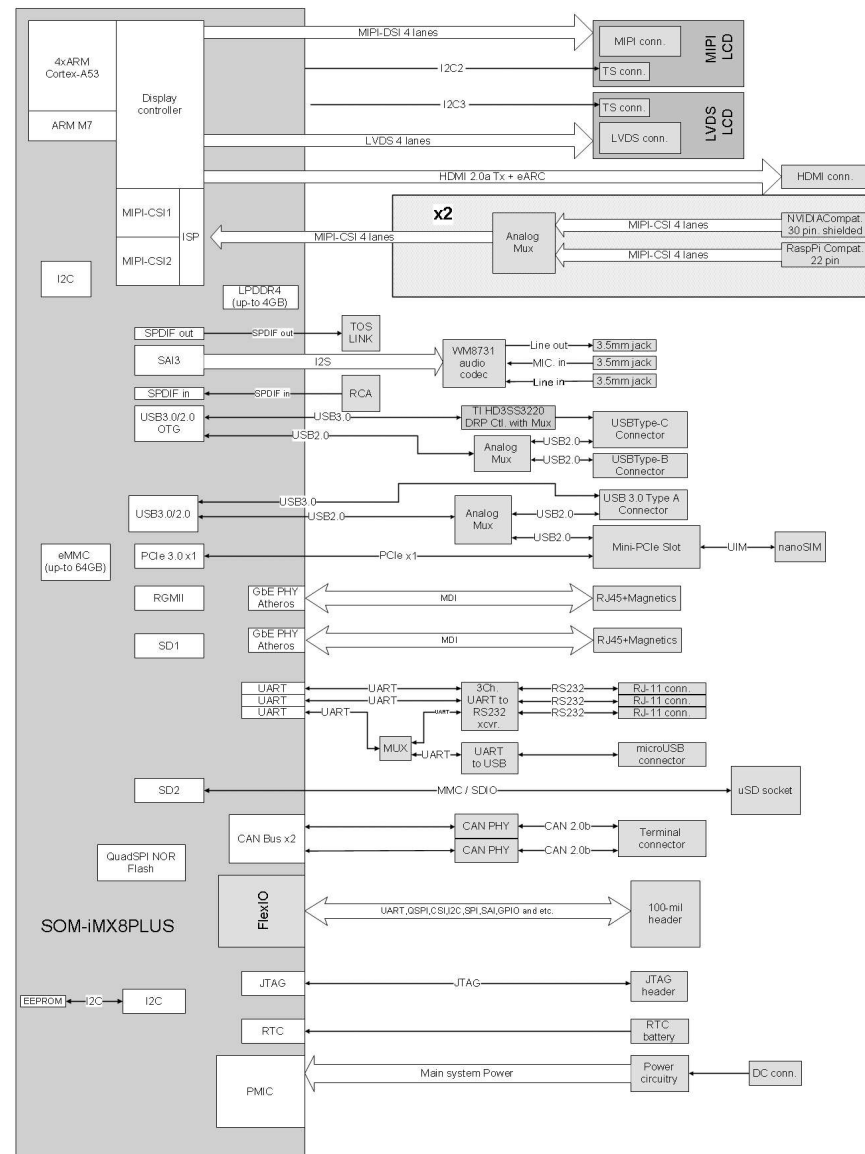


BOARD REVISION: 1.0

Page	Description
01	Block Diagram
02	Carrier-board interface
03	RJ-45 Ethernet connectors
04	USB3.0, Type-C, Host
05	Audio Codec
06	JTAG, CAN, GPIO Exp., Misc.
07	MIPI-DSI LCD
08	LVDS LCD
09	HDMI connector with eARC
10	MIPI-CSI1 Connectors
11	MIPI-CSI2 Connectors
12	PCIe
13	Power
14	UART, RS232, SD, EEPROM
15	Mechanical

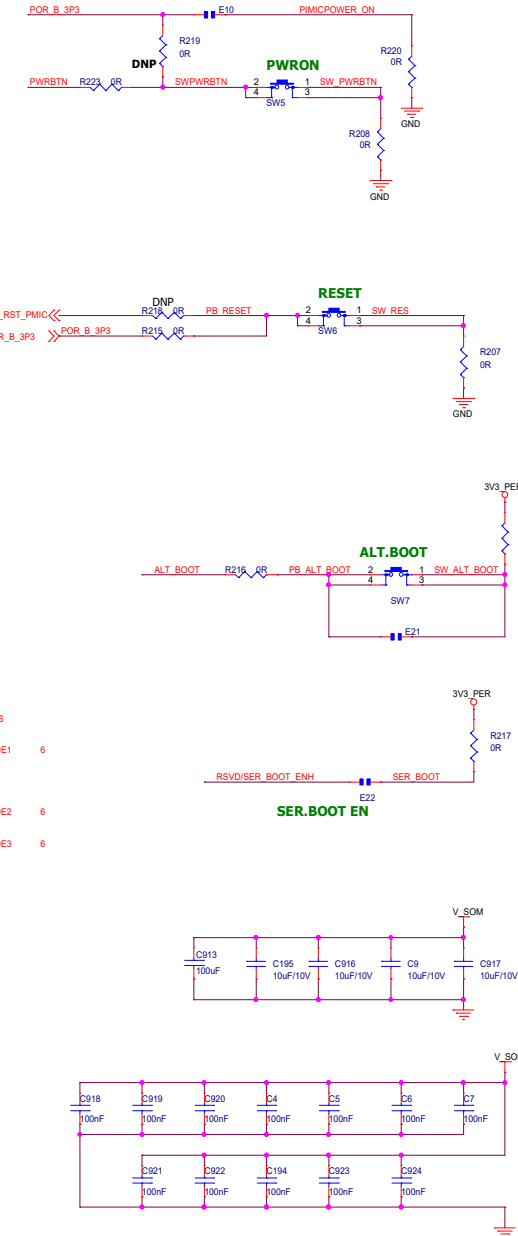
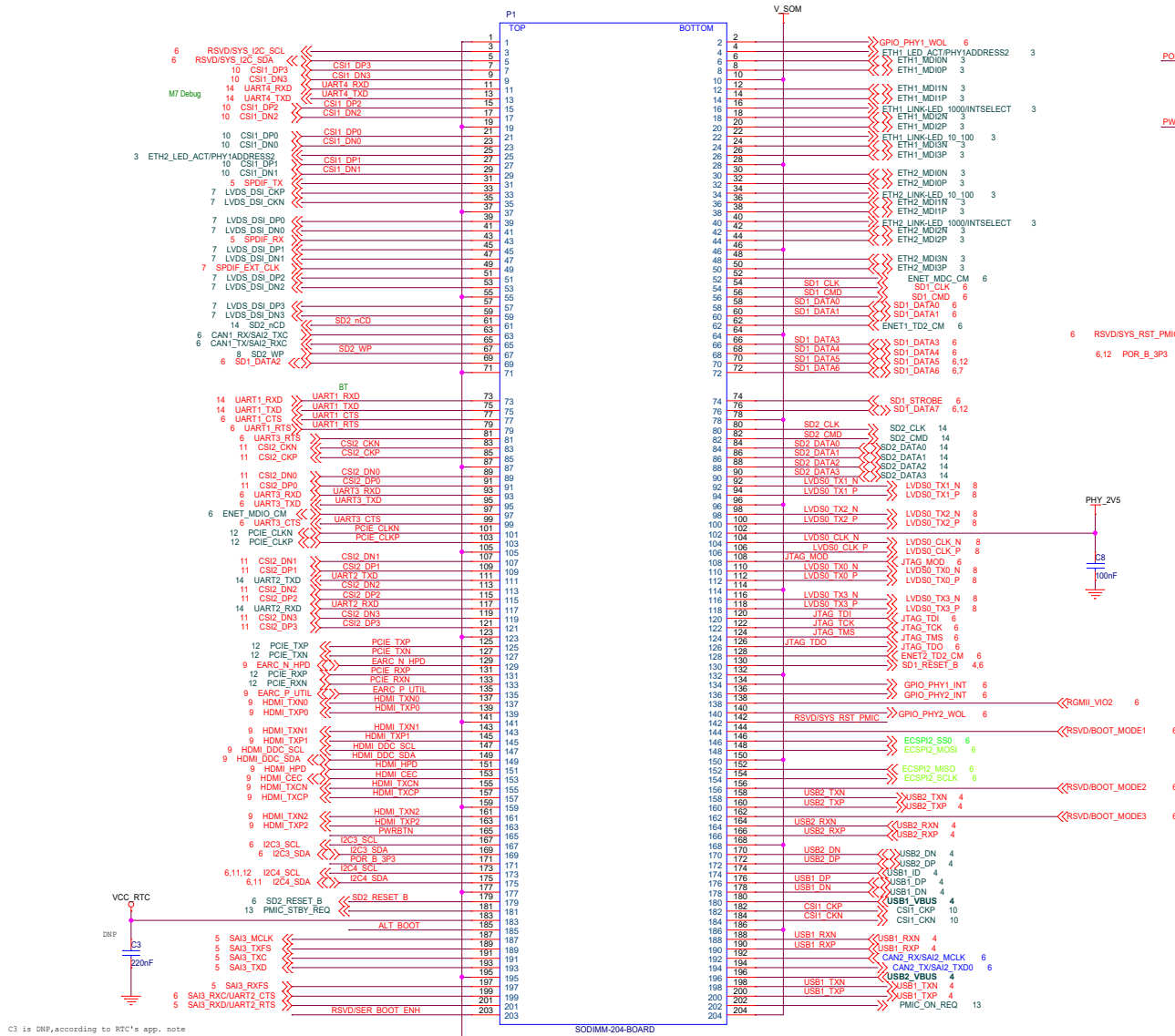


