

U46F

PS_DDR_DQ0_502	D1	DDR3_DQ0
PS_DDR_DQ1_502	C3	DDR3_DQ1
PS_DDR_DQ2_502	B2	DDR3_DQ2
PS_DDR_DQ3_502	D3	DDR3_DQ3
PS_DDR_DQ4_502	E1	DDR3_DQ4
PS_DDR_DQ5_502	F2	DDR3_DQ5
PS_DDR_DQ6_502	F1	DDR3_DQ6
PS_DDR_DQ7_502	G2	DDR3_DQ7
PS_DDR_DQ8_502	G1	DDR3_DQ8
PS_DDR_DQ9_502	L1	DDR3_DQ9
PS_DDR_DQ10_502	L2	DDR3_DQ10
PS_DDR_DQ11_502	L3	DDR3_DQ11
PS_DDR_DQ12_502	K1	DDR3_DQ12
PS_DDR_DQ13_502	J1	DDR3_DQ13
PS_DDR_DQ14_502	M1	DDR3_DQ14
PS_DDR_DQ15_502	K3	DDR3_DQ15
PS_DDR_DQ16_502	M3	DDR3_DQ16
PS_DDR_DQ17_502	T1	DDR3_DQ17
PS_DDR_DQ18_502	N3	DDR3_DQ18
PS_DDR_DQ19_502	T3	DDR3_DQ19
PS_DDR_DQ20_502	R3	DDR3_DQ20
PS_DDR_DQ21_502	T2	DDR3_DQ21
PS_DDR_DQ22_502	M2	DDR3_DQ22
PS_DDR_DQ23_502	R1	DDR3_DQ23
PS_DDR_DQ24_502	A3	DDR3_DQ24
PS_DDR_DQ25_502	U1	DDR3_DQ25
PS_DDR_DQ26_502	AA1	DDR3_DQ26
PS_DDR_DQ27_502	W1	DDR3_DQ27
PS_DDR_DQ28_502	U2	DDR3_DQ28
PS_DDR_DQ29_502	Y3	DDR3_DQ29
PS_DDR_DQ30_502	W3	DDR3_DQ30
PS_DDR_DQ31_502	Y1	DDR3_DQ31

PS_DDR_A0_502	M4	DDR3_A0
PS_DDR_A1_502	M5	DDR3_A1
PS_DDR_A2_502	K4	DDR3_A2
PS_DDR_A3_502	L4	DDR3_A3
PS_DDR_A4_502	K5	DDR3_A4
PS_DDR_A5_502	J7	DDR3_A5
PS_DDR_A6_502	J6	DDR3_A6
PS_DDR_A7_502	J5	DDR3_A7
PS_DDR_A8_502	H5	DDR3_A8
PS_DDR_A9_502	J3	DDR3_A9
PS_DDR_A10_502	G5	DDR3_A10
PS_DDR_A11_502	H4	DDR3_A11
PS_DDR_A12_502	F4	DDR3_A12
PS_DDR_A13_502	H3	DDR3_A13
PS_DDR_A14_502	G4	DDR3_A14

PS_DDR_DQS_P0_502	C2	DDR3_DQS0_P
PS_DDR_DQS_N_502	D2	DDR3_DQS0_N
PS_DDR_DQS_P1_502	H2	DDR3_DQS1_P
PS_DDR_DQS_N1_502	J2	DDR3_DQS1_N
PS_DDR_DQS_P2_502	N2	DDR3_DQS2_P
PS_DDR_DQS_N2_502	P2	DDR3_DQS2_N
PS_DDR_DQS_P3_502	V2	DDR3_DQS3_P
PS_DDR_DQS_N3_502	W2	DDR3_DQS3_N

PS_DDR_CK_P_502	N4	DDR3_CK0_P
PS_DDR_CK_N_502	L5	DDR3_CK0_N
PS_DDR_BA0_502	L7	DDR3_BA0
PS_DDR_BA1_502	L6	DDR3_BA1
PS_DDR_BA2_502	M6	DDR3_BA2
PS_DDR_DM0_502	B1	DDR3_DM0
PS_DDR_DM1_502	H3	DDR3_DM1
PS_DDR_DM2_502	P1	DDR3_DM2
PS_DDR_DM3_502	AA2	DDR3_DM3

PS_DDR_CS_B_502	P6	DDR3_CS#
PS_DDR_WE_B_502	R4	DDR3_WE#
PS_DDR_CAS_B_502	R5	DDR3_CAS#
PS_DDR_RAS_B_502	V3	DDR3_CKE
PS_DDR_CKE_502	PS_DDR_ODT_502	PS_DDR_ODT

PS_DDR_DRST_B_502	F3	DDR3_RESET#
PS_DDR_VREF0_502	H7	
PS_DDR_VREF1_502	P7	
PS_DDR_VRP_502	N7	
PS_DDR_VRN_502	M7	

XC7Z020CLG484

VTTREF

VCCO_DDR3

C42

C43

0.01uF/6.3V/10%/X5R/C0201

0.01uF/6.3V/10%/X5R/C0201

Layout Notice:
DDR3 trace lengths must include 2ynq package flight times.
See UG933 and Layout Guidelines.

