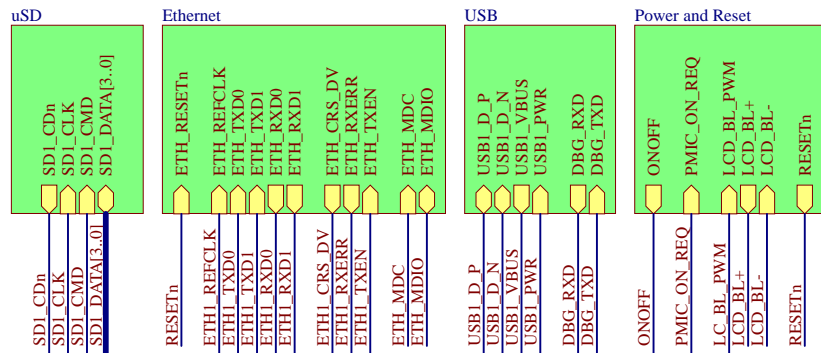
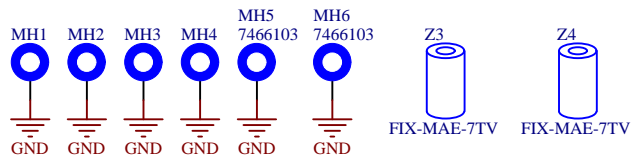


Rev. 1.0.0
- prototype

Rev. 1.1.0
- added R89 1k pull-up on ETH_MDC
- changed R101 from 4k7 to 1k on ETH_MDIO
- R4 and R5 now connected to 3V3_SNVS
- added 10k pull-ups to S1
- U3 pin 1 (VCCIO) connected to 3V3 instead 3.3V_DBG
- U1 pin 15 (nRST) connected to global RESETn signal
- added inverter U10 to SD2_CD signal
- P62 connected to JTAG_MOD instead CCM_CLK1_N
- P19 connected to UART2_CTS_B and P20 to UART2_RTS_B
- added missing parts to the BOM

Rev. 1.2.0
- R15 connected to 3V3 instead GND
- MH5, MH6 and R67 mounted
- R67 not mounted
- changed U9 (MAX803) package to SC70
- R4, R5 and R97-R100 changed from 10k to 1k
- BOOT_TCFG2[3] replaced BOOT_CFG1[0] in S1 pos. 6
- fixed BOM issues

Rev. 1.3.0
- improved schematic readability
- added plastic spacers to the BOM
- P41 connected to ENET2_RX_EN (UART1_TX)
- P59 connected to LCD_RESET
- P61 connected to ENET2_TX_EN
- P51, P53 and P79 connected to GND
- P63 connected to CCM_CLK1_P
- P64 connected to CCM_CLK1_N
- R92-R96 are now in series with I2S signals instead of JTAG
- fixed J8 pin numbering on "Top Overlay" layer
- replaced BOOT_CFG1[7..6] with BOOT_CFG2[6..5] in S1
- replaced Q1 transistor AP2319GN with DMP3099L-7

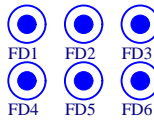
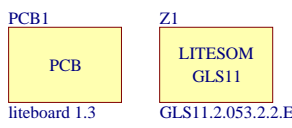
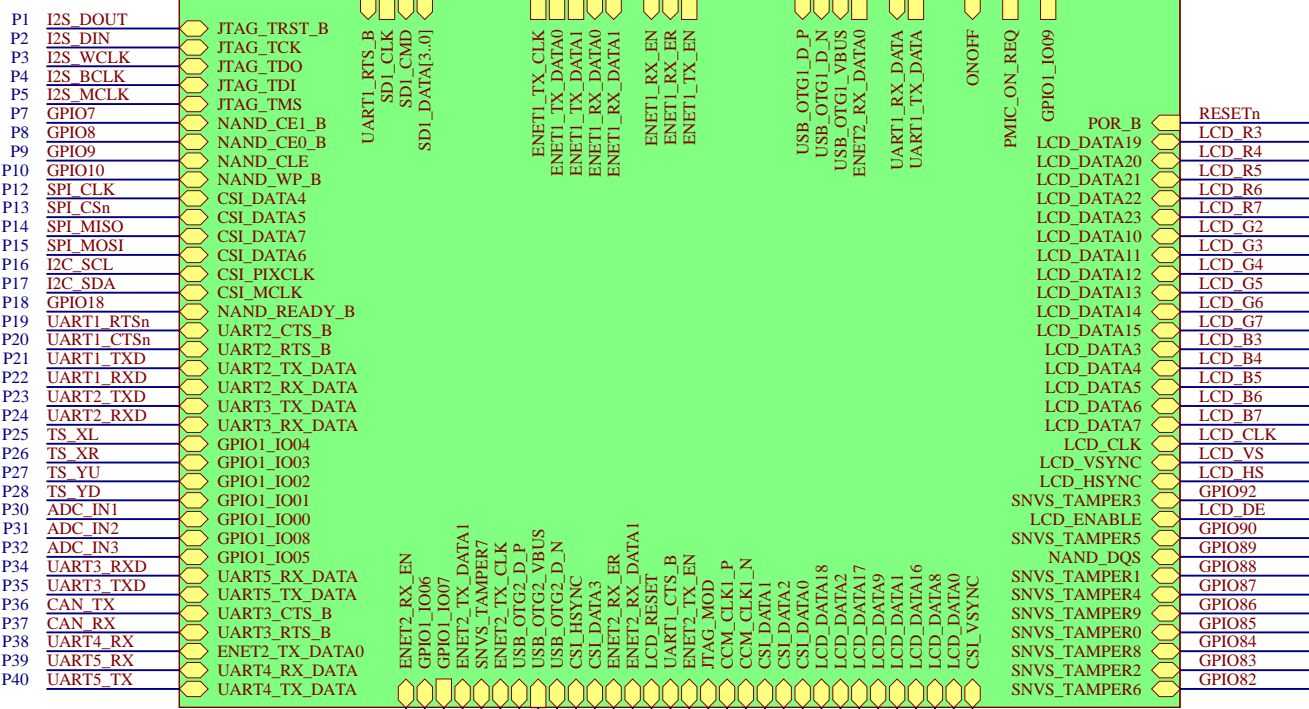


