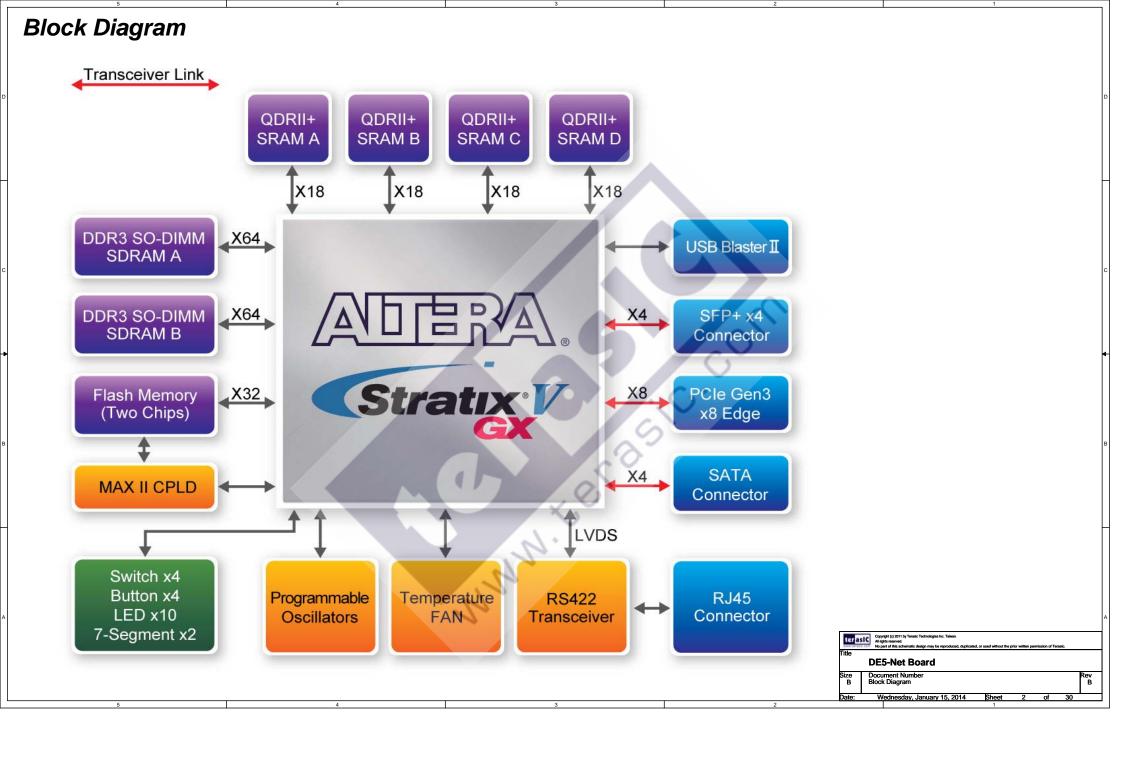
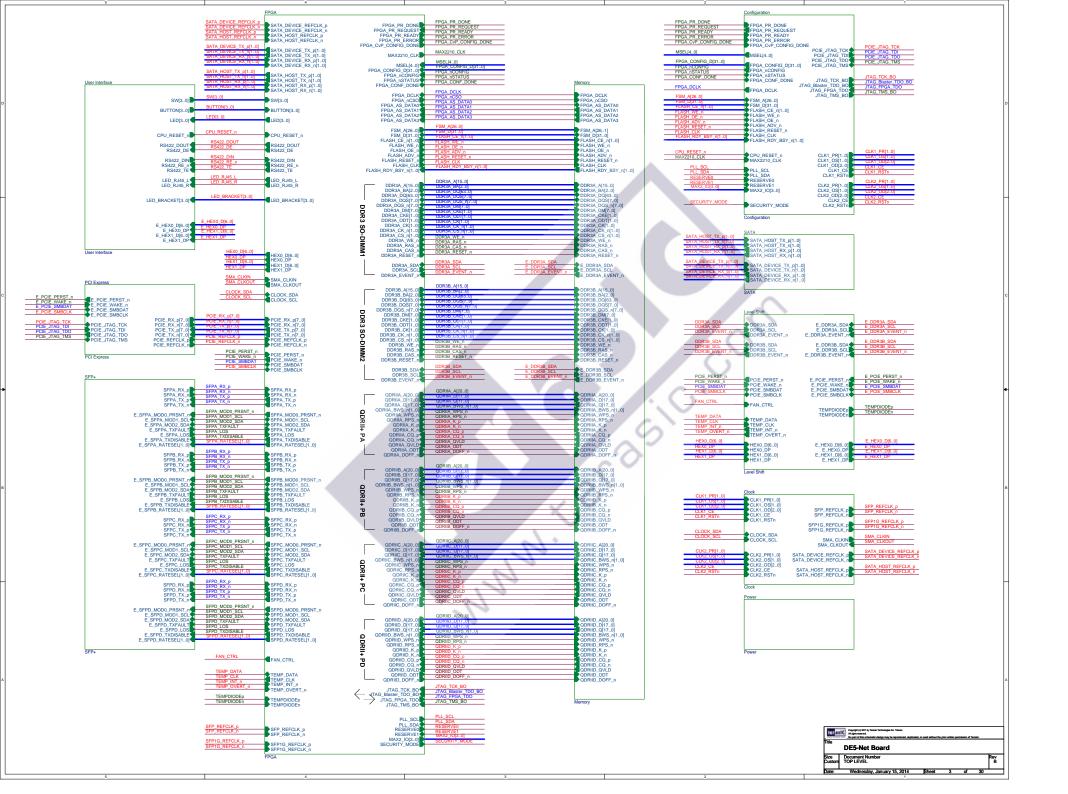
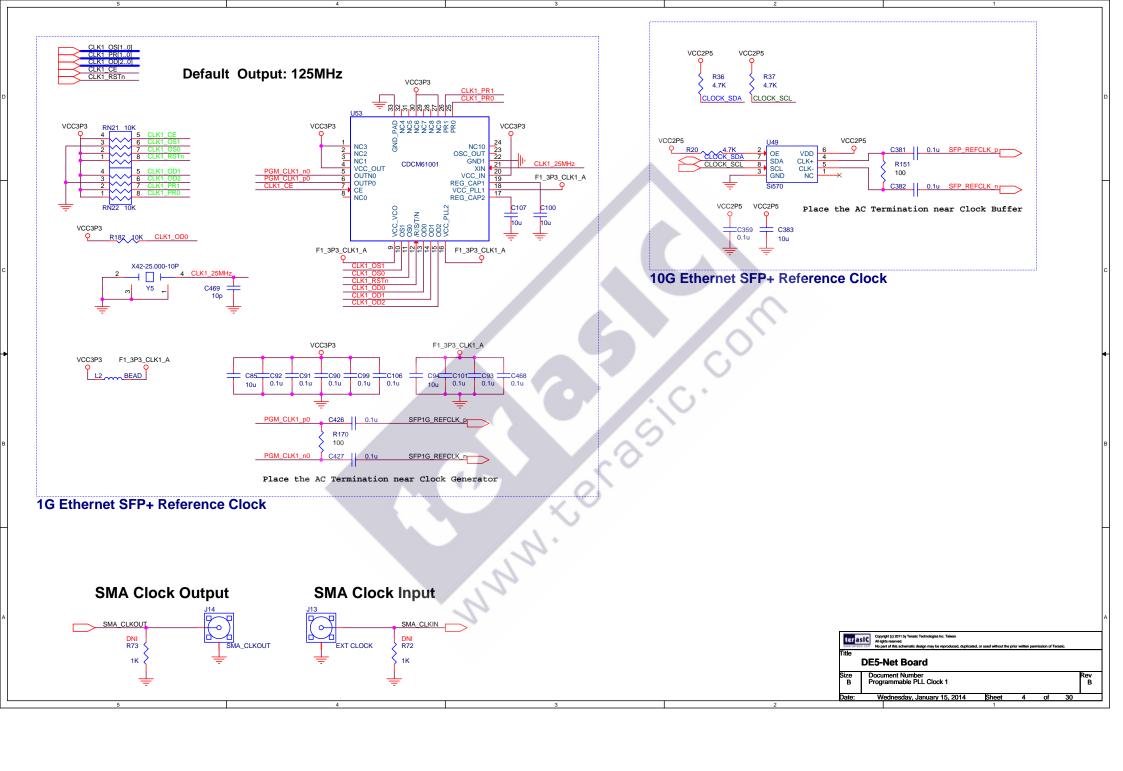
DE5-Net Board

