

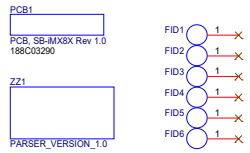
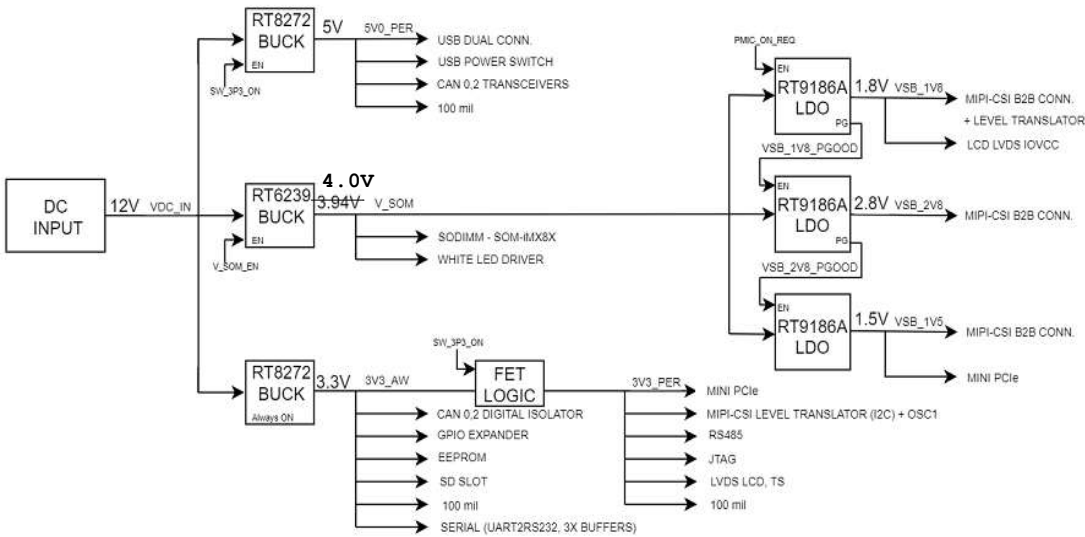
SB-iMX8X

BOARD REVISION: 1.0

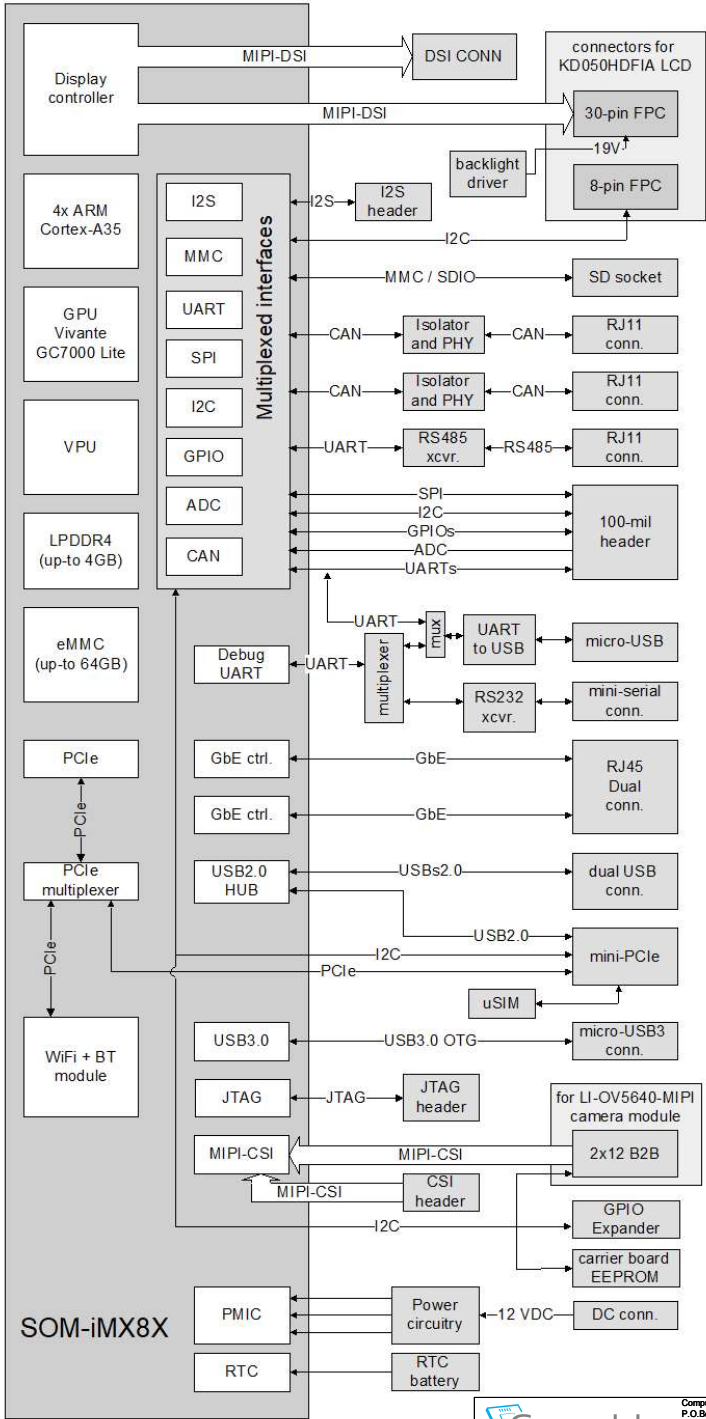
PAGE	FUNCTION
01	INDEX & BLOCK DIAGRAM
02	CARRIER BOARD INTERFACE
03	ETHERNET
04	USB OTG,USB DUAL CONN,mPCIe
05	100 MIL CONN
06	CSI, CAN,GPIO EXP
07	UART, RS232, RS485, EEPROM, SD
08	POWER
09	LVDS LCD
10	MECHNICS