P1	I2S_DOUT	1	2	I2S_DIN	P2
P3	I2S_WCLK	3	4	I2S_BCLK	P4
P5	I2S_MCLK	5	6	GND	P6
P7	GPIO7	7	8	GPIO8	P8
P9	GPIO9	9	10	GPIO10	P10
P11	GND	11	12	SPI_CLK	P12
P13	SPI_CS _n	13	14	SPI_MISO	P14
P15	SPI_MOSI	15	16	I2C_SCL	P16
P17	I2C_SDA	17	18	GPIO18	P18
P19	UART1_RTS _n	19	20	UART1_CTS _n	P20
P21	UART1_TXD	21	22	UART1_RXD	P22
P23	UART2_TXD	23	24	UART2_RXD	P24
P25	TS_XL	25	26	TS_XR	P26
P27	TS_YU	27	28	TS_YD	P28
P29	GND	29	30	ADC_IN1	P30
P31	ADC_IN2	31	32	ADC_IN3	P32
P33	GND	33	34	UART3_RXD	P34
P35	UART3_TXD	35	36	CAN_TX	P36
P37	CAN_RX	37	38	UART4_RX	P38
P39	UART5_RX	39	40	UART5_TX	P40

P41	UART4_TX	1	2	ETH_MDIO	P42
P43	ETH_MDC	3	4	USB2_PWR	P44
P45	GPIO45	5	6	USB2_ID	P46
P47	GND	7	8	USB2_D_P	P48
P49	USB2_VBUS	9	10	USB2_D_N	P50
P51	GND	11	12	SD2_CMD	P52
P53	GND	13	14	GND	P54
P55	SD2_DATA3	15	16	GPIO56	P56
P57	GND	17	18	GPIO58	P58
P59	GPIO59	19	20	GPIO60	P60
P61	GPIO61	21	22	GPIO62	P62
P63	CLK_P	23	24	CLK_N	P64
P65	SD2_DATA1	25	26	SD2_DATA2	P66
P67	GND	27	28	SD2_DATA0	P68
P69	GND	29	30	LCD_R2	P70
P71	LCD_B2	31	32	LCD_R1	P72
P73	LCD_G1	33	34	LCD_B1	P74
P75	LCD_R0	35	36	LCD_G0	P76
P77	LCD_B0	37	38	SD2_CLK	P78
P79	GND	39	40	GND	P80

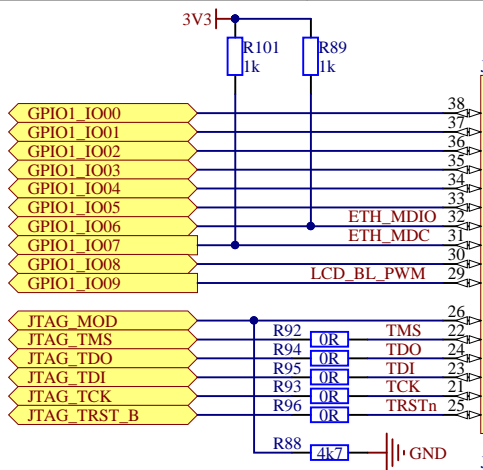
P81	GND	1	2	GPIO82	P82
P83	GPIO83	3	4	GPIO84	P84
P85	GPIO85	5	6	GPIO86	P86
P87	GPIO87	7	8	GPIO88	P88
P89	GPIO89	9	10	GPIO90	P90
P91	LCD_DE	11	12	GPIO92	P92
P93	LCD_HS	13	14	LCD_VS	P94
P95	GND	15	16	LCD_CLK	P96
P97	LCD_B7	17	18	LCD_B6	P98
P99	LCD_B5	19	20	LCD_B4	P100
P101	LCD_B3	21	22	LCD_G7	P102
P103	LCD_G6	23	24	LCD_G5	P104
P105	LCD_G4	25	26	LCD_G3	P106
P107	LCD_G2	27	28	LCD_R7	P108
P109	LCD_R6	29	30	LCD_R5	P110
P111	LCD_R4	31	32	LCD_R3	P112
P113	RESETn	33	34	LCD_BL+	P114
P115	LCD_BL-	35	36		P116
P117	GND	37	38	3V3	P118
P119	GND	39	40	5V_SYS	P120

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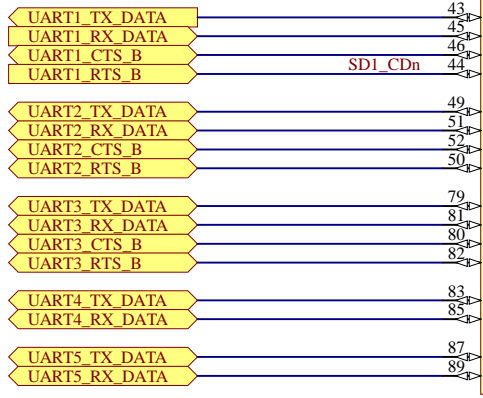
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Size	A4	Project	liteboard
Date	2017-11-24	Rev	1.3.0
		Number	
		Sheet	1 / 8





