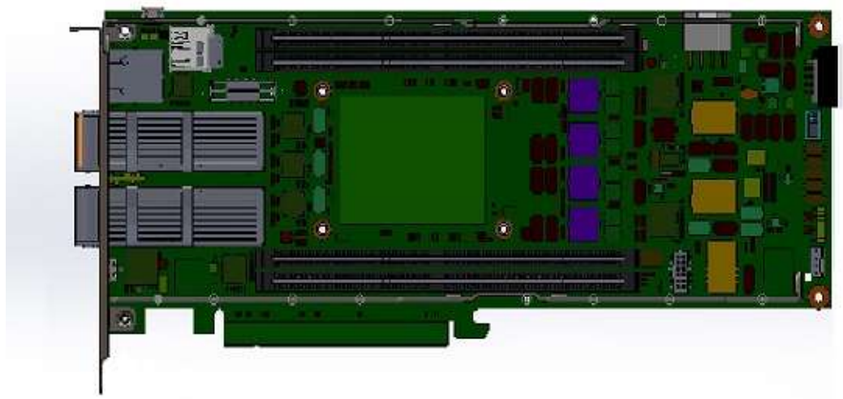
REV	DATE	PAGES	DESCRIPTION
A	11 / 12 / 2017	All	Initial

PAGE	DESCRIPTION	PAGE	DESCRIPTION
1	Title, Notes, Rev. History	39	Clock 2
2	Block Diagram	40	I2C and PMBUS
3	Power Tree	41	LEDs and PushButtons
4	Power Sequence Timing	42	LEDs for QSFPDD
5	Clock Tree Diagram	43	MAX10 - USB Blaster II -1
6	I2C Diagram	44	MAX10 - USB Blaster II -2
7	JTAG Diagram	45	BLANK
8	DDR4_DDR4 Pin Map	46	MAX10 Power Control -1
9	DDR4/DDRT Single DIMM CH0	47	MAX10 Power Control -2
10	FPGA BANK 3A	48	Power inputs
11	FPGA BANK 3B	49	PWR 12V to 5V
12	DDR4 Single DIMM CH1	50	PWR 12V to 3.3V
13	FPGA BANK 3C	51	PWR VCC - 1
14	FPGA BANK 3D	52	PWR VCC - 2
15	DDR4/DDRT Single DIMM CH2	53	PWR 1p8V
16	FPGA BANK 2A	54	PWR - 0p8V_VCCL_SDM
17	FPGA BANK 2B	55	PWR - 0p8V_VCCL_HPS
18	DDR4/DDRT Single DIMM CH3	56	BLANK
19	FPGA BANK 2C	57	PWR - IO_1p8V
20	FPGA BANK 2D	58	PWR - VCC_HSSI
21	FPGA BANK 9A	59	PWR - 1p2V_VCCR
22	FPGA BANK 10A	60	PWR - 1p2V_DDR4_CH01
23	QSFPDD0	61	PWR - 1p2V_DDR4_CH23
24	QSFPDD1	62	PWR - 0p6V_VTT/VREF
25	PCIe End Point Edge Connector	63	PWR - 2p5V
26	FPGA Config SDM	64	PWR - 1p1V_VCCH_GXER1
27	FPGA BANK HPS	65	PWR - Decouping Caps 1
28	ETH PHY	66	PWR - Decouping Caps 2
29	UART		
30	Micro SD		
31	eMMC		
32	FPGA BANK NC DNU		
33	FPGA Power 1		
34	FPGA Power 2		
35	FPGA Gnd 1		
36	FPGA Gnd 2		
37	FPGA Gnd 3		
38	Clock 1		

Board BOM : K57065 Rev01



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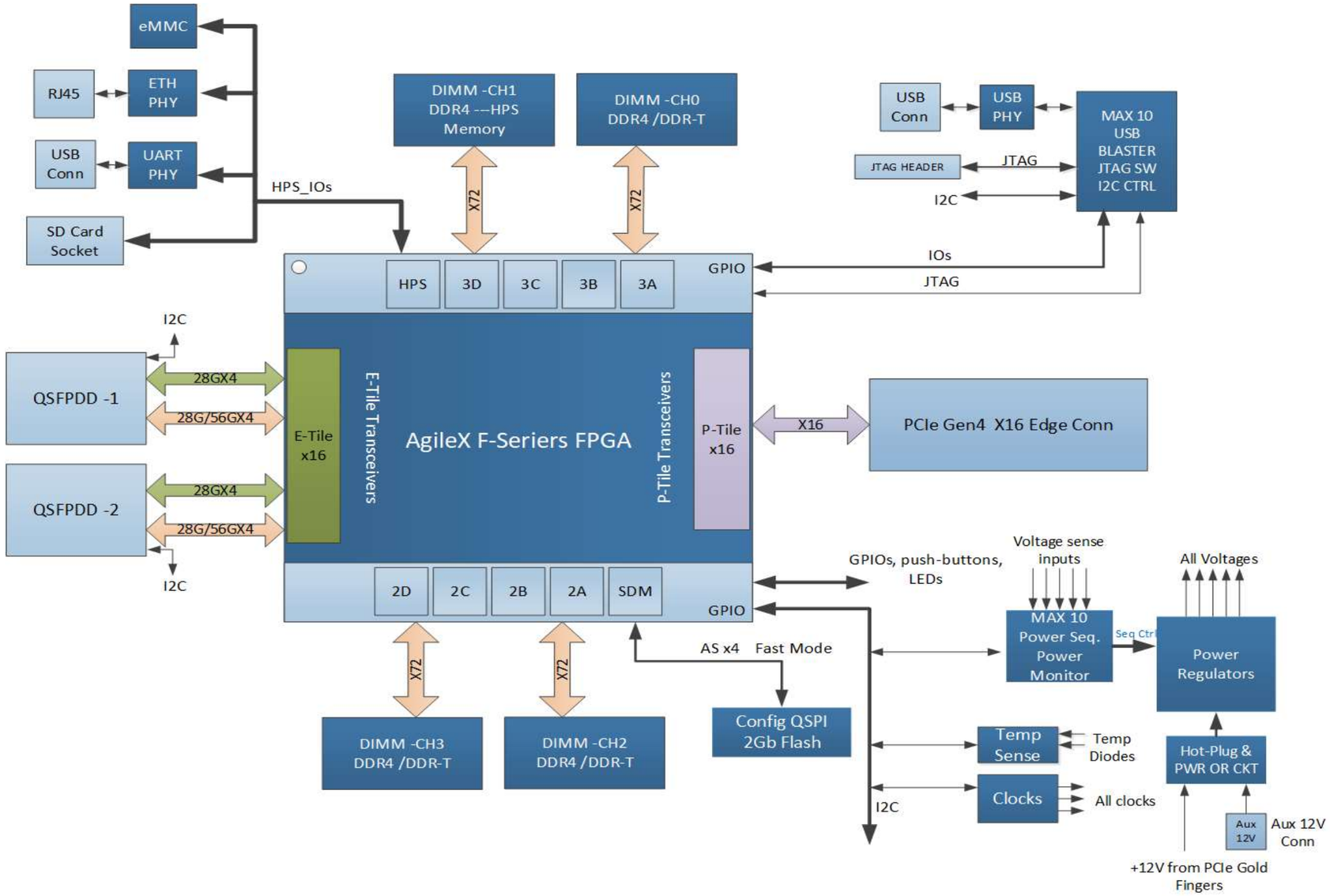
System Block Diagram



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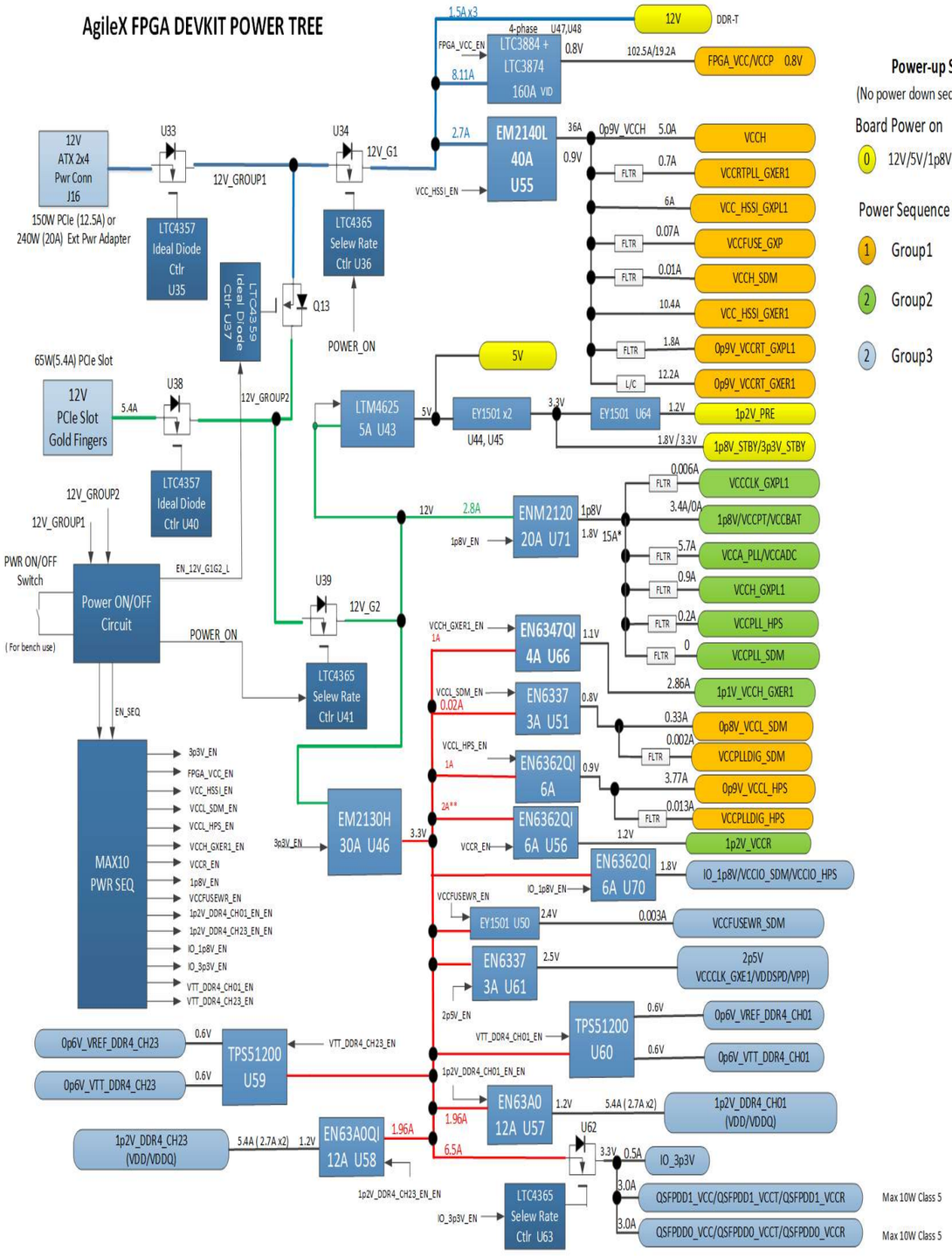
AgileX FPGA DEVKIT POWER TREE



Power-up Sequence:

(No power down sequence requirment)

Board Power on

0 12V/5V/1p8V_STBY/3p3V_STBY/1p2V_PRE

Power Sequence Start

1 Group1

2 Group2

2 Group3

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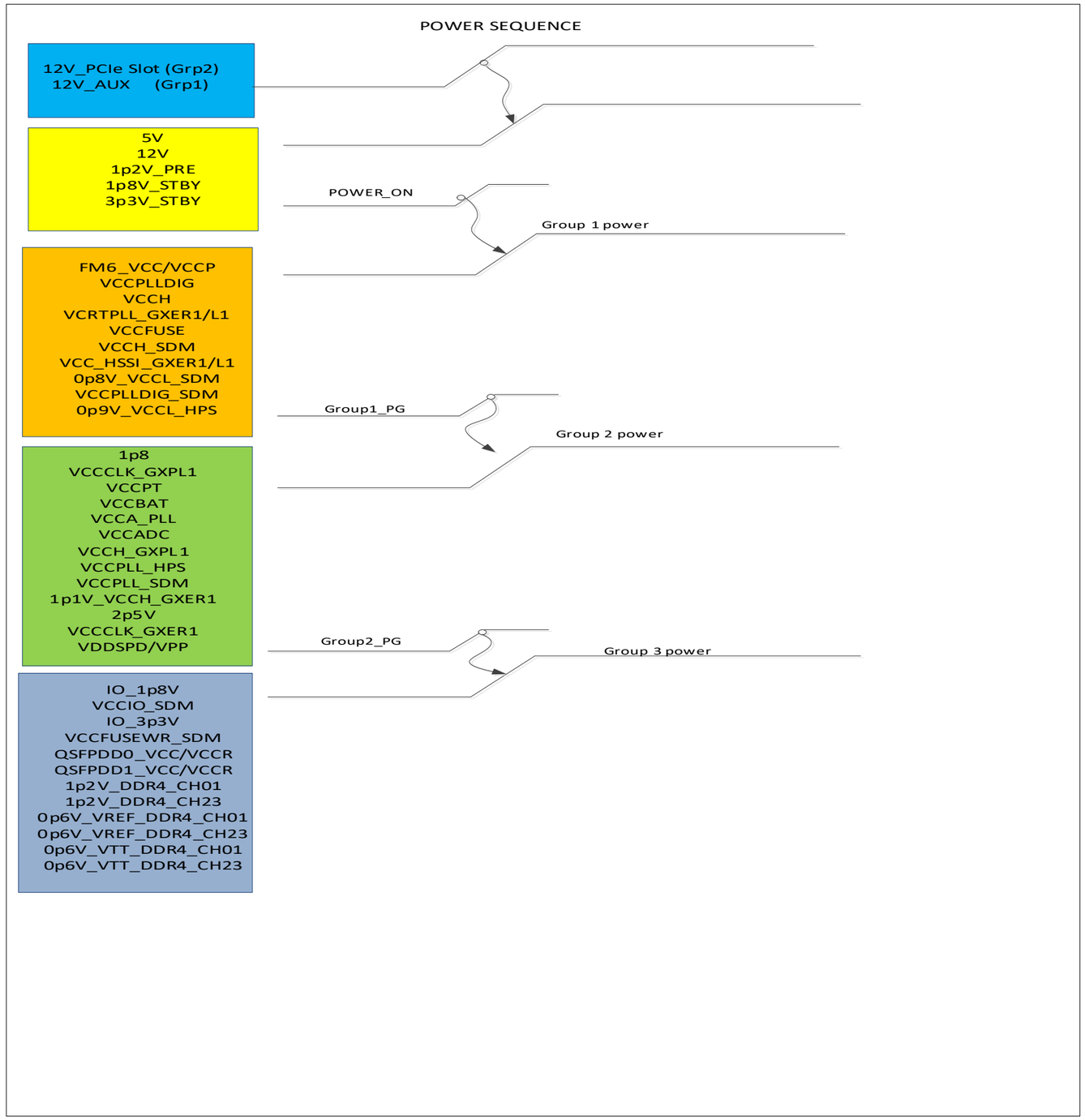
Power Sequence Timing



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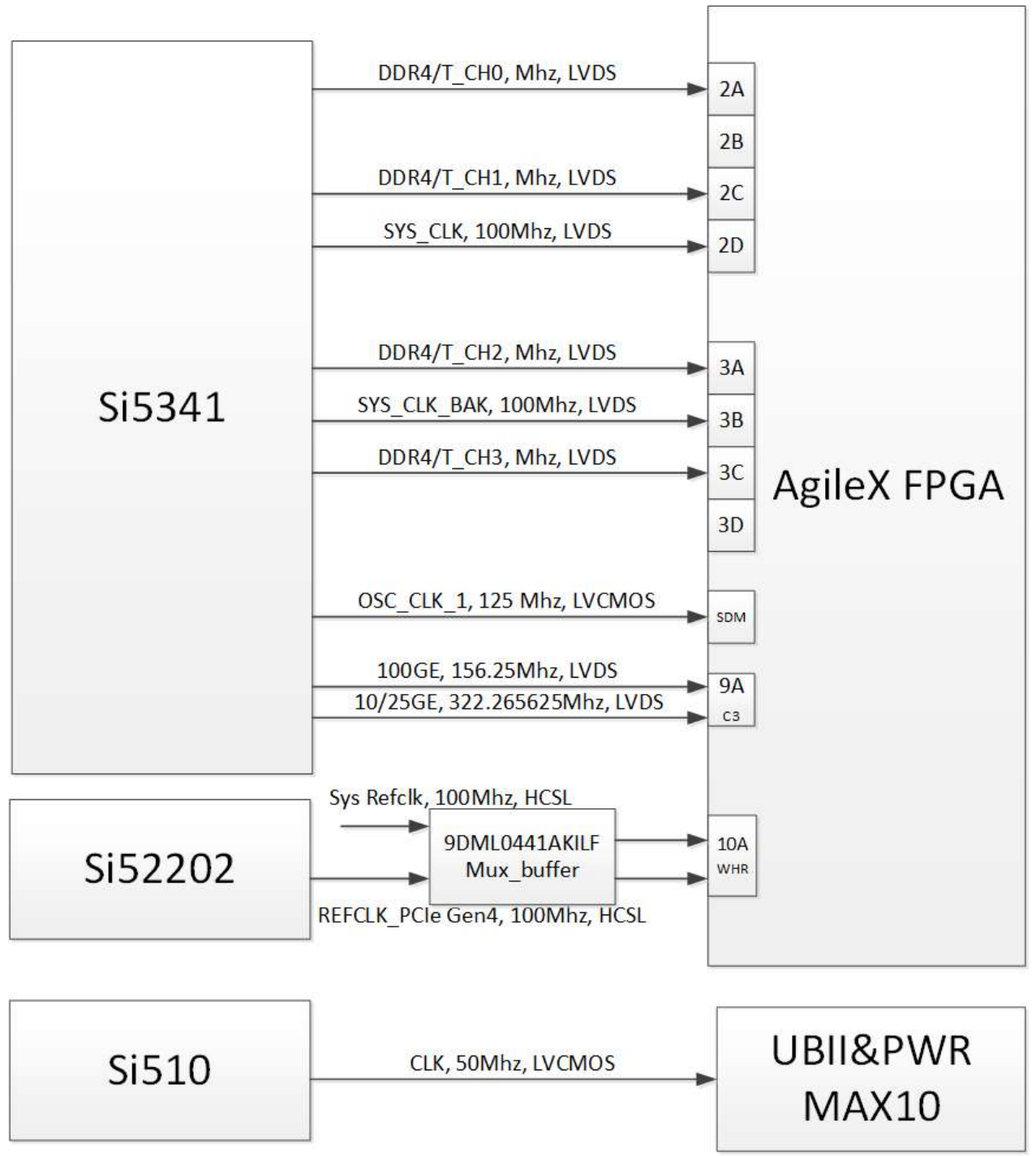
Clock Tree



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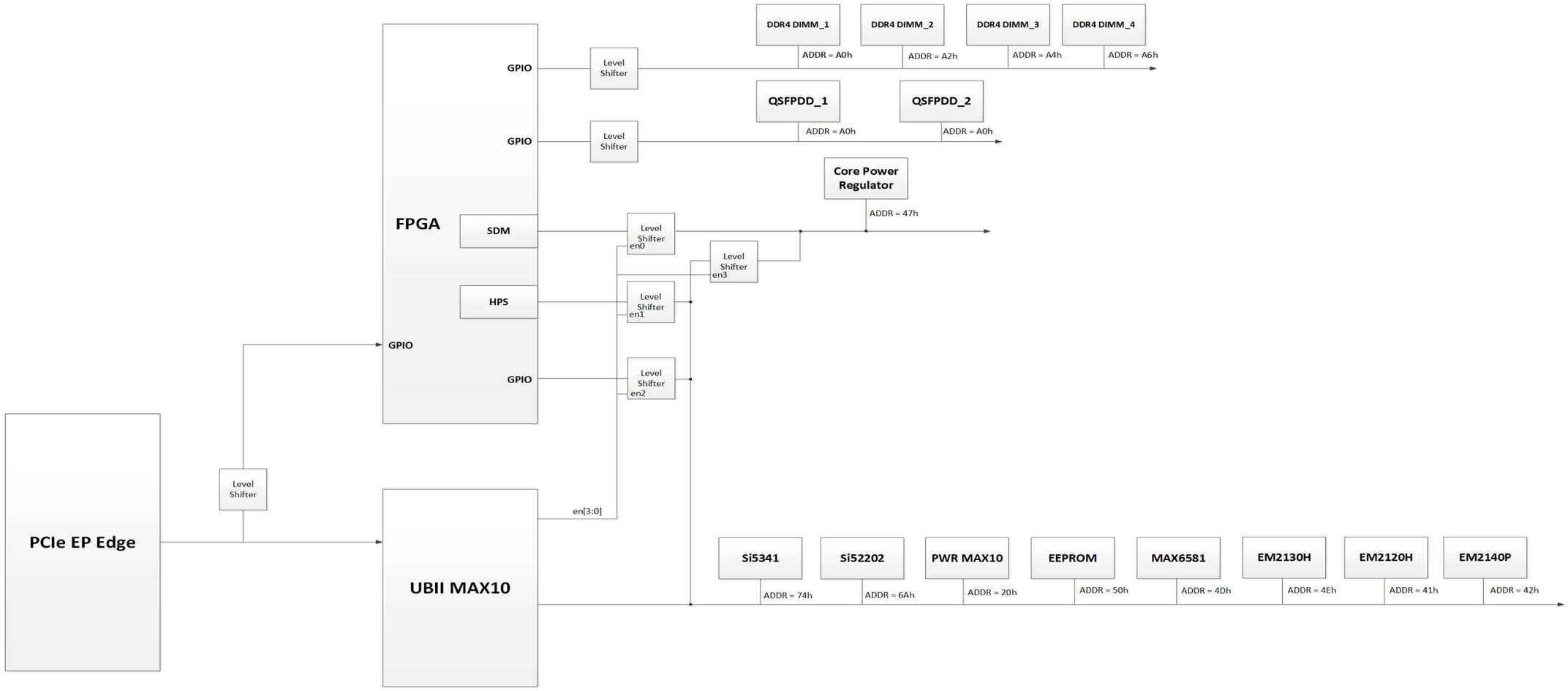
I2C Diagram



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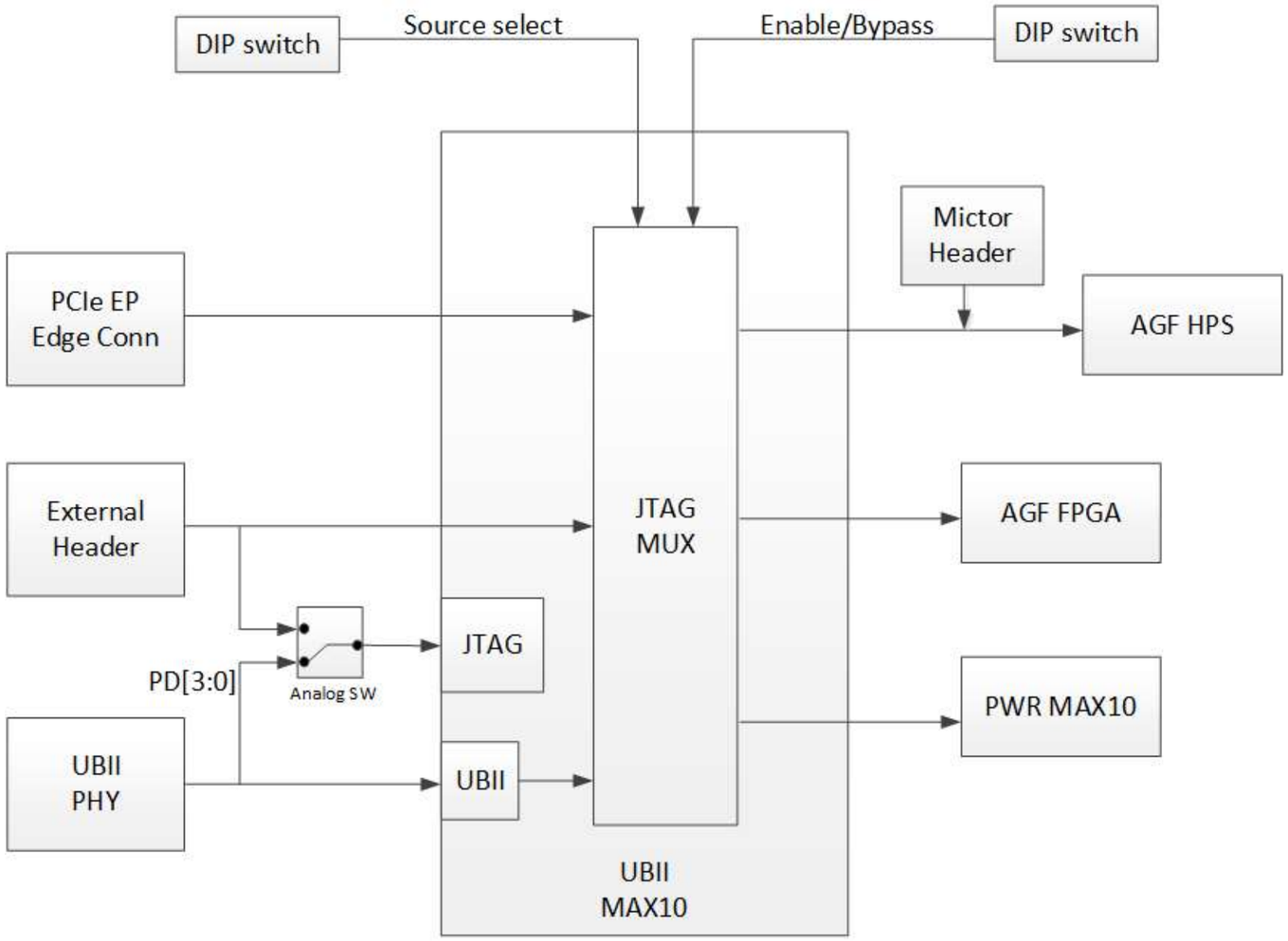
JTAG Block Diagrram



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DDR4/DDR-T DIMM Pin Map

Pin #	Front Side	Pin #	Back Side	Pin #	Front Side	Pin #	Back Side	Pin #	Front Side	Pin #	Back Side	Pin #	Front Side	Pin #	Back Side
1	12V	145	12V	38	DQ24	182	VSS	75	CLK0#	219	CLK1#	108	DQ40	252	VSS
2	VSS	146	VREFCA	39	VSS	183	DQ25	76	VDD	220	VDD	109	VSS	253	DQ41
3	DQ4	147	VSS	40	DQS12	184	VSS	77	VTT	221	VTT	110	DQS14	254	VSS
4	VSS	148	DQ5	41	DQS12#	185	DQS3#	KEY				111	DQS14#	255	DQS5#
5	DQ0	149	VSS	42	VSS	186	DQS3					112	VSS	256	DQS5
6	VSS	150	DQ1	43	DQ30	187	VSS					113	DQ46	257	VSS
7	DQS0	151	VSS	44	VSS	188	DQ31					114	VSS	258	DQ47
8	DQS0#	152	DQS0#	45	DQ26	189	VSS	78	EVENT	222	PARITY	115	DQ42	259	VSS
9	VSS	153	DQ50	46	VSS	190	DQ27	79	A0	223	VDD	116	VSS	260	DQ43
10	DQ6	154	VSS	47	CB4	191	VSS	80	VDD	224	BA1	117	DQ52	261	VSS
11	VSS	155	DQ7	48	VSS	192	CB5	81	BA0	225	A10	118	VSS	262	DQ53
12	DQ2	156	VSS	49	CB0	193	VSS	82	RAS#/A16	226	VDD	119	DQ48	263	VSS
13	VSS	157	DQ3	50	VSS	194	CB1	83	VDD	227	RFU	120	VSS	264	DQ49
14	DQ12	158	VSS	51	DQS17	195	VSS	84	CS0#	228	WE#/A14	121	DQS15	265	VSS
15	VSS	159	DQ13	52	DQS17#	196	DQS8#	85	VDD	229	VDD	122	DQS15#	266	DQS6#
16	DQ8	160	VSS	53	VSS	197	DQS8	86	CAS#/A15	230	SAVE#	123	VSS	267	DQS6
17	VSS	161	DQ9	54	CB6	198	VSS	87	ODT0	231	VDD	124	DQ54	268	VSS
18	DQS10	162	VSS	55	VSS	199	CB7	88	VDD	232	A13	125	VSS	269	DQ55
19	DQS10#	163	DQS1#	56	CB2	200	VSS	89	CS1#	233	VDD	126	DQ50	270	VSS
20	VSS	164	DQ51	57	VSS	201	CB3	90	VDD	234	A17	127	VSS	271	DQ51
21	DQ14	165	VSS	58	RESET#	202	VSS	91	ODT1	235	C2	128	DQ60	272	VSS
22	VSS	166	DQ15	59	VDD	203	CKE1	92	VDD	236	VDD	129	VSS	273	DQ61
23	DQ10	167	VSS	60	CKE0	204	VDD	93	C0	237	C1	130	DQ56	274	VSS
24	VSS	168	DQ11	61	VDD	205	RFU	94	VSS	238	SA2	131	VSS	275	DQ57
25	DQ20	169	VSS	62	ACT#	206	VDD	95	DQ36	239	VSS	132	DQS16	276	VSS
26	VSS	170	DQ21	63	BG0	207	BG1	96	VSS	240	DQ37	133	DQS16#	277	DQS7#
27	DQ16	171	VSS	64	VDD	208	ALERT#	97	DQ32	241	VSS	134	VSS	278	DQS7
28	VSS	172	DQ17	65	A12	209	VDD	98	VSS	242	DQ33	135	DQ62	279	VSS
29	DQS11	173	VSS	66	A9	210	A11	99	DQS13	243	VSS	136	VSS	280	DQ63
30	DQS11#	174	DQS2#	67	VDD	211	A7	100	DQS13#	244	DQS4#	137	DQ58	281	VSS
31	VSS	175	DQS2	68	A8	212	VDD	101	VSS	245	DQS4	138	VSS	282	DQ59
32	DQ22	176	VSS	69	A6	213	A5	102	DQ38	246	VSS	139	SA0	283	VSS
33	VSS	177	DQ23	70	VDD	214	A4	103	VSS	247	DQ39	140	SA1	284	VDDSPD
34	DQ18	178	VSS	71	A3	215	VDD	104	DQ34	248	VSS	141	SCL	285	SDA
35	VSS	179	DQ19	72	A1	216	A2	105	VSS	249	DQ35	142	VPP	286	VPP
36	DQ28	180	VSS	73	VDD	217	VDD	106	DQ44	250	VSS	143	VPP	287	VPP
37	VSS	181	DQ29	74	CLK0	218	CLK1	107	VSS	251	DQ45	144	RFU	288	VPP

DDR-T DIMM Pin Map is Identical to standard DDR4 DIMM Pin Map except the DDR-T protocol repurposes five of these pins:

CS1# (pin 89) : Grant, GNT# <0> Input

CKE1 (pin 203) : Request, REQ# <0> Output

ODT1 (pin 91) : Error, ERR# Output

CLK1 (pin 218):Early Read ID, ERID<0> Output

CLK1# (pin 219):Early Read ID, ERID<1> Output

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DDR4/DDRT Single DIMM CH0

x72bit DIMM Only

J1A

DDR4x72x288

J1B

MAX3378E

DDR4 DIMM IF

I2C Addr: 0xA0

Put caps on VDD pins which are close to DIMM A/C pins

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DDR4/T CH0 INTERFACE -- FPGA SIDE 3A

U2I

DDR4_DIMM_CH0_DQ63	V59	IO, LVDS3A_25N, DQ60
DDR4_DIMM_CH0_DQ61	T59	IO, LVDS3A_25P, DQ60
DDR4_DIMM_CH0_DQ60	W58	IO, LVDS3A_26N, DQ60
DDR4_DIMM_CH0_DQ62	U58	IO, LVDS3A_26P, DQ60
DDR4_DIMM_CH0_TDQS_N16	V57	IO, LVDS3A_27N, DQ60
DDR4_DIMM_CH0_DBI_N7	T57	IO, LVDS3A_27P, DQ60
DDR4_DIMM_CH0_DQS_N7	W56	IO, LVDS3A_28N, DQSN60
DDR4_DIMM_CH0_DQS_P7	U56	IO, LVDS3A_28P, DQS60
DDR4_DIMM_CH0_DQ56	V55	IO, LVDS3A_29N, DQ60
DDR4_DIMM_CH0_DQ57	T55	IO, LVDS3A_29P, DQ60
DDR4_DIMM_CH0_DQ58	W54	IO, LVDS3A_30N, DQ60
DDR4_DIMM_CH0_DQ59	U54	IO, LVDS3A_30P, DQ60
	P59	IO, LVDS3A_31N, DQ61
	M59	IO, LVDS3A_31P, DQ61
	N58	IO, LVDS3A_32N, DQ61
	L58	IO, LVDS3A_32P, DQ61
	P57	IO, LVDS3A_33N, DQ61
	M57	IO, LVDS3A_33P, DQ61
	N56	IO, PLL_3A_B_CLKOUT1N, LVDS3A_34N, DQSN61
	L56	IO, PLL_3A_B_CLKOUT1P, PLL_3A_B_CLKOUT1, PLL_3A_B_FB1, LVDS3A_34P, DQS61
	P55	IO, LVDS3A_35N, DQ61
	M55	IO, RZQ_B_3A, LVDS3A_35P, DQ61
	N54	IO, CLK_B_3A_1N, LVDS3A_36N, DQ61
	L54	IO, CLK_B_3A_1P, LVDS3A_36P, DQ61
	W52	IO, CLK_B_3A_0N, LVDS3A_37N, DQ62
	U52	IO, CLK_B_3A_0P, LVDS3A_37P, DQ62
	V51	IO, LVDS3A_38N, DQ62
	T51	IO, LVDS3A_38P, DQ62
	W50	IO, PLL_3A_B_CLKOUT0N, LVDS3A_39N, DQ62
	U50	IO, PLL_3A_B_CLKOUT0P, PLL_3A_B_CLKOUT0, PLL_3A_B_FB0, LVDS3A_39P, DQ62
	V49	IO, LVDS3A_40N, DQSN62
	T49	IO, LVDS3A_40P, DQS62
	W48	IO, LVDS3A_41N, DQ62
	U48	IO, LVDS3A_41P, DQ62
	V47	IO, LVDS3A_42N, DQ62
	T47	IO, LVDS3A_42P, DQ62
	N52	IO, LVDS3A_43N, DQ63
	L52	IO, LVDS3A_43P, DQ63
	P51	IO, LVDS3A_44N, DQ63
	M51	IO, LVDS3A_44P, DQ63
	N50	IO, LVDS3A_45N, DQ63
	L50	IO, LVDS3A_45P, DQ63
	P49	IO, LVDS3A_46N, DQSN63
	M49	IO, LVDS3A_46P, DQS63
	N48	IO, LVDS3A_47N, DQ63
	L48	IO, LVDS3A_47P, DQ63
	P47	IO, LVDS3A_48N, DQ63
	M47	IO, LVDS3A_48P, DQ63

IO, LVDS3A_1N, DQ56	H59	DDR4_DIMM_CH0_DQ47
IO, LVDS3A_1P, DQ56	F59	DDR4_DIMM_CH0_DQ45
IO, LVDS3A_2N, DQ56	J58	DDR4_DIMM_CH0_DQ44
IO, LVDS3A_2P, DQ56	G58	DDR4_DIMM_CH0_DQ46
IO, LVDS3A_3N, DQ56	H57	DDR4_DIMM_CH0_TDQS_N14
IO, LVDS3A_3P, DQ56, AVST_READY	F57	DDR4_DIMM_CH0_DBI_N5
IO, LVDS3A_4N, DQSN56, SDM_MISSION_DATA31	J56	DDR4_DIMM_CH0_DQS_N5
IO, LVDS3A_4P, DQS56, SDM_MISSION_DATA30	G56	DDR4_DIMM_CH0_DQS_P5
IO, LVDS3A_5N, DQ56, SDM_MISSION_DATA29	H55	DDR4_DIMM_CH0_DQ42
IO, LVDS3A_5P, DQ56, SDM_MISSION_DATA28	F55	DDR4_DIMM_CH0_DQ40
IO, LVDS3A_6N, DQ56, SDM_MISSION_DATA27	J54	DDR4_DIMM_CH0_DQ43
IO, LVDS3A_6P, DQ56, SDM_MISSION_DATA26	G54	DDR4_DIMM_CH0_DQ41
IO, LVDS3A_7N, DQ57, SDM_MISSION_DATA25	H61	DDR4_DIMM_CH0_DQ55
IO, LVDS3A_7P, DQ57, SDM_MISSION_DATA24	F61	DDR4_DIMM_CH0_DQ54
IO, LVDS3A_8N, DQ57, SDM_MISSION_DATA23	D59	DDR4_DIMM_CH0_DQ52
IO, LVDS3A_8P, DQ57, SDM_MISSION_DATA22	C58	DDR4_DIMM_CH0_DQ53
IO, LVDS3A_9N, DQ57, SDM_MISSION_DATA21	D57	DDR4_DIMM_CH0_TDQS_N15
IO, LVDS3A_9P, DQ57, SDM_MISSION_DATA20	B57	DDR4_DIMM_CH0_DBI_N6
IO, PLL_3A_T_CLKOUT1N, LVDS3A_10N, DQSN57, SDM_MISSION_DATA19	C56	DDR4_DIMM_CH0_DQS_N6
IO, PLL_3A_T_CLKOUT1P, PLL_3A_T_CLKOUT1, PLL_3A_T_FB1, LVDS3A_10P, DQS57, SDM_MISSION_DATA18	A56	DDR4_DIMM_CH0_DQS_P6
IO, LVDS3A_11N, DQ57, SDM_MISSION_DATA17	D55	DDR4_DIMM_CH0_DQ50
IO, RZQ_T_3A, LVDS3A_11P, DQ57, SDM_MISSION_DATA16	B55	DDR4_DIMM_CH0_DQ48
IO, CLK_T_3A_1N, LVDS3A_12N, DQ57	C54	DDR4_DIMM_CH0_DQ51
IO, CLK_T_3A_1P, LVDS3A_12P, DQ57	A54	DDR4_DIMM_CH0_DQ49
IO, CLK_T_3A_0N, LVDS3A_13N, DQ58	J52	DDR4_DIMM_CH0_DQ39
IO, CLK_T_3A_0P, LVDS3A_13P, DQ58	G52	DDR4_DIMM_CH0_DQ38
IO, LVDS3A_14N, DQ58	H51	DDR4_DIMM_CH0_DQ37
IO, LVDS3A_14P, DQ58	F51	DDR4_DIMM_CH0_DQ36
IO, PLL_3A_T_CLKOUT0N, LVDS3A_15N, DQ58	J50	DDR4_DIMM_CH0_TDQS_N13
IO, PLL_3A_T_CLKOUT0P, PLL_3A_T_CLKOUT0, PLL_3A_T_FB0, LVDS3A_15P, DQ58	G50	DDR4_DIMM_CH0_DBI_N4
IO, LVDS3A_16N, DQSN58, SDM_MISSION_CLK	H49	DDR4_DIMM_CH0_DQS_N4
IO, LVDS3A_16P, DQS58, SDM_MISSION_DATA15	F49	DDR4_DIMM_CH0_DQS_P4
IO, LVDS3A_17N, DQ58, SDM_MISSION_DATA14	J48	DDR4_DIMM_CH0_DQ34
IO, LVDS3A_17P, DQ58, SDM_MISSION_DATA13	G48	DDR4_DIMM_CH0_DQ32
IO, LVDS3A_18N, DQ58, SDM_MISSION_DATA12	H47	DDR4_DIMM_CH0_DQ35
IO, LVDS3A_18P, DQ58, SDM_MISSION_DATA11	F47	DDR4_DIMM_CH0_DQ33
IO, LVDS3A_19N, DQ59, SDM_MISSION_DATA10	C52	DDR4_DIMM_CH0_DQ68
IO, LVDS3A_19P, DQ59, SDM_MISSION_DATA9	A52	DDR4_DIMM_CH0_DQ71
IO, LVDS3A_20N, DQ59, SDM_MISSION_DATA8	D51	DDR4_DIMM_CH0_DQ69
IO, LVDS3A_20P, DQ59, SDM_MISSION_DATA_VALID	B51	DDR4_DIMM_CH0_DQ70
IO, LVDS3A_21N, DQ59, SDM_MISSION_DATA7	C50	DDR4_DIMM_CH0_TDQS_N17
IO, LVDS3A_21P, DQ59, SDM_MISSION_DATA6	A50	DDR4_DIMM_CH0_DBI_N8
IO, LVDS3A_22N, DQSN59, SDM_MISSION_DATA5	D49	DDR4_DIMM_CH0_DQS_N8
IO, LVDS3A_22P, DQS59, SDM_MISSION_DATA4	B49	DDR4_DIMM_CH0_DQS_P8
IO, LVDS3A_23N, DQ59, SDM_MISSION_DATA3	C48	DDR4_DIMM_CH0_DQ66
IO, LVDS3A_23P, DQ59, SDM_MISSION_DATA2	A48	DDR4_DIMM_CH0_DQ64
IO, LVDS3A_24N, DQ59, SDM_MISSION_DATA1	D47	DDR4_DIMM_CH0_DQ67
IO, LVDS3A_24P, DQ59, SDM_MISSION_DATA0	B47	DDR4_DIMM_CH0_DQ65

BOT TOP

Bank 3A

AGFB014R24_2486A

9,11 DDR4_DIMM_CH0_DBI_N[8:0]
9,11 DDR4_DIMM_CH0_DQ[71:0]
9,11 DDR4_DIMM_CH0_DQS_P[8:0]
9,11 DDR4_DIMM_CH0_DQS_N[8:0]
9,11 DDR4_DIMM_CH0_TDQS_N[17:9]

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DDR4/T CH1 INTERFACE -- FPGA SIDE 3B