PCB1
PCB, SB-SOM-iMX8M PLUS, Rev1.0

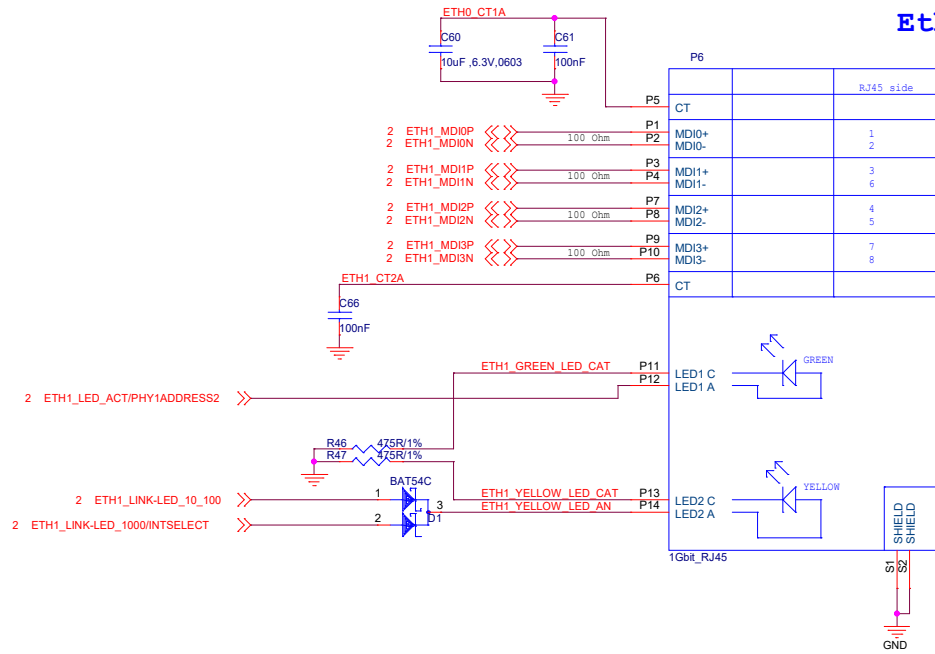
ZZ1

PARSER VERSION 1.0

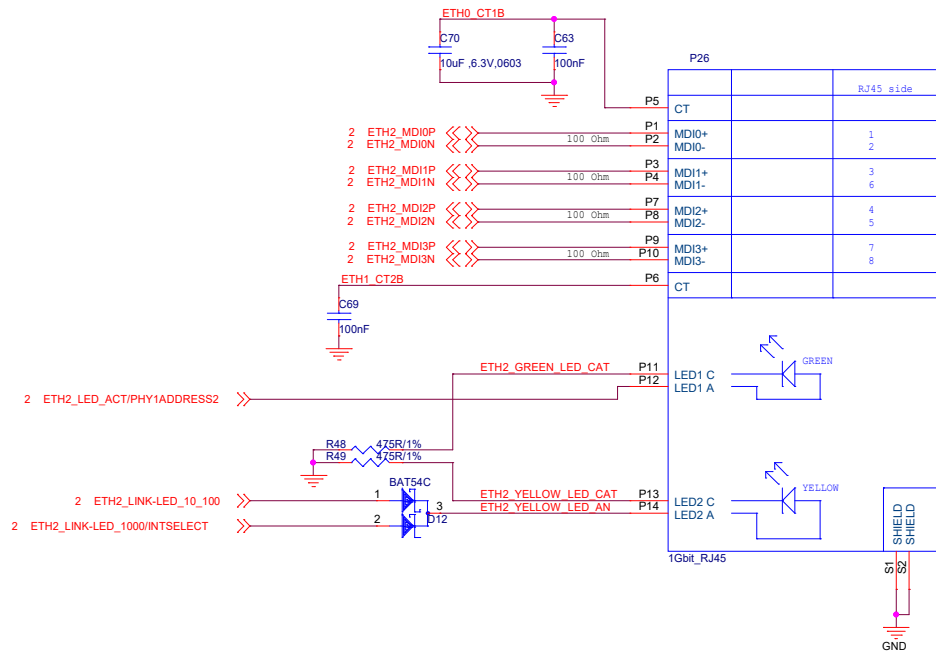
Carrier Board Interface



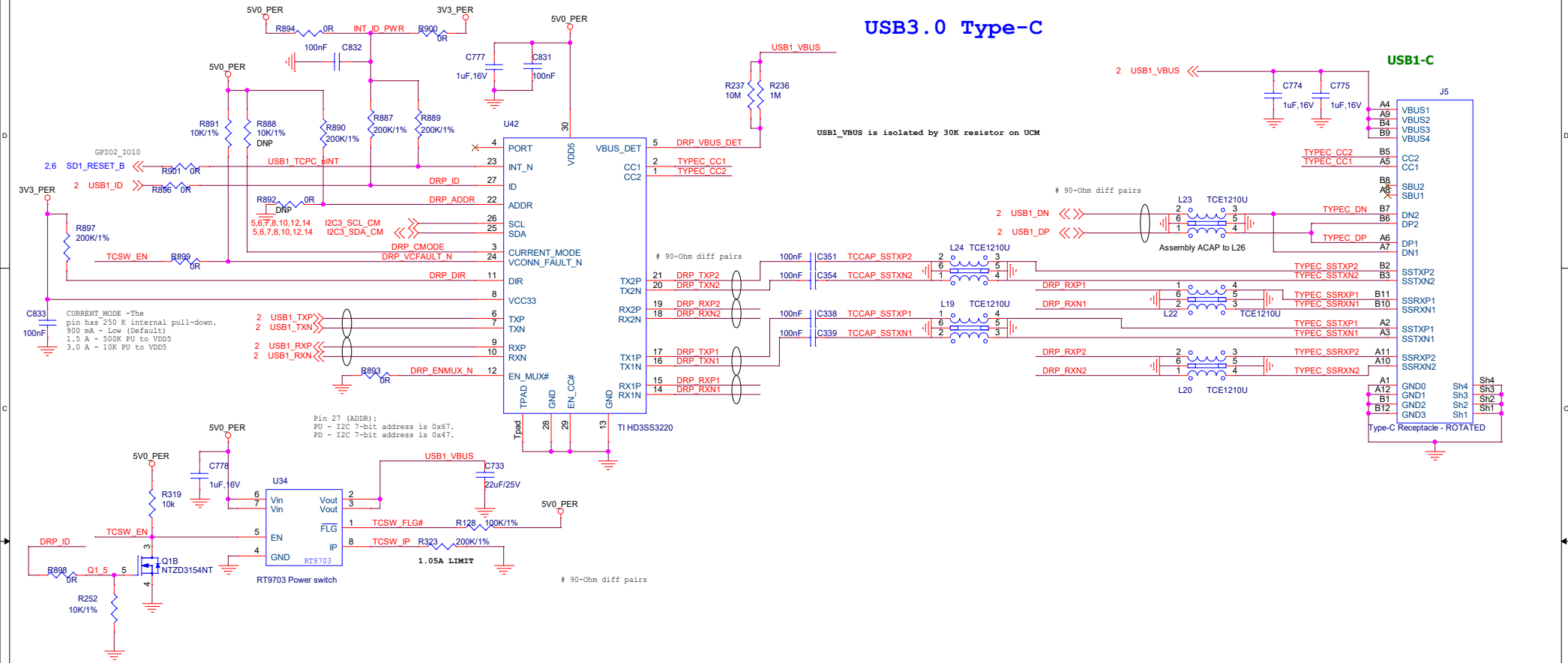
Ethernet connector 1



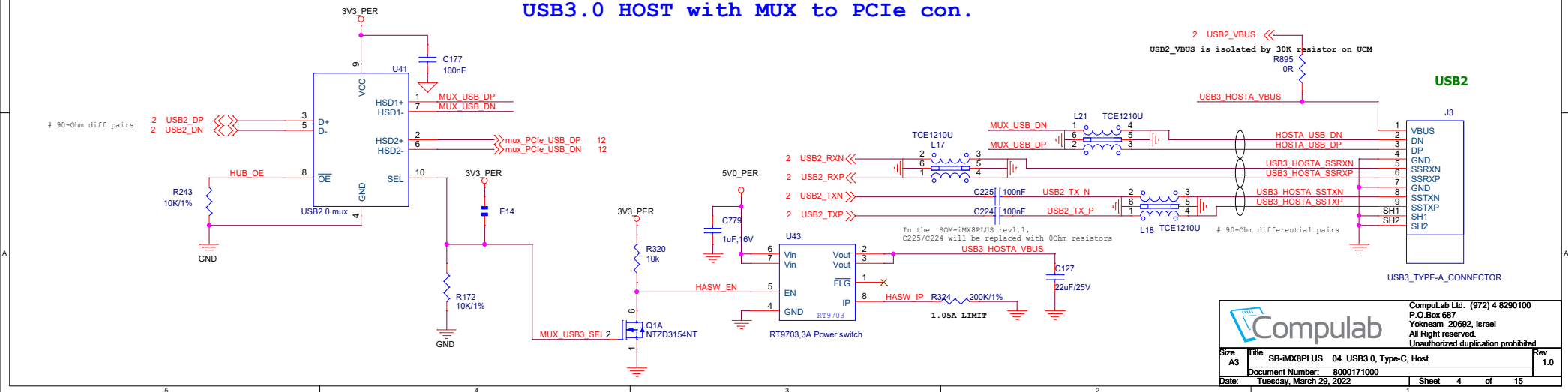
Ethernet connector 2



USB3.0 Type-C

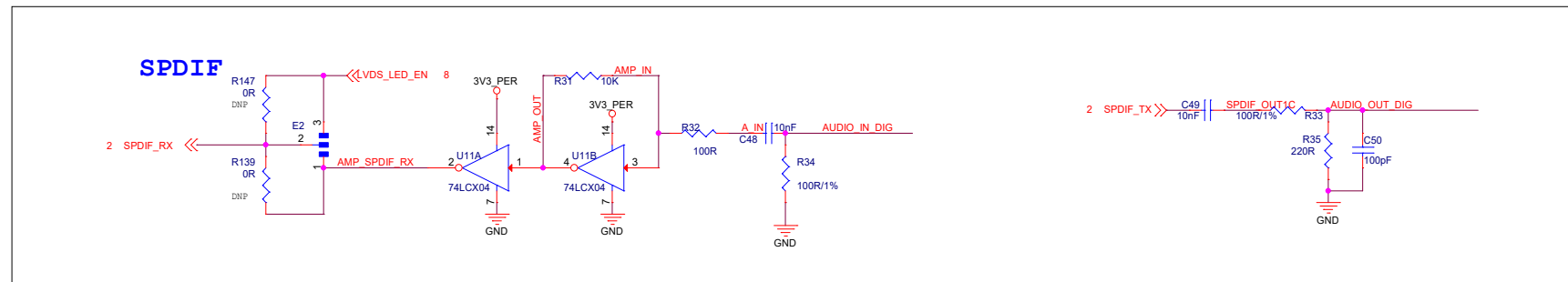
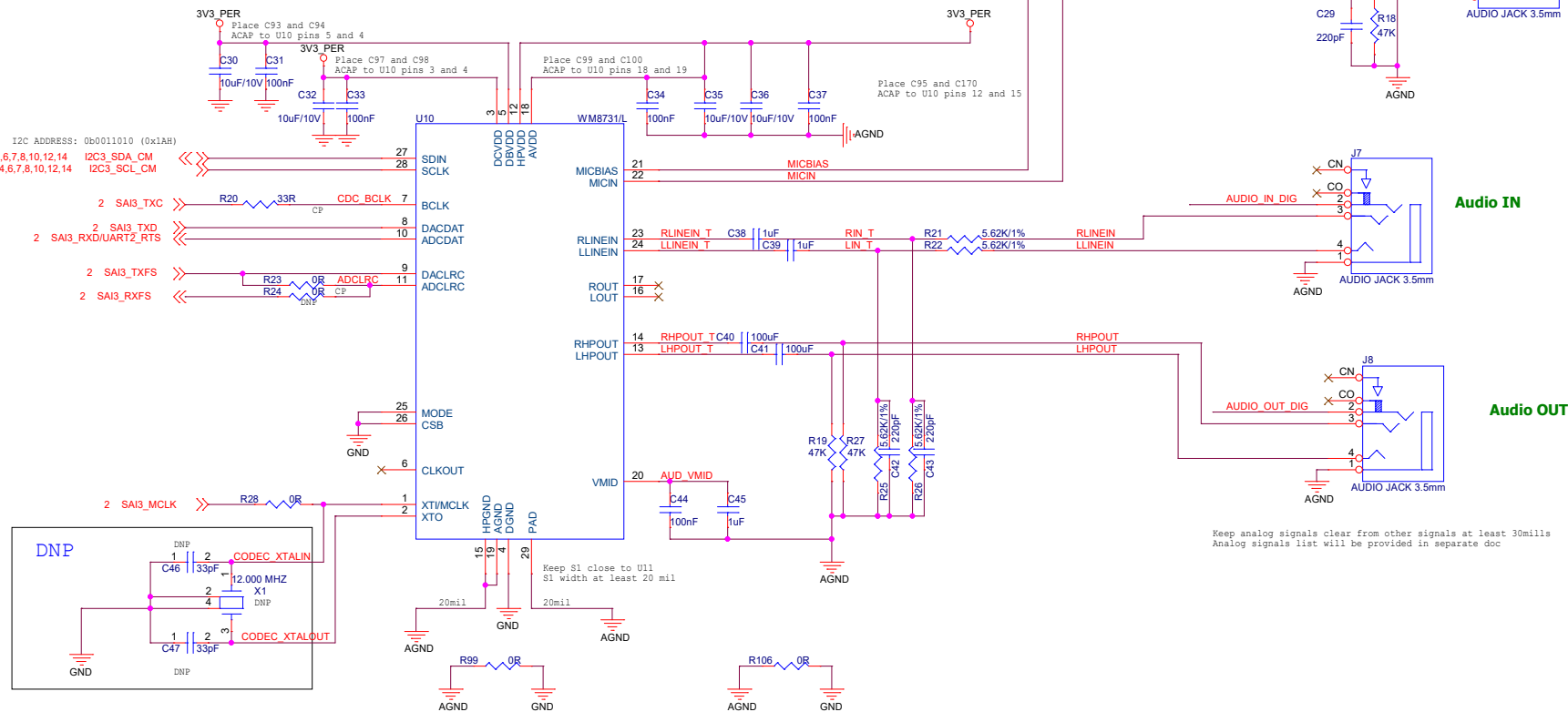


USB3.0 HOST with MUX to PCIe con.



Audio Codec

POWER CONSUMPTION:
 DBVDD = 1.5mA @ 3.3V (typ)
 DCVDD = 3.2mA @ 1.5V (typ) ==> assuming same current @ 3.3V
 HPVDD = 1.7mA @ 3.3V (typ)
 AVDD = 13.1mA @ 3.3V (typ)
 1.5+3.2+1.7+13.1=19.5mA @ 3.3V (typ):
 Assuming worst case is 50mA @ 3.3V



[illegible][illegible]

The diagram illustrates the I2C connection provision. It shows the RSVD/SYS_OC_SCL and RSVD/SYS_OC_SDA pins of the RSVD/SYS_OC_SDA component connected to the I2C3_SCL_CM and I2C3_SDA_CM pins of the I2C3 component. The connections are as follows:

- RSVD/SYS_OC_SCL is connected to I2C3_SCL_CM via a pull-up resistor R205 (4.75K1% R190) and a pull-down resistor R202 (4.75K1% R189).