liteSOM GPIO Group

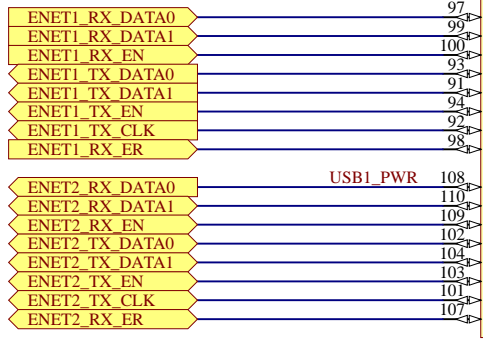
GPIO1_IO00	K13	I2C2_SCL/GPT1_CAPTURE1/ANATOP_OTG1_ID/ENET1_REF_CLK1/MOS_RIGHT/GPIO1_I000/ENET1_1588_EVENT0_IWSRC_SYSTEM_RESET/WDOG3_WDOG_BIADC1_I00/ADC2_I0
GPIO1_IO01	L15	I2C2_SDA/GPT1_COMPARE1/USB_OTG1_OC/ENET2_REF_CLK2/MOS_LEFT/GPIO1_I001/ENET1_1588_EVENT0_OUT/SRC_EARLY_RESET/WDOG1_WDOG_BIADC1_I01/ADC2_I01
GPIO1_IO02	L14	I2C1_SCL/GPT1_COMPARE2/USB_OTG2_PWR/ENET1_REF_CLK_25M/USDH1_WP/GPIO1_I002/SDMA_EXT_EVENT00/SRC_ANY_PU_RESET/UART1_DCE_TX/UART1_DTE_RX/ADC1_I02/ADC2_I02
GPIO1_IO03	L17	I2C1_SDA/GPT1_COMPARE3/USB_OTG2_OC/REF_CLK_32K/USDH1_CD_B/GPIO1_I003/CCM_DIO_EXT_CLK/SRC_TESTER_ACK/UART1_DCE_RX/UART1_DTE_TX/ADC1_I03/ADC2_I03
GPIO1_IO04	M16	ENET1_REF_CLK1/PWM3_OUT/USB_OTG1_PWR/REF_CLK_24M/USDH1_RESET_B/GPIO1_I004/ENET2_1588_EVENT0_I0/UART5_DCE_TX/UART5_DTE_RX/ADC1_I04/ADC2_I04
GPIO1_IO05	M17	ENET2_REF_CLK2/PWM4_OUT/ANATOP_OTG2_ID/CSI_FIELD/USDH1_VSELECT/GPIO1_I005/ENET2_1588_EVENT0_OUT/UART5_DCE_RX/UART5_DTE_TX/ADC1_I05/ADC2_I05
GPIO1_IO06	K17	ENET1_MDIO/ENET2_MDIO/USB_OTG_PWR_WAKE/CSI_MCLK/USDH2_WP/GPIO1_I006/CCM_WAIT/CCM_REF_EN_B/UART1_DCE_CTS_B/UART1_DTE_RTS_B/ADC1_I06/ADC2_I06
GPIO1_IO07	L16	ENET1_MDC/ENET2_MDC/USB_OTG_HOST_MODE/CSI_PIXCLK/USDH2_CD_B/GPIO1_I007/CCM_STOP/UART1_DCE_RTS_B/UART1_DTE_CTS_B/ADC1_I07/ADC2_I07
GPIO1_IO08	N17	PWM1_OUT/WDOG1_WDOG_B/SPDIF_OUT/CSI_VSYNC/USDH2_VSELECT/GPIO1_I008/CCM_PMIC_RDY/UART5_DCE_RTS_B/UART5_DTE_CTS_B/ADC1_I08/ADC2_I08
GPIO1_IO09	M15	PWM2_OUT/WDOG1_WDOG_ANY/SPDIF_IN/CSI_HS_VSYNC/USDH2_RESET_B/GPIO1_I009/USDH1_RESET_B/UART5_DCE_CTS_B/UART5_DTE_RTS_B/ADC1_I09/ADC2_I09
JTAG_MOD	P15	SJC_MOD/GPT2_CLK/SPDIF_OUT/ENET1_REF_CLK_25M/CCM_PMIC_RDY/GPIO1_I010/SDMA_EXT_EVENT00
JTAG_TMS	P14	SJC_TMS/GPT2_CAPTURE1/SAI2_MCLK/CCM_CLK01/CCM_WAIT/GPIO1_I011/SDMA_EXT_EVENT01/EPIT1_OUT
JTAG_TDO	N15	SJC_TDO/GPT2_CAPTURE2/SAI2_TX_SYNC/CCM_CLK02/CCM_STOP/GPIO1_I012/MOS_RIGHT/EPIT2_OUT
JTAG_TDI	N16	SJC_TDI/GPT2_COMPARE1/SAI2_TX_BCLK/PWM6_OUT/GPIO1_I013/MOS_LEFT/SIM1_POWER_FAIL
JTAG_TCK	M14	SJC_TCK/GPT2_COMPARE2/SAI2_RX_DATA/PWM7_OUT/GPIO1_I014/REF_CLK_32K/SIM2_POWER_FAIL
JTAG_TRST_B	N14	SJC_TRST_B/GPT2_COMPARE3/SAI2_TX_DATA/PWM8_OUT/GPIO1_I015/REF_CLK_24M/CAAM_RNG_OSC_OBS



liteSOM UART Group

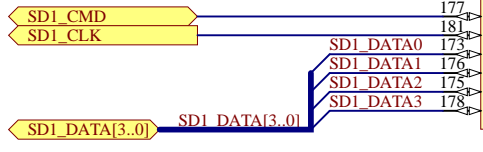
UART1_TX_DATA	K14	UART1_DCE_TX/UART1_DTE_RX/ENET1_RDATA02/I2C3_SCL/CSI_DATA02/GPT1_COMPARE1/GPIO1_I016/SPDIF_OUT
UART1_RX_DATA	K16	UART1_DCE_RX/UART1_DTE_TX/ENET1_RDATA03/I2C3_SDA/CSI_DATA03/GPT1_CLK/GPIO1_I017/SPDIF_IN
UART1_CTS_B	K15	UART1_DCE_CTS_B/UART1_DTE_RTS_B/ENET1_RX_CLK/USDH1_WP/CSI_DATA04/ENET2_1588_EVENT1_IN/GPIO1_I018/USDH2_WP
UART1_RTS_B	J14	UART1_DCE_RTS_B/UART1_DTE_CTS_B/ENET1_TX_ER/USDH1_CD_B/CSI_DATA05/ENET2_1588_EVENT1_OUT/GPIO1_I019/USDH2_CD_B
UART2_TX_DATA	J17	UART2_DCE_TX/UART2_DTE_RX/ENET1_TDATA02/I2C4_SCL/CSI_DATA06/GPT1_CAPTURE1/GPIO1_I020/ECSP3_S0
UART2_RX_DATA	J16	UART2_DCE_RX/UART2_DTE_TX/ENET1_TDATA03/I2C4_SDA/CSI_DATA07/GPT1_CAPTURE2/GPIO1_I021/SJC_DONE/ECSP3_SCLK
UART2_CTS_B	J15	UART2_DCE_CTS_B/UART2_DTE_RTS_B/ENET1_CRS/FLEXCAN2_TX/CSI_DATA08/GPT1_COMPARE2/GPIO1_I022/SJC_DE_B/ECSP3_MOSI
UART2_RTS_B	H14	UART2_DCE_RTS_B/UART2_DTE_CTS_B/ENET1_COL/FLEXCAN2_RX/CSI_DATA09/GPT1_COMPARE3/GPIO1_I023/SJC_FAIL/ECSP3_MISO
UART3_TX_DATA	H17	UART3_DCE_TX/UART3_DTE_RX/ENET2_RDATA02/SIM1_PORT0_PD/CSI_DATA10/UART2_DCE_CTS_B/UART2_DTE_RTS_B/GPIO1_I024/SJC_JTAG_ACT
UART3_RX_DATA	H16	UART3_DCE_RX/UART3_DTE_TX/ENET2_RDATA03/SIM2_PORT0_PD/CSI_DATA10/UART2_DCE_RTS_B/UART2_DTE_CTS_B/GPIO1_I025/EPIT1_OUT
UART3_CTS_B	H15	UART3_DCE_CTS_B/UART3_DTE_RTS_B/ENET2_RX_CLK/FLEXCAN1_TX/CSI_DATA11/ENET1_1588_EVENT1_IN/GPIO1_I026/EPIT2_OUT
UART3_RTS_B	G14	UART3_DCE_RTS_B/UART3_DTE_CTS_B/ENET2_TX_ER/FLEXCAN1_RX/CSI_DATA11/ENET1_1588_EVENT1_OUT/GPIO1_I027/WDOG1_WDOG_B
UART4_TX_DATA	G17	UART4_DCE_TX/UART4_DTE_RX/ENET2_TDATA02/I2C1_SCL/CSI_DATA12/CSU_CSU_ALARM_AUT02/GPIO1_I028/ECSP2_SCLK
UART4_RX_DATA	G16	UART4_DCE_RX/UART4_DTE_TX/ENET2_TDATA03/I2C1_SDA/CSI_DATA13/CSU_CSU_ALARM_AUT01/GPIO1_I029/ECSP2_S0
UART5_TX_DATA	F17	UART5_DCE_TX/UART5_DTE_RX/ENET2_CRS/I2C2_SCL/CSI_DATA14/CSU_CSU_ALARM_AUT00/GPIO1_I030/ECSP2_MOSI
UART5_RX_DATA	G13	UART5_DCE_RX/UART5_DTE_TX/ENET2_COL/I2C2_SDA/CSI_DATA15/CSU_CSU_INT_DEB/GPIO1_I031/ECSP2_MISO

