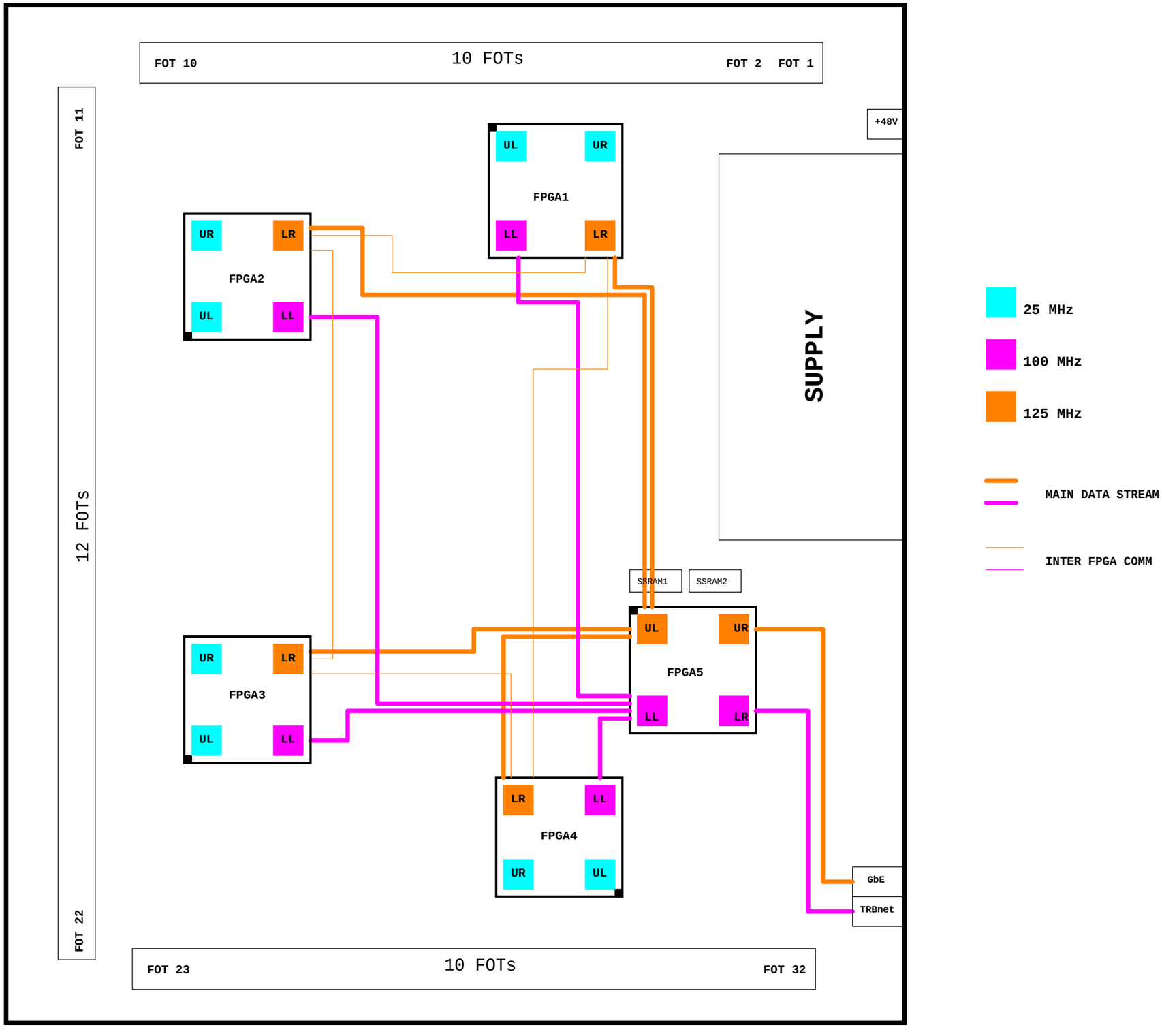
TOP VIEW

What one sees when addon card is connected to TRB
and trb is under addon



25 MHz

100 MHz

125 MHz

MAIN DATA STREAM

INTER FPGA COMM

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Size: A2	Document Number: <Doc>	Rev: <RevCode>
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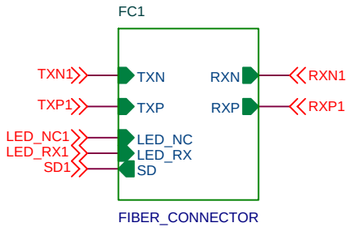

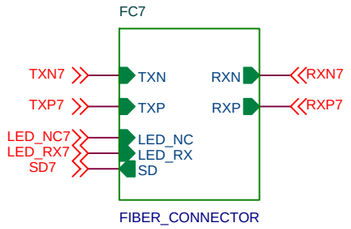

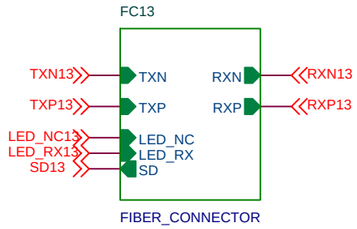

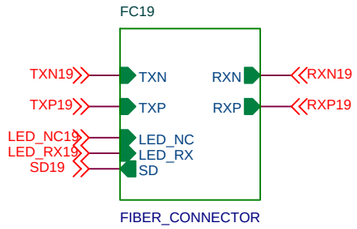

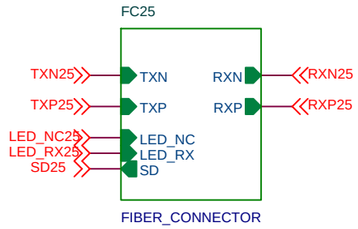

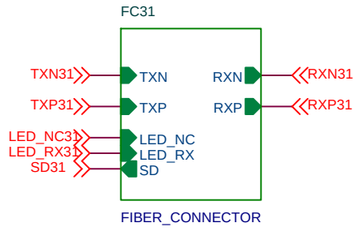

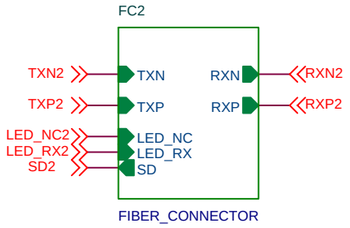

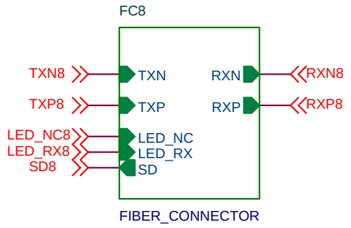

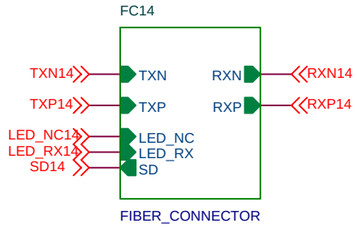

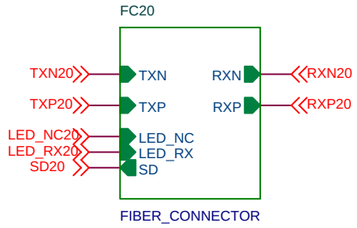

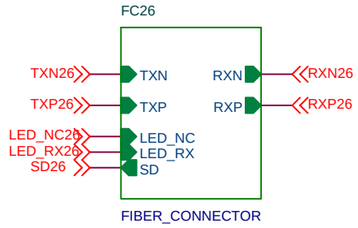

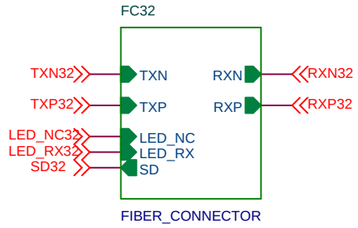

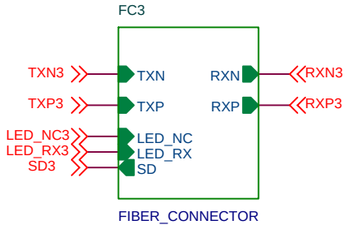

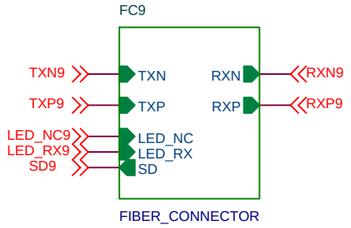

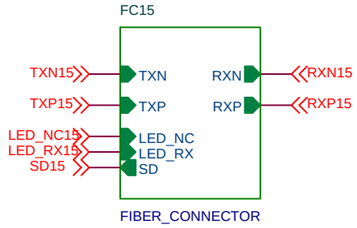

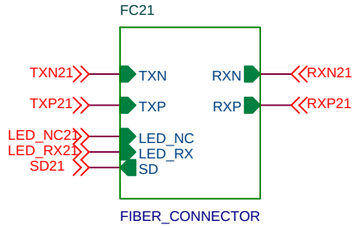

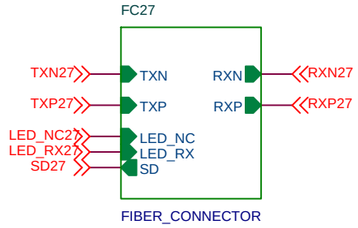

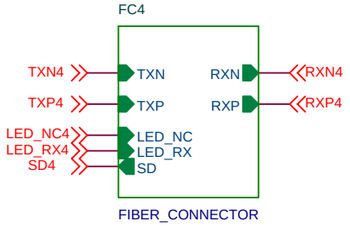

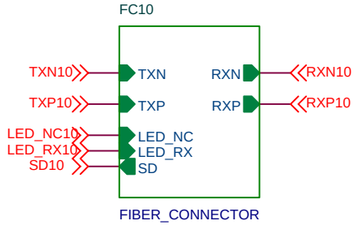

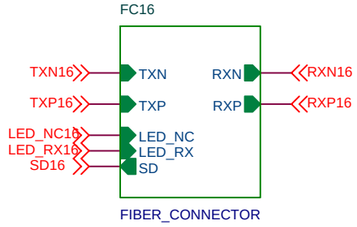

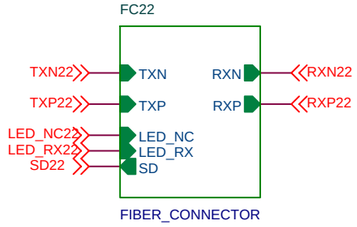

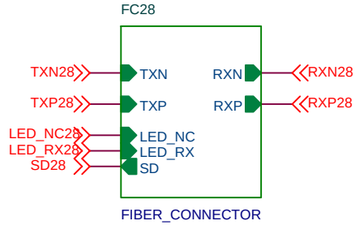

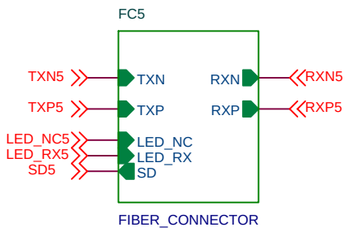

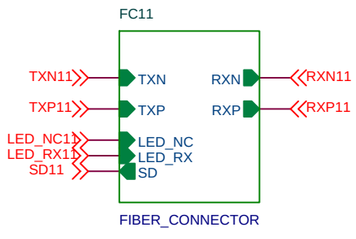

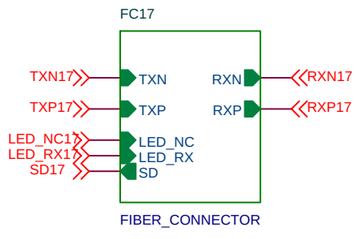

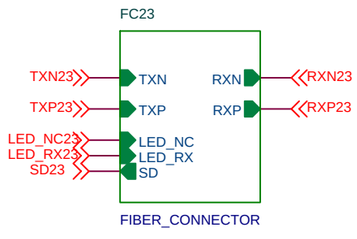

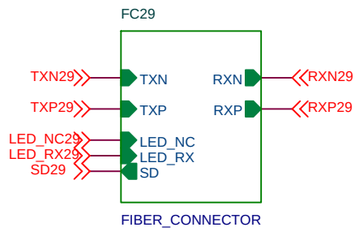

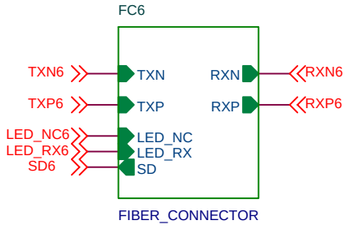

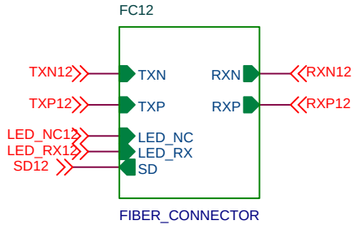

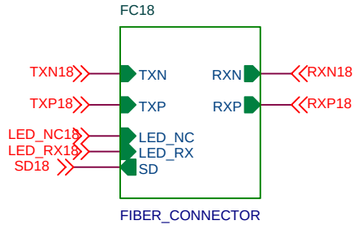

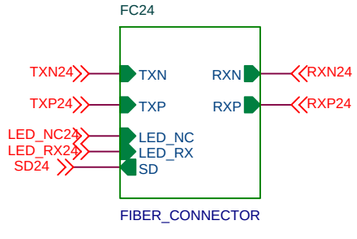

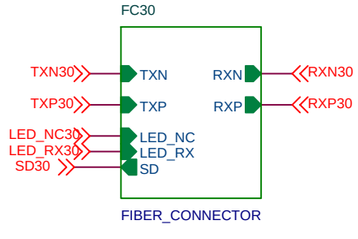

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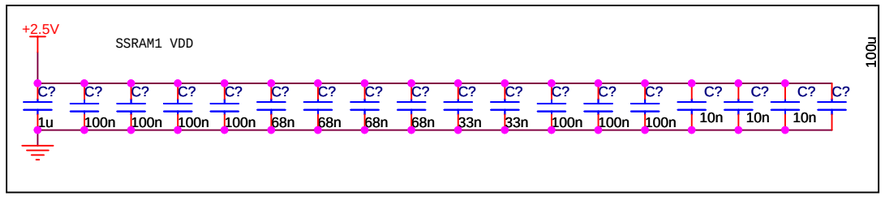