- RSVD/SYS_OC_SDA is connected to I2C3_SDA_CM via a pull-up resistor R204 (4.75K1% R189) and a pull-down resistor R203 (4.75K1% R189).

The 3V3_PEX supply voltage is connected to the I2C3_SCL_CM and I2C3_SDA_CM pins.

MISC connectors

P25

3V3_PER

2 UART1_CTS 1 3 0 D 2
2 UART1_RTS 1 4 0 D 2
2 ENET_MDIO_CM 1 5 0 D 2
2 ENET_MDC_CM 1 6 0 D 2
2,11,12 EC2_SDA 1 7 0 D 2
2,21 EC2_SCL 1 8 0 D 2
2 SAUL_RXC_UART2_CTS 1 9 0 D 2
2 ENET2_TMD 1 10 0 D 2
2,6 SD1_RESET_B 1 11 0 D 2
2 GPIO_PHY1_INT 1 12 0 D 2
2 GPIO_PHY2_WOL 1 13 0 D 2
2 EC2SP_SSD 1 14 0 D 2
2 EC2SP_MSD 1 15 0 D 2
2 EC2SP_SCLx 1 16 0 D 2
1 17 0 D 2
1 18 0 D 2
1 19 0 D 2
1 20 0 D 2
1 21 0 D 2
1 22 0 D 2
1 23 0 D 2
1 24 0 D 2
1 25 0 D 2
1 26 0 D 2
1 27 0 D 2
1 28 0 D 2
1 29 0 D 2
1 30 0 D 2
1 31 0 D 2
1 32 0 D 2
1 33 0 D 2
1 34 0 D 2

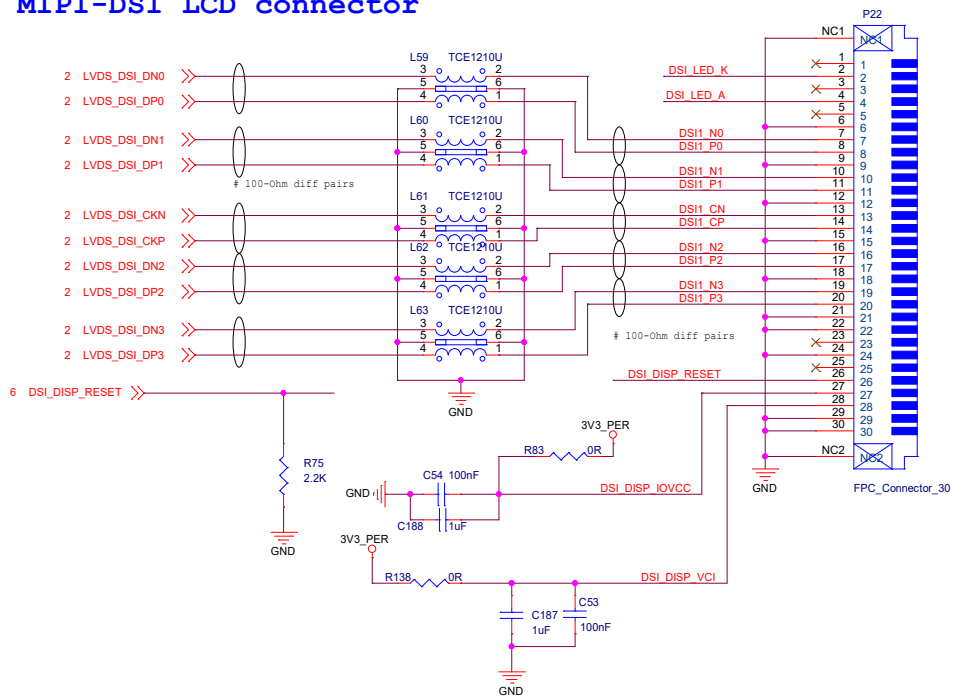
RSVD1SYS OC SDA
RSVD1SYS OC SCL
GPIO_PHY1_WOL 2
SD1_CLK 2
SD1_CMD 2
SD1_DATA0 2
SD1_DATA1 2
SD1_DATA3 2
SD1_DATA4 2,6
SD1_DATA5 2,6,12
SD1_DATA6 2,7
SD1_STROBE 2,8
SD1_DATA7 2,12
SD1_DATA2 2,12
RVS_SCL
RVS_SDA