Layout Notice:
DDR3 target trace impedances are as follows:
Single Ended Signals = 40 ohms
Diff Ended Signals = 80 ohms

DDR3_A0	N3	A0	VrefCA
DDR3_A1	P7	A1	
DDR3_A2	P5	A2	
DDR3_A3	N2	A3	
DDR3_A4	P8	A4	
DDR3_A5	P2	A5	
DDR3_A6	R8	A6	
DDR3_A7	R2	A7	
DDR3_A8	T8	A8	
DDR3_A9	R3	A9	
DDR3_A10	L7	A10/AP	
DDR3_A11	R7	A11	
DDR3_A12	N7	A12/BC#	
DDR3_A13	T3	A13	
DDR3_A14	T7	A14	

DDR3_BA0	M2	BA0	
DDR3_BA1	N8	BA1	
DDR3_BA2	M3	BA2	

DDR3_CS#	L2	CS#	
DDR3_WE#	L3	WE#	
DDR3_CAS#	K3	CAS#	
DDR3_RAS#	J3	RAS#	

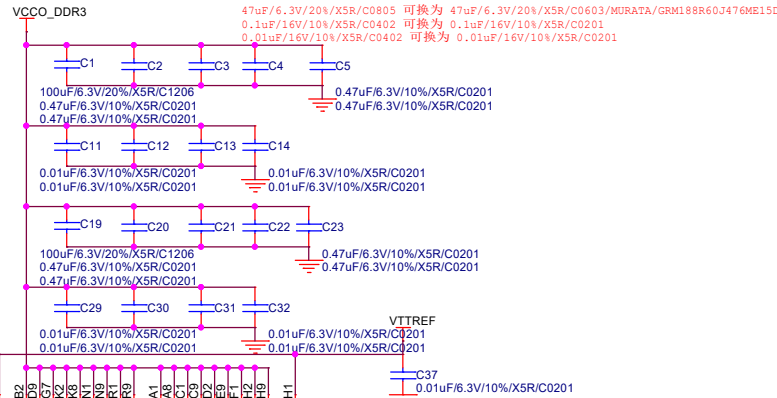
DDR3_CKE	K9	CKE	
DDR3_CK0_P	J7	CK	
DDR3_CK0_N	K7	CK#	

DDR3_RESET#	T2	RESET#	
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NC0	NC0		
NC1	NC1		
NC2	NC2		
NC3	NC3		
VSS0	VSS0		
VSS1	VSS1		
VSS2	VSS2		
VSS3	VSS3		
VSS4	VSS4		
VSS5	VSS5		
VSS6	VSS6		
VSS7	VSS7		
VSS8	VSS8		
VSS9	VSS9		
VSS10	VSS10		
VSS11	VSS11		
VSS12	VSS12		
VSS13	VSS13		
VSS14	VSS14		
VSS15	VSS15		
VSS16	VSS16		
VSS17	VSS17		
VSS18	VSS18		
VSS19	VSS19		
VSS20	VSS20		

DDR3_A14	R3	40.2R/62.5mW/1%/R0402
DDR3_A13	R4	40.2R/62.5mW/1%/R0402
DDR3_A12	R5	40.2R/62.5mW/1%/R0402
DDR3_A11	R6	40.2R/62.5mW/1%/R0402
DDR3_A10	R7	40.2R/62.5mW/1%/R0402
DDR3_A9	R8	40.2R/62.5mW/1%/R0402
DDR3_A8	R9	40.2R/62.5mW/1%/R0402
DDR3_A7	R10	40.2R/62.5mW/1%/R0402
DDR3_A6	R11	40.2R/62.5mW/1%/R0402
DDR3_A5	R12	40.2R/62.5mW/1%/R0402
DDR3_A4	R13	40.2R/62.5mW/1%/R0402
DDR3_A3	R14	40.2R/62.5mW/1%/R0402
DDR3_A2	R15	40.2R/62.5mW/1%/R0402
DDR3_A1	R16	40.2R/62.5mW/1%/R0402
DDR3_A0	R17	40.2R/62.5mW/1%/R0402
DDR3_BA0	R18	40.2R/62.5mW/1%/R0402
DDR3_BA1	R19	40.2R/62.5mW/1%/R0402
DDR3_BA2	R20	40.2R/62.5mW/1%/R0402
DDR3_CS#	R21	40.2R/62.5mW/1%/R0402
DDR3_WE#	R22	40.2R/62.5mW/1%/R0402
DDR3_CAS#	R23	40.2R/62.5mW/1%/R0402
DDR3_RAS#	R24	40.2R/62.5mW/1%/R0402
DDR3_ODT	R25	40.2R/62.5mW/1%/R0402
DDR3_CKE	R26	40.2R/62.5mW/1%/R0402
DDR3_RESET#	R27	4.7k/62.5mW/1%/R0402
DDR3_CK0_P	R28	80.6R/62.5mW/1%/R0402
DDR3_CK0_N	R29	80.6R/62.5mW/1%/R0402

NOTE:
RESET# requires 1K resistor for Pull Down, to maintain logic high through FPGA Configuration. See UG933p62



DDR3_A0	N3	A0	VrefCA
DDR3_A1	P7	A1	
DDR3_A2	P5	A2	
DDR3_A3	N2	A3	
DDR3_A4	P8	A4	
DDR3_A5	P2	A5	
DDR3_A6	R8	A6	
DDR3_A7	R2	A7	
DDR3_A8	T8	A8	
DDR3_A9	R3	A9	
DDR3_A10	L7	A10/AP	
DDR3_A11	R7	A11	
DDR3_A12	N7	A12/BC#	
DDR3_A13	T3	A13	
DDR3_A14	T7	A14	

