

ConnectCore for i.MX6UL Starter Board

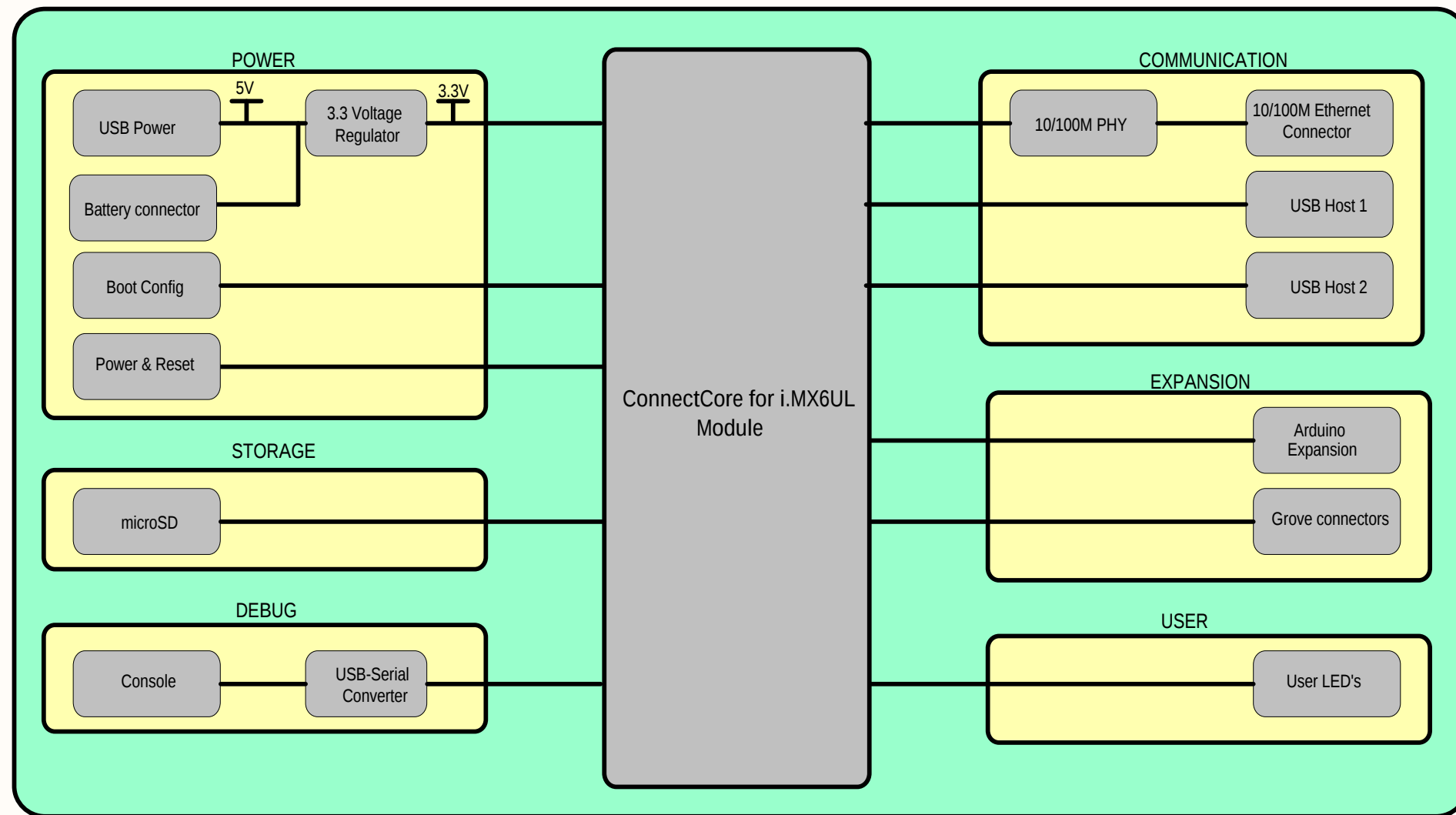
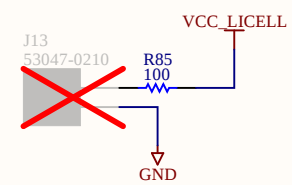