Warning!
For unknown reason CTS/RTS ports direction are swapped in the i.MX6UL documentation. UARTx_CTS_B is output and UARTx_RTS_B is input. This is in opposite to commonly used naming convention.



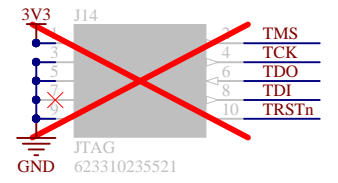
liteSOM ENET Group

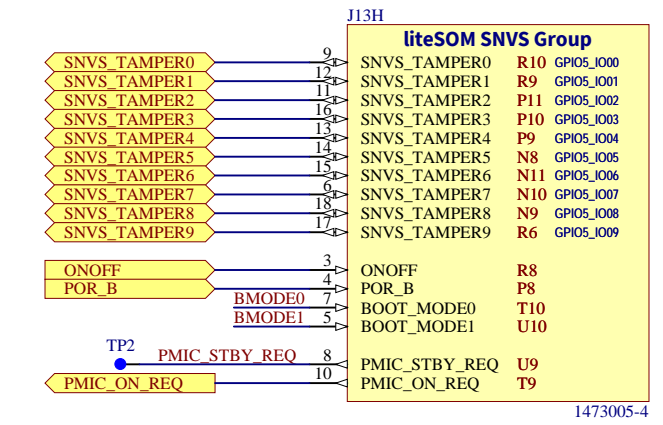
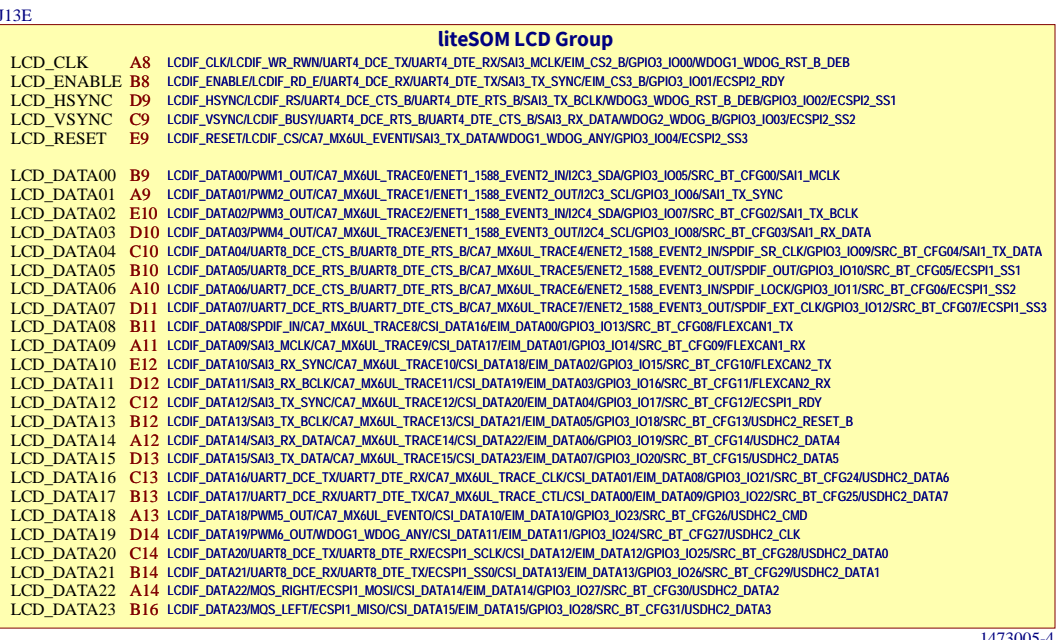
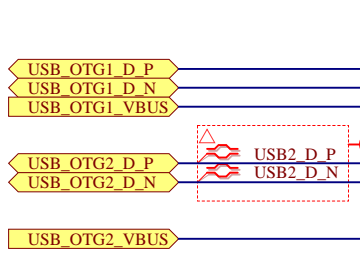
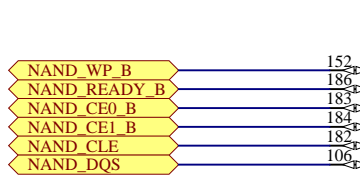
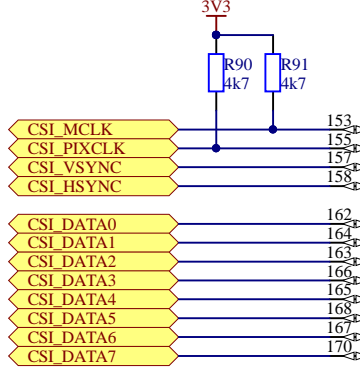
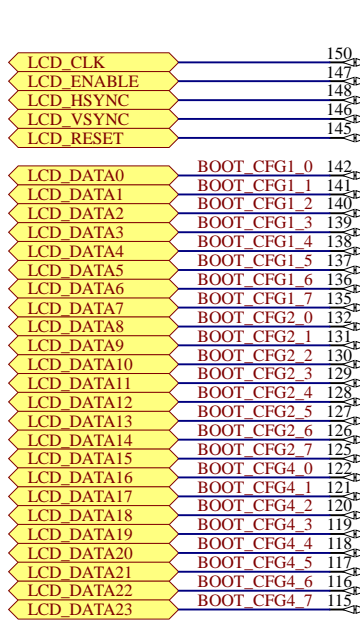
ENET1_RX_DATA0	F16	ENET1_RDATA00/UART4_DCE_RTS_B/UART4_DTE_CTS_B/PWM1_OUT/CSI_DATA16/FLEXCAN1_TX/GPIO2_I000/KPP_ROW00/USDH1_CTL
ENET1_RX_DATA1	E17	ENET1_RDATA01/UART4_DCE_CTS_B/UART4_DTE_RTS_B/PWM2_OUT/CSI_DATA17/FLEXCAN1_RX/GPIO2_I001/KPP_COL00/USDH1_CTL
ENET1_RX_EN	E16	ENET1_RX_EN/UART5_DCE_RTS_B/UART5_DTE_CTS_B/BREF_CLK_32K/CSI_DATA18/FLEXCAN2_TX/GPIO2_I002/KPP_ROW01/USDH1_VSELECT
ENET1_TX_DATA0	E15	ENET1_TDATA00/UART5_DCE_CTS_B/UART5_DTE_RTS_B/BREF_CLK_24M/CSI_DATA19/FLEXCAN2_RX/GPIO2_I003/KPP_COL01/USDH2_VSELECT
ENET1_TX_DATA1	E14	ENET1_TDATA01/UART6_DCE_CTS_B/UART6_DTE_RTS_B/PWM5_OUT/CSI_DATA20/ENET2_MDIO/GPIO2_I004/KPP_ROW02/WDOG1_WDOG_RST_B_DEB
ENET1_TX_EN	F15	ENET1_TX_EN/UART6_DCE_RTS_B/UART6_DTE_CTS_B/PWM6_OUT/CSI_DATA21/ENET2_MDC/GPIO2_I005/KPP_COL02/WDOG2_WDOG_RST_B_DEB