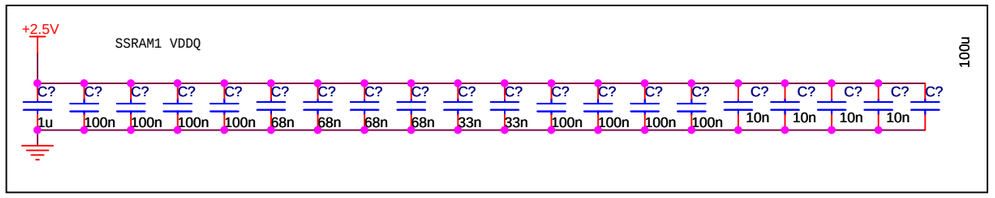

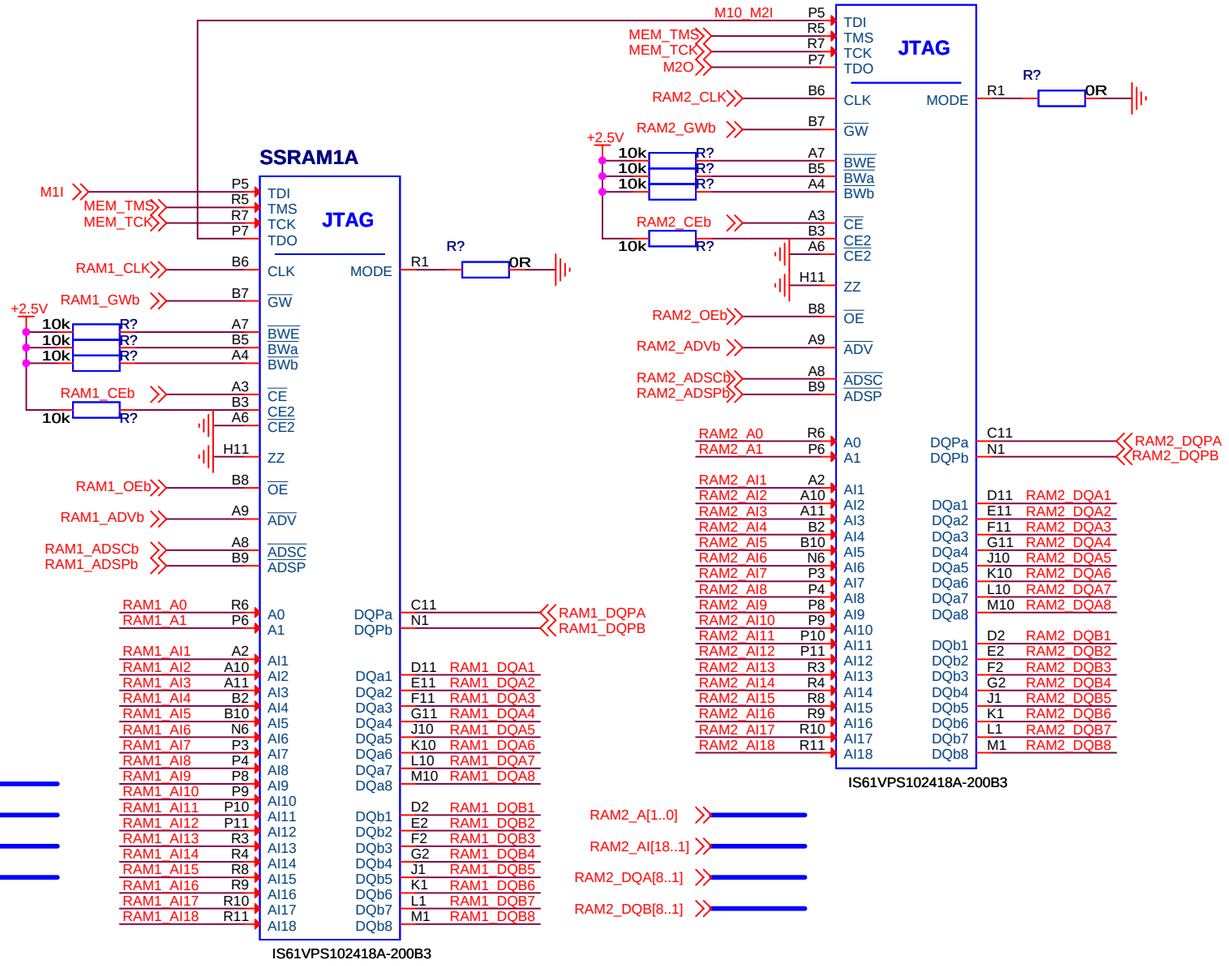

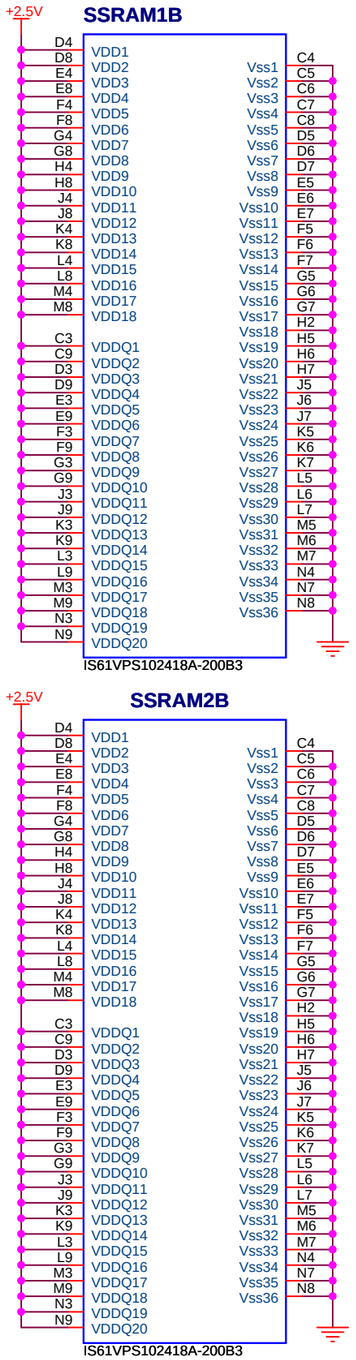

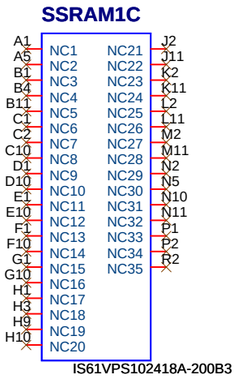

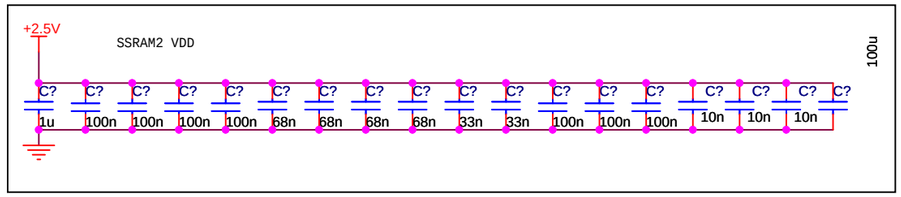

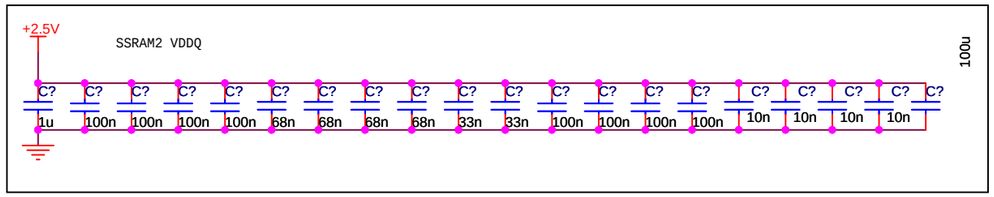

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RAM1_AI[18..1]
RAM1_DQA[8..1]
RAM1_DQB[8..1]

RAM2_A[1..0]
RAM2_AI[18..1]
RAM2_DQA[8..1]
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Size A3	Document Number <Doc>	Rev <RevCo
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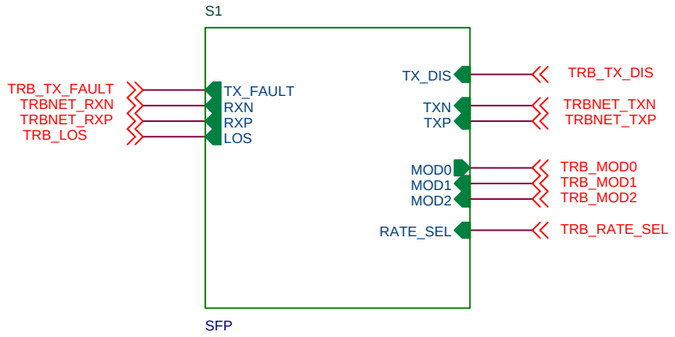