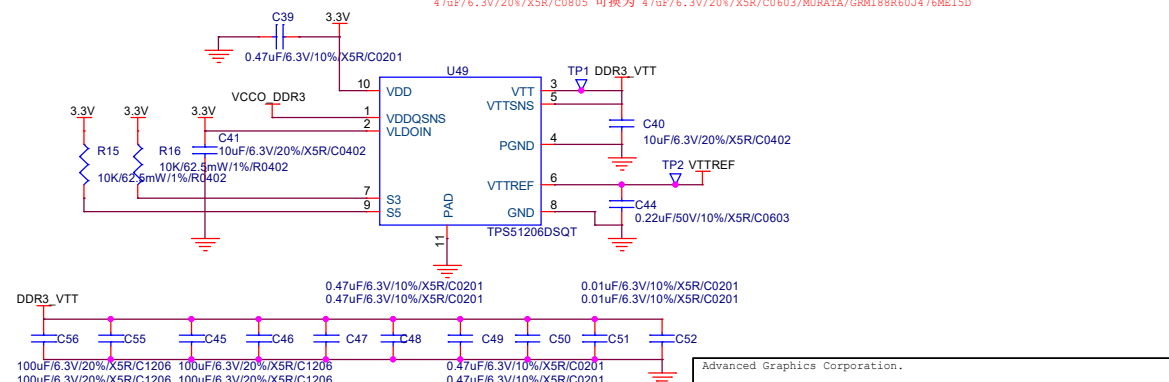
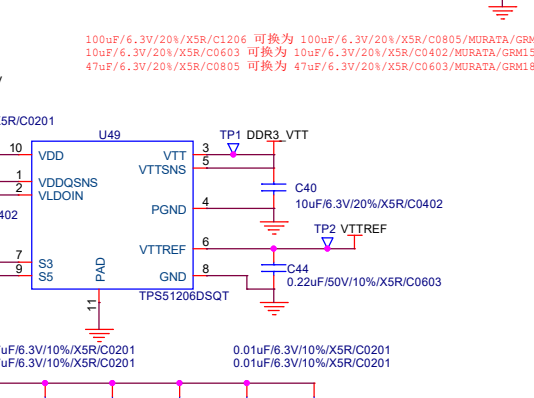
DDR3_BA0	M2	BA0	
DDR3_BA1	N8	BA1	
DDR3_BA2	M3	BA2	

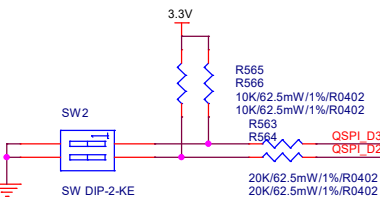
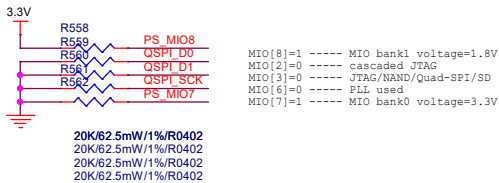
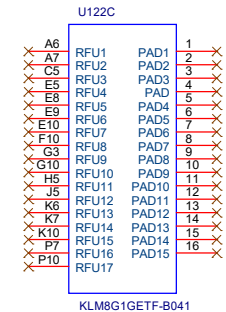
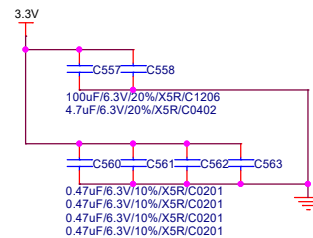
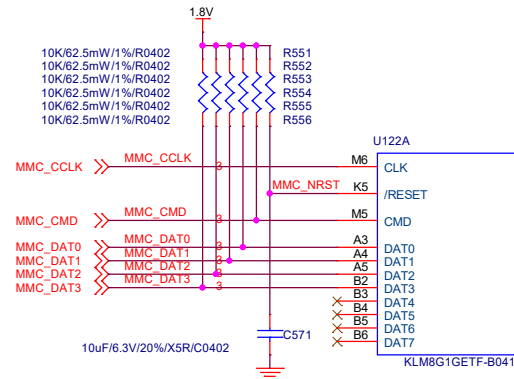
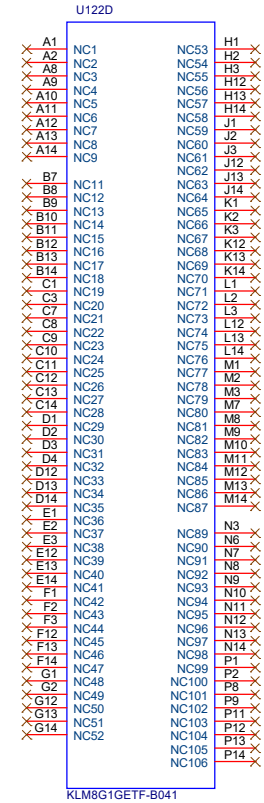
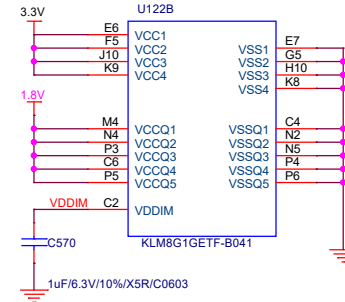
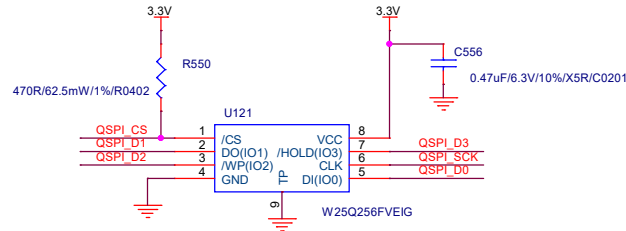
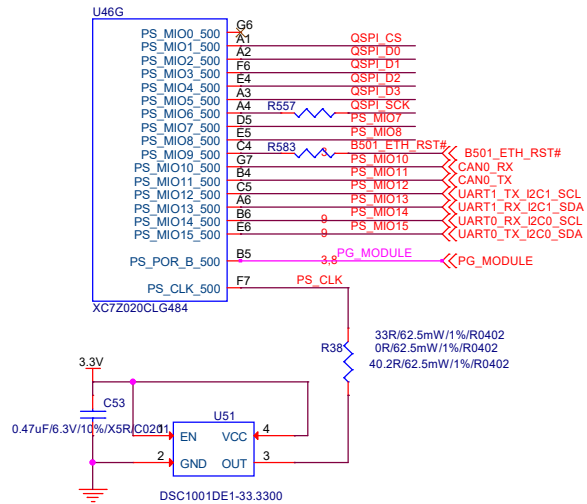
DDR3_CS#	L2	CS#	
DDR3_WE#	L3	WE#	
DDR3_CAS#	K3	CAS#	
DDR3_RAS#	J3	RAS#	

