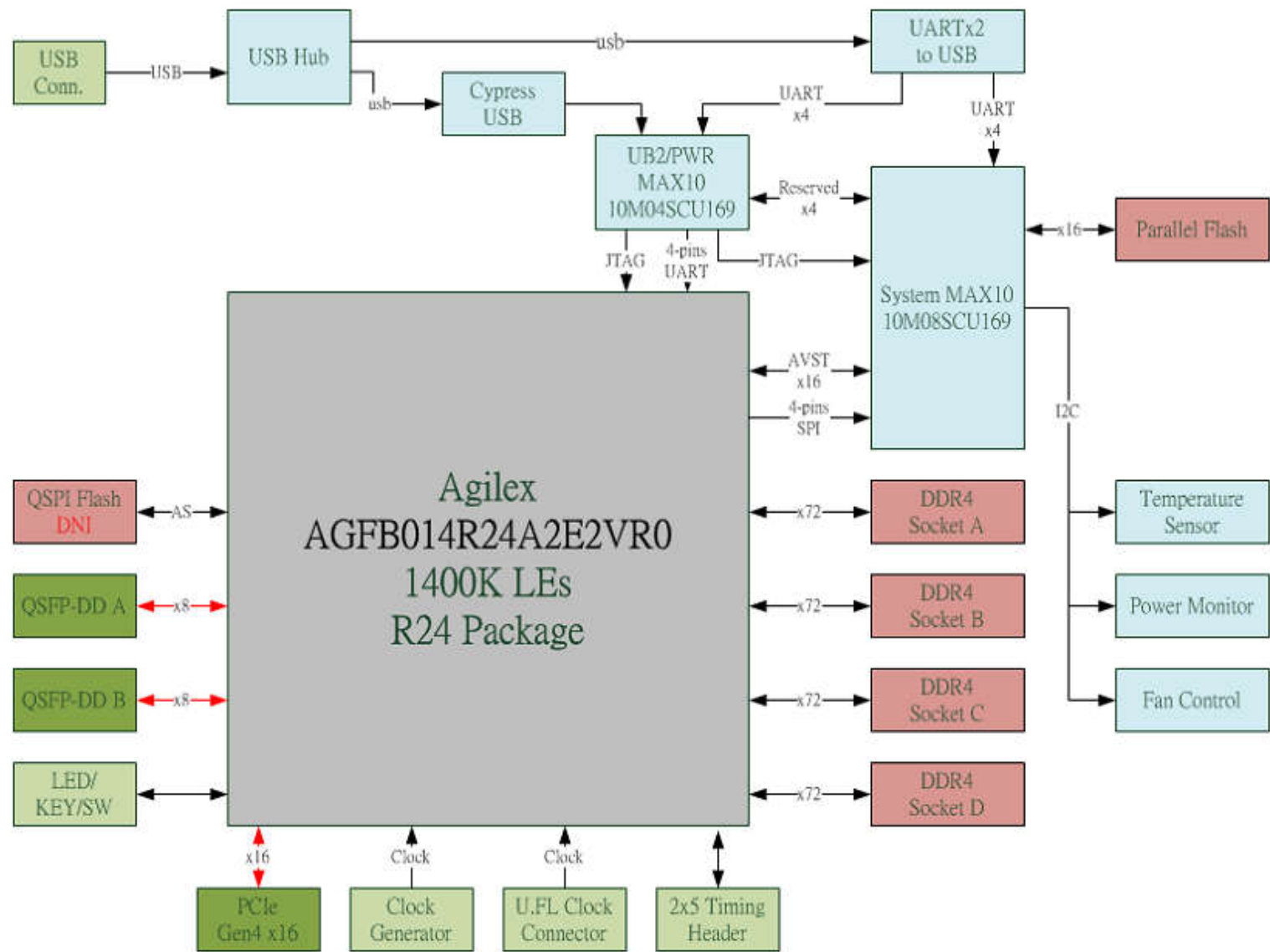