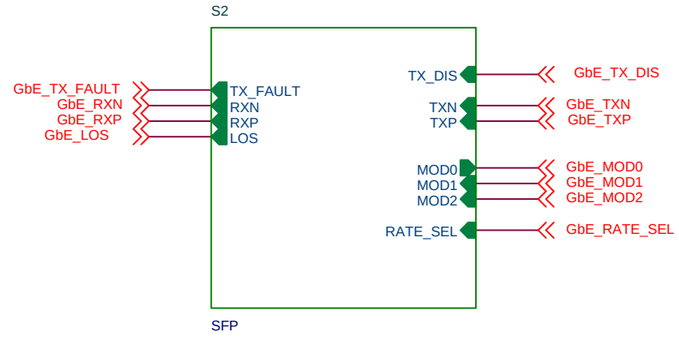

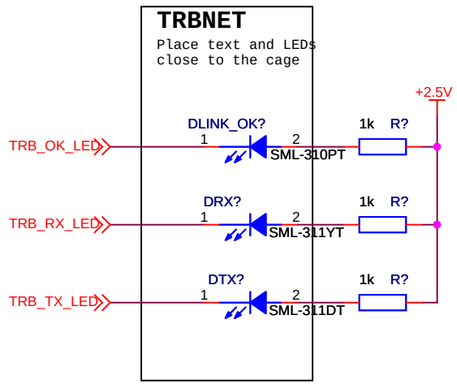

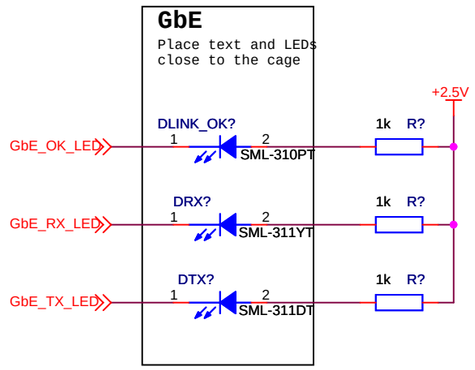

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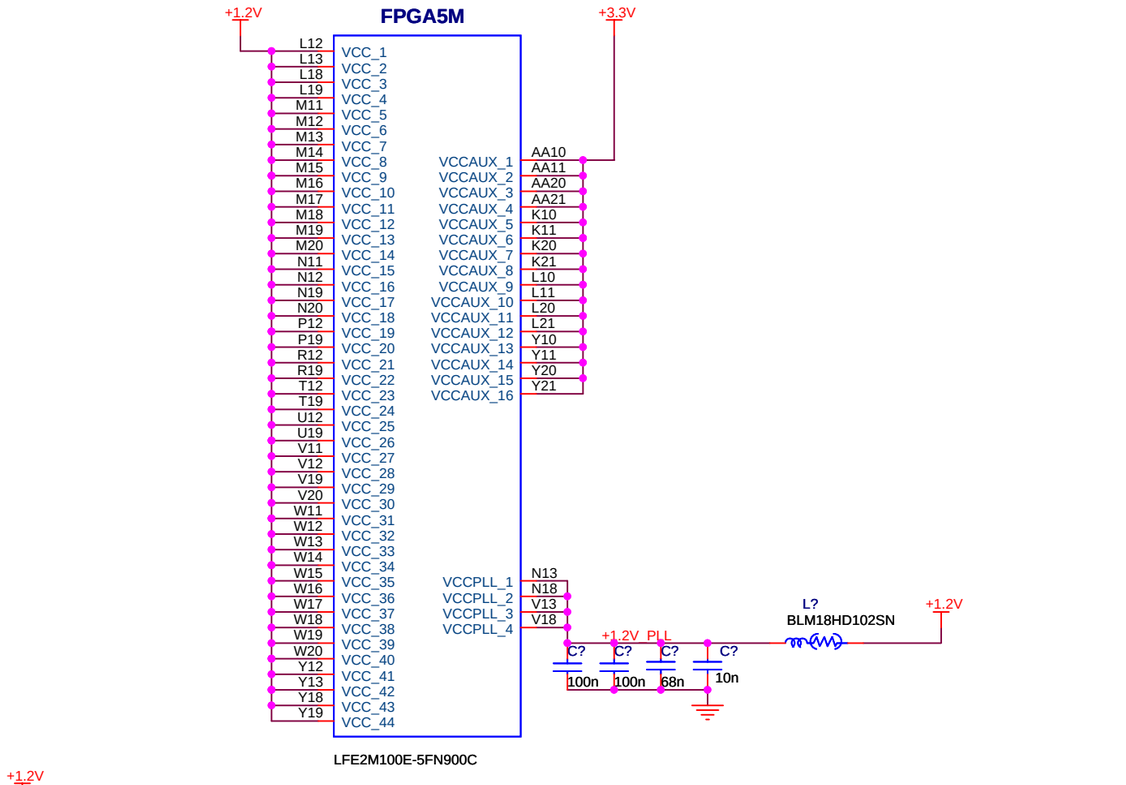

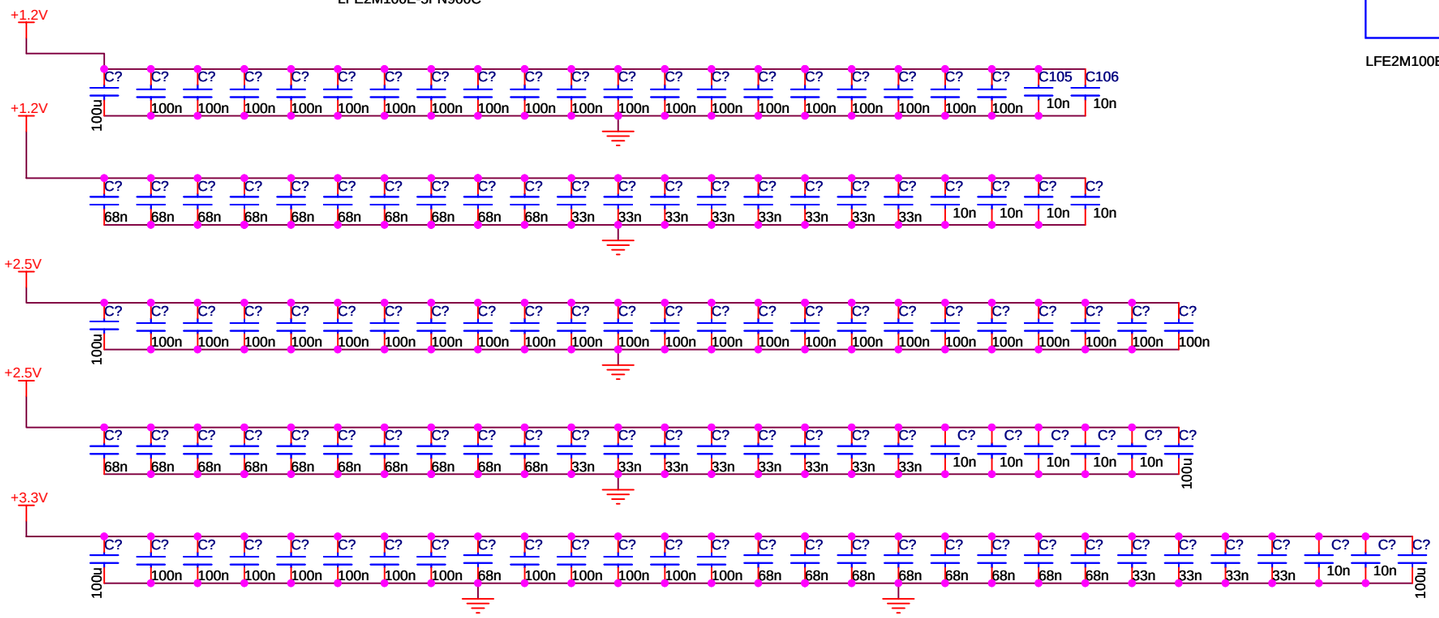

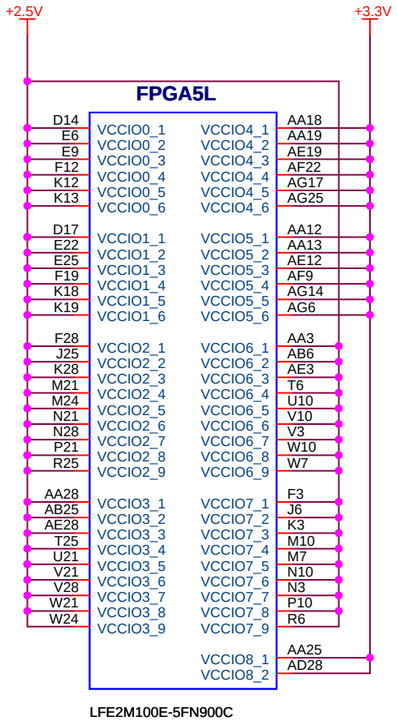

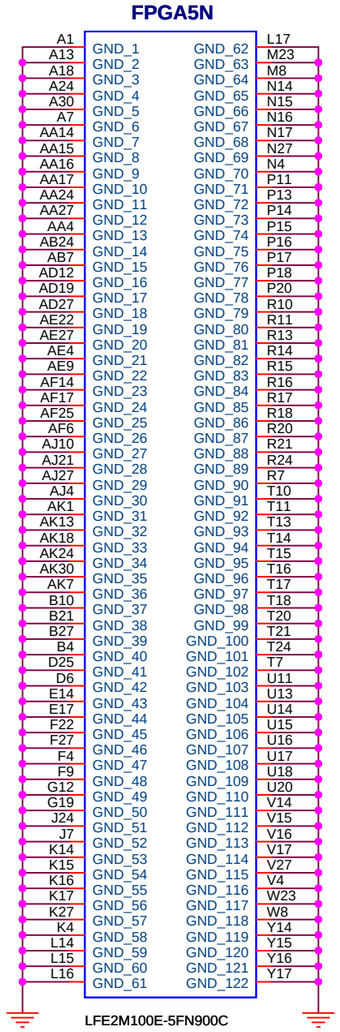

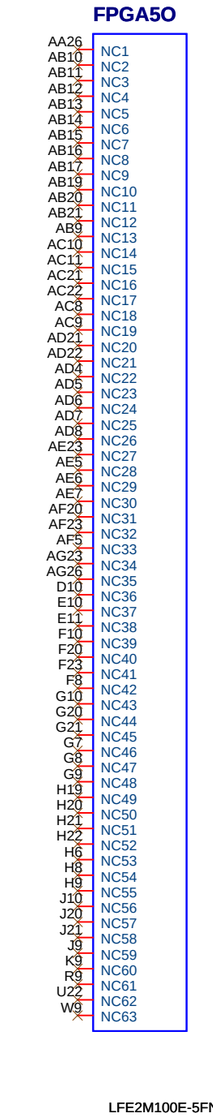

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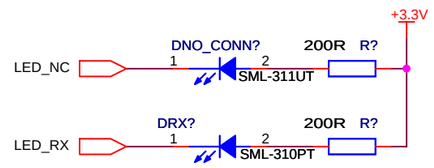

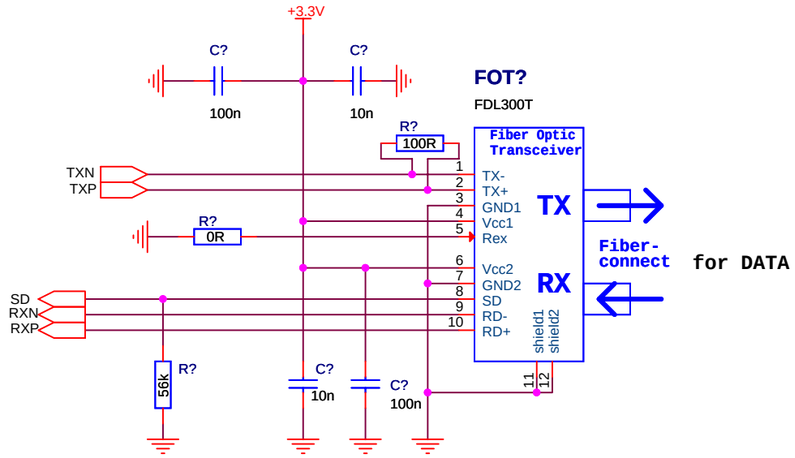

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FLASH?
AT25DF321-SU
MEM_SPI_CS
MEM_SPI_CLK
MEM_SPI_IN
MEM_SPI_OUT
10k R?
10k R?
C?
100n

Place LED close to FPGA
DONE?
SML-310PT
1k R?
Q? MMBT3904
R?
2.7k
22k
DONE

SWITCH?
SN74CB3Q3257DGVR
SPI_CLK
SPI_CS
SPI_IN
SPI_OUT
LOGIC_SPI_CLK
LOGIC_SPI_CS
LOGIC_SPI_INP
LOGIC_SPI_OUT
MEM_SPI_CS
MEM_SPI_CLK
MEM_SPI_IN
MEM_SPI_OUT
BLM15HG102

Jumper2P
CFG0
CFG1
CFG2
0R

FPGA?K
JTAG
TDI
TMS
TCK
TDO
CONFIG (BANK8)
PROGRAMN
SPI_FAST
SPI_IN
SPI_CS
SPI_OUT
DONE
PGRAMN
INITN
CCLK
CSN
CS1N
WRITEN
RLM0_PLLCAP
LLM0_PLLCAP
XRES
5.6n
10k
LFE2M100E-5FN900C