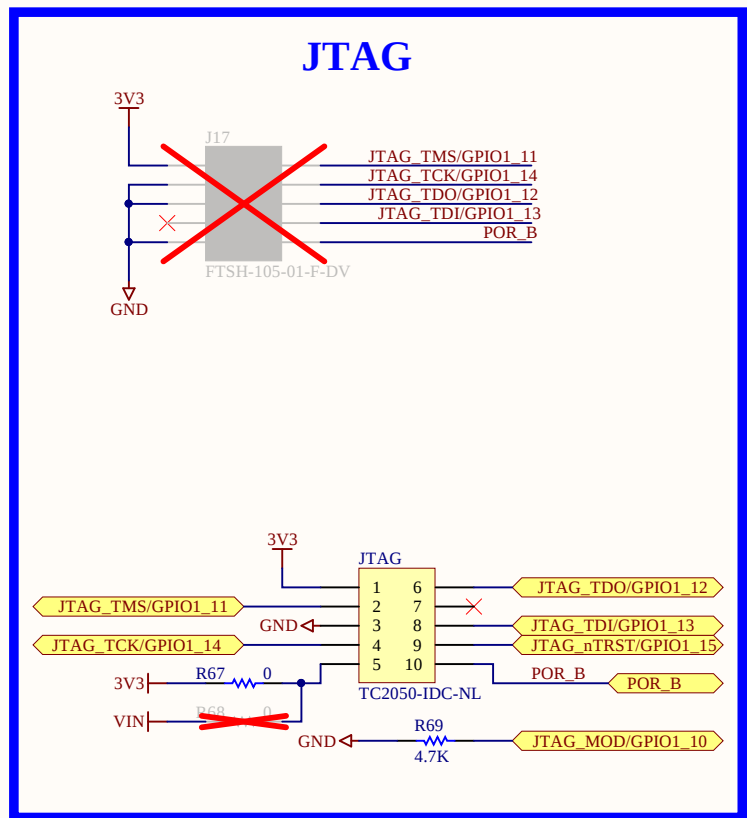
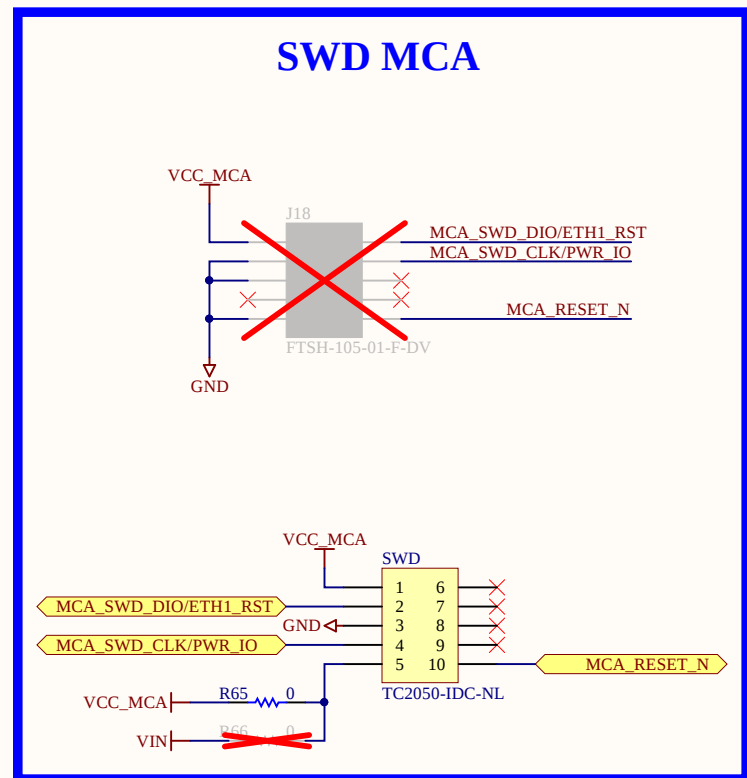
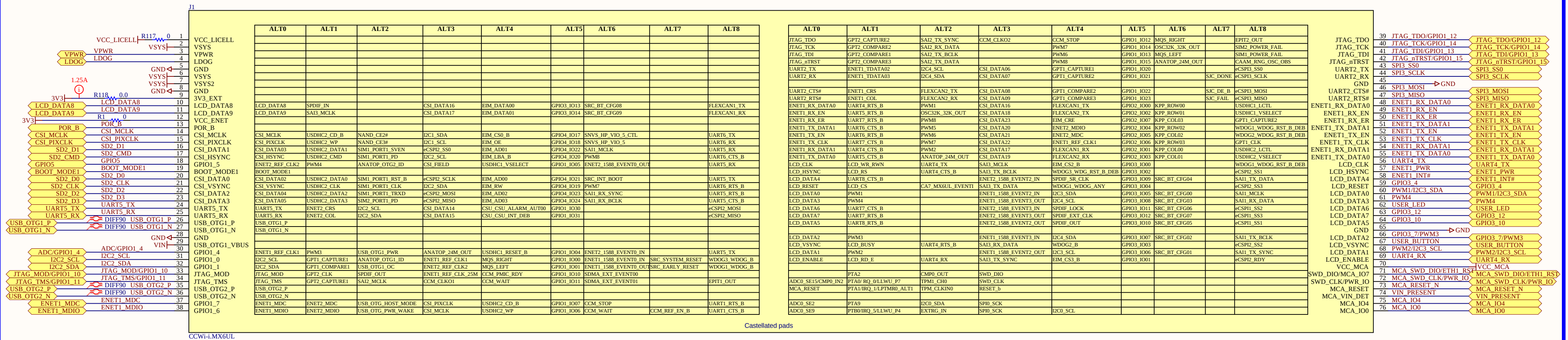