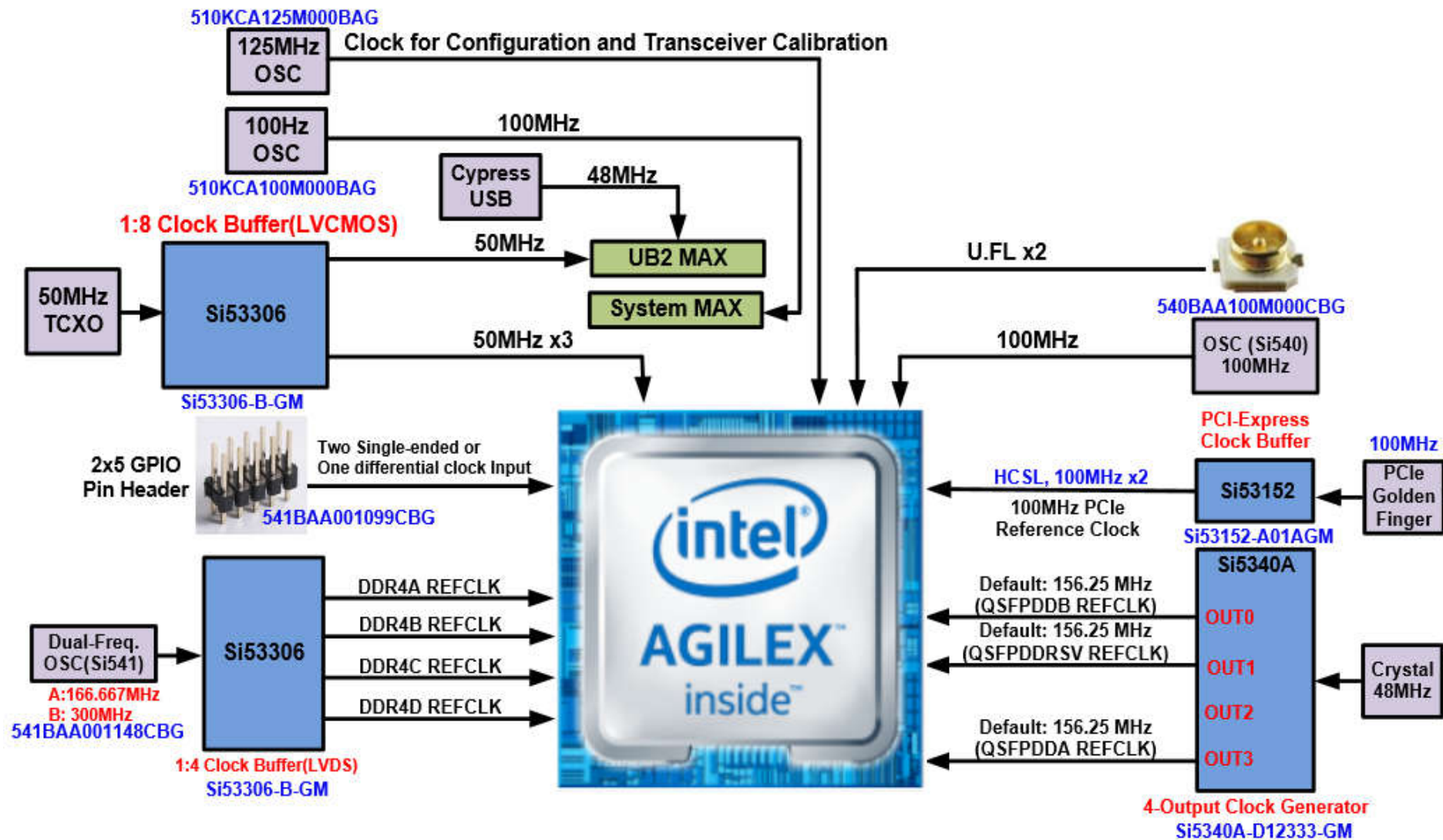