FPGA?O
LFE2M100E-5FN900C

FPGA?M
LFE2M100E-5FN900C

FPGA?L
LFE2M100E-5FN900C

FPGA?N
LFE2M100E-5FN900C

+1.2V PLL
BLM18HD102SN
+1.2V
+2.5V
+3.3V
100uF,1210;6.3V;X5R
68n
33n
10n
100n

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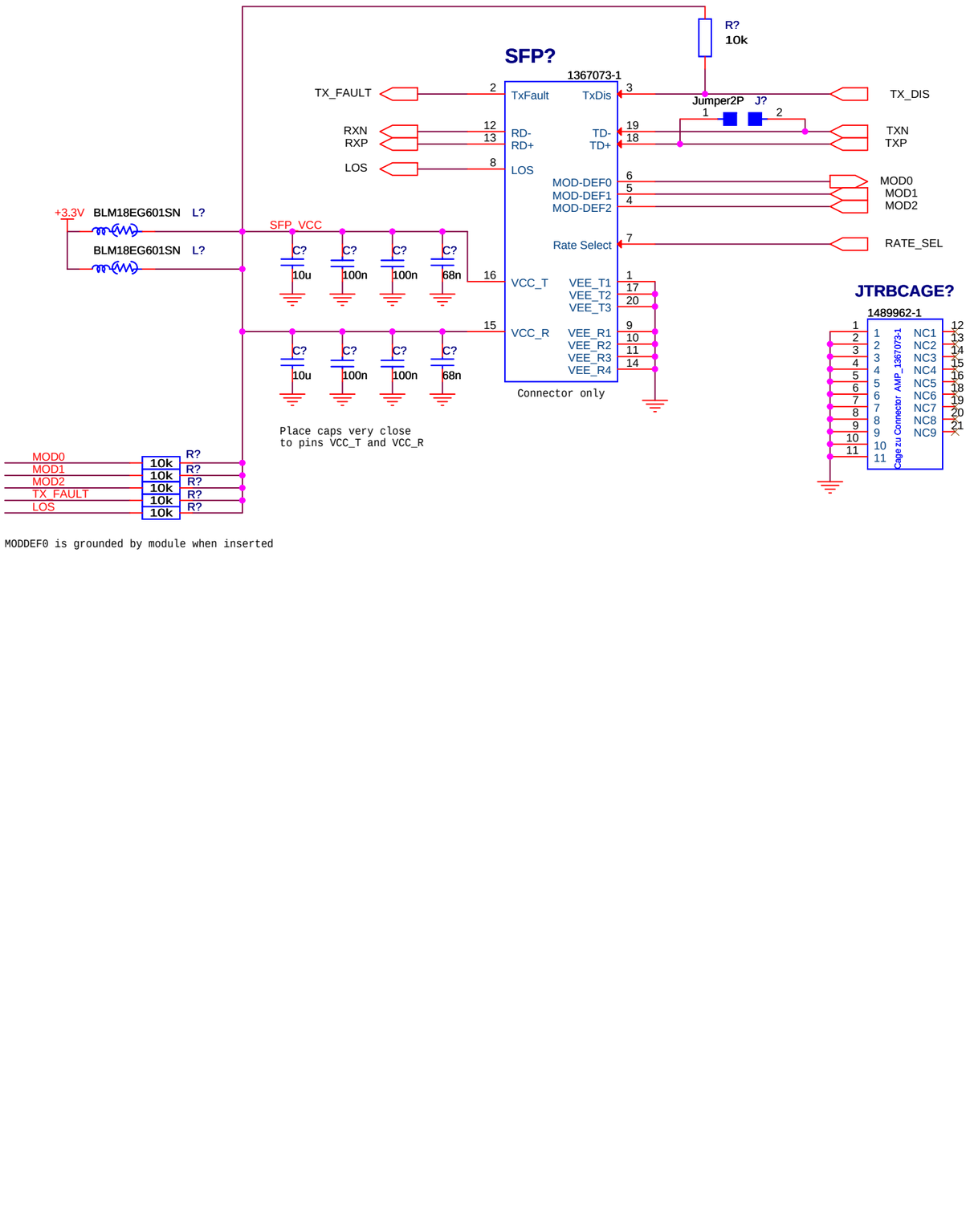

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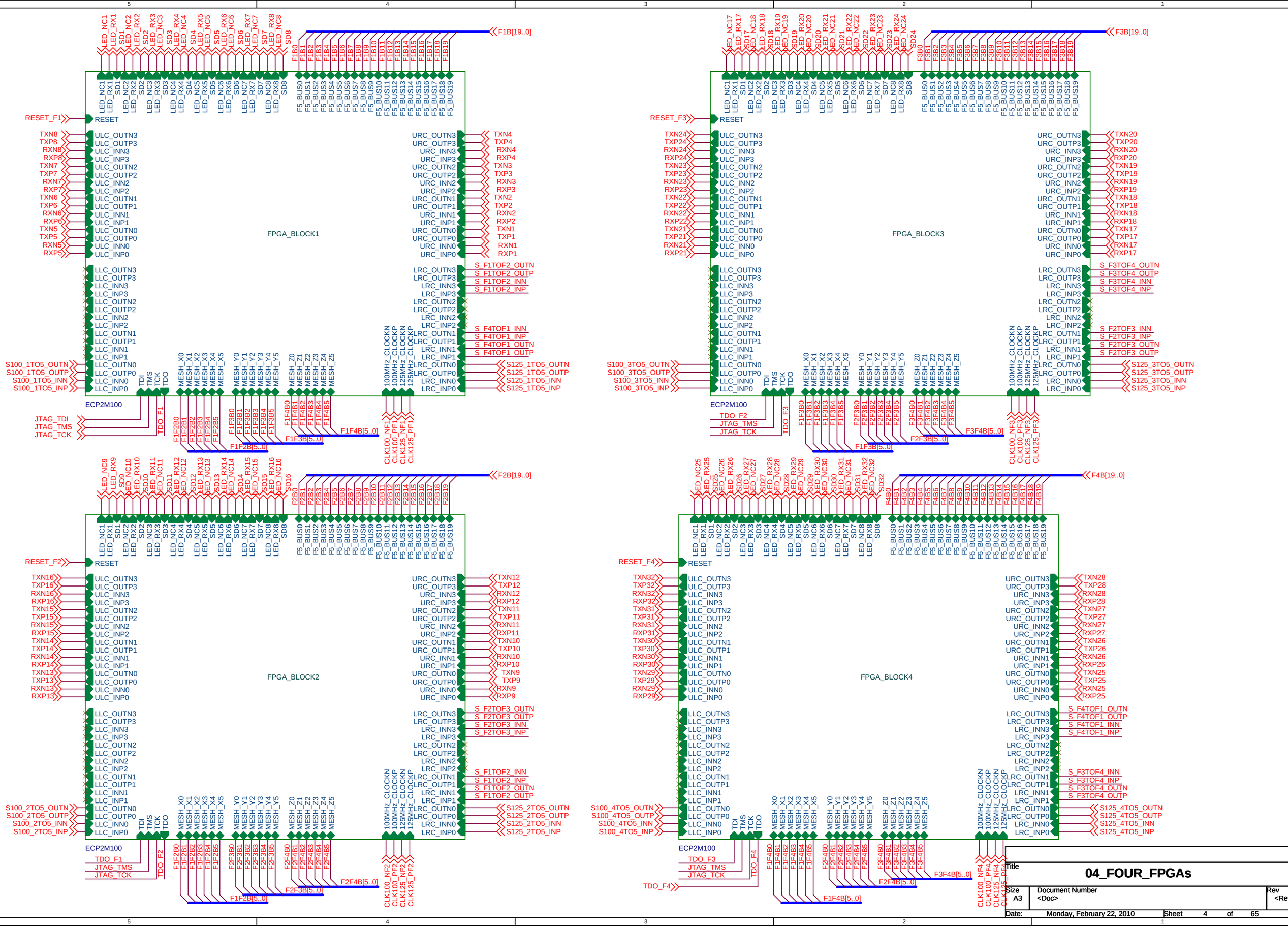
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FPGA_BLOCK2
FPGA_BLOCK3
FPGA_BLOCK4
ECP2M100
RESET_F1
RESET_F2
RESET_F3
RESET_F4
F1B[19..0]
F2B[19..0]
F3B[19..0]
F4B[19..0]
F1F2B[5..0]
F1F3B[5..0]
F1F4B[5..0]
F2F3B[5..0]
F2F4B[5..0]
F3F4B[5..0]
JTAG_TDI
JTAG_TMS
JTAG_TCK
TDO_F1
TDO_F2
TDO_F3
TDO_F4
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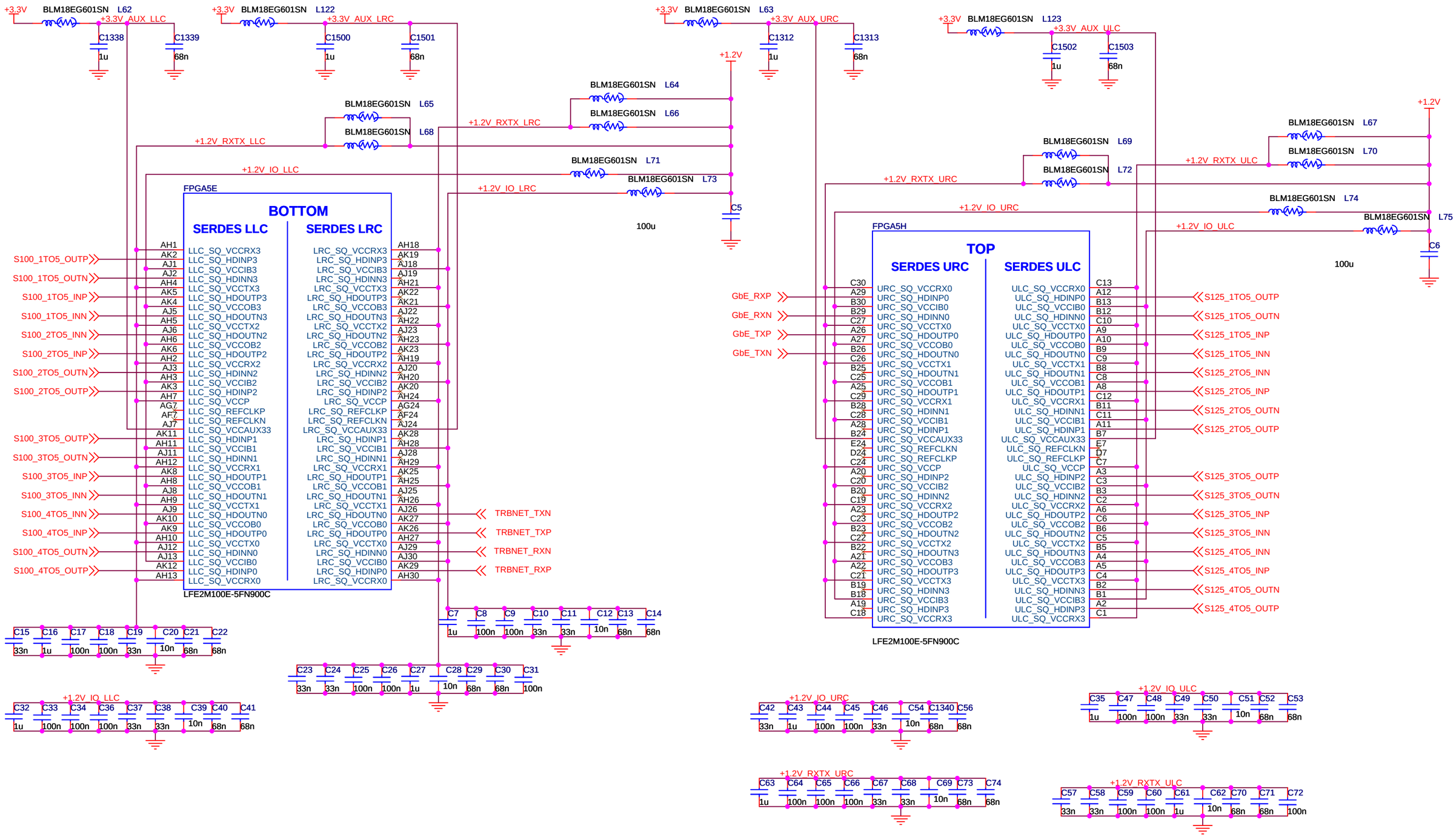

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Size A3	Document Number <Doc>	Rev <RevCo
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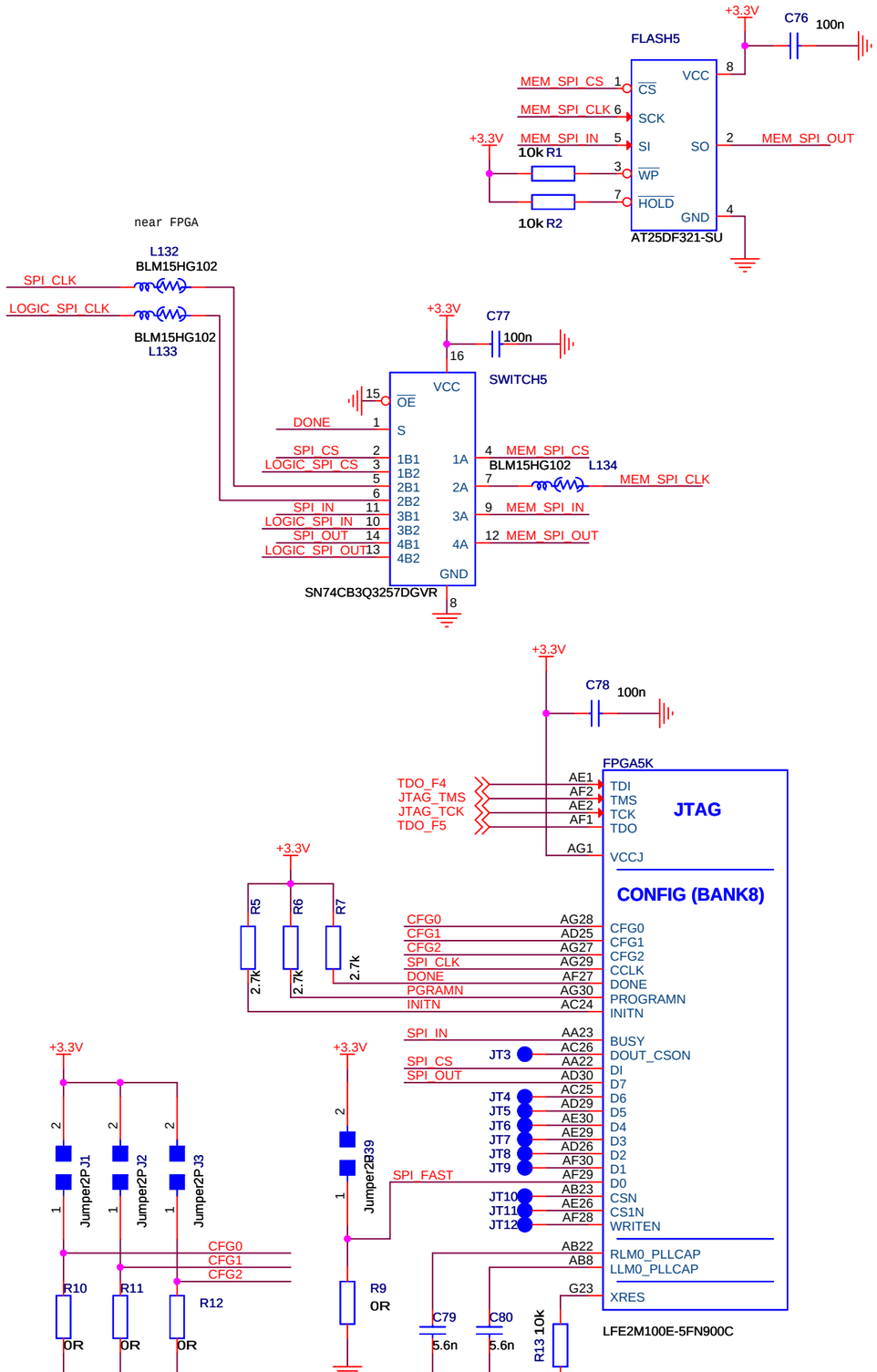