P27

2 RGMII_VIO2 1 3 0 D 2
2 BOOT_MODE 1 4 0 D 2
2 BOOT_MODE 1 5 0 D 2
2 BOOT_MODE 1 6 0 D 2
2 SD2_RESET_B 1 7 0 D 2

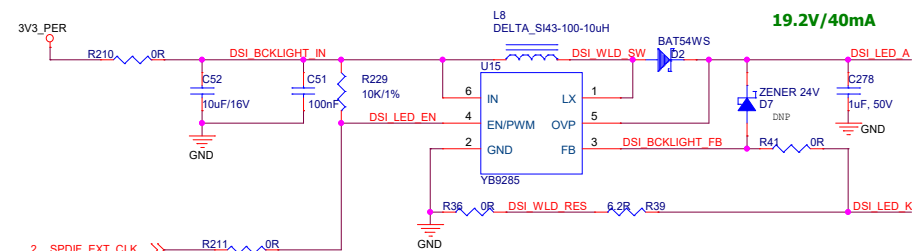
UART3_RTS 2
UART3_CTS 2
UART3_RXD 2
UART3_TXD 2
ENET1_TMD_CM 2

MIPI-DSI LCD connector

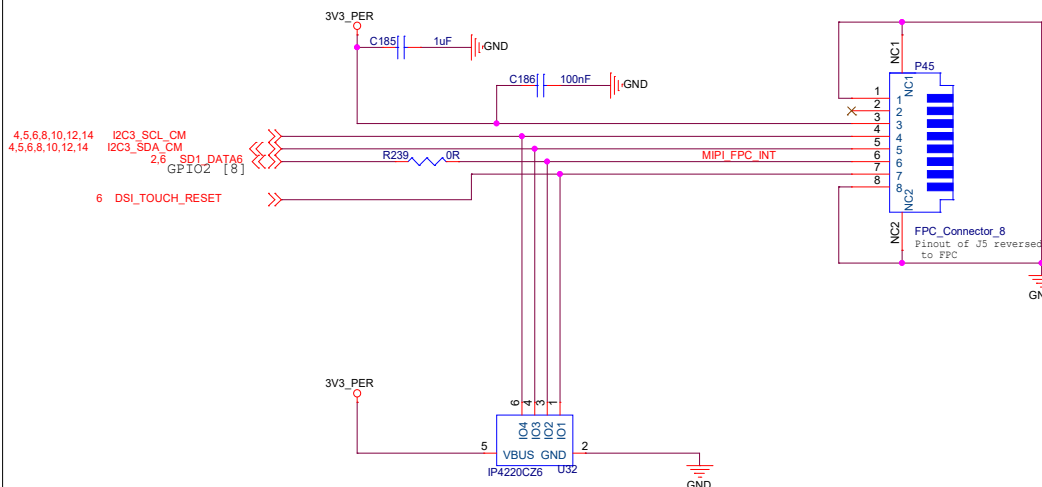


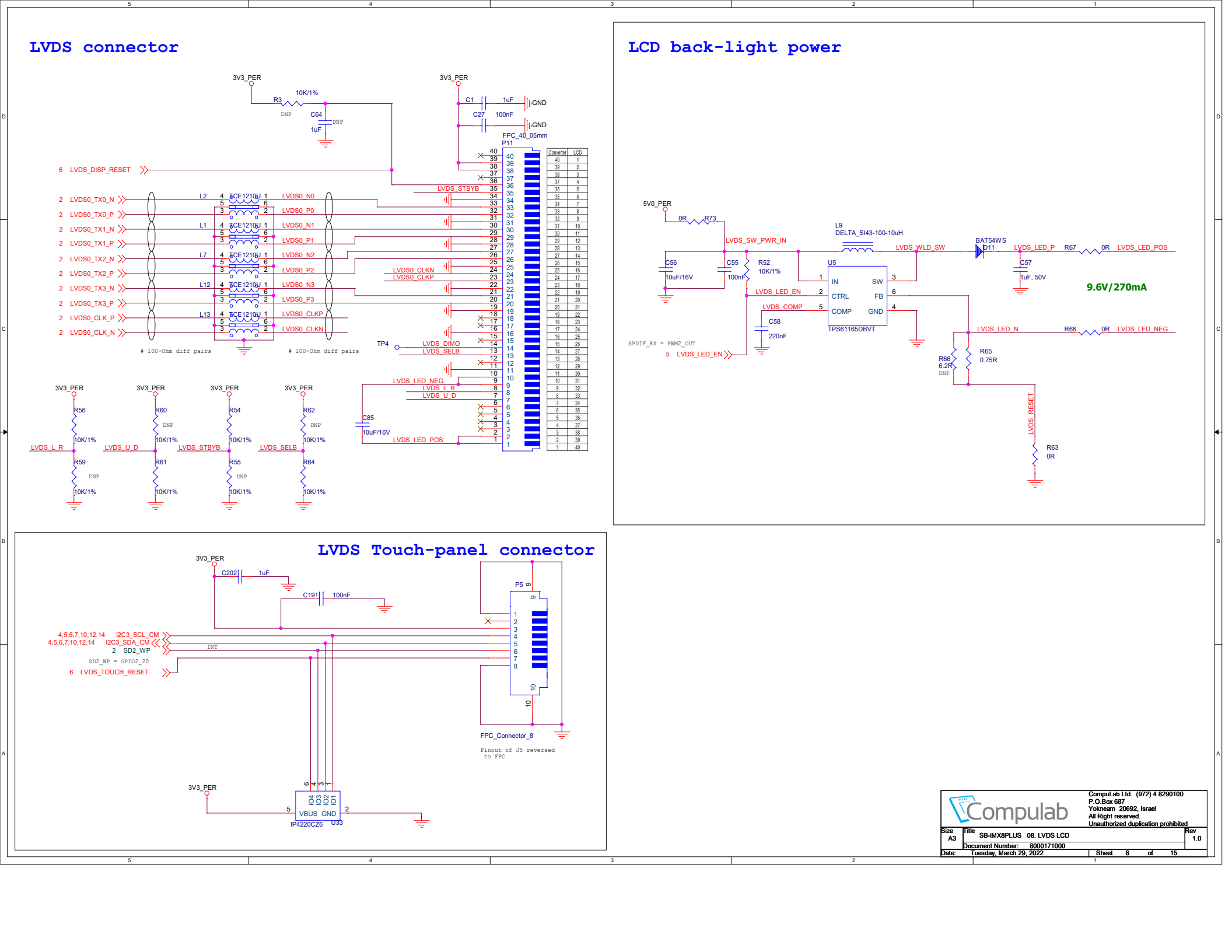
MIPI-DSI LCD back-light power

Typical LED configuration: Two parallel chains of 6 serially connected LEDs



MIPI-DSI touch-panel connector



[illegible]