Block Diagram



Clock Tree



DDR4 SO-DIMM C

DDR4C_CK[1_0]_34	
DDR4C_BA[1_0]_34	
DDR4C_BG[1_0]_34	
DDR4C_ODT[1_0]_34	
DDR4C_CS_n[1_0]_34	
DDR4C_DQ[71_0]_13_34	
DDR4C_DQS[8_0]_13_34	
DDR4C_DQS_n[8_0]_13_34	
DDR4C_A[16_0]_34	
DDR4C_DBI_n[8_0]_13_34	
DDR4C_CKE[1_0]_34	
DDR4C_RESET_n_34	
DDR4C_C[1_0]_34	
DDR4C_PAR_34	
DDR4C_ACT_n_34	
DDR4C_ALERT_n_34	
DDR4C_SDA_11.13	
DDR4C_SCL_11.13	
DDR4C_EVENT_n_11.13	

RAS_n is a multiplexed function with A16
CAS_n is a multiplexed function with A15
WE_n is a multiplexed function with A14

DDR4C_REFCLK_p_5	
DDR4C_REFCLK_n_5	

DDR4C_DQ51	CF3
DDR4C_DQ55	CH3
DDR4C_DQ54	CE4
DDR4C_DQ48	CG4
	CF5
DDR4C_DBI_n6	CH5
DDR4C_DQS_n6	CE6
DDR4C_DQ56	CG6
DDR4C_DQ50	CF7
DDR4C_DQ53	CH7
DDR4C_DQ52	CE8
DDR4C_DQ49	CG8
DDR4C_DQ63	CK3
DDR4C_DQ58	CM3
DDR4C_DQ59	CL4
DDR4C_DQ62	CN4
	CK5
DDR4C_DBI_n7	CM5
DDR4C_DQ57	CL6
DDR4C_DQ61	CK7
DDR4C_DQ56	CM7
DDR4C_DQ60	CL8
DDR4C_DQ57	CN8
DDR4C_DQ36	CE10
DDR4C_DQ37	CG10
DDR4C_DQ32	CF11
DDR4C_DQ39	CH11
	CE12
DDR4C_DBI_n4	CG12
DDR4C_DQS_n4	CF13
DDR4C_DQ54	CH13
DDR4C_DQ33	CE14
DDR4C_DQ34	CG14
DDR4C_DQ35	CF15
DDR4C_DQ38	CH15
DDR4C_DQ43	CL10
DDR4C_DQ47	CN10
DDR4C_DQ46	CK11
DDR4C_DQ42	CM11
	CL12
DDR4C_DBI_n5	CN12
DDR4C_DQS_n5	CK13
DDR4C_DQ55	CM13
DDR4C_DQ44	CL14
DDR4C_DQ40	CN14
DDR4C_DQ45	CK15
DDR4C_DQ41	CM15