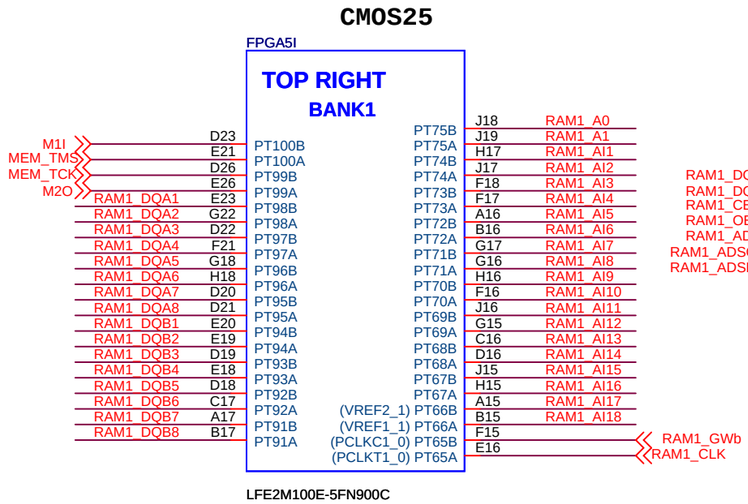

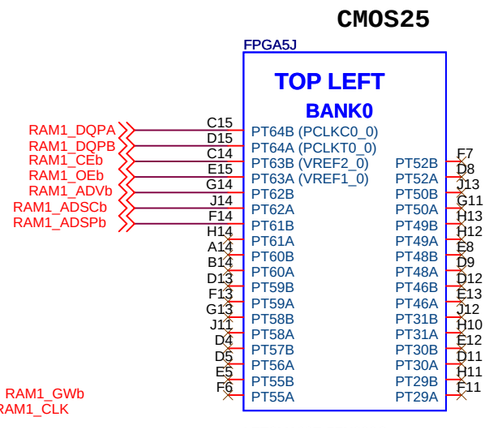

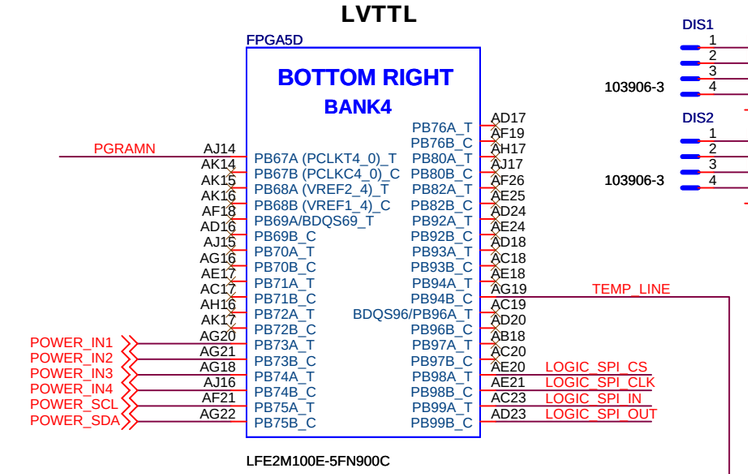

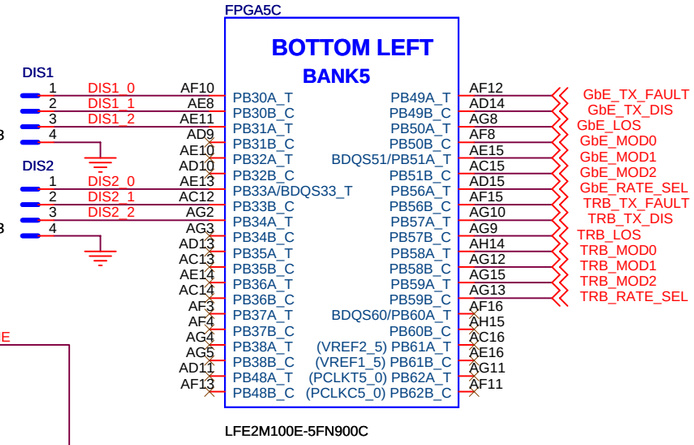

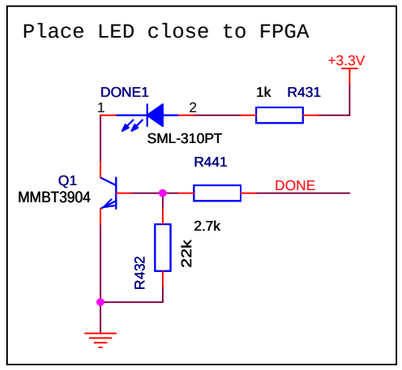

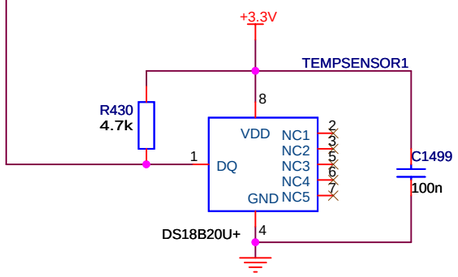

Title
06_FPGA_5_LVTTL_JTAG

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A3	<Doc>	<RevCo

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CMOS25/LVDS

FPGA5B

LOWER LEFT BANK6

CLK125_PF5
CLK125_NF5
100R R15

	T5	PL59A (PCLKT6_0)_T(LVDS)	PL78A_T	W2	
	T4	PL59B (PCLKC6_0)_C(LVDS)	PL78B_C	Y4	
	U7	PL60A (VREF2_6)_T	PL79A_T(LVDS)	Y1	F3B4
	T8	PL60B (VREF1_6)_C	PL79B_C(LVDS)	Y2	F3B5
	R3	PL61A_T(LVDS)	PL80A_T	Y5	
	R2	PL61B_C(LVDS)	PL80B_C	Y6	
	R1	PL62A_T	LDQS81/PL81A_T(LVDS)	AA1	F3B6
	T1	PL62B_C	PL81B_C(LVDS)	AA2	F3B7
	T3	PL65A (LLM4_SPLLT_IN_A)_T(LVDS)	PL82A_T	Y3	
	T2	PL65B (LLM4_SPLLC_IN_A)_C(LVDS)	PL82B_C	AB1	
	U9	PL66A (LLM4_SPLLT_FB_A)_T	PL83A_T(LVDS)	Y9	F3B8
	U8	PL66B (LLM4_SPLLC_FB_A)_C	PL83B_C(LVDS)	Y8	F3B9
	U5	PL68A_T(LVDS)	PL84A_T	Y7	
	U4	PL68B_C(LVDS)	PL84B_C	AA7	
	V9	PL69A_T	PL95A_T(LVDS)	AB2	F3B10
	V7	PL69B_C	PL95B_C(LVDS)	AB3	F3B11
	U3	PL70A_T(LVDS)	PL96A_T	AA5	
	U2	PL70B_C(LVDS)	PL96B_C	AA6	
	V8	PL71A_T	PL97A_T(LVDS)	AB4	F3B12
	U6	PL71B_C	PL97B_C(LVDS)	AB5	F3B13
	U1	PL72A/LDQS72_T(LVDS)	PL98A_T	AA8	
	V2	PL72B_C(LVDS)	PL98B_C	AA9	
	V5	PL73A_T	LLM0_GPLLT_IN_A) LDQS99/PL99A_T(LVDS)	AC1	F3B14
	V6	PL73B_C	(LLM0_GPLLC_IN_A) PL99B_C(LVDS)	AC2	F3B15
F3B0	V1	PL74A_T(LVDS)	(LLM0_GDLLT_FB_A) PL100A_T	AC4	
F3B1	W1	PL74B_C(LVDS)	(LLM0_GDLLC_FB_A) PL100B_C	AC3	
	W5	PL75A_T	(LLM0_GDLLT_IN_A) PL101A_T(LVDS)	AC7	F3B16
	W6	PL75B_C	(LLM0_GDLLC_IN_A) PL101B_C(LVDS)	AC6	F3B17
F3B2	W3	PL77A_T(LVDS)	(LLM0_GDLLT_FB_A) PL102A_T	AC5	
F3B3	W4	PL77B_C(LVDS)	(LLM0_GDLLC_FB_A) PL102B_C	AD3	
			PL104A_T	AD2	F3B18
			PL104B_C	AD1	F3B19

LFE2M100E-5FN900C

F3B[19..0]

OPTIONAL RESISTORS
DO NOT SOLDER

F3B0	100R	R26	F3B1		
F3B4	100R	R28	F3B5		
F3B8	100R	R30	F3B9		
F3B12	100R	R32	F3B13		
F3B16	100R	R34	F3B17		

CMOS25/LVDS

FPGA5G

UPPER RIGHT BANK2

RAM2_DQA1	M30	PR57B (PCLKC2_0)_C	PR34B_C(LVDS)	E30	RAM2_AI8
RAM2_DQA2	M29	PR57A (PCLKT2_0)_T	PR34A_T(LVDS)	E29	RAM2_AI9
RAM2_DQA3	P23	PR56B_C(LVDS)	PR33B_C	L25	RAM2_AI10
RAM2_DQA4	P24	PR56A_T(LVDS)	PR33A_T	L26	RAM2_AI11
RAM2_DQA5	R26	PR55B_C	PR32B_C(LVDS)	H28	RAM2_AI12
RAM2_DQA6	P27	PR55A_T	RDQS32 /PR32A_T(LVDS)	J28	RAM2_AI13
RAM2_DQA7	P25	PR54B_C(LVDS)	PR31B_C	G28	RAM2_AI14
RAM2_DQA8	P26	PR54A/RDQS54_T(LVDS)	PR31A_T	G27	RAM2_AI15
RAM2_DQB1	K30	PR53B_C	PR30B_C(LVDS)	L24	RAM2_AI16
RAM2_DQB2	K29	PR53A_T	PR30A_T(LVDS)	L23	RAM2_AI17
RAM2_DQB3	N22	PR52B_C(LVDS)	PR29B_C	D30	RAM2_AI18
RAM2_DQB4	P22	PR52A_T(LVDS)	PR29A_T	D29	
RAM2_DQB5	J30	PR51B (RU3_SPLLC_FB_A)_C	PR28B_C(LVDS)	K24	
RAM2_DQB6	J29	PR51A (RUM3_SPLLT_FB_A)_T	PR28A_T(LVDS)	K25	
RAM2_DQB7	N24	PR50B (RUM3_SPLLC_IN_A)_C(LVDS)	PR26B_C	J27	
RAM2_DQB8	N23	PR50A (RUM3_SPLLT_IN_CA_T(LVDS)	PR26A_T	K26	
	N25	PR48B_C	PR25B_C(LVDS)	K23	
RAM2_CLK	N26	PR48A_T	PR25A_T(LVDS)	K22	
RAM2_GWb	M27	PR47B_C(LVDS)	PR24B_C	J22	
RAM2_CEb	M28	PR47A_T(LVDS)	PR24A_T	J23	
RAM2_OEb	H30	PR46B_C	PR17B_C(LVDS)	J26	TEST_LINE0
RAM2_ADVb	G30	PR46A_T	PR17A_T(LVDS)	H26	TEST_LINE1
RAM2_ADSCb	M25	PR45B_C(LVDS)	PR16B_C	H27	TEST_LINE2
RAM2_ADSPb	M26	PR45A/RDQS45_T(LVDS)	PR16A_T	G26	TEST_LINE3
RAM2_DQPA	L30	PR44B_C	PR15B_C(LVDS)	H23	TEST_LINE4
RAM2_DQPB	L29	PR44A_T	RDQS15/PR15A_T(LVDS)	H24	TEST_LINE5
RAM2_A0	L28	PR43B_C(LVDS)	PR14B_C	D28	TEST_LINE6
RAM2_A1	L27	PR43A_T(LVDS)	PR14A_T	E28	TEST_LINE7
RAM2_AI1	H29	PR42B_C	PR13B_C(LVDS)	G24	TEST_LINE8
RAM2_AI2	G29	PR42A_T	PR13A_T(LVDS)	H25	TEST_LINE9
RAM2_AI3	L22	PR41B_C(LVDS)	(RUM0_SPLLC_FB_A) PR12B_C	D27	TEST_LINE10
RAM2_AI4	M22	PR41A_T(LVDS)	(RUM0_SPLLT_FB_A) PR12A_T	E27	TEST_LINE11
RAM2_AI5	F30	PR40B_C	(RUM0_SPLLC_IN_A) PR11B_C(LVDS)	F26	TEST_LINE12
RAM2_AI6	F29	PR40A_T	(RUM0_SPLLT_IN_A) PR11A_T(LVDS)	G25	TEST_LINE13
RAM2_AI7			(VREF2_2) PR9B_C	F24	TEST_LINE14
			(VREF1_2) PR9A_T	F25	TEST_LINE15