I2C ADDRESSES	
DEVICE	ADDRESS
EEPROM	0x54..57
GPIO EXT	0x20

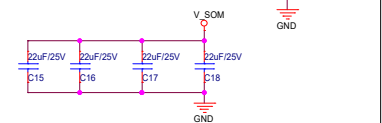
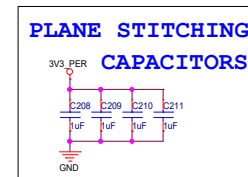
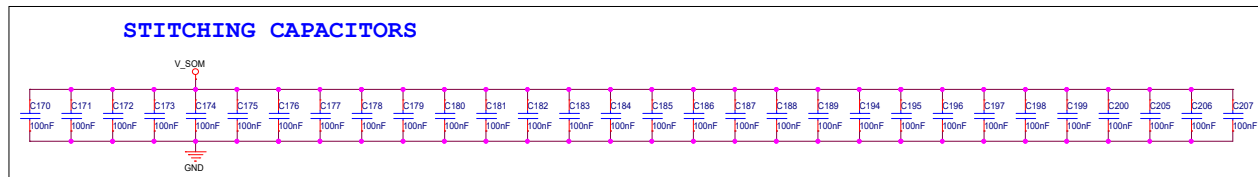
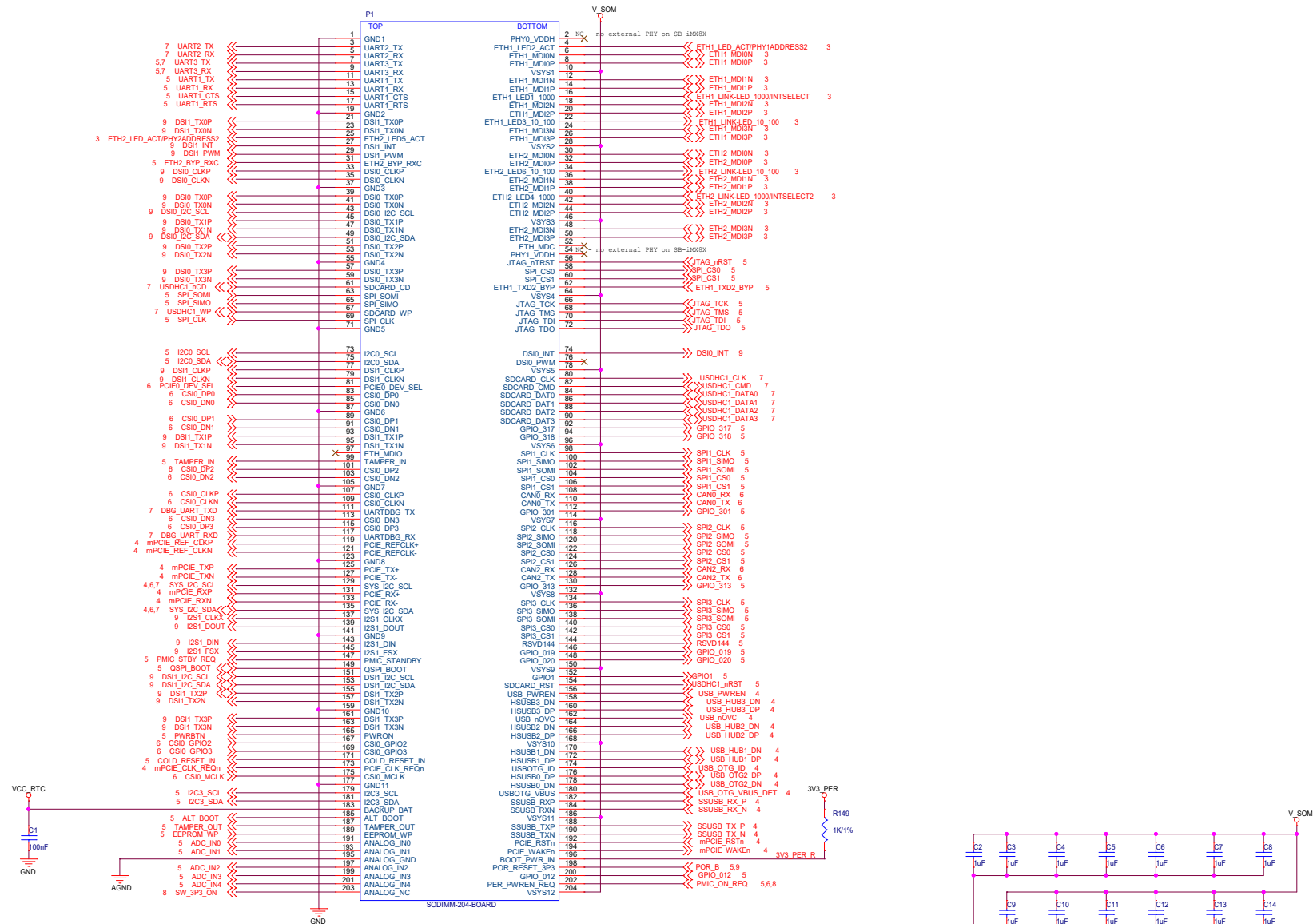
Power Diagram