LVDS connector

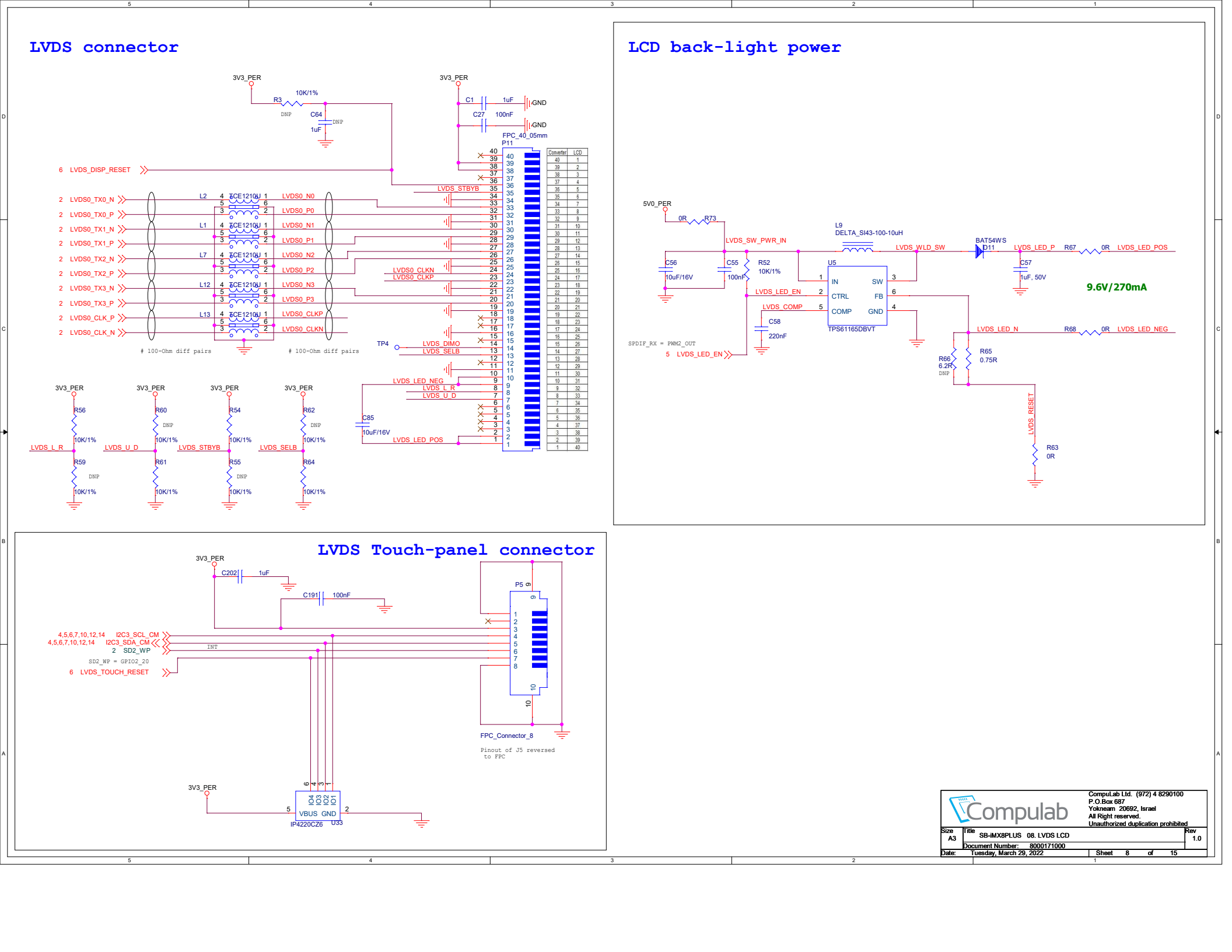
Connector	LCD
40	1
39	2
38	3
37	4
36	5
35	6
34	7
33	8
32	9
31	10
30	11
29	12
28	13
27	14
26	15
25	16
24	17
23	18
22	19
21	20
20	21
19	22
18	23
17	24
16	25
15	26
14	27
13	28
12	29
11	30
10	31
9	32
8	33
7	34
6	35
5	36
4	37
3	38
2	39
1	40

LCD back-light power

LVDS Touch-panel connector

Connector	LCD
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40

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Size	A3	Title	SB-IMX8PLUS 08. LVDS LCD
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LVDS connector

Pin	Signal
1	LVDS_LED_POS
2	LVDS_LED_EN
3	LVDS_LED_N
4	LVDS_LED_P
5	LVDS_LED_N
6	LVDS_LED_P
7	LVDS_LED_N
8	LVDS_LED_P
9	LVDS_LED_N
10	LVDS_LED_P
11	LVDS_LED_N
12	LVDS_LED_P
13	LVDS_LED_N
14	LVDS_LED_P
15	LVDS_LED_N
16	LVDS_LED_P
17	LVDS_LED_N
18	LVDS_LED_P
19	LVDS_LED_N
20	LVDS_LED_P
21	LVDS_LED_N
22	LVDS_LED_P
23	LVDS_LED_N
24	LVDS_LED_P
25	LVDS_LED_N
26	LVDS_LED_P
27	LVDS_LED_N
28	LVDS_LED_P
29	LVDS_LED_N
30	LVDS_LED_P
31	LVDS_LED_N
32	LVDS_LED_P
33	LVDS_LED_N
34	LVDS_LED_P
35	LVDS_LED_N
36	LVDS_LED_P
37	LVDS_LED_N
38	LVDS_LED_P
39	LVDS_LED_N
40	LVDS_LED_P

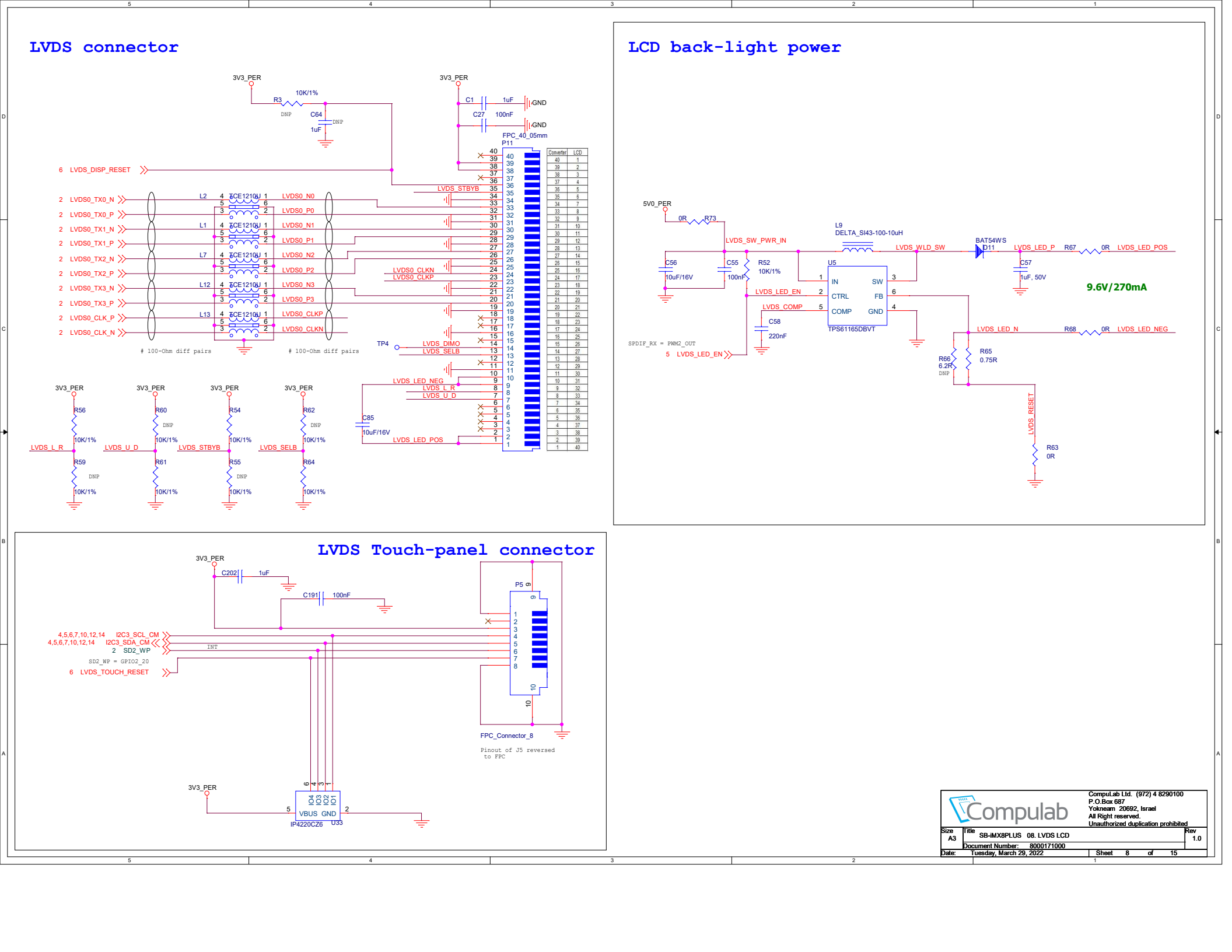
LCD back-light power

Pin	Signal
1	LVDS_LED_POS
2	LVDS_LED_EN
3	LVDS_LED_N
4	LVDS_LED_P
5	LVDS_LED_N
6	LVDS_LED_P
7	LVDS_LED_N
8	LVDS_LED_P
9	LVDS_LED_N
10	LVDS_LED_P
11	LVDS_LED_N
12	LVDS_LED_P
13	LVDS_LED_N
14	LVDS_LED_P
15	LVDS_LED_N
16	LVDS_LED_P
17	LVDS_LED_N
18	LVDS_LED_P
19	LVDS_LED_N
20	LVDS_LED_P
21	LVDS_LED_N
22	LVDS_LED_P
23	LVDS_LED_N
24	LVDS_LED_P
25	LVDS_LED_N
26	LVDS_LED_P
27	LVDS_LED_N
28	LVDS_LED_P
29	LVDS_LED_N
30	LVDS_LED_P
31	LVDS_LED_N
32	LVDS_LED_P
33	LVDS_LED_N
34	LVDS_LED_P
35	LVDS_LED_N
36	LVDS_LED_P
37	LVDS_LED_N
38	LVDS_LED_P
39	LVDS_LED_N
40	LVDS_LED_P