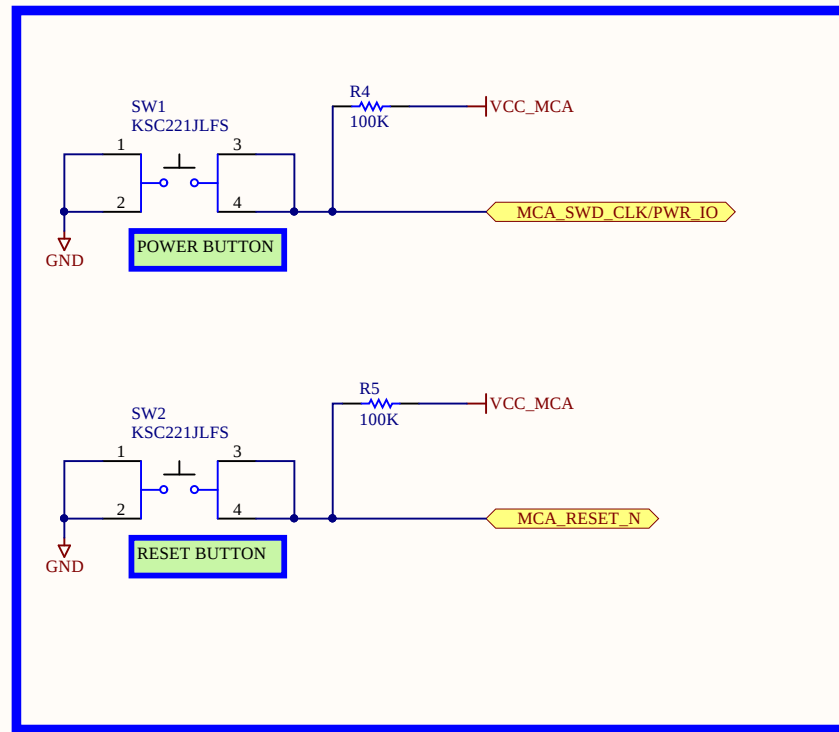
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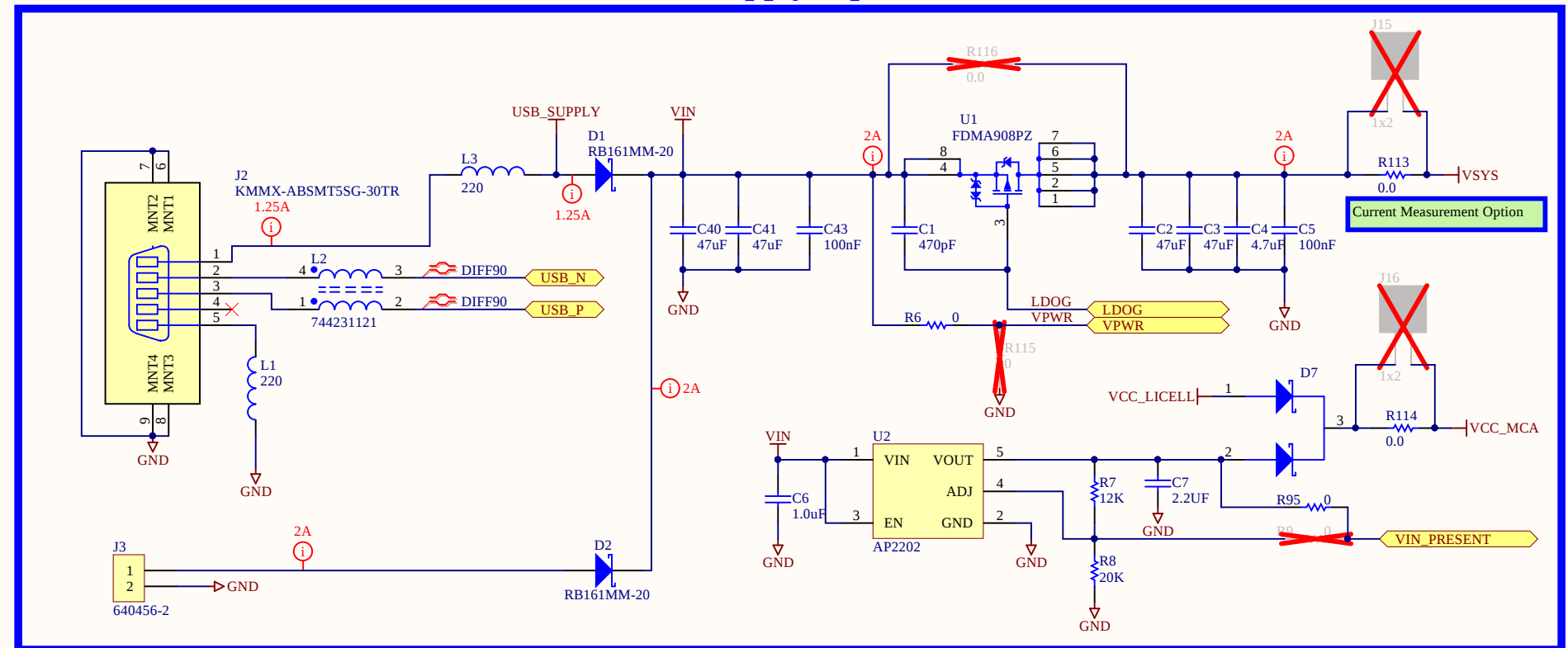
ConnectCore for i.MX6UL Module