LFE2M100E-5FN900C

F3B[19..0]

RAM2_A[1..0]
RAM2_AI[18..1]
RAM2_DQA[8..1]
RAM2_DQB[8..1]

HPLA5

3	CK			
19	CH0			
18	CH1			
17	CH2			
16	CH3	NDK1	1	
15	CH4	NDK2	2	
14	CH5			
13	CH6			
12	CH7			
11	CH8			
10	CH9			
9	CH10			
8	CH11			
7	CH12			
6	CH13			
5	CH14			
4	CH15	GND	20	

ZF5-20-01

CMOS25/LVDS

FPGA5A

UPPER LEFT BANK7

D2		PL9A (VREF2_7)_T	PL34A_T(LVDS)	J3	F2B2
D3		PL9B (VREF1_7)_C	PL34B_C(LVDS)	J2	F2B3
J8		PL11A (LUM0_SPLLT_IN_A)_T(LVDS)	PL35A_T	H1	
H7		PL11B (LUM0_SPLLC_IN_A)_C(LVDS)	PL35B_C	J1	
E3		PL12A (LUM0_SPLLT_FB_A)	PL41A_T(LVDS)	L5	F2B4
E4		PL12B (LUM0_SPLLC_FB_A)	PL41B_C(LVDS)	L4	F2B5
G6		PL13A_T(LVDS)	PL42A_T	N9	
F5		PL13B_C(LVDS)	PL42B_C	N7	
E2		PL14A_T	PL43A_T(LVDS)	K2	F2B6
D1		PL14B_C	PL43B_C(LVDS)	K1	F2B7
G5		PL15A/LDQS15_T(LVDS)	PL44A_T	P9	
G4		PL15B_C(LVDS)	PL44B_C	P7	
K7		PL16A_T	LDQS45/PL45A_T(LVDS)	M6	F2B8
K8		PL16B_C	PL45B_C(LVDS)	M5	F2B9
E1		PL17A_T(LVDS)	PL46A_T	N5	
F2		PL17B_C(LVDS)	PL46B_C	N6	
F1		PL18A_T	PL47A_T(LVDS)	M4	F2B10
G3		PL18B_C	PL47B_C(LVDS)	M3	F2B11
H5		PL25A_T(LVDS)	PL48A_T	P6	
H4		PL25B_C(LVDS)	PL48B_C	P8	
J5		PL26A_T	(LUM3_SPLLT_IN_A) PL50A_T(LVDS)	L3	F2B12
J4		PL26B_C	(LUM3_SPLLC_IN_A) PL50B_C(LVDS)	L2	F2B13
G2		PL28A_T(LVDS)	(LUM3_SPLLT_FB_A) PL51A_T	P5	
G1		PL28B_C(LVDS)	(LUM3_SPLLC_FB_A) PL51B_C	P4	
L9		PL29A_T	PL52A_T(LVDS)	L1	F2B14
L7		PL29B_C	PL52B_C(LVDS)	M2	F2B15
K6		PL30A_T(LVDS)	PL53A_T	R5	
K5		PL30B_C(LVDS)	PL53B_C	R4	
L8		PL31A_T	LDQS54/PL54A_T(LVDS)	M1	F2B16
L6		PL31B_C	PL54B_C(LVDS)	N2	F2B17
H3		PL32A/LDQS32_T(LVDS)	PL55A_T	R8	
H2		PL32B_C(LVDS)	PL55B_C	T9	
N8		PL33A_T	PL56A_T(LVDS)	P3	F2B18
M9		PL33B_C	PL56B_C(LVDS)	P2	F2B19
			(PCLKT7_0) PL57A_T	N1	
			PCLKC7_0) PL57B_C	P1	

F2B0
F2B1

LFE2M100E-5FN900C

F2B[19..0]

F2B[19..0]

OPTIONAL RESISTORS
DO NOT SOLDER

F2B0	100R	R40	F2B1		
F2B4	100R	R36	F2B5		
F2B8	100R	R38	F2B9		
F2B12	100R	R42	F2B13		
F2B16	100R	R44	F2B17		

CMOS25/LVDS

FPGA5F

LOWER RIGHT BANK3

TRB_OK_LED	AC27	PR102B (RLM0_GDLCC_FB_A)_C	PR77B_C(LVDS)	W27	F4B19
TRB_RX_LED	AC28	PR102A (RLM0_GDLLT_FB_A)_T	PR77A_T(LVDS)	W28	F4B18
TRB_TX_LED	AC29	PR101B (RLM0_GDLLC_IN_A)_C(LVDS)	PR75B_C	V24	F4B17
GbE_OK_LED	AC30	PR101A (RLM0_GDLLT_IN_A)_T(LVDS)	PR75A_T	V25	F4B16
GbE_RX_LED	AB30	PR100B (RLM0_GPLLC_IN_A)_C	PR74B_C(LVDS)	V28	F4B15
GbE_TX_LED	AA30	PR100A (RLM0_GPLLT_IN_A)_T	PR74A_T(LVDS)	U27	F4B14
	AB29	PR99B (RLM0_GPLLC_FB_A)_C(LVDS	PR73B_C	U23	F4B13
	AB28	PR99A/RDQS99 (RLM0_GPLLT_FB_A)_T(LVDS)	PR73A_T	V23	F4B12
	Y22	PR98B_C	PR72B_C(LVDS)	V26	F4B11
	Y23	PR98A_T	RDQS72/PR72A_T(LVDS)	U26	F4B10
F1B19	AB26	PR97B_C(LVDS)	PR71B_C	U25	F4B9
F1B18	AB27	PR97A_T(LVDS)	PR71A_T	U24	F4B8
F1B17	Y24	PR96B_C	PR70B_C(LVDS)	T30	F4B7
F1B16	Y25	PR96APR95B_T	PR70A_T(LVDS)	R30	F4B6
F1B15	AA29	PR95B_C(LVDS)	PR69B_C	T23	F4B5
F1B14	Y28	PR95A_T(LVDS)	PR69A_T	T22	F4B4
F1B13	Y30	PR93B_C	PR68B_C(LVDS)	T29	F4B3
F1B12	Y29	PR93A_T	PR68A_T(LVDS)	T28	F4B2
F1B11	W22	PR83B_C(LVDS)	(RLM4_SPLLC_FB_A) PR66B_C	R23	F4B1
F1B10	V22	PR83A_T(LVDS)	(RLM4_SPLLT_FB_A) PR66A_T	R22	F4B0
F1B9	Y27	PR82B_C	(RLM4_SPLLC_IN_A) PR65B_C(LVDS)	P30	
F1B8	Y26	PR82A_T	(RLM4_SPLLT_IN_A) PR65A_T(LVDS)	R29	LED_RED
F1B7	W30	PR81B_C(LVDS)	PR64B_C	T27	LED_YELLOW
F1B6	W29	PR81A/RDQS81_T(LVDS)	PR64A_T	T26	LED_GREEN
F1B5	W25	PR80B_C	PR61B_C(LVDS)	N30	LED_ORANGE
F1B4	W26	PR80A_T	PR61A_T(LVDS)	N29	
F1B3	U29	PR79B_C(LVDS)	(VREF2_3) PR60B_C	R27	
F1B2	V29	PR79A_T(LVDS)	(VREF1_3) PR60A_T	R28	
F1B1	V30	PR78B_C	(PCLKC3_0) PR59B_C(LVDS)	P29	
F1B0	U30	PR78A_T	(PCLKT3_0) PR59A_T(LVDS)	P28	

LFE2M100E-5FN900C

CLK100_NF5
CLK100_PF5
R398 100R

+2.5V

LED_RED	DERROR1	1	2	SML-311UT	1k R374
LED_YELLOW	DWAIT1	1	2	SML-311YT	1k R375
LED_GREEN	DOK1	1	2	SML-310PT	1k R376
LED_ORANGE	DACTIVE1	1	2	SML-311DT	1k R377

F4B[19..0]
F1B[19..0]

OPTIONAL RESISTORS
DO NOT SOLDER

F4B0	100R	R46	F4B1		
F4B4	100R	R48	F4B5		
F4B8	100R	R50	F4B9		
F4B12	100R	R52	F4B13		
F4B16	100R	R54	F4B17		

OPTIONAL RESISTORS
DO NOT SOLDER

F1B0	100R	R16	F1B1		
F1B4	100R	R18	F1B5		
F1B8	100R	R20	F1B9		
F1B12	100R	R22	F1B13		
F1B16	100R	R24	F1B17		

Title	07_FPGA_5_LVDS
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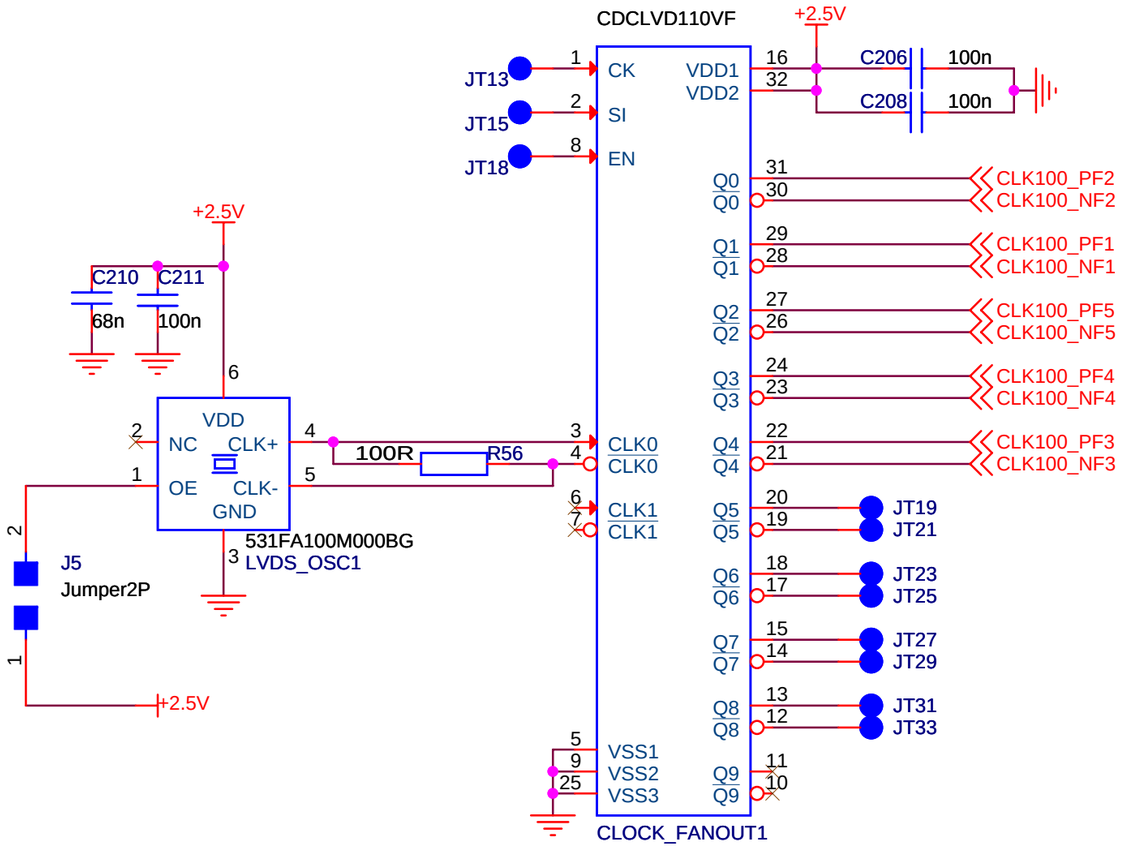