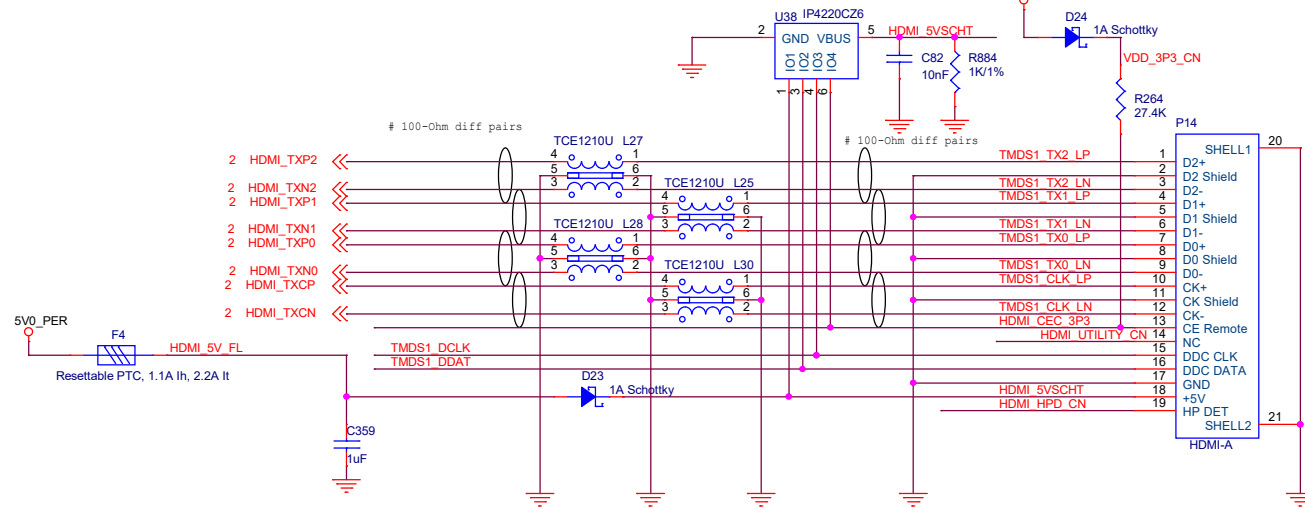
LVDS Touch-panel connector

Pin	Signal
1	LVDS_LED_POS
2	LVDS_LED_EN
3	LVDS_LED_N
4	LVDS_LED_P
5	LVDS_LED_N
6	LVDS_LED_P
7	LVDS_LED_N
8	LVDS_LED_P
9	LVDS_LED_N
10	LVDS_LED_P
11	LVDS_LED_N
12	LVDS_LED_P
13	LVDS_LED_N
14	LVDS_LED_P
15	LVDS_LED_N
16	LVDS_LED_P
17	LVDS_LED_N
18	LVDS_LED_P
19	LVDS_LED_N
20	LVDS_LED_P
21	LVDS_LED_N
22	LVDS_LED_P
23	LVDS_LED_N
24	LVDS_LED_P
25	LVDS_LED_N
26	LVDS_LED_P
27	LVDS_LED_N
28	LVDS_LED_P
29	LVDS_LED_N
30	LVDS_LED_P
31	LVDS_LED_N
32	LVDS_LED_P
33	LVDS_LED_N
34	LVDS_LED_P
35	LVDS_LED_N
36	LVDS_LED_P
37	LVDS_LED_N
38	LVDS_LED_P
39	LVDS_LED_N
40	LVDS_LED_P

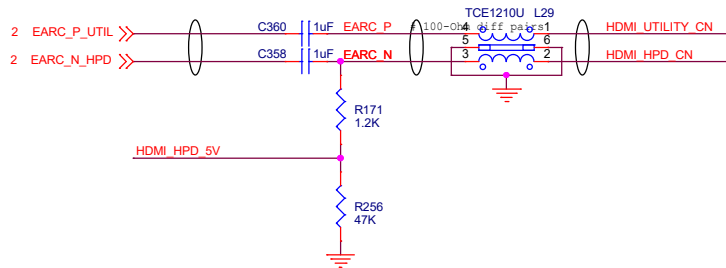
		Compulab Ltd. (972) 4 8290100 P.O. Box 687 Yokneam 20692, Israel All Right reserved. Unauthorized duplication prohibited	
Size	A3	Title	SB-IMX8PLUS 08. LVDS LCD
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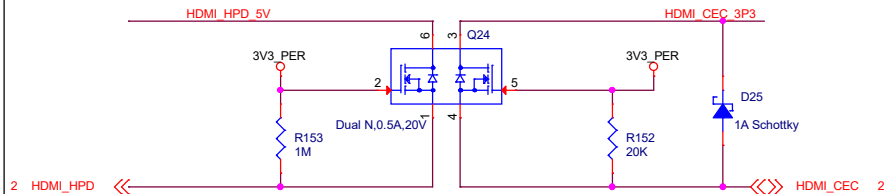
HDMI connector with eARC



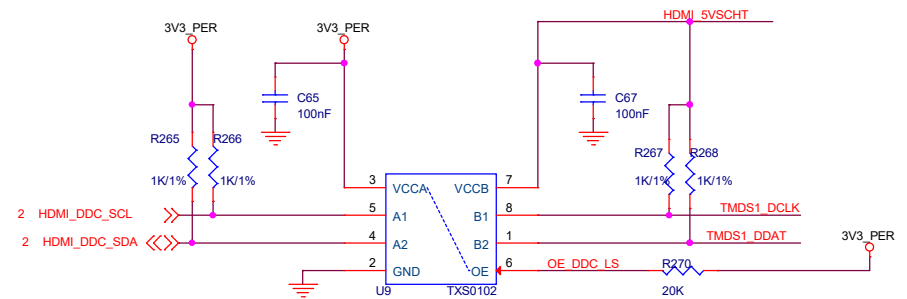
eARC ESD and HPD DC Filter



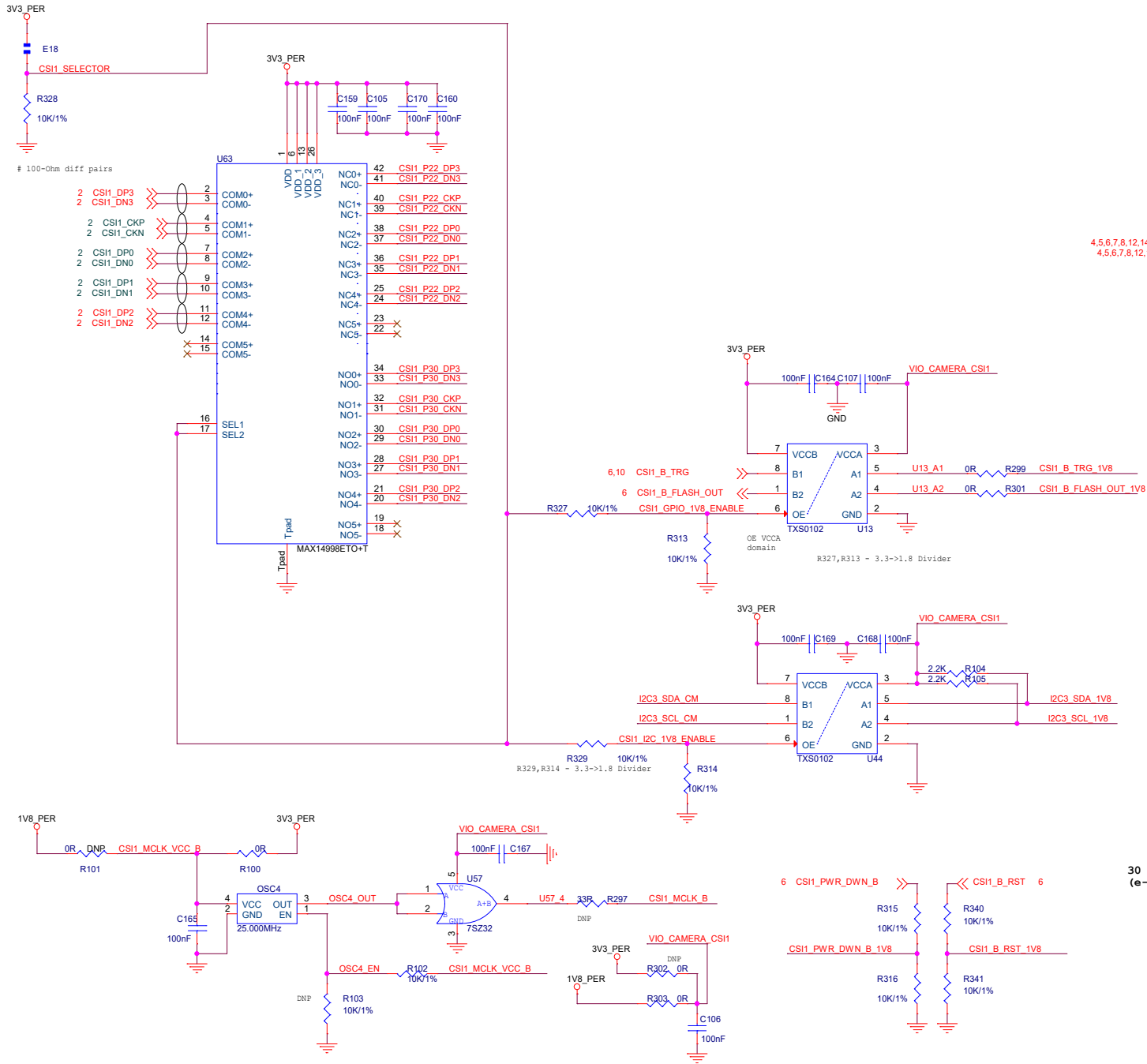
HPD and CEC Level Shifter



DDC Level Shifter

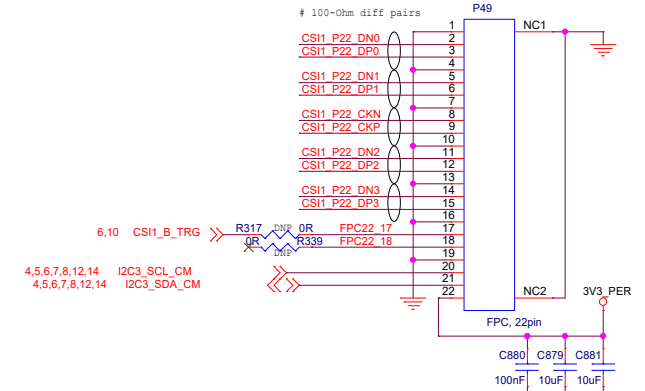


MIPI-CSI1 Connectors

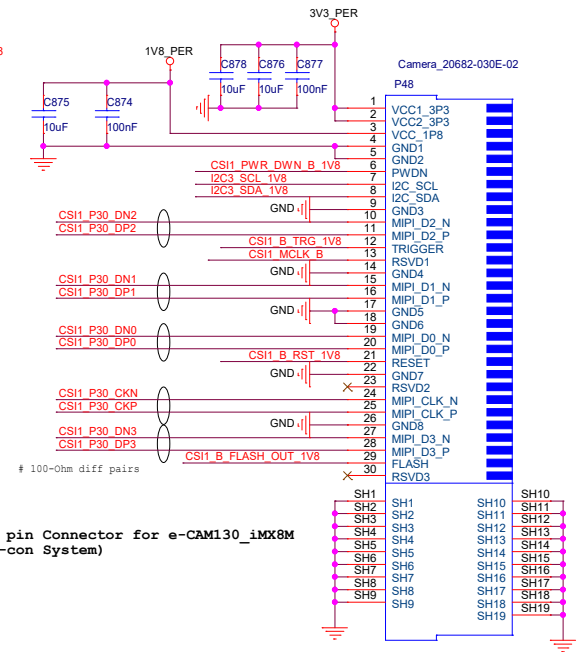


MIPI-CSI1 (22-pin, 3.3V)