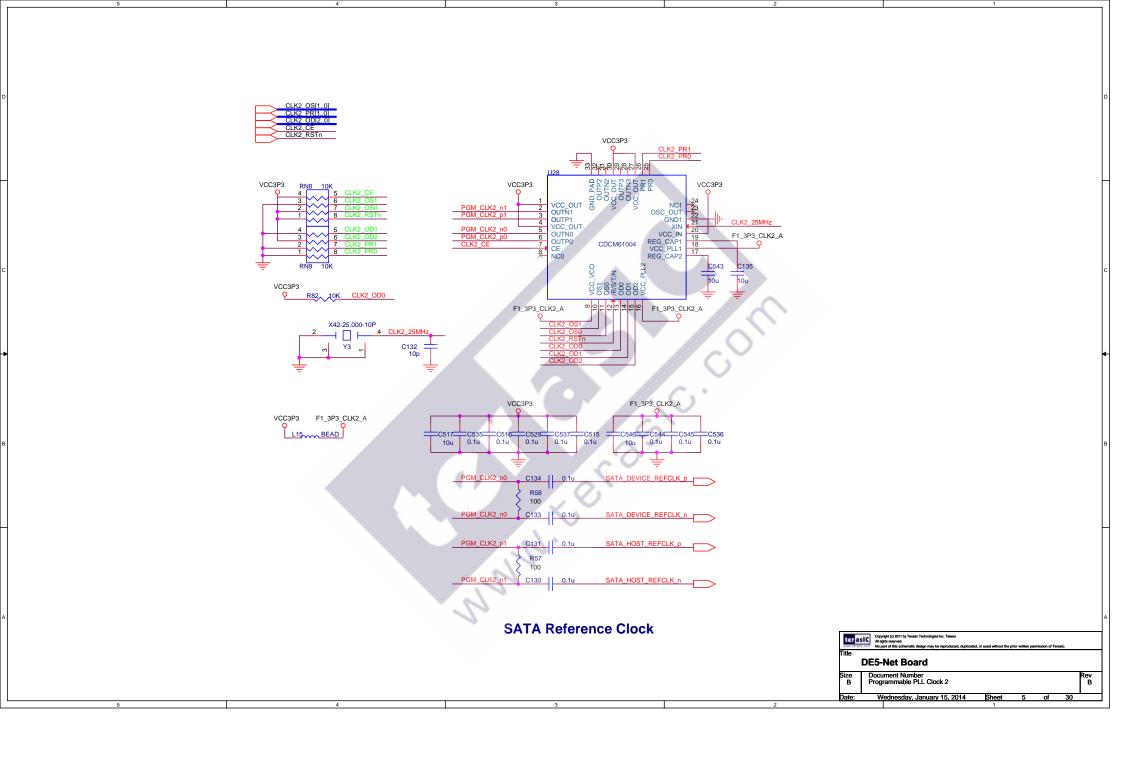
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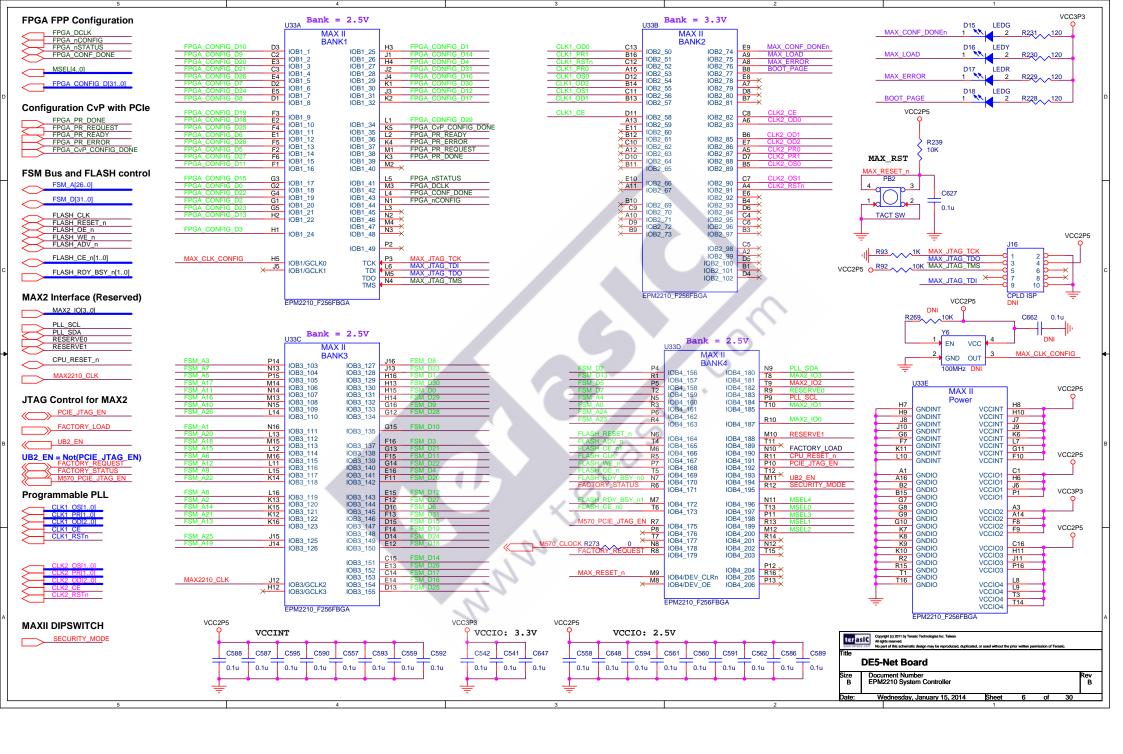
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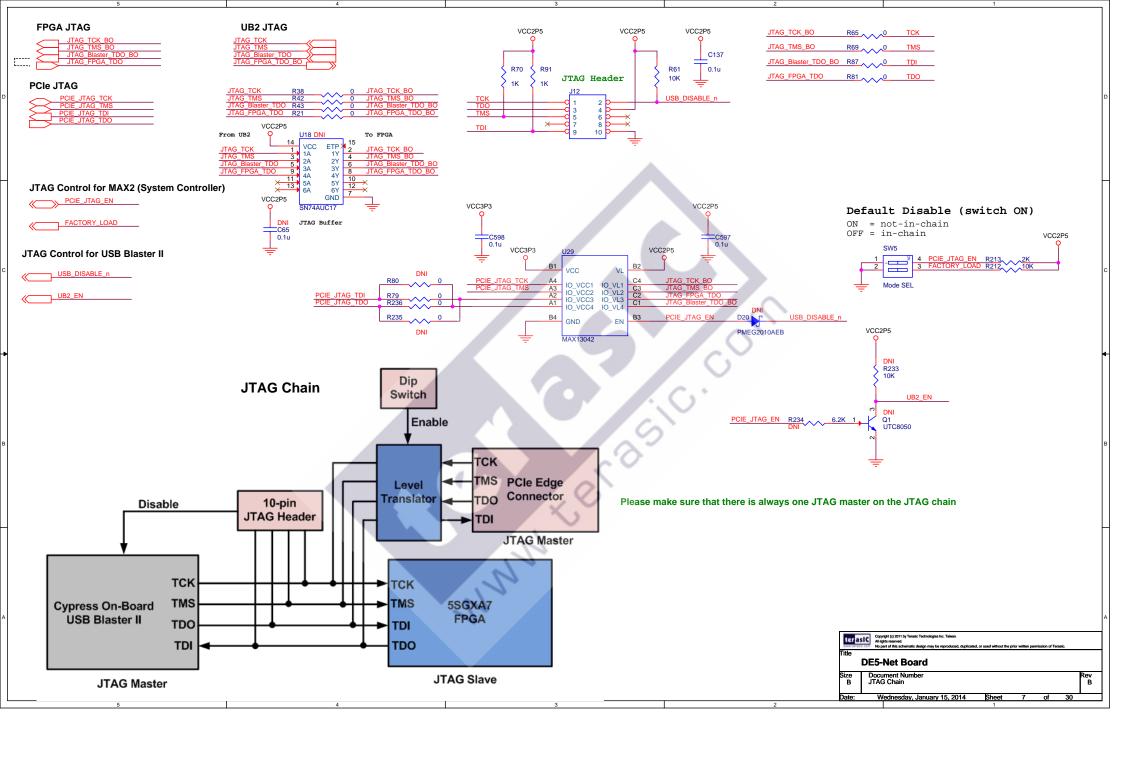