DDR3_CKE	K9	CKE	
DDR3_CK0_P	J7	CK	
DDR3_CK0_N	K7	CK#	

DDR3_RESET#	T2	RESET#	
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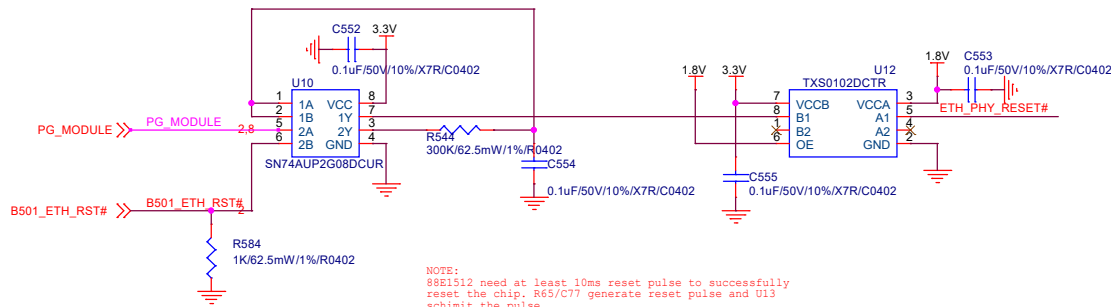
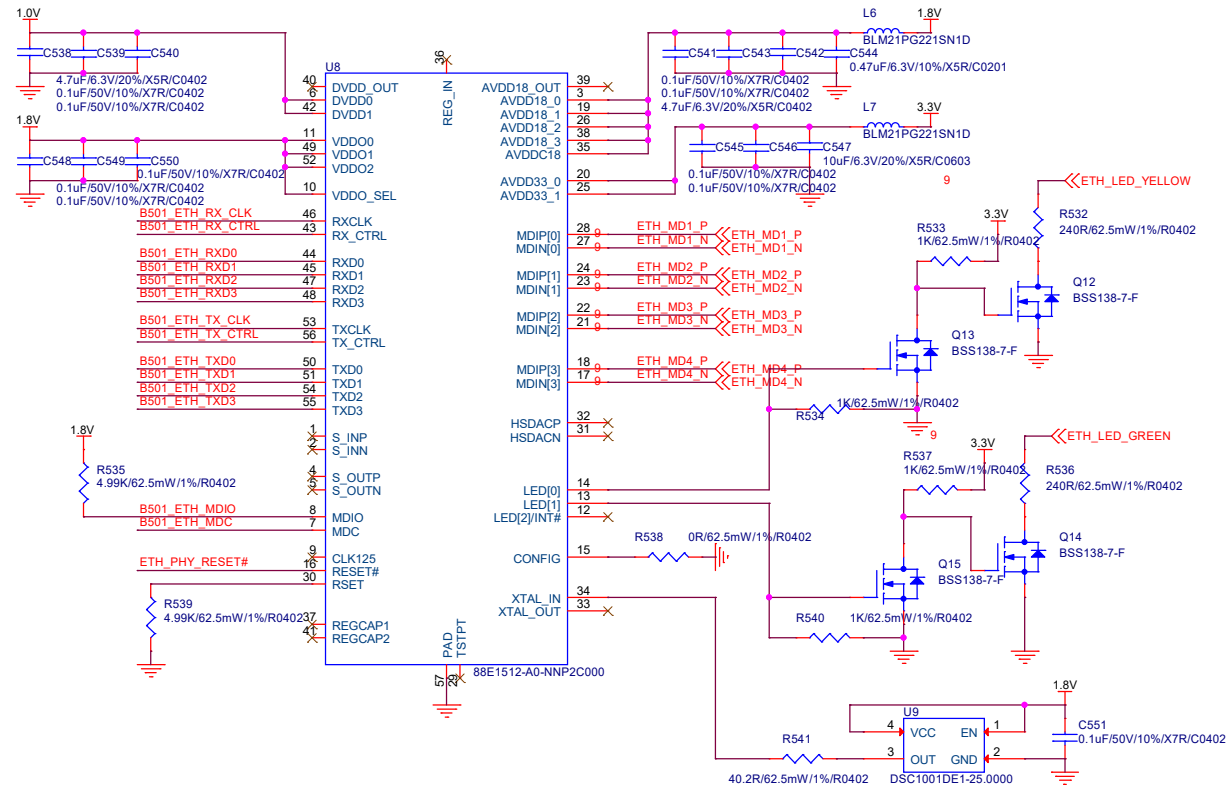
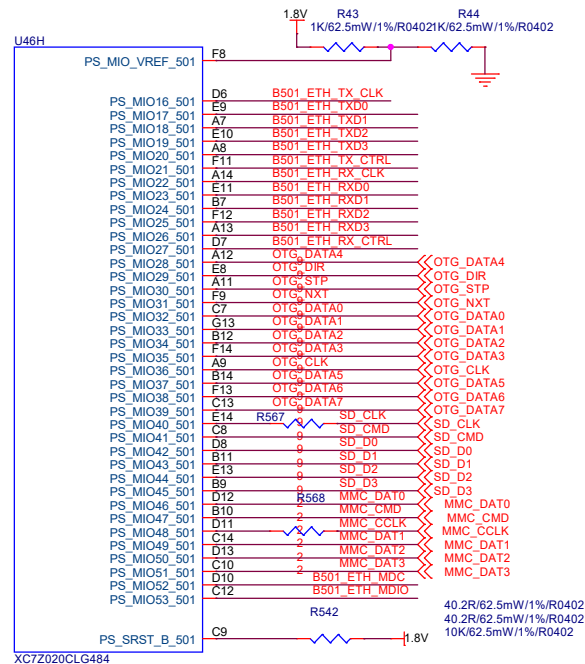
NC0	NC0		
NC1	NC1		
NC2	NC2		
NC3	NC3		
VSS0	VSS0		
VSS1	VSS1		
VSS2	VSS2		
VSS3	VSS3		
VSS4	VSS4		
VSS5	VSS5		
VSS6	VSS6		
VSS7	VSS7		
VSS8	VSS8		
VSS9	VSS9		
VSS10	VSS10		
VSS11	VSS11		
VSS12	VSS12		
VSS13	VSS13		
VSS14	VSS14		
VSS15	VSS15		
VSS16	VSS16		
VSS17	VSS17		
VSS18	VSS18		
VSS19	VSS19		
VSS20	VSS20		