ENET1_TX_CLK	F14	ENET1_TX_CLK/UART7_DCE_CTS_B/UART7_DTE_RTS_B/PWM7_OUT/CSI_DATA22/ENET1_REF_CLK1/GPIO2_I006/KPP_ROW03/GPT1_CLK
ENET1_RX_ER	D15	ENET1_RX_ER/UART7_DCE_RTS_B/UART7_DTE_CTS_B/PWM8_OUT/CSI_DATA23/ENET1_CRE/GPIO2_I007/KPP_COL03/GPT1_CAPTURE2
ENET2_RX_DATA0	C17	ENET2_RDATA00/UART6_DCE_TX/UART6_DTE_RX/SIM1_PORT0_TRXD/I2C3_SCL/ENET1_MDIO/GPIO2_I008/KPP_ROW04/USB_OTG1_PWR
ENET2_RX_DATA1	C16	ENET2_RDATA01/UART6_DCE_RX/UART6_DTE_TX/SIM1_PORT0_CLK/I2C3_SDA/ENET1_MDC/GPIO2_I009/KPP_COL04/USB_OTG1_OC
ENET2_RX_EN	B17	ENET2_RX_EN/UART7_DCE_TX/UART7_DTE_RX/SIM1_PORT0_RST_B/I2C4_SCL/EIM_ADDR26/GPIO2_I010/KPP_ROW05/ENET1_REF_CLK_25M
ENET2_TX_DATA0	A15	ENET2_TDATA00/UART7_DCE_RX/UART7_DTE_TX/SIM1_PORT0_SVEN/I2C4_SDA/EIM_EB_B02/GPIO2_I011/KPP_COL05/REF_CLK_24M
ENET2_TX_DATA1	A16	ENET2_TDATA01/UART8_DCE_TX/UART8_DTE_RX/SIM2_PORT0_TRXD/ECSP4_SCLK/EIM_EB_B03/GPIO2_I012/KPP_ROW06/USB_OTG2_PWR
ENET2_TX_EN	B15	ENET2_TX_EN/UART8_DCE_RX/UART8_DTE_TX/SIM2_PORT0_CLK/ECSP4_MOSI/EIM_ACLK_FREERUN/GPIO2_I013/KPP_COL06/USB_OTG2_OC
ENET2_TX_CLK	D17	ENET2_TX_CLK/UART8_DCE_CTS_B/UART8_DTE_RTS_B/SIM2_PORT0_RST_B/ECSP4_MISO/ENET2_REF_CLK2/GPIO2_I014/KPP_ROW07/ANATOP_OTG2_ID
ENET2_RX_ER	D16	ENET2_RX_ER/UART8_DCE_RTS_B/UART8_DTE_CTS_B/SIM2_PORT0_SVEN/ECSP4_S0/EIM_ADDR25/GPIO2_I015/KPP_COL07/WDOG1_WDOG_ANY