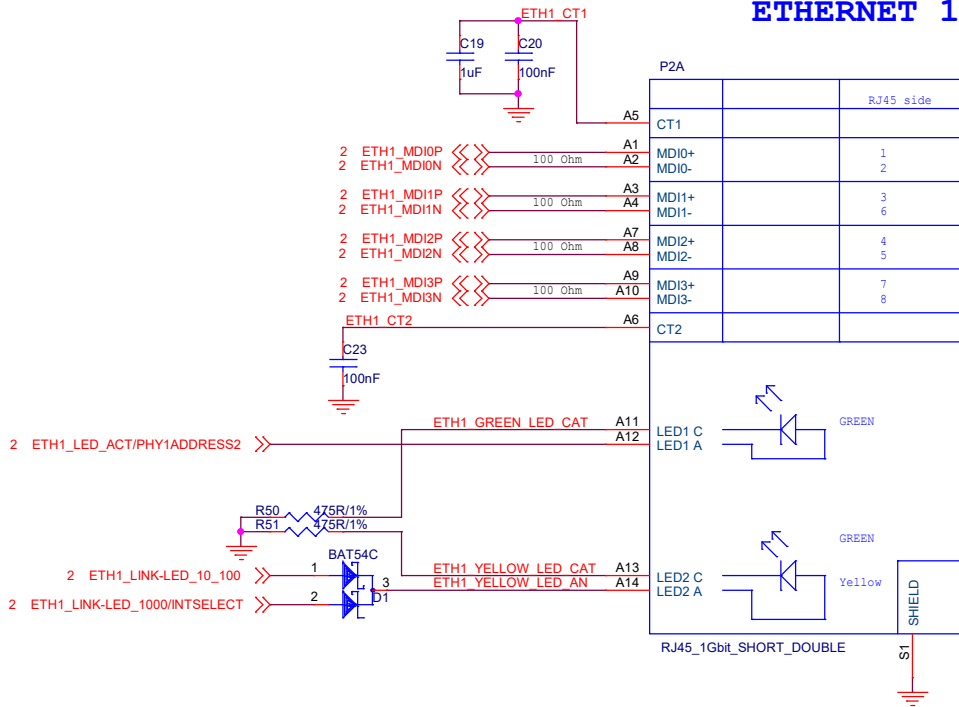
Block Diagram



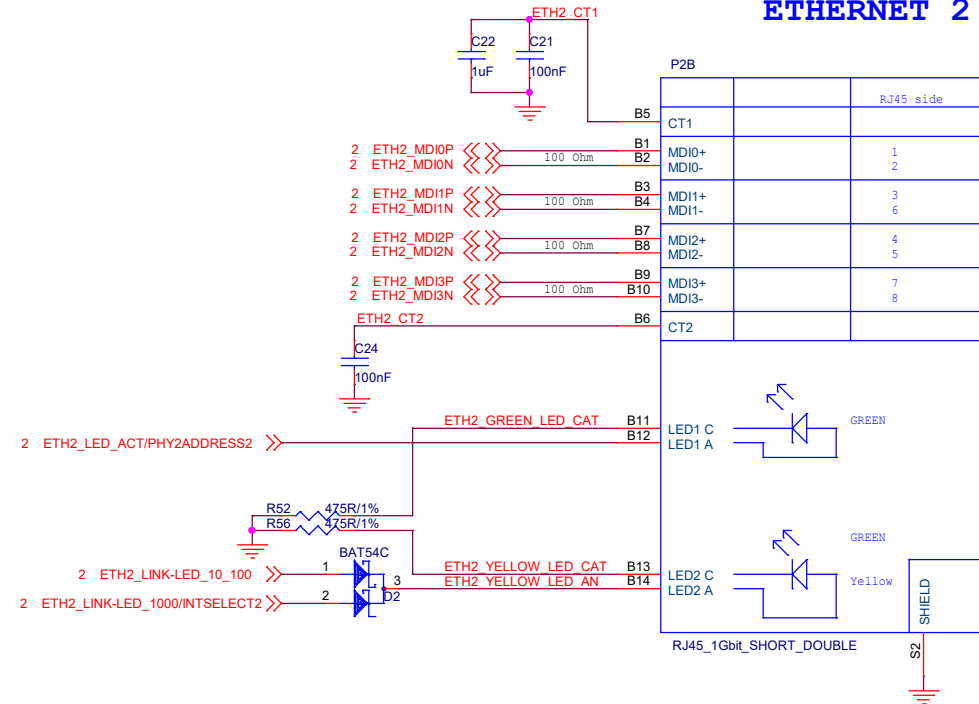
CARRIER SODIMM INTERFACE



ETHERNET 1



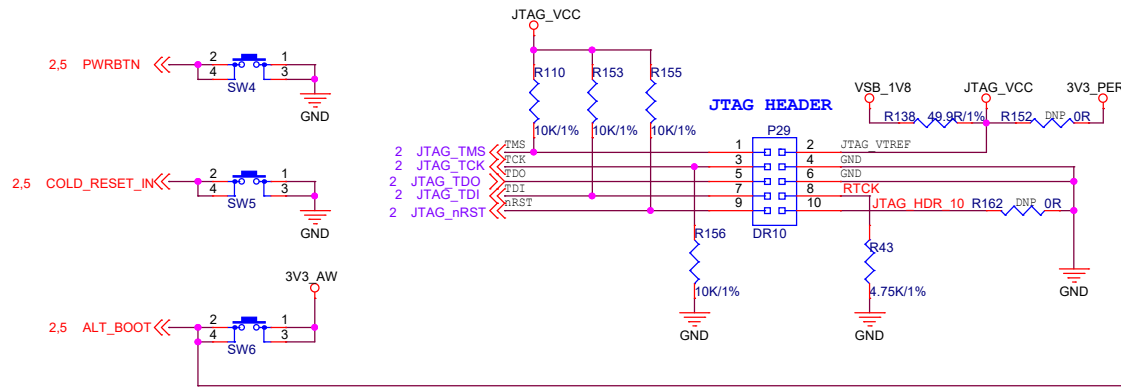
ETHERNET 2



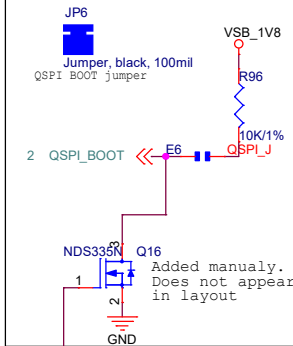
Layout notes

- 1: 100ohm differential impedance control.
- 2: Match each differential signals pair ± 5 mils.
- 3: Not more than two vias on each differential trace
- 4: GND stitching VIA near every signal VIA