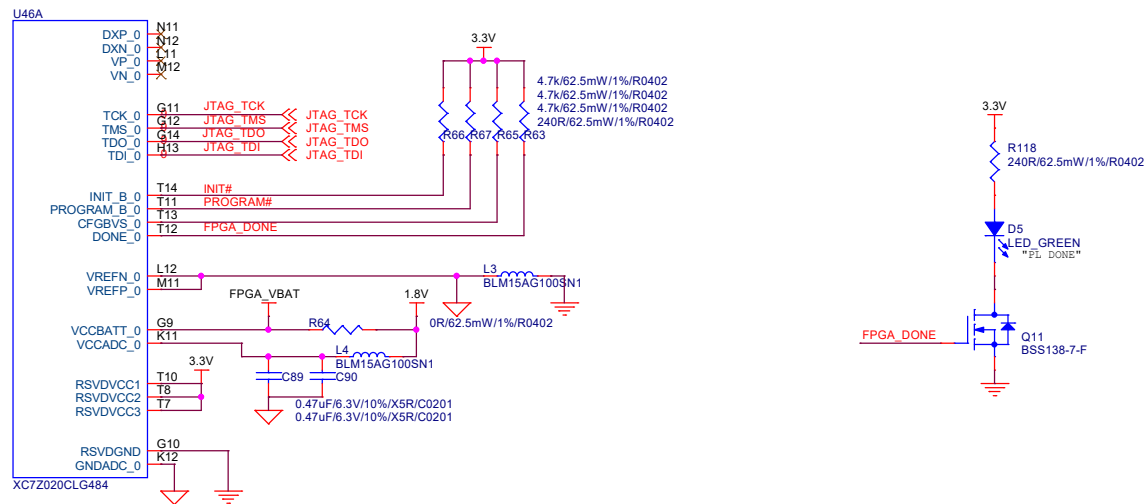
Boot Mode Select		
BOOT MODE	QSPI D3 (MI05)	QSPI D2 (MI04)
NAND (default)	LOW(2-3)	HIGH(1-2)
QSPI	HIGH(1-2)	LOW(2-3)
SD_CARD	HIGH(1-2)	HIGH(1-2)
JTAG	LOW(2-3)	LOW(2-3)
IND_JTAG	LOW(2-3)	LOW(2-3)
CASCADE_JTAG	LOW(2-3)	LOW(2-3)