U2H

DDRT:ERID2	DDR4_DIMM_CH0_CK_N1	V45	IO, LVDS3B_25N, DQ52	IO, LVDS3B_1N, DQ48	H45	DDR4_DIMM_CH0_DQ29
DDRT:ERID0	DDR4_DIMM_CH0_CK_P1	T45	IO, LVDS3B_25P, DQ52	IO, LVDS3B_1P, DQ48	F45	DDR4_DIMM_CH0_DQ31
		W44	IO, LVDS3B_26N, DQ52	IO, LVDS3B_2N, DQ48	J44	DDR4_DIMM_CH0_DQ28
DDRT:NC	DDR4_DIMM_CH0_ALERT_N	U44	IO, LVDS3B_26P, DQ52	IO, LVDS3B_2P, DQ48	G44	DDR4_DIMM_CH0_DQ30
		V43	IO, LVDS3B_27N, DQ52	IO, LVDS3B_3N, DQ48	H43	DDR4_DIMM_CH0_TDQS_N12
		T43	IO, LVDS3B_27P, DQ52	IO, LVDS3B_3P, DQ48	F43	DDR4_DIMM_CH0_DBI_N3
		W42	IO, LVDS3B_28N, DQSN52	IO, LVDS3B_4N, DQSN48	J42	DDR4_DIMM_CH0_DQS_N3
		U42	IO, LVDS3B_28P, DQS52	IO, LVDS3B_4P, DQS48	G42	DDR4_DIMM_CH0_DQS_P3
		V41	IO, LVDS3B_29N, DQ52	IO, LVDS3B_5N, DQ48	H41	DDR4_DIMM_CH0_DQ27
DDRT:C3	DDR4_DIMM_CH0_C2	T41	IO, LVDS3B_29P, DQ52	IO, LVDS3B_5P, DQ48	F41	DDR4_DIMM_CH0_DQ26
DDRT:C2	DDR4_DIMM_CH0_CS_N3	W40	IO, LVDS3B_30N, DQ52	IO, LVDS3B_6N, DQ48	J40	DDR4_DIMM_CH0_DQ25
DDRT:C1	DDR4_DIMM_CH0_CS_N2	U40	IO, LVDS3B_30P, DQ52	IO, LVDS3B_6P, DQ48	G40	DDR4_DIMM_CH0_DQ24
	DDR4_DIMM_CH0_BG0	P45	IO, LVDS3B_31N, DQ53	IO, LVDS3B_7N, DQ49	D45	DDR4_DIMM_CH0_DQ20
	DDR4_DIMM_CH0_BA1	M45	IO, LVDS3B_31P, DQ53	IO, LVDS3B_7P, DQ49	B45	DDR4_DIMM_CH0_DQ21
	DDR4_DIMM_CH0_BA0	N44	IO, LVDS3B_32N, DQ53	IO, LVDS3B_8N, DQ49	C44	DDR4_DIMM_CH0_DQ23
	DDR4_DIMM_CH0_A17	L44	IO, LVDS3B_32P, DQ53	IO, LVDS3B_8P, DQ49	A44	DDR4_DIMM_CH0_DQ22
	DDR4_DIMM_CH0_A16	P43	IO, LVDS3B_33N, DQ53	IO, LVDS3B_9N, DQ49	D43	DDR4_DIMM_CH0_TDQS_N11
	DDR4_DIMM_CH0_A15	M43	IO, LVDS3B_33P, DQ53	IO, LVDS3B_9P, DQ49	B43	DDR4_DIMM_CH0_DBI_N2
	DDR4_DIMM_CH0_A14	N42	IO, PLL_3B_B_CLKOUT1N, LVDS3B_34N, DQSN53	IO, PLL_3B_T_CLKOUT1N, LVDS3B_10N, DQSN49	C42	DDR4_DIMM_CH0_DQS_N2
	DDR4_DIMM_CH0_A13	L42	IO, PLL_3B_B_CLKOUT1P, PLL_3B_B_CLKOUT1, PLL_3B_B_FB1, LVDS3B_34P, DQS53	IO, PLL_3B_T_CLKOUT1P, PLL_3B_T_CLKOUT1, PLL_3B_T_FB1, LVDS3B_10P, DQS49	A42	DDR4_DIMM_CH0_DQS_P2
	DDR4_DIMM_CH0_A12	P41	IO, LVDS3B_35N, DQ53	IO, LVDS3B_11N, DQ49	D41	DDR4_DIMM_CH0_DQ19
240 R15	DDR4_DIMM_CH0_RZQ	M41	IO, RZQ_B_3B, LVDS3B_35P, DQ53	IO, RZQ_T_3B, LVDS3B_11P, DQ49	B41	DDR4_DIMM_CH0_DQ18
	CLK_DDR4_CH0_N 38	N40	IO, CLK_B_3B_1N, LVDS3B_36N, DQ53	IO, CLK_T_3B_1N, LVDS3B_12N, DQ49	C40	DDR4_DIMM_CH0_DQ17
	CLK_DDR4_CH0_P 38	L40	IO, CLK_B_3B_1P, LVDS3B_36P, DQ53	IO, CLK_T_3B_1P, LVDS3B_12P, DQ49	A40	DDR4_DIMM_CH0_DQ16
	DDR4_DIMM_CH0_A11	W38	IO, CLK_B_3B_0N, LVDS3B_37N, DQ54	IO, CLK_T_3B_0N, LVDS3B_13N, DQ50	J38	DDR4_DIMM_CH0_DQ4
	DDR4_DIMM_CH0_A10	U38	IO, CLK_B_3B_0P, LVDS3B_37P, DQ54	IO, CLK_T_3B_0P, LVDS3B_13P, DQ50	G38	DDR4_DIMM_CH0_DQ5
	DDR4_DIMM_CH0_A9	V37	IO, LVDS3B_38N, DQ54	IO, LVDS3B_14N, DQ50	H37	DDR4_DIMM_CH0_DQ7
	DDR4_DIMM_CH0_A8	T37	IO, LVDS3B_38P, DQ54	IO, LVDS3B_14P, DQ50	F37	DDR4_DIMM_CH0_DQ6
	DDR4_DIMM_CH0_A7	W36	IO, PLL_3B_B_CLKOUT0N, LVDS3B_39N, DQ54	IO, PLL_3B_T_CLKOUT0N, LVDS3B_15N, DQ50	J36	DDR4_DIMM_CH0_TDQS_N9
	DDR4_DIMM_CH0_A6	U36	IO, PLL_3B_B_CLKOUT0P, PLL_3B_B_CLKOUT0, PLL_3B_B_FB0, LVDS3B_39P, DQ54	IO, PLL_3B_T_CLKOUT0P, PLL_3B_T_CLKOUT0, PLL_3B_T_FB0, LVDS3B_15P, DQ50	G36	DDR4_DIMM_CH0_DBI_N0
	DDR4_DIMM_CH0_A5	V35	IO, LVDS3B_40N, DQSN54	IO, LVDS3B_16N, DQSN50	H35	DDR4_DIMM_CH0_DQS_N0
	DDR4_DIMM_CH0_A4	T35	IO, LVDS3B_40P, DQS54	IO, LVDS3B_16P, DQS50	F35	DDR4_DIMM_CH0_DQS_P0
	DDR4_DIMM_CH0_A3	W34	IO, LVDS3B_41N, DQ54	IO, LVDS3B_17N, DQ50	J34	DDR4_DIMM_CH0_DQ3
	DDR4_DIMM_CH0_A2	U34	IO, LVDS3B_41P, DQ54	IO, LVDS3B_17P, DQ50	G34	DDR4_DIMM_CH0_DQ2
	DDR4_DIMM_CH0_A1	V33	IO, LVDS3B_42N, DQ54	IO, LVDS3B_18N, DQ50	H33	DDR4_DIMM_CH0_DQ1
	DDR4_DIMM_CH0_A0	T33	IO, LVDS3B_42P, DQ54	IO, LVDS3B_18P, DQ50	F33	DDR4_DIMM_CH0_DQ0
	DDR4_DIMM_CH0_PAR	N38	IO, LVDS3B_43N, DQ55	IO, LVDS3B_19N, DQ51	C38	DDR4_DIMM_CH0_DQ15
DDRT:GNT0	DDR4_DIMM_CH0_CS_N1	L38	IO, LVDS3B_43P, DQ55	IO, LVDS3B_19P, DQ51	A38	DDR4_DIMM_CH0_DQ13
	DDR4_DIMM_CH0_CK_N0	P37	IO, LVDS3B_44N, DQ55	IO, LVDS3B_20N, DQ51	D37	DDR4_DIMM_CH0_DQ12
	DDR4_DIMM_CH0_CK_P0	M37	IO, LVDS3B_44P, DQ55	IO, LVDS3B_20P, DQ51	B37	DDR4_DIMM_CH0_DQ14
DDRT:REQ	DDR4_DIMM_CH0_CKE1	N36	IO, LVDS3B_45N, DQ55	IO, LVDS3B_21N, DQ51	C36	DDR4_DIMM_CH0_TDQS_N10
	DDR4_DIMM_CH0_CKE0	L36	IO, LVDS3B_45P, DQ55	IO, LVDS3B_21P, DQ51	A36	DDR4_DIMM_CH0_DBI_N1
DDRT:ERR	DDR4_DIMM_CH0_ODT1	P35	IO, LVDS3B_46N, DQSN55	IO, LVDS3B_22N, DQSN51	D35	DDR4_DIMM_CH0_DQS_N1
	DDR4_DIMM_CH0_ODT0	M35	IO, LVDS3B_46P, DQS55	IO, LVDS3B_22P, DQS51	B35	DDR4_DIMM_CH0_DQS_P1
	DDR4_DIMM_CH0_ACT_N	N34	IO, LVDS3B_47N, DQ55	IO, LVDS3B_23N, DQ51	C34	DDR4_DIMM_CH0_DQ11
	DDR4_DIMM_CH0_CS_N0	L34	IO, LVDS3B_47P, DQ55	IO, LVDS3B_23P, DQ51	A34	DDR4_DIMM_CH0_DQ10
	DDR4_DIMM_CH0_RESET_N	P33	IO, LVDS3B_48N, DQ55	IO, LVDS3B_24N, DQ51	D33	DDR4_DIMM_CH0_DQ9
	DDR4_DIMM_CH0_BG1	M33	IO, LVDS3B_48P, DQ55	IO, LVDS3B_24P, DQ51	B33	DDR4_DIMM_CH0_DQ8

BOT | TOP

Bank 3B

AGFB014R24_2486A

9 DDR4_DIMM_CH0_CK_P[1:0]
9 DDR4_DIMM_CH0_CK_N[1:0]
9 DDR4_DIMM_CH0_CKE[1:0]
9 DDR4_DIMM_CH0_A[17:0]
9 DDR4_DIMM_CH0_ODT[1:0]
9 DDR4_DIMM_CH0_BG[1:0]
9 DDR4_DIMM_CH0_BA[1:0]
9 DDR4_DIMM_CH0_CS_N[3:0]
9 DDR4_DIMM_CH0_RESET_N
9 DDR4_DIMM_CH0_ACT_N
9 DDR4_DIMM_CH0_PAR
9 DDR4_DIMM_CH0_ALERT_N
9 DDR4_DIMM_CH0_C2

9,10 DDR4_DIMM_CH0_DBI_N[8:0]
9,10 DDR4_DIMM_CH0_DQ[71:0]
9,10 DDR4_DIMM_CH0_DQS_P[8:0]
9,10 DDR4_DIMM_CH0_DQS_N[8:0]
9,10 DDR4_DIMM_CH0_TDQS_N[17:9]

CLK_DDR4_CH0_P R16 DNI CLK_DDR4_CH0_N

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DDR4 Single DIMM CH1
HPS Dedicated

Note: only support 1x Rank, x8 mode in HPS

J2A

J2B

U3 MAX3378E

DDR4x72x288

DDR4 DIMM IF

Put caps on VDD pins which are close to DIMM A/C pins

I2C Addr: 0xA2

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DDR4 DIMM CH1 Interface - FPGA Side 3C

U2G

DDR4_DIMM_CH1_DQ39	V19	IO, LVDS3C_25N, DQ44	
DDR4_DIMM_CH1_DQ38	T19	IO, LVDS3C_25P, DQ44	
DDR4_DIMM_CH1_DQ37	W20	IO, LVDS3C_26N, DQ44	
DDR4_DIMM_CH1_DQ36	U20	IO, LVDS3C_26P, DQ44	
DDR4_DIMM_CH1_TDQS_N13	V21	IO, LVDS3C_27N, DQ44	
DDR4_DIMM_CH1_DBI_N4	T21	IO, LVDS3C_27P, DQ44	
DDR4_DIMM_CH1_DQS_N4	W22	IO, LVDS3C_28N, DQSN44	
DDR4_DIMM_CH1_DQS_P4	U22	IO, LVDS3C_28P, DQS44	
DDR4_DIMM_CH1_DQ35	V23	IO, LVDS3C_29N, DQ44	
DDR4_DIMM_CH1_DQ34	T23	IO, LVDS3C_29P, DQ44	
DDR4_DIMM_CH1_DQ33	W24	IO, LVDS3C_30N, DQ44	
DDR4_DIMM_CH1_DQ32	U24	IO, LVDS3C_30P, DQ44	
DDR4_DIMM_CH1_DQ45	P19	IO, LVDS3C_31N, DQ45	
DDR4_DIMM_CH1_DQ47	M19	IO, LVDS3C_31P, DQ45	
DDR4_DIMM_CH1_DQ46	N20	IO, LVDS3C_32N, DQ45	
DDR4_DIMM_CH1_DQ44	L20	IO, LVDS3C_32P, DQ45	
DDR4_DIMM_CH1_TDQS_N14	P21	IO, LVDS3C_33N, DQ45	
DDR4_DIMM_CH1_DBI_N5	M21	IO, LVDS3C_33P, DQ45	
DDR4_DIMM_CH1_DQS_N5	N22	IO, PLL_3C_B_CLKOUT1N, LVDS3C_34N, DQSN45	
DDR4_DIMM_CH1_DQS_P5	L22	IO, PLL_3C_B_CLKOUT1P, PLL_3C_B_CLKOUT1, PLL_3C_B_FB1, LVDS3C_34P, DQS45	
DDR4_DIMM_CH1_DQ43	P23	IO, LVDS3C_35N, DQ45	
DDR4_DIMM_CH1_DQ42	M23	IO, RZQ_B_3C, LVDS3C_35P, DQ45	
DDR4_DIMM_CH1_DQ41	N24	IO, CLK_B_3C_1N, LVDS3C_36N, DQ45	
DDR4_DIMM_CH1_DQ40	L24	IO, CLK_B_3C_1P, LVDS3C_36P, DQ45	
DDR4_DIMM_CH1_DQ61	W26	IO, CLK_B_3C_0N, LVDS3C_37N, DQ46	
DDR4_DIMM_CH1_DQ63	U26	IO, CLK_B_3C_0P, LVDS3C_37P, DQ46	
DDR4_DIMM_CH1_DQ62	V27	IO, LVDS3C_38N, DQ46	
DDR4_DIMM_CH1_DQ60	T27	IO, LVDS3C_38P, DQ46	
DDR4_DIMM_CH1_TDQS_N16	W28	IO, PLL_3C_B_CLKOUT0N, LVDS3C_39N, DQ46	
DDR4_DIMM_CH1_DBI_N7	U28	IO, PLL_3C_B_CLKOUT0P, PLL_3C_B_CLKOUT0, PLL_3C_B_FB0, LVDS3C_39P, DQ46	
DDR4_DIMM_CH1_DQS_N7	V29	IO, LVDS3C_40N, DQSN46	
DDR4_DIMM_CH1_DQS_P7	T29	IO, LVDS3C_40P, DQS46	
DDR4_DIMM_CH1_DQ59	W30	IO, LVDS3C_41N, DQ46	
DDR4_DIMM_CH1_DQ58	U30	IO, LVDS3C_41P, DQ46	
DDR4_DIMM_CH1_DQ57	V31	IO, LVDS3C_42N, DQ46	
DDR4_DIMM_CH1_DQ56	T31	IO, LVDS3C_42P, DQ46	
DDR4_DIMM_CH1_DQ55	N26	IO, LVDS3C_43N, DQ47	
DDR4_DIMM_CH1_DQ54	L26	IO, LVDS3C_43P, DQ47	
DDR4_DIMM_CH1_DQ53	P27	IO, LVDS3C_44N, DQ47	
DDR4_DIMM_CH1_DQ52	M27	IO, LVDS3C_44P, DQ47	
DDR4_DIMM_CH1_TDQS_N15	N28	IO, LVDS3C_45N, DQ47	
DDR4_DIMM_CH1_DBI_N6	L28	IO, LVDS3C_45P, DQ47	
DDR4_DIMM_CH1_DQS_N6	P29	IO, LVDS3C_46N, DQSN47	
DDR4_DIMM_CH1_DQS_P6	M29	IO, LVDS3C_46P, DQS47	
DDR4_DIMM_CH1_DQ51	N30	IO, LVDS3C_47N, DQ47	
DDR4_DIMM_CH1_DQ50	L30	IO, LVDS3C_47P, DQ47	
DDR4_DIMM_CH1_DQ49	P31	IO, LVDS3C_48N, DQ47	
DDR4_DIMM_CH1_DQ48	M31	IO, LVDS3C_48P, DQ47	

BOT TOP

Bank 3C

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	H19	IO, LVDS3C_1N, DQ40		
	F19	IO, LVDS3C_1P, DQ40		
	J20	IO, LVDS3C_2N, DQ40		
	G20	IO, LVDS3C_2P, DQ40		
	H21	IO, LVDS3C_3N, DQ40		
	F21	IO, LVDS3C_3P, DQ40		
	J22	IO, LVDS3C_4N, DQSN40		
	G22	IO, LVDS3C_4P, DQS40		
	H23	IO, LVDS3C_5N, DQ40		
	F23	IO, LVDS3C_5P, DQ40	FPGA_I2C_SCL	40
	J24	IO, LVDS3C_6N, DQ40		
	G24	IO, LVDS3C_6P, DQ40		
	D19	IO, LVDS3C_7N, DQ41	FPGA_I2C_SDA	40
	B19	IO, LVDS3C_7P, DQ41	DDR4_CH1_EVENT_N	12
	C20	IO, LVDS3C_8N, DQ41	DDR4_CH1_SAVE_N	12
	A20	IO, LVDS3C_8P, DQ41	DDR4_CH0_EVENT_N	9
	D21	IO, LVDS3C_9N, DQ41	DDR4_CH0_SAVE_N	9
	B21	IO, LVDS3C_9P, DQ41	DDR4_DIMM_SDA	9
	C22	IO, PLL_3C_T_CLKOUT1N, LVDS3C_10N, DQSN41		
	A22	IO, PLL_3C_T_CLKOUT1P, PLL_3C_T_CLKOUT1, PLL_3C_T_FB1, LVDS3C_10P, DQS41		
	D23	IO, LVDS3C_11N, DQ41		
	B23	IO, RZQ_T_3C, LVDS3C_11P, DQ41	DDR4_DIMM_SCL	9
	C24	IO, CLK_T_3C_1N, LVDS3C_12N, DQ41		
	A24	IO, CLK_T_3C_1P, LVDS3C_12P, DQ41	CPU_RESETn	41,44
	J26	IO, CLK_T_3C_0N, LVDS3C_13N, DQ42	CLK_SYS_BAK_50M_N	38
	G26	IO, CLK_T_3C_0P, LVDS3C_13P, DQ42	CLK_SYS_BAK_50M_P	38
	H27	IO, LVDS3C_14N, DQ42		
	F27	IO, LVDS3C_14P, DQ42		
	J28	IO, PLL_3C_T_CLKOUT0N, LVDS3C_15N, DQ42		
	G28	IO, PLL_3C_T_CLKOUT0P, PLL_3C_T_CLKOUT0, PLL_3C_T_FB0, LVDS3C_15P, DQ42	QSFPDD_FPGA_I2C_SDA	12
	H29	IO, LVDS3C_16N, DQSN42		
	F29	IO, LVDS3C_16P, DQS42		
	J30	IO, LVDS3C_17N, DQ42	QSFPDD0_1V2_RESET_L	44
	G30	IO, LVDS3C_17P, DQ42	QSFPDD0_1V2_MODPRS_L	44
	H31	IO, LVDS3C_18N, DQ42	QSFPDD0_1V2_LPMODE	44
	F31	IO, LVDS3C_18P, DQ42	QSFPDD0_1V2_INT_L	44
	C26	IO, LVDS3C_19N, DQ43	QSFPDD0_1V2_MODSEL_L	44
	A26	IO, LVDS3C_19P, DQ43	QSFPDD1_1V2_RESET_L	44
	D27	IO, LVDS3C_20N, DQ43	QSFPDD1_1V2_MODPRS_L	44
	B27	IO, LVDS3C_20P, DQ43	QSFPDD1_1V2_MODSEL_L	44
	C28	IO, LVDS3C_21N, DQ43	QSFPDD1_1V2_INT_L	44
	A28	IO, LVDS3C_21P, DQ43	QSFPDD1_1V2_LPMODE	44
	D29	IO, LVDS3C_22N, DQSN43	QSFPDD_FPGA_I2C_SCL	12
	B29	IO, LVDS3C_22P, DQS43		
	C30	IO, LVDS3C_23N, DQ43	FPGA_LED0	44
	A30	IO, LVDS3C_23P, DQ43	FPGA_LED1	44
	D31	IO, LVDS3C_24N, DQ43	FPGA_LED2	44
	B31	IO, LVDS3C_24P, DQ43	FPGA_LED3	44

R31 100

R32 10.0K
R33 10.0K
R34 10.0K
R35 10.0K

12,14 DDR4_DIMM_CH1_DBI_N[8:0]
12,14 DDR4_DIMM_CH1_DQ[71:0]
12,14 DDR4_DIMM_CH1_DQS_P[8:0]
12,14 DDR4_DIMM_CH1_DQS_N[8:0]
12,14 DDR4_DIMM_CH1_TDQS_N[17:9]

1p2V_DDR4_CH01

R49	10.0K	DDR4_CH0_EVENT_N
R50	10.0K	DDR4_CH0_SAVE_N
R672	10.0K	DDR4_CH1_EVENT_N
R673	10.0K	DDR4_CH1_SAVE_N

1p2V_DDR4_CH01

R36	10.0K	DDR4_DIMM_SCL		
R37	10.0K	DDR4_DIMM_SDA		
R38	10.0K	QSFPDD0_1V2_RESET_L		
R39	10.0K	QSFPDD1_1V2_RESET_L		
R40	10.0K	QSFPDD0_1V2_MODSEL_L		
R41	10.0K	QSFPDD1_1V2_MODSEL_L		
R42	DNI	QSFPDD0_1V2_LPMODE	R43	DNI
R44	DNI	QSFPDD1_1V2_LPMODE	R45	DNI
R46	4.7K	QSFPDD_FPGA_I2C_SCL		
R47	4.7K	QSFPDD_FPGA_I2C_SDA		

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DDR4 CH1 Interface - FPGA Side 3D

U2F

DDR4_DIMM_CH1_DQ71	V5	IO, LVDS3D_25N, DQ36	IO, LVDS3D_1N, DQ32	H5	DDR4_DIMM_CH1_DQ15
DDR4_DIMM_CH1_DQ70	T5	IO, LVDS3D_25P, DQ36	IO, LVDS3D_1P, DQ32	F5	DDR4_DIMM_CH1_DQ14
DDR4_DIMM_CH1_DQ69	W6	IO, LVDS3D_26N, DQ36	IO, LVDS3D_2N, DQ32	J6	DDR4_DIMM_CH1_DQ13
DDR4_DIMM_CH1_DQ68	U6	IO, LVDS3D_26P, DQ36	IO, LVDS3D_2P, DQ32	G6	DDR4_DIMM_CH1_DQ12
DDR4_DIMM_CH1_TDQS_N17	V7	IO, LVDS3D_27N, DQ36	IO, LVDS3D_3N, DQ32	H7	DDR4_DIMM_CH1_TDQS_N10
DDR4_DIMM_CH1_DBI_N8	T7	IO, LVDS3D_27P, DQ36	IO, LVDS3D_3P, DQ32	F7	DDR4_DIMM_CH1_DBI_N1
DDR4_DIMM_CH1_DQS_N8	W8	IO, LVDS3D_28N, DQSN36	IO, LVDS3D_4N, DQSN32	J8	DDR4_DIMM_CH1_DQS_N1
DDR4_DIMM_CH1_DQS_P8	U8	IO, LVDS3D_28P, DQS36	IO, LVDS3D_4P, DQS32	G8	DDR4_DIMM_CH1_DQS_P1
DDR4_DIMM_CH1_DQ67	V9	IO, LVDS3D_29N, DQ36	IO, LVDS3D_5N, DQ32	H9	DDR4_DIMM_CH1_DQ11
DDR4_DIMM_CH1_DQ66	T9	IO, LVDS3D_29P, DQ36	IO, LVDS3D_5P, DQ32	F9	DDR4_DIMM_CH1_DQ10
DDR4_DIMM_CH1_DQ65	W10	IO, LVDS3D_30N, DQ36	IO, LVDS3D_6N, DQ32	J10	DDR4_DIMM_CH1_DQ9
DDR4_DIMM_CH1_DQ64	U10	IO, LVDS3D_30P, DQ36	IO, LVDS3D_6P, DQ32	G10	DDR4_DIMM_CH1_DQ8
DDR4_DIMM_CH1_BG0	P5	IO, LVDS3D_31N, DQ37	IO, LVDS3D_7N, DQ33	D5	DDR4_DIMM_CH1_DQ7
DDR4_DIMM_CH1_BA1	M5	IO, LVDS3D_31P, DQ37	IO, LVDS3D_7P, DQ33	B5	DDR4_DIMM_CH1_DQ5
DDR4_DIMM_CH1_BA0	N6	IO, LVDS3D_32N, DQ37	IO, LVDS3D_8N, DQ33	C6	DDR4_DIMM_CH1_DQ6
DDR4_DIMM_CH1_ALERT_N	L6	IO, LVDS3D_32P, DQ37	IO, LVDS3D_8P, DQ33	A6	DDR4_DIMM_CH1_DQ4
DDR4_DIMM_CH1_A16	P7	IO, LVDS3D_33N, DQ37	IO, LVDS3D_9N, DQ33	D7	DDR4_DIMM_CH1_TDQS_N9
DDR4_DIMM_CH1_A15	M7	IO, LVDS3D_33P, DQ37	IO, LVDS3D_9P, DQ33	B7	DDR4_DIMM_CH1_DBI_N0
DDR4_DIMM_CH1_A14	N8	IO, PLL_3D_B_CLKOUT1N, LVDS3D_34N, DQSN37	IO, PLL_3D_T_CLKOUT1N, LVDS3D_10N, DQSN33	C8	DDR4_DIMM_CH1_DQS_N0
DDR4_DIMM_CH1_A13	L8	IO, PLL_3D_B_CLKOUT1P, PLL_3D_B_CLKOUT1, PLL_3D_B_FB1, LVDS3D_34P, DQS37	IO, PLL_3D_T_CLKOUT1P, PLL_3D_T_CLKOUT1, PLL_3D_T_FB1, LVDS3D_10P, DQS33	A8	DDR4_DIMM_CH1_DQS_P0
DDR4_DIMM_CH1_A12	P9	IO, LVDS3D_35N, DQ37	IO, LVDS3D_11N, DQ33	D9	DDR4_DIMM_CH1_DQ3
DDR4_DIMM_CH1_RZQ	M9	IO, RZQ_B_3D, LVDS3D_35P, DQ37	IO, RZQ_T_3D, LVDS3D_11P, DQ33	B9	DDR4_DIMM_CH1_DQ2
CLK_DDR4_CH1_N 38	N10	IO, CLK_B_3D_1N, LVDS3D_36N, DQ37	IO, CLK_T_3D_1N, LVDS3D_12N, DQ33	C10	DDR4_DIMM_CH1_DQ1
CLK_DDR4_CH1_P 38	L10	IO, CLK_B_3D_1P, LVDS3D_36P, DQ37	IO, CLK_T_3D_1P, LVDS3D_12P, DQ33	A10	DDR4_DIMM_CH1_DQ0
DDR4_DIMM_CH1_A11	W12	IO, CLK_B_3D_0N, LVDS3D_37N, DQ38	IO, CLK_T_3D_0N, LVDS3D_13N, DQ34	J12	DDR4_DIMM_CH1_DQ21
DDR4_DIMM_CH1_A10	U12	IO, CLK_B_3D_0P, LVDS3D_37P, DQ38	IO, CLK_T_3D_0P, LVDS3D_13P, DQ34	G12	DDR4_DIMM_CH1_DQ23
DDR4_DIMM_CH1_A9	V13	IO, LVDS3D_38N, DQ38	IO, LVDS3D_14N, DQ34	H13	DDR4_DIMM_CH1_DQ22
DDR4_DIMM_CH1_A8	T13	IO, LVDS3D_38P, DQ38	IO, LVDS3D_14P, DQ34	F13	DDR4_DIMM_CH1_DQ20
DDR4_DIMM_CH1_A7	W14	IO, PLL_3D_B_CLKOUT0N, LVDS3D_39N, DQ38	IO, PLL_3D_T_CLKOUT0N, LVDS3D_15N, DQ34	J14	DDR4_DIMM_CH1_TDQS_N11
DDR4_DIMM_CH1_A6	U14	IO, PLL_3D_B_CLKOUT0P, PLL_3D_B_CLKOUT0, PLL_3D_B_FB0, LVDS3D_39P, DQ38	IO, PLL_3D_T_CLKOUT0P, PLL_3D_T_CLKOUT0, PLL_3D_T_FB0, LVDS3D_15P, DQ34	G14	DDR4_DIMM_CH1_DBI_N2
DDR4_DIMM_CH1_A5	V15	IO, LVDS3D_40N, DQSN38	IO, LVDS3D_16N, DQSN34	H15	DDR4_DIMM_CH1_DQS_N2
DDR4_DIMM_CH1_A4	T15	IO, LVDS3D_40P, DQS38	IO, LVDS3D_16P, DQS34	F15	DDR4_DIMM_CH1_DQS_P2
DDR4_DIMM_CH1_A3	W16	IO, LVDS3D_41N, DQ38	IO, LVDS3D_17N, DQ34	J16	DDR4_DIMM_CH1_DQ19
DDR4_DIMM_CH1_A2	U16	IO, LVDS3D_41P, DQ38	IO, LVDS3D_17P, DQ34	G16	DDR4_DIMM_CH1_DQ18
DDR4_DIMM_CH1_A1	V17	IO, LVDS3D_42N, DQ38	IO, LVDS3D_18N, DQ34	H17	DDR4_DIMM_CH1_DQ17
DDR4_DIMM_CH1_A0	T17	IO, LVDS3D_42P, DQ38	IO, LVDS3D_18P, DQ34	F17	DDR4_DIMM_CH1_DQ16
DDR4_DIMM_CH1_PAR	N12	IO, LVDS3D_43N, DQ39	IO, LVDS3D_19N, DQ35	C12	DDR4_DIMM_CH1_DQ31
DDR4_DIMM_CH1_CS_N1	L12	IO, LVDS3D_43P, DQ39	IO, LVDS3D_19P, DQ35	A12	DDR4_DIMM_CH1_DQ30
DDR4_DIMM_CH1_CK_N0	P13	IO, LVDS3D_44N, DQ39	IO, LVDS3D_20N, DQ35	D13	DDR4_DIMM_CH1_DQ29
DDR4_DIMM_CH1_CK_P0	M13	IO, LVDS3D_44P, DQ39	IO, LVDS3D_20P, DQ35	B13	DDR4_DIMM_CH1_DQ28
DDR4_DIMM_CH1_CKE1	N14	IO, LVDS3D_45N, DQ39	IO, LVDS3D_21N, DQ35	C14	DDR4_DIMM_CH1_TDQS_N12
DDR4_DIMM_CH1_CKE0	L14	IO, LVDS3D_45P, DQ39	IO, LVDS3D_21P, DQ35	A14	DDR4_DIMM_CH1_DBI_N3
DDR4_DIMM_CH1_ODT1	P15	IO, LVDS3D_46N, DQSN39	IO, LVDS3D_22N, DQSN35	D15	DDR4_DIMM_CH1_DQS_N3
DDR4_DIMM_CH1_ODT0	M15	IO, LVDS3D_46P, DQS39	IO, LVDS3D_22P, DQS35	B15	DDR4_DIMM_CH1_DQS_P3
DDR4_DIMM_CH1_ACT_N	N16	IO, LVDS3D_47N, DQ39	IO, LVDS3D_23N, DQ35	C16	DDR4_DIMM_CH1_DQ27
DDR4_DIMM_CH1_CS_N0	L16	IO, LVDS3D_47P, DQ39	IO, LVDS3D_23P, DQ35	A16	DDR4_DIMM_CH1_DQ26
DDR4_DIMM_CH1_RESET_N	P17	IO, LVDS3D_48N, DQ39	IO, LVDS3D_24N, DQ35	D17	DDR4_DIMM_CH1_DQ25
DDR4_DIMM_CH1_BG1	M17	IO, LVDS3D_48P, DQ39	IO, LVDS3D_24P, DQ35	B17	DDR4_DIMM_CH1_DQ24

BOT TOP

Bank 3D

AGFB014R24_2486A

240 R48

CLK_DDR4_CH1_P R53 DNI CLK_DDR4_CH1_N

12 DDR4_DIMM_CH1_CK_P0
12 DDR4_DIMM_CH1_CK_N0
12 DDR4_DIMM_CH1_CKE[1:0]
12 DDR4_DIMM_CH1_A[16:0]
12 DDR4_DIMM_CH1_ODT[1:0]
12 DDR4_DIMM_CH1_BG[1:0]
12 DDR4_DIMM_CH1_BA[1:0]
12 DDR4_DIMM_CH1_CS_N[1:0]
12 DDR4_DIMM_CH1_RESET_N
12 DDR4_DIMM_CH1_ACT_N
12 DDR4_DIMM_CH1_PAR
12 DDR4_DIMM_CH1_ALERT_N

12,13 DDR4_DIMM_CH1_DBI_N[8:0]
12,13 DDR4_DIMM_CH1_DQ[71:0]
12,13 DDR4_DIMM_CH1_DQS_P[8:0]
12,13 DDR4_DIMM_CH1_DQS_N[8:0]
12,13 DDR4_DIMM_CH1_TDQS_N[17:9]

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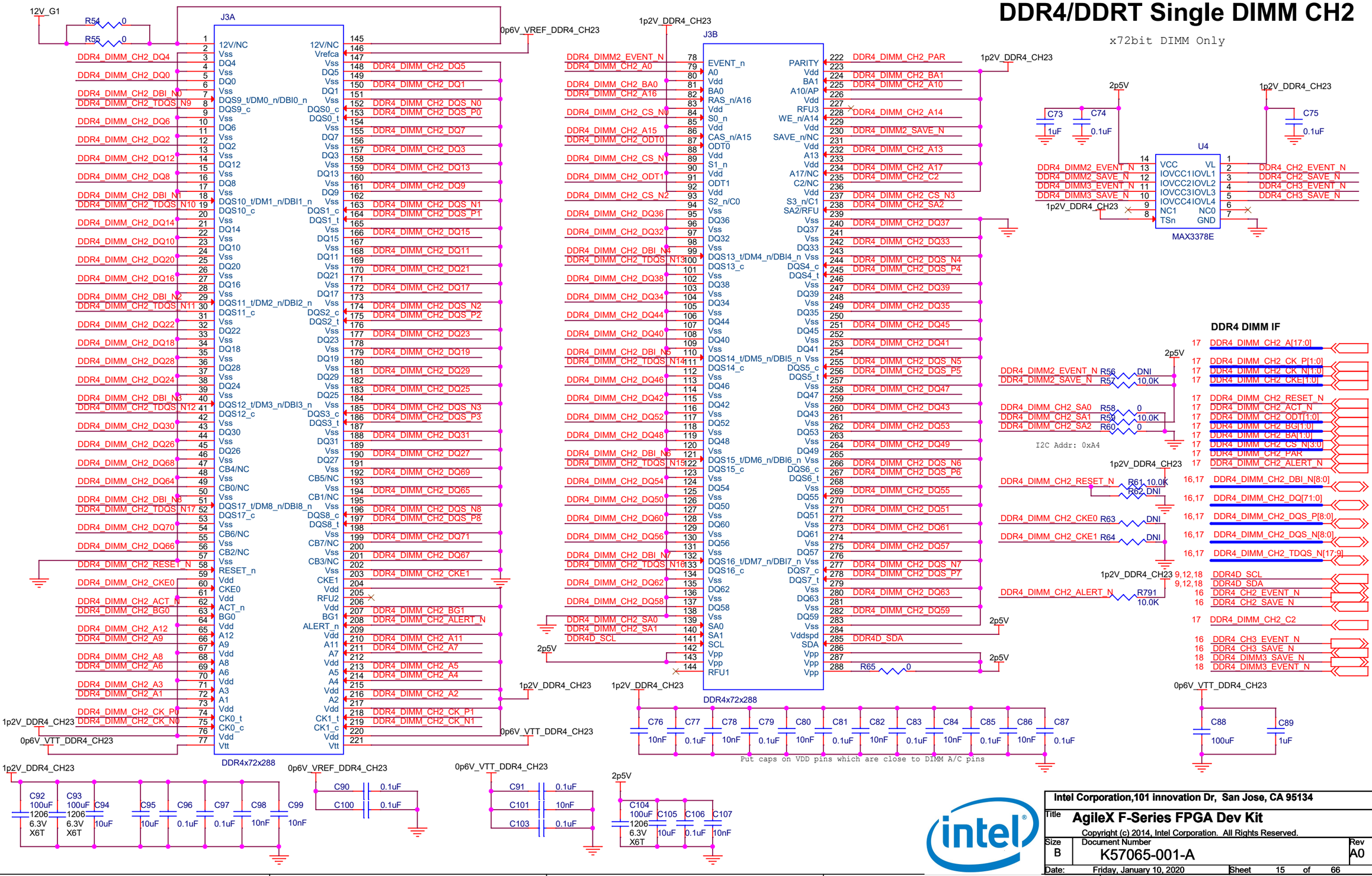
DDR4/DDRT Single DIMM CH2

x72bit DIMM Only



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DDR4/T CH2 INTERFACE -- FPGA SIDE 2A