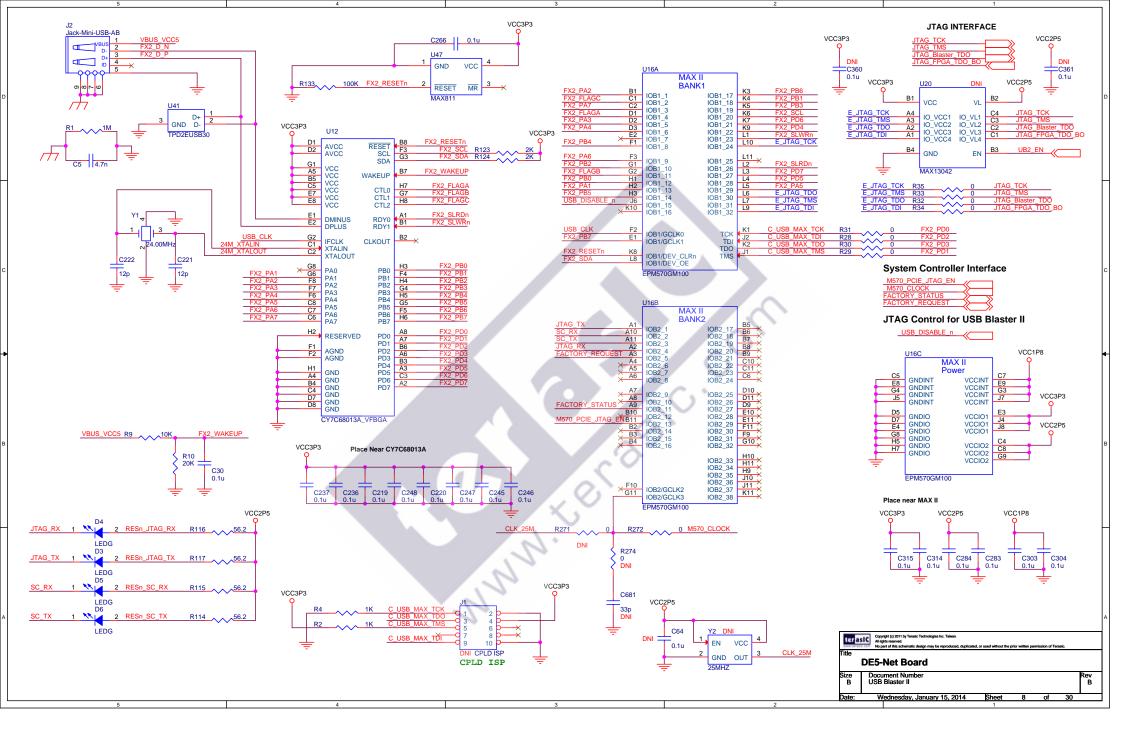


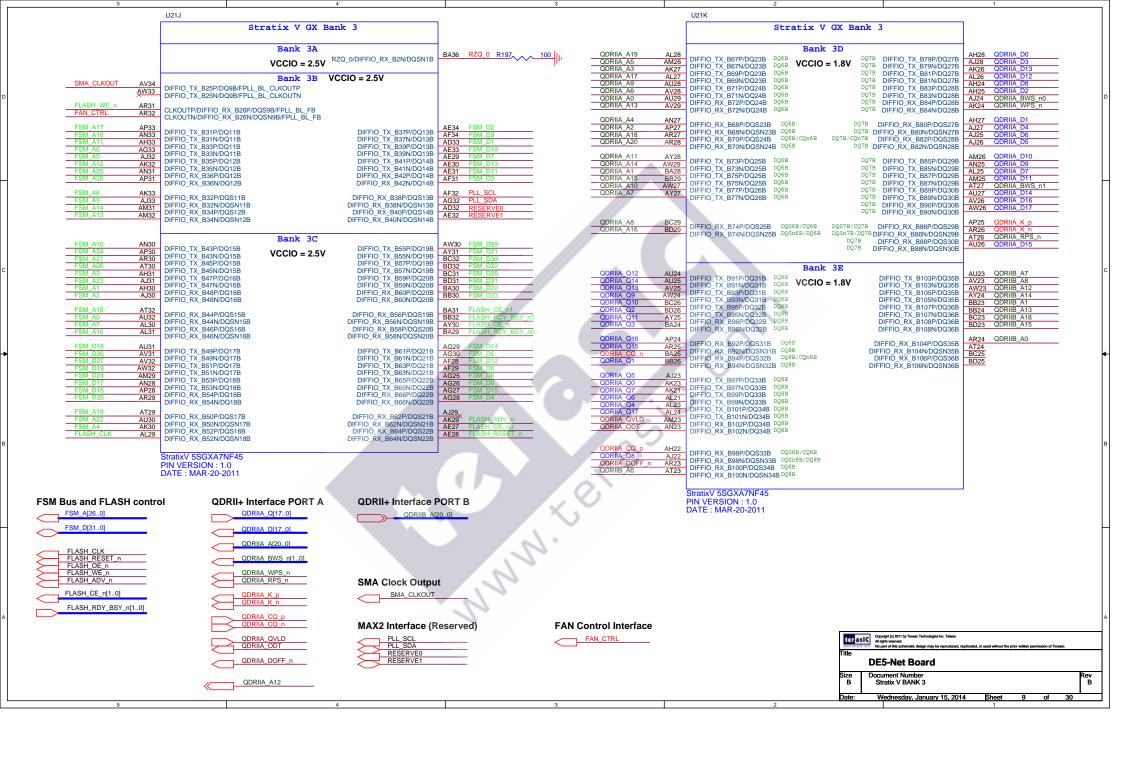


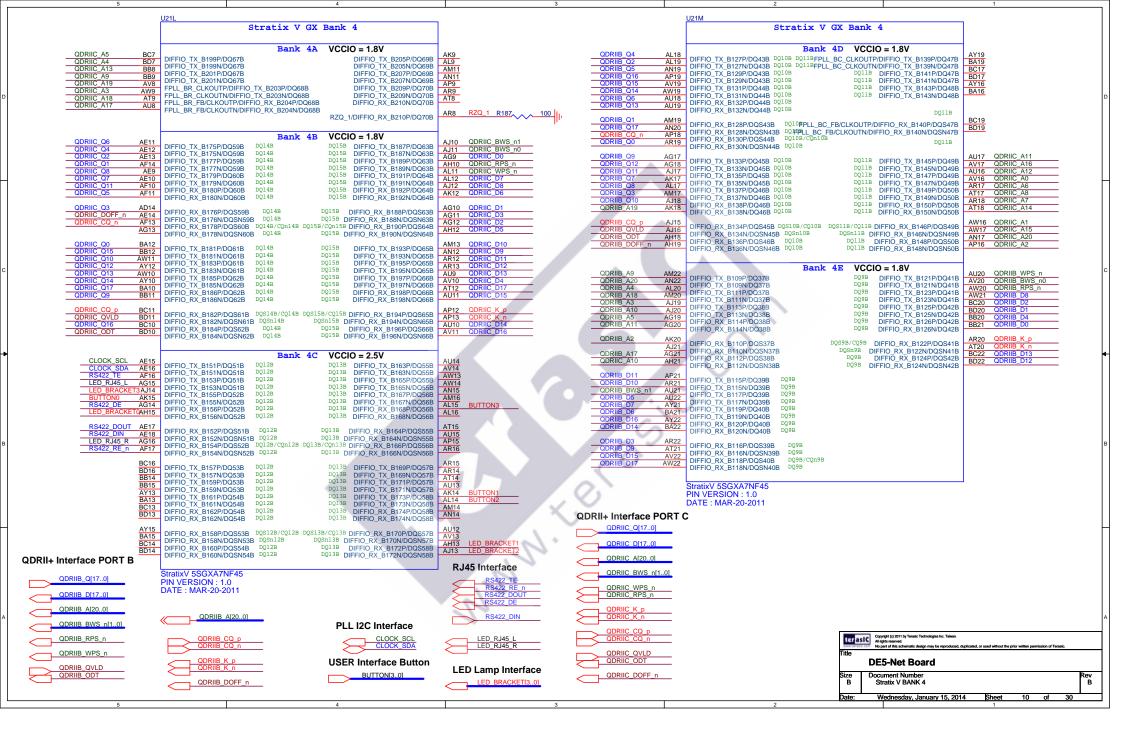


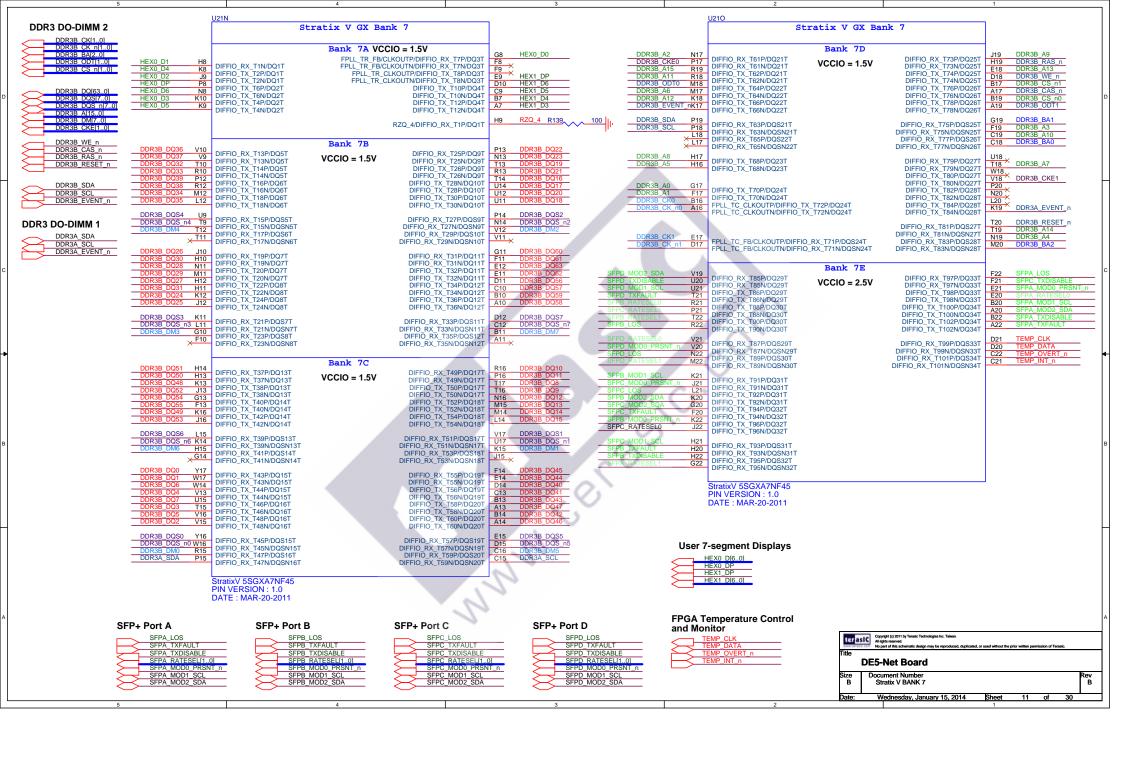




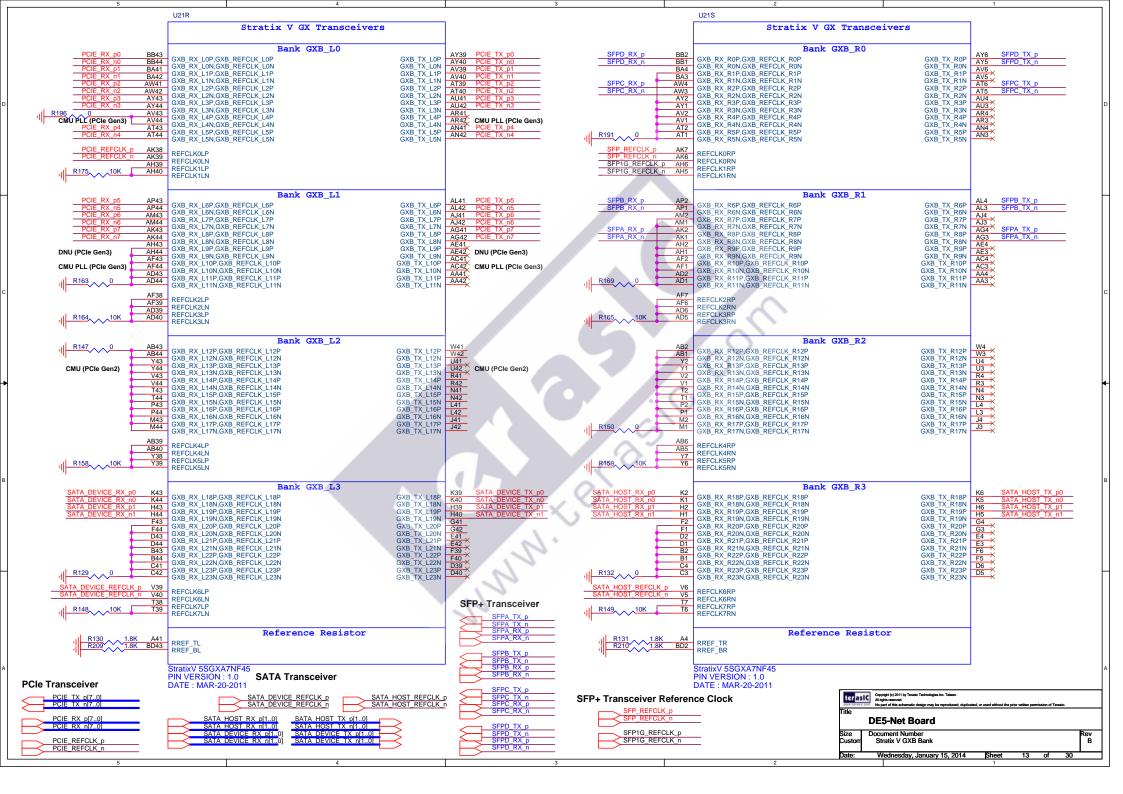


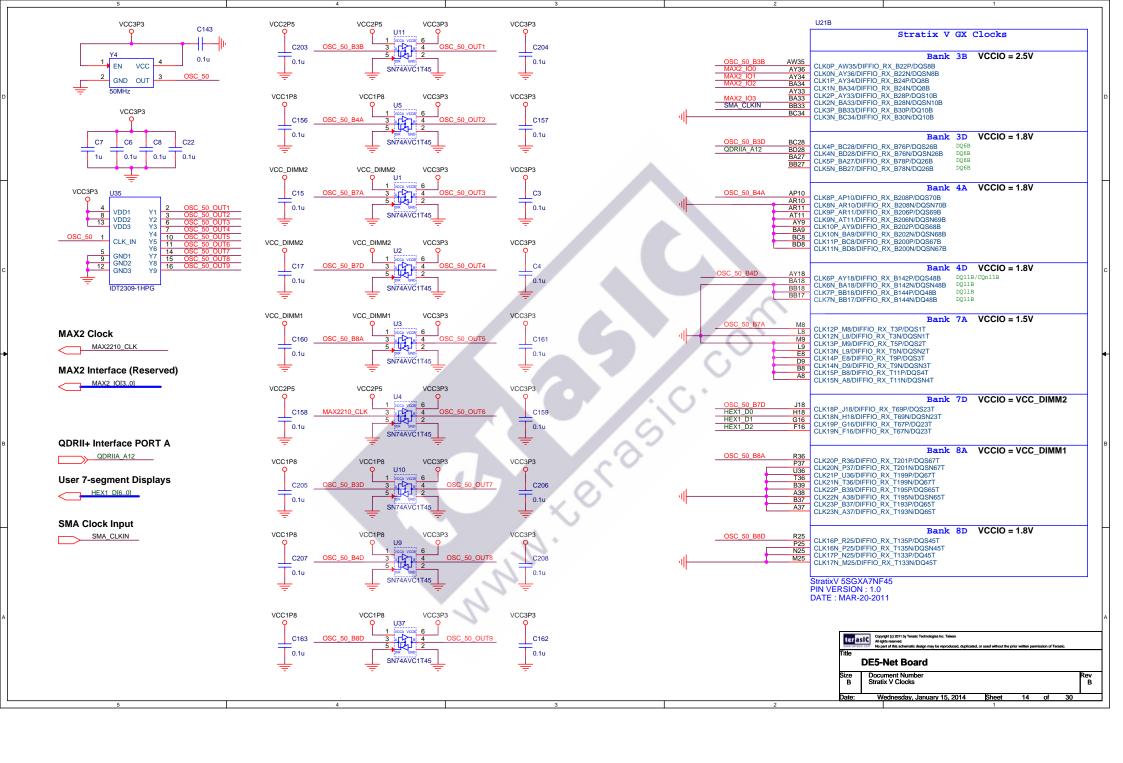


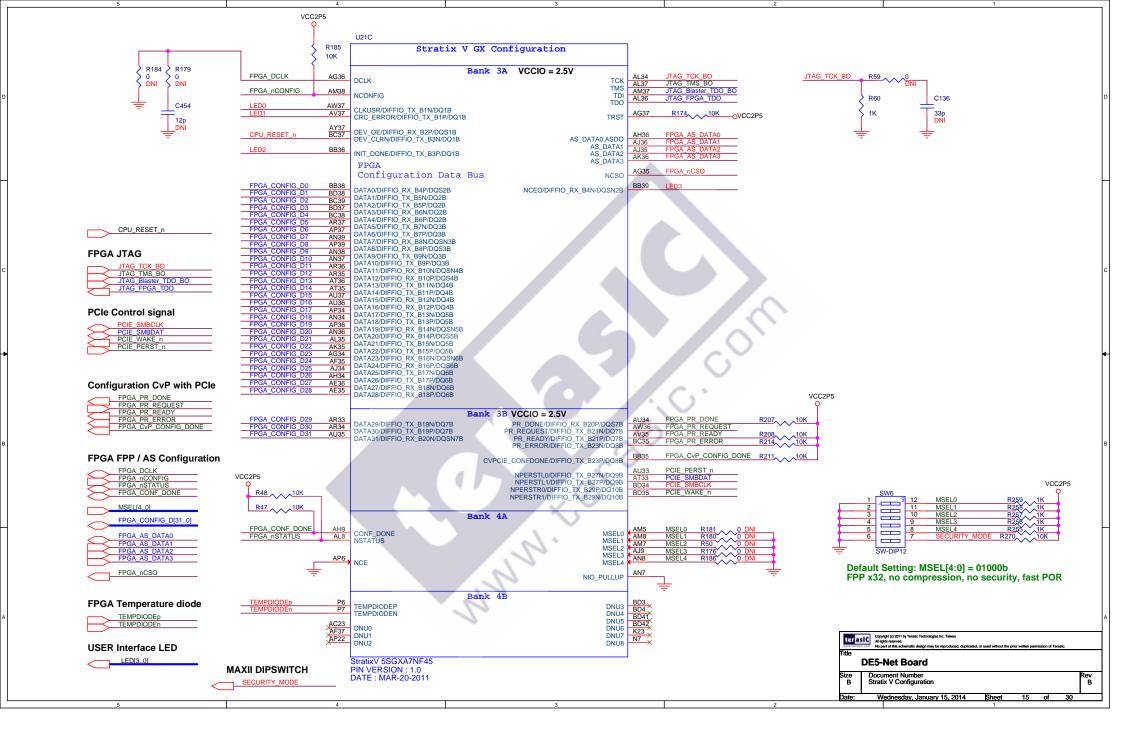


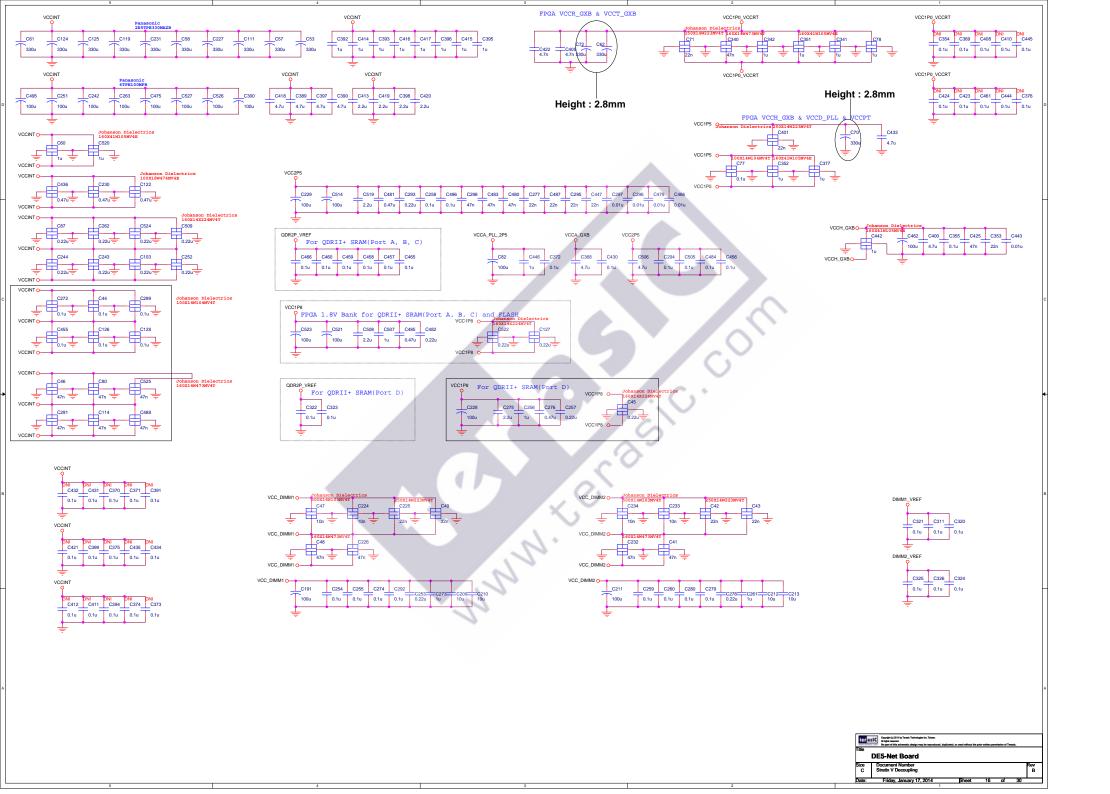


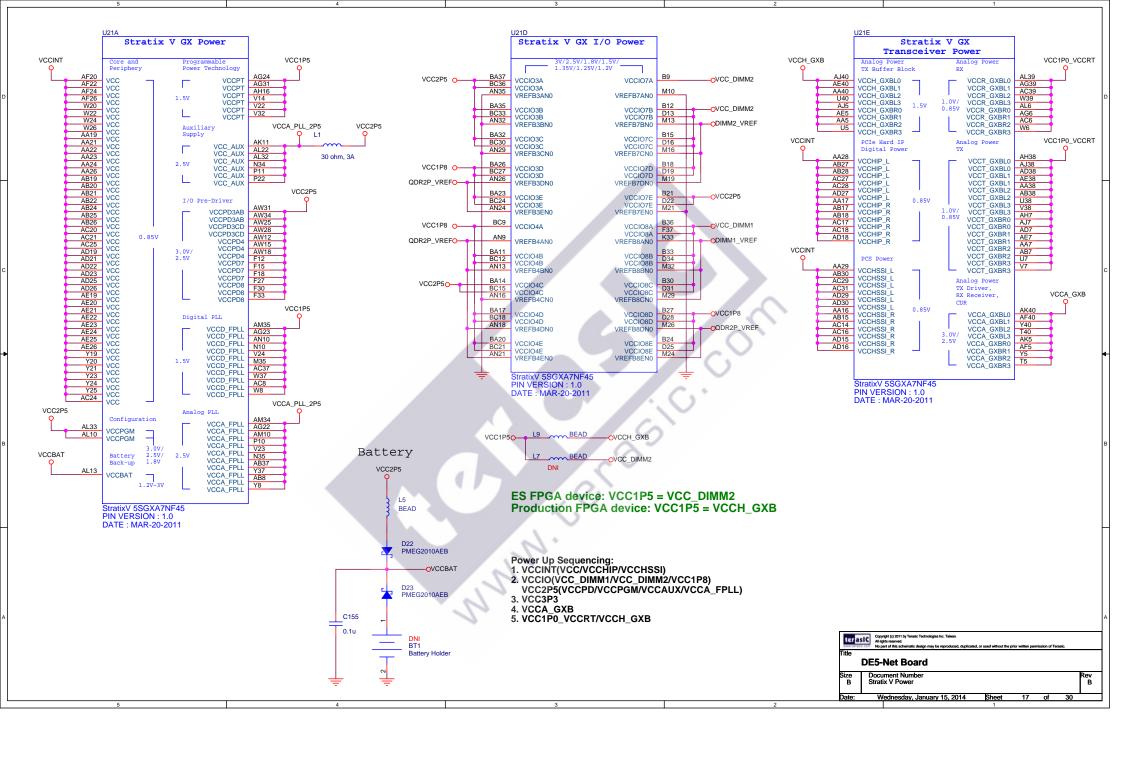
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	U21P	-1- O	1	Ä	21Q	
DDP3 DO-DIMM 1	Stratix V GX Bank 8				Stratix V GX Bank 8	
DDR3 DO-DIMM 1 DDR3A_CK[1,,0] DDR3A_CKE0 E36	Bank 8A		P39 DDR3A BA1	QDRIID Q11 D27	Bank 8D	RIID A7
DDR3A_CK_n[10]	DIFFIO_TX_T196P/DQ66T DIFFIO_TX_T196N/DQ66T VCCIO = 1.5V	DIFFIO_TX_T202P/DQ68T DIFFIO_TX_T202N/DQ68T	P38 DDR3A_RAS_n N38 DDR3A_A2	QDRIID_Q0 C27 QDRIID_Q2 B26	DIFFIO_RX_T121P/DQ41T DQ10T VCCIO = 1.8V DQ11T DIFFIO_TX_T134P/DQ45T T25 QDRI	RIID_A15
DDR3A ODT[1 0] DDR3A CK p0 E36	FPLL_TL_CLKOUTP/DIFFIO_TX_T198P/DQ66T FPLL_TL_CLKOUTN/DIFFIO_TX_T198N/DQ66T	DIFFIO_TX_T204P/DQ68T DIFFIO_TX_T204N/DQ68T	N37 DDR3A_WE_n J36 DDR3A_BA2	QDRIID_Q1 A26 QDRIID Q6 A29	DIFFIO_TX_T122P/DQ41T DQ10T DIFFIO_TX_T122P/DQ41T DQ10T V27 QDRI	RIID_A9
		DIFFIO_RX_T205P/DQ69T DIFFIO_RX_T205N/DQ69T	H36 DDR3A_A4 K35 DDR3A_A7	QDRIID_Q7 A28 QDRIID_Q5 C28	DIFFIO_TX_T124P/DQ42T	RIID_A14
DDR3A_DQ[630] DDR3A_DQS[70] DDR3A_DQS n[70] DDR3A_CK1 J37		DIFFIO_TX_T206P/DQ69T DIFFIO_TX_T206N/DQ69T	K34 DDR3A_A14	QDRIID_Q8 B28	DIFFIO_TX_T126P/DQ42T DQ10T DQ11T DIFFIO_TX_T138P/DQ46T U27 QDRI DIFFIO_TX_T126N/DQ42T DQ10T DQ11T DIFFIO_TX_T138N/DQ46T U27 QDRI	RIID_A10
DDR3A_A[150] DDR3A_CK_n1 H37	FPLL_TL_FB/CLKOUTP/DIFFIO_RX_T197P/DQS66T FPLL_TL_FB/CLKOUTN/DIFFIO_RX_T197N/DQSN66T	DIFFIO_RX_T203P/DQS68T	P36 DDR3A_CS_n0	QDINID_DOLL_II E21	DIFFIO_RX_T123P/DQS41T	[]
DDR3A DM[70] DDR3A CKE[10]	22_12_1 5/02/100/1100/110_11/1_113/14/04/3/1001	DIFFIO_RX_T207P/DQS69T DIFFIO_RX_T207N/DQSN69T	K37 DDR3A_A9 K36 DDR3A_A12	ODPIID A20 D20		RIID_A13 RIID_A6
DDR3A_WE_n	DIFFIO_TX_T194P/DQ65T RZQ_	5/DIFFIO_RX_T203N/DQSN68T	P35 RZQ_5 R145 100	QDRIID_Q12 G29	DIFFIO RY T127P/DO43T D010T D011T DIFFIO RY T139P/D047T	RIID_A17 RIID_A3