U157B

IO, LVDS2D_25N, DQ4	47
IO, LVDS2D_25P, DQ4	46
IO, LVDS2D_26N, DQ4	45
IO, LVDS2D_26P, DQ4	44
IO, LVDS2D_27N, DQ4	43
IO, LVDS2D_27P, DQ4	42
IO, LVDS2D_28N, DQSN4	41
IO, LVDS2D_28P, DQSN4	40
IO, LVDS2D_29N, DQ4	39
IO, LVDS2D_29P, DQ4	38
IO, LVDS2D_30N, DQ4	37
IO, LVDS2D_30P, DQ4	36
IO, LVDS2D_31N, DQ5	35
IO, LVDS2D_31P, DQ5	34
IO, LVDS2D_32N, DQ5	33
IO, LVDS2D_32P, DQ5	32
IO, LVDS2D_33N, DQ5	31
IO, LVDS2D_33P, DQ5	30
IO, PLL_2D_B_CLKOUT1N, LVDS2D_34N, DQSN5	29
IO, PLL_2D_B_CLKOUT1P, PLL_2D_B_CLKOUT1, PLL_2D_B_FB1, LVDS2D_34P, DQSN5	28
IO, LVDS2D_35N, DQ5	27
IO, RZQ_B_2D, LVDS2D_35P, DQ5	26
IO, CLK_B_2D_1N, LVDS2D_36N, DQ5	25
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IO, CLK_B_2D_0N, LVDS2D_37N, DQ6	23
IO, CLK_B_2D_0P, LVDS2D_37P, DQ6	22
IO, LVDS2D_38N, DQ6	21
IO, LVDS2D_38P, DQ6	20
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IO, PLL_2D_B_CLKOUT0P, PLL_2D_B_CLKOUT0, PLL_2D_B_FB0, LVDS2D_39P, DQ6	18
IO, LVDS2D_40N, DQSN6	17
IO, LVDS2D_40P, DQSN6	16
IO, LVDS2D_41P, DQ6	15
IO, LVDS2D_41N, DQ6	14
IO, LVDS2D_42N, DQ6	13
IO, LVDS2D_42P, DQ6	12
IO, LVDS2D_43N, DQ7	11
IO, LVDS2D_43P, DQ7	10
IO, LVDS2D_44N, DQ7	9
IO, LVDS2D_44P, DQ7	8
IO, LVDS2D_45N, DQ7	7
IO, LVDS2D_45P, DQ7	6
IO, LVDS2D_46N, DQSN7	5
IO, LVDS2D_46P, DQSN7	4
IO, LVDS2D_47N, DQ7	3
IO, LVDS2D_47P, DQ7	2
IO, LVDS2D_48N, DQ7	1
IO, LVDS2D_48P, DQ7	0

BOT TOP

Bank 2D vccio = 1.2v

AGFB014R24A2E2VR0

FPGA Bank - 2D

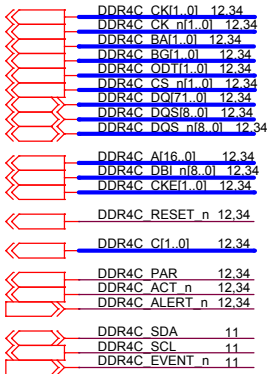
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IO, LVDS2D_1P, DQ0	
IO, LVDS2D_2N, DQ0	
IO, LVDS2D_2P, DQ0	
IO, LVDS2D_3N, DQ0	
IO, LVDS2D_3P, DQ0	
IO, LVDS2D_4N, DQSN0	
IO, LVDS2D_4P, DQSN0	
IO, LVDS2D_5N, DQ0	
IO, LVDS2D_5P, DQ0	
IO, LVDS2D_6N, DQ0	
IO, LVDS2D_6P, DQ0	
IO, LVDS2D_7N, DQ1	
IO, LVDS2D_7P, DQ1	
IO, LVDS2D_8N, DQ1	
IO, LVDS2D_8P, DQ1	
IO, LVDS2D_9N, DQ1	
IO, LVDS2D_9P, DQ1	
IO, PLL_2D_T_CLKOUT1N, LVDS2D_10N, DQSN1	
IO, PLL_2D_T_CLKOUT1P, PLL_2D_T_CLKOUT1, PLL_2D_T_FB1, LVDS2D_10P, DQSN1	
IO, LVDS2D_11N, DQ1	
IO, RZQ_T_2D, LVDS2D_11P, DQ1	
IO, CLK_T_2D_1N, LVDS2D_12N, DQ1	
IO, CLK_T_2D_1P, LVDS2D_12P, DQ1	
IO, CLK_T_2D_0N, LVDS2D_13N, DQ2	
IO, CLK_T_2D_0P, LVDS2D_13P, DQ2	
IO, LVDS2D_14N, DQ2	
IO, LVDS2D_14P, DQ2	
IO, PLL_2D_T_CLKOUT0N, LVDS2D_15N, DQ2	
IO, PLL_2D_T_CLKOUT0P, PLL_2D_T_CLKOUT0, PLL_2D_T_FB0, LVDS2D_15P, DQ2	
IO, LVDS2D_16N, DQSN2	
IO, LVDS2D_16P, DQSN2	
IO, LVDS2D_17N, DQ2	
IO, LVDS2D_17P, DQ2	
IO, LVDS2D_18N, DQ2	
IO, LVDS2D_18P, DQ2	
IO, LVDS2D_19N, DQ3	
IO, LVDS2D_19P, DQ3	
IO, LVDS2D_20N, DQ3	
IO, LVDS2D_20P, DQ3	
IO, LVDS2D_21N, DQ3	
IO, LVDS2D_21P, DQ3	
IO, LVDS2D_22N, DQSN3	
IO, LVDS2D_22P, DQSN3	
IO, LVDS2D_23N, DQ3	
IO, LVDS2D_23P, DQ3	
IO, LVDS2D_24N, DQ3	
IO, LVDS2D_24P, DQ3	