U2E

DDR4_DIMM_CH2_DQ6	CF57	IO, LVDS2A_25N, DQ28	IO, LVDS2A_1N, DQ24	CT57	DDR4_DIMM_CH2_DQ14
DDR4_DIMM_CH2_DQ7	CH57	IO, LVDS2A_25P, DQ28	IO, LVDS2A_1P, DQ24	CV57	DDR4_DIMM_CH2_DQ15
DDR4_DIMM_CH2_DQ4	CE56	IO, LVDS2A_26N, DQ28	IO, LVDS2A_2N, DQ24	CR56	DDR4_DIMM_CH2_DQ12
DDR4_DIMM_CH2_DQ5	CG56	IO, LVDS2A_26P, DQ28	IO, LVDS2A_2P, DQ24	CU56	DDR4_DIMM_CH2_DQ13
DDR4_DIMM_CH2_TDQS_N9	CF55	IO, LVDS2A_27N, DQ28	IO, LVDS2A_3N, DQ24	CT55	DDR4_DIMM_CH2_TDQS_N10
DDR4_DIMM_CH2_DBI_N0	CH55	IO, LVDS2A_27P, DQ28	IO, LVDS2A_3P, DQ24	CV55	DDR4_DIMM_CH2_DBI_N1
DDR4_DIMM_CH2_DQS_N0	CE54	IO, LVDS2A_28N, DQSN28	IO, LVDS2A_4N, DQSN24	CR54	DDR4_DIMM_CH2_DQS_N1
DDR4_DIMM_CH2_DQS_P0	CG54	IO, LVDS2A_28P, DQS28	IO, LVDS2A_4P, DQS24	CU54	DDR4_DIMM_CH2_DQS_P1
DDR4_DIMM_CH2_DQ1	CF53	IO, LVDS2A_29N, DQ28	IO, LVDS2A_5N, DQ24	CT53	DDR4_DIMM_CH2_DQ9
DDR4_DIMM_CH2_DQ3	CH53	IO, LVDS2A_29P, DQ28	IO, LVDS2A_5P, DQ24	CV53	DDR4_DIMM_CH2_DQ11
DDR4_DIMM_CH2_DQ0	CE52	IO, LVDS2A_30N, DQ28	IO, LVDS2A_6N, DQ24	CR52	DDR4_DIMM_CH2_DQ8
DDR4_DIMM_CH2_DQ2	CG52	IO, LVDS2A_30P, DQ28	IO, LVDS2A_6P, DQ24	CU52	DDR4_DIMM_CH2_DQ10
	CK57	IO, LVDS2A_31N, DQ29	IO, LVDS2A_7N, DQ25	CY57	DDR4_DIMM_CH2_DQ20
	CM57	IO, LVDS2A_31P, DQ29	IO, LVDS2A_7P, DQ25	DB57	DDR4_DIMM_CH2_DQ21
	CL56	IO, LVDS2A_32N, DQ29	IO, LVDS2A_8N, DQ25	DA56	DDR4_DIMM_CH2_DQ22
	CN56	IO, LVDS2A_32P, DQ29	IO, LVDS2A_8P, DQ25	DC56	DDR4_DIMM_CH2_DQ23
	CK55	IO, LVDS2A_33N, DQ29	IO, LVDS2A_9N, DQ25	CY55	DDR4_DIMM_CH2_TDQS_N11
	CM55	IO, LVDS2A_33P, DQ29	IO, LVDS2A_9P, DQ25	DB55	DDR4_DIMM_CH2_DBI_N2
	CL54	IO, PLL_2A_B_CLKOUT1N, LVDS2A_34N, DQSN29	IO, PLL_2A_T_CLKOUT1N, LVDS2A_10N, DQSN25	DA54	DDR4_DIMM_CH2_DQS_N2
	CN54	IO, PLL_2A_B_CLKOUT1P, PLL_2A_B_CLKOUT1, PLL_2A_B_FB1, LVDS2A_34P, DQS29	IO, PLL_2A_T_CLKOUT1P, PLL_2A_T_CLKOUT1, PLL_2A_T_FB1, LVDS2A_10P, DQS25	DC54	DDR4_DIMM_CH2_DQS_P2
	CK53	IO, LVDS2A_35N, DQ29	IO, LVDS2A_11N, DQ25	CY53	DDR4_DIMM_CH2_DQ17
	CM53	IO, RZQ_B_2A, LVDS2A_35P, DQ29	IO, RZQ_T_2A, LVDS2A_11P, DQ25	DB53	DDR4_DIMM_CH2_DQ18
	CL52	IO, CLK_B_2A_1N, LVDS2A_36N, DQ29	IO, CLK_T_2A_1N, LVDS2A_12N, DQ25	DA52	DDR4_DIMM_CH2_DQ16
	CN52	IO, CLK_B_2A_1P, LVDS2A_36P, DQ29	IO, CLK_T_2A_1P, LVDS2A_12P, DQ25	DC52	DDR4_DIMM_CH2_DQ19
	CE50	IO, CLK_B_2A_0N, LVDS2A_37N, DQ30	IO, CLK_T_2A_0N, LVDS2A_13N, DQ26	CR50	DDR4_DIMM_CH2_DQ71
	CG50	IO, CLK_B_2A_0P, LVDS2A_37P, DQ30	IO, CLK_T_2A_0P, LVDS2A_13P, DQ26	CU50	DDR4_DIMM_CH2_DQ69
	CF49	IO, LVDS2A_38N, DQ30	IO, LVDS2A_14N, DQ26	CT49	DDR4_DIMM_CH2_DQ68
	CH49	IO, LVDS2A_38P, DQ30	IO, LVDS2A_14P, DQ26	CV49	DDR4_DIMM_CH2_DQ70
	CE48	IO, PLL_2A_B_CLKOUT0N, LVDS2A_39N, DQ30	IO, PLL_2A_T_CLKOUT0N, LVDS2A_15N, DQ26	CR48	DDR4_DIMM_CH2_TDQS_N17
	CG48	IO, PLL_2A_B_CLKOUT0P, PLL_2A_B_CLKOUT0, PLL_2A_B_FB0, LVDS2A_39P, DQ30	IO, PLL_2A_T_CLKOUT0P, PLL_2A_T_CLKOUT0, PLL_2A_T_FB0, LVDS2A_15P, DQ26	CU48	DDR4_DIMM_CH2_DBI_N8
	CF47	IO, LVDS2A_40N, DQSN30	IO, LVDS2A_16N, DQSN26	CT47	DDR4_DIMM_CH2_DQS_N8
	CH47	IO, LVDS2A_40P, DQS30	IO, LVDS2A_16P, DQS26	CV47	DDR4_DIMM_CH2_DQS_P8
	CE46	IO, LVDS2A_41N, DQ30	IO, LVDS2A_17N, DQ26	CR46	DDR4_DIMM_CH2_DQ66
	CG46	IO, LVDS2A_41P, DQ30	IO, LVDS2A_17P, DQ26	CU46	DDR4_DIMM_CH2_DQ64
	CF45	IO, LVDS2A_42N, DQ30	IO, LVDS2A_18N, DQ26	CT45	DDR4_DIMM_CH2_DQ65
	CH45	IO, LVDS2A_42P, DQ30	IO, LVDS2A_18P, DQ26	CV45	DDR4_DIMM_CH2_DQ67
51 GPIO_TRIG_OUT	CL50	IO, LVDS2A_43N, DQ31	IO, LVDS2A_19N, DQ27	DA50	DDR4_DIMM_CH2_DQ29
	CN50	IO, LVDS2A_43P, DQ31	IO, LVDS2A_19P, DQ27	DC50	DDR4_DIMM_CH2_DQ28
	CK49	IO, LVDS2A_44N, DQ31	IO, LVDS2A_20N, DQ27	CY49	DDR4_DIMM_CH2_DQ31
	CM49	IO, LVDS2A_44P, DQ31	IO, LVDS2A_20P, DQ27	DB49	DDR4_DIMM_CH2_DQ30
	CL48	IO, LVDS2A_45N, DQ31	IO, LVDS2A_21N, DQ27	DA48	DDR4_DIMM_CH2_TDQS_N12
	CN48	IO, LVDS2A_45P, DQ31	IO, LVDS2A_21P, DQ27	DC48	DDR4_DIMM_CH2_DBI_N3
51 GPIO_TRIG_IN	CK47	IO, LVDS2A_46N, DQSN31	IO, LVDS2A_22N, DQSN27	CY47	DDR4_DIMM_CH2_DQS_N3
	CM47	IO, LVDS2A_46P, DQS31	IO, LVDS2A_22P, DQS27	DB47	DDR4_DIMM_CH2_DQS_P3
15 DDR4_CH2_SAVE_N	CL46	IO, LVDS2A_47N, DQ31	IO, LVDS2A_23N, DQ27	DA46	DDR4_DIMM_CH2_DQ24
15 DDR4_CH2_EVENT_N	CN46	IO, LVDS2A_47P, DQ31	IO, LVDS2A_23P, DQ27	DC46	DDR4_DIMM_CH2_DQ25
15 DDR4_CH3_SAVE_N	CK45	IO, LVDS2A_48N, DQ31	IO, LVDS2A_24N, DQ27	CY45	DDR4_DIMM_CH2_DQ27
15 DDR4_CH3_EVENT_N	CM45	IO, LVDS2A_48P, DQ31	IO, LVDS2A_24P, DQ27	DB45	DDR4_DIMM_CH2_DQ26

BOT TOP

Bank 2A

AGFB014R24_2486A

15,17 DDR4_DIMM_CH2_DBI_N[8:0]

15,17 DDR4_DIMM_CH2_DQ[71:0]

15,17 DDR4_DIMM_CH2_DQS_P[8:0]

15,17 DDR4_DIMM_CH2_DQS_N[8:0]

15,17 DDR4_DIMM_CH2_TDQS_N[17:9]

1p2V_DDR4_CH23

R674	10.0K	DDR4_CH2_EVENT_N
R675	10.0K	DDR4_CH2_SAVE_N
R676	10.0K	DDR4_CH3_EVENT_N
R677	10.0K	DDR4_CH3_SAVE_N

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DDR4/T CH2 INTERFACE -- FPGA SIDE 2B

U2D

DDRT:ERID2	DDR4_DIMM_CH2_CK_N1	CF43	IO, LVDS2B_25N, DQ20	IO, LVDS2B_1N, DQ16	CT43	DDR4_DIMM_CH2_DQ39
DDRT:ERID0	DDR4_DIMM_CH2_CK_P1	CH43	IO, LVDS2B_25P, DQ20	IO, LVDS2B_1P, DQ16	CV43	DDR4_DIMM_CH2_DQ37
		CE42	IO, LVDS2B_26N, DQ20	IO, LVDS2B_2N, DQ16	CR42	DDR4_DIMM_CH2_DQ38
DDRT:NC	DDR4_DIMM_CH2_ALERT_N	CG42	IO, LVDS2B_26P, DQ20	IO, LVDS2B_2P, DQ16	CU42	DDR4_DIMM_CH2_DQ36
		CF41	IO, LVDS2B_27N, DQ20	IO, LVDS2B_3N, DQ16	CT41	DDR4_DIMM_CH2_TDQS_N13
		CH41	IO, LVDS2B_27P, DQ20	IO, LVDS2B_3P, DQ16	CV41	DDR4_DIMM_CH2_DBI_N4
		CE40	IO, LVDS2B_28N, DQSN20	IO, LVDS2B_4N, DQSN16	CR40	DDR4_DIMM_CH2_DQS_N4
		CG40	IO, LVDS2B_28P, DQS20	IO, LVDS2B_4P, DQS16	CU40	DDR4_DIMM_CH2_DQS_P4
		CF39	IO, LVDS2B_29N, DQ20	IO, LVDS2B_5N, DQ16	CT39	DDR4_DIMM_CH2_DQ32
DDRT:C3	DDR4_DIMM_CH2_C2	CH39	IO, LVDS2B_29P, DQ20	IO, LVDS2B_5P, DQ16	CV39	DDR4_DIMM_CH2_DQ33
DDRT:C2	DDR4_DIMM_CH2_CS_N3	CE38	IO, LVDS2B_30N, DQ20	IO, LVDS2B_6N, DQ16	CR38	DDR4_DIMM_CH2_DQ35
DDRT:C1	DDR4_DIMM_CH2_CS_N2	CG38	IO, LVDS2B_30P, DQ20	IO, LVDS2B_6P, DQ16	CU38	DDR4_DIMM_CH2_DQ34
	DDR4_DIMM_CH2_BG0	CK43	IO, LVDS2B_31N, DQ21	IO, LVDS2B_7N, DQ17	CY43	DDR4_DIMM_CH2_DQ47
	DDR4_DIMM_CH2_BA1	CM43	IO, LVDS2B_31P, DQ21	IO, LVDS2B_7P, DQ17	DB43	DDR4_DIMM_CH2_DQ45
	DDR4_DIMM_CH2_BA0	CL42	IO, LVDS2B_32N, DQ21	IO, LVDS2B_8N, DQ17	DA42	DDR4_DIMM_CH2_DQ46
	DDR4_DIMM_CH2_A17	CN42	IO, LVDS2B_32P, DQ21	IO, LVDS2B_8P, DQ17	DC42	DDR4_DIMM_CH2_DQ44
	DDR4_DIMM_CH2_A16	CK41	IO, LVDS2B_33N, DQ21	IO, LVDS2B_9N, DQ17	CY41	DDR4_DIMM_CH2_TDQS_N14
	DDR4_DIMM_CH2_A15	CM41	IO, LVDS2B_33P, DQ21	IO, LVDS2B_9P, DQ17	DB41	DDR4_DIMM_CH2_DBI_N5
	DDR4_DIMM_CH2_A14	CL40	IO, PLL_2B_B_CLKOUT1N, LVDS2B_34N, DQSN21	IO, PLL_2B_T_CLKOUT1N, LVDS2B_10N, DQSN17	DA40	DDR4_DIMM_CH2_DQS_N5
	DDR4_DIMM_CH2_A13	CN40	IO, PLL_2B_B_CLKOUT1P, PLL_2B_B_CLKOUT1, PLL_2B_B_FB1, LVDS2B_34P, DQS21	IO, PLL_2B_T_CLKOUT1P, PLL_2B_T_CLKOUT1, PLL_2B_T_FB1, LVDS2B_10P, DQS17	DC40	DDR4_DIMM_CH2_DQS_P5
	DDR4_DIMM_CH2_A12	CK39	IO, LVDS2B_35N, DQ21	IO, LVDS2B_11N, DQ17	CY39	DDR4_DIMM_CH2_DQ40
240 R66	DDR4_DIMM_CH2_RZQ	CM39	IO, RZQ_B_2B, LVDS2B_35P, DQ21	IO, RZQ_T_2B, LVDS2B_11P, DQ17	DB39	DDR4_DIMM_CH2_DQ41
	CLK_DDR4_CH2_N 38	CL38	IO, CLK_B_2B_1N, LVDS2B_36N, DQ21	IO, CLK_T_2B_1N, LVDS2B_12N, DQ17	DA38	DDR4_DIMM_CH2_DQ43
	CLK_DDR4_CH2_P 38	CN38	IO, CLK_B_2B_1P, LVDS2B_36P, DQ21	IO, CLK_T_2B_1P, LVDS2B_12P, DQ17	DC38	DDR4_DIMM_CH2_DQ42
	DDR4_DIMM_CH2_A11	CE36	IO, CLK_B_2B_0N, LVDS2B_37N, DQ22	IO, CLK_T_2B_0N, LVDS2B_13N, DQ18	CR36	DDR4_DIMM_CH2_DQ63
	DDR4_DIMM_CH2_A10	CG36	IO, CLK_B_2B_0P, LVDS2B_37P, DQ22	IO, CLK_T_2B_0P, LVDS2B_13P, DQ18	CU36	DDR4_DIMM_CH2_DQ61
	DDR4_DIMM_CH2_A9	CF35	IO, LVDS2B_38N, DQ22	IO, LVDS2B_14N, DQ18	CT35	DDR4_DIMM_CH2_DQ62
	DDR4_DIMM_CH2_A8	CH35	IO, LVDS2B_38P, DQ22	IO, LVDS2B_14P, DQ18	CV35	DDR4_DIMM_CH2_DQ60
	DDR4_DIMM_CH2_A7	CE34	IO, PLL_2B_B_CLKOUT0N, LVDS2B_39N, DQ22	IO, PLL_2B_T_CLKOUT0N, LVDS2B_15N, DQ18	CR34	DDR4_DIMM_CH2_TDQS_N16
	DDR4_DIMM_CH2_A6	CG34	IO, PLL_2B_B_CLKOUT0P, PLL_2B_B_CLKOUT0, PLL_2B_B_FB0, LVDS2B_39P, DQ22	IO, PLL_2B_T_CLKOUT0P, PLL_2B_T_CLKOUT0, PLL_2B_T_FB0, LVDS2B_15P, DQ18	CU34	DDR4_DIMM_CH2_DBI_N7
	DDR4_DIMM_CH2_A5	CF33	IO, LVDS2B_40N, DQSN22	IO, LVDS2B_16N, DQSN18	CT33	DDR4_DIMM_CH2_DQS_N7
	DDR4_DIMM_CH2_A4	CH33	IO, LVDS2B_40P, DQS22	IO, LVDS2B_16P, DQS18	CV33	DDR4_DIMM_CH2_DQS_P7
	DDR4_DIMM_CH2_A3	CE32	IO, LVDS2B_41N, DQ22	IO, LVDS2B_17N, DQ18	CR32	DDR4_DIMM_CH2_DQ56
	DDR4_DIMM_CH2_A2	CG32	IO, LVDS2B_41P, DQ22	IO, LVDS2B_17P, DQ18	CU32	DDR4_DIMM_CH2_DQ57
	DDR4_DIMM_CH2_A1	CF31	IO, LVDS2B_42N, DQ22	IO, LVDS2B_18N, DQ18	CT31	DDR4_DIMM_CH2_DQ59
	DDR4_DIMM_CH2_A0	CH31	IO, LVDS2B_42P, DQ22	IO, LVDS2B_18P, DQ18	CV31	DDR4_DIMM_CH2_DQ58
	DDR4_DIMM_CH2_PAR	CL36	IO, LVDS2B_43N, DQ23	IO, LVDS2B_19N, DQ19	DA36	DDR4_DIMM_CH2_DQ52
DDRT:GNT0	DDR4_DIMM_CH2_CS_N1	CN36	IO, LVDS2B_43P, DQ23	IO, LVDS2B_19P, DQ19	DC36	DDR4_DIMM_CH2_DQ53
	DDR4_DIMM_CH2_CK_N0	CK35	IO, LVDS2B_44N, DQ23	IO, LVDS2B_20N, DQ19	CY35	DDR4_DIMM_CH2_DQ55
	DDR4_DIMM_CH2_CK_P0	CM35	IO, LVDS2B_44P, DQ23	IO, LVDS2B_20P, DQ19	DB35	DDR4_DIMM_CH2_DQ54
DDRT:REQ	DDR4_DIMM_CH2_CKE1	CL34	IO, LVDS2B_45N, DQ23	IO, LVDS2B_21N, DQ19	DA34	DDR4_DIMM_CH2_TDQS_N15
	DDR4_DIMM_CH2_CKE0	CN34	IO, LVDS2B_45P, DQ23	IO, LVDS2B_21P, DQ19	DC34	DDR4_DIMM_CH2_DBI_N8
DDRT:ERR	DDR4_DIMM_CH2_ODT1	CK33	IO, LVDS2B_46N, DQSN23	IO, LVDS2B_22N, DQSN19	CY33	DDR4_DIMM_CH2_DQS_N6
	DDR4_DIMM_CH2_ODT0	CM33	IO, LVDS2B_46P, DQS23	IO, LVDS2B_22P, DQS19	DB33	DDR4_DIMM_CH2_DQS_P6
	DDR4_DIMM_CH2_ACT_N	CL32	IO, LVDS2B_47N, DQ23	IO, LVDS2B_23N, DQ19	DA32	DDR4_DIMM_CH2_DQ48
	DDR4_DIMM_CH2_CS_N0	CN32	IO, LVDS2B_47P, DQ23	IO, LVDS2B_23P, DQ19	DC32	DDR4_DIMM_CH2_DQ49
	DDR4_DIMM_CH2_RESET_N	CK31	IO, LVDS2B_48N, DQ23	IO, LVDS2B_24N, DQ19	CY31	DDR4_DIMM_CH2_DQ51
	DDR4_DIMM_CH2_BG1	CM31	IO, LVDS2B_48P, DQ23	IO, LVDS2B_24P, DQ19	DB31	DDR4_DIMM_CH2_DQ50
			BOT	TOP		

Bank 2B

AGFB014R24_2486A

15 DDR4_DIMM_CH2_CK_P[1:0]
15 DDR4_DIMM_CH2_CK_N[1:0]
15 DDR4_DIMM_CH2_CKE[1:0]
15 DDR4_DIMM_CH2_A[17:0]
15 DDR4_DIMM_CH2_ODT[1:0]
15 DDR4_DIMM_CH2_BG[1:0]
15 DDR4_DIMM_CH2_BA[1:0]
15 DDR4_DIMM_CH2_CS_N[3:0]
15 DDR4_DIMM_CH2_RESET_N
15 DDR4_DIMM_CH2_ACT_N
15 DDR4_DIMM_CH2_PAR
15 DDR4_DIMM_CH2_ALERT_N
15 DDR4_DIMM_CH2_C2

15,16 DDR4_DIMM_CH2_DBI_N[8:0]
15,16 DDR4_DIMM_CH2_DQ[71:0]
15,16 DDR4_DIMM_CH2_DQS_P[8:0]
15,16 DDR4_DIMM_CH2_DQS_N[8:0]
15,16 DDR4_DIMM_CH2_TDQS_N[17:9]

CLK_DDR4_CH2_P R67 DNI CLK_DDR4_CH2_N

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DDR4/DDRT Single DIMM CH3

x72bit DIMM Only

J4A

J4B

DDR4x72x288

DDR4 DIMM IF

Put caps on VDD pins which are close to DIMM A/C pins

I2C Addr: 0xA6

Intel Corporation,101 innovation Dr, San Jose, CA 95134

Title: AgileX F-Series FPGA Dev Kit

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DDR4/T CH3 INTERFACE -- FPGA SIDE 2C

U2C

DDR4_DIMM_CH3_DQ23	CF17	IO, LVDS2C_25N, DQ12	
DDR4_DIMM_CH3_DQ22	CH17	IO, LVDS2C_25P, DQ12	
DDR4_DIMM_CH3_DQ20	CE18	IO, LVDS2C_26N, DQ12	
DDR4_DIMM_CH3_DQ21	CG18	IO, LVDS2C_26P, DQ12	
DDR4_DIMM_CH3_TDQS_N11	CF19	IO, LVDS2C_27N, DQ12	
DDR4_DIMM_CH3_DBI_N2	CH19	IO, LVDS2C_27P, DQ12	
DDR4_DIMM_CH3_DQS_N2	CE20	IO, LVDS2C_28N, DQSN12	
DDR4_DIMM_CH3_DQS_P2	CG20	IO, LVDS2C_28P, DQS12	
DDR4_DIMM_CH3_DQ17	CF21	IO, LVDS2C_29N, DQ12	
DDR4_DIMM_CH3_DQ16	CH21	IO, LVDS2C_29P, DQ12	
DDR4_DIMM_CH3_DQ18	CE22	IO, LVDS2C_30N, DQ12	
DDR4_DIMM_CH3_DQ19	CG22	IO, LVDS2C_30P, DQ12	
DDR4_DIMM_CH3_DQ68	CK17	IO, LVDS2C_31N, DQ13	
DDR4_DIMM_CH3_DQ71	CM17	IO, LVDS2C_31P, DQ13	
DDR4_DIMM_CH3_DQ69	CL18	IO, LVDS2C_32N, DQ13	
DDR4_DIMM_CH3_DQ70	CN18	IO, LVDS2C_32P, DQ13	
DDR4_DIMM_CH3_TDQS_N17	CK19	IO, LVDS2C_33N, DQ13	
DDR4_DIMM_CH3_DBI_N8	CM19	IO, LVDS2C_33P, DQ13	
DDR4_DIMM_CH3_DQS_N8	CL20	IO, PLL_2C_B_CLKOUT1N, LVDS2C_34N, DQSN13	
DDR4_DIMM_CH3_DQS_P8	CN20	IO, PLL_2C_B_CLKOUT1P, PLL_2C_B_CLKOUT1, PLL_2C_B_FB1, LVDS2C_34P, DQS13	
DDR4_DIMM_CH3_DQ66	CK21	IO, LVDS2C_35N, DQ13	
DDR4_DIMM_CH3_DQ64	CM21	IO, RZQ_B_2C, LVDS2C_35P, DQ13	
DDR4_DIMM_CH3_DQ67	CL22	IO, CLK_B_2C_1N, LVDS2C_36N, DQ13	
DDR4_DIMM_CH3_DQ65	CN22	IO, CLK_B_2C_1P, LVDS2C_36P, DQ13	
DDR4_DIMM_CH3_DQ12	CE24	IO, CLK_B_2C_0N, LVDS2C_37N, DQ14	
DDR4_DIMM_CH3_DQ15	CG24	IO, CLK_B_2C_0P, LVDS2C_37P, DQ14	
DDR4_DIMM_CH3_DQ14	CF25	IO, LVDS2C_38N, DQ14	
DDR4_DIMM_CH3_DQ13	CH25	IO, LVDS2C_38P, DQ14	
DDR4_DIMM_CH3_TDQS_N10	CE26	IO, PLL_2C_B_CLKOUT0N, LVDS2C_39N, DQ14	
DDR4_DIMM_CH3_DBI_N1	CG26	IO, PLL_2C_B_CLKOUT0P, PLL_2C_B_CLKOUT0, PLL_2C_B_FB0, LVDS2C_39P, DQ14	
DDR4_DIMM_CH3_DQS_N1	CF27	IO, LVDS2C_40N, DQSN14	
DDR4_DIMM_CH3_DQS_P1	CH27	IO, LVDS2C_40P, DQS14	
DDR4_DIMM_CH3_DQ10	CE28	IO, LVDS2C_41N, DQ14	
DDR4_DIMM_CH3_DQ8	CG28	IO, LVDS2C_41P, DQ14	
DDR4_DIMM_CH3_DQ11	CF29	IO, LVDS2C_42N, DQ14	
DDR4_DIMM_CH3_DQ9	CH29	IO, LVDS2C_42P, DQ14	
DDR4_DIMM_CH3_DQ7	CL24	IO, LVDS2C_43N, DQ15	
DDR4_DIMM_CH3_DQ6	CN24	IO, LVDS2C_43P, DQ15	
DDR4_DIMM_CH3_DQ4	CK25	IO, LVDS2C_44N, DQ15	
DDR4_DIMM_CH3_DQ5	CM25	IO, LVDS2C_44P, DQ15	
DDR4_DIMM_CH3_TDQS_N9	CL26	IO, LVDS2C_45N, DQ15	
DDR4_DIMM_CH3_DBI_N0	CN26	IO, LVDS2C_45P, DQ15	
DDR4_DIMM_CH3_DQS_N0	CK27	IO, LVDS2C_46N, DQSN15	
DDR4_DIMM_CH3_DQS_P0	CM27	IO, LVDS2C_46P, DQS15	
DDR4_DIMM_CH3_DQ1	CL28	IO, LVDS2C_47N, DQ15	
DDR4_DIMM_CH3_DQ0	CN28	IO, LVDS2C_47P, DQ15	
DDR4_DIMM_CH3_DQ2	CK29	IO, LVDS2C_48N, DQ15	
DDR4_DIMM_CH3_DQ3	CM29	IO, LVDS2C_48P, DQ15	

BOT

		IO, LVDS2C_1N, DQ8	CT17
		IO, LVDS2C_1P, DQ8	CV17
		IO, LVDS2C_2N, DQ8	CR18
		IO, LVDS2C_2P, DQ8	CU18
		IO, LVDS2C_3N, DQ8	CT19
		IO, LVDS2C_3P, DQ8	CV19
		IO, LVDS2C_4N, DQSN8	CR20
		IO, LVDS2C_4P, DQS8	CU20
		IO, LVDS2C_5N, DQ8	CT21
		IO, LVDS2C_5P, DQ8	CV21
		IO, LVDS2C_6N, DQ8	CR22
		IO, LVDS2C_6P, DQ8	CU22
		IO, LVDS2C_7N, DQ9	CY17
		IO, LVDS2C_7P, DQ9	DB17
		IO, LVDS2C_8N, DQ9	DA18
		IO, LVDS2C_8P, DQ9	DC18
		IO, LVDS2C_9N, DQ9	CY19
		IO, LVDS2C_9P, DQ9	DB19
		IO, PLL_2C_T_CLKOUT1N, LVDS2C_10N, DQSN9	DA20
		IO, PLL_2C_T_CLKOUT1P, PLL_2C_T_CLKOUT1, PLL_2C_T_FB1, LVDS2C_10P, DQS9	DC20
		IO, LVDS2C_11N, DQ9	CY21
		IO, RZQ_T_2C, LVDS2C_11P, DQ9	DB21
		IO, CLK_T_2C_1N, LVDS2C_12N, DQ9	DA22
		IO, CLK_T_2C_1P, LVDS2C_12P, DQ9	DC22
		IO, CLK_T_2C_0N, LVDS2C_13N, DQ10	CR24
		IO, CLK_T_2C_0P, LVDS2C_13P, DQ10	CU24
		IO, LVDS2C_14N, DQ10	CT25
		IO, LVDS2C_14P, DQ10	CV25
		IO, PLL_2C_T_CLKOUT0N, LVDS2C_15N, DQ10	CR26
		IO, PLL_2C_T_CLKOUT0P, PLL_2C_T_CLKOUT0, PLL_2C_T_FB0, LVDS2C_15P, DQ10	CU26
		IO, LVDS2C_16N, DQSN10	CT27
		IO, LVDS2C_16P, DQS10	CV27
		IO, LVDS2C_17N, DQ10	CR28
		IO, LVDS2C_17P, DQ10	CU28
		IO, LVDS2C_18N, DQ10	CT29
		IO, LVDS2C_18P, DQ10	CV29
		IO, LVDS2C_19N, DQ11	DA24
		IO, LVDS2C_19P, DQ11	DC24
		IO, LVDS2C_20N, DQ11	CY25
		IO, LVDS2C_20P, DQ11	DB25
		IO, LVDS2C_21N, DQ11	DA26
		IO, LVDS2C_21P, DQ11	DC26
		IO, LVDS2C_22N, DQSN11	CY27
		IO, LVDS2C_22P, DQS11	DB27
		IO, LVDS2C_23N, DQ11	DA28
		IO, LVDS2C_23P, DQ11	DC28
		IO, LVDS2C_24N, DQ11	CY29
		IO, LVDS2C_24P, DQ11	DB29

TOP

Bank 2C

AGFB014R24_2486A

PCIE_EP_I2C_SDA 25
PCIE_EP_WAKEN 25
PCIE_EP_I2C_SCL 25
PCIE_1V2_CLKREQn 25
CLK_SYS_100M_N 38
CLK_SYS_100M_P 38
R80 100

DDR4_DIMM_CH3_DQ31
DDR4_DIMM_CH3_DQ30
DDR4_DIMM_CH3_DQ28
DDR4_DIMM_CH3_DQ29
DDR4_DIMM_CH3_TDQS_N12
DDR4_DIMM_CH3_DBI_N3
DDR4_DIMM_CH3_DQS_N3
DDR4_DIMM_CH3_DQS_P3
DDR4_DIMM_CH3_DQ25
DDR4_DIMM_CH3_DQ24
DDR4_DIMM_CH3_DQ26
DDR4_DIMM_CH3_DQ27

1p2V_DDR4_CH23

R81 10.0K PCIE_EP_I2C_SCL
R82 10.0K PCIE_EP_I2C_SDA
R83 10.0K PCIE_EP_WAKEN

18,20 DDR4_DIMM_CH3_DBI_N[8:0]
18,20 DDR4_DIMM_CH3_DQ[71:0]
18,20 DDR4_DIMM_CH3_DQS_P[8:0]
18,20 DDR4_DIMM_CH3_DQS_N[8:0]
18,20 DDR4_DIMM_CH3_TDQS_N[17:9]

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DDR4/T CH3 INTERFACE -- FPGA SIDE 2D

U2B

DDR4_DIMM_CH3_DQ63	CF3	IO, LVDS2D_25N, DQ4	IO, LVDS2D_1N, DQ0	CT3	DDR4_DIMM_CH3_CK_N1
DDR4_DIMM_CH3_DQ62	CH3	IO, LVDS2D_25P, DQ4	IO, LVDS2D_1P, DQ0	CV3	DDR4_DIMM_CH3_CK_P1
DDR4_DIMM_CH3_DQ60	CE4	IO, LVDS2D_26N, DQ4	IO, LVDS2D_2N, DQ0	CR4	
DDR4_DIMM_CH3_DQ61	CG4	IO, LVDS2D_26P, DQ4	IO, LVDS2D_2P, DQ0	CU4	DDR4_DIMM_CH3_ALERT_N
DDR4_DIMM_CH3_TDQS_N16	CF5	IO, LVDS2D_27N, DQ4	IO, LVDS2D_3N, DQ0	CT5	
DDR4_DIMM_CH3_DBI_N7	CH5	IO, LVDS2D_27P, DQ4	IO, LVDS2D_3P, DQ0	CV5	
DDR4_DIMM_CH3_DQS_N7	CE6	IO, LVDS2D_28N, DQSN4	IO, LVDS2D_4N, DQSN0	CR6	
DDR4_DIMM_CH3_DQS_P7	CG6	IO, LVDS2D_28P, DQS4	IO, LVDS2D_4P, DQS0	CU6	
DDR4_DIMM_CH3_DQ57	CF7	IO, LVDS2D_29N, DQ4	IO, LVDS2D_5N, DQ0	CT7	
DDR4_DIMM_CH3_DQ56	CH7	IO, LVDS2D_29P, DQ4	IO, LVDS2D_5P, DQ0	CV7	DDR4_DIMM_CH3_C2
DDR4_DIMM_CH3_DQ58	CE8	IO, LVDS2D_30N, DQ4	IO, LVDS2D_6N, DQ0	CR8	DDR4_DIMM_CH3_CS_N3
DDR4_DIMM_CH3_DQ59	CG8	IO, LVDS2D_30P, DQ4	IO, LVDS2D_6P, DQ0	CU8	DDR4_DIMM_CH3_CS_N2
DDR4_DIMM_CH3_DQ52	CK3	IO, LVDS2D_31N, DQ5	IO, LVDS2D_7N, DQ1	CT1	DDR4_DIMM_CH3_BG0
DDR4_DIMM_CH3_DQ55	CM3	IO, LVDS2D_31P, DQ5	IO, LVDS2D_7P, DQ1	CV1	DDR4_DIMM_CH3_BA1
DDR4_DIMM_CH3_DQ54	CL4	IO, LVDS2D_32N, DQ5	IO, LVDS2D_8N, DQ1	CY3	DDR4_DIMM_CH3_BA0
DDR4_DIMM_CH3_DQ53	CN4	IO, LVDS2D_32P, DQ5	IO, LVDS2D_8P, DQ1	DA4	DDR4_DIMM_CH3_A17
DDR4_DIMM_CH3_TDQS_N15	CK5	IO, LVDS2D_33N, DQ5	IO, LVDS2D_9N, DQ1	CY5	DDR4_DIMM_CH3_A16
DDR4_DIMM_CH3_DBI_N6	CM5	IO, LVDS2D_33P, DQ5	IO, LVDS2D_9P, DQ1	DB5	DDR4_DIMM_CH3_A15
DDR4_DIMM_CH3_DQS_N6	CL6	IO, PLL_2D_B_CLKOUT1N, LVDS2D_34N, DQSN5	IO, PLL_2D_T_CLKOUT1N, LVDS2D_10N, DQSN1	DA6	DDR4_DIMM_CH3_A14
DDR4_DIMM_CH3_DQS_P6	CN6	IO, PLL_2D_B_CLKOUT1P, PLL_2D_B_CLKOUT1, PLL_2D_B_FB1, LVDS2D_34P, DQS5	IO, PLL_2D_T_CLKOUT1P, PLL_2D_T_CLKOUT1, PLL_2D_T_FB1, LVDS2D_10P, DQS1	DC6	DDR4_DIMM_CH3_A13
DDR4_DIMM_CH3_DQ50	CK7	IO, LVDS2D_35N, DQ5	IO, LVDS2D_11N, DQ1	CY7	DDR4_DIMM_CH3_A12
DDR4_DIMM_CH3_DQ48	CM7	IO, RZQ_B_2D, LVDS2D_35P, DQ5	IO, RZQ_T_2D, LVDS2D_11P, DQ1	DB7	DDR4_DIMM_CH3_RZQ
DDR4_DIMM_CH3_DQ51	CL8	IO, CLK_B_2D_1N, LVDS2D_36N, DQ5	IO, CLK_T_2D_1N, LVDS2D_12N, DQ1	DA8 38	CLK_DDR4_CH3_N
DDR4_DIMM_CH3_DQ49	CN8	IO, CLK_B_2D_1P, LVDS2D_36P, DQ5	IO, CLK_T_2D_1P, LVDS2D_12P, DQ1	DC8 38	CLK_DDR4_CH3_P
DDR4_DIMM_CH3_DQ44	CE10	IO, CLK_B_2D_0N, LVDS2D_37N, DQ6	IO, CLK_T_2D_0N, LVDS2D_13N, DQ2	CR10	DDR4_DIMM_CH3_A11
DDR4_DIMM_CH3_DQ47	CG10	IO, CLK_B_2D_0P, LVDS2D_37P, DQ6	IO, CLK_T_2D_0P, LVDS2D_13P, DQ2	CU10	DDR4_DIMM_CH3_A10
DDR4_DIMM_CH3_DQ46	CF11	IO, LVDS2D_38N, DQ6	IO, LVDS2D_14N, DQ2	CT11	DDR4_DIMM_CH3_A9
DDR4_DIMM_CH3_DQ45	CH11	IO, LVDS2D_38P, DQ6	IO, LVDS2D_14P, DQ2	CV11	DDR4_DIMM_CH3_A8
DDR4_DIMM_CH3_TDQS_N14	CE12	IO, PLL_2D_B_CLKOUT0N, LVDS2D_39N, DQ6	IO, PLL_2D_T_CLKOUT0N, LVDS2D_15N, DQ2	CR12	DDR4_DIMM_CH3_A7
DDR4_DIMM_CH3_DBI_N5	CG12	IO, PLL_2D_B_CLKOUT0P, PLL_2D_B_CLKOUT0, PLL_2D_B_FB0, LVDS2D_39P, DQ6	IO, PLL_2D_T_CLKOUT0P, PLL_2D_T_CLKOUT0, PLL_2D_T_FB0, LVDS2D_15P, DQ2	CU12	DDR4_DIMM_CH3_A6
DDR4_DIMM_CH3_DQS_N5	CF13	IO, LVDS2D_40N, DQSN6	IO, LVDS2D_16N, DQSN2	CT13	DDR4_DIMM_CH3_A5
DDR4_DIMM_CH3_DQS_P5	CH13	IO, LVDS2D_40P, DQS6	IO, LVDS2D_16P, DQS2	CV13	DDR4_DIMM_CH3_A4
DDR4_DIMM_CH3_DQ42	CE14	IO, LVDS2D_41N, DQ6	IO, LVDS2D_17N, DQ2	CR14	DDR4_DIMM_CH3_A3
DDR4_DIMM_CH3_DQ40	CG14	IO, LVDS2D_41P, DQ6	IO, LVDS2D_17P, DQ2	CU14	DDR4_DIMM_CH3_A2
DDR4_DIMM_CH3_DQ43	CF15	IO, LVDS2D_42N, DQ6	IO, LVDS2D_18N, DQ2	CT15	DDR4_DIMM_CH3_A1
DDR4_DIMM_CH3_DQ41	CH15	IO, LVDS2D_42P, DQ6	IO, LVDS2D_18P, DQ2	CV15	DDR4_DIMM_CH3_A0
DDR4_DIMM_CH3_DQ39	CL10	IO, LVDS2D_43N, DQ7	IO, LVDS2D_19N, DQ3	DA10	DDR4_DIMM_CH3_PAR
DDR4_DIMM_CH3_DQ38	CN10	IO, LVDS2D_43P, DQ7	IO, LVDS2D_19P, DQ3	DC10	DDR4_DIMM_CH3_CS_N1
DDR4_DIMM_CH3_DQ36	CK11	IO, LVDS2D_44N, DQ7	IO, LVDS2D_20N, DQ3	CY11	DDR4_DIMM_CH3_CK_N0
DDR4_DIMM_CH3_DQ37	CM11	IO, LVDS2D_44P, DQ7	IO, LVDS2D_20P, DQ3	DB11	DDR4_DIMM_CH3_CK_P0
DDR4_DIMM_CH3_TDQS_N13	CL12	IO, LVDS2D_45N, DQ7	IO, LVDS2D_21N, DQ3	DA12	DDR4_DIMM_CH3_CKE1
DDR4_DIMM_CH3_DBI_N4	CN12	IO, LVDS2D_45P, DQ7	IO, LVDS2D_21P, DQ3	DC12	DDR4_DIMM_CH3_CKE0
DDR4_DIMM_CH3_DQS_N4	CK13	IO, LVDS2D_46N, DQSN7	IO, LVDS2D_22N, DQSN3	CY13	DDR4_DIMM_CH3_ODT1
DDR4_DIMM_CH3_DQS_P4	CM13	IO, LVDS2D_46P, DQS7	IO, LVDS2D_22P, DQS3	DB13	DDR4_DIMM_CH3_ODT0
DDR4_DIMM_CH3_DQ33	CL14	IO, LVDS2D_47N, DQ7	IO, LVDS2D_23N, DQ3	DA14	DDR4_DIMM_CH3_ACT_N
DDR4_DIMM_CH3_DQ32	CN14	IO, LVDS2D_47P, DQ7	IO, LVDS2D_23P, DQ3	DC14	DDR4_DIMM_CH3_CS_N0
DDR4_DIMM_CH3_DQ34	CK15	IO, LVDS2D_48N, DQ7	IO, LVDS2D_24N, DQ3	CY15	DDR4_DIMM_CH3_RESET_N
DDR4_DIMM_CH3_DQ35	CM15	IO, LVDS2D_48P, DQ7	IO, LVDS2D_24P, DQ3	DB15	DDR4_DIMM_CH3_BG1

BOT | TOP

Bank 2D

AGFB014R24_2486A

DDR4_DIMM_CH3_DBI_N:DDR:ERID2
DDR4_DIMM_CH3_DQ:DDR:ERID0
DDR4_DIMM_CH3_DQS_N:DDR:NC
DDR4_DIMM_CH3_DQS_P:DDR:C3
DDR4_DIMM_CH3_DQ:DDR:C2
DDR4_DIMM_CH3_TDQS_N:DDR:C1
DDR4_DIMM_CH3_CK_P[1:0]:DDR:GNT0
DDR4_DIMM_CH3_CK_N[1:0]:DDR:REQ
DDR4_DIMM_CH3_CKE[1:0]:DDR:ERR
DDR4_DIMM_CH3_A[17:0]
DDR4_DIMM_CH3_ODT[1:0]
DDR4_DIMM_CH3_BG[1:0]
DDR4_DIMM_CH3_BA[1:0]
DDR4_DIMM_CH3_CS_N[3:0]
DDR4_DIMM_CH3_RESET_N
DDR4_DIMM_CH3_ACT_N
DDR4_DIMM_CH3_PAR
DDR4_DIMM_CH3_ALERT_N
DDR4_DIMM_CH3_C2

18,19 DDR4_DIMM_CH3_DBI_N[8:0]
18,19 DDR4_DIMM_CH3_DQ[71:0]
18,19 DDR4_DIMM_CH3_DQS_P[8:0]
18,19 DDR4_DIMM_CH3_DQS_N[8:0]
18,19 DDR4_DIMM_CH3_TDQS_N[17:9]