DDR3A_RAS_n DDR3A_RESET_n	DIFFIO_TX_T194N/DQ65T	DIFFIO_TX_T208P/DQ70T	M37 DDR3A_BA0 M36 DDR3A_CAS_n	QDRIID_Q13 F29	DIFFIO_RX_T127N/DQ43T DQ10T DQ11T DIFFIO_RX_T139N/DQ47T NZ8 QDRI DIFFIO_TX_T128P/DQ43T DQ10T DQ11T DIFFIO_TX_T140P/DQ47T M28 QDRI	RIID_A2 RIID_A18
DDDGA ODTA Was	DIFFIG. TV. T200B/DOCTT	DIFFIO_TX_T208N/DQ70T DIFFIO_TX_T210P/DQ70T	M39 DDR3A_A0 M38 DDR3A_A10	QDRIID_Q17 H29 QDRIID_Q14 H28	DIFFIO_IX_1128N/DQ431 DQ10T	RIID_A11 RIID_A12
DDR3A_ODT0 V36	DIFFIO_TX_T200P/DQ67T DIFFIO_TX_T200N/DQ67T	DIFFIO_TX_T210N/DQ70T DIFFIO_RX_T209P/DQS70T	L36 DDR3A_A3	ODRIID O16 128	DIFFIO_TX_T130NDQ044T DQ10T	RIID_A1 RIID_A19
		DIFFIO_RX_T209N/DQSN70T	L35 DDR3A_A1	QDRIID_CQ_n H27	DIFFIC BY TARRIPORT POLATICATION PROLITICAL STREET, BY TARRIPORT L27 QDRI	RIID_A5
DDD2A DOC ACC	Bank 8B		E35 DDB3A DO46	QDRIID_QVLD J27	DIFFIO_RX_T129N/DQSN43T DQ10T DQ11T DIFFIO_RX_T141N/DQSN47T P26 QDRI	RIID_A4 RIID_A16 RIID_A0
DDR3A_DQ1 A34	DIFFIO_RX_T169P/DQ57T DIFFIO_RX_T169P/DQ57T VCCIO = 1.5V	DIFFIO_RX_T181P/DQ61T DIFFIO_RX_T181N/DQ61T	F35 DDR3A_DQ16 E35 DDR3A_DQ21 G34 DDR3A_DQ17	QDRIID_ODT H26	DIFFIO_RX_1131P/DQS441 DQ201 DQ11T DIFFIO_RX_1143P/DQS441 DQ6 QDRI	AIID_AU
c DDR3A_DQ4 B32	DIFFIO_IX_I170P/DQ571 DIFFIO_TX_T170N/DQ57T	DIFFIO_TX_T182P/DQ61T DIFFIO_TX_T182N/DQ61T	F34 DDR3A_DQ20 K31 DDR3A_DQ23	SW0 B25	Bank 8E H24 QDRI	RIID_D1
DDR3A_DQ6 D33 DDR3A_DQ2 D36	DIFFIO_TX_T172P/DQ58T DIFFIO_TX_T172N/DQ58T	DIFFIO_TX_T184P/DQ62T DIFFIO_TX_T184N/DQ62T	J31 DDR3A_DQ22 J34 DDR3A_DQ19	SW1 A25 SW2 B23	DIFFIO RX_1103P/DQ351	RIID_D2 RIID_D3
DDR3A_DQ5 D35	DIFFIO_TX_T174P/DQ58T DIFFIO_TX_T174N/DQ58T	DIFFIO_TX_T186P/DQ62T DIFFIO_TX_T186N/DQ62T	J33 DDR3A_DQ18	SW3 A23 E23	DIFFIO_TX_T104P/DQ35T	RIID_D4 RIID_D7
DDR3A_DQS0 C34 DDR3A_DQS_n0 B34	DIFFIO_RX_T171P/DQS57T DIFFIO_RX_T171N/DQSN57T	DIFFIO_RX_T183P/DQS61T DIFFIO_RX_T183N/DQSN61T	H35 DDR3A_DQS2 G35 DDR3A_DQS_n2	E24	DIFFIO_TX_T106N/DQ36T DIFFIO_TX_T118N/DQ40T E26 QDRI	RIID_RPS_n RIID_BWS_n0