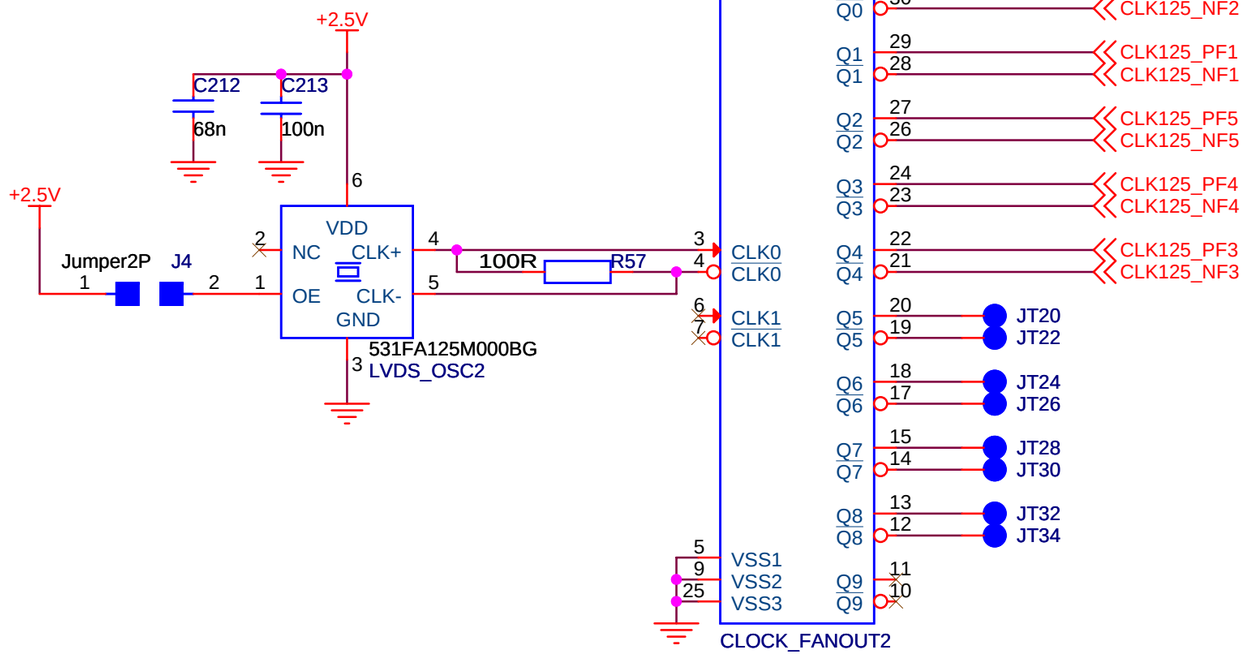

Title	09_CLOCKING	
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Power 5V

DCDC1

J29 770968-1

FP1 Flat_Con

F1 5A/slow

C1305 330u

C1308 22n

FILTER1 FLT007A0-SRZ (VIN- GNDVIN+ VO- VO+ Filtermodul)

C1531 10n

DC/DC (+Vin +Vout -Vin -Vout +SENSE -SENSE REMOTE Vout_TRIM) KW010A0A41Z

R395 OR

J30 Jumper2P

C1306 180u

C1307 100n

+5V

J31 Jumper2P

C1532 10n

PLEASE PROVIDE THE SPACE FOR THE CAGE TO COVER DCDC CONVERTERS - GND PINS

POWER_CONTROL1

ispPAC-POWR1014A-01TN48I

+5V R394 2.49k DPWR1 SML-310PT

+3.3V +1.2V +2.5V

R93 10k R95 10k

JTAGLDO1 ADP1715ARMZ-3,3-R7 (EN IN OUT SS GND#5 GND#6 GND#7 GND#8)

C310 100u C314 10n C311 100u C312 100n

VCC_JTAG

POWER_IN1 POWER_IN2 POWER_IN3 POWER_IN4

R97 10k R98 10k

POWER_SCL POWER_SDA

VMON1 VMON2 VMON3 VMON4 VMON5 VMON6 VMON7 VMON8 VMON9 VMON10

VCCA VCCPROG VCCD1 VCCD2 VCCINP

IN1 IN2 IN3 IN4

SCL SDA

GNDD1 GNDD2

HVOUT1 HVOUT2 SMBA_OUT3 OUT4 OUT5 OUT6 OUT7 OUT8 OUT9 OUT10 OUT11 OUT12 OUT13 OUT14

INHIB_12 INHIB_25 INHIB_33

R85 10k R86 10k R87 10k R88 10k R89 10k R90 10k R91 10k R92 10k

RESET_F5 RESET_F1 RESET_F2 RESET_F3 RESET_F4

JT35 JT36 JT37 JT38

C313 100n

VCCJ ATDI TDI TDISEL TCK TMS TDO

JTAG_TDI TDO_F5 JTAG_TCK JTAG_TMS

TDISEL = 0 ATDI
TDISEL = 1 TDI

J8

R96 10k

RESETB PLDCLK MCLK GNDA

JT39 JT40

JTAG1

VCC_JTAG JTAG_TMS JTAG_TCK JTAG_TDO JTAG_TDI

Power 3.3V

DCDC3 PME5218TS (Inhibit GND Vo_Adjust Vin Track Vout)

INHIB_33

C317 100n C318 180u

R102 698R

C327 100n C328 100u C1520 180u

Power 2.5V

DCDC4 PME5218TS (Inhibit GND Vo_Adjust Vin Track Vout)

INHIB_25

C323 100n C319 180u

R103 2.21k

C329 100n C330 100u C331 100u C1522 180u

Power 1.2V

LTM1V2_1

LTM4600EV

Board-Mounting-Hole

E1 E4 E7 E10 E11 E12 E13 E14 E15 E22 E16 E17 E18 E19 E20 E21 (3.5mm / 1.8mm)

+1.2V +3.3V +5V

R446 1k D10 SML-311YT R447 100k

C1521 100p R448 30.1k R449 100k

RUN/SS PGOOD COMP f_ADJ EXTVcc V_OSET SV_IN FCB SGND

V_IN1 V_IN2 V_IN3 V_IN4 V_IN5 V_IN6 V_IN7 V_IN8 V_IN9 V_IN10 V_IN11 V_IN12 V_IN13 V_IN14 V_IN15

V_OUT1 V_OUT2 V_OUT3 V_OUT4 V_OUT5 V_OUT6 V_OUT7 V_OUT8 V_OUT9 V_OUT10 V_OUT11 V_OUT12 V_OUT13 V_OUT14 V_OUT15 V_OUT16 V_OUT17 V_OUT18 V_OUT19 V_OUT20 V_OUT21 V_OUT22 V_OUT23 V_OUT24 V_OUT25 V_OUT26 V_OUT27 V_OUT28 V_OUT29 V_OUT30 V_OUT31 V_OUT32 V_OUT33

PGND1 PGND2 PGND3 PGND4 PGND5 PGND6 PGND7 PGND8 PGND9 PGND10 PGND11 PGND12 PGND13 PGND14 PGND15 PGND16 PGND17 PGND18 PGND19 PGND20 PGND21 PGND22 PGND23 PGND24 PGND25 PGND26 PGND27 PGND28 PGND29 PGND30 PGND31 PGND32 PGND33 PGND34 PGND35 PGND36 PGND37 PGND38 PGND39 PGND40 PGND41 PGND42 PGND43 PGND44 PGND45 PGND46 PGND47

C1523 100n C1524 180u

+1.2V OUT

C1525 100n C1526 180u C1527 180u C1530 180u C1528 100u C1529 100u

GND test pins for connection of probe

JGND1 5-826632-0 JGND2 5-826632-0

Title	11_POWER_SOURCE	
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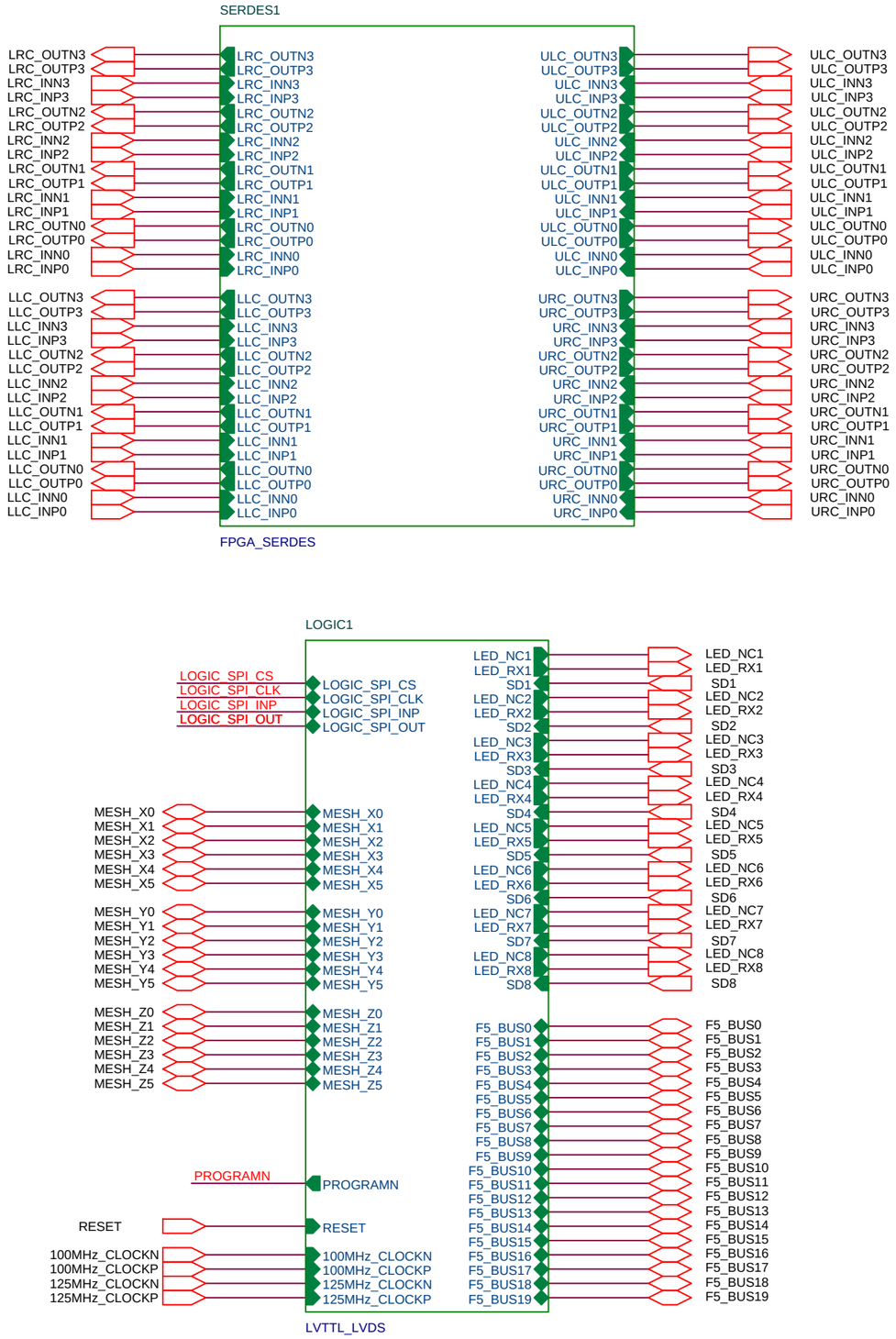