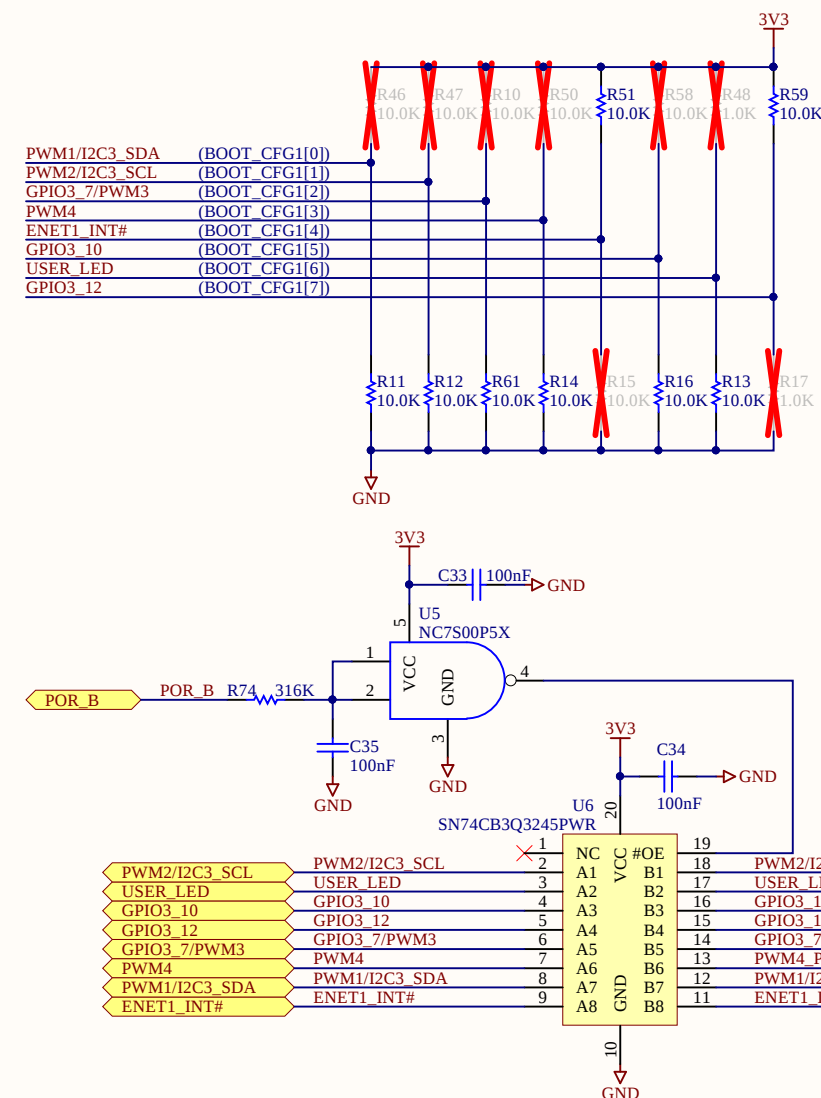
Power and Reset



Supply Inputs

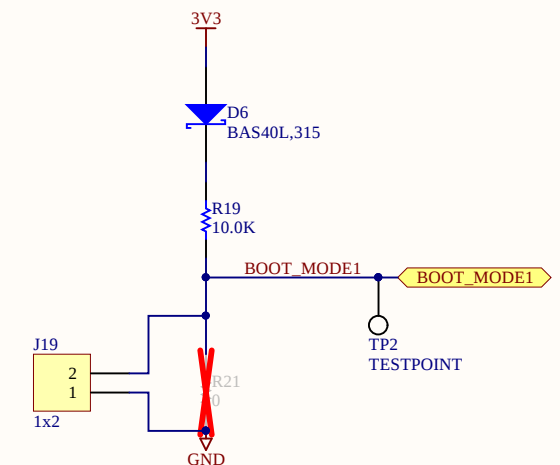


Boot Selection



BOOTSTRAP	NAND
BOOT_CFG1[0]	Row Address Cycles: 00 - 3 cycles 01 - 2 cycles 10 - 4 cycles 11 - 5 cycles
BOOT_CFG1[1]	
BOOT_CFG1[2]	Number of devices: 00 - 1 device 01 - 2 devices 10 - 4 devices 11 - Reserved
BOOT_CFG1[3]	
BOOT_CFG1[4]	Pages in Block: 00 - 128 pages 01 - 64 pages 10 - 32 pages 11 - 256 pages
BOOT_CFG1[5]	
BOOT_CFG1[6]	Samsung's toggle mode DDR NAND 0 - Raw NAND 1 - Toggle mode NAND
BOOT_CFG1[7]	Boot Device Selection: 1 - Boot from NAND interface