CLK_DDR4_CH3_P R85 DNI CLK_DDR4_CH3_N

DDR4_DIMM_CH3_RZQ 240 R84

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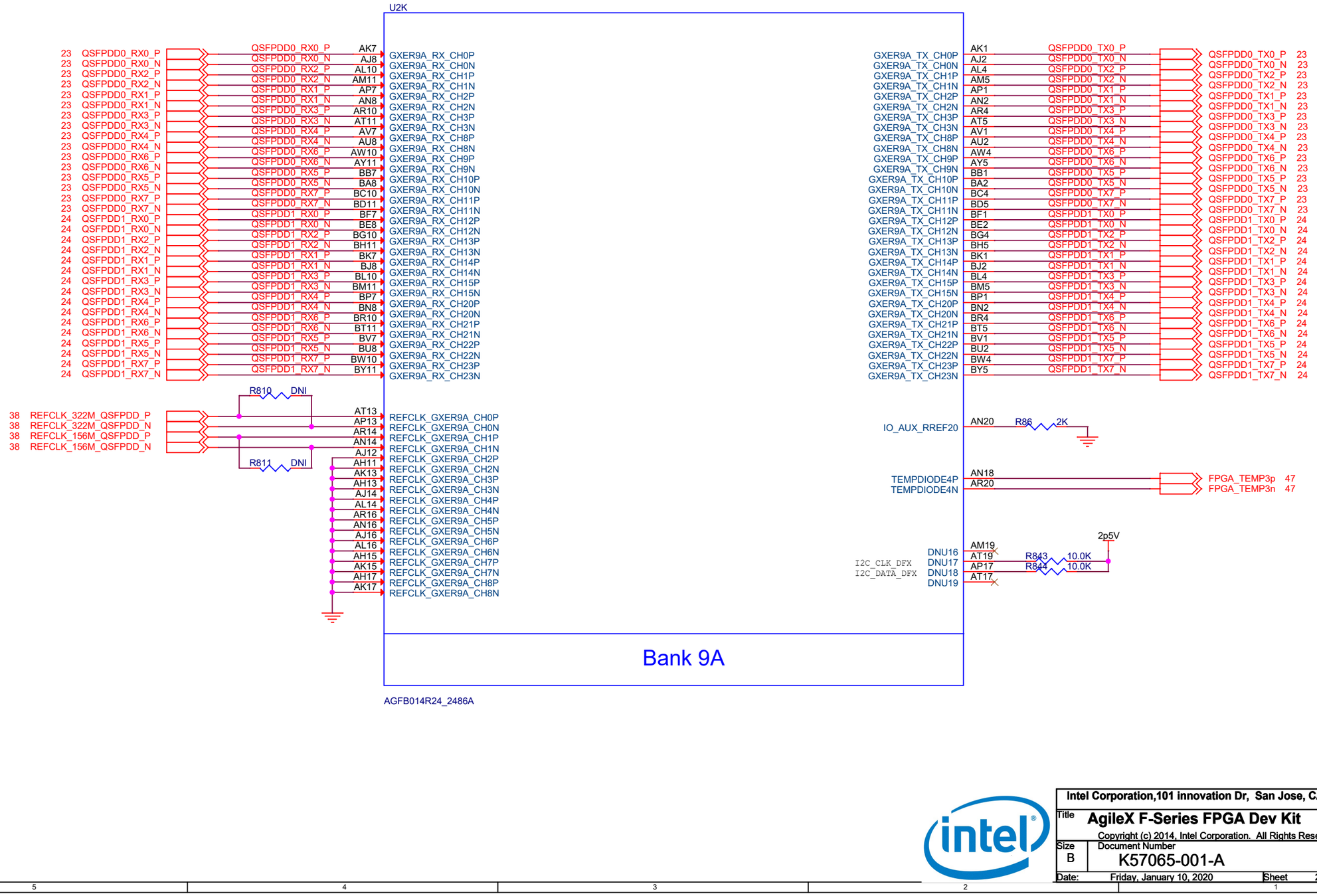
E-TILE BANK 9A



Intel Corporation,101 innovation Dr, San Jose, CA 95134		
Title: AgileX F-Series FPGA Dev Kit		
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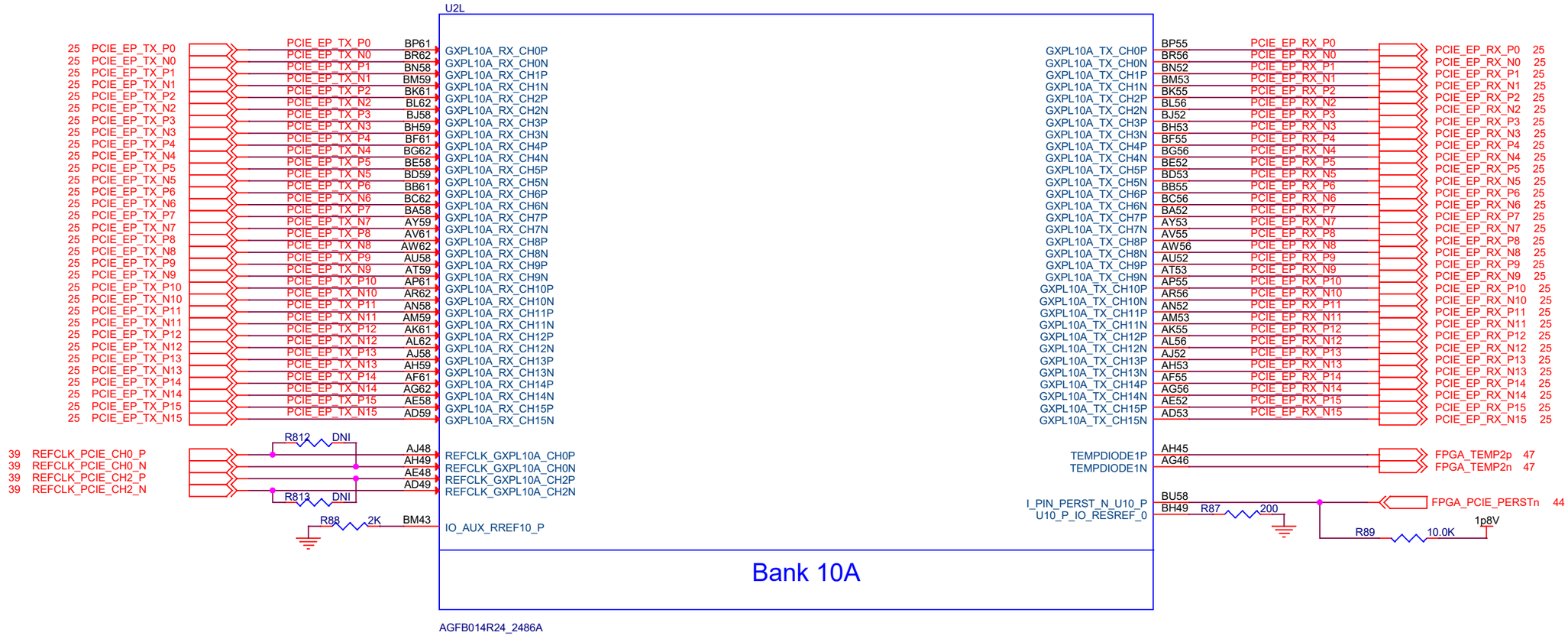
P-TILE BANK 10A



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Title: AgileX F-Series FPGA Dev Kit		
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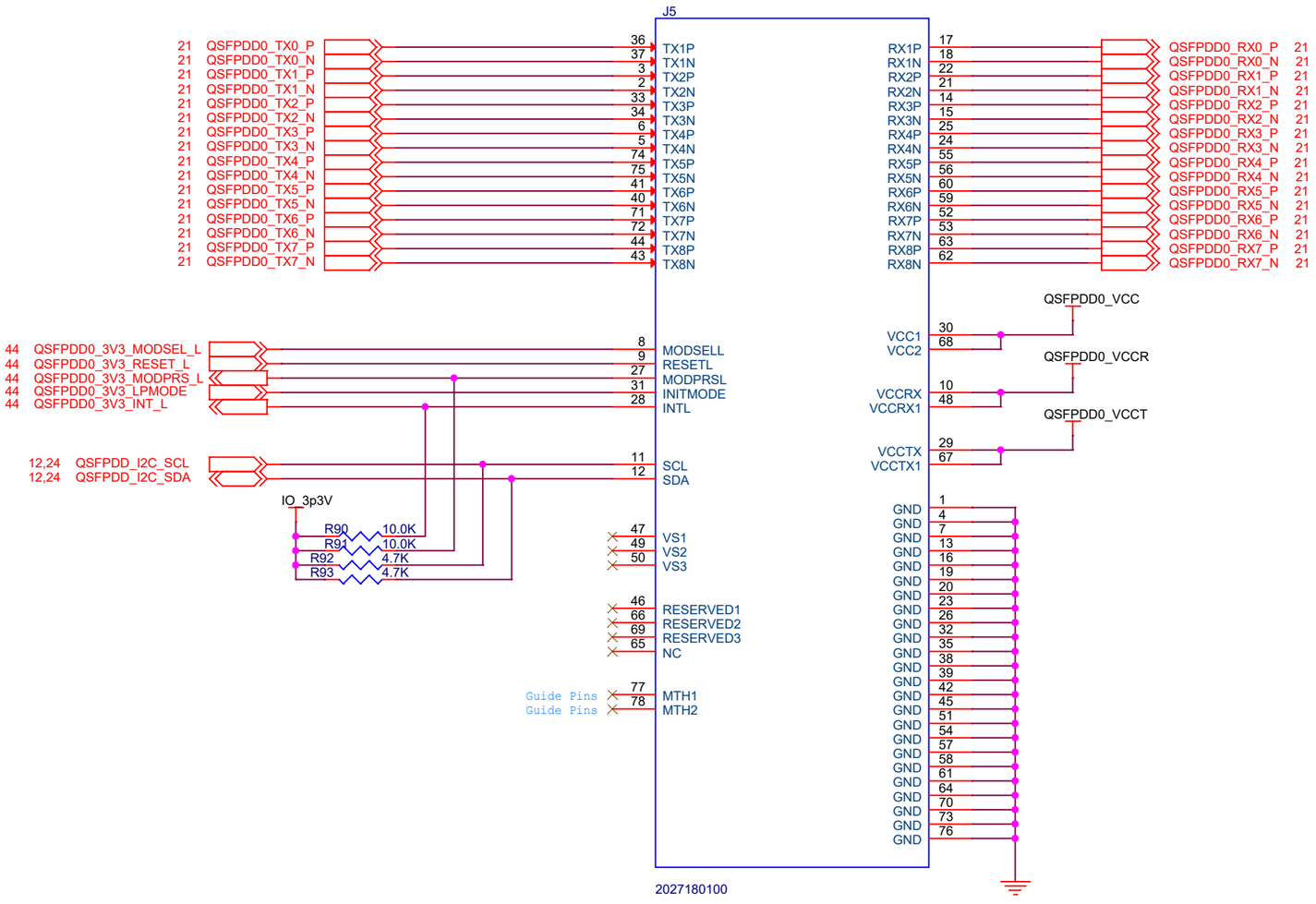
QSFPDD0

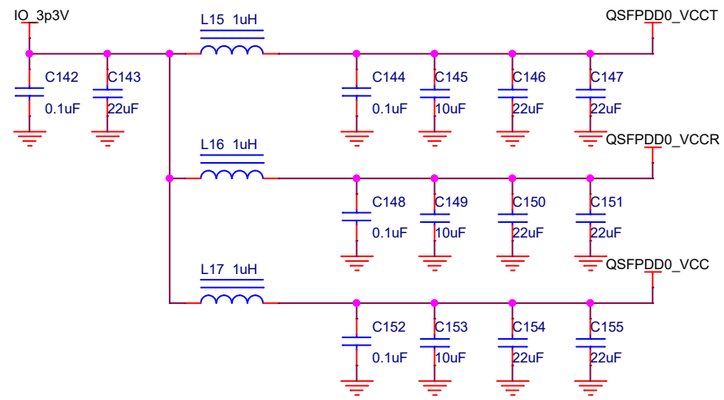


NOTE 1: Bypass Capacitors should be placed as close to the associated 20-pin connector as possible.

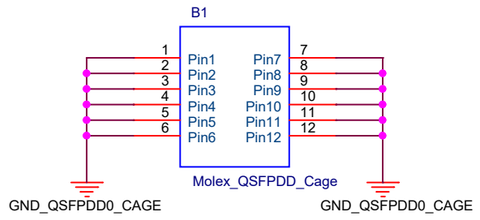
NOTE 2: zQSFP 100-ohm termination is implemented via the FPGA on-chip termination.

NOTE 3: DC blocking capacitors are in the module for RX and TX.

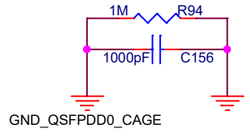
NOTE 4: 1uH inductors should have a DC Resistance of less than 0.1-ohm.



Place close to QSFPDD Connector



MOLEX MPN 2031431355



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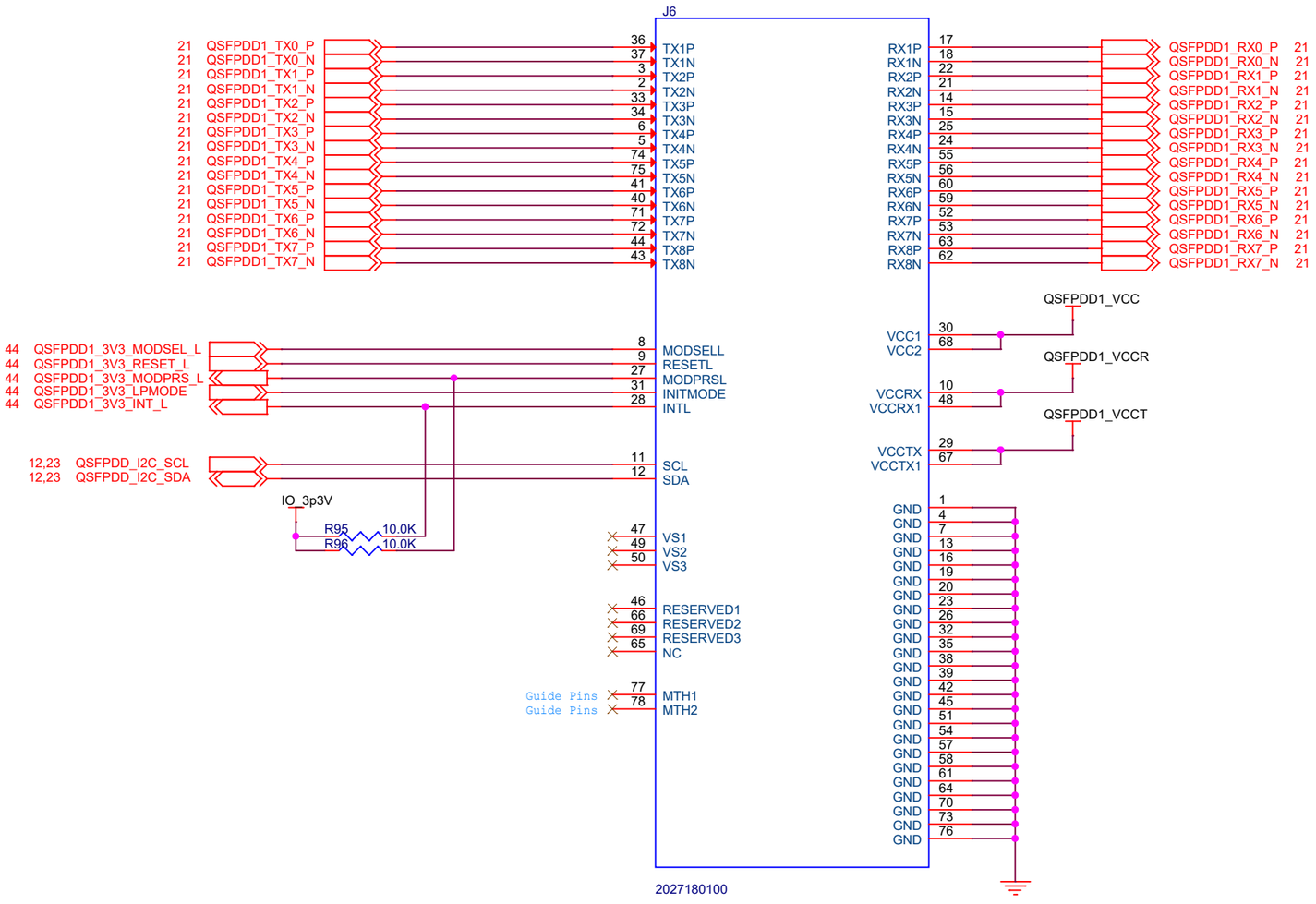
QSFPDD1

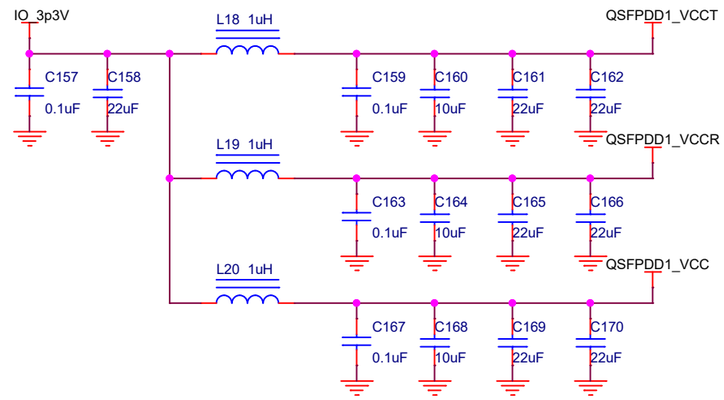


NOTE 1: Bypass Capacitors should be placed as close to the associated 20-pin connector as possible.

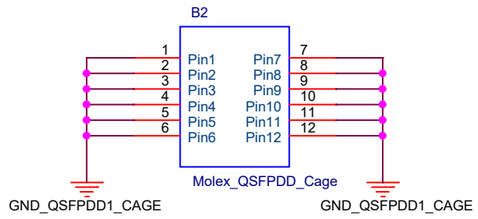
NOTE 2: zQSFP 100-ohm termination is implemented via the FPGA on-chip termination.

NOTE 3: DC blocking capacitors are in the module for RX and TX.

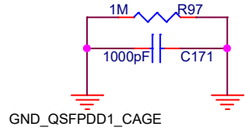
NOTE 4: 1uH inductors should have a DC Resistance of less than 0.1-ohm.



Place close to QSFPDD Connector



MOLEX MPN 2031431355



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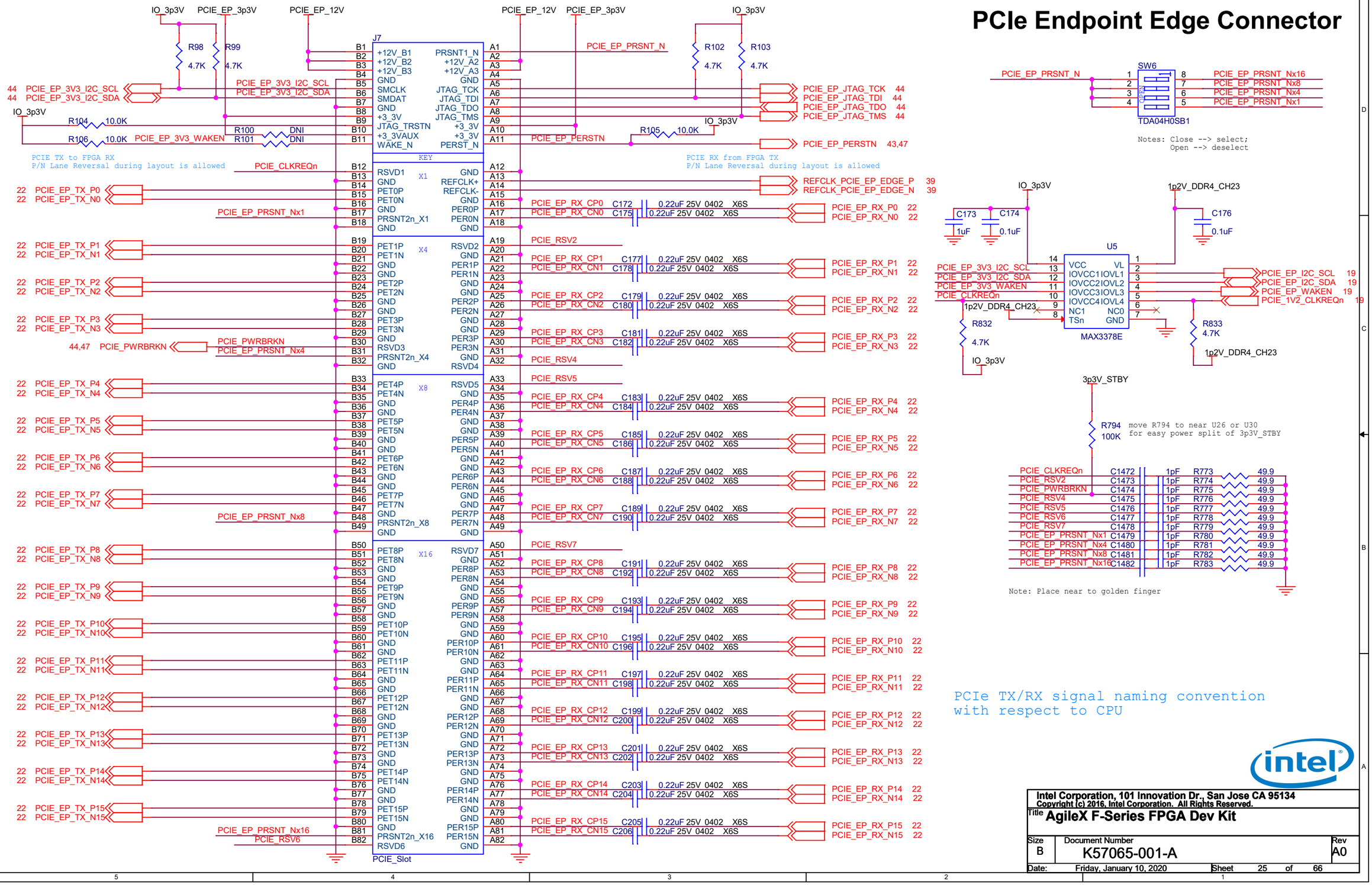
PCIe Endpoint Edge Connector



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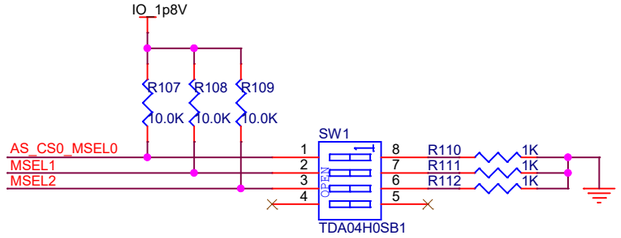
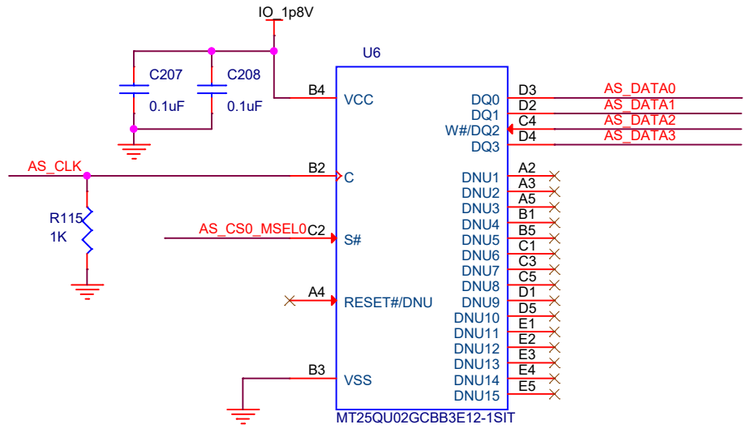
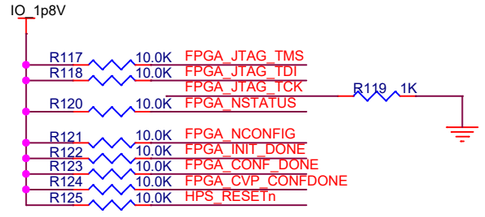
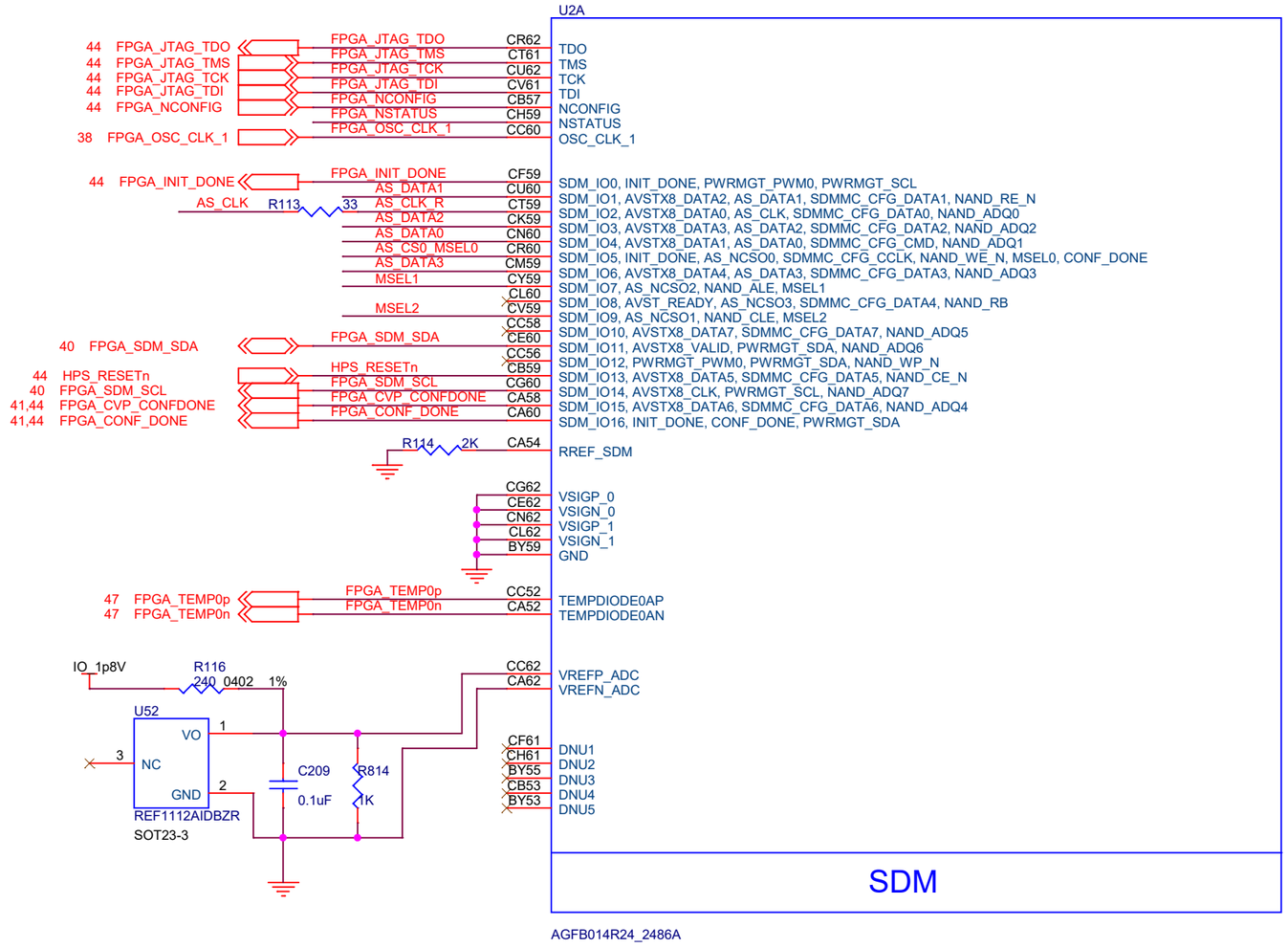
SDM & Configuration



Config Mode	MSEL2	MSEL1	MSEL0
AS_FAST	0	0	1
AS_NORMAL	0	1	1







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Bank HPS

U2J

31 EMMC_CLK	AH5	HPS_IOA_1, GPIO0_IO0, SPIM0_SS1_N, SPIS0_CLK, UART0_CTS_N, NAND_ADQ0, USB0_CLK, SDMMC_CCLK
31 EMMC_CMD	AD1	HPS_IOA_2, GPIO0_IO1, SPIM1_SS1_N, SPIS0_MOSI, UART0_RTS_N, NAND_ADQ1, USB0_STP, SDMMC_CMD
31 EMMC_DATA0	AG6	HPS_IOA_3, GPIO0_IO2, SPIS0_SS0_N, UART0_TX, I2C1_SDA, NAND_WE_N, USB0_DIR, SDMMC_DATA0
31 EMMC_DATA1	AB1	HPS_IOA_4, GPIO0_IO3, SPIS0_MISO, UART0_RX, I2C1_SCL, NAND_RE_N, USB0_DATA0, SDMMC_DATA1
31 EMMC_DATA2	AG4	HPS_IOA_5, GPIO0_IO4, SPIM0_CLK, UART1_CTS_N, I2C0_SDA, NAND_WP_N, USB0_DATA1, SDMMC_DATA2
31 EMMC_DATA3	AD3	HPS_IOA_6, GPIO0_IO5, SPIM0_MOSI, UART1_RTS_N, I2C0_SCL, NAND_ADQ2, USB0_NXT, SDMMC_DATA3
31 EMMC_DATA4	AF5	HPS_IOA_7, GPIO0_IO6, SPIM0_MISO, MDIO2_MDIO, UART1_TX, I2C_EMAC2_SDA, NAND_ADQ3, USB0_DATA2, SDMMC_DATA4
31 EMMC_DATA5	AC2	HPS_IOA_8, GPIO0_IO7, SPIM0_SS0_N, MDIO2_MDC, UART1_RX, I2C_EMAC2_SCL, NAND_CLE, USB0_DATA3, SDMMC_DATA5
31 EMMC_DATA6	AF1	HPS_IOA_9, GPIO0_IO8, SPIM1_CLK, SPIS1_CLK, MDIO1_MDIO, I2C_EMAC1_SDA, NAND_ADQ4, USB0_DATA4, SDMMC_DATA6
31 EMMC_DATA7	AB3	HPS_IOA_10, GPIO0_IO9, SPIM1_MOSI, SPIS1_MOSI, MDIO1_MDC, I2C_EMAC1_SCL, NAND_ADQ5, USB0_DATA5, SDMMC_DATA7
	AF3	HPS_IOA_11, GPIO0_IO10, SPIM1_MISO, SPIS1_SS0_N, MDIO0_MDIO, I2C_EMAC0_SDA, NAND_ADQ6, USB0_DATA6
44 RSV_SD_RESETn	AA2	HPS_IOA_12, GPIO0_IO11, SPIM1_SS0_N, SPIS1_MISO, MDIO0_MDC, I2C_EMAC0_SCL, NAND_ADQ7, USB0_DATA7
28 ENET_GTX_CLK	AC4	HPS_IOA_13, GPIO0_IO12, NAND_ALE, USB1_CLK, EMAC0_TX_CLK
28 ENET_TX_EN	V1	HPS_IOA_14, GPIO0_IO13, NAND_RB, USB1_STP, EMAC0_TX_CTL
28 ENET_RX_CLK	AA4	HPS_IOA_15, GPIO0_IO14, NAND_CE_N, USB1_DIR, EMAC0_RX_CLK
28 ENET_RX_DV	T1	HPS_IOA_16, GPIO0_IO15, USB1_DATA0, EMAC0_RX_CTL
28 ENET_TXD0	AD5	HPS_IOA_17, GPIO0_IO16, NAND_ADQ8, USB1_DATA1, EMAC0_TXD0
28 ENET_TXD1	P1	HPS_IOA_18, GPIO0_IO17, NAND_ADQ9, USB1_NXT, EMAC0_TXD1
28 ENET_RXD0	AF7	HPS_IOA_19, GPIO0_IO18, NAND_ADQ10, USB1_DATA2, EMAC0_RXD0
28 ENET_RXD1	M1	HPS_IOA_20, GPIO0_IO19, SPIM1_SS1_N, NAND_ADQ11, USB1_DATA3, EMAC0_RXD1
28 ENET_TXD2	AF9	HPS_IOA_21, GPIO0_IO20, SPIM1_CLK, SPIS0_CLK, UART0_CTS_N, I2C1_SDA, NAND_ADQ12, USB1_DATA4, EMAC0_TXD2
28 ENET_TXD3	W2	HPS_IOA_22, GPIO0_IO21, SPIM1_MOSI, SPIS0_MOSI, UART0_RTS_N, I2C1_SCL, NAND_ADQ13, USB1_DATA5, EMAC0_TXD3
28 ENET_RXD2	AB5	HPS_IOA_23, GPIO0_IO22, SPIM1_MISO, SPIS0_SS0_N, UART0_TX, I2C0_SDA, NAND_ADQ14, USB1_DATA6, EMAC0_RXD2
28 ENET_RXD3	U2	HPS_IOA_24, GPIO0_IO23, SPIM1_SS0_N, SPIS0_MISO, UART0_RX, I2C0_SCL, NAND_ADQ15, USB1_DATA7, EMAC0_RXD3
28 ENET_INTn	AC6	HPS_IOB_1, GPIO1_IO0, SPIM1_CLK, UART0_CTS_N, NAND_ADQ0, EMAC1_TX_CLK
	H1	HPS_IOB_2, GPIO1_IO1, SPIM1_MOSI, UART0_RTS_N, NAND_ADQ1, EMAC1_TX_CTL
29 UART_TX	AA6	HPS_IOB_3, GPIO1_IO2, SPIM1_MISO, UART0_TX, I2C0_SDA, NAND_WE_N, EMAC1_RX_CLK
29 UART_RX	F1	HPS_IOB_4, GPIO1_IO3, SPIM1_SS0_N, UART0_RX, I2C0_SCL, NAND_RE_N, EMAC1_RX_CTL
	AD7	HPS_IOB_5, GPIO1_IO4, SPIM1_SS1_N, SPIS1_CLK, UART1_CTS_N, NAND_WP_N, EMAC1_TXD0
	N2	HPS_IOB_6, GPIO1_IO5, SPIS1_MOSI, UART1_RTS_N, NAND_ADQ2, EMAC1_TXD1
40 HPS_I2C_SDA	AB7	HPS_IOB_7, GPIO1_IO6, SPIS1_SS0_N, UART1_TX, I2C1_SDA, NAND_ADQ3, EMAC1_RXD0
40 HPS_I2C_SCL	L2	HPS_IOB_8, GPIO1_IO7, SPIS1_MISO, UART1_RX, I2C1_SCL, NAND_CLE, EMAC1_RXD1
30 MICTOR_JTAG_TCK	AC8	HPS_IOB_9, GPIO1_IO8, JTAG_TCK, SPIS0_CLK, MDIO2_MDIO, I2C_EMAC2_SDA, NAND_ADQ4, EMAC1_TXD2
30 MICTOR_JTAG_TMS	J2	HPS_IOB_10, GPIO1_IO9, JTAG_TMS, SPIS0_MOSI, MDIO2_MDC, I2C_EMAC2_SCL, NAND_ADQ5, EMAC1_TXD3
30 MICTOR_JTAG_TDO	AA8	HPS_IOB_11, GPIO1_IO10, JTAG_TDO, SPIS0_SS0_N, MDIO0_MDIO, I2C_EMAC0_SDA, NAND_ADQ6, EMAC1_RXD2
30 MICTOR_JTAG_TDI	G2	HPS_IOB_12, GPIO1_IO11, JTAG_TDI, SPIS0_MISO, MDIO0_MDC, I2C_EMAC0_SCL, NAND_ADQ7, EMAC1_RXD3
30 SD_DATA0	AD9	HPS_IOB_13, GPIO1_IO12, I2C1_SDA, NAND_ALE, SDMMC_DATA0, EMAC2_TX_CLK
30 SD_CMD	V3	HPS_IOB_14, GPIO1_IO13, I2C1_SCL, NAND_RB, SDMMC_CMD, EMAC2_TX_CTL
30 SD_CLK	AB9	HPS_IOB_15, GPIO1_IO14, UART1_TX, NAND_CE_N, SDMMC_CCLK, EMAC2_RX_CLK
30 SD_DATA1	T3	HPS_IOB_16, GPIO1_IO15, UART1_RX, SDMMC_DATA1, EMAC2_RX_CTL
30 SD_DATA2	AC10	HPS_IOB_17, GPIO1_IO16, UART1_CTS_N, NAND_ADQ8, SDMMC_DATA2, EMAC2_TXD0
30 SD_DATA3	P3	HPS_IOB_18, GPIO1_IO17, SPIM0_SS1_N, UART1_RTS_N, NAND_ADQ9, SDMMC_DATA3, EMAC2_TXD1
38 HPS_OSC_CLK	AD11	HPS_IOB_19, GPIO1_IO18, SPIM0_MISO, MDIO1_MDIO, I2C_EMAC1_SDA, NAND_ADQ10, SDMMC_DATA4, EMAC2_RXD0
	M3	HPS_IOB_20, GPIO1_IO19, SPIM0_SS0_N, MDIO1_MDC, I2C_EMAC1_SCL, NAND_ADQ11, SDMMC_DATA5, EMAC2_RXD1
	AC12	HPS_IOB_21, GPIO1_IO20, SPIM0_CLK, SPIS1_CLK, I2C_EMAC2_SDA, NAND_ADQ12, SDMMC_DATA6, EMAC2_TXD2
	H3	HPS_IOB_22, GPIO1_IO21, SPIM0_MOSI, SPIS1_MOSI, I2C_EMAC2_SCL, NAND_ADQ13, SDMMC_DATA7, EMAC2_TXD3
28 ENET_MDIO	AD13	HPS_IOB_23, GPIO1_IO22, SPIM0_MISO, SPIS1_SS0_N, MDIO0_MDIO, I2C_EMAC0_SDA, NAND_ADQ14, EMAC2_RXD2
28 ENET_MDC	F3	HPS_IOB_24, GPIO1_IO23, SPIM0_SS0_N, SPIS1_MISO, MDIO0_MDC, I2C_EMAC0_SCL, NAND_ADQ15, EMAC2_RXD3
	AH19	DNU6
	AJ20	DNU7

HPS IO

AGFB014R24_2486A

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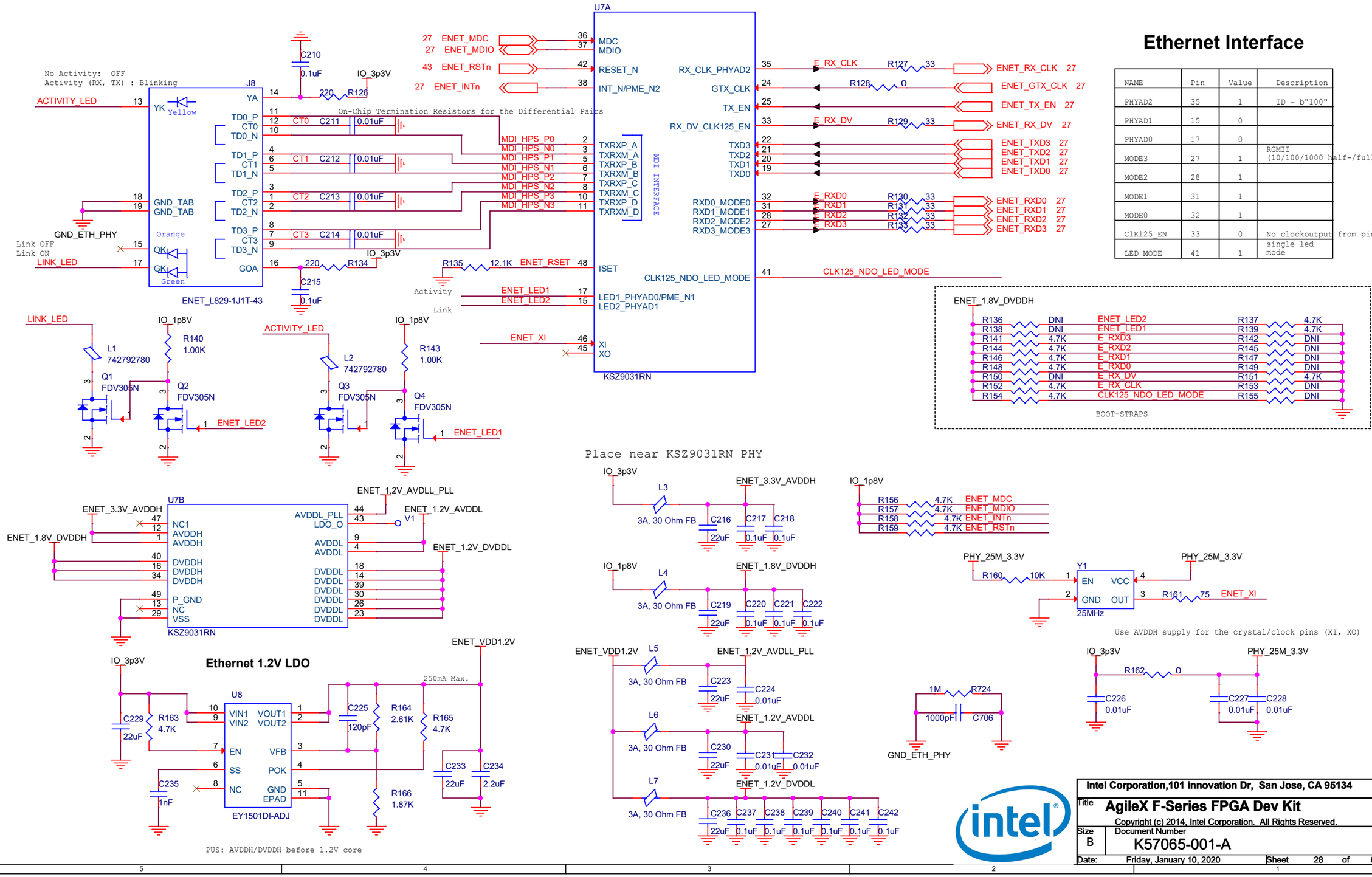
10/100/1000 Ethernet - HPS

Ethernet Interface

NAME	Pin	Value	Description
PHYAD2	35	1	ID = b"100"
PHYAD1	15	0	
PHYAD0	17	0	
MODE3	27	1	RGMII (10/100/1000 half-/full-duplex)
MODE2	28	1	
MODE1	31	1	
MODE0	32	1	
C1K125_EN	33	0	No clockoutput from pin41
LED_MODE	41	1	single led mode



