1

Relay 2

Relay 3

Relay 4

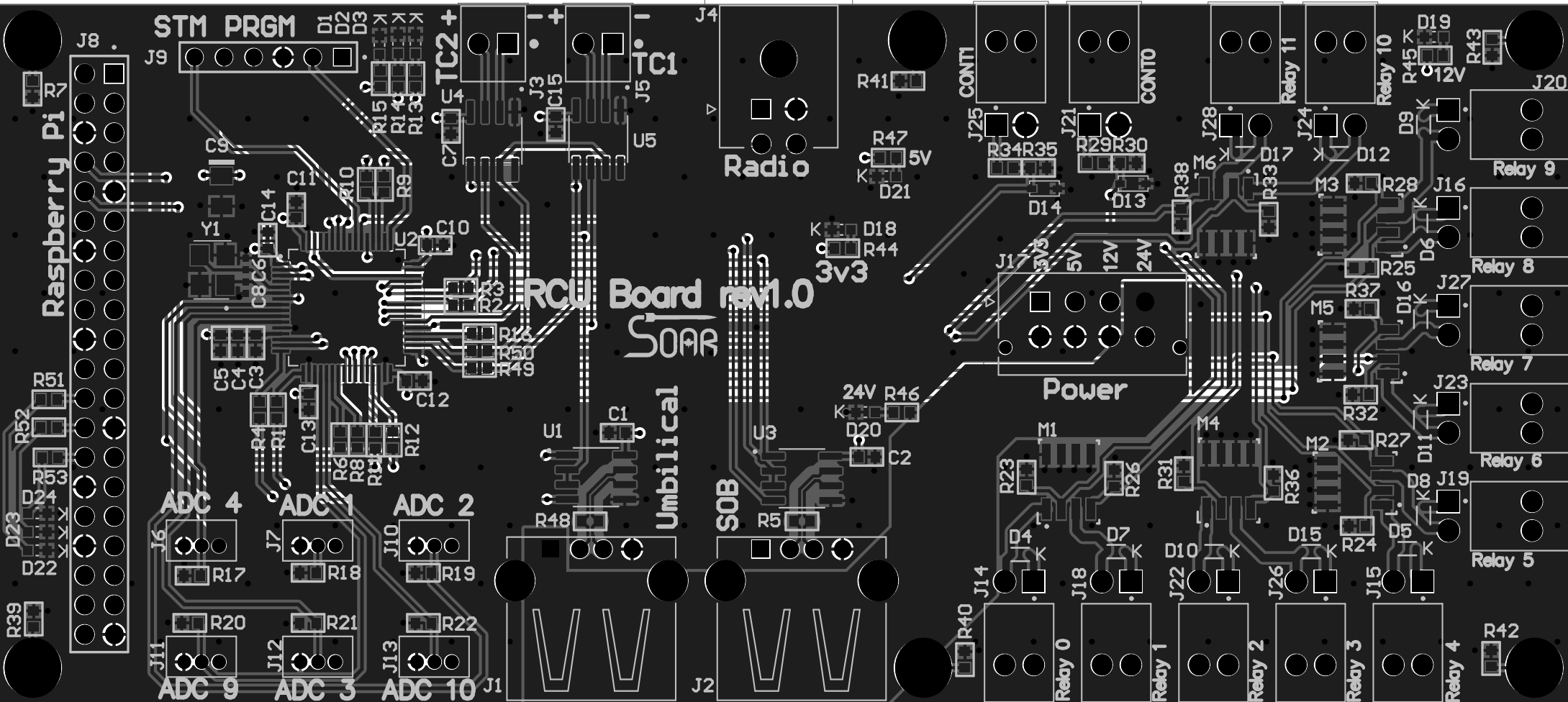
Relay 5

Relay 6

Relay 7

Relay 8

Relay 9



Designator	Description	Manufacturer	Manufacturer Part #	Quantity
[NoValue], *1, *2, *3, *4, *5				6
C1, C2, C3, C7, C10, C11, C12, C13, C14, C15	CAP CER 0.1UF 50V X7R 0603	Samsung Electro-Mechanics	CL10B104KB8NNWC	10
C4, C5	CAP CER 1UF 25V X7R 0603	Yageo	CC0603KRX7R8BB105	2
C6, C8	15 pF ±1% 50V Ceramic Capacitor COG, NPO 0402 (1005 Metric)	YAGEO	CC0402FRNPO9BN150	2
C9	4.7 µF Molded Tantalum Capacitors 20 V 1206 (3216 Metric) 40hm	AVX Corporation	TAJA475K020RNU	1
D1, D2, D3, D18, D19, D20, D21, D22, D23, D24	Red 620nm LED Indication - Discrete 2.2V 0603_1608 Metric	Rohm Semiconductor	SML-D12U1WT86	10
D4, D5, D6, D7, D8, D9, D10, D11, D12, D15, D16, D17	DIODE SCHOTTKY 40V 380MA SOD523	Diodes Incorporated	ZLLS350TA	12
D13, D14	TVS DIODE 12VWM 28.3V/C SOD323	Bourns Inc.	CDSOD323-T12C	2
J1, J2	CONN RCPT USB2.0 TYPEA 4POS R/A	Amphenol ICC (FCI)	87520-0010BLF	2
J3, J5	TERM BLK 2P SIDE ENT 2.54MM PCB	TE Connectivity AMP Connectors	282834-2	2
J4	CONN HEADER R/A 4POS 3MM	Molex	0430450400	1
J6, J7, J10, J11, J12, J13	CONN HEADER VERT 3POS 1.5MM	JST Sales America Inc.	B3B-ZR(LF)(SN)	6
J8	CONN SOCKET 40POS 0.1 TIN PCB	Samtec Inc.	ESQ-120-23-T-D	1
J9	CONN HEADER VERT 6POS 2.54MM	Samtec	TSW-106-05-T-S	1