- 5: The spacing between differential pair signals and other signals should be at least three times the trace width.

POWER/RESET/BOOT SWITCHES & JTAG

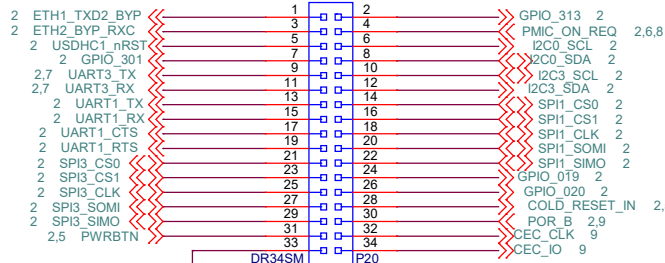


Quad SPI boot



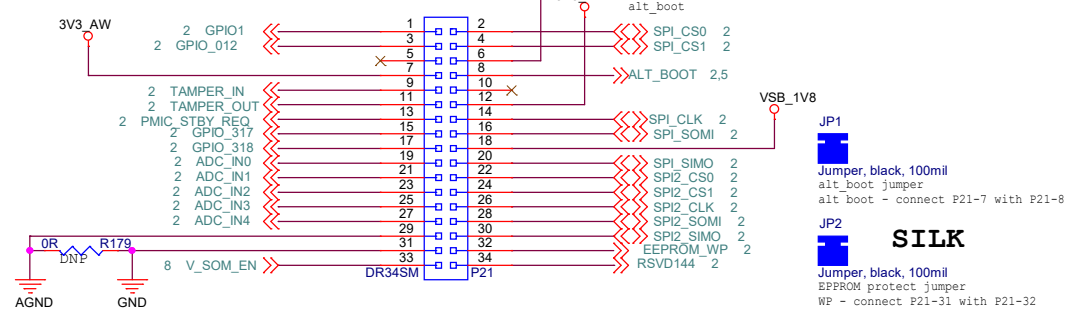
100mil CONN 1

Signals can be swapped freely



100mil CONN 2

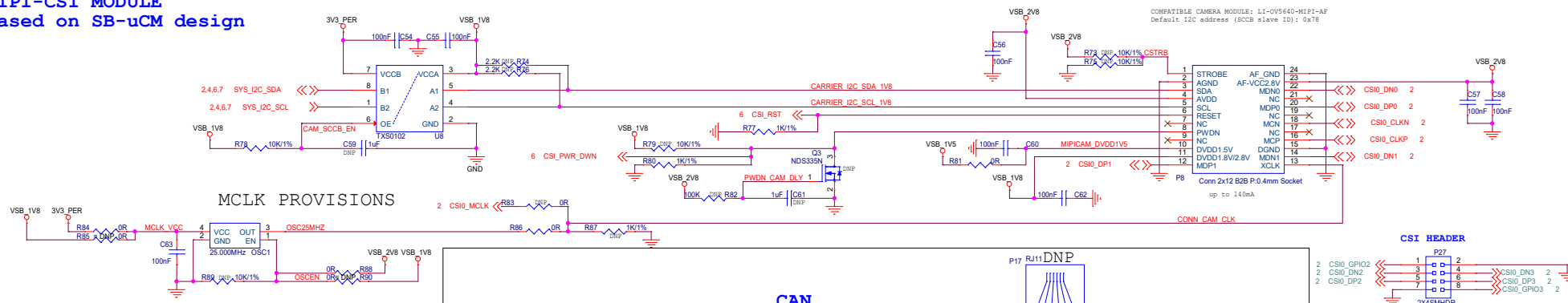
Signals can be swapped freely except jumper dependent like alt_boot