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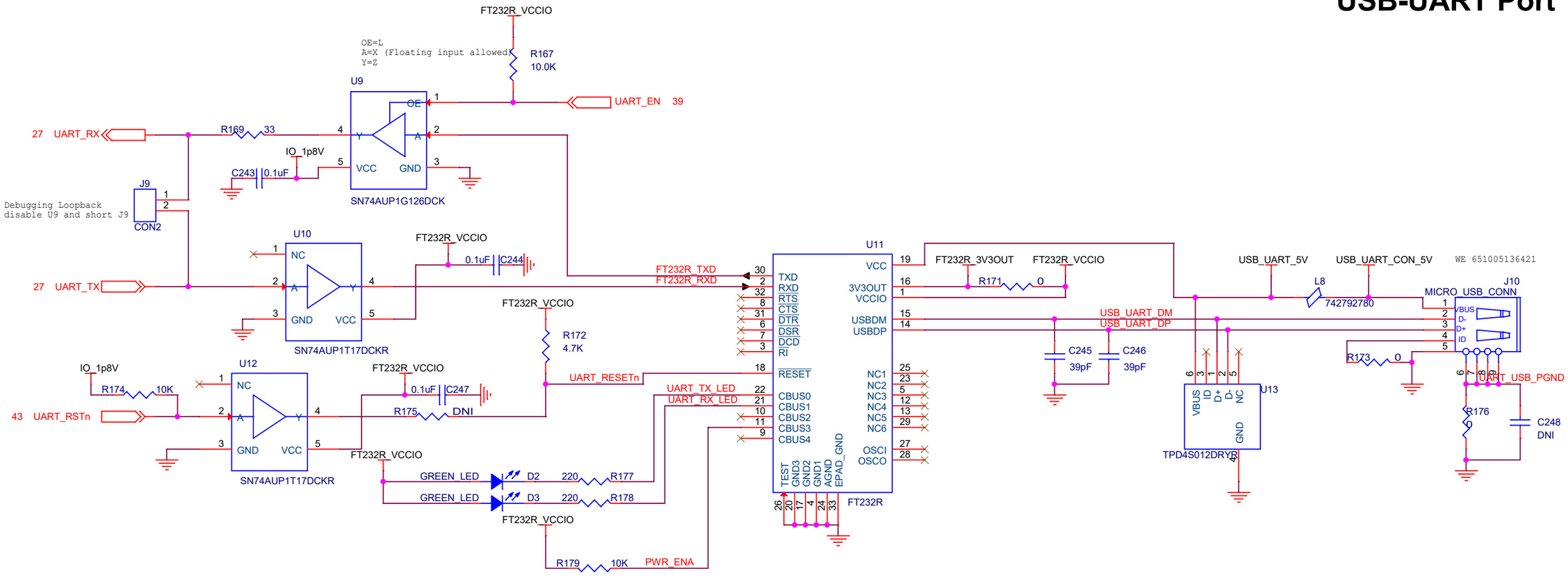
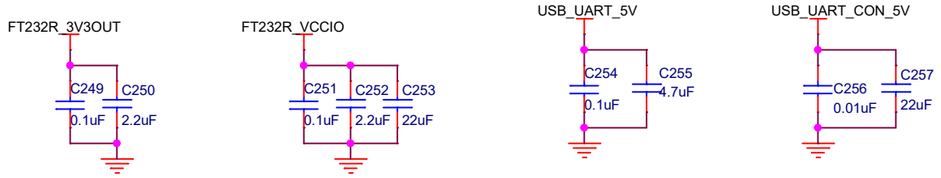
USB-UART Port





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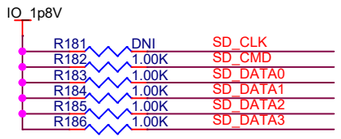
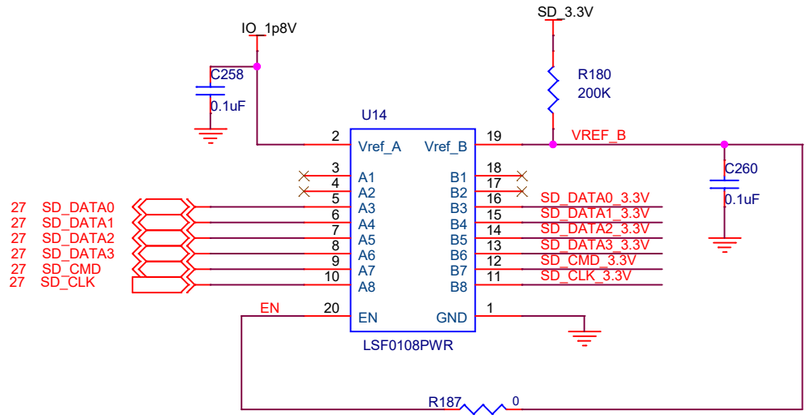
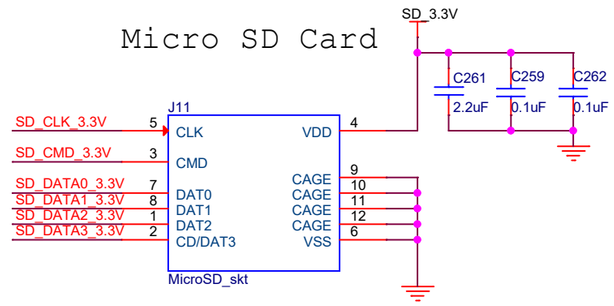
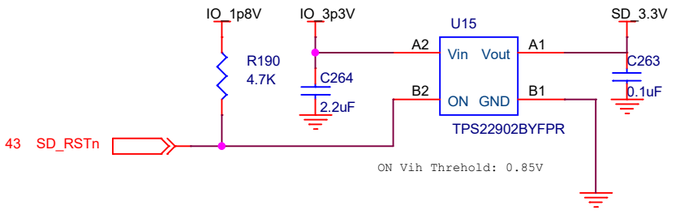
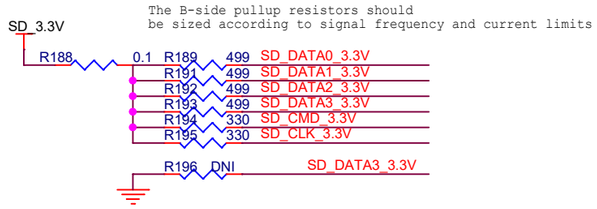
MicroSD Card

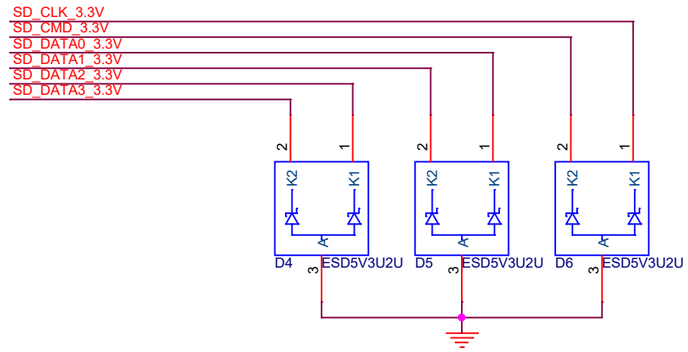








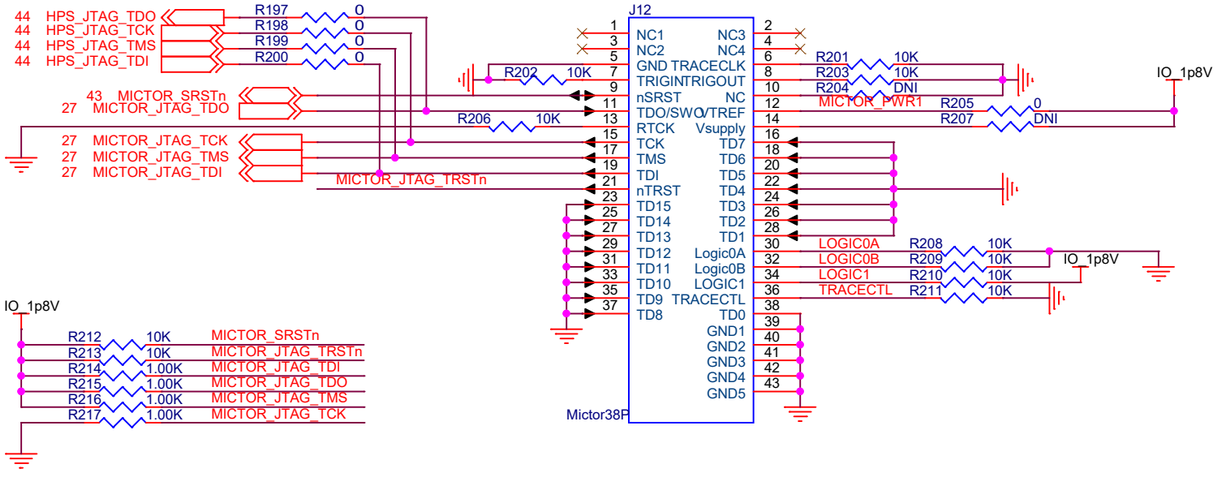




IEC61000-4-2 (ESD): ± 20 kV (air / contact)

IEC61000-4-4 (EFT): ±50 A (5/50 ns)

IEC61000-4-5 (surge): ±3 A (8/20 µs)



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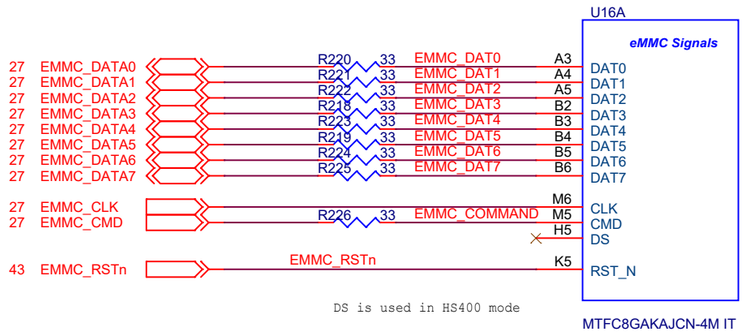
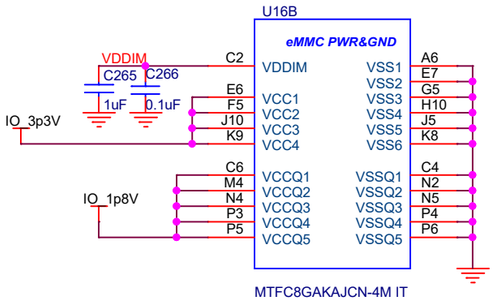
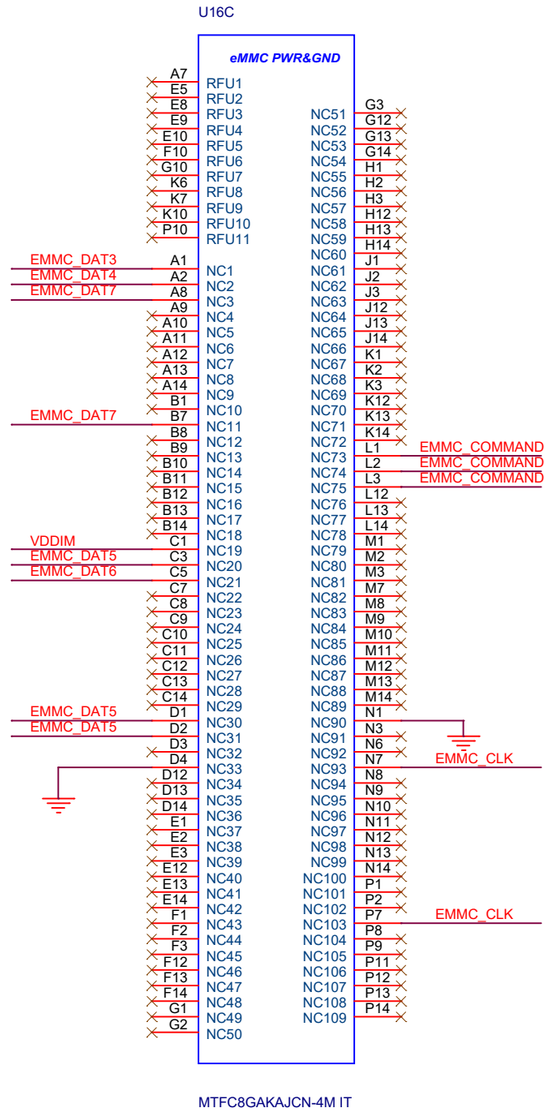
eMMC







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Bank NC/DNU

U2M

	CB61	DNU8
	AD45	DNU9
	BW18	DNU10
	AD19	DNU11
	BY61	DNU12
	AE44	DNU13
	BY19	DNU14
	AF19	DNU15
47 FPGA_TEMP1n	AH43	TEMPDIODE0CN
47 FPGA_TEMP1p	AF43	TEMPDIODE0CP
	AJ46	DNU20
	BN50	DNU21
	BK49	DNU22
	BM49	DNU23
	BL48	DNU24
	BL44	DNU25
	BU44	DNU26
	BT49	DNU27
	BV49	DNU28
	BV51	DNU29
	BU50	DNU30
	BT51	DNU31
	BL46	DNU32
	BR50	DNU33
	BN46	DNU34
	BV53	DNU35
	BP47	DNU36
	BN44	DNU37
	BU52	DNU38
	BV55	DNU39
	BT53	DNU40
	BM47	DNU41
	BV45	DNU42
	BM45	DNU43
	BT45	DNU44
	BU46	DNU45
	BU48	DNU46
	BV47	DNU47
	BT47	DNU48
	BL50	DNU49
	BN48	DNU50 STRAP_NODE_ID0
	BV57	DNU51 STRAP_NODE_ID1
	BU54	DNU52 STRAP_UPI_MODE

DNU

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U2N

	W62	NC1
	V61	NC2
	U62	NC3
	T61	NC4
	P61	NC5
	N62	NC6
	M61	NC7
	L62	NC8
	J62	NC9
	G62	NC10
	CM61	NC11
	CM1	NC12
	CK61	NC13
	CK1	NC14
	CH1	NC15
	CF1	NC16
	CC8	NC17
	CC50	NC18
	CC22	NC19
	CC20	NC20
	CC2	NC21
	CC18	NC22
	CC16	NC23
	CC14	NC24
	CB7	NC25
	CB51	NC26
	CB21	NC27
	CB19	NC28
	CB17	NC29
	CB15	NC30
	CB13	NC31
	CB1	NC32
	CA56	NC33
	CA50	NC34
	CA18	NC35
	CA16	NC36
	CA14	NC37
	BY57	NC38
	BY21	NC39
	BY17	NC40
	BY15	NC41
	BV19	NC42
	BV17	NC43
	BV15	NC44
	BV13	NC45
	BU60	NC46
	BU16	NC47
	BU14	NC48
	BT59	NC49
	AD43	NC50
	AD17	NC51
	AD15	NC52
	AC62	NC53
	AC56	NC54
	AC46	NC55
	AC44	NC56
	AC42	NC57
	AC18	NC58
	AC16	NC59
	AC14	NC60
	AB61	NC61
	AB55	NC62
	AB47	NC63
	AB45	NC64
	AB43	NC65
	AB19	NC66
	AB17	NC67
	AB15	NC68
	AB13	NC69
	AB11	NC70
	AA62	NC71
	AA56	NC72
	AA52	NC73
	AA48	NC74
	AA46	NC75
	AA44	NC76
	AA42	NC77
	AA20	NC78
	AA18	NC79
	AA16	NC80
	AA14	NC81
	AA12	NC82
	AA10	NC83

NC

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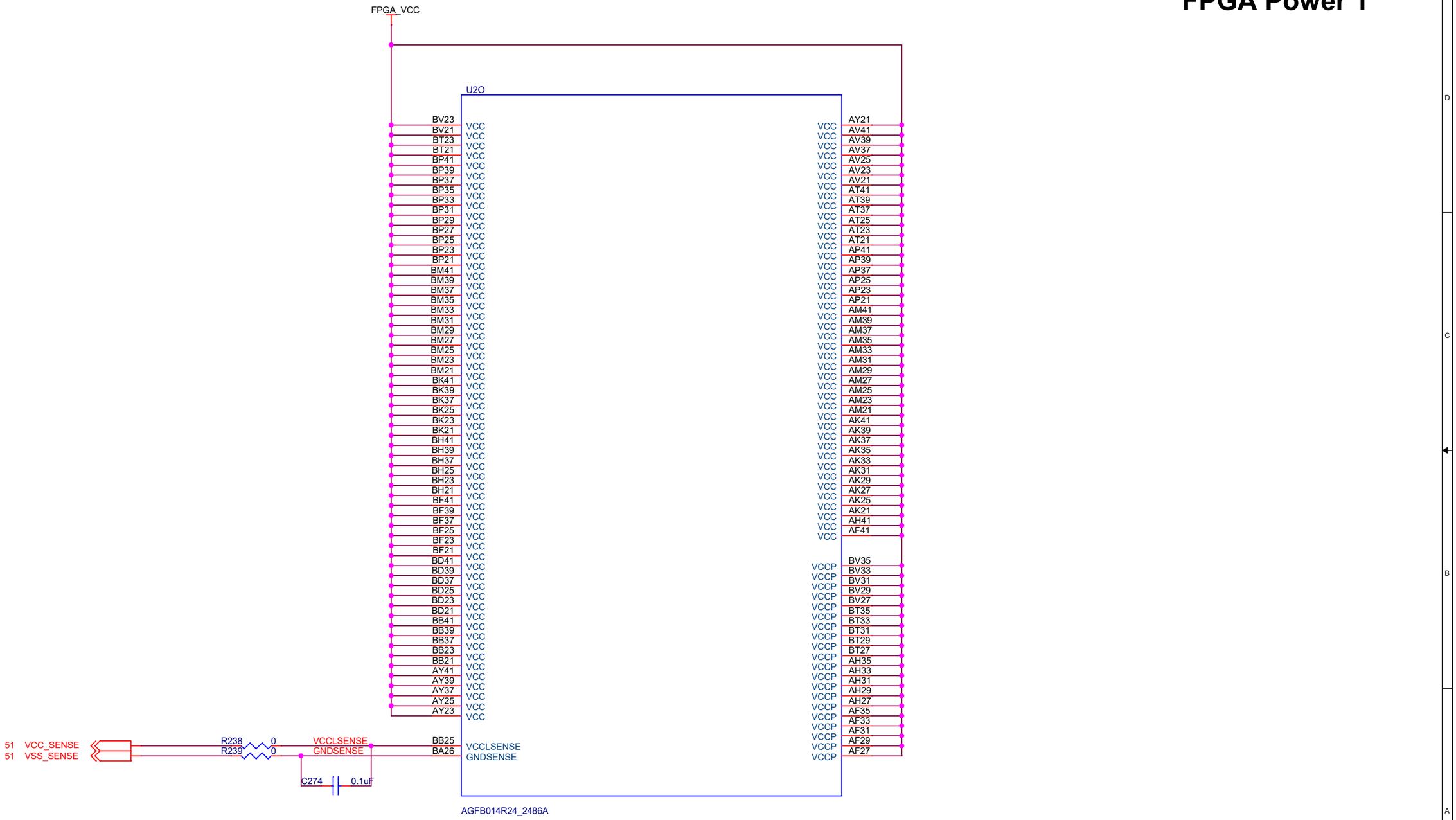
FPGA Power 1



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FPGA Power 2

U2P

0p9V_VCCL_HPS
AK23 VCCL_HPS
AH25 VCCL_HPS
AH23 VCCL_HPS
AF25 VCCL_HPS
AF23 VCCL_HPS
VCCPLLDIG_HPS
FB10 5A, 10mOhm 80ohm @ 100Mhz
AD23 VCCPLLDIG_HPS
AB23 VCCPLLDIG_HPS

0p8V_VCCL_SDM
BV41 VCCL_SDM
BV39 VCCL_SDM
BT41 VCCL_SDM
BT39 VCCL_SDM
VCCPLLDIG_SDM
FB9 5A, 10mOhm 80ohm @ 100Mhz
CB45 VCCPLLDIG_SDM
BY45 VCCPLLDIG_SDM

0p9V_VCCH
BT19 VCC_HSSI_GXER1
BR20 VCC_HSSI_GXER1
BP19 VCC_HSSI_GXER1
BK19 VCC_HSSI_GXER1
BH19 VCC_HSSI_GXER1
BD19 VCC_HSSI_GXER1
BB19 VCC_HSSI_GXER1
AY19 VCC_HSSI_GXER1
AW20 VCC_HSSI_GXER1
AU20 VCC_HSSI_GXER1

1p1V_VCCH_GXER1
BP17 VCCH_GXER1
BM17 VCCH_GXER1
BK17 VCCH_GXER1
BB17 VCCH_GXER1
AY17 VCCH_GXER1

0p9V_VCCRT_GXER1
BP15 VCCRT_GXER1
BN14 VCCRT_GXER1
BM15 VCCRT_GXER1
BL14 VCCRT_GXER1
BK15 VCCRT_GXER1
BJ14 VCCRT_GXER1
BG14 VCCRT_GXER1
BE14 VCCRT_GXER1
BC14 VCCRT_GXER1
BB15 VCCRT_GXER1
BA14 VCCRT_GXER1
AY15 VCCRT_GXER1
AW14 VCCRT_GXER1
AV15 VCCRT_GXER1

0p9V_VCCH
FB16 5A, 10mOhm 80ohm @ 100Mhz
VCCRTPLL_GXER1
BG16 VCCRTPLL_GXER1
BE16 VCCRTPLL_GXER1
C1450 22uF
C1448 1uF
C1449 1uF

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0p9V_VCCH
VCCH BF43
VCCH BD43
VCCH AY43
VCCH AV43
VCCH BL20
VCCH BJ20
VCCH BE20
VCCH BC20
VCCH_SDM BT43

0p9V_VCCH
VCC_HSSI_GXPL1 BH43
VCC_HSSI_GXPL1 BE44
VCC_HSSI_GXPL1 BC44
VCC_HSSI_GXPL1 BA44
VCC_HSSI_GXPL1 AW44
VCC_HSSI_GXPL1 AU44
VCC_HSSI_GXPL1 AR44

VCCH_GXPL1
FB11 80ohm @ 100Mhz 5A, 10mOhm
1p8V
VCCH_GXPL1 BE46
VCCH_GXPL1 BC46
VCCH_GXPL1 AY47
VCCH_GXPL1 AW46
VCCH_GXPL1 AV47
VCCH_GXPL1 AU46
VCCH_GXPL1 AN46

0p9V_VCCRT_GXPL1
VCCRT_GXPL1 BD49
VCCRT_GXPL1 BC48
VCCRT_GXPL1 BB49
VCCRT_GXPL1 AY49
VCCRT_GXPL1 AV49
VCCRT_GXPL1 AT49
VCCRT_GXPL1 AR48
VCCRT_GXPL1 AP49
VCCRT_GXPL1 AN48
VCCRT_GXPL1 AM49

VCCFUSE_GXP
FB12 DNI
1p8V
FB13 220ohm
0p9V_VCCH
VCCFUSE_GXP BR44

VCCCLK_GXPL1
VCCCLK_GXPL1 BH47
VCCCLK_GXPL1 BH45
VCCCLK_GXER1 AR18
2p5V
C275 1uF
C276 1uF
C277 1uF

U2X

1p8V
BR36 VCCPT
BR34 VCCPT
BR32 VCCPT
BR30 VCCPT
AJ36 VCCPT
AJ34 VCCPT
AJ32 VCCPT
AJ30 VCCPT

1p2V_VCCR
BV37 VCCRCORE
BT37 VCCRCORE
BR28 VCCRCORE
BR26 VCCRCORE
BR24 VCCRCORE
AJ28 VCCRCORE
AJ26 VCCRCORE
AJ24 VCCRCORE
AH37 VCCRCORE
AF37 VCCRCORE

1p8V_FLTR
CC34 VCCA_PLL
CC32 VCCA_PLL
CC30 VCCA_PLL
CC28 VCCA_PLL
AA34 VCCA_PLL
AA32 VCCA_PLL
AA30 VCCA_PLL
AA28 VCCA_PLL
CB43 VCCADC
BY43 VCCADC

1p8V
CC48 VCCBAT
CA48 VCCBAT

IO_1p8V
AH21 VCCIO_HPS
AF21 VCCIO_HPS
AD21 VCCIO_HPS
CB41 VCCIO_SDM
BY41 VCCIO_SDM

1p8V
FB14 220ohm
VCCPLL_HPS
AC22 VCCPLL_HPS
AA22 VCCPLL_HPS

VCCPLL_SDM
FB15 220ohm
CB47 VCCPLL_SDM
BY47 VCCPLL_SDM

VCCFUSEWR_SDM
CB49 VCCFUSEWR_SDM
BY49 VCCFUSEWR_SDM

1p2V_DDR4_CH23
CB39 VCCIO_PIO_2A
CB37 VCCIO_PIO_2A
BY39 VCCIO_PIO_2A
BY37 VCCIO_PIO_2A
CB35 VCCIO_PIO_2B
CB33 VCCIO_PIO_2B
BY35 VCCIO_PIO_2B
BY33 VCCIO_PIO_2B
CB31 VCCIO_PIO_2C
CB29 VCCIO_PIO_2C
BY31 VCCIO_PIO_2C
BY29 VCCIO_PIO_2C
CB27 VCCIO_PIO_2D
CB25 VCCIO_PIO_2D
BY27 VCCIO_PIO_2D
BY25 VCCIO_PIO_2D

1p2V_DDR4_CH01
AD39 VCCIO_PIO_3A
AD37 VCCIO_PIO_3A
AB39 VCCIO_PIO_3A
AB37 VCCIO_PIO_3A
AD35 VCCIO_PIO_3B
AD33 VCCIO_PIO_3B
AB35 VCCIO_PIO_3B
AB33 VCCIO_PIO_3B
AD31 VCCIO_PIO_3C
AD29 VCCIO_PIO_3C
AB31 VCCIO_PIO_3C
AB29 VCCIO_PIO_3C
AD27 VCCIO_PIO_3D
AD25 VCCIO_PIO_3D
AB27 VCCIO_PIO_3D
AB25 VCCIO_PIO_3D
BV43 VCCN_PIO_SDM

0p6V_VREF_DDR4_CH23
CC38 VREFB2AN0
CC36 VREFB2BN0
CC26 VREFB2CN0
CC24 VREFB2DN0

0p6V_VREF_DDR4_CH01
AA38 VREFB3AN0
AA36 VREFB3BN0
AA26 VREFB3CN0
AA24 VREFB3DN0

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VCCPLLDIG_HPS
C278 1uF
C279 1uF

VCCPLLDIG_SDM
C280 1uF
C281 1uF

VCCRTPLL_GXER1
C282 1uF
C283 1uF

0p6V_VREF_DDR4_CH01
C284 0.1uF
C285 0.1uF
C286 0.1uF
C287 0.1uF

1p8V
FB17 80ohm @ 100Mhz 5A, 10mOhm
1p8V_FLTR
FB18 80ohm @ 100Mhz 5A, 10mOhm

1p8V
FB38 80ohm @ 100Mhz 5A, 10mOhm
VCCCLK_GXPL1

VCCPLL_SDM
C289 1uF
C290 1uF

VCCPLL_HPS
C291 1uF
C292 1uF

VCCFUSE_GXP
C1201 1uF
C1202 4.7uF

0p6V_VREF_DDR4_CH23
C294 0.1uF
C295 0.1uF
C296 0.1uF
C297 0.1uF

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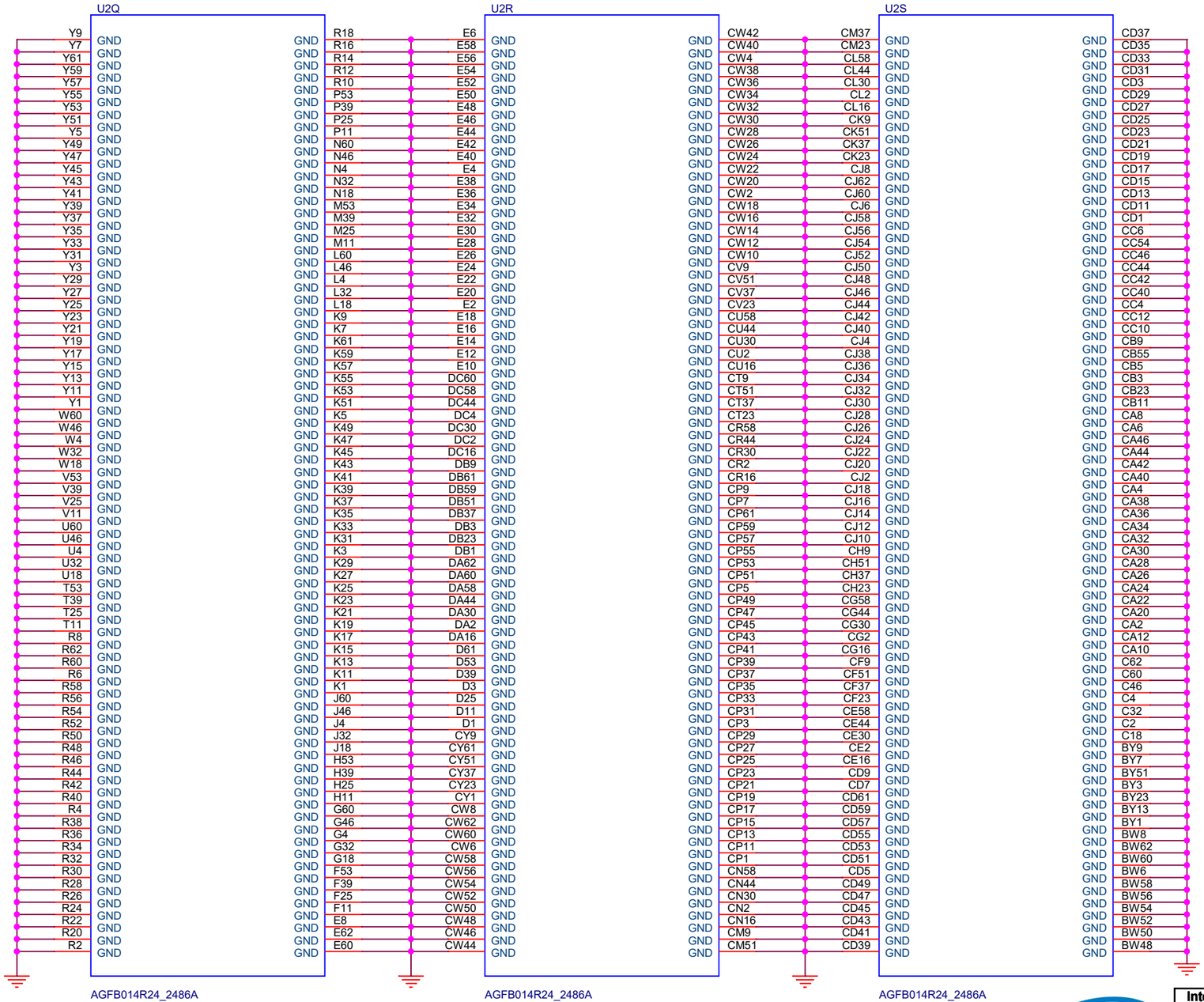
FPGA GND 1



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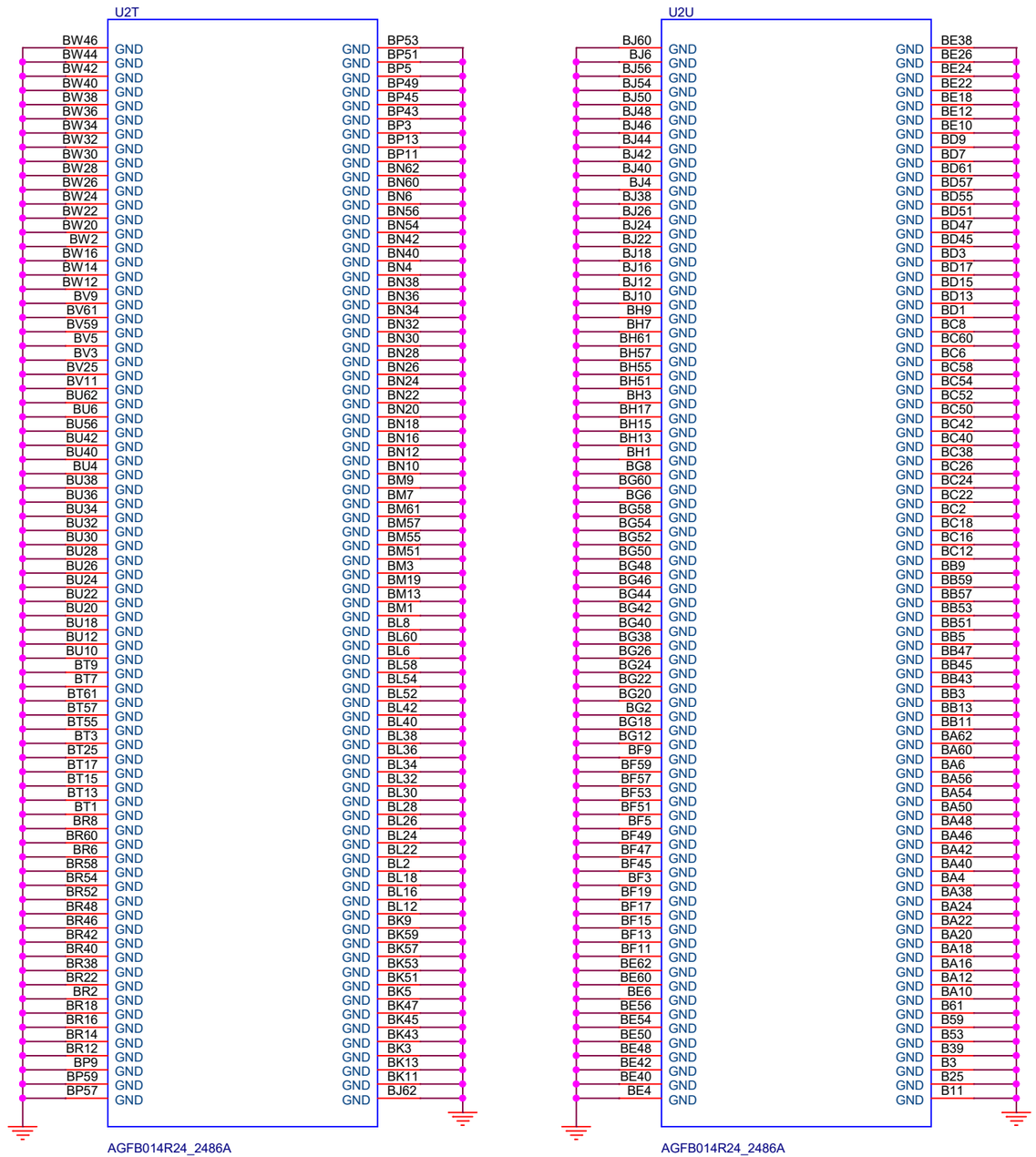
FPGA GND 2



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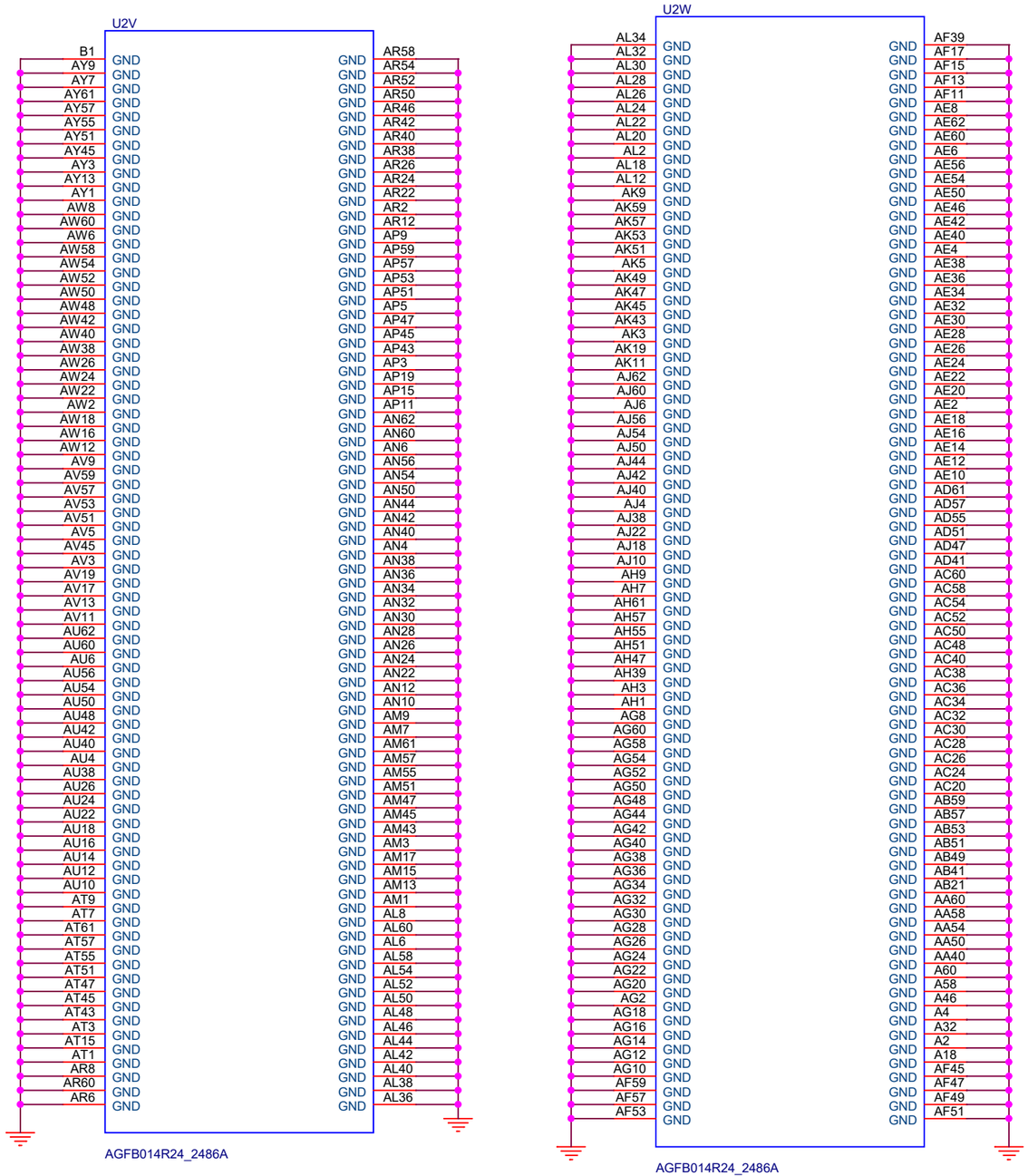
FPGA GND 3



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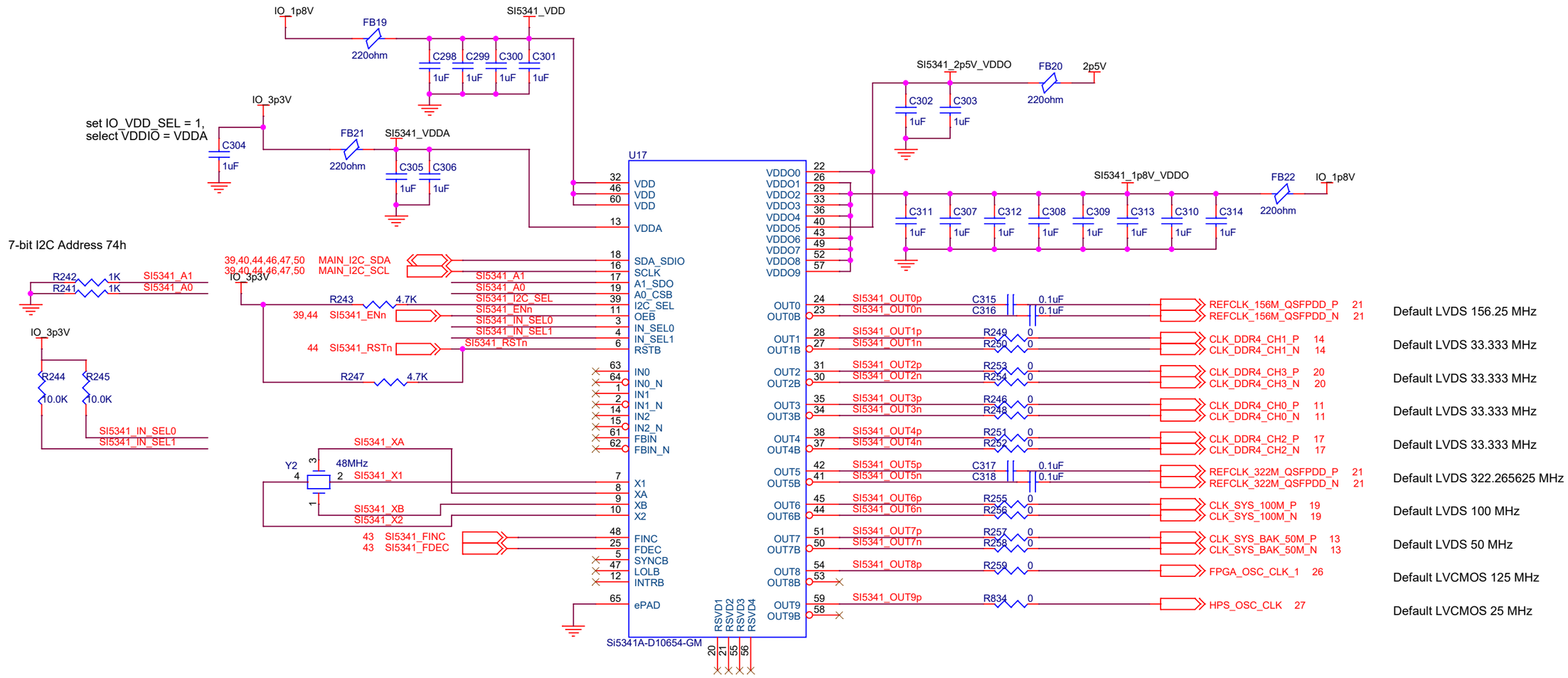
Clock 1