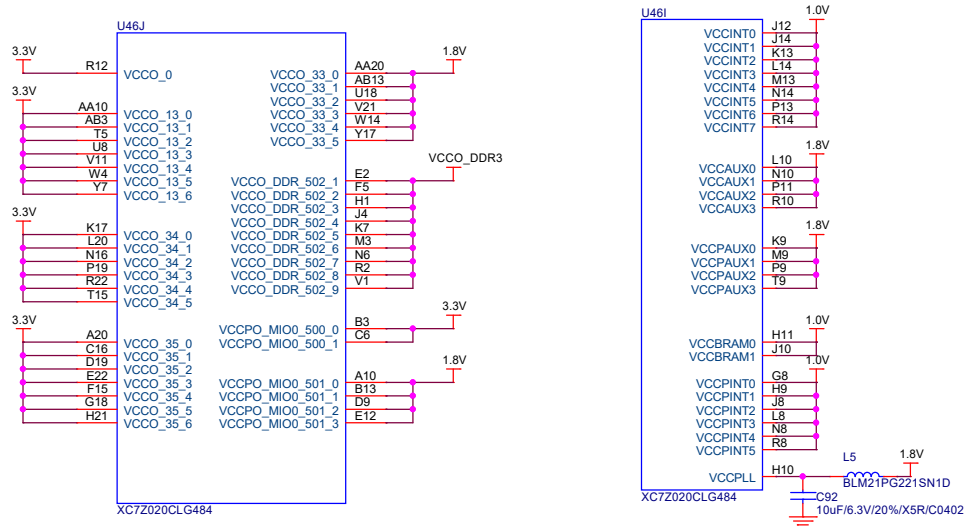
* CASCADE JTAG - DEFAULT MODE



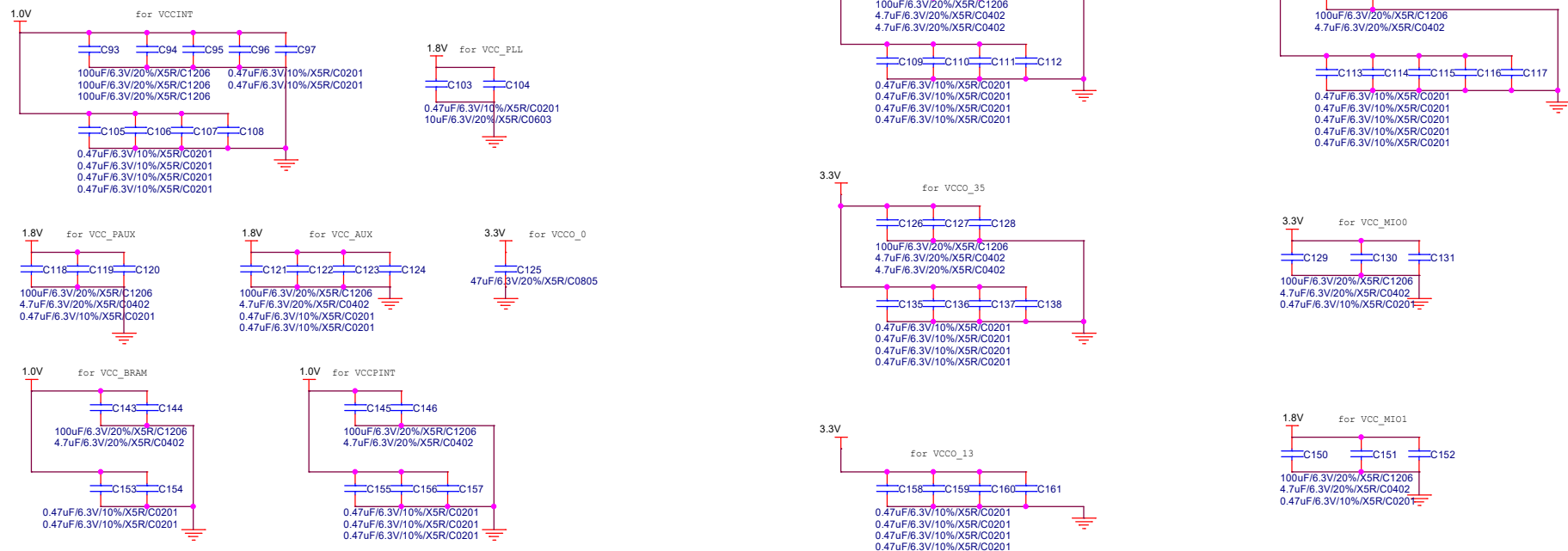
NOTE:
88E1512 need at least 10ms reset pulse to successfully
reset the chip. R65/C77 generate reset pulse and U13
schmitt the pulse.

Title			ETH, UART
Size	Document Number	Rev	
A3	A5012	1	
Date:	Sunday, November 07, 2021	Sheet	3 of 15

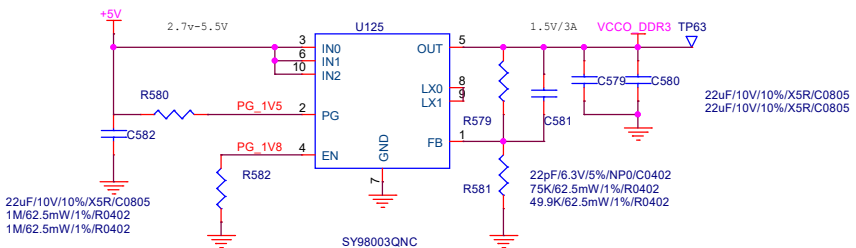
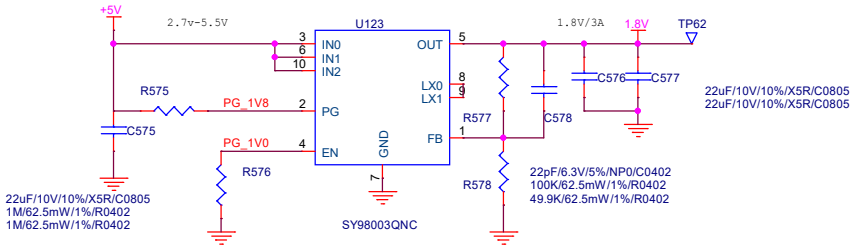
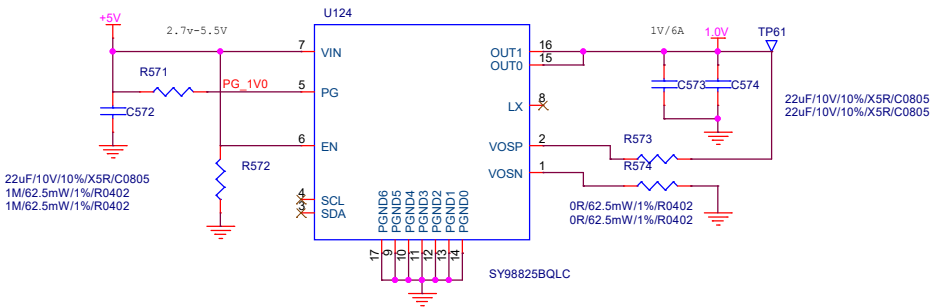