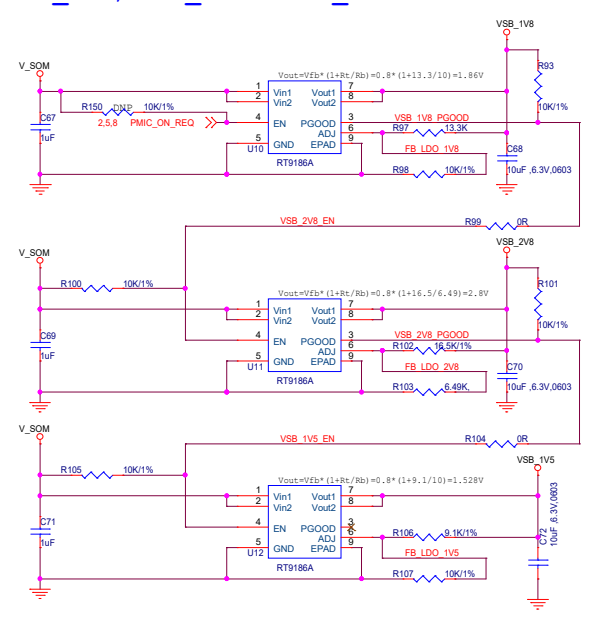
Layout notes for PCIe and LVDS signals

- 1: 100ohm differential impedance control for LVDS, 85ohm for PCIe.
- 2: Match each differential signals pair ± 5 mils.
- 3: Not more than two vias on each differential trace
- 4: GND stitching VIA near every signal VIA
- 5: The spacing between differential pair signal and other signals should at least three times the trace width.

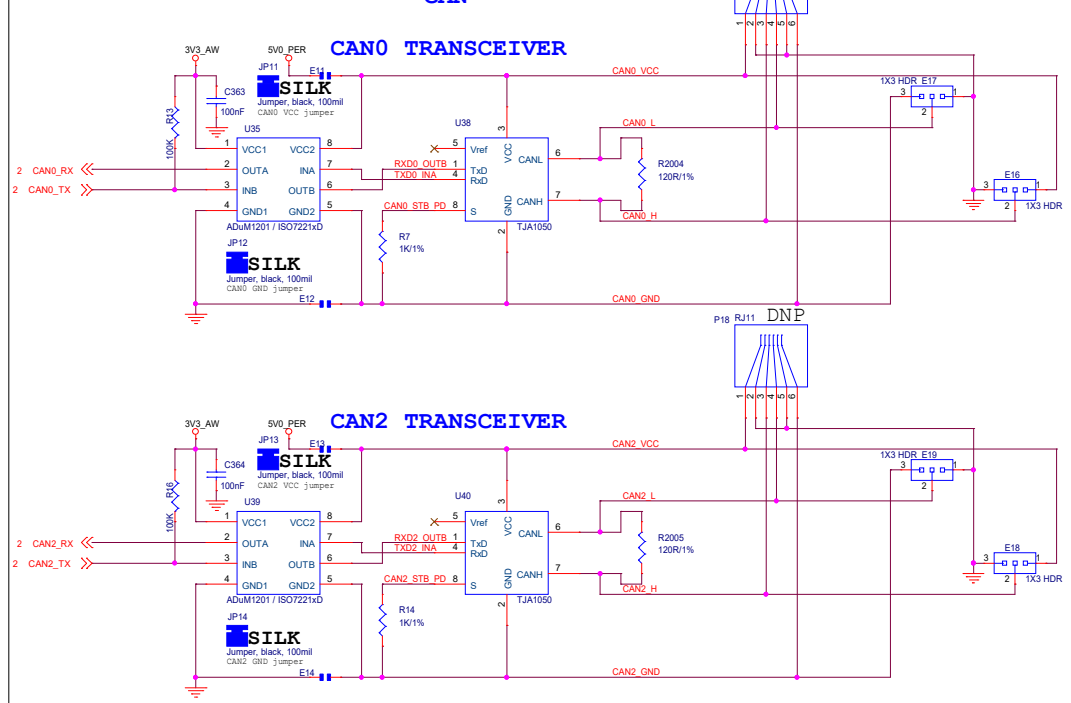
MIPI-CSI MODULE
Based on SB-uCM design



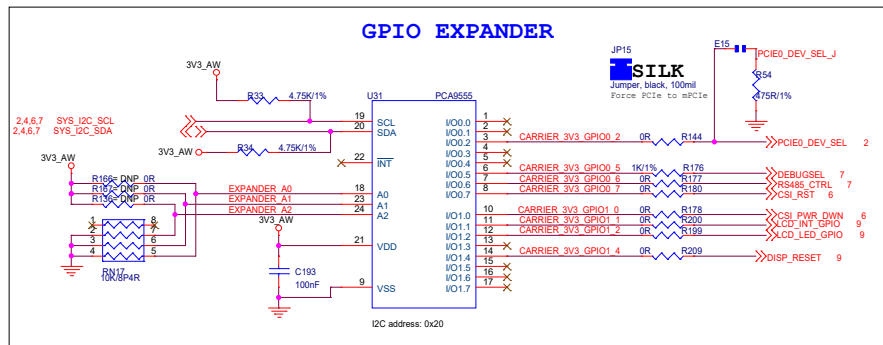
VS_B 1V5, VS_B 1V8 & VCC 2V8 CSI sources