BOOT_MODE1	BOOT_MODE0	Description
0	0	Boot from Fuses
1	0	Boot from board settings

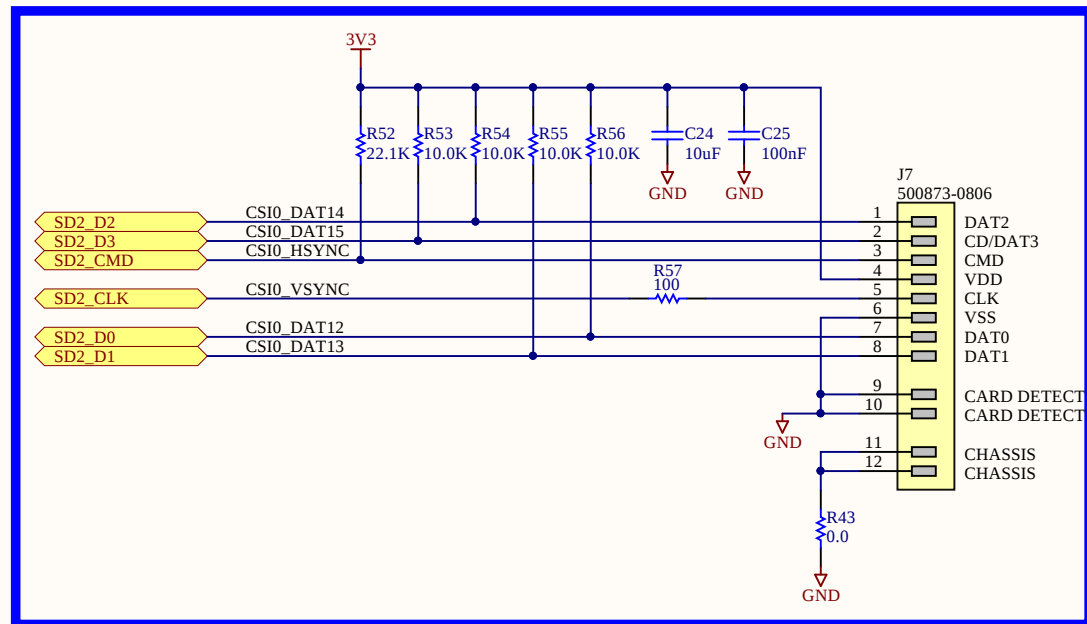


[illegible]

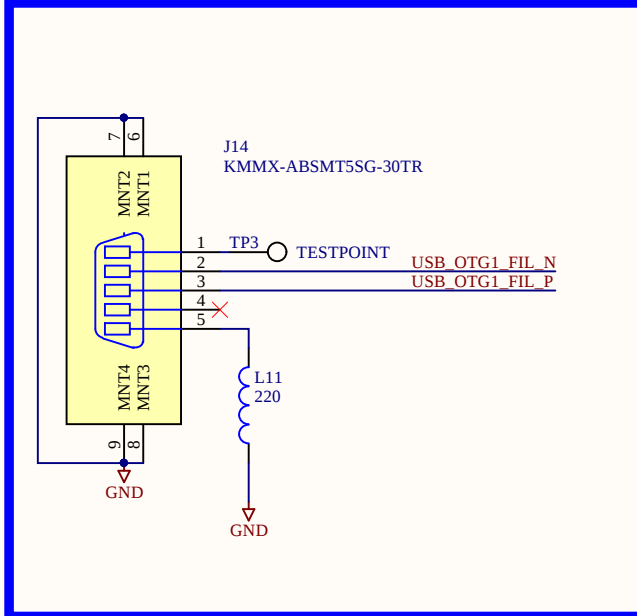
The diagram illustrates a 50 ohm RF circuit layout. It begins with a U.FL-R-SMT(01) connector (J5) connected to a 50 ohm RF line. The line passes through a series resistor R112 (50 ohm) and is terminated by a 1000146 antenna (ANT1). Two capacitors, C36 and C37 (1.3pF), are shown in parallel with the ground plane, both marked with a red X, indicating they are not to be included in the design.