100uF/6.3V/20%/X5R/C1206 可换为 100uF/6.3V/20%/X5R/C0805/MURATA/GRM21BR60J107ME15L
10uF/6.3V/20%/X5R/C0603 可换为 10uF/6.3V/20%/X5R/C0402/MURATA/GRM155R60J106ME15D
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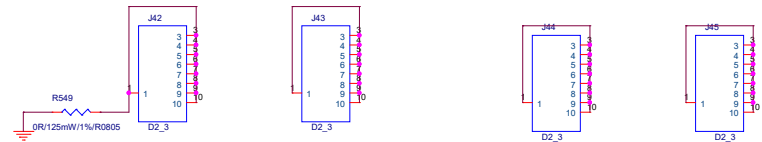
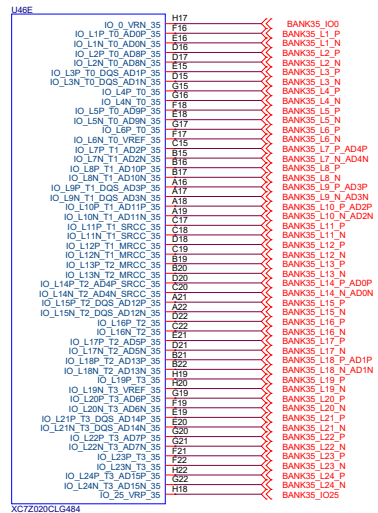
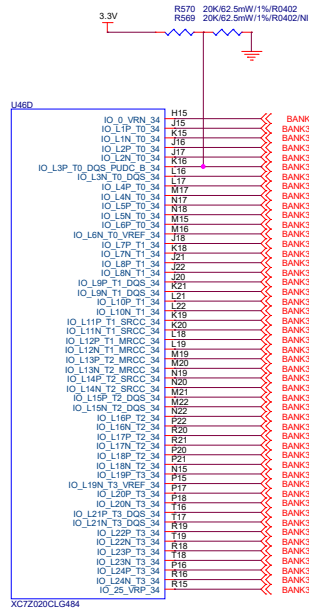
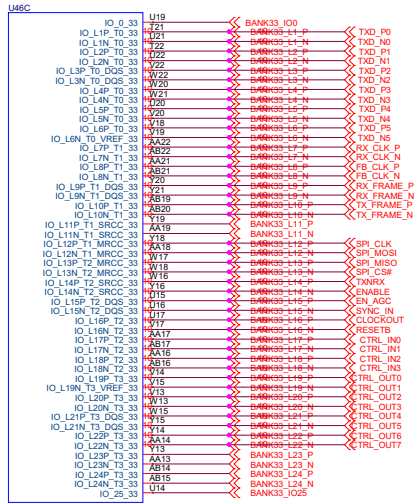
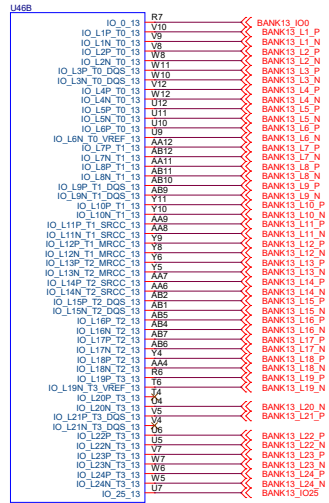


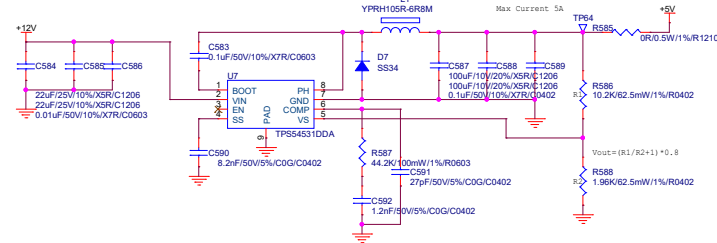
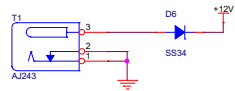
POWER UP SEQUENCE: 5V -> 1.0V -> 1.8V -> 1.5V (DDR) -> 3.3V -> PG_MODULE



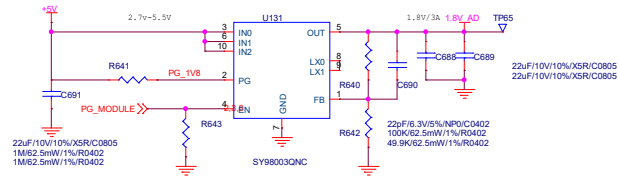
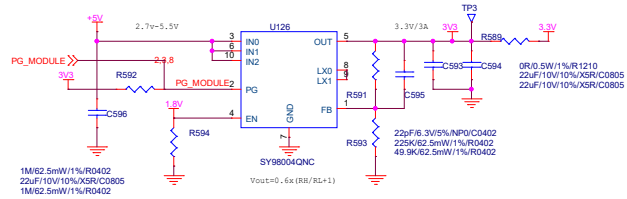
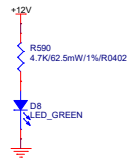
$$V_{out} = 0.6x (R_H / R_L + 1)$$