CT3	DDR4C_CK_n1
CV3	DDR4C_CK1
CR4	
CU4	
CT5	
CV5	
CR6	
CT7	
CV7	
CR8	DDR4C_C1
CU8	DDR4C_C0
CT1	DDR4C_BG0
CV1	DDR4C_BA1
CU3	DDR4C_BA0
DA4	DDR4C_ALERT_n
CV5	DDR4C_A16
DB5	DDR4C_A15
DA6	DDR4C_A14
DC6	DDR4C_A13
CV7	DDR4C_A12
DB7	DDR4C_RZQ
DA8	DDR4C_REFCLK_n
DC8	DDR4C_REFCLK_p
CR10	DDR4C_A11
CU10	DDR4C_A10
CT11	DDR4C_A9
CV11	DDR4C_A8
CR12	DDR4C_A7
CU12	DDR4C_A6
CT13	DDR4C_A5
CV13	DDR4C_A4
CR14	DDR4C_A3
CU14	DDR4C_A2
CT15	DDR4C_A1
CV15	DDR4C_A0
DA10	DDR4C_PAR
DC10	DDR4C_CS_n1
CV11	DDR4C_CK_n0
DB11	DDR4C_CK0
DA12	DDR4C_CKE1
DC12	DDR4C_CKE0
CV13	DDR4C_ODT1
DB13	DDR4C_ODT0
DA14	DDR4C_ACT_n
DC14	DDR4C_CS_n0
CV15	DDR4C_RESET_n
DB15	DDR4C_BG1

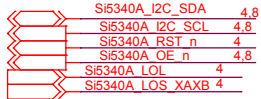


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Size B	Document Number FPGA Bank 2D	Rev A
Date:	Thursday, August 06, 2020	Sheet 12 of 51

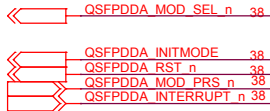
DDR4 SO-DIMM C



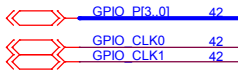
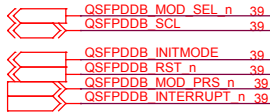
RAS_n is a multiplexed function with A16
CAS_n is a multiplexed function with A15
WE_n is a multiplexed function with A14