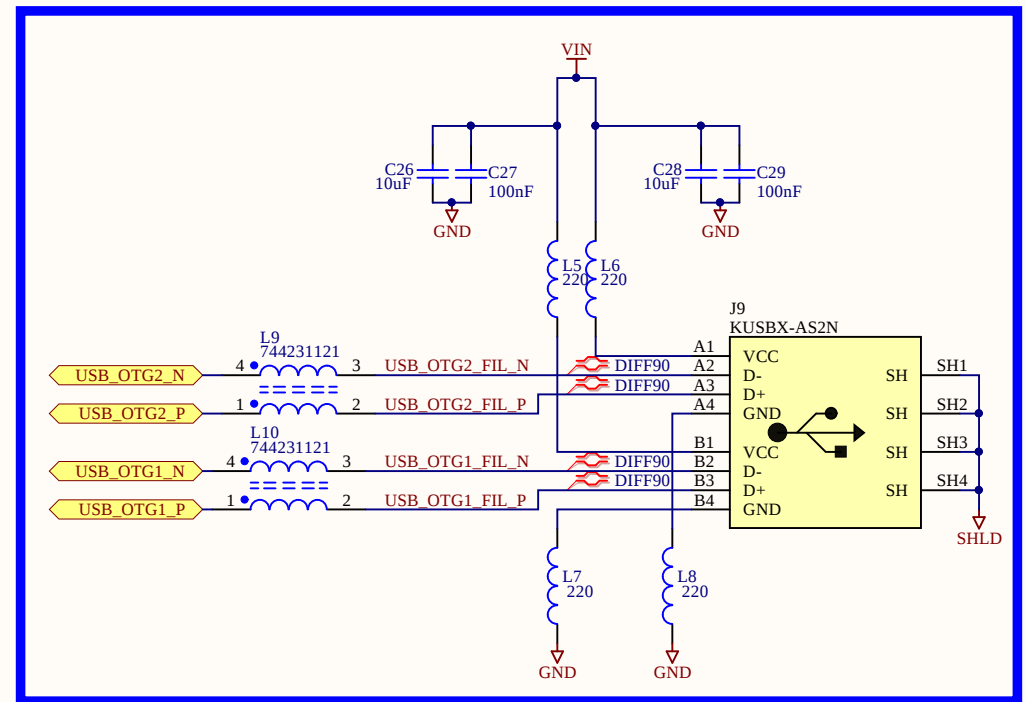
microSD



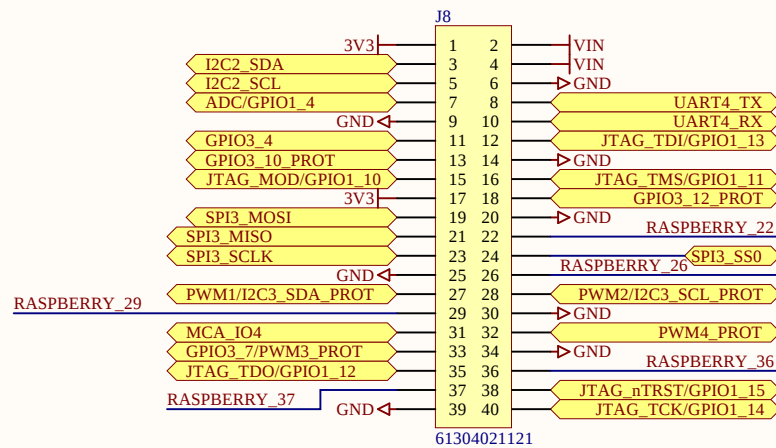
USB Device



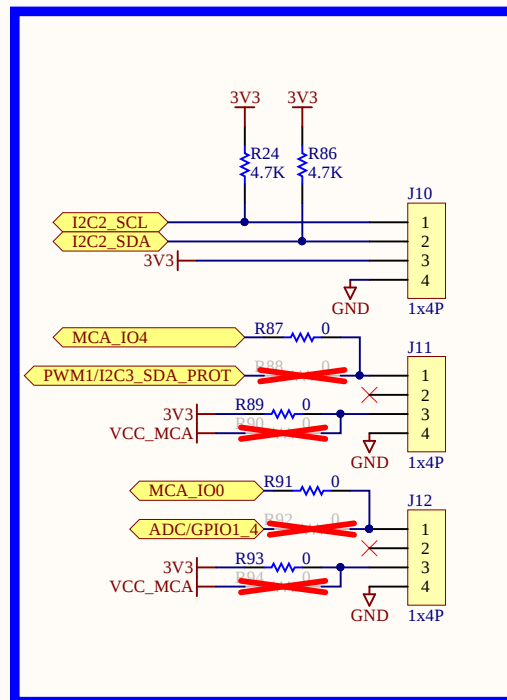
USB HOST



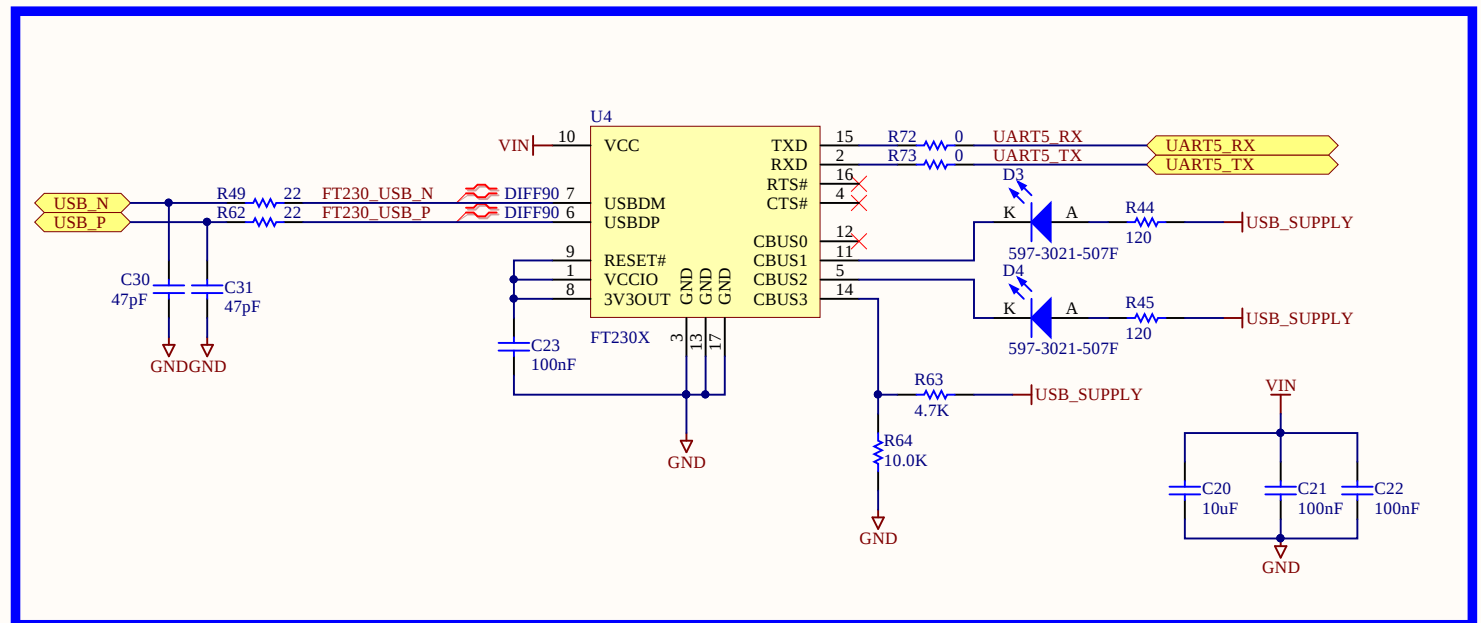
Raspberry Pi Expansion



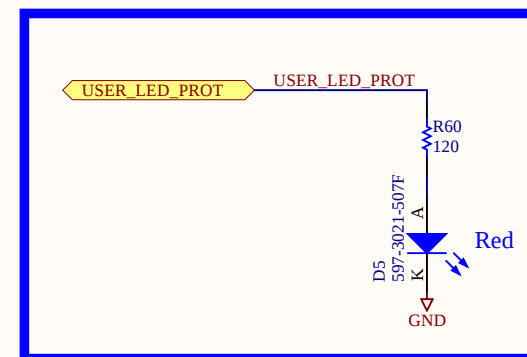
Grove connectors



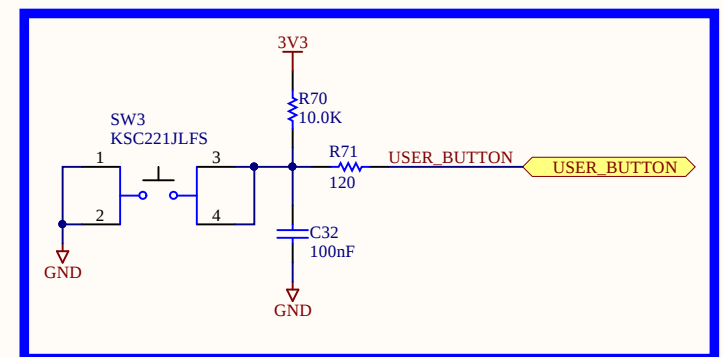
Console



USER LED



USER BUTTON



System Power Rails

Voltage (V)	Supply Name	Block	Generated by	Current Capability (mA)	Notes
5.0	VIN	USB Host	External DC supply	2000	
		Console			
		Raspberry Pi Ext			
	VSYS	ConnectCore 6UL	U1	2000	
3.3	3V3	microSD	PMIC SW2	1250	
		UART			
		JTAG			
		ETHERNET			
		BOOT			
		GROVE			
		Raspberry Pi Ext			
	VCC_MCA	MCA	U2	150	