Title	**FPGA_BLOCK**	
Size A3	Document Number <Doc>	Rev <RevCo
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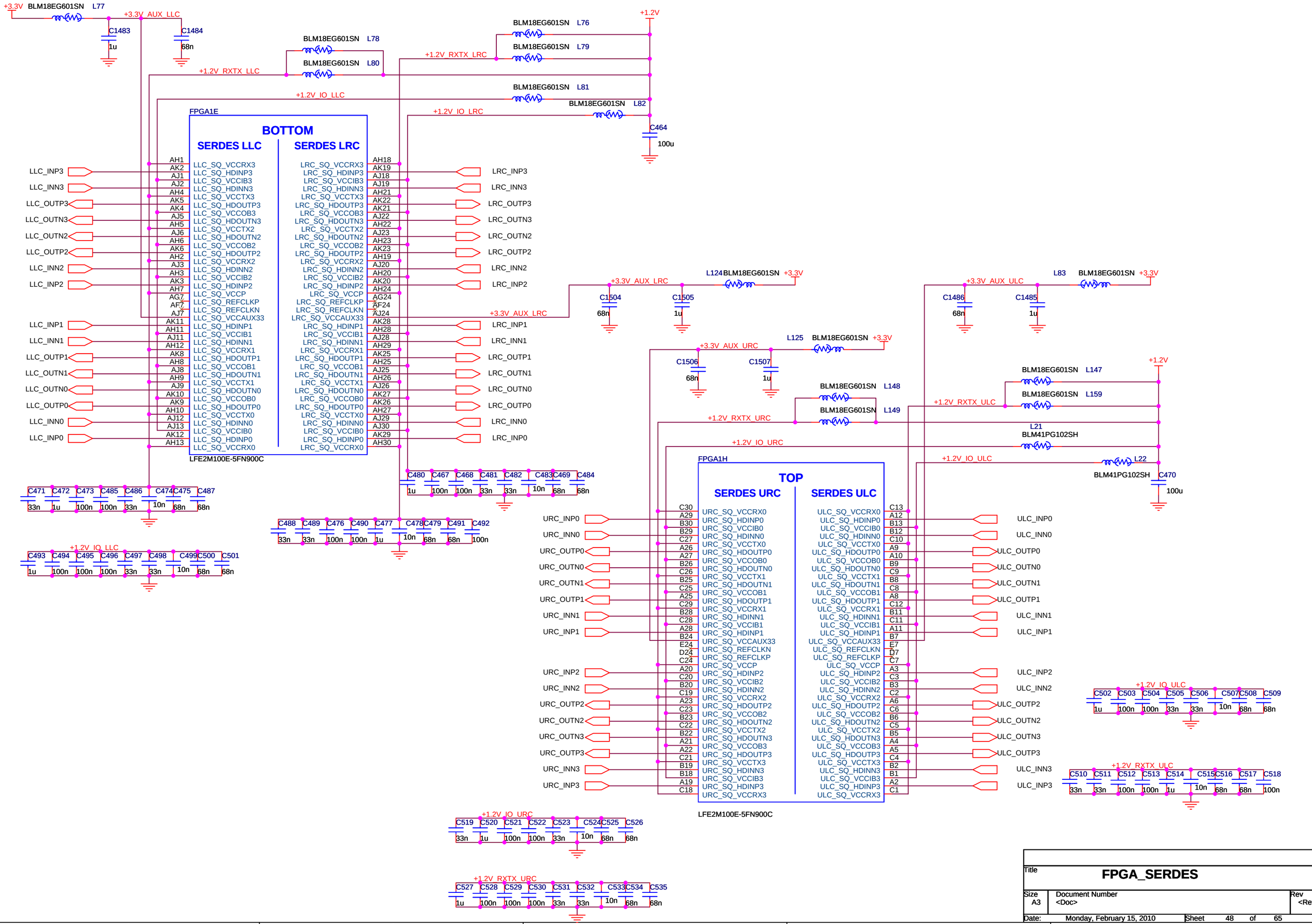

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CMOS25/LVDS

FPGA1A

UPPER LEFT
BANK7

LFE2M100E-5FN900C

MESH_Y0 MESH_Y1 MESH_Y2 MESH_Y3 MESH_Y4 MESH_Y5
MESH_Z0 MESH_Z1 MESH_Z2 MESH_Z3 MESH_Z4 MESH_Z5
MESH_X0 MESH_X1 MESH_X2 MESH_X3 MESH_X4 MESH_X5

LED_RED → DERROR2 → SML-311UT → 1k R378
LED_YELLOW → DWAIT2 → SML-311YT → 1k R379
LED_GREEN → DOK2 → SML-310PT → 1k R380
LED_ORANGE → DACTIVE2 → SML-311DT → 1k R381
+2.5V

OPTIONAL OSCILLATOR
DO NOT SOLDER

+2.5V, C1286 100n, C1287 68n
VDD, CLK+, NC, CLK-, OE, GND
R316 100R
531FA100M000BG
LVDS_OSC3
J21 Jumper2P

LVTTL

FPGA1B

LOWER LEFT
BANK6

LOGIC_SPI_CS
LOGIC_SPI_CLK
LOGIC_SPI_INP
LOGIC_SPI_OUT

JT234 JT235 JT236 JT237 JT238 JT239 JT240 JT241 JT242 JT243 JT244 JT245 JT246 JT247 JT248 JT249 JT250 JT251

LED_NC1 LED_RX1 SD1 LED_NC2 LED_RX2 SD2 LED_NC3 LED_RX3 SD3 LED_NC4 LED_RX4 SD4 LED_NC5 LED_RX5 SD5 LED_NC6 LED_RX6 SD6 LED_NC7 LED_RX7 SD7 LED_NC8 LED_RX8 SD8
PROGRAMN
RESET

LFE2M100E-5FN900C

SOLDER PADS SHOULD BE IN PLUGGED VIAS

CMOS25/LVDS

FPGA1G

UPPER RIGHT
BANK2

100MHz_CLOCKN
100MHz_CLOCKP
100R R317

LFE2M100E-5FN900C

CMOS25/LVDS

FPGA1F

LOWER RIGHT
BANK3

F5_BUS19 F5_BUS18 F5_BUS17 F5_BUS16 F5_BUS15 F5_BUS14 F5_BUS13 F5_BUS12 F5_BUS11 F5_BUS10
F5_BUS9 F5_BUS8 F5_BUS7 F5_BUS6 F5_BUS5 F5_BUS4 F5_BUS3 F5_BUS2 F5_BUS1 F5_BUS0
125MHz_CLOCKN
125MHz_CLOCKP
100R R328

LFE2M100E-5FN900C

OPTIONAL RESISTORS
DO NOT SOLDER

F5_BUS2	100R	R319	F5_BUS3
F5_BUS6	100R	R321	F5_BUS7
F5_BUS10	100R	R323	F5_BUS11
F5_BUS14	100R	R325	F5_BUS15
F5_BUS18	100R	R327	F5_BUS19

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LVTTL

FPGA1J

TOP LEFT
BANK0

JT82	C15	PT64B (PCLKC0_0)	
JT83	D15	PT64A (PCLKT0_0)	
JT84	C14	PT63B (VREF2_0)	PT52B
JT85	E15	PT63A (VREF1_0)	PT52A
JT86	G14	PT62B	PT50B
JT87	J14	PT62A	PT50A
JT88	F14	PT61B	PT49B
JT89	H14	PT61A	PT49A
JT90	A14	PT60B	PT48B
JT91	B14	PT60A	PT48A
JT92	D13	PT59B	PT46B
JT93	F13	PT59A	PT46A
JT94	G13	PT58B	PT31B
JT95	J11	PT58A	PT31A
JT96	D4	PT57B	PT30B
JT97	D5	PT56A	PT30A
JT98	E5	PT55B	PT29B
JT99	F6	PT55A	PT29A

HPLA1

		3	CK	
F7	TEST_LINE0	19	CH0	
D8	TEST_LINE1	18	CH1	
J13	TEST_LINE2	17	CH2	
G11	TEST_LINE3	16	CH3	NDK1
H13	TEST_LINE4	15	CH4	NDK2
H12	TEST_LINE5	14	CH5	
E8	TEST_LINE6	13	CH6	
D9	TEST_LINE7	12	CH7	
D12	TEST_LINE8	11	CH8	
E13	TEST_LINE9	10	CH9	
J12	TEST_LINE10	9	CH10	
H10	TEST_LINE11	8	CH11	
E12	TEST_LINE12	7	CH12	
D11	TEST_LINE13	6	CH13	
H11	TEST_LINE14	5	CH14	
F11	TEST_LINE15	4	CH15	GND

HPLA

1, 2, 20

ZF5-20-01

LFE2M100E-5FN900C

CMOS25/LVDS

FPGA1I

TOP RIGHT
BANK1

D23	PT100B	PT75B	J18
E21	PT100A	PT75A	H17
D26	PT99B	PT74B	J17
E26	PT99A	PT74A	F18
E23	PT98B	PT73B	F17
G22	PT98A	PT73A	A16
D22	PT97B	PT72B	B16
F21	PT97A	PT72A	G17
G18	PT96B	PT71B	G16
H18	PT96A	PT71A	H16
D20	PT95B	PT70B	F16
D21	PT95A	PT70A	J16
E20	PT94B	PT69B	G15
E19	PT94A	PT69A	C16
D19	PT93B	PT68B	D16
E18	PT93A	PT68A	J15
D18	PT92B	PT67B	H15
C17	PT92A	(VREF2_1) PT67A	A15
A17	PT91B	(VREF1_1) PT66B	B15
B17	PT91A	(PCLKC1_0) PT66A	F15
		(PCLKT1_0) PT65B	E16
		PT65A	

LFE2M100E-5FN900C

Please code the FPGA number here:
open == high
0 ohm == low

Jumper2P

Jumper2P J44

J18 1 — 1 J19
J45 2 — 2

OPTIONAL OSCILLATOR
DO NOT SOLDER

+2.5V

C1294 68n
C1295 100n

+2.5V

Jumper2P J25 1 — 2

VDD (2) NC (1) OE (6) CLK+ (4) CLK- (5) GND (3)

531FA125M000BG
LVDS_OSC4

100R R368

LFE2M100E-5FN900C

SOLDER PADS SHOULD BE IN PLUGGED VIAS

CMOS25/LVDS

FPGA1D

BOTTOM RIGHT
BANK4

AJ14	PB67A (PCLKT4_0)_T	PB76A_T	AD17
AK14	PB67B (PCLKC4_0)_C	PB76B_C	AF19
AK15	PB68A (VREF2_4)_T	PB80A_T	AH17
AK16	PB68B (VREF1_4)_C	PB80B_C	AJ17
AF18	PB69A/BDQS69_T	PB82A_T	AF26
AD16	PB69B_C	PB82B_C	AE25
AJ15	PB70A_T	PB92A_T	AD24
AG16	PB70B_C	PB92B_C	AE24
AE17	PB71A_T	PB93A_T	AD18
AC17	PB71B_C	PB93B_C	AC18
AH16	PB72A_T	PB94A_T	AE18
AK17	PB72B_C	PB94B_C	AG19
AG20	PB73A_T	BDQS96/PB96A_T	AC19
AG21	PB73B_C	PB96B_C	AD20
AG18	PB74A_T	PB97A_T	AB18
AJ16	PB74B_C	PB97B_C	AC20
AF21	PB75A_T	PB98A_T	AE20
AG22	PB75B_C	PB98B_C	AE21
		PB99A_T	AC23
		PB99B_C	AD23

LFE2M100E-5FN900C

CMOS25/LVDS

FPGA1C

BOTTOM LEFT
BANK5

JT102	AF10	PB30A_T	PB49A_T	AF12
JT100	AE8	PB30B_C	PB49B_C	AD14
JT101	AE11	PB31A_T	PB50A_T	AG8
JT103	AD9	PB31B_C	PB50B_C	AF8
JT104	AE10	PB32A_T	BDQS51/PB51A_T	AE15
JT105	AD10	PB32B_C	PB51B_C	AC15
JT106	AE13	PB33A/BDQS33_T	PB56A_T	AD15
JT107	AC12	PB33B_C	PB56B_C	AF15
JT108	AG2	PB34A_T	PB57A_T	AG10
JT109	AG3	PB34B_C	PB57B_C	AG9
JT110	AD13	PB35A_T	PB58A_T	AH14
JT111	AC13	PB35B_C	PB58B_C	AG12
JT112	AE14	PB36A_T	PB59A_T	AG15
JT113	AC14	PB36B_C	PB59B_C	AG13
JT114	AF3	PB37A_T	BDQS60/PB60A_T	AF16
JT115	AF4	PB37B_C	PB60B_C	AH15
JT116	AG4	PB38A_T	(VREF2_5) PB61A_T	AC16
JT117	AG5	PB38B_C	(VREF1_5) PB61B_C	AE16
JT118	AD11	PB48A_T	(PCLKT5_0) PB62A_T	AG11
JT119	AF13	PB48B_C	(PCLKC5_0) PB62B_C	AF11

LFE2M100E-5FN900C

Title	**SPARE_LOG**		
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