CAN



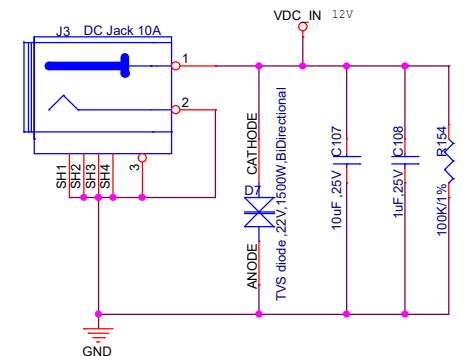
GPIO EXPANDER



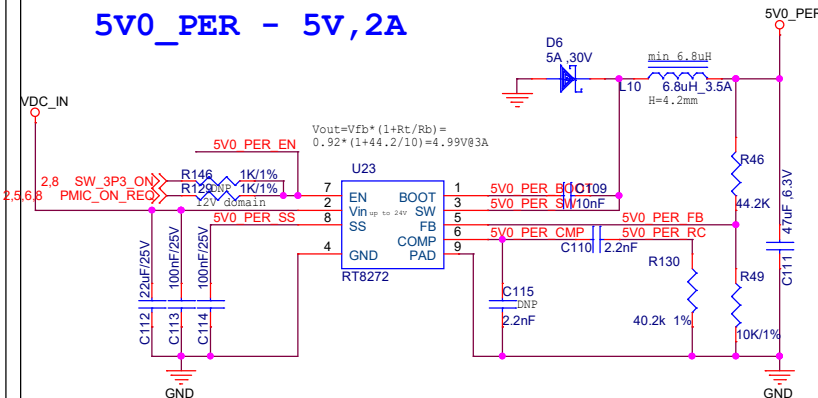
Layout notes

- 1: 100ohm differential impedance control for CSI, 85 for PCIe, 90 for USB.
- 2: Match each differential signals pair ± 5 mils and 40 mils for usb
- 3: Not more than two vias on each differential trace
- 4: GND stitching VIA near every signal VIA
- 5: The spacing between differential pair signal and other signals should at least three times the trace width.