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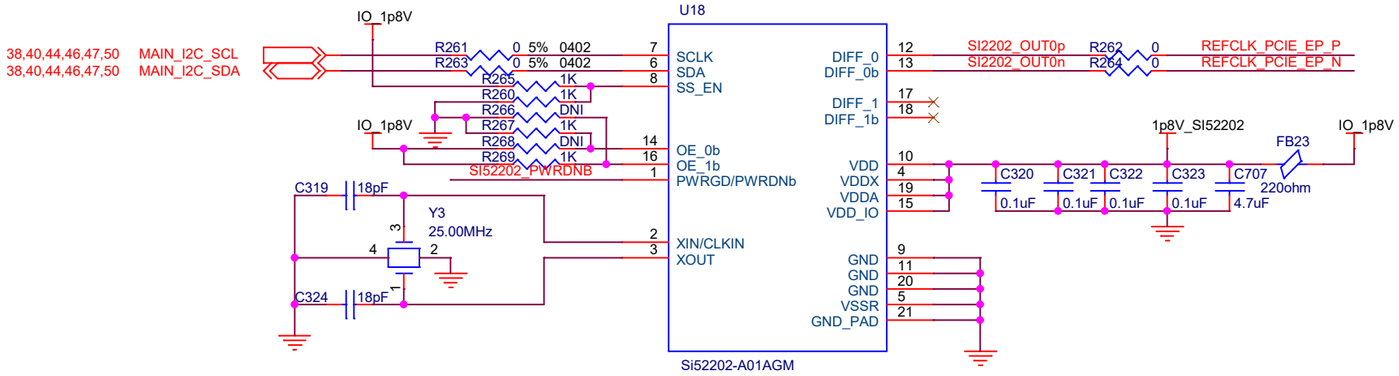
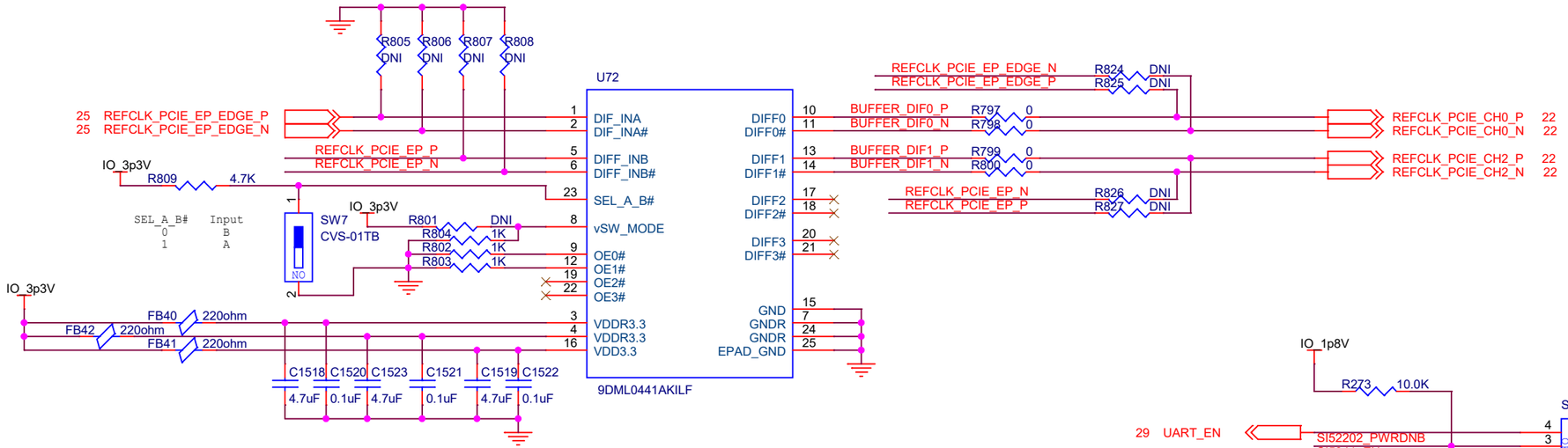
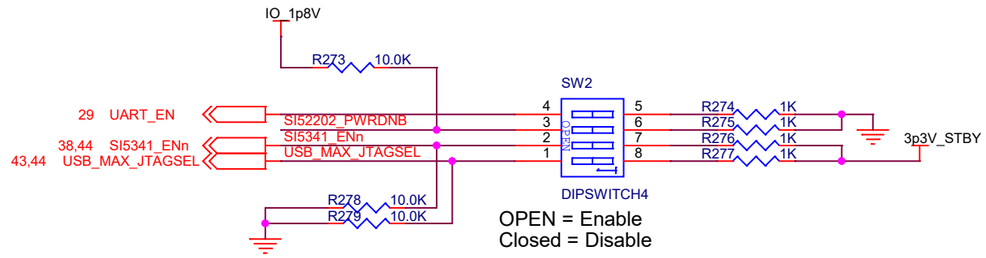
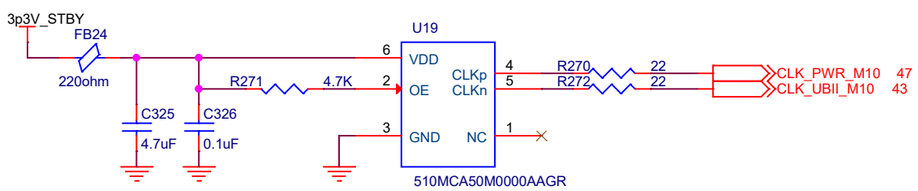
Clock 2









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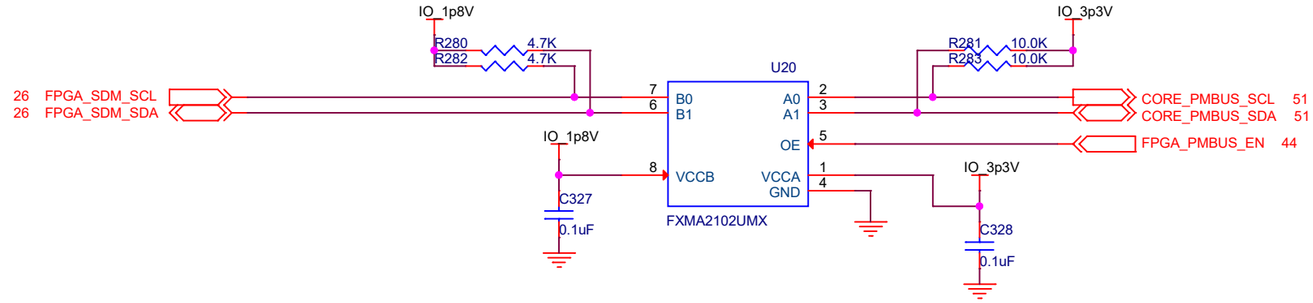
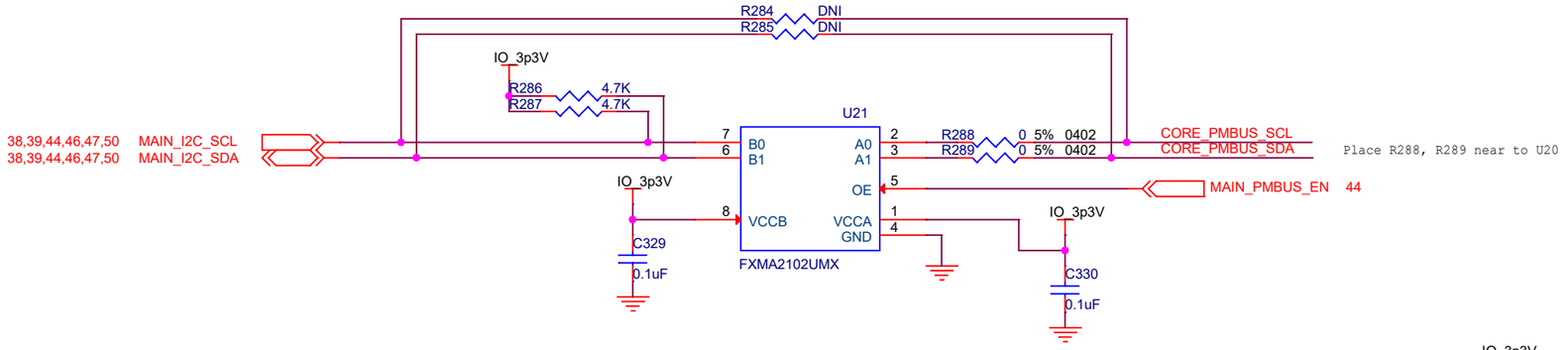
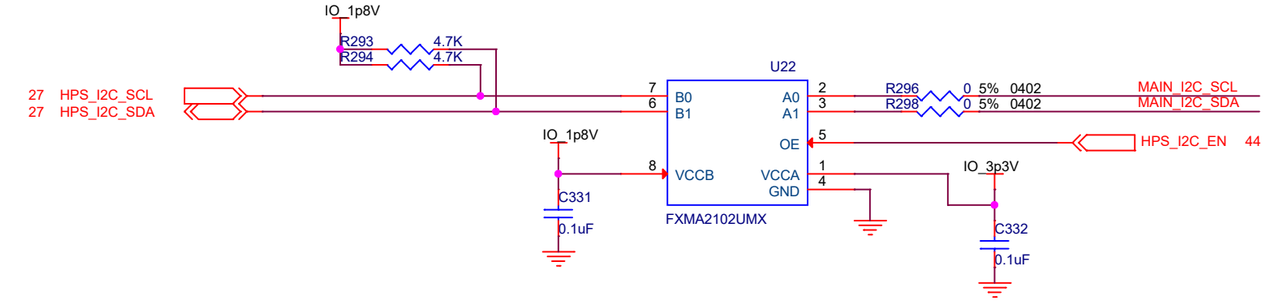
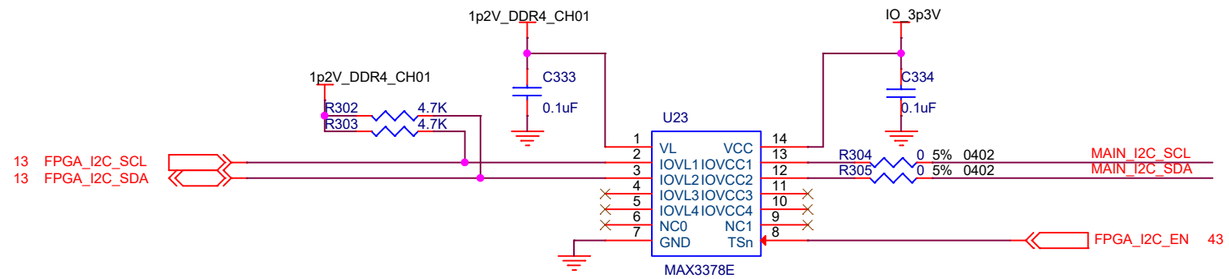
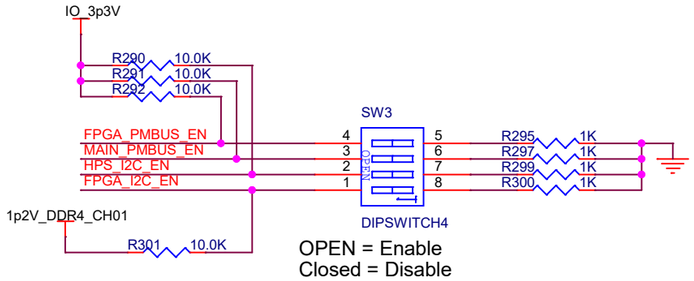
I2C And PMBUS











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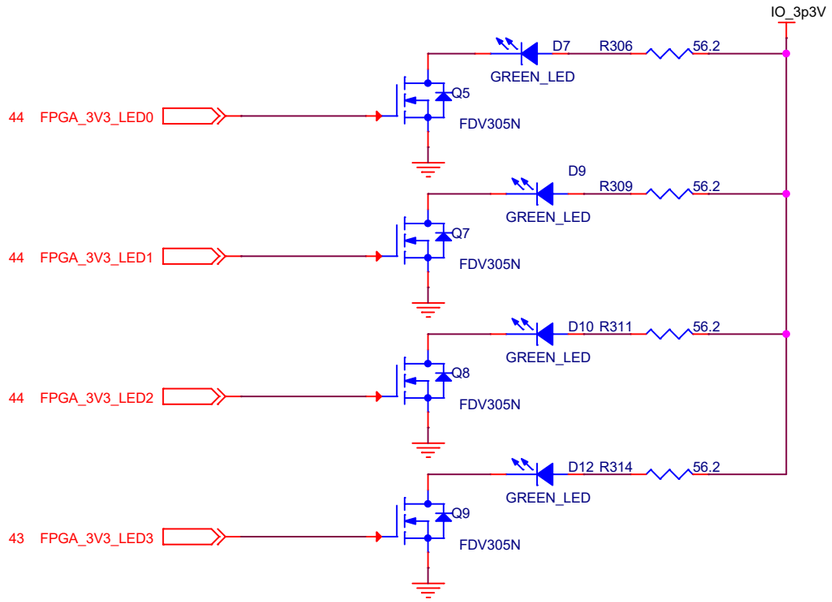
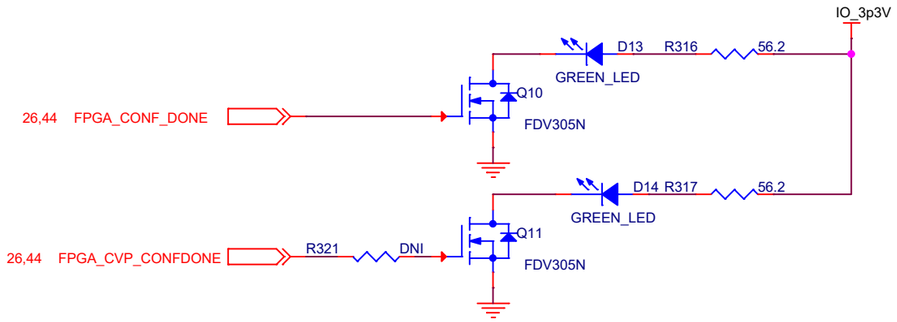
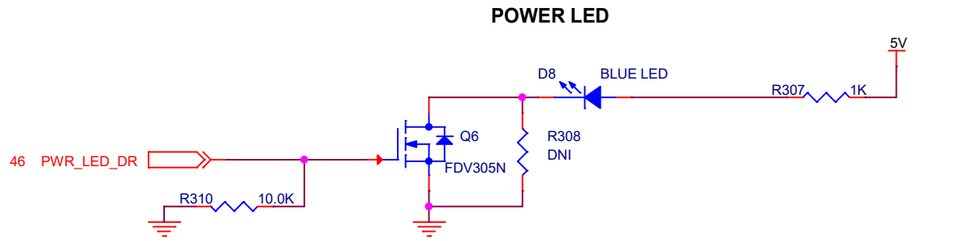
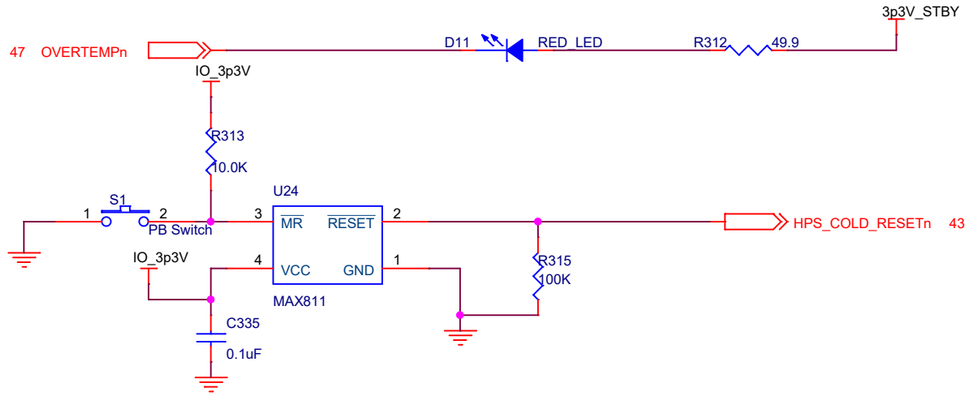
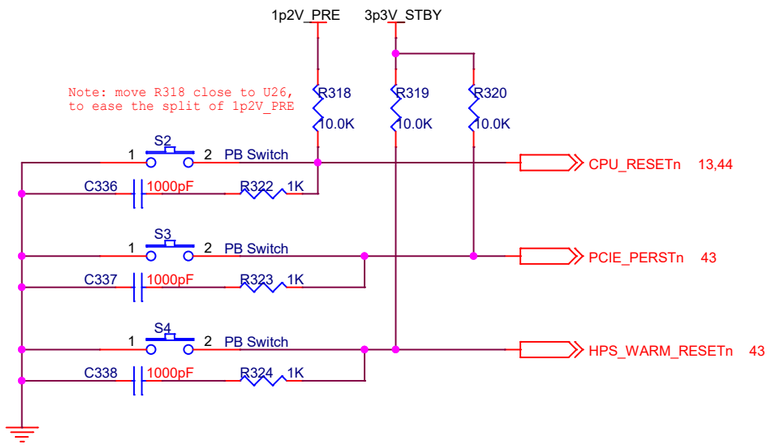
LEDs And PushButtons



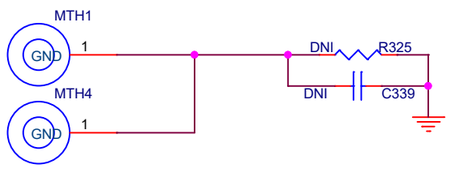




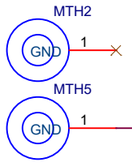




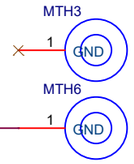
Large Mounting holes on the rear of board



Large Mounting holes on the front of board



Small Mounting holes on the front of board



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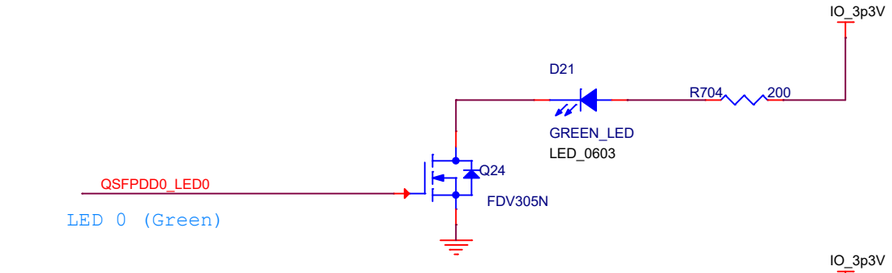
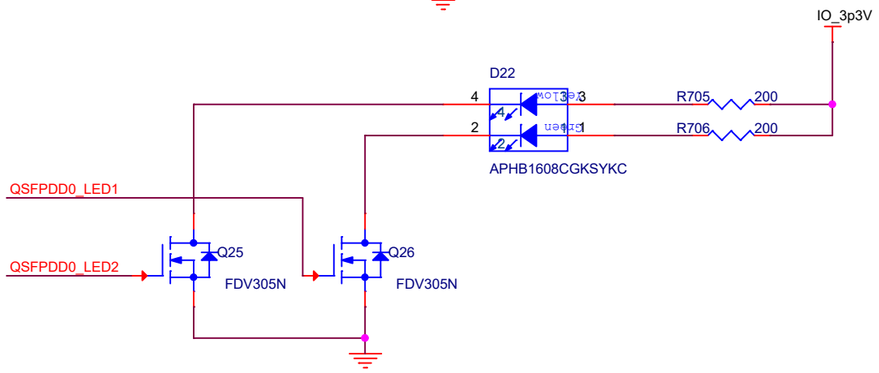
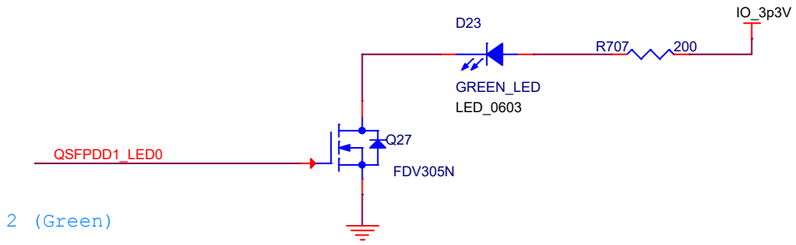
QSFPDD LED



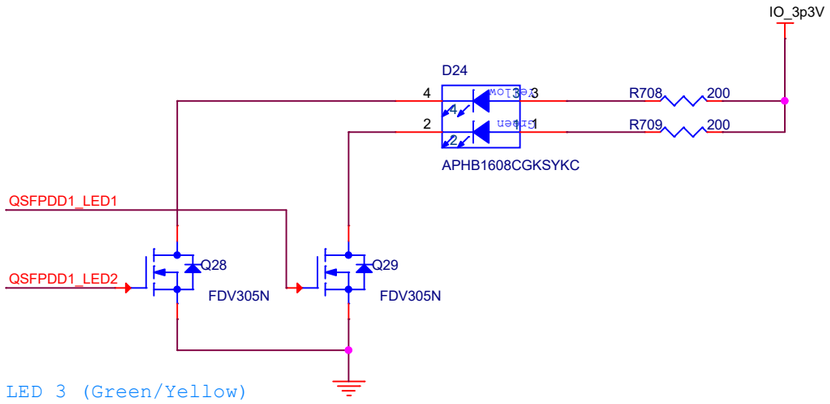
LED 0 (Green)



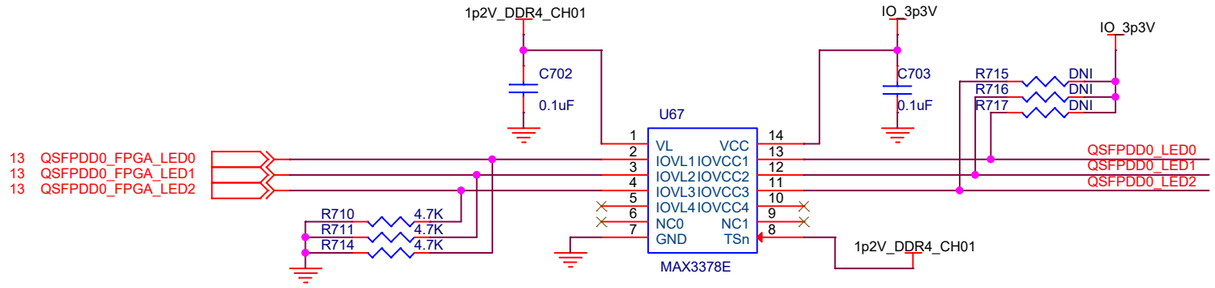
LED 1 (Green/Yellow)

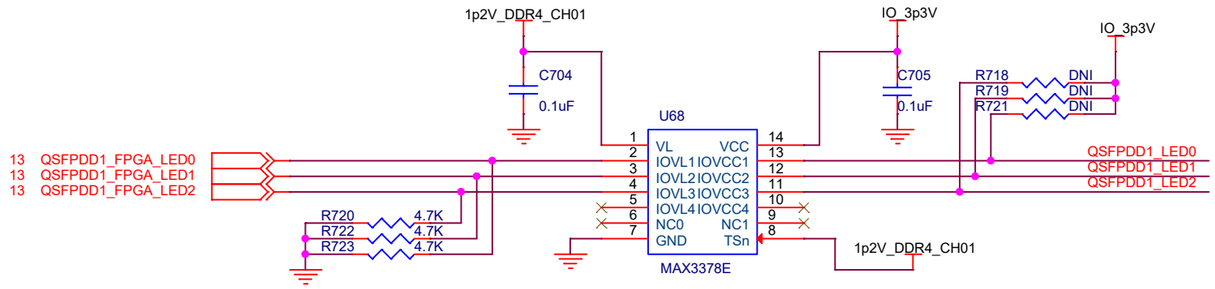


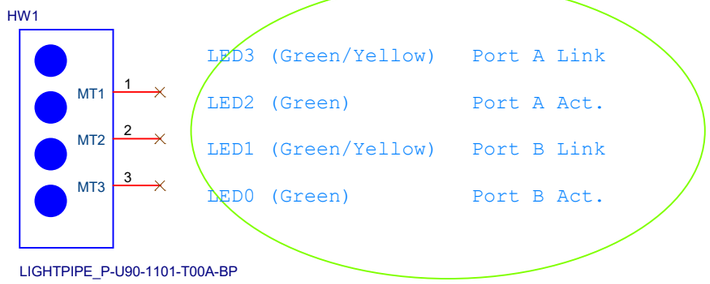
LED 2 (Green)



LED 3 (Green/Yellow)







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UBII-MAX10 1

Bank 3: 3.3V IO

J13
MICRO_USB_CONN
VBUS_5V
FX2_D_N
FX2_D_P
R327 DNI

R329 0
4.7nF C341
U27 TPD2EUSB30

FX2_SDA R326 0 MAX_SDA
3p3V_USBPHY
C340 0.1uF
U25 MAX811
100K R328 FX2_RESETn
S5 PB Switch

3p3V_USBPHY
U28 CY7C68013A_QFN
FX2_RESETn
FX2_SCL R330 2.00K
FX2_SDA R331 2.00K
FX2_WAKEUP
FX2_FLAGA
FX2_FLAGB
FX2_FLAGC
FX2_SLRDn
FX2_SLWRn
IFCLK = 48MHz
USB_T_CLK R332 22
24M_XTALIN
24M_XTALOUT
Y4 24.00MHz
C342 12pF
C343 12pF
FX2_PA0 FX2_PA1 FX2_PA2 FX2_PA3 FX2_PA4 FX2_PA5 FX2_PA6 FX2_PA7
FX2_PB0 FX2_PB1 FX2_PB2 FX2_PB3 FX2_PB4 FX2_PB5 FX2_PB6 FX2_PB7
FX2_PD0 FX2_PD1 FX2_PD2 FX2_PD3 FX2_PD4 FX2_PD5 FX2_PD6 FX2_PD7

U26D
FX2_FLAGB FX2_PA1 FX2_PA4 FX2_PA2 FX2_PA3 FX2_PA6 FX2_PA5 FX2_PB5 FX2_PB3 FX2_PB2 FX2_PD5 FX2_PD4 FX2_PD7 FX2_PD6 FX2_PA0 FX2_PB6 FX2_PA7 FX2_PB0
38 SI5341_FINC
FX2_PB4 FX2_SLWRn FX2_SLRDn FX2_PB1 FX2_PB7 FX2_FLAGC FX2_FLAGA FX2_SCL
41 PCIE_PERSTn
MAX_SDA
IO_3_L5/DIFFIO_TX_RX_B1N
IO_3_M4/DIFFIO_RX_B2N
IO_3_L4/DIFFIO_TX_RX_B1P
IO_3_M5/DIFFIO_RX_B2P
IO_3_K5/DIFFIO_TX_RX_B3N
IO_3_N4/DIFFIO_RX_B4N
IO_3_J5/DIFFIO_TX_RX_B3P
IO_3_N5/DIFFIO_RX_B4P
IO_3_N6/DIFFIO_TX_RX_B5N
IO_3_N7/DIFFIO_RX_B6N
IO_3_M7/DIFFIO_TX_RX_B5P
IO_3_N8/DIFFIO_RX_B6P
IO_3_J6/DIFFIO_TX_RX_B7N
IO_3_M8/DIFFIO_RX_B8N
IO_3_K6/DIFFIO_TX_RX_B7P
IO_3_M9/DIFFIO_RX_B8P
IO_3_J7/DIFFIO_TX_RX_B9N
IO_3_K7/DIFFIO_TX_RX_B9P
IO_3_N12
IO_3_M13/DIFFIO_TX_RX_B10N
IO_3_N10/DIFFIO_RX_B11N
IO_3_M12/DIFFIO_TX_RX_B10P
IO_3_N9/DIFFIO_RX_B11P
IO_3_M11/DIFFIO_TX_RX_B12N
IO_3_L11/DIFFIO_TX_RX_B12P
IO_3_J8/DIFFIO_TX_RX_B14N
IO_3_K8/DIFFIO_TX_RX_B14P
IO_3_M10/DIFFIO_TX_RX_B16N
IO_3_L10/DIFFIO_TX_RX_B16P
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U26H
USB_T_CLK
CLK_UBII_M10 39
USB_DISABLEn
FX2_RESETn
29 UART_RSTn
28 ENET_RSTn
30 SD_RSTn
31 EMMC_RSTn
30 MICTOR_SRSTn
41 FPGA_3V3_LED3
46,50,53,58 EM_PMBUS_ALERTn
46,51 LT_PMBUS_ALERTn
40 FPGA_I2C_EN
PCIE_EP_PERSTn 47
IO_2_G5/CLK0N/DIFFIO_RX_L18N
IO_2_H6/CLK0P/DIFFIO_RX_L18P
IO_2_H5/CLK1N/DIFFIO_RX_L20N
IO_2_H4/CLK1P/DIFFIO_RX_L20P
IO_2_N2/DPCLK0/DIFFIO_RX_L22N
IO_2_N3/DPCLK1/DIFFIO_RX_L22P
IO_6_G9/CLK2P/DIFFIO_RX_R14P
IO_6_G10/CLK2N/DIFFIO_RX_R14N
IO_6_F13/CLK3P/DIFFIO_RX_R16P
IO_6_E13/CLK3N/DIFFIO_RX_R16N
IO_6_F9/DPCLK3/DIFFIO_RX_R26P
IO_6_F10/DPCLK2/DIFFIO_RX_R26N
IO_1B_H1/VREFB1N0
IO_2_L1/VREFB2N0
IO_3_N11/VREFB3N0
IO_5_K13/VREFB5N0
IO_6_D13/VREFB6N0
IO_8_B7/VREFB8N0
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3p3V_STBY
R333 DNI
R334 10.0K

U26I
USB_MAX_TMS USB_MAX_TCK USB_MAX_TDI USB_MAX_TDO
41 HPS_COLD_RESETn
38 SI5341_FDEC
41 HPS_WARM_RESETn
R335 10.0K
R336 10.0K
R337 10.0K
R338 10.0K
3p3V_STBY
IO_1B_E5/JTAGEN/DIFFIO_RX_L9P
IO_1B_G1/TMS/DIFFIO_RX_L11N
IO_1B_G2/TCK/DIFFIO_RX_L11P
IO_1B_F5/TDI/DIFFIO_RX_L12N
IO_1B_F6/TDO/DIFFIO_RX_L12P
IO_8_B9/DEV_CLRN/DIFFIO_RX_T16N
IO_8_D8/DEV_OE/DIFFIO_RX_T18P
IO_8_D7/BOOT_SEL
IO_8_D6/CRC_ERROR/DIFFIO_RX_T22N
IO_8_C4/NSTATUS/DIFFIO_RX_T24P
IO_8_C5/CONF_DONE/DIFFIO_RX_T24N
INPUT_ONLY_8_E7/NCONFIG
MAX10 10M04SCU169

3p3V_USBPHY
R339 DNI
VBUS_5V R340 10.0K FX2_WAKEUP
R344 20.0K
C345 0.1uF

3p3V_STBY
R341 R342 R343 1K
J14 70247-1051
44 EXT_JTAG_TCK
44 EXT_JTAG_TDO
44 EXT_JTAG_TMS
44 EXT_JTAG_TDI
R346 0 USB_DISABLEn
R345 1K
R347 1K
External JTAG Header

3p3V_STBY
C344 0402 0.1uF 25V X6S
U29 TS3A5018RSVR UQFN-16
EXT_JTAG_TCK EXT_JTAG_TMS EXT_JTAG_TDI EXT_JTAG_TDO
(TCK) (TMS) (TDI) (TDO)
FX2_PD0 FX2_PD1 FX2_PD2 FX2_PD3
39,44 USB_MAX_JTAGSEL
USB_MAX_TCK USB_MAX_TMS USB_MAX_TDI USB_MAX_TDO
IN = "0" NC <--> COM
IN = "1" NO <--> COM

USB_MAX_JTAG = "1", Debug mode.
EXT_UBII is disabled on UBII MAX10.

3p3V_STBY
FB25 600 Ohm, 0.5A, 0.35DCR 0603
3p3V_USBPHY
PLACE NEAR CY7C68013A
C346 22uF 0603
C347 C348 C349 C350 C351 C352 C353 C354 0.1uF

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UBII-MAX10 2

Bank 5: 1.2V IO

U26E

13	QSFPDD0_1V2_RESET_L	K10	IO_5_K10/DIFFIO_RX_R1P
13	QSFPDD0_1V2_MODPRS_L	K11	IO_5_K11/DIFFIO_RX_R2P
13	QSFPDD0_1V2_LPMODE	J10	IO_5_J10/DIFFIO_RX_R1N
13	QSFPDD0_1V2_INT_L	L12	IO_5_L12/DIFFIO_RX_R2N
13	QSFPDD1_1V2_RESET_L	K12	IO_5_K12/DIFFIO_RX_R7P
13	QSFPDD1_1V2_MODPRS_L	L13	IO_5_L13
13	QSFPDD1_1V2_MODSEL_L	J12	IO_5_J12/DIFFIO_RX_R7N
13	QSFPDD1_1V2_INT_L	J9	IO_5_J9/DIFFIO_RX_R8P
13	QSFPDD0_1V2_MODSEL_L	J13	IO_5_J13/DIFFIO_RX_R9P
13	QSFPDD1_1V2_LPMODE	H10	IO_5_H10/DIFFIO_RX_R8N
		H13	IO_5_H13/DIFFIO_RX_R9N
13,41	CPU_RESETn	H9	IO_5_H9/DIFFIO_RX_R10P
13	FPGA_LED0	G13	IO_5_G13/DIFFIO_RX_R11P
13	FPGA_LED1	H8	IO_5_H8/DIFFIO_RX_R10N
13	FPGA_LED2	G12	IO_5_G12/DIFFIO_RX_R11N
13	FPGA_LED3		

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Bank 8: 3.3V IO

U26G

38,39,40,46,47,50	MAIN_I2C_SCL	C10	IO_8_C10/DIFFIO_RX_T14P
38,39,40,46,47,50	MAIN_I2C_SDA	A8	IO_8_A8/DIFFIO_RX_T15P
38,39	SI5341_ENn	C9	IO_8_C9/DIFFIO_RX_T14N
38	SI5341_RSTn	A9	IO_8_A9/DIFFIO_RX_T15N
23	QSFPDD0_3V3_RESET_L	B10	IO_8_B10/DIFFIO_RX_T16P
23	QSFPDD0_3V3_MODPRS_L	A10	IO_8_A10/DIFFIO_RX_T17P
23	QSFPDD0_3V3_LPMODE	A11	IO_8_A11/DIFFIO_RX_T17N
23	QSFPDD0_3V3_INT_L	E8	IO_8_E8/DIFFIO_RX_T18N
24	QSFPDD1_3V3_RESET_L	A7	IO_8_A7/DIFFIO_RX_T19P
24	QSFPDD1_3V3_MODPRS_L	A6	IO_8_A6/DIFFIO_RX_T19N
24	QSFPDD1_3V3_LPMODE	B6	IO_8_B6/DIFFIO_RX_T20P
24	QSFPDD1_3V3_INT_L	A4	IO_8_A4/DIFFIO_RX_T21P
24	QSFPDD1_3V3_MODSEL_L	B5	IO_8_B5/DIFFIO_RX_T20N
23	QSFPDD0_3V3_MODSEL_L	A3	IO_8_A3/DIFFIO_RX_T21N
47	PWR_MAX10_JTAG_TMS	E6	IO_8_E6/DIFFIO_RX_T22P
47	PWR_MAX10_JTAG_TCK	B3	IO_8_B3/DIFFIO_RX_T23P
25,47	PCIE_PWRBRKN	B4	IO_8_B4/DIFFIO_RX_T23N
47	PWR_MAX10_JTAG_TDI	A5	IO_8_A5/DIFFIO_RX_T25P
47	PWR_MAX10_JTAG_TDO	A2	IO_8_A2/DIFFIO_RX_T26P
39,43	USB_MAX_JTAGSEL	B2	IO_8_B2/DIFFIO_RX_T26N

USB_MAX_JTAG = "1", Debug mode.
EXT_UBII is disabled on UBII MAX10.

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Bank 6: 1.8V IO

U26F

30	HPS_JTAG_TCK	HPS_JTAG_TCK	F12	IO_6_F12/DIFFIO_RX_R18P
30	HPS_JTAG_TDI	HPS_JTAG_TDI	E12	IO_6_E12/DIFFIO_RX_R18N
26,41	FPGA_CVP_CONFDONE		C13	IO_6_C13
26,41	FPGA_CONF_DONE		F8	IO_6_F8/DIFFIO_RX_R27P
26	FPGA_INIT_DONE		B12	IO_6_B12/DIFFIO_RX_R28P
			E9	IO_6_E9/DIFFIO_RX_R27N
26	FPGA_NCONFIG	HPS_JTAG_TMS	B11	IO_6_B11/DIFFIO_RX_R28N
30	HPS_JTAG_TMS	HPS_JTAG_TDO	C12	IO_6_C12/DIFFIO_RX_R29P
30	HPS_JTAG_TDO	R354 0	B13	IO_6_B13/DIFFIO_RX_R30P
26	HPS_RESETn	FPGA_JTAG_TCK	C11	IO_6_C11/DIFFIO_RX_R29N
26	FPGA_JTAG_TCK	FPGA_JTAG_TDI	A12	IO_6_A12/DIFFIO_RX_R30N
26	FPGA_JTAG_TDI	FPGA_JTAG_TMS	E10	IO_6_E10/DIFFIO_RX_R31P
26	FPGA_JTAG_TMS		D9	IO_6_D9/DIFFIO_RX_R31N
27	RSV_SD_RESETn	R357 0	D12	IO_6_D12/DIFFIO_RX_R33P
22	FPGA_PCIE_PERSTn	FPGA_JTAG_TDO	D11	IO_6_D11/DIFFIO_RX_R33N
26	FPGA_JTAG_TDO			

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Bank 2: 3.3V IO

U26C

		JTAG_INPUT_SOURCE	M3	IO_2_M3/PLL_L_CLKOUTN/DIFFIO_RX_L27N
43	EXT_JTAG_TDI	EXT_JTAG_TDI	L3	IO_2_L3/PLL_L_CLKOUTP/DIFFIO_RX_L27P
43	EXT_JTAG_TCK	EXT_JTAG_TCK	J1	IO_2_J1/DIFFIO_RX_L19N
		PWR_MAX10_BYPASSn	J2	IO_2_J2/DIFFIO_RX_L19P
43	EXT_JTAG_TMS	EXT_JTAG_TMS	M1	IO_2_M1/DIFFIO_RX_L21N
		MICTOR_BYPASSn	M2	IO_2_M2/DIFFIO_RX_L21P
25	PCIE_EP_3V3_I2C_SDA		L2	IO_2_L2
25	PCIE_EP_3V3_I2C_SCL		K1	IO_2_K1/DIFFIO_RX_L28N
43	EXT_JTAG_TDO	EXT_JTAG_TDO	K2	IO_2_K2/DIFFIO_RX_L28P

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Bank 1A/1B: 3.3V IO

U26B

41	FPGA_3V3_LED0		D1	IO_1A_D1/DIFFIO_RX_L1N
41	FPGA_3V3_LED1		C2	IO_1A_C2/DIFFIO_RX_L1P
25	PCIE_EP_JTAG_TCK	PCIE_EP_JTAG_TCK	E3	IO_1A_E3/DIFFIO_RX_L3N
		FPGA_BYPASSn	E4	IO_1A_E4/DIFFIO_RX_L3P
25	PCIE_EP_JTAG_TMS	PCIE_EP_JTAG_TMS	C1	IO_1A_C1/DIFFIO_RX_L5N
41	FPGA_3V3_LED2		B1	IO_1A_B1/DIFFIO_RX_L5P
25	PCIE_EP_JTAG_TDI	PCIE_EP_JTAG_TDI	F1	IO_1A_F1/DIFFIO_RX_L7N
46	PWR_GOOD	PWR_GOOD	E1	IO_1A_E1/DIFFIO_RX_L7P
25	PCIE_EP_JTAG_TDO	PCIE_EP_JTAG_TDO	F4	IO_1B_F4/DIFFIO_RX_L14N
40	FPGA_PMBUS_EN		G4	IO_1B_G4/DIFFIO_RX_L14P
40	MAIN_PMBUS_EN		H2	IO_1B_H2/DIFFIO_RX_L16N
40	HPS_I2C_EN		H3	IO_1B_H3/DIFFIO_RX_L16P

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Bank 3: 3.3V IO

U26A

3p3V_STBY		F2	VCCIO1A__F2
		G3	VCCIO1B__G3
		K3	VCCIO2__K3
		J3	VCCIO2__J3
		L8	VCCIO3__L8
		L7	VCCIO3__L7
		L6	VCCIO3__L6
1p2V_PRE	FB26 0603 600 Ohm, 0.5A, 0.35DCR	J11	VCCIO5__J11
1p8V_PRE	FB27 0603 600 Ohm, 0.5A, 0.35DCR	H11	VCCIO5__H11
1p8V_UBII		G11	VCCIO6__G11
1p2V_UBII		F11	VCCIO6__F11
		C8	VCCIO8__C8
		C7	VCCIO8__C7
UBII_M10_VCCA		C6	VCCIO8__C6
		D3	VCCA3__D3
		K4	VCCA1__K4
		D10	VCCA2__D10
		D4	VCCA3__D4
3p3V_STBY		K9	VCCA4__K9
		H7	VCC_ONE__H7
		G8	VCC_ONE__G8
		G6	VCC_ONE__G6
		F7	VCC_ONE__F7

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U26J

A1	GND__A1
A13	GND__A13
B8	GND__B8
C3	GND__C3
D2	GND__D2
D5	GND__D5
E11	GND__E11
E2	GND__E2
F3	GND__F3
G7	GND__G7
H12	GND__H12
J4	GND__J4
L9	GND__L9
M6	GND__M6
N1	GND__N1
N13	GND__N13

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FB28: 600 Ohm, 0.5A, 0.35DCR, 0603
C380 10uF, C381 0.1uF

3p3V_STBY

R348 1K, R349 1K, R350 1K, R351 1K

SW4 TDA04H0SB1

JTAG_INPUT_SOURCE	1
PWR_MAX10_BYPASSn	2
MICTOR_BYPASSn	3
FPGA_BYPASSn	4

JTAG Master Selection:
USB_DISABLEn = 0: External JTAG
USB_DISABLEn = 1: On-Board UBII/PCIe EP Edge
JTAG_INPUT_SOURCE = 0: PCIe EP edge
JTAG_INPUT_SOURCE = 1: On-Board UBII

JTAG Chain:
SW4_2/3/4 = Low : Bypass
SW4_2/3/4 = High: Enable

3p3V_STBY

PWR_MAX10_JTAG_TMS	R352	1K
PWR_MAX10_JTAG_TDI	R353	1K
PWR_MAX10_JTAG_TCK	R355	1K
PWR_GOOD	R356	1K

Place R808~R810 near to U30

DNI C1525 DNI R831 EXT_JTAG_TCK

DNI C355 DNI R358 PCIE_EP_JTAG_TCK

R359 1K

PLACE CLOSE MAX II PWR PIN

3p3V_STBY: C356 10uF; C357 C358 C359 C360 C361 C362 C363 C364 0.1uF
1p8V_UBII: C365 C366 C367 0.1uF
1p2V_UBII: C708 0.1uF