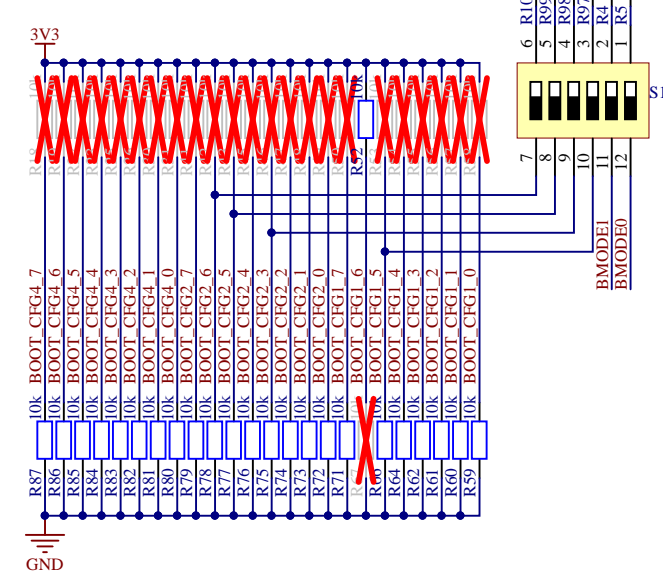
liteSOM SD1 Group

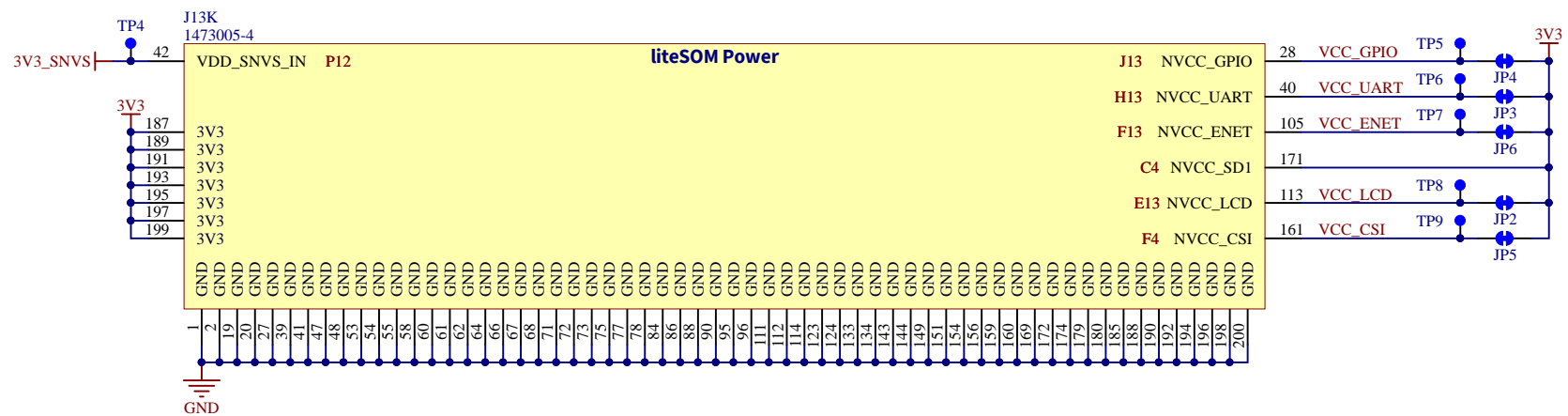
SD1_CMD	C2	USDH1_CMD/GPT2_COMPARE1/SAI2_RX_SYNC/SPDIF_OUT/EIM_ADDR19/GPIO2_I016/SDMA_EXT_EVENT00/USB_OTG1_PWR
SD1_CLK	C1	USDH1_CLK/GPT2_COMPARE2/SAI2_MCLK/SPDIF_IN/EIM_ADDR20/GPIO2_I017/USB_OTG1_OC
SD1_DATA0	B3	USDH1_DATA0/GPT2_COMPARE3/SAI2_TX_SYNC/FLEXCAN1_TX/EIM_ADDR21/GPIO2_I018/ANATOP_OTG1_ID
SD1_DATA1	B2	USDH1_DATA1/GPT2_CLK/SAI2_TX_BCLK/FLEXCAN1_RX/EIM_ADDR22/GPIO2_I019/USB_OTG2_PWR
SD1_DATA2	B1	USDH1_DATA2/GPT2_CAPTURE1/SAI2_RX_DATA/FLEXCAN2_TX/EIM_ADDR23/GPIO2_I020/CCM_CLK01/USB_OTG2_OC
SD1_DATA3	A2	USDH1_DATA3/GPT2_CAPTURE2/SAI2_TX_DATA/FLEXCAN2_RX/EIM_ADDR24/GPIO2_I021/CCM_CLK02/ANATOP_OTG2





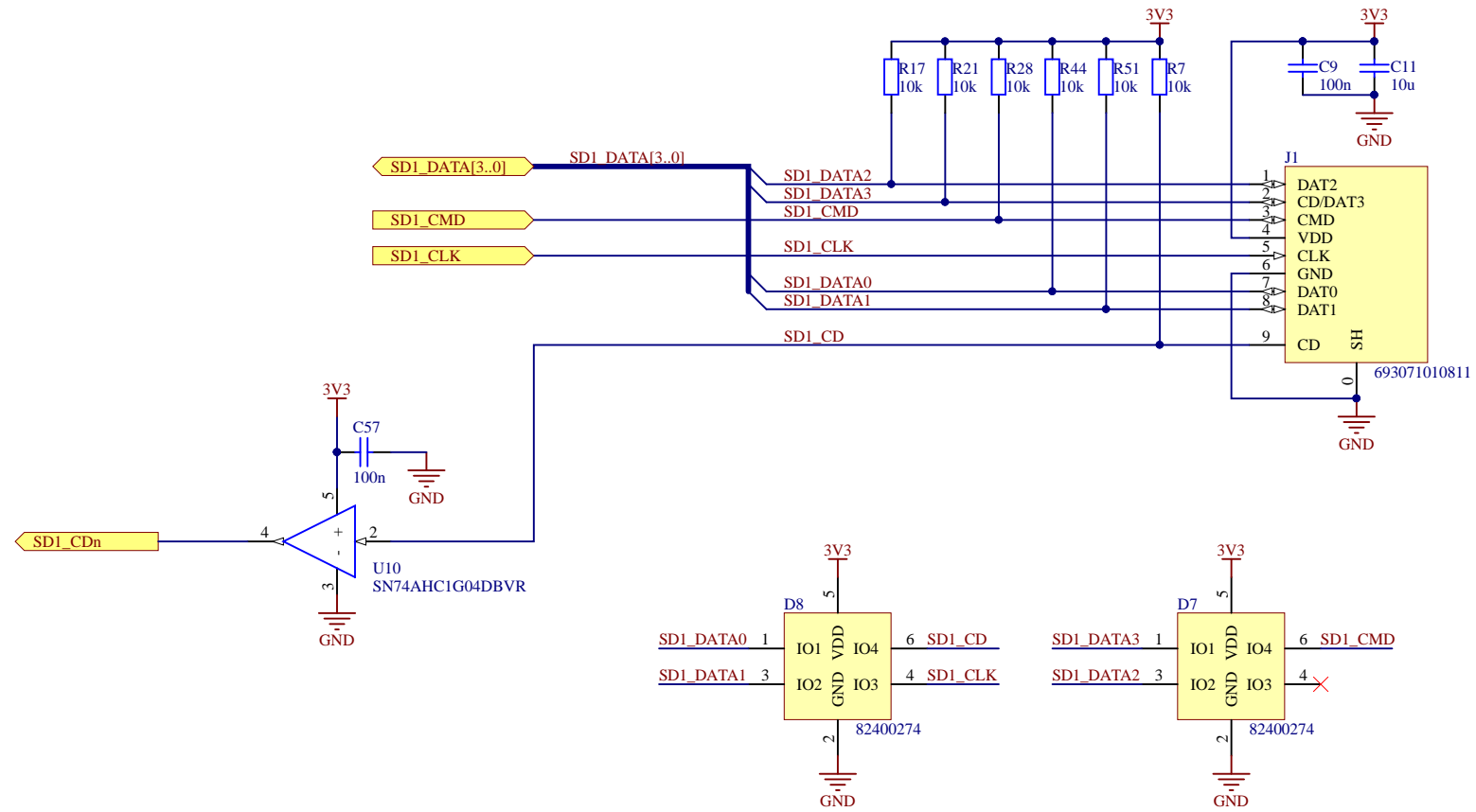
BOOT_CFG2[6]	BOOT_CFG2[5]	BOOT_CFG2[3]	BOOT_CFG1[5]	BMODE1	BMODE0	
X	X	X	X	0	0	Boot From Fuses
X	X	X	X	0	1	Serial Downloader
0	0	0	0	1	0	SDHC1 1-bit
0	1	0	0	1	0	SDHC1 4-bit
0	0	1	1	1	0	eMMC2 1-bit
0	1	1	1	1	0	eMMC2 4-bit
1	0	1	1	1	0	eMMC2 8-bit