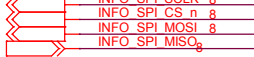
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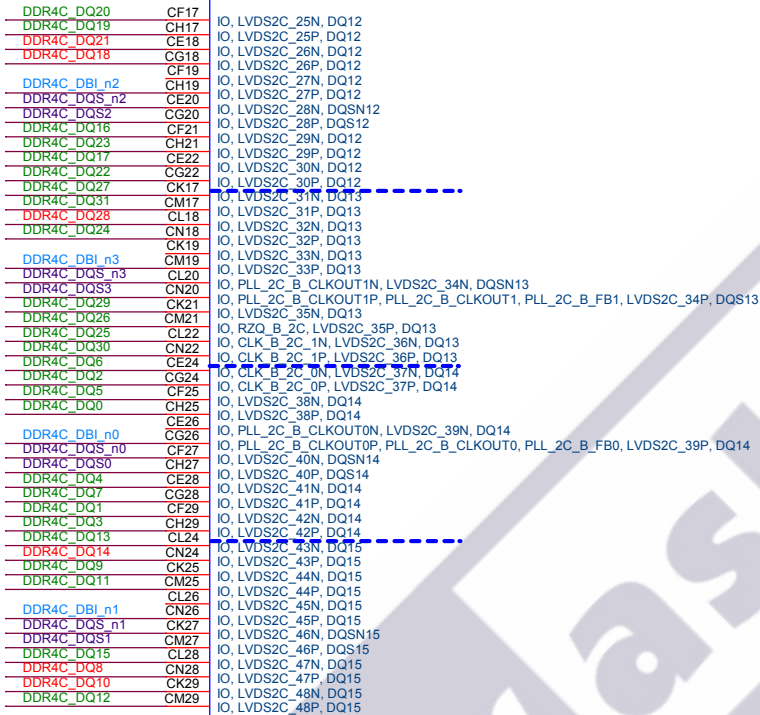
QSFPDD Port B Control Interface



FPGA/System MAX SPI



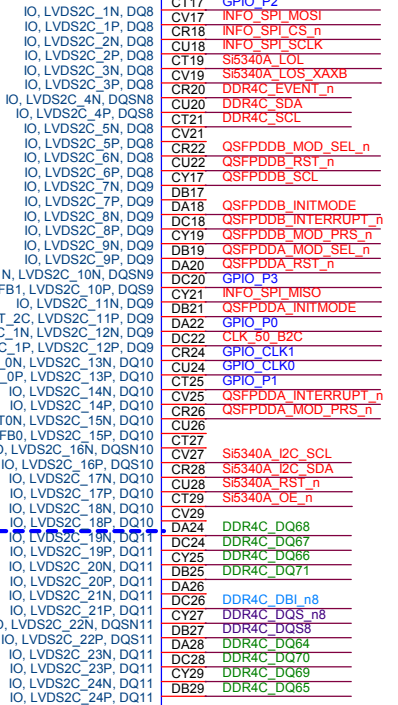
U157C



BOT TOP

Bank 2C vccio = 1.2v

AGFB014R24A2E2VR0



DDR4 SO-DIMM D

DDR4D_CK1_0_1	35
DDR4D_CK_n1_0_1	35
DDR4D_BA1_0_1	35
DDR4D_BG1_0_1	35
DDR4D_ODT1_0_1	35
DDR4D_CS_n1_0_1	35
DDR4D_DQ17_0_1	15,35
DDR4D_DQS18_0_1	15,35
DDR4D_DQS_n18_0_1	15,35

DDR4D_A16_0_1	35
DDR4D_DBI_n18_0_1	15,35
DDR4D_CKE1_0_1	35

DDR4D_RESET_n	35
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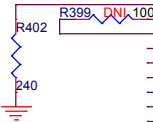
DDR4D_C11_0_1	35
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DDR4D_PAR	35
DDR4D_ACT_n	35
DDR4D_ALERT_n	35

DDR4D_SDA	11,15
DDR4D_SCL	11,15
DDR4D_EVENT_n	11,15

RAS_n is a multiplexed function with A16
CAS_n is a multiplexed function with A15
WE_n is a multiplexed function with A14