J14, J15, J16, J18, J19, J20, J21, J22, J23, J24, J25, J26, J27, J28	CONN HEADER R/A 2POS 2.5MM 8A	Molex	1053131202	14
J17	CONN HEADER VERT 8POS 3MM	Molex	0430450812	1
M1, M2, M3, M4, M5, M6	MOSFET 2N-CH 30V 6.8A 8SO	Diodes Incorporated	DMN3024LSD-13	6
R1, R2, R3, R4, R9, R10, R11, R12, R49, R50	22 Ohms ±0.5% 0.063W, 1/16W Chip Resistor 0603 (1608 Metric) - Thin Film	Susumu	RR0816Q-220-D	10
R5, R48	RES SMD 100 OHM 0.5% 1/16W 0603	Susumu	RR08P100DCT-ND	2
R6, R7, R8, R16, R39, R40, R41, R42, R43	0 Ohms Jumper 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thick Film	Stackpole Electronics Inc	RMCF0603ZTOR00	9
R13, R14, R15, R44, R47, R51, R52, R53	220 Ohms ±0.5% 0.063W, 1/16W Chip Resistor 0603 (1608 Metric) - Thin Film	Susumu	RR0816P-221-D	8
R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R31, R32, R33, R36, R37, R38	RES 10K OHM 1% 1/8W 0603	Stackpole Electronics Inc	RNCP0603FTD10K0	18
R29, R30, R34, R35, R45, R46	RES 7.5K OHM 1% 1/8W 0603, RES 20K OHM 1% 1/10W 0603	Stackpole Electronics Inc	RNCP0603FTD7K50, RNCP0603FTD20K0	6
U1, U3	IC TRANSCEIVER HALF 1/1 8SOIC	Texas Instruments	THVD1400DR	2
U2	IC MCU 32BIT 128KB FLASH 64LOFP	STMicroelectronics	STM32L431RBT6TR	1
U4, U5	IC CONV THERMOCOUPLE-DGTL SOIC	Analog Devices Inc./Maxim Integrated	MAX31855KASA+T	2
Y1	CRYSTAL 32.0000MHZ 9PF SMD	ABRACON	ABM8-32.000MHZ-9-D1G-T	1