DDR3A CKE1 B35	DIFFIO_RX_T173P/DQS58T DIFFIO_RX_T173N/DQSN58T	DIFFIO_RX_T185P/DQS62T DIFFIO_RX_T185N/DQSN62T	H34 DDR3A_DM2 H33 DDR3A_RESET_n	<u> </u>	DIFFIO_TX_T108N/DQ36T DIFFIO_TX_T120N/DQ40T	RIID_D6
	DIFFIO_RX_T175P/DQ59T	DIFFIO_RX_T187P/DQ63T	W34 DDR3A_DQ30 V35 DDR3A_DQ31	C25 C24 G23	DIFFIO_RX_T105P/DQS35T DQ9T/CQn9T DIFFIO_RX_T117P/DQS39T CQn9T DIFFIO_RX_T117P/DQSN35T DQ9T DIFFIO_RX_T117P/DQSN35T DQ9T DIFFIO_RX_T117P/DQSN39T H25 ODRI	RIID_BWS_n1_ RIID_D5
DDR3A_DQ35 V34	DIFFIO_TX_T176P/DQ59T	DIFFIO_RX_T187N/DQ63T DIFFIO_TX_T188P/DQ63T	T34 DDR3A_DQ29 R34 DDR3A_DQ28	E22	DIFFIO_RX_T107P/DQS36T DQ9T_DIFFIO_RX_T119P/DQS40T RL3_QDRI DIFFIO_RX_T119N/DQSN36T DQ9T_DIFFIO_RX_T119N/DQSN40T G25_QDRI	
DDR3A_DQ36 N31	DIFFIC TY T178P/D060T	DIFFIO_TX_T188N/DQ63T DIFFIO_TX_T190P/DQ64T	R33 DDR3A_DQ25 P34 DDR3A_DQ24	QDRIID_D15 U24	DIFFIO_RX_T109P/DQ37T DQ9T	
DDR3A_DQ32 P33 DDR3A_DQ33 P32	DIFFIO_TX_T180P/DQ60T	DIFFIO_TX_T190N/DQ64T DIFFIO_TX_T192P/DQ64T	M34 DDR3A DQ26 L33 DDR3A DQ27	QDRIID_D14 U23 QDRIID D17 T23	DIFFIO_RX_T109N/DQ37T DQ9T DIFFIO_TX_T110P/DQ37T DQ9T DEFIO_TX_T140P/DQ37T DQ9T	
DDR3A_DQS4 T33	DIFFIO_TX_T180N/DQ60T DIFFIO_RX_T177P/DQS59T DIFFIO_RX_T177N/DQSNS9T	DIFFIO_TX_T192N/DQ64T DIFFIO_RX_T189P/DQS63T	U35 DDR3A_DQS3	QDRIID_D11 P23 QDRIID_D9 N23	DIFFIO_TX_T110N/D037T	
DDR3A DM4 N32	DIFFIO_RX_T177P/DQSS91 DIFFIO_RX_T177N/DQSN59T DIFFIO_RX_T179P/DQS60T	DIFFIO_RX_T189P/DQS63T DIFFIO_RX_T189N/DQSN63T DIFFIO_RX_T191P/DQS64T	T35 DDR3A_DQS_n3 L32 DDR3A_DM3	ODDUD D40	DIFFIO_TX_T114N/DQ38T_DQ9T DIFFIO_TX_T114N/DQ38T_DQ9T	
	DIFFIO_RX_T179N/DQSN60T	DIFFIO_RX_T191N/DQSN64T	K32 DDR3A_A8	QDRIID_D13 R24	DIFFIO_RX_T111P/DQS37T DQ9T	В
DDR3A DQ58 Y28	Bank 8C		G32 DDR3A DQ53	QDRIID_K_p L23	DIFFIO_RX_T111N/DQSN37T DQ9T DIFFIO_RX_T113P/DQS38T DQS9T/CQ9T	
DDR3A_DQ63 Y27 DDR3A_DQ62 W28	DIFFIO_RX_T145P/DQ49T DIFFIO_RX_T145N/DQ49T DIFFIO_TX_T146P/DQ49T	DIFFIO_RX_T157P/DQ53T DIFFIO_RX_T157N/DQ53T	F32 DDR3A_DQ52 H32 DDR3A_DQ48	TALL THE TAL	DIFFIO_RX_T113N/DQSN38T DQSn9T/DQ9T	
DDR3A_DQ57 V28 DDR3A_DQ59 W29	DIFFIO_TX_T146N/DQ49T	DIFFIO_TX_T158P/DQ53T DIFFIO_TX_T158N/DQ53T	H31 DDR3A_DQ49 L30 DDR3A DQ50		StratixV 5SGXA7NF45 PIN VERSION : 1.0	