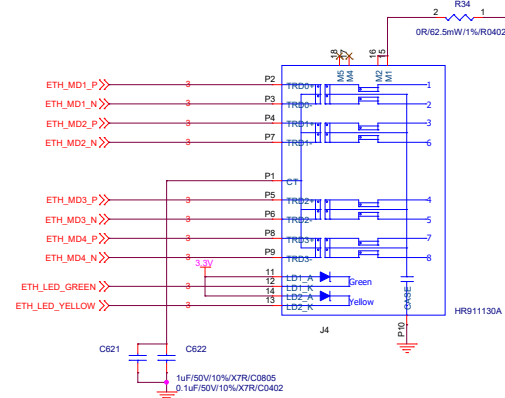
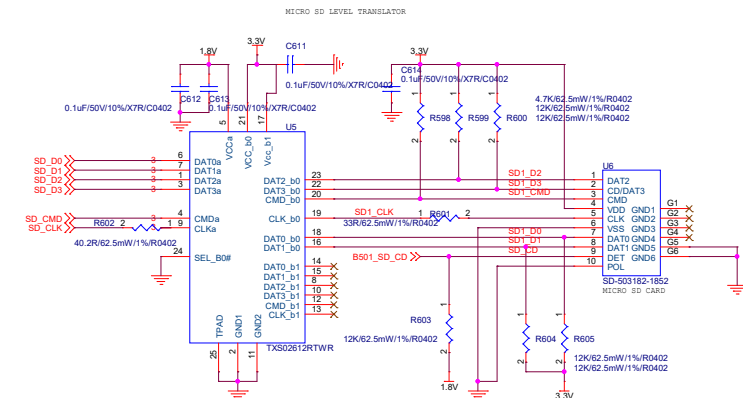
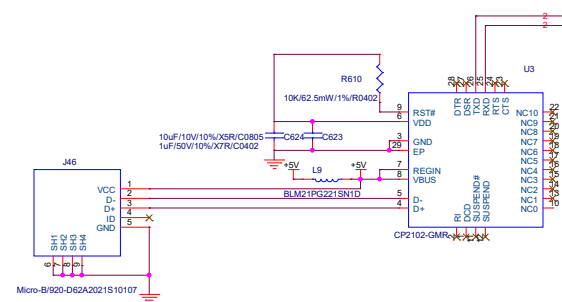
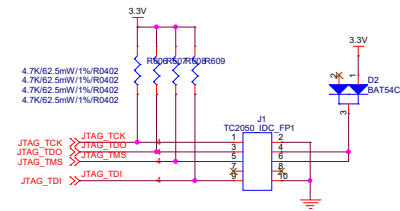
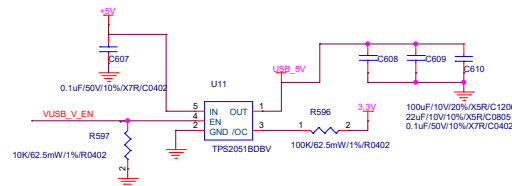
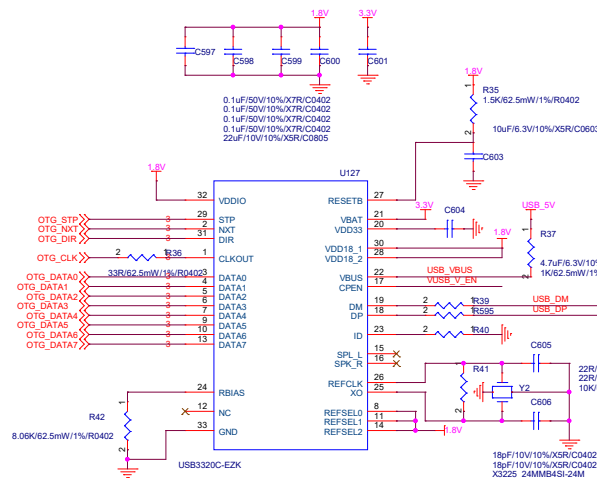
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CPU_PWR		
Size		
A3	Document Number	Rev
CB		1
Date: Sunday, November 07, 2021		
Sheet 6 of 12		

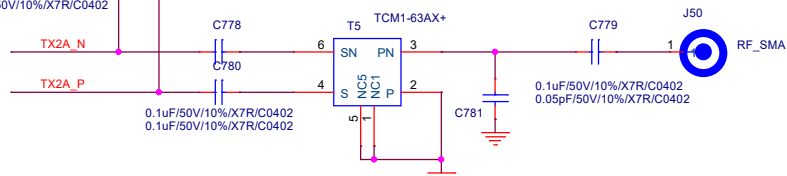
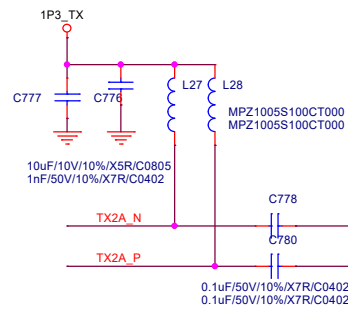
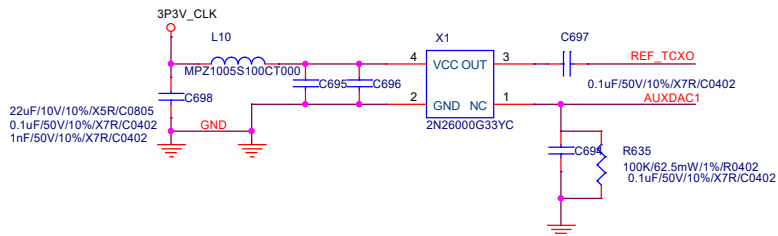




POWER UP SEQUENCE: 5V -> 1.0V -> 1.8V -> 1.5V (DDR) -> 3.3V -> PG_MODULE







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Size A3	Document Number <Doc>		Rev <Rev Code>
Date:	Sunday, November 07, 2021	Sheet 10 of 12	