Title		liteSOM part 3	
Size	A4	Project	liteboard
		Rev	1.3.0
Date	2017-11-24	Number	*
		Sheet	4 / 8



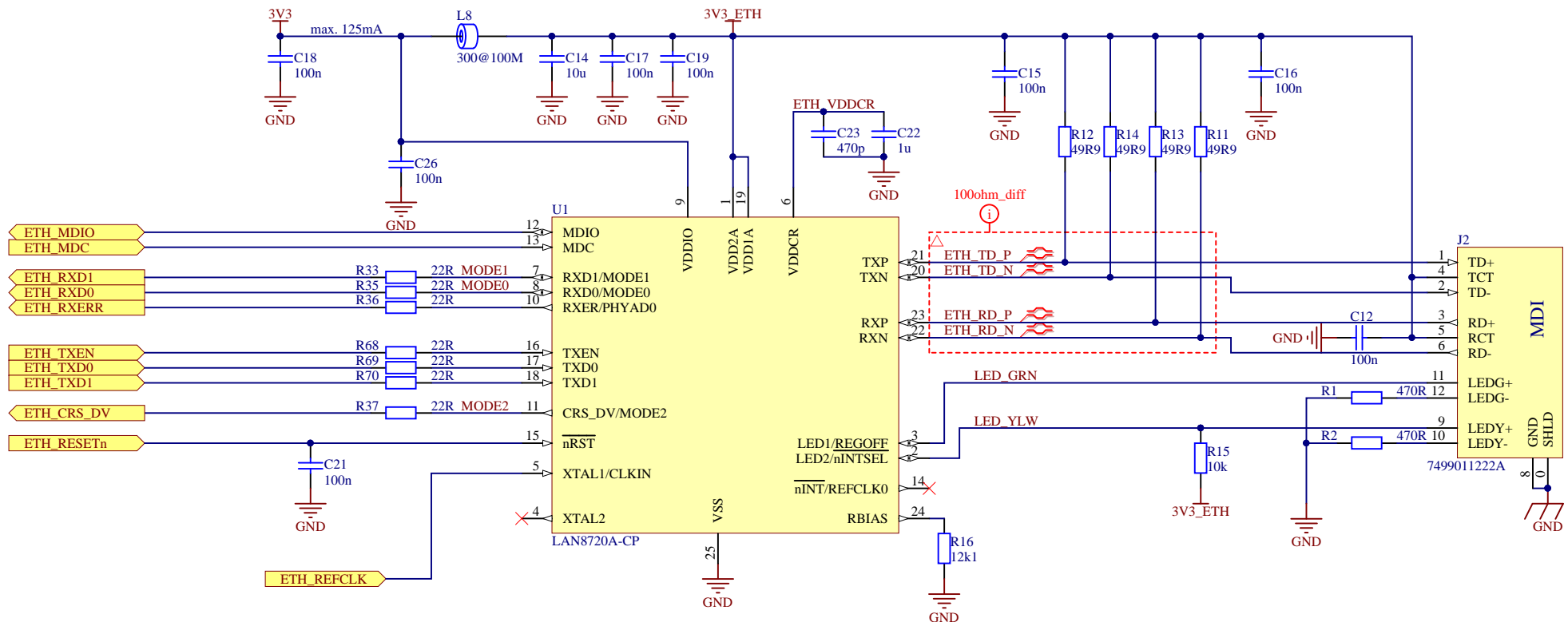


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Size	A4	Project	liteboard
Date	2017-11-24	Rev	1.3.0
		Number	Sheet 5 / 8