DDR3A_DQ60 V30 DDR3A_DQ61 V29	DIFFIO_TX_T148P/DQ50T DIFFIO_TX_T148N/DQ50T DIFFIO_TX_T150P/DQ50T	DIFFIO_TX_T160P/DQ54T DIFFIO_TX_T160N/DQ54T DIFFIO_TX_T162P/DQ54T	L29 DDR3A_DQ51 N29 DDR3A_DQ55		ATE : MAR-20-2011	
	DIFFIO_TX_T150N/DQ50T	DIFFIO_TX_T162P/DQ54T	M30 DDR3A_DQ54	QDRII+ Interface PORT	D	
DDR3A_DQS7 Y30 DDR3A_DQS_n7 Y29 DDR3A_DM7 T28	DIFFIO_RX_T147P/DQS49T DIFFIO_RX_T147N/DQSN49T	DIFFIO_RX_T159P/DQS53T DIFFIO_RX_T159N/DQSN53T	J30 DDR3A_DQS6 H30 DDR3A_DQS_n6 K30 DDR3A_DM6	QDRIID_Q[170]	USER Interface SWITCH	П
	DIFFIO_RX_T149P/DQS50T DIFFIO_RX_T149N/DQSN50T	DIFFIO_RX_T161P/DQS54T DIFFIO_RX_T161N/DQSN54T	K29 DDR3A_A5	QDRIID D[170]		
DDR3A_DQ8 A32 DDR3A_DQ9 A31	DIFFIO_RX_T151P/DQ51T	DIFFIO RX T163P/DQ55T	U30 DDR3A_DQ42 T29 DDR3A_DQ46	QDRIID A[200]		
DDR3A_DQ10 C30	DIFFIO_RX_1151N/DQ511	DIFFIO_RX_T163N/DQ55T DIFFIO_TX_T164P/DQ55T	P31 DDR3A_DQ43 P30 DDR3A_DQ47	QDRIID BWS n[10]		
		DIFFIO_TX_T164N/DQ55T DIFFIO_TX_T166P/DQ56T DIFFIO_TX_T166N/DQ56T	Y32 DDR3A_DQ45_	QDRIID_WPS_n QDRIID_RPS_n		
DDR3A_DQ15 G31 DDR3A_DQ14 F31	DIFFIO_TX_T154P/DQ52T DIFFIO_TX_T154P/NDQ52T DIFFIO_TX_T156P/NDQ52T DIFFIO_TX_T156P/NDQ52T	DIFFIO_TX_T166N/DQ56T DIFFIO_TX_T168P/DQ56T DIFFIO_TX_T168N/DQ56T	T31 DDR3A_DQ44 R31 DDR3A_DQ40	QDRIID K p		_A
DDR3A_DQS1 C31	DIFFIO RX T153P/DQS51T	DIFFIO_RX_T165P/DQS55T	T30 DDR3A_DQS5 R30 DDR3A_DQS_n5	QDRIID_K_n	Copyright (c) 2011 by Tensic Technologies In: Telean. All dight reserved.	
	DIFFIO_RX_T153P/DQS51T DIFFIO_RX_T153N/DQSNS1T DIFFIO_RX_T155P/DQS52T	DIFFIO_RX_T165N/DQSN55T DIFFIO_RX_T167P/DQS56T	R30 DDR3A_DQS_n5 W32 DDR3A_DM5 V31	QDRIID_CQ_p QDRIID_CQ_n	All rights reserved. No part of this schematic design may be reproduced, duplicated, or used without the prior written permission. Titlo.	on of Terasic.
	DIFFIO_RX_T155N/DQSN52T	DIFFIO_RX_T167N/DQSN56T	V 0 1	QDRIID_QVLD QDRIID_ODT	DE5-Net Board	
	StratixV 5SGXA7NF45 PIN VERSION : 1.0		.	QDRIID_DOFF_n	Size Document Number B Stratix V BANK 8	Rev B
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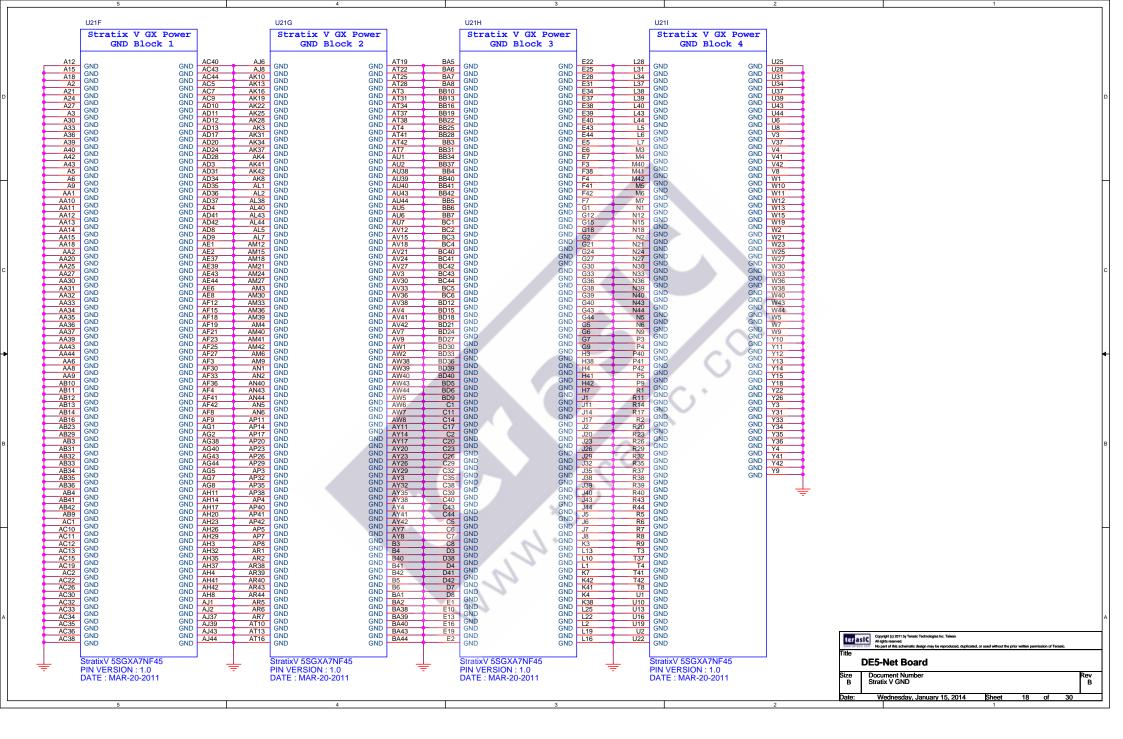