GPIO Table

Signal Name	GPIO	Use
i.MX6UL processor		
GPIO1_4	GPIO1_4	ADC/GPIO1_4
JTAG_MOD	GPIO1_10	JTAG_MOD/GPIO1_10
JTAG_TMS	GPIO1_11	JTAG_TMS/GPIO1_11
JTAG_TDO	GPIO1_12	JTAG_TDO/GPIO1_12
JTAG_TCK	GPIO1_14	JTAG_TCK/GPIO1_14
JTAG_TDI	GPIO1_13	JTAG_TDI/GPIO1_13
JTAG_nTRST	GPIO1_15	JTAG_nTRST/GPIO1_15
LCD_HSYNC	GPIO3_2	ENET1_PWR
LCD_DATA4	GPIO3_9	ENET1_INT#
LCD_RESET	GPIO3_4	GPIO3_4
LCD_D6	GPIO3_11	USER_LED
LCD_D7	GPIO3_12	GPIO3_12
LCD_D5	GPIO3_10	GPIO3_10
LCD_D2	GPIO3_7	GPIO3_7/PWM3
LCD_VSYNC	GPIO3_3	USER_BUTTON
MCA (KL03)		
SWD_CLK	PTA0	MCA_SWD_CLK/PWR_IO
SWD_DIO	PTA2	RASPBERRY Pi EXT
MCA_IO4	PTA9	J11 Grove / Raspberry Pi EXT
MCA_IO0	PTB0	J12 Grove / Raspberry Pi EXT

	1	2	3	4	5	6	7	8
A	Format: DD/MM/YYYY 12/02/2016 - ConnectCore i.MX6UL Starter Board * Initial version 02/06/2016 - ConnectCore i.MX6UL Starter Board * Board spin: 30015102-02 revA / 55001889-02 rev01 - Added current measurement option to VSYS (R113/J15) - Added current measurement option to VCC_MCA (R114/J16) - Supply VCC_MCA through VCC_LICELL as an option (D7) - R6/R115/R116 for being able to shunt U1 - Modified Ethernet PHY reset circuitry - Added Ethernet PHY power switch (R20/Q1/U7/R3/C39) - Remove the configuration resistors to support only final module pinout - Added pull-up for I2C bus (R24/R86) - Added 2x47µF//100nF (C40/C41/C43) at the input of U1 based on NXP PF3000 recommendation 28/06/2016 - ConnectCore i.MX6UL Starter Board * 55001889-02 rev02: - Depopulate R88/R92. Populate R87/R91 25/07/2016 - ConnectCore i.MX6UL Starter Board * Revision: 1P - NPR004383 - Populate J19 (BOOT_MODE jumper) - Changed R19 from 0R to 10K resistor 20/09/2016 - ConnectCore i.MX6UL Starter Board * Revision: 2P - ECO006990 - Module revision change: HWID correction. 11/10/2016 - ConnectCore i.MX6UL Starter Board * Revision: 3P - ECO007044 - ConnectCore i.MX6UL module going to revision 3P. 21/02/2017 - ConnectCore i.MX6UL Starter Board * Revision: 4P - ECO007182 - ConnectCore i.MX6UL module (J1) P/N changed from 50001916-01 to 50001939-01 16/05/2017 - ConnectCore i.MX6UL Starter Board * Revision: A - ECO007543 - Release to revA without changes. 14/08/2017 - ConnectCore i.MX6UL Starter Board * Revision: B - ECO007701 - Release to revB without changes. 28/09/2017 - ConnectCore 6UL SBC Express * ECO-008055: 55001889-02 rev C: - Fixing JIRA CC6UL-869 - Depopulate C134, R36 and D1 from SNVS circuitry on the module.							A
B								B
C	MECH1 **DO NOT CONNECT MOUNTING HOLES TO GND** **Place 2x20 pin Connector 1002007 within footprint** Raspberry Pi Hat Interface PCB LBL1 LABEL 28000351_LABEL TXT1 LABEL TEXT LABEL_TEXT J6 QR LABEL P1 LPF076-1290-19AB55L							C
D								D
	1	2	3	4	5	6	7	8