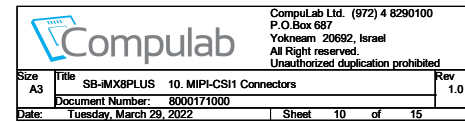
22-pin Connector for RPi cameras
Four MIPI-CSI lanes connected



MIPI-CSI1 (30-pin, 1.8V)



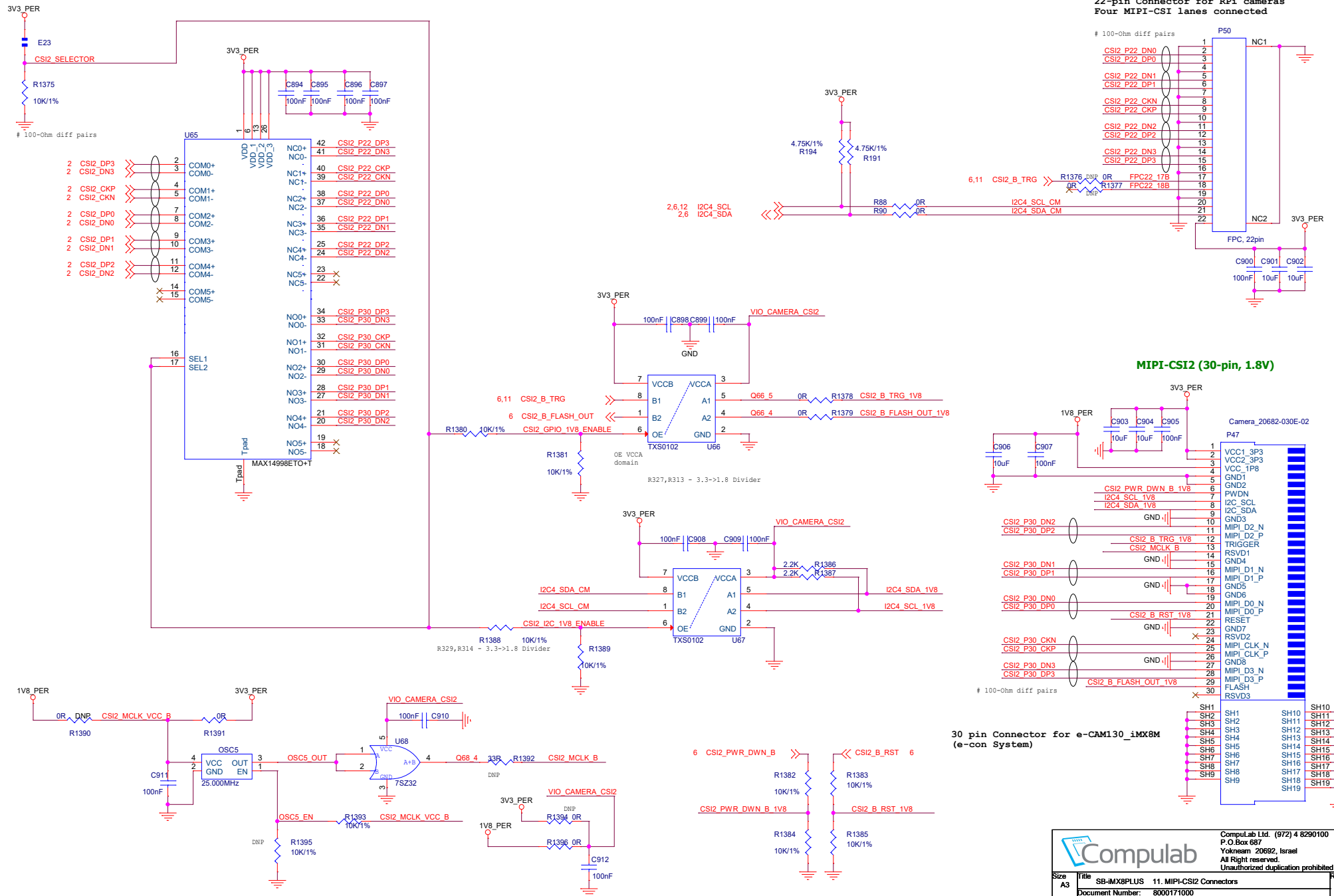
30 pin Connector for e-CAM130_IMX8M
(e-con System)



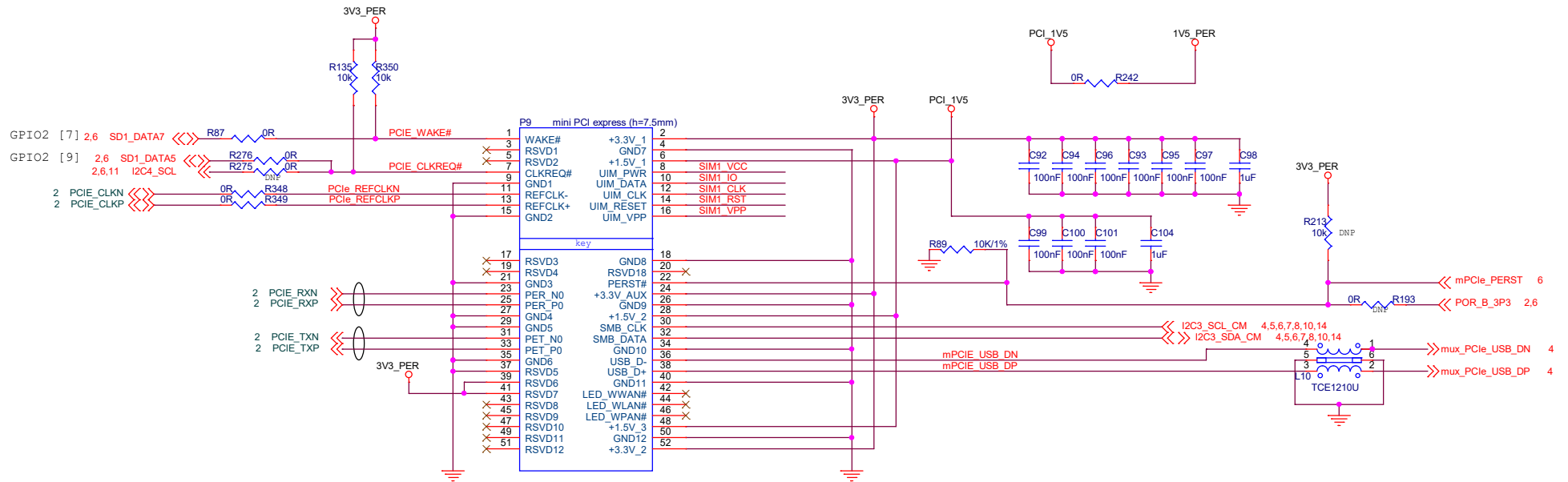
MIPI-CSI2 Connectors

MIPI-CSI2 (22-pin, 3.3V)

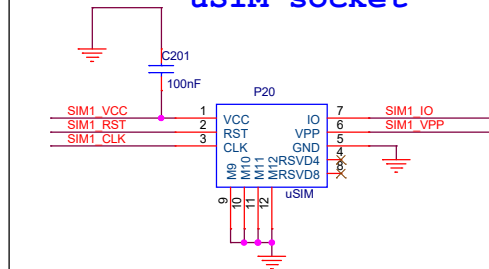
22-pin Connector for RPi cameras
Four MIPI-CSI lanes connected