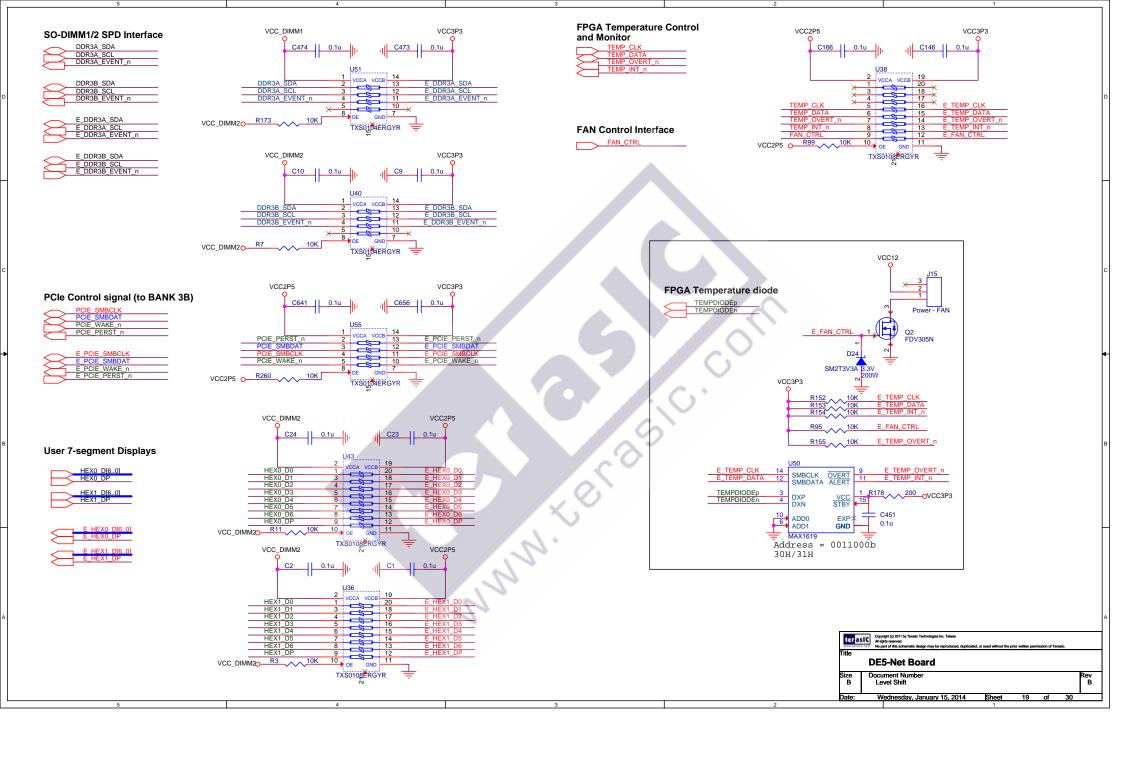


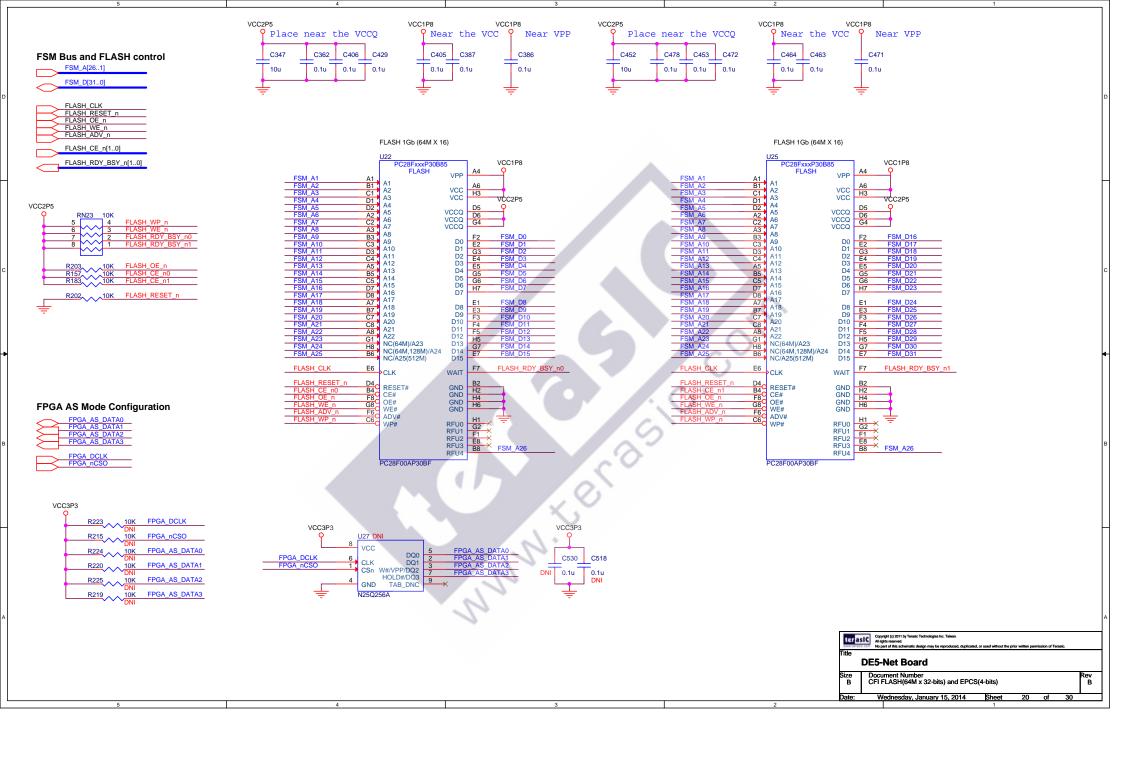


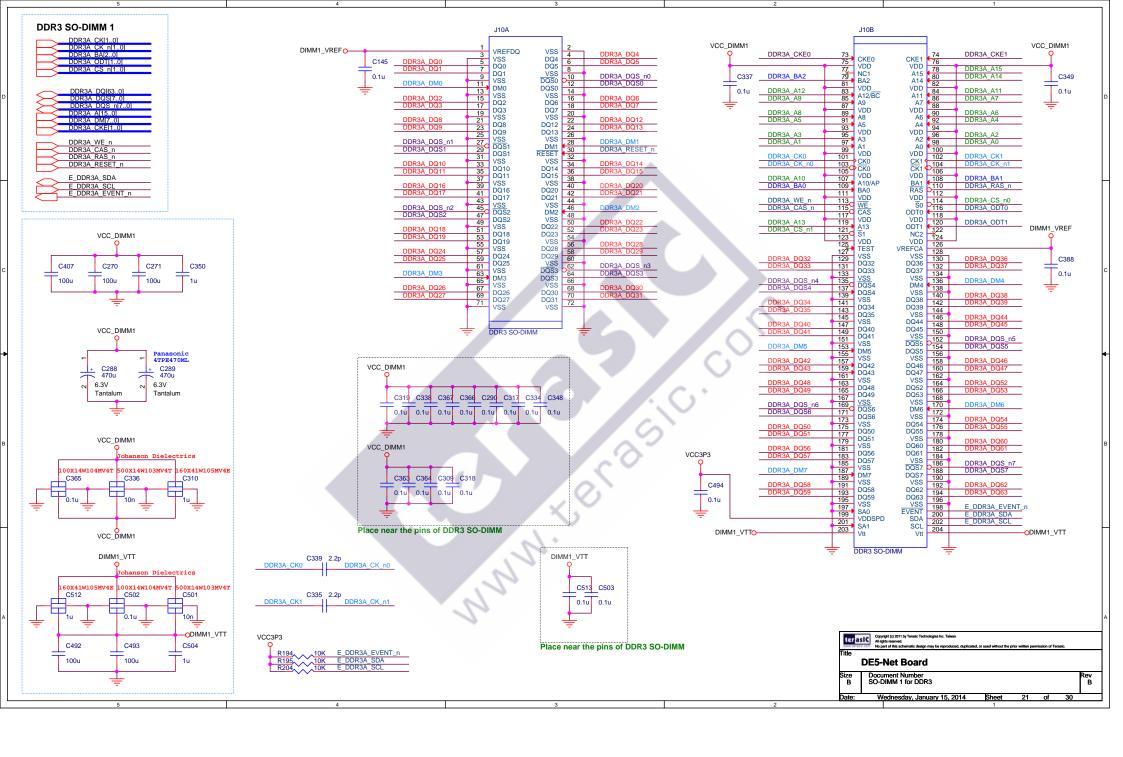


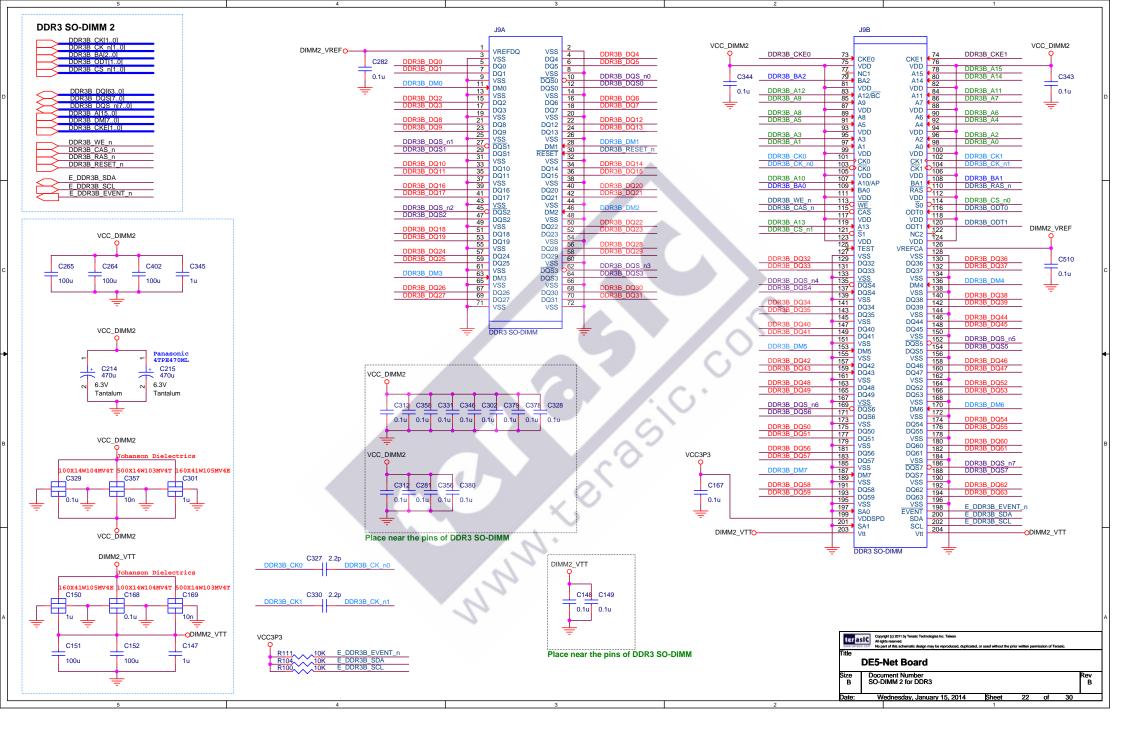


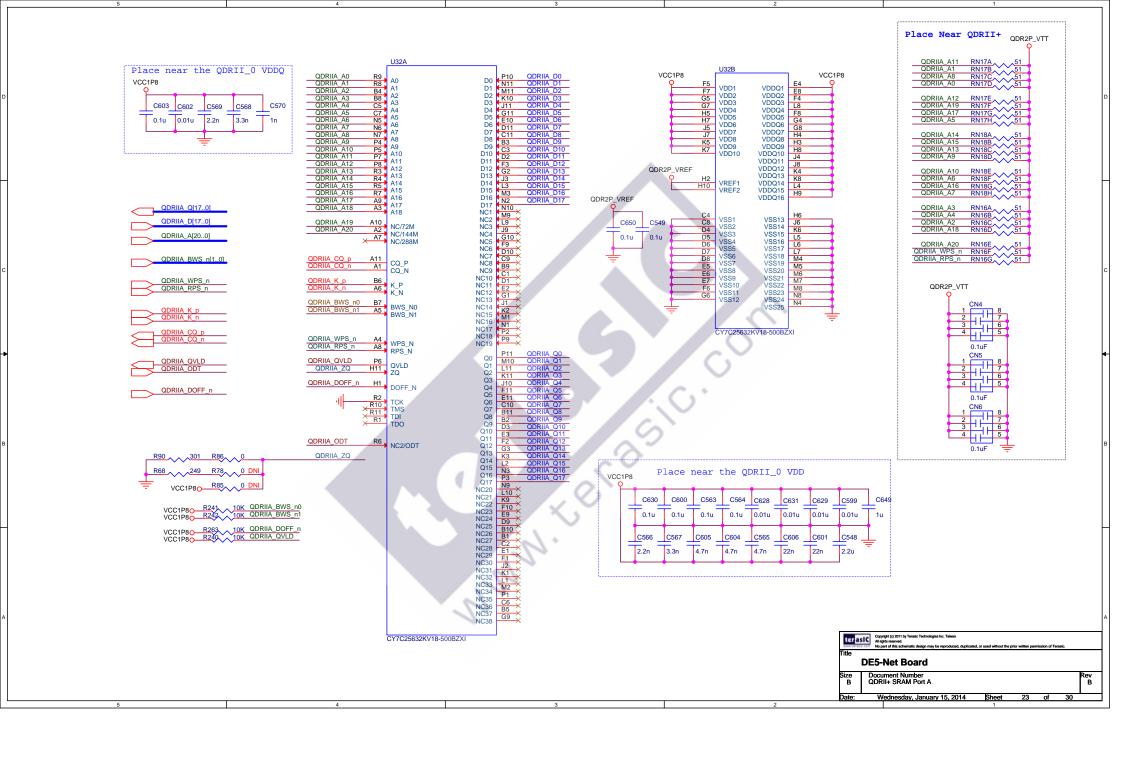


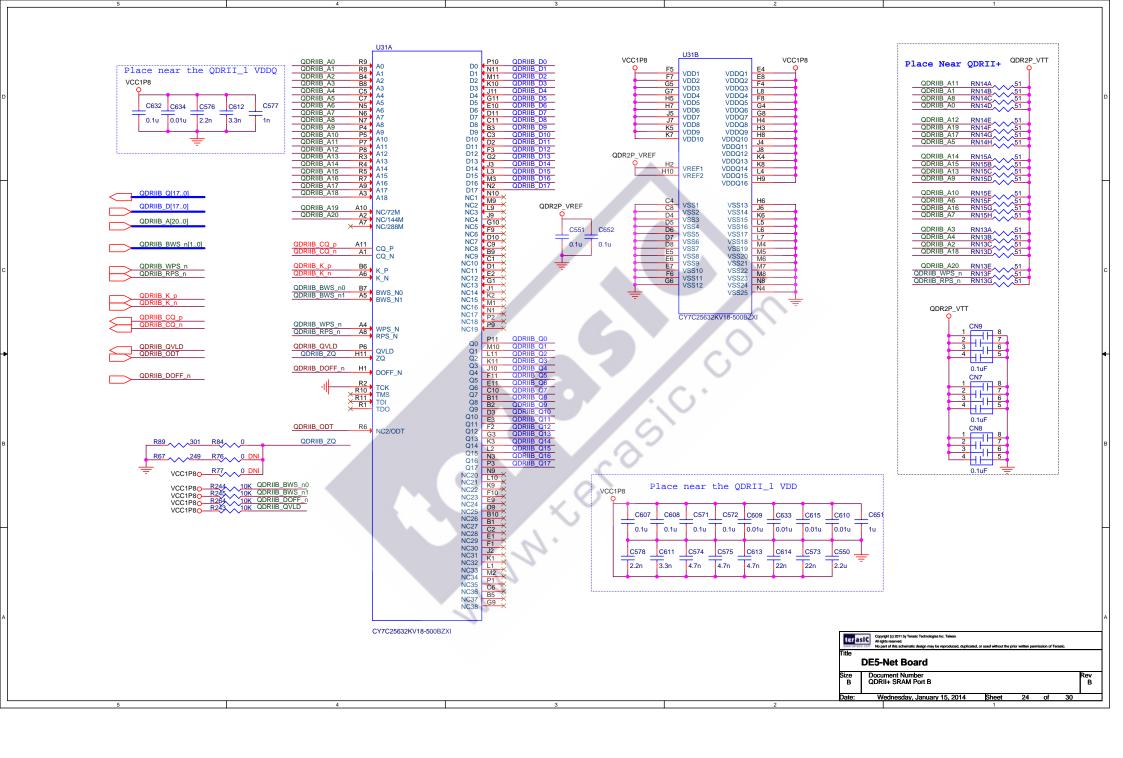


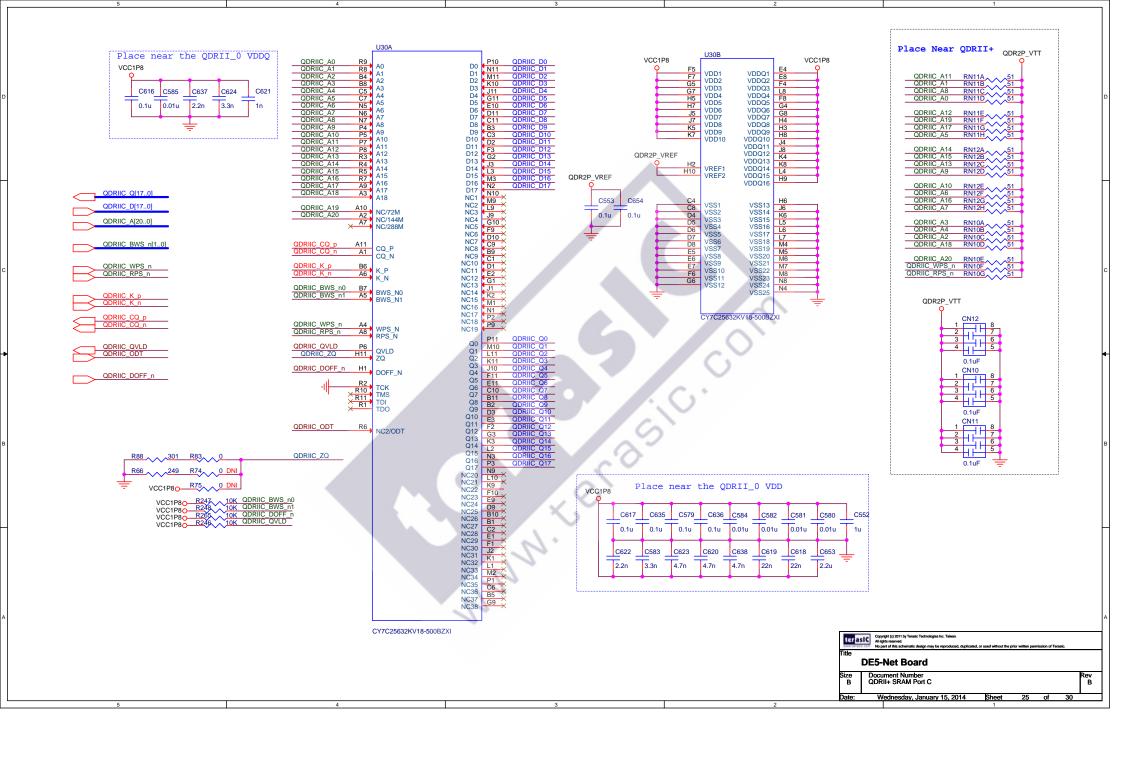


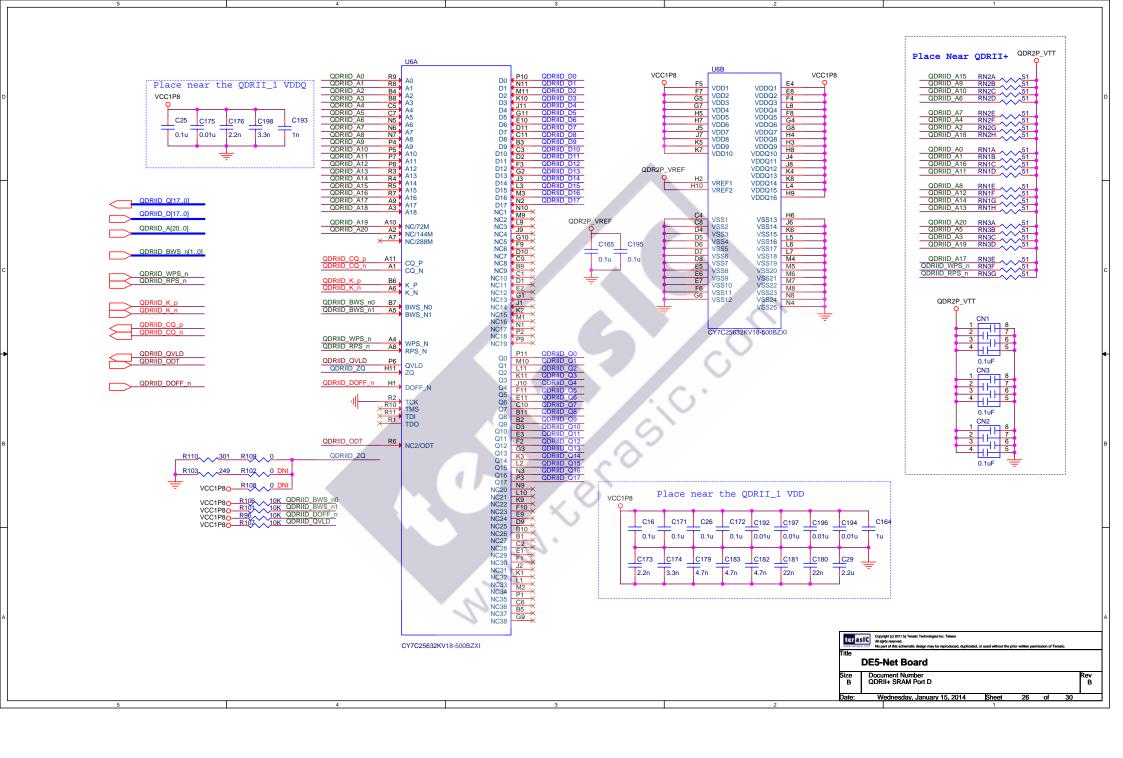












PCIe x8 Edge Connector VCC12 PCIE **PCIe Transceiver** PRSNT1_N +12V A2 +12V A3 A4 GND A5 JTAG_TCK A6 JTAG_TDI A7 JTAG_TDO A8 JTAG_TMS A9 +3_3V_2 +3_3V_3 PERST_N PCIE_PRSNT1n +12V B2 B3 B4 B5 +12V +12V GND PCIE_JTAG_TCK PCIE_JTAG_TDI PCIE_JTAG_TDO E_PCIE_SMBCLK E_PCIE_SMBDAT B5 SMCLK B6 SMDAT GND X B9 +3_3V_1 JTAG_TRSTN SMCLK PCIE_JTAG_TMS +3_3VAUX WAKE_N E_PCIE_WAKE_n E_PCIE_PERST_n R94 PCIe Mode Select × B12 B13 GND GND A12 REFCLK+ REFCLKA14 A15 **PCIe Control signal** PCIE_REFCLK_p PCIE_PRSNT1n E_PCIE_PERST_n E_PCIE_WAKE_n PETOP GND A16 PETON C678 0.22u GND PER0P PCIE_PRSNT2n_x1 B17 B18 PEROP A17 PERON A18 