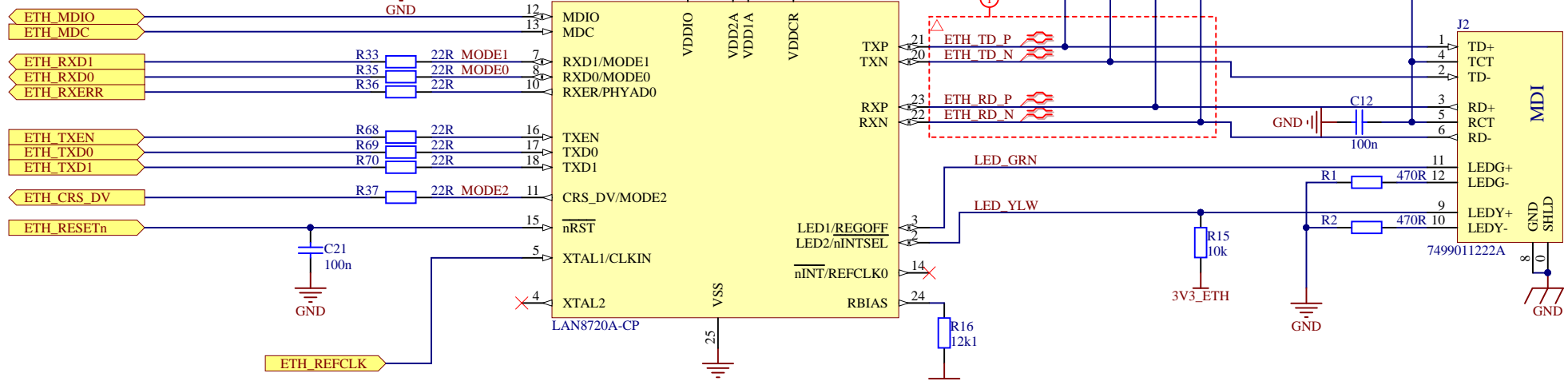
A

A



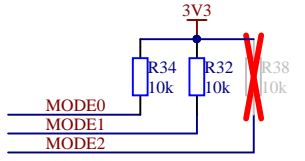
B

B



C

C



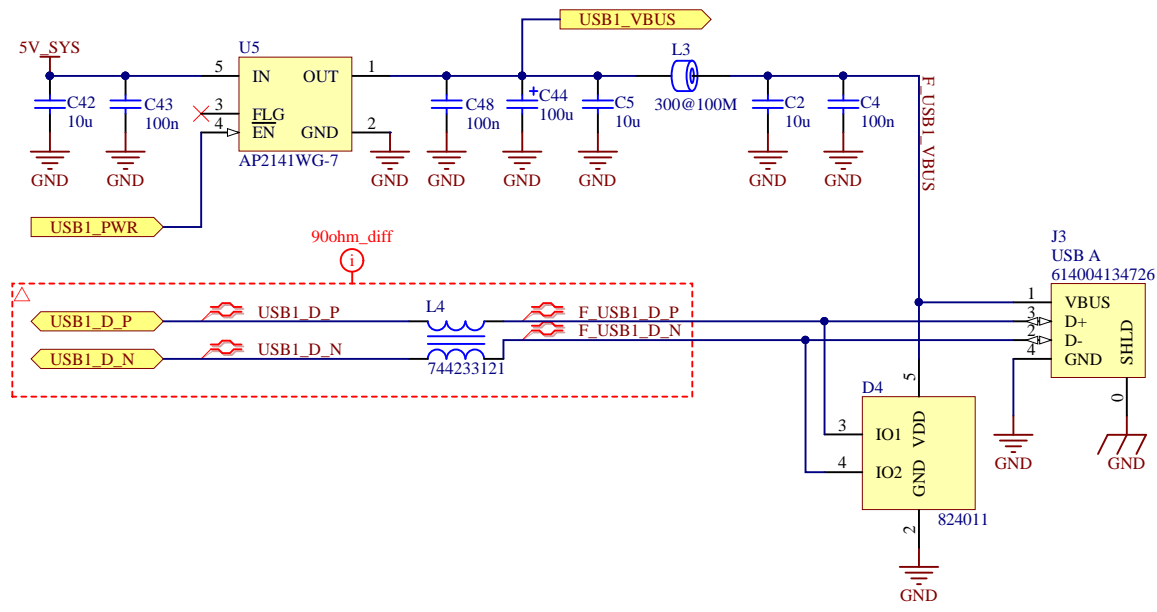
D

D

Title Ethernet PHY		Rev 1.3.0		
Size A4	Project liteboard	Date 2017-11-24		
Number *		Sheet 6 / 8		

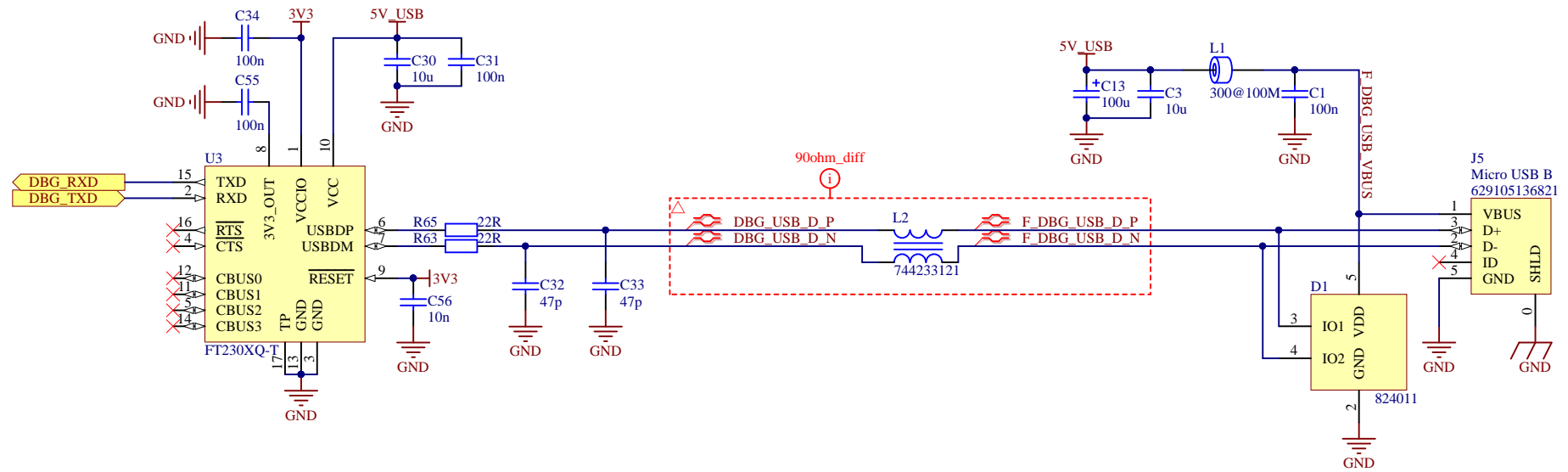
A

A



B

B



C

C

D

D

Title USB		Rev 1.3.0		
Size A4	Project liteboard	Sheet 7 / 8		
Date 2017-11-24	Number *			