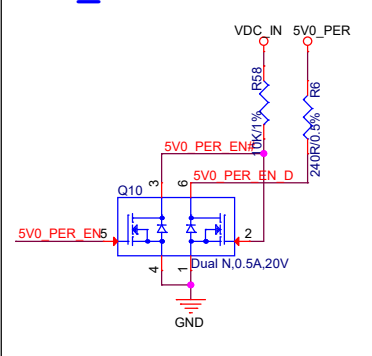
DC INPUT



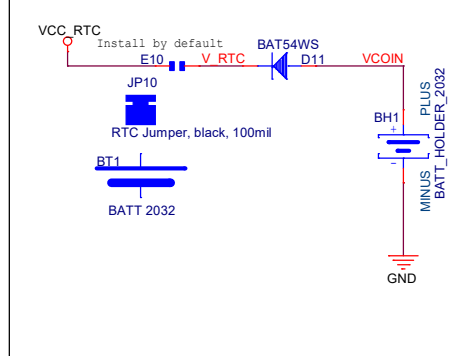
5V0_PER - 5V, 2A



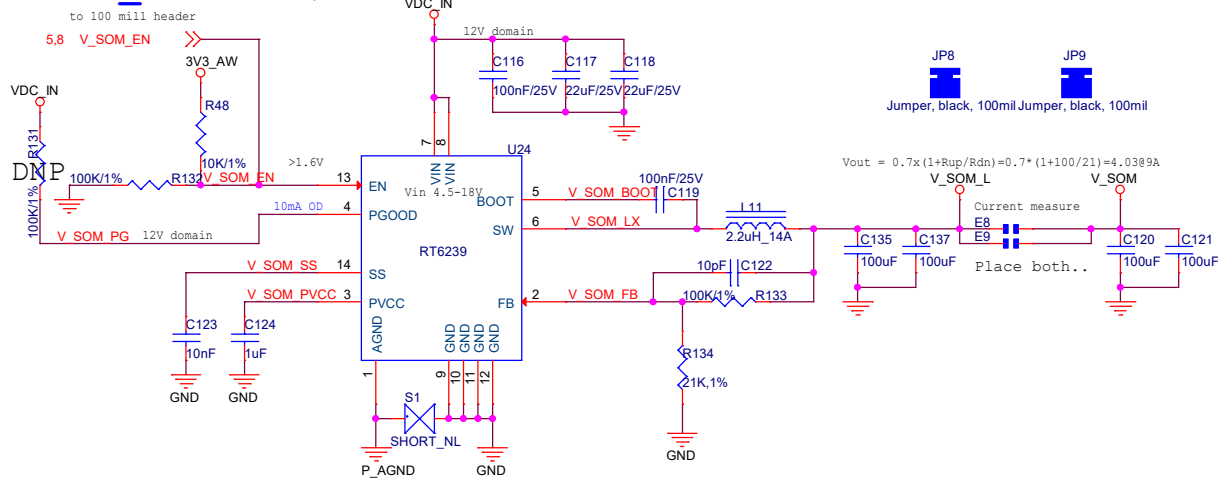
5V0_PER DISCHARGE



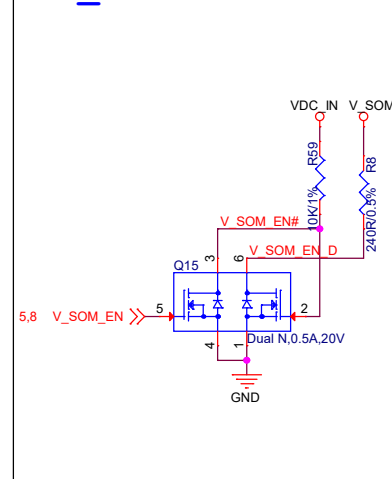
RTC BATTERY



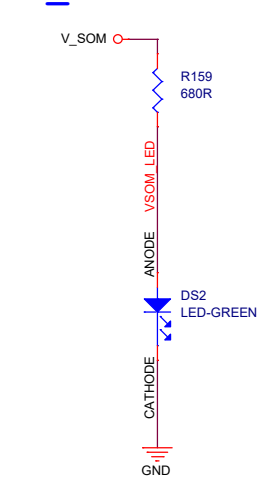
V_SOM - 4V, 9A



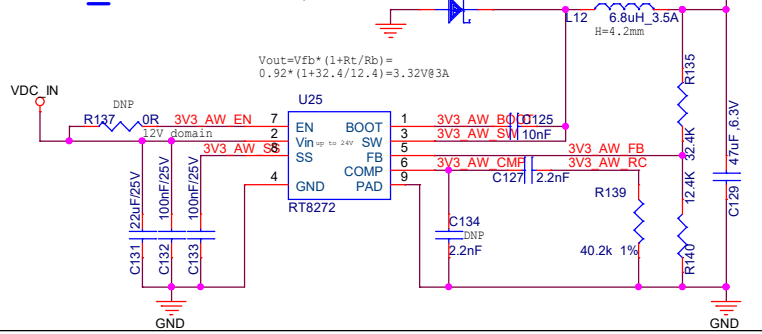
V_SOM DISCHARGE



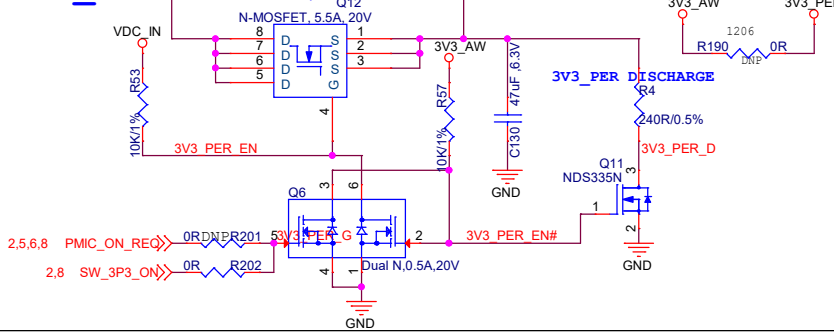
V_SOM LED



3V3_AW - 3.3V, 2.75A

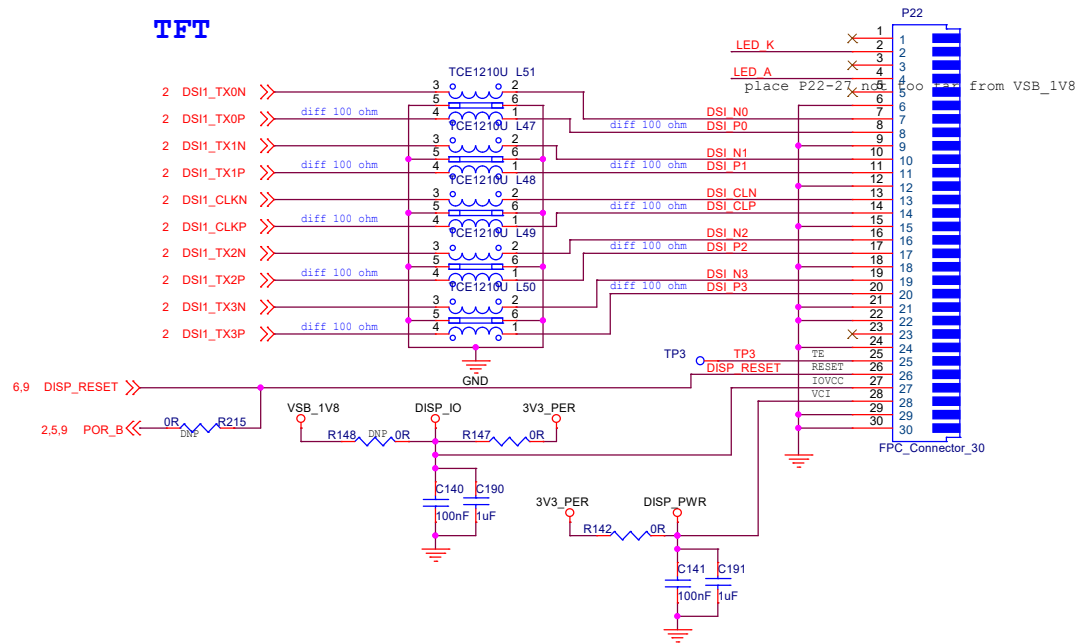


3V3_PER - 3.3V, 2.75A

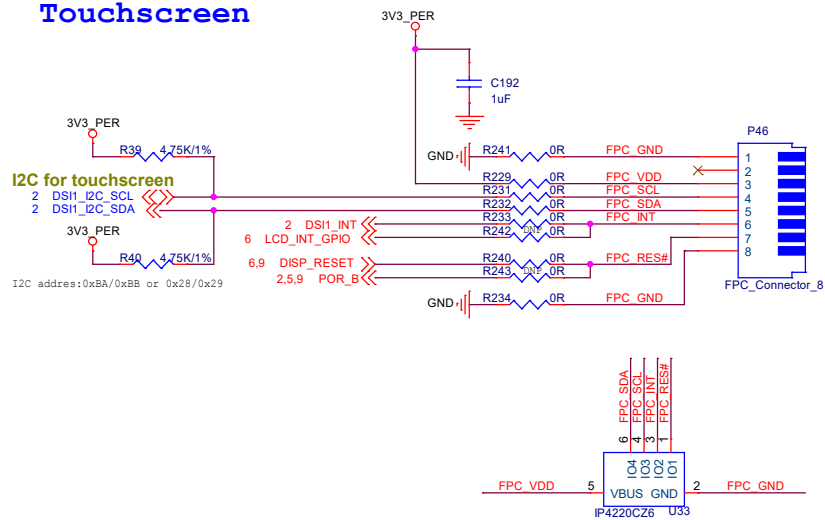


LCD

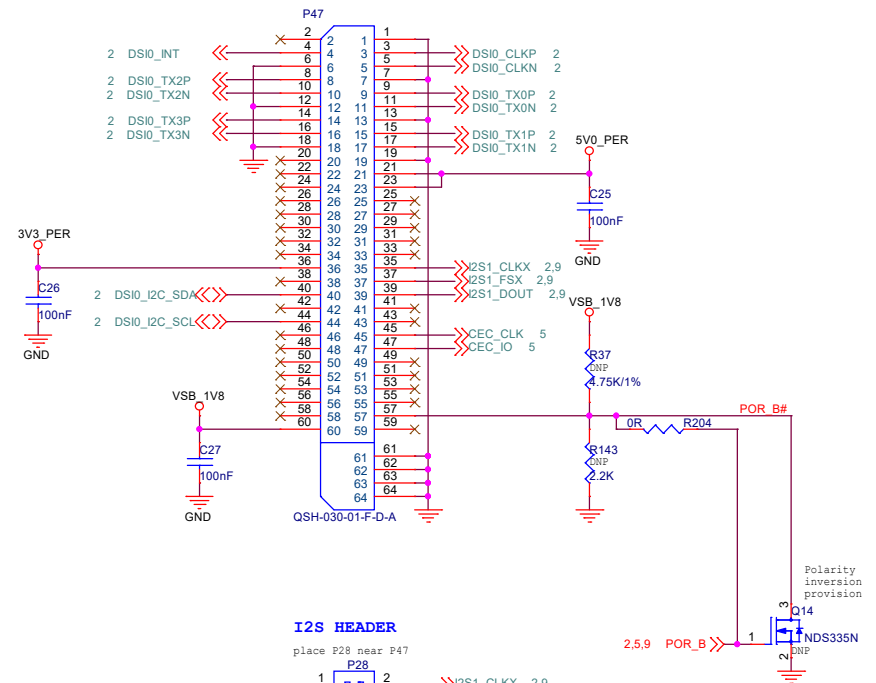