3p3V_STBY: C368 10uF; C369 C370 C371 C372 C373 C374 C375 0.1uF
UBII_M10_VCCA: C376 C377 C378 C379 0.1uF

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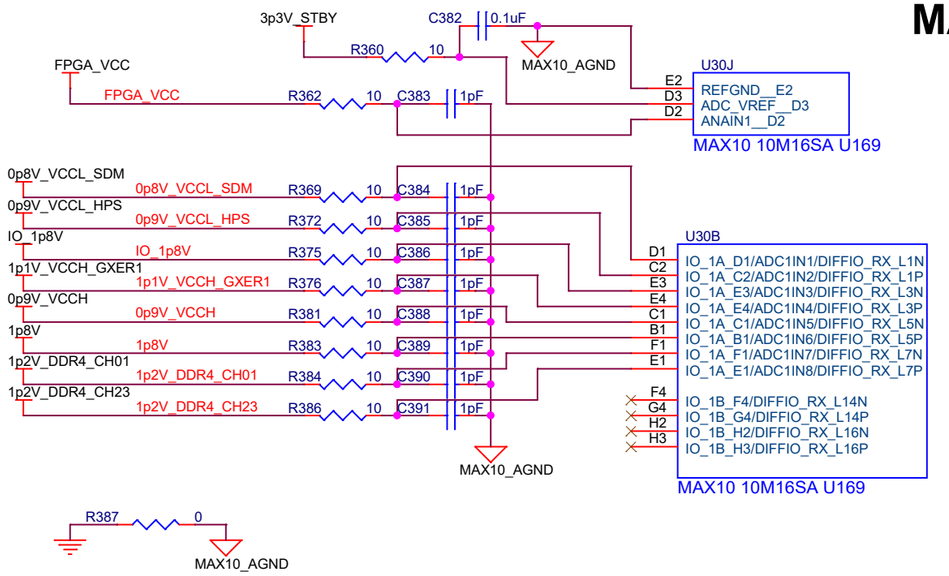
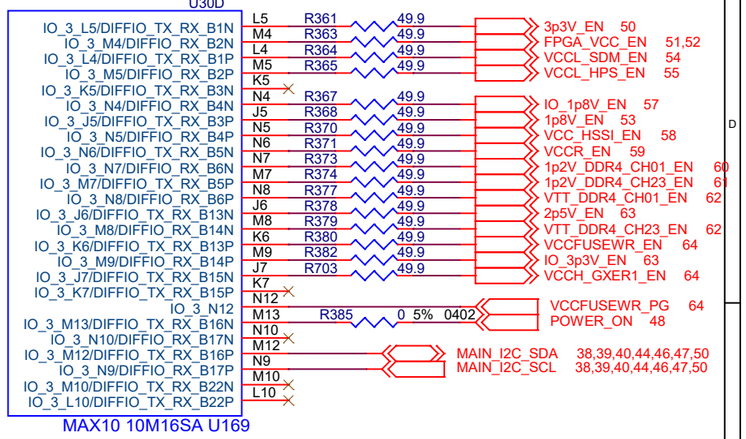
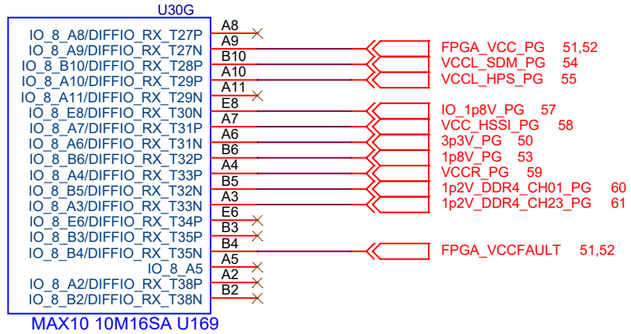
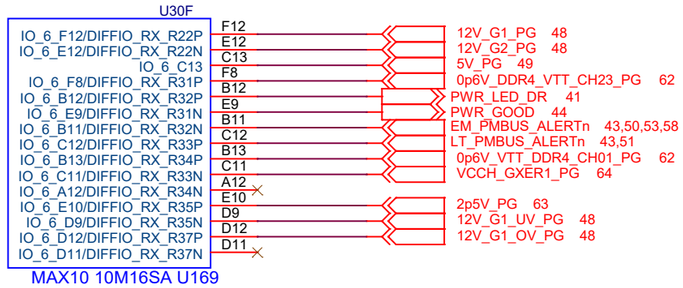
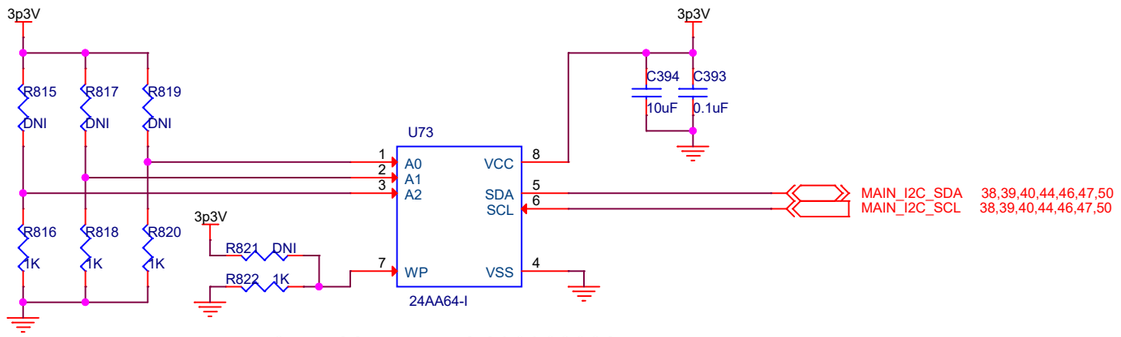
MAX 10 PWR Manager 1











I2C Address = b'1010000'

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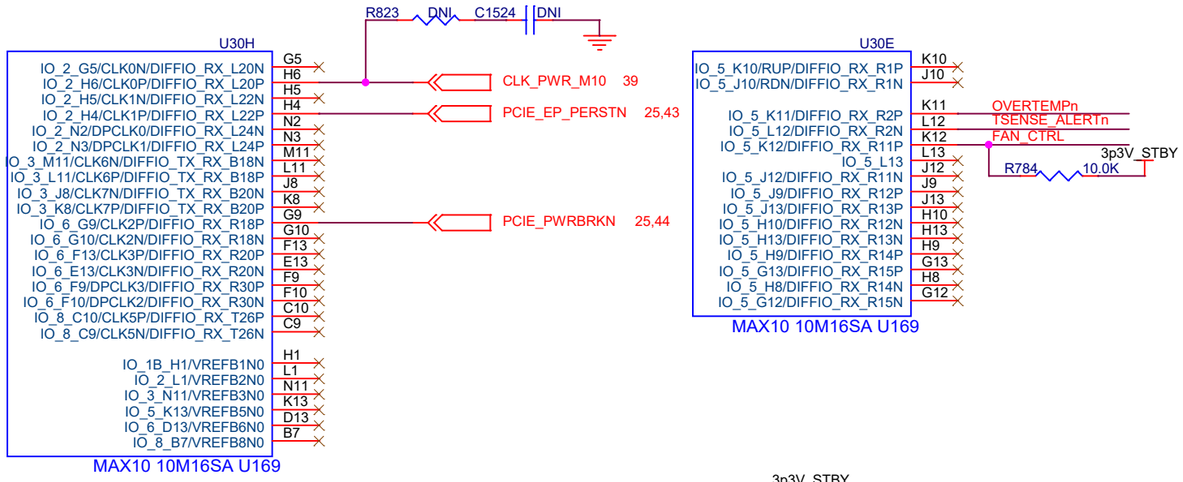
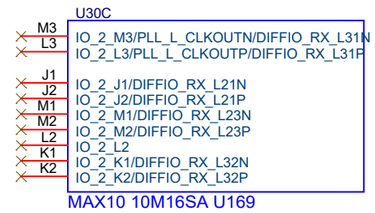
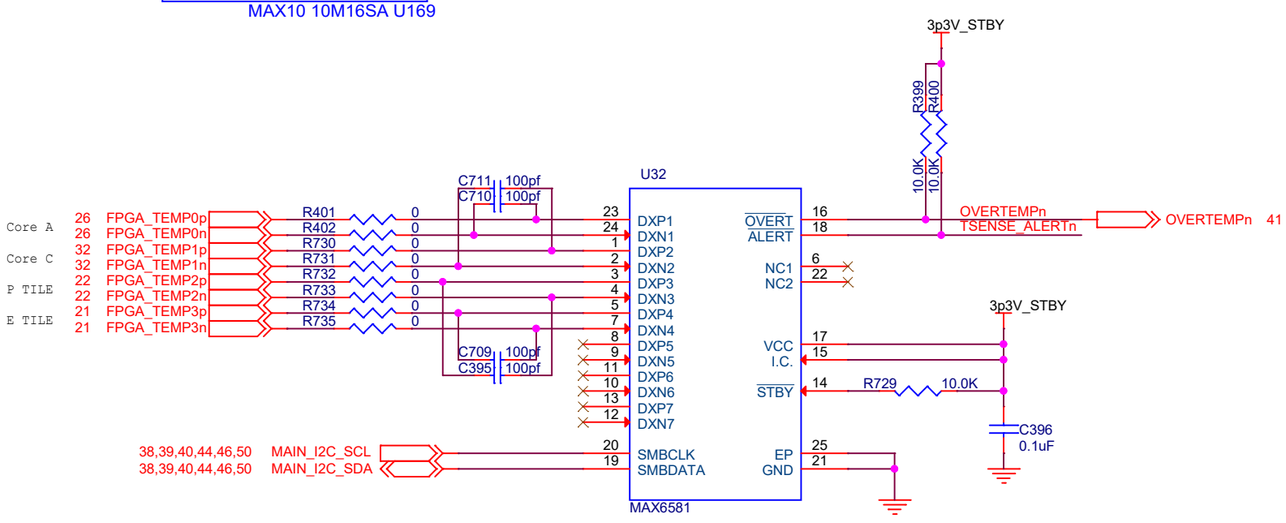
MAX10 PWR Manager 2

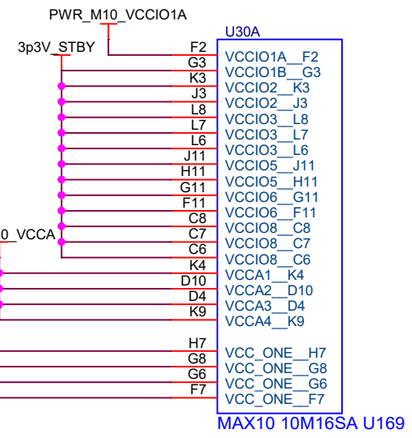


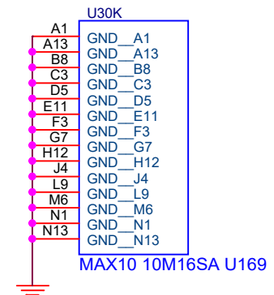


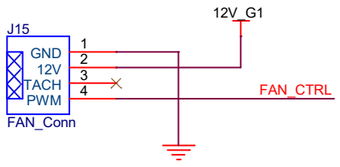


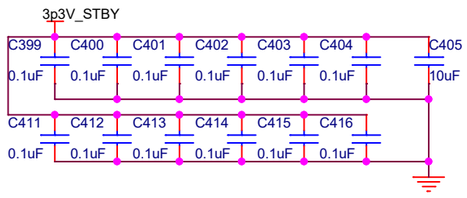
I2C ADDR = 4D

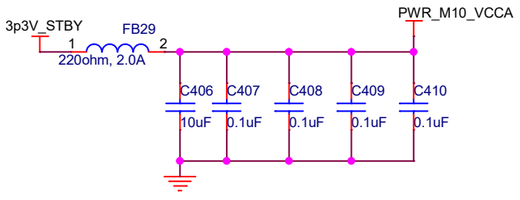
Board Temp Sensor

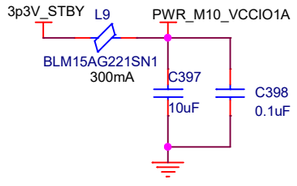












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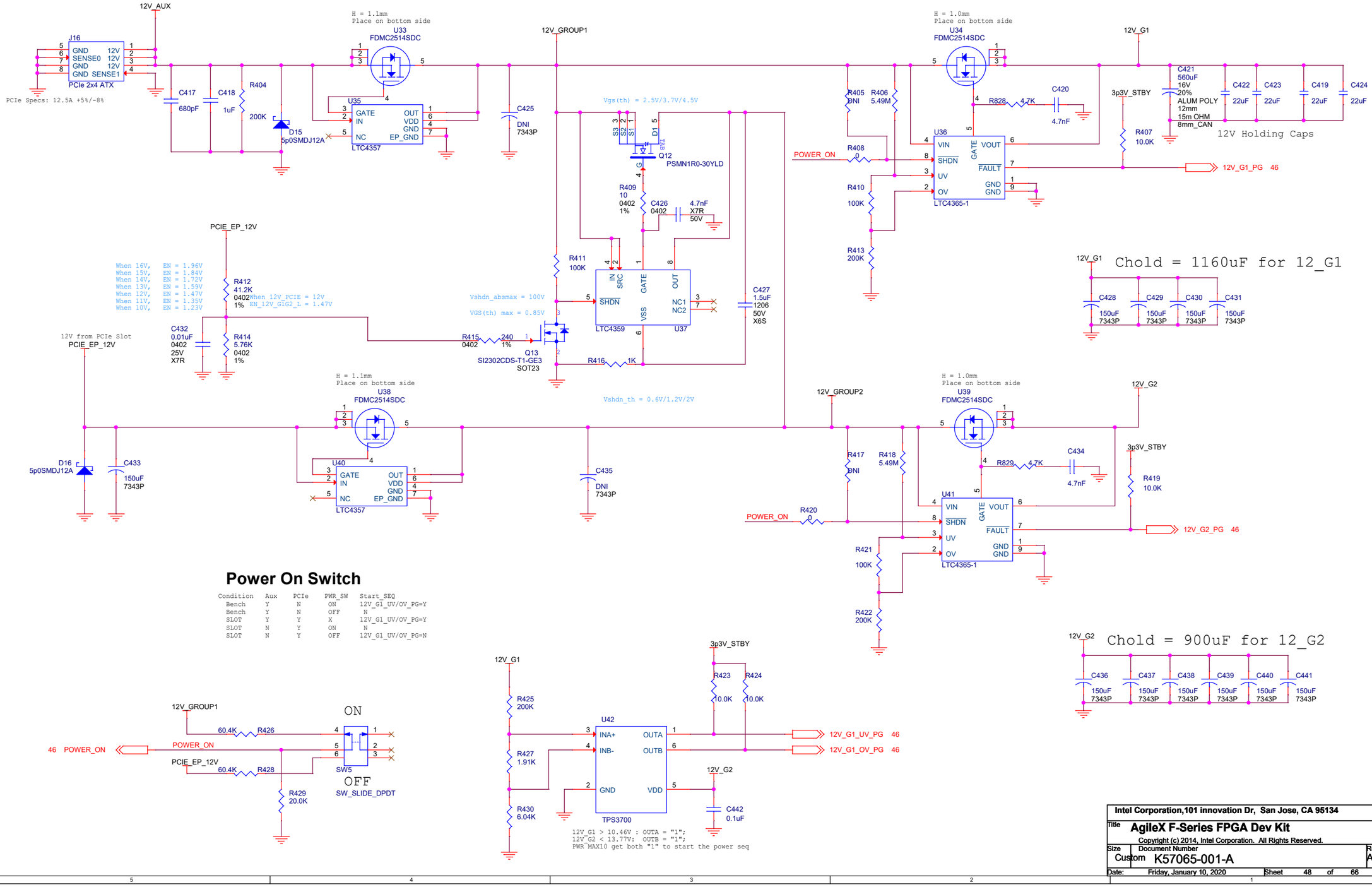
Power - Select Power Input



Power On Switch

Condition	Aux	PCIe	PWR_SW	Start_SEQ
Bench	Y	N	ON	12V_G1_UV/OV_PG=Y
Bench	Y	N	OFF	N
SLOT	Y	Y	X	12V_G1_UV/OV_PG=Y
SLOT	N	Y	ON	N
SLOT	N	Y	OFF	12V_G1_UV/OV_PG=N

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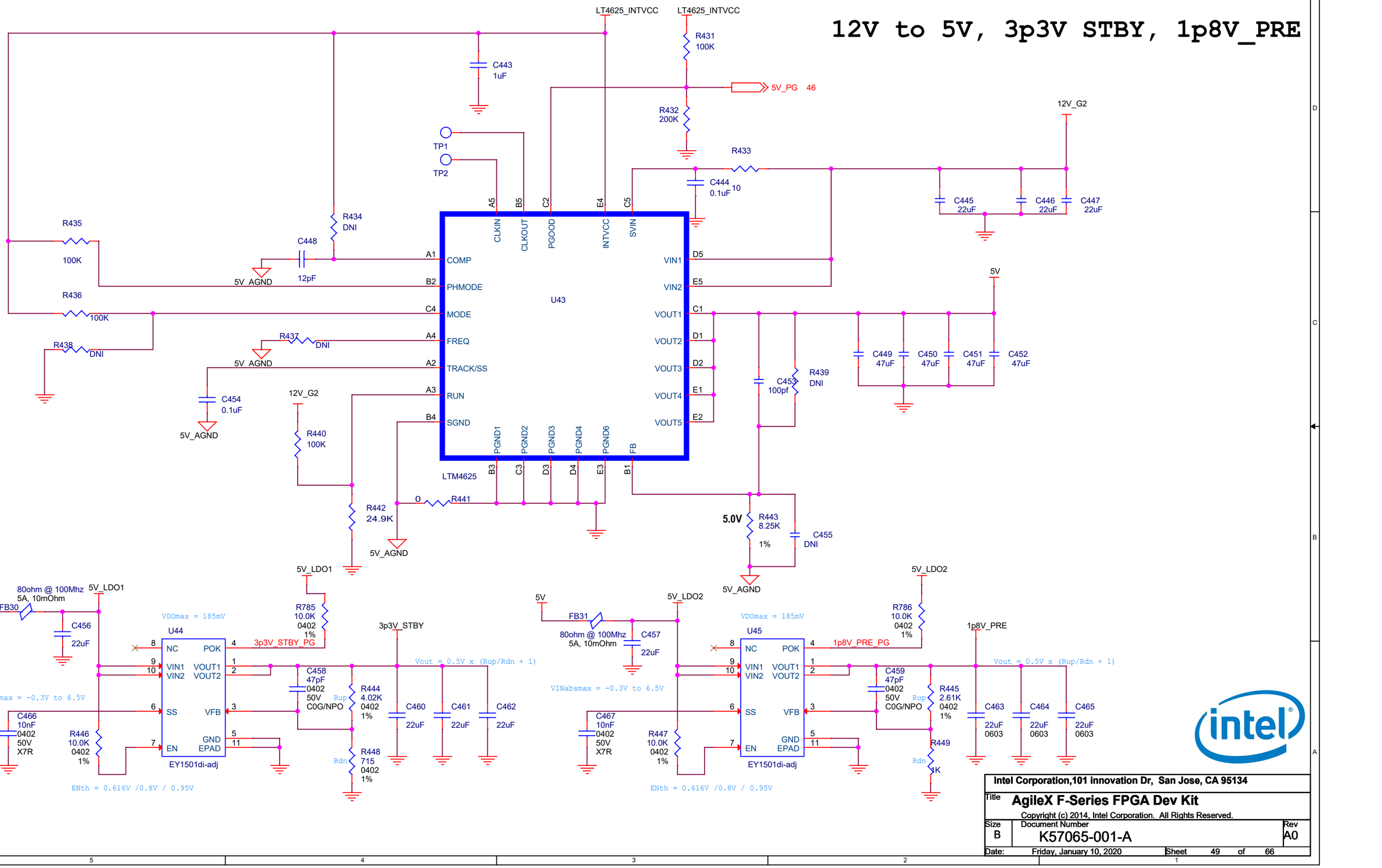
12V to 5V, 3p3V STBY, 1p8V_PRE



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MAIN 12V to 3.3V

TP5
TESTPOINT
(Top Side 30mil pad, No Via)

VDD33_OUT1
R450 10.0K
46 3p3V_PG
R451 0
3.3V output
R452 576 0402
3p3V_AGND 3p3V_AGND

46 3p3V_EN
R453 4.7K
VDD33_OUT1
PMBus Address = 0X4E
R458 10.0K
R459 10.0K
R460 10.0K
R463 2.74K 0402
R461 22K 0402
3p3V_AGND
R464 DNI 0402
3,46,53,58 EM_PMBUS_ALERTn
R466 0
53,58 EM_SDA
53,58 EM_SCL
12V_G2

C480 22uF
C481 22uF
C482 22uF
C483 22uF
C484 22uF
C485 22uF
C486 22uF
R468 11K 0402 0.1%
R469 1K 0402 0.1%
C488 DNI 0402
3p3V_AGND
3p3V_AGND
C487 10uF 1206

U46
EM2130H

VOUT_PAD 101 100 99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82

1 VOUT
2 VOUT
3 VOUT
4 RVSET
5 RTUNE
6 VINSEN
7 ADDR1
8 ADDR0
9 PWM
10 SYNC
11 PGOOD
12 CONTROL
13 SMBALERT
14 SDA
15 SCL
16 VDD33
17 PVIN
18 PVIN
19 PVIN
20 PVIN
21 PVIN
22 PGND
23 PGND
24 PGND
25 PGND
26 PGND
27 PGND
28 PGND
29 PGND
30 PGND
31 PGND
104 PGND_PAD

81 VOUT
80 VOUT
79 VOUT
78 VCCSEN
77 VTRACK
76 NC76
75 NC75
74 NC74
73 NC73
72 VSENN
71 VSENP
102 AGND_PAD
70 AGND
69 DGND
68 NC68
67 NC67
66 VCC
65 PVCC
103 PVIN_PAD
64 PVIN
63 PVIN
62 PVIN
61 PVIN
60 PGND
59 PGND
58 PGND
57 PGND
56 PGND
55 PGND
54 PGND
53 PGND
52 PGND
51 PGND

PGND PGND PGND PGND PGND PGND PGND PGND PGND PGND PGND PGND PGND PGND PGND PGND PGND PGND
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

H = 6.6mm
Place on Top side

C468 220uF 6.3V
C474 220uF 6.3V
C475 47UF
C469 47UF
C476 47UF
C470 47UF
C477 47UF
C471 47UF
C472 DNI
3p3V
3.3V
26A
C473 1uF 0603

R462 10.0K
R454 3.3k 0402
R457 DNI 0402
VDD33_OUT1
3p3V_AGND
R455 0
R456 0
Place sense lines at the load

C478 DNI 0402
R465 1K 0402
R467 2K 0402

FB32 742792780 0402
3p3V_AGND
5V
C479 2.2uF 10V X6S

Enpirion Dongle
J17
1 EM_SCL R470 0 MAIN_I2C_SCL 38,39,40,44,46,47
2 EM_SDA R471 0 MAIN_I2C_SDA 38,39,40,44,46,47
3
TSW-103-08-G-S

ST1
1 2
SHORT
AGND
PGND
3p3V_AGND

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12V to VCC Core (Phase 0,1)

U47
LTC3884EUK

Q14 BSG0811ND
Q15 BSG0811ND
Q16 BSG0811ND
Q19 BSG0811ND
Q17 MMST3906-7-F SOT-323
Q18 MMST3906-7-F SOT-323

FM_VCC should start from 0.8V as default,
need program LTC3884 by dongle in fab.

I2C Address: 0x47(user);
0x5A/5B(LTC3884 Global addr)

Check Phase define

Need 0.8V core voltage

FM_VCC should start from 0.8V as default,
need program LTC3884 by dongle in fab.

J18 2x6HDR

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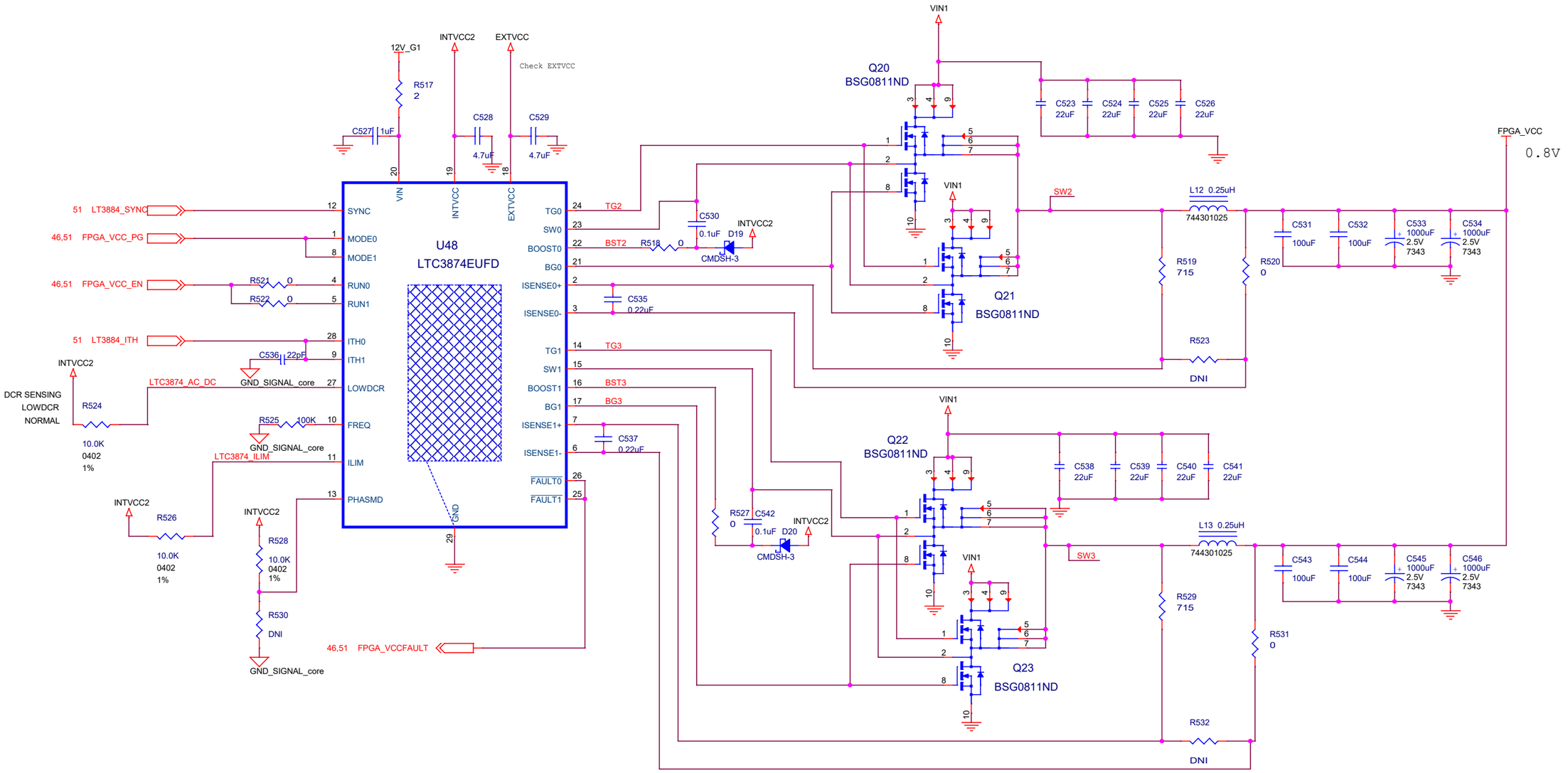
12V to VCC Core (Phase 2,3)



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PWR - 1p8V

TP12
TESTPOINT
TP (Top Side 30mil pad, No Via)

3p3V
R753 10.0K
46 1p8V_PG
R754 0
1.8V output
R755 6.81K 0402
1p8V_AGND 1p8V_AGND

46 1p8V_EN
R756 4.7K
3p3V
R764 10.0K
PMBus Address = 0X41
R762 2.74K 0402
R763 680 0402
1p8V_AGND
R767 DNI 0402
43,46,50,58 EM_PMBUS_ALERTn
50,58 EM_SDA
50,58 EM_SCL
R769 0
VDD33_OUT2
12V_G2

C1464 22uF
C1465 22uF
C1466 22uF
C1467 22uF
C1468 22uF
C1469 22uF
C1470 22uF
R771 11K 0402 0.1%
C1463 10uF 1206
R772 1K 0402 0.1%
C1471 DNI 0402
1p8V_AGND
1p8V_AGND

U71
EM2120H01QI

101	VOUT_PAD	VOUT	81
1	VOUT	VOUT	80
2	VOUT	VOUT	79
3	VOUT	VCCSEN	78
4	RVSET	VTRACK	77
5	RTUNE	NC76	76
6	VINSEN	NC75	75
7	ADDR1	NC74	74
8	ADDR0	NC73	73
9	PWM	VSENN	72
10	SYNC	VSENP	71
11	PGOOD	AGND_PAD	102
12	CONTROL	AGND	70
13	SMBALERT	DGND	69
14	SDA	NC68	68
15	SCL	NC67	67
16	VDD33	VCC	66
17	PVIN	PVCC	65
18	PVIN	PVIN_PAD	103
19	PVIN	PVIN	64
20	PVIN	PVIN	63
21	PVIN	PVIN	62
22	PVIN	PVIN	61
23	PGND	PVIN	60
24	PGND	PGND	59
25	PGND	PGND	58
26	PGND	PGND	57
27	PGND	PGND	56
28	PGND	PGND	55
29	PGND	PGND	54
30	PGND	PGND	53
31	PGND	PGND	52
104	PGND_PAD	PGND	51
32–50	PGND		

H = 6.6mm
Place on Top side

1p8V
1.8V
26A
C1451 220uF 6.3V
C1452 220uF 6.3V
C1453 47UF
C1454 47UF
C1455 47UF
C1456 47UF
C1457 47UF
C1458 47UF
C1459 DNI
C1460 1uF 0603

R757 10.0K
R758 3.3k 0402
R761 DNI 0402
VDD33_OUT2
1p8V_AGND
R759 0
R760 0
Place sense lines at the load

C1461 DNI
R768 2K 0402
R770 2K 0402
0402

FB39 742792780 0402
1p8V_AGND
5V
C1462 2.2uF 10V X6S

ST19
1 2
SHORT
AGND
PGND
1p8V_AGND

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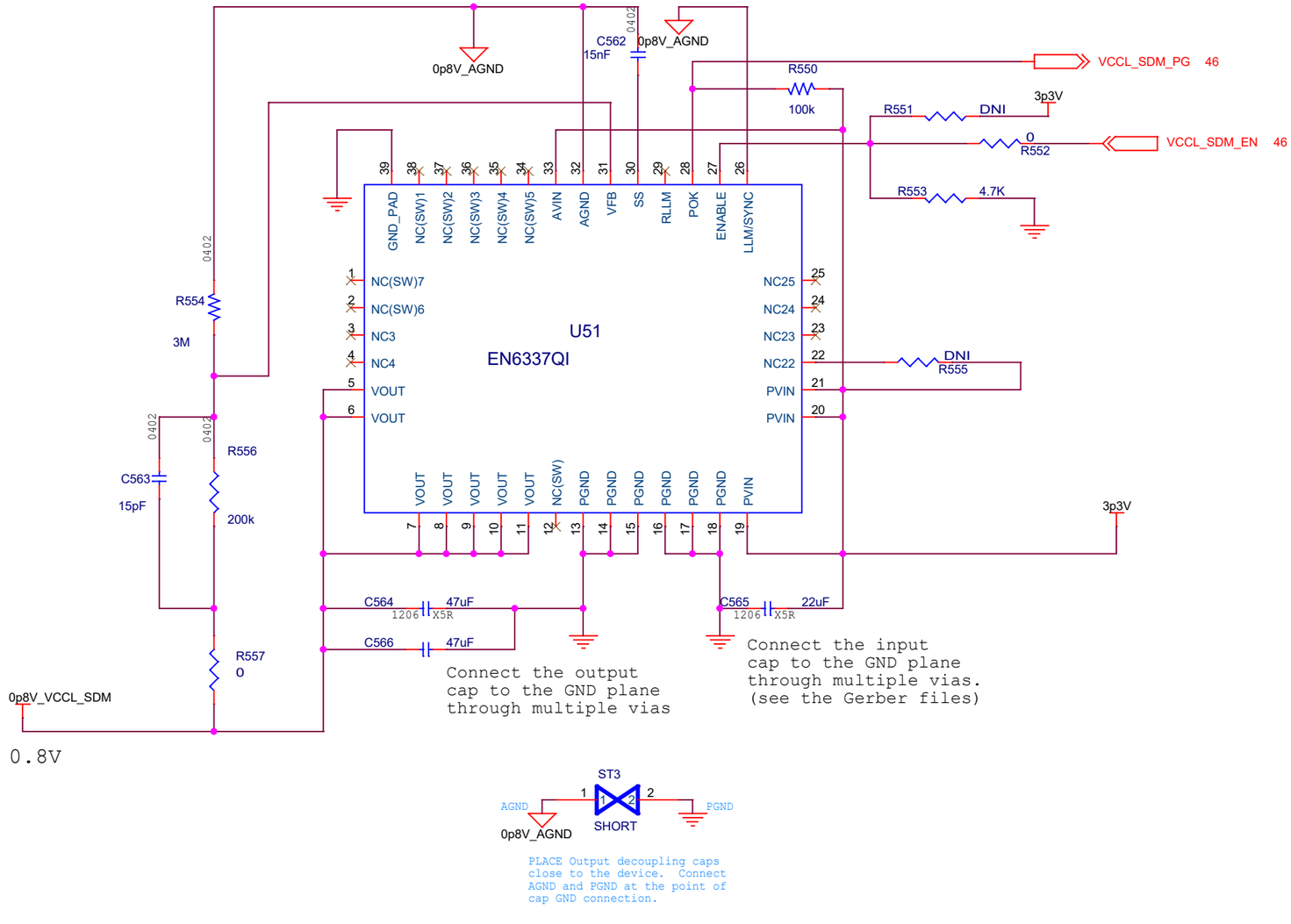
PWR - 0p8V_VCCL_SDM



PLACE Output decoupling caps close to the device. Connect AGND and PGND at the point of cap GND connection.

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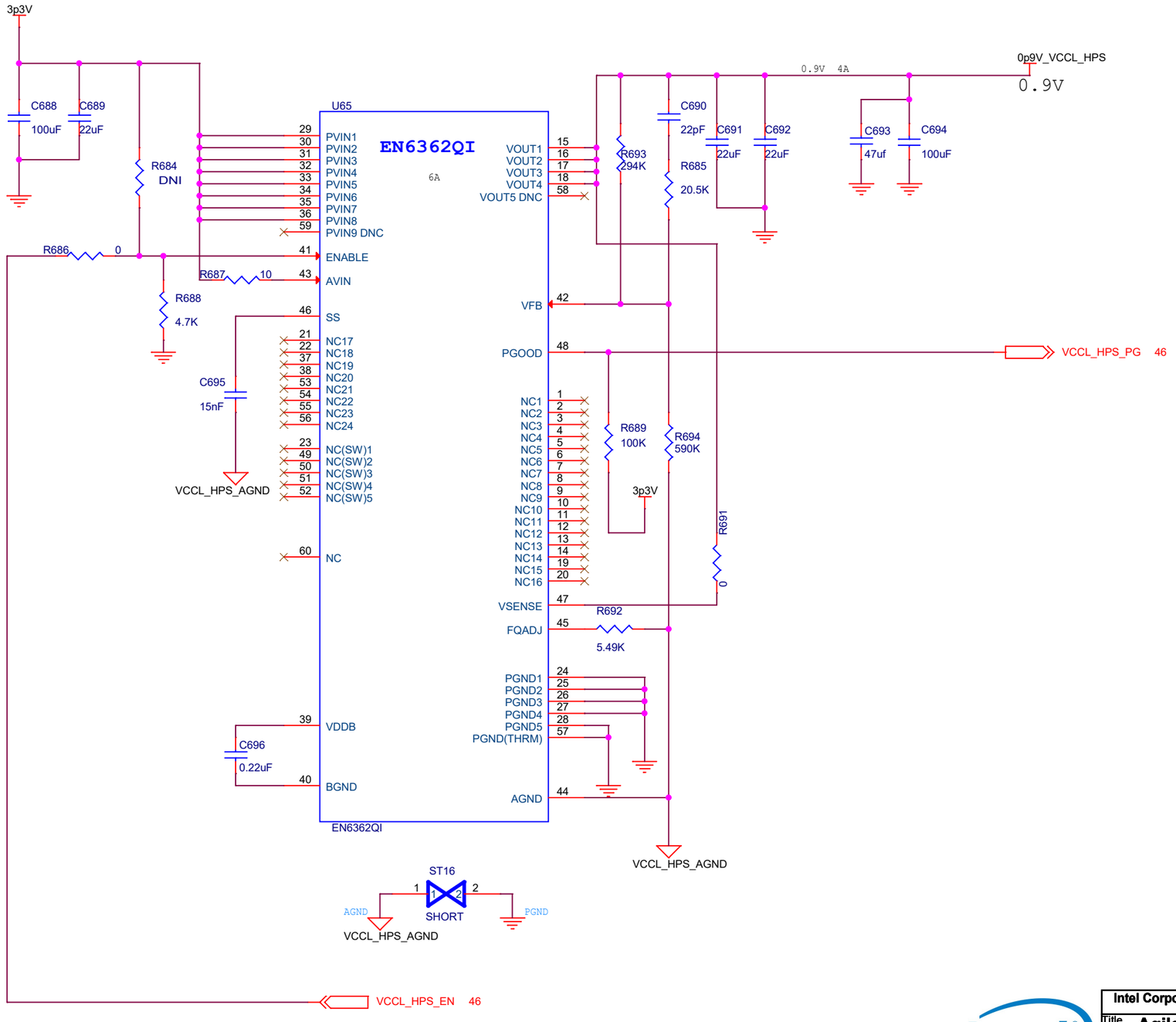
PWR - 0p9V_VCCL_HPS



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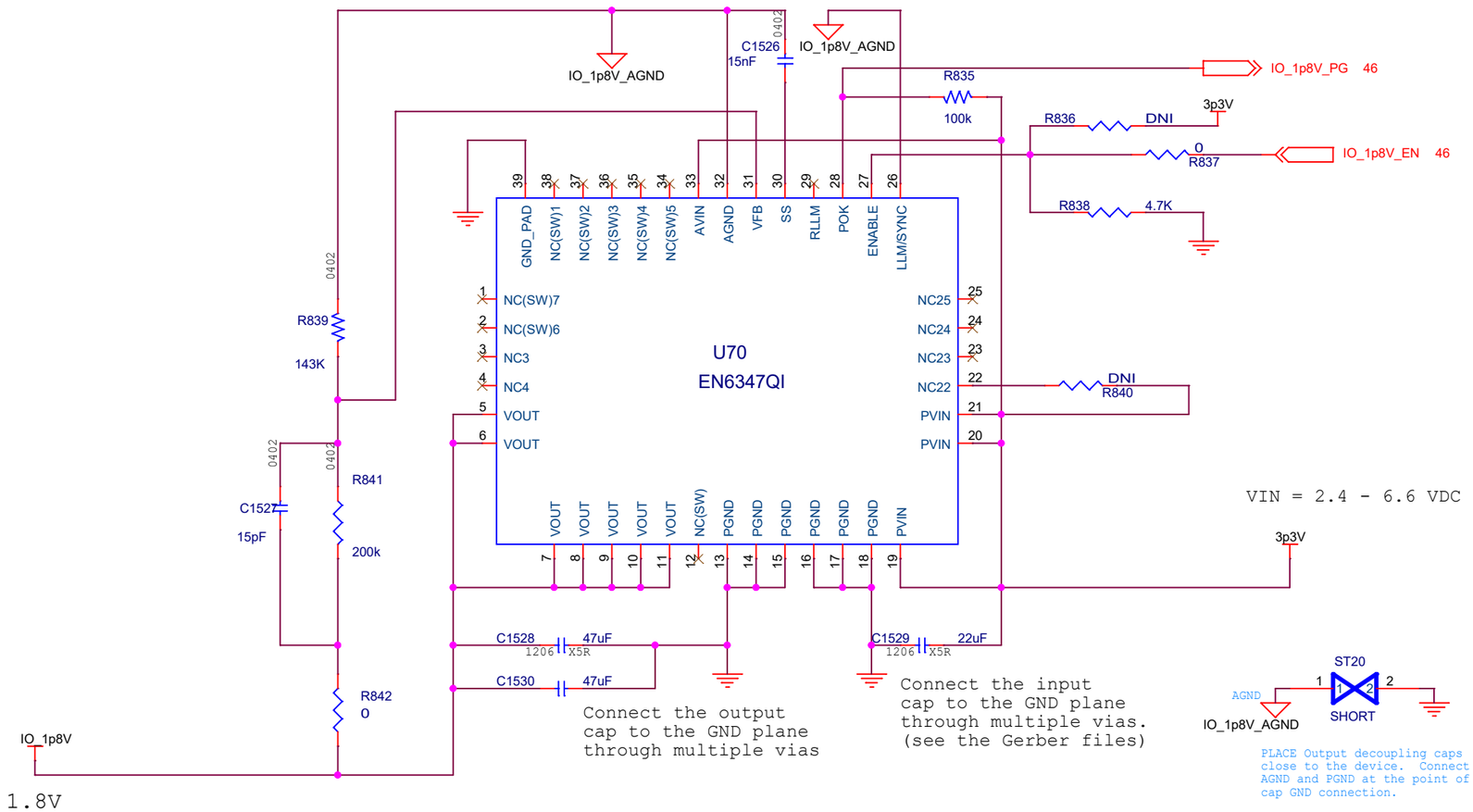
PWR - IO_1p8V