PRSNT2_N_X1 GND GND PCIe Mode B19 B20 B21 B21 GND RSVD2 A19 GND A20 PER1P A22 VCC12 PCIE PCIe JTAG C675 0.22u PER1N A22 GND A24 GND A25 PER2P A26 PER2N A27 GND A27 GND A23 GND B23 PET2P B24 B25 C138 C140 C141 C139 C679 PET2N GND B26 B27 B28 B29 B29 GND GND PET3P PET3N 0.22u 10u 0.1u 0.1u 0.1u 0.1u GND PER3P B29 GND B30 RSVD3 C672 0.22u C671 0.22u PER3N PCIE PRSNT2n x4 B31 PRSNT2_N_X4 GND GND RSVD4 A32 RSVD5 A33 × A34 × A3F B33 B34 PET4P PET4N GND PER4P PER5P PER5P PER5P GND GND GND PER5P PER5P GND A41 B35 B36 B37 GND GND B38 PETSN B39 PETSN GND PET5P 0.22u B39 B40 GND PET6P GND A41 A42 A43 A44 B42 B43 PET6N C666 0.22u C665 0.22u GND GND PER6P PER6N B44 PER6N A45 GND A46 GND A47 PER7P PER7N GND A49 B45 GND PET7P C664 0.22u PCIE_PRSNT2n_x8 C663 0.22u PRSNT2_N_X8 GND PCIe_Edge_X8 Copyright (c) 2011 by Terasic Technologies Inc. Talwan All rights reserved. **DE5-Net Board** Document Number PCI Express x 8 Rev B

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