TFT



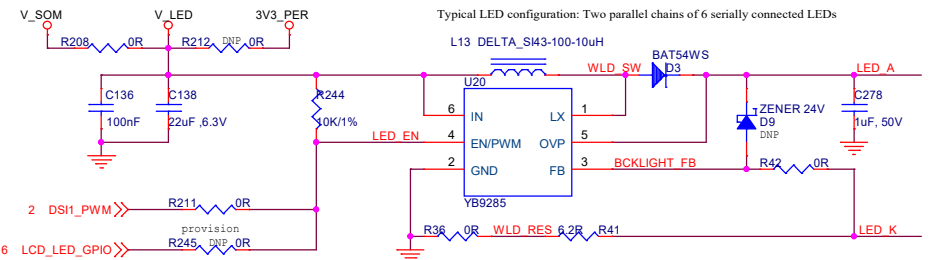
Touchscreen



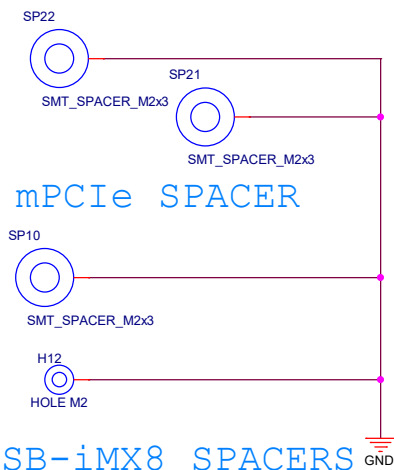
MIPI-DSI CONN



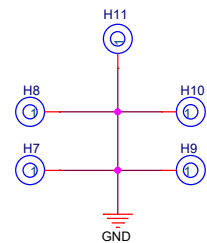
White LED Driver



SODIMM SPACERS



SB-iMX8 SPACERS




SPACER1

Spacer, (Standoff), Hex, 4x4 (4.5mm body length), M2, Male/Female

3.5mm M2
PAN HEAD

SCREW1
SCREW, M2, 3.5mm, PAN HEAD

		Compulab Ltd. (972) 4 8290100 P.O.Box 687 Yokneam 20692, Israel All Right reserved. Unauthorized duplication prohibited	
Size B	Title 10. MECHANICS	Rev 1.0	
Date: Sunday, July 14, 2019	Document Number: 8000064001	Sheet 10	of 10