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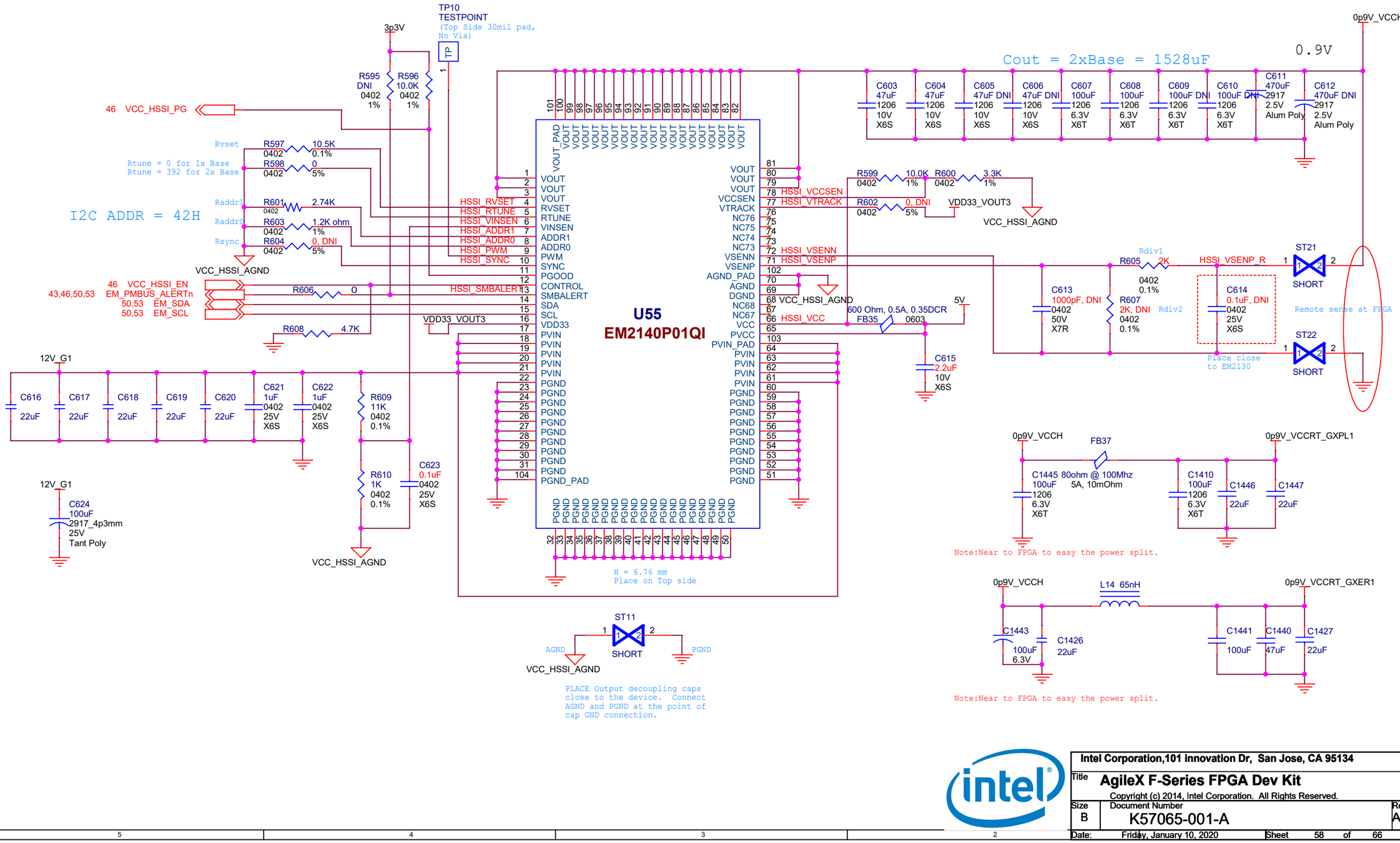
PWR - VCC_HSSI_GXER1/VCC_HSSI_GXPL1



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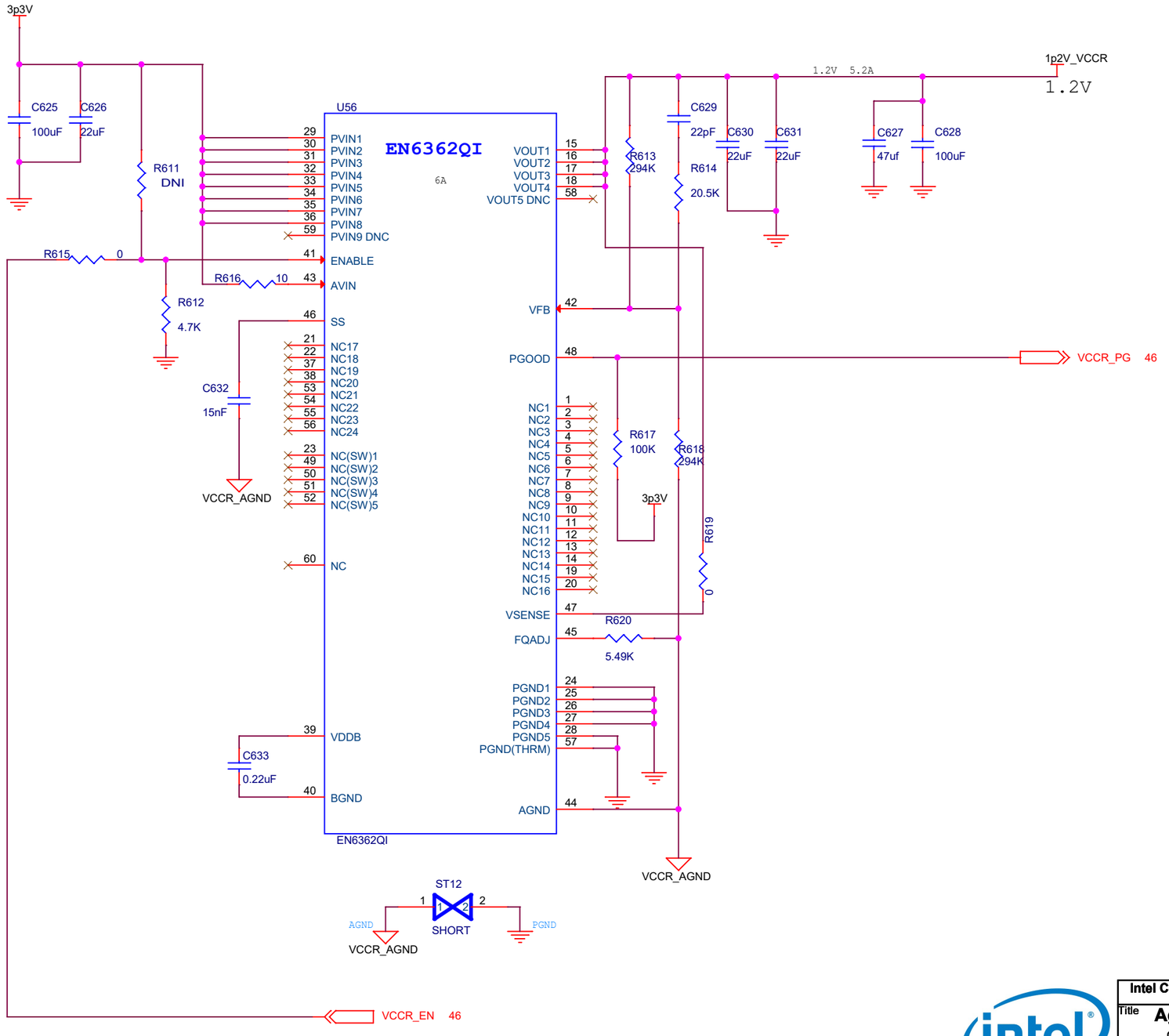
PWR - 1p2V VCCR



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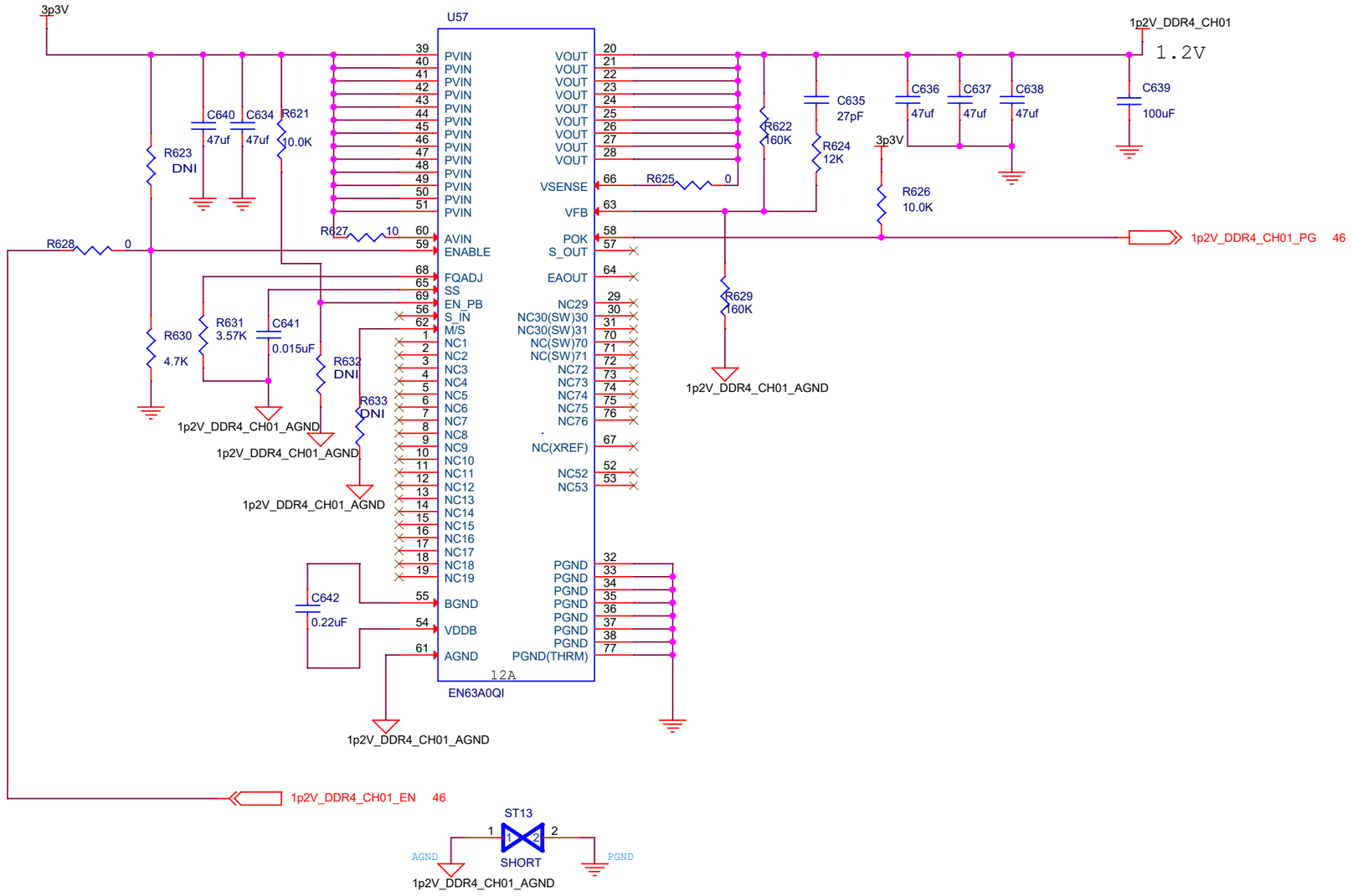
PWR - 1p2V_DDR4_CH01



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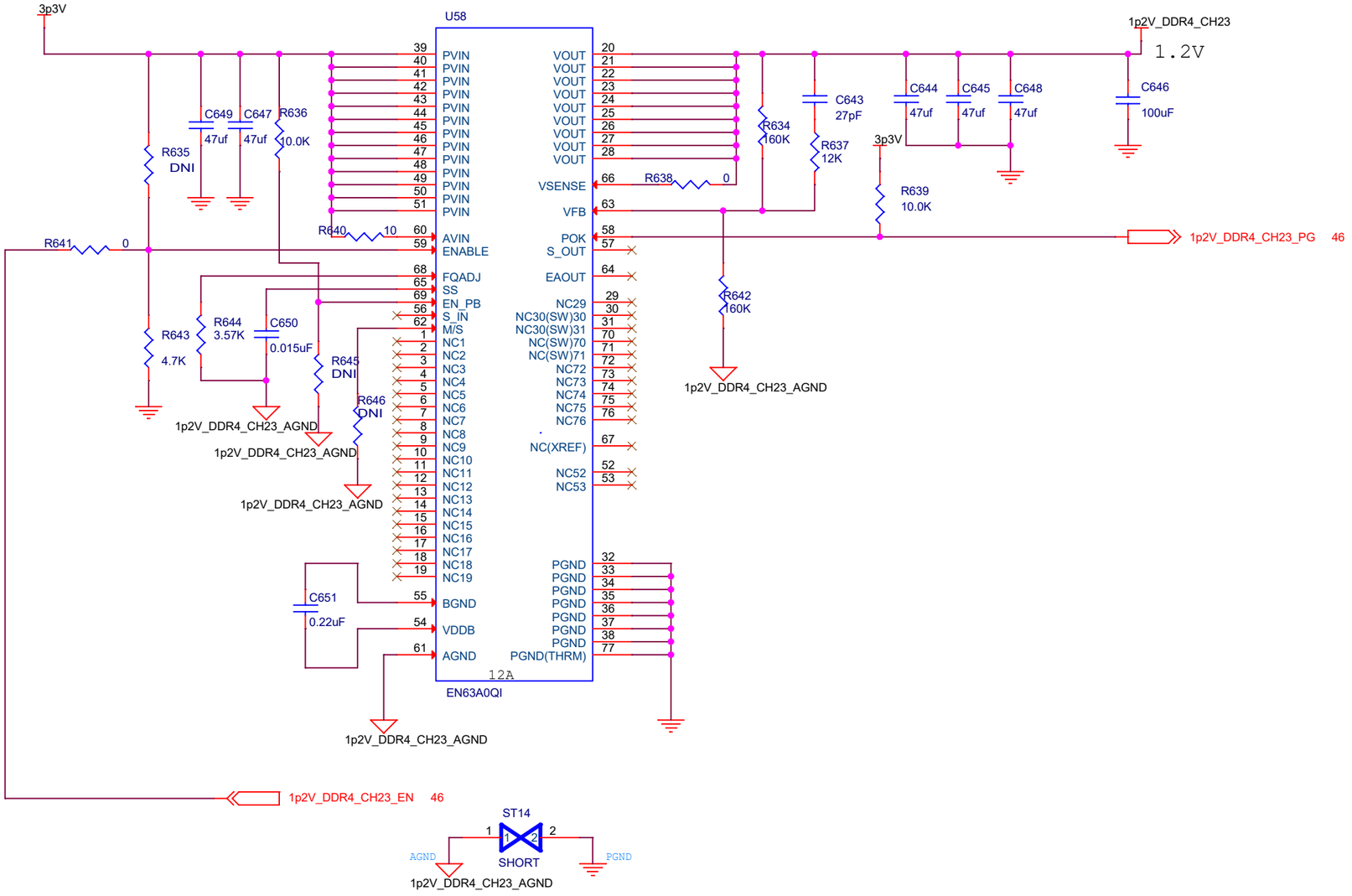
PWR - 1p2V_DDR4_CH23



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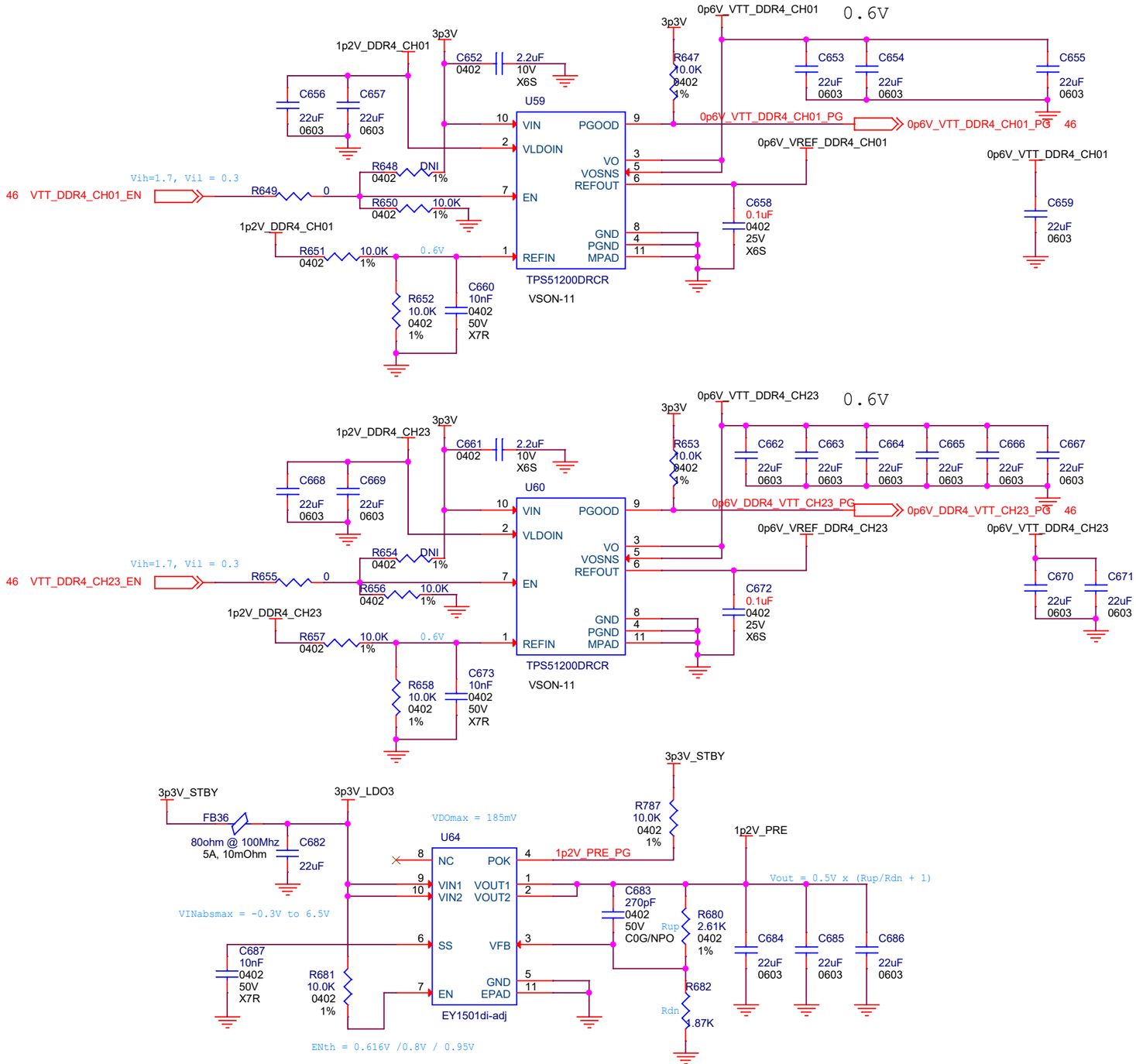
PWR - DDR4 VREF/VTT



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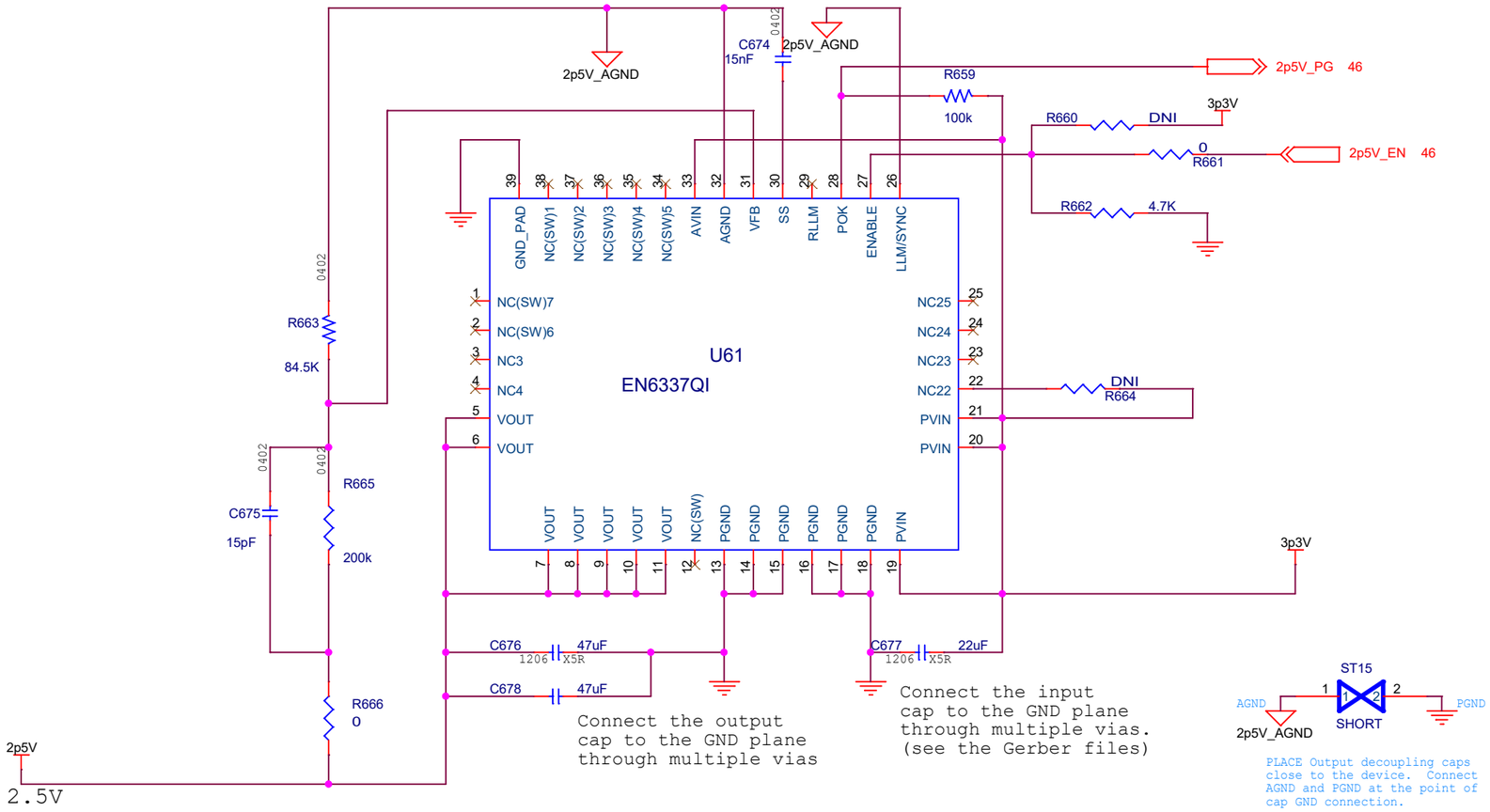
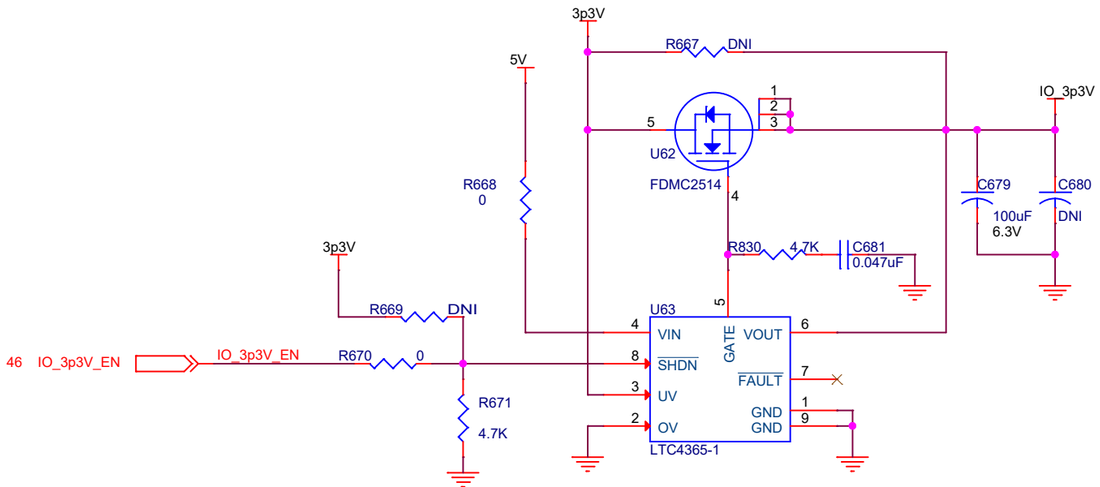
PWR - 2p5V





3.3V Enable Circuit

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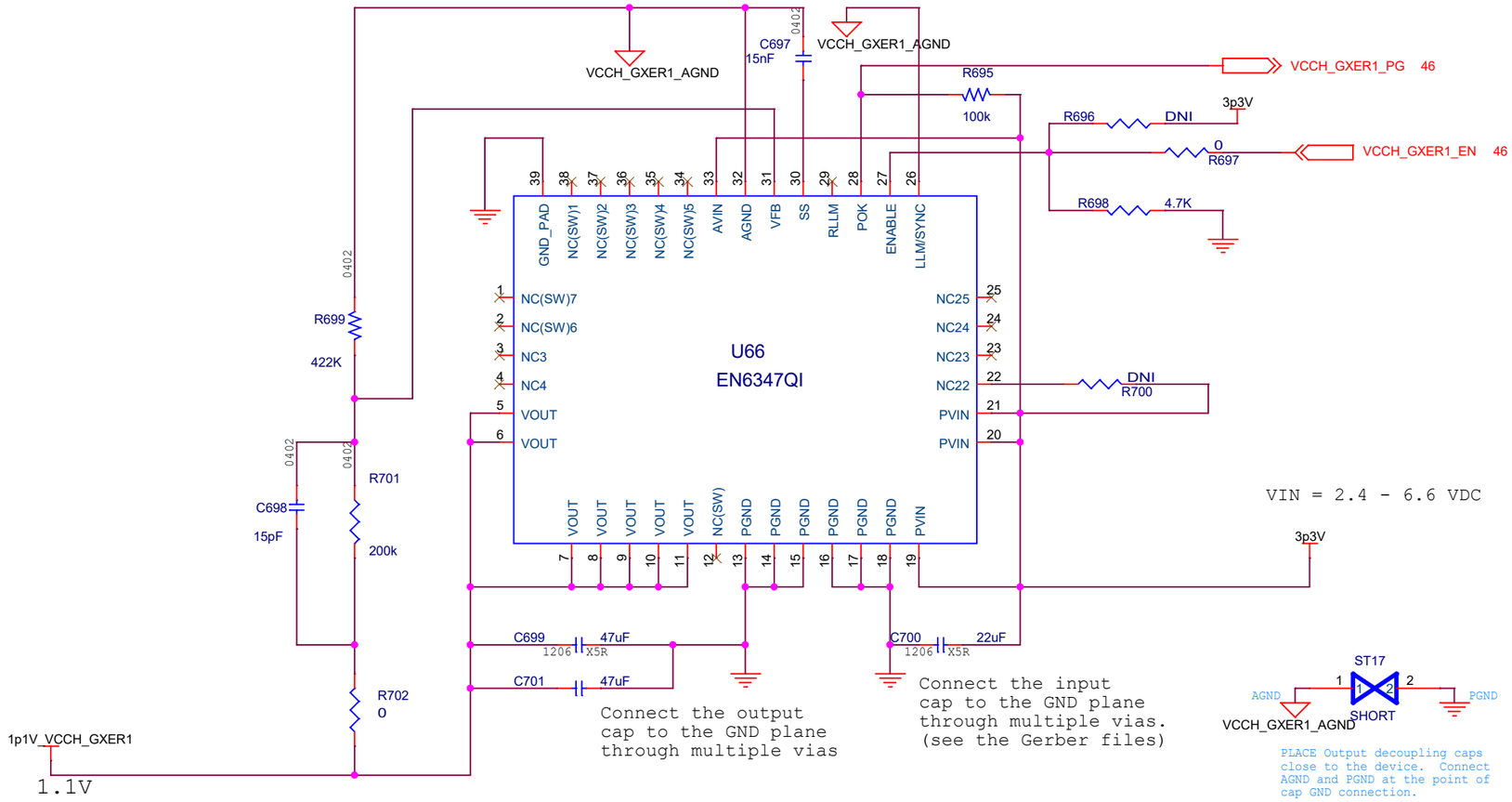
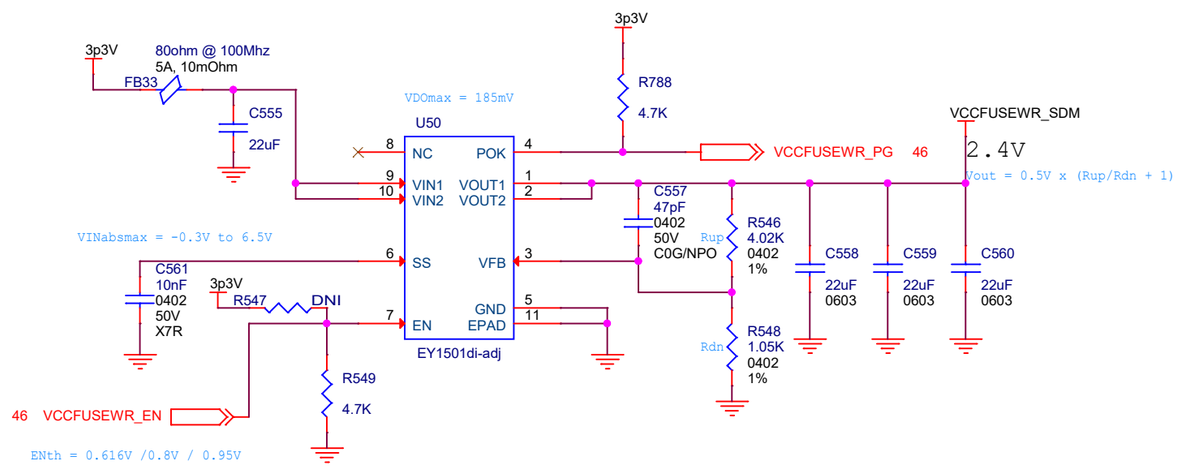
PWR - 1p1V VCCH_GXER1
VCCFUSEWR_SDM





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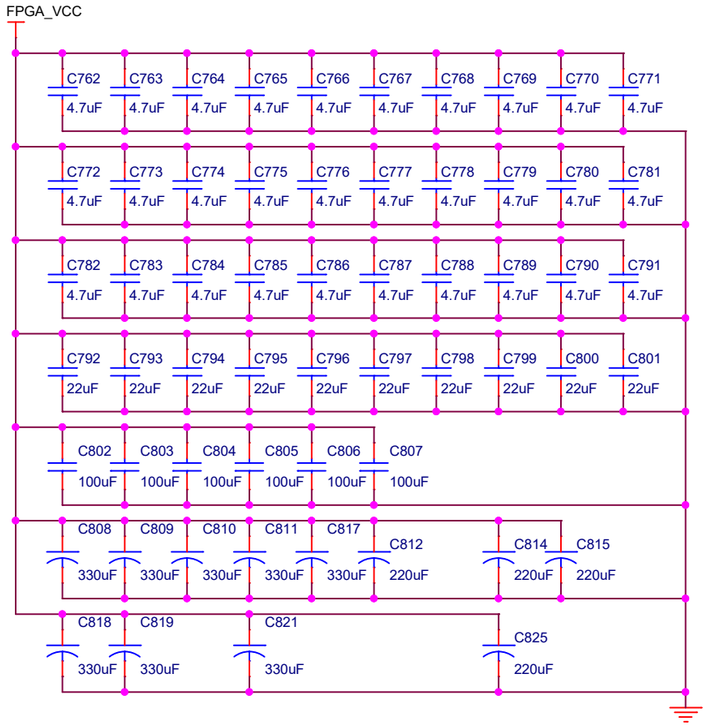

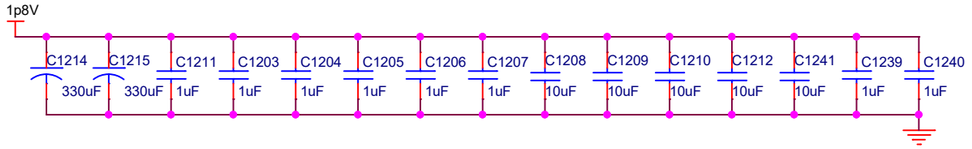

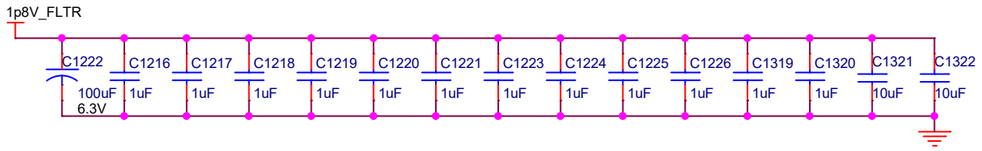

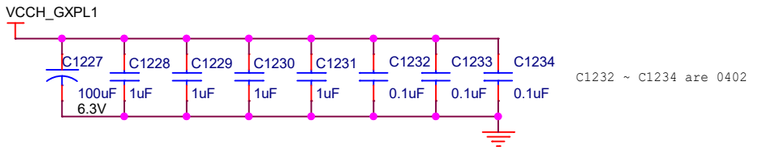

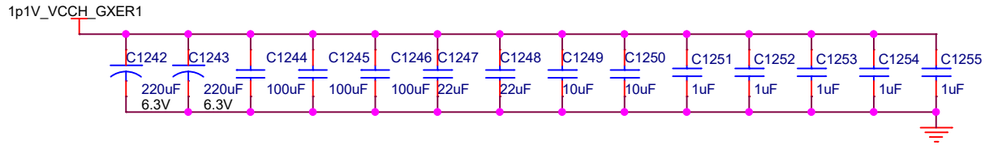

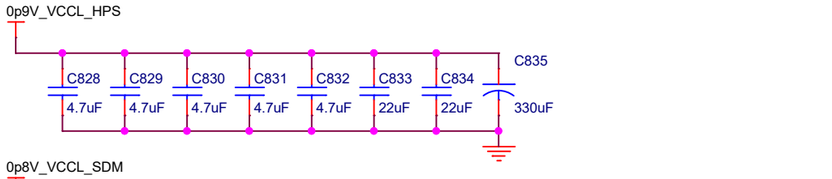

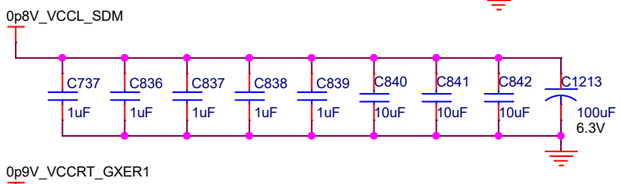

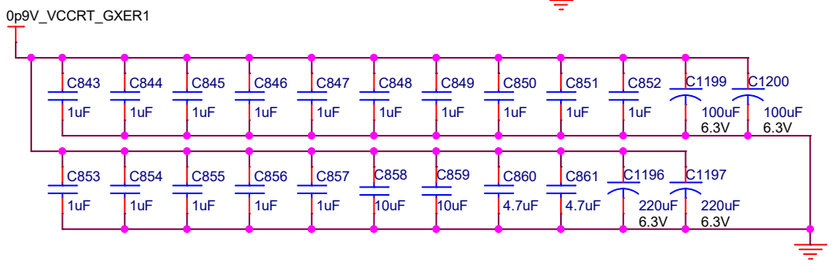

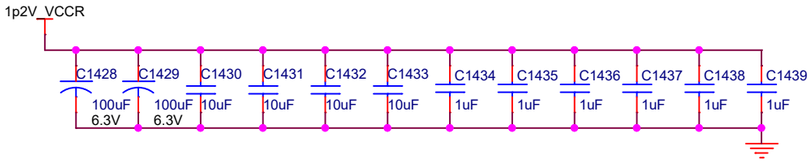

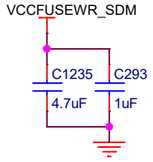

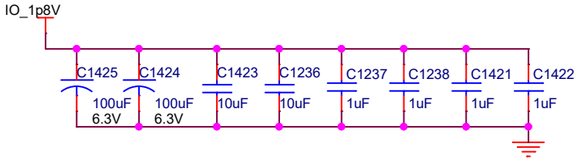

1 100uF + 1 10uF near to FPGA HPS area, 1 100uF+1 10uF near to FPGA SDM area

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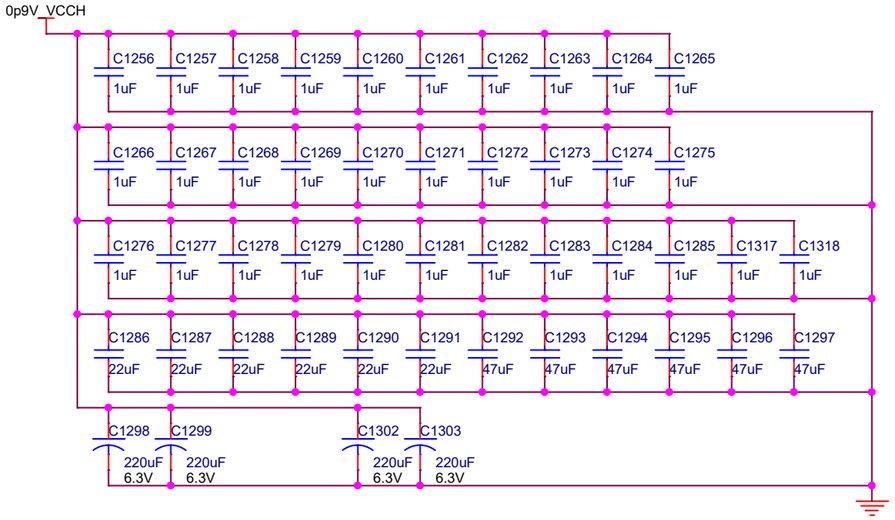

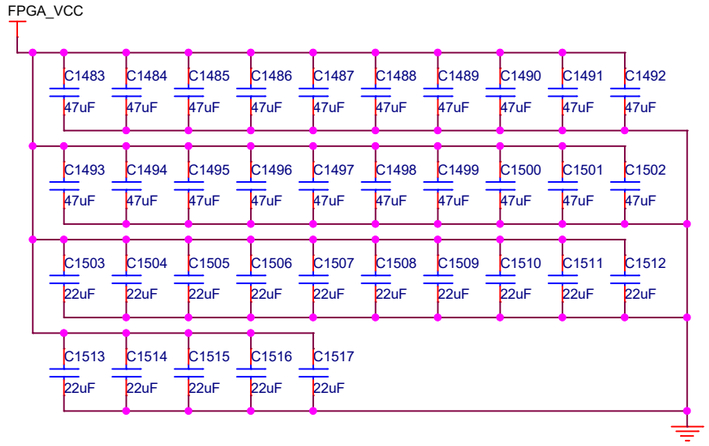

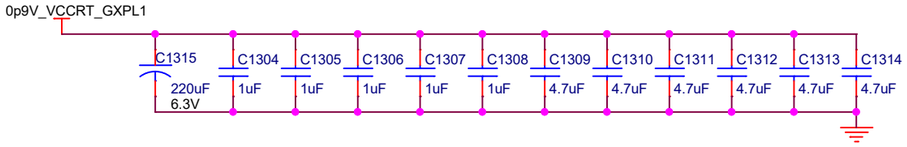

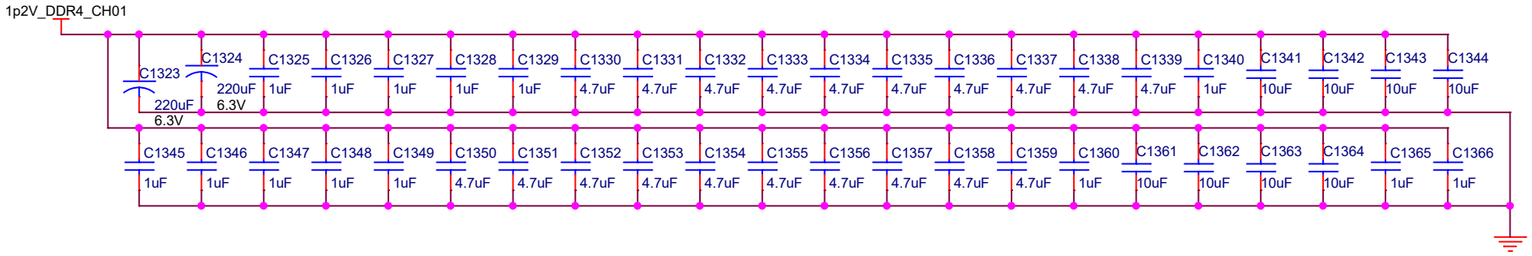

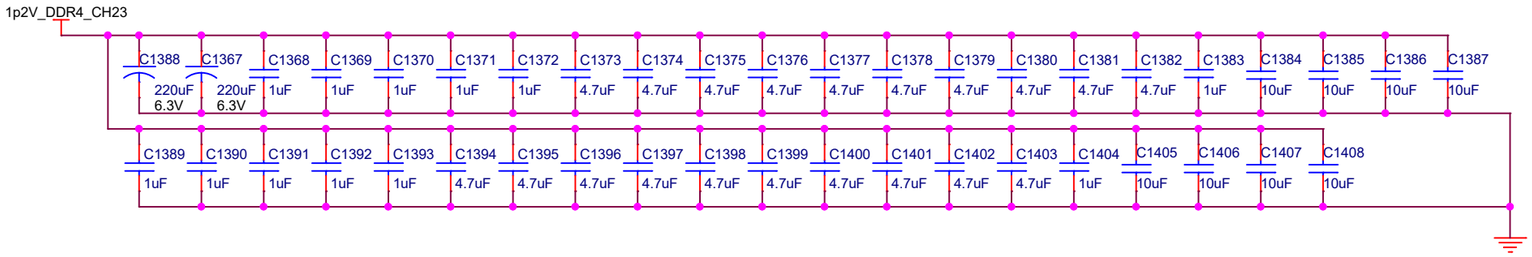

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