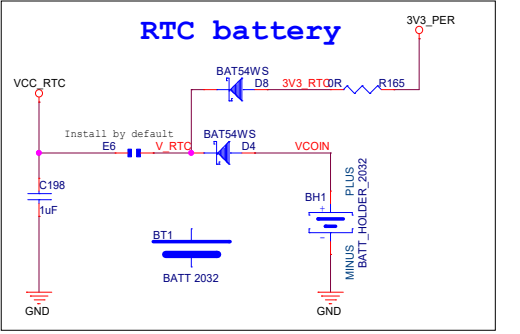
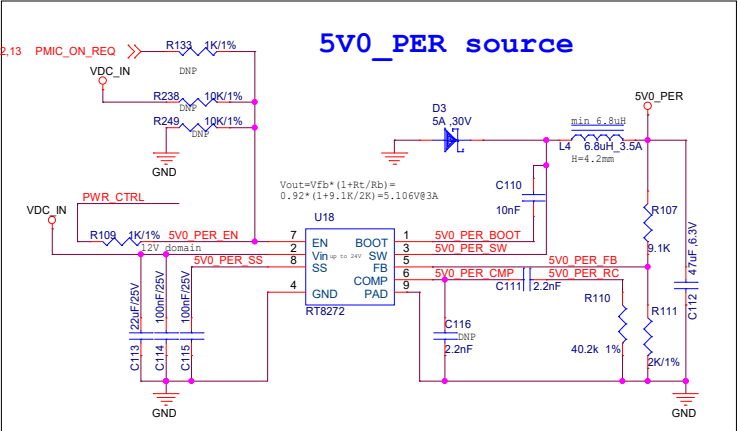
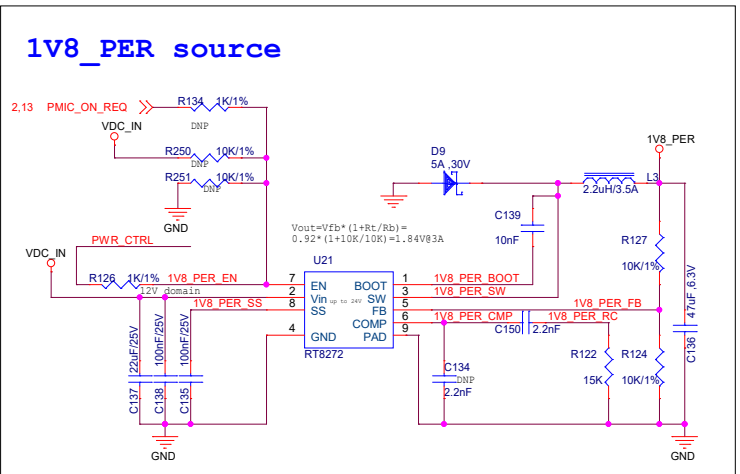
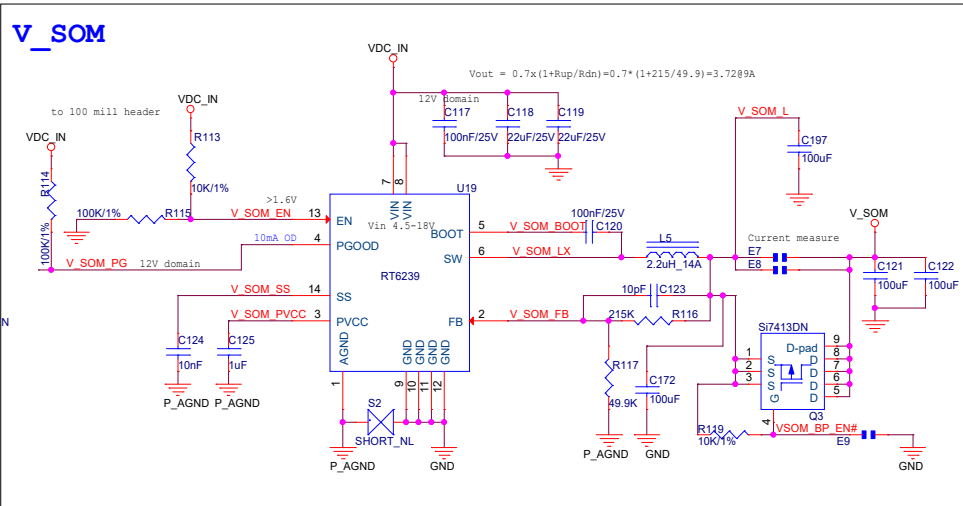
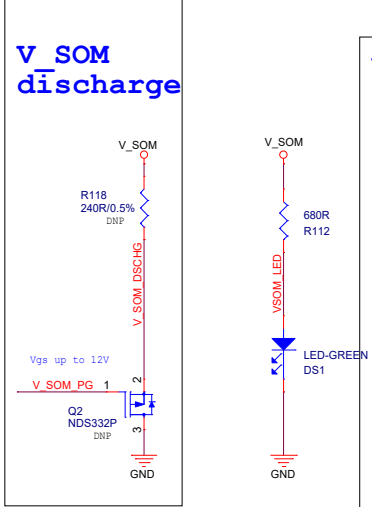
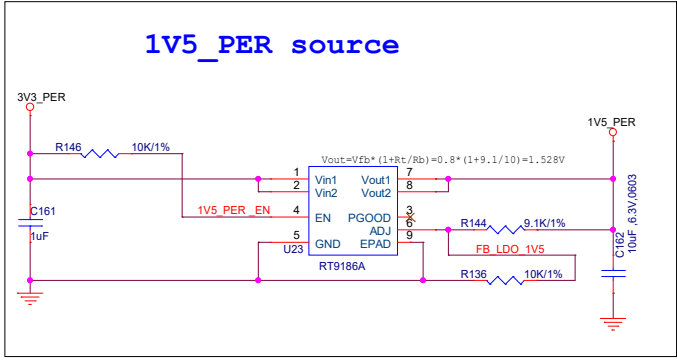
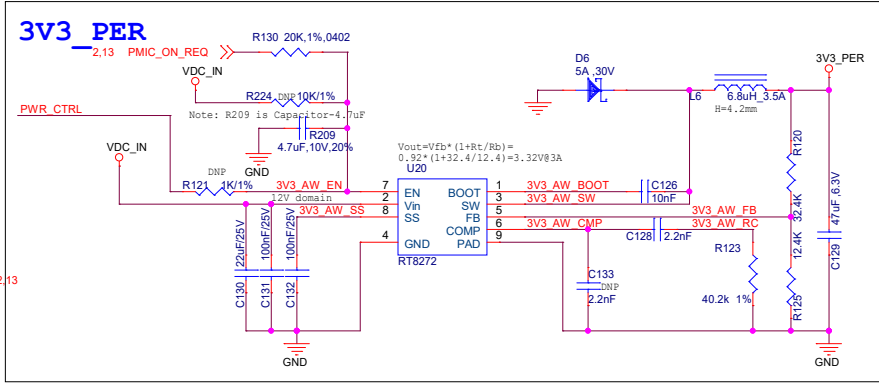
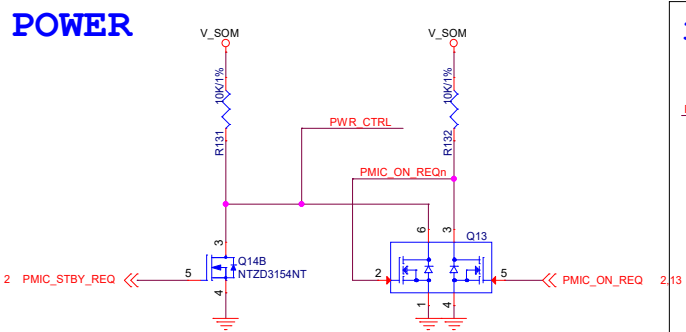
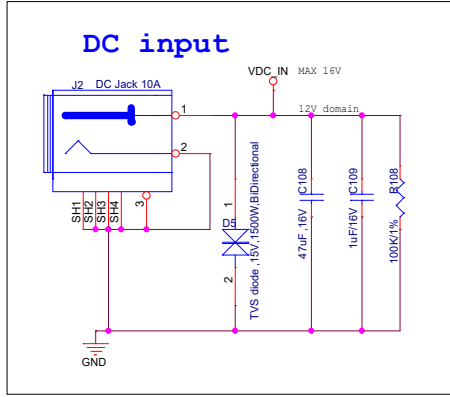


mini PCIe socket & SIM socket

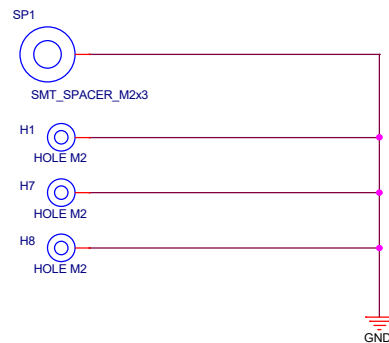


uSIM socket

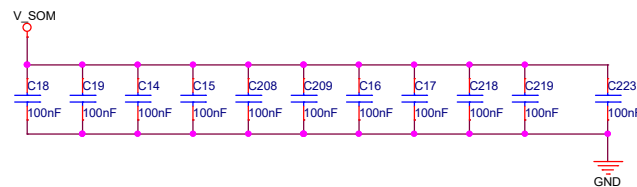
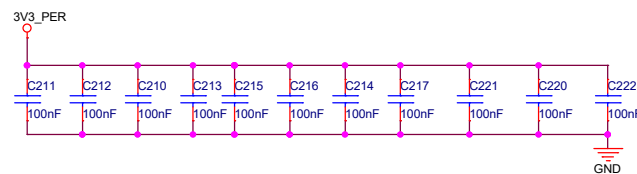
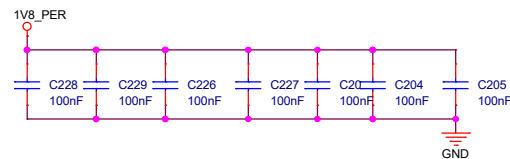
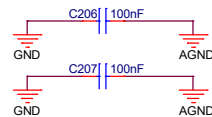




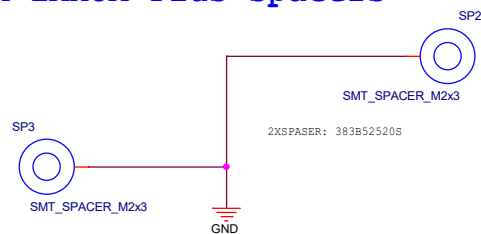
For PCIe module




Stitching capacitors



SOM-iMX8M-Plus spacers



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		Title: SB-IMX8PLUS 15. Mechanical Document Number: 8000171000 Date: Tuesday, March 29, 2022	Rev 1.0 Sheet 15 of 15