DDR4D_REFCLK_p	5
DDR4D_REFCLK_n	5



DDR4D_CK1	CF43
DDR4D_CK1	CH43
	CE42
	CG42
	CF41
	CH41
	CE40
	CG40
	CF39
	CH39
	CE38
DDR4D_C1	CG38
DDR4D_C0	CK43
DDR4D_BG0	CM43
DDR4D_BA1	CL42
DDR4D_BA0	CM42
DDR4D_ALERT_n	CK41
DDR4D_A16	CM41
DDR4D_A15	CL40
DDR4D_A14	CM40
DDR4D_A13	CK39
DDR4D_A12	CM39
DDR4D_RZQ	CL38
DDR4D_REFCLK_n	CN38
DDR4D_REFCLK_p	CE36
DDR4D_A11	CG36
DDR4D_A10	CF35
DDR4D_A9	CH35
DDR4D_A8	CE34
DDR4D_A7	CG34
DDR4D_A6	CF33
DDR4D_A5	CH33
DDR4D_A4	CE32
DDR4D_A3	CG32
DDR4D_A2	CF31
DDR4D_A1	CH31
DDR4D_A0	CL36
DDR4D_PAR	CN36
DDR4D_CS_n1	CK35
DDR4D_CK_n0	CM35
DDR4D_CK0	CL34
DDR4D_CKE1	CN34
DDR4D_CKE0	CK33
DDR4D_ODT1	CM33
DDR4D_ODT0	CL32
DDR4D_ACT_n	CN32
DDR4D_CS_n0	CK31
DDR4D_RESET_n	CM31
DDR4D_BG1	

U157D

IO, LVDS2B_25N, DQ20	47
IO, LVDS2B_25P, DQ20	46
IO, LVDS2B_26N, DQ20	45
IO, LVDS2B_26P, DQ20	44
IO, LVDS2B_27N, DQ20	43
IO, LVDS2B_27P, DQ20	42
IO, LVDS2B_28N, DQSN20	41
IO, LVDS2B_28P, DQSN20	40
IO, LVDS2B_29N, DQ20	39
IO, LVDS2B_29P, DQ20	38
IO, LVDS2B_30N, DQ20	37
IO, LVDS2B_30P, DQ20	36
IO, LVDS2B_31N, DQ21	35
IO, LVDS2B_31P, DQ21	34
IO, LVDS2B_32N, DQ21	33
IO, LVDS2B_32P, DQ21	32
IO, LVDS2B_33N, DQ21	31
IO, LVDS2B_33P, DQ21	30
IO, PLL_2B_B_CLKOUT1N, LVDS2B_34N, DQSN21	29
IO, PLL_2B_B_CLKOUT1P, PLL_2B_B_CLKOUT1, PLL_2B_B_FB1, LVDS2B_34P, DQSN21	28
IO, LVDS2B_35N, DQ21	27
IO, RZQ_B_2B, LVDS2B_35P, DQ21	26
IO, CLK_B_2B_1N, LVDS2B_36N, DQ21	25
IO, CLK_B_2B_1P, LVDS2B_36P, DQ21	24
IO, CLK_B_2B_0N, LVDS2B_37N, DQ22	23
IO, CLK_B_2B_0P, LVDS2B_37P, DQ22	22
IO, LVDS2B_38N, DQ22	21
IO, LVDS2B_38P, DQ22	20
IO, PLL_2B_B_CLKOUT0N, LVDS2B_39N, DQ22	19
IO, PLL_2B_B_CLKOUT0P, PLL_2B_B_CLKOUT0, PLL_2B_B_FB0, LVDS2B_39P, DQ22	18
IO, LVDS2B_40N, DQSN22	17
IO, LVDS2B_40P, DQSN22	16
IO, LVDS2B_41N, DQ22	15
IO, LVDS2B_41P, DQ22	14
IO, LVDS2B_42N, DQ22	13
IO, LVDS2B_42P, DQ22	12
IO, LVDS2B_43N, DQ23	11
IO, LVDS2B_43P, DQ23	10
IO, LVDS2B_44N, DQ23	9
IO, LVDS2B_44P, DQ23	8
IO, LVDS2B_45N, DQ23	7
IO, LVDS2B_45P, DQ23	6
IO, LVDS2B_46N, DQSN23	5
IO, LVDS2B_46P, DQSN23	4
IO, LVDS2B_47N, DQ23	3
IO, LVDS2B_47P, DQ23	2
IO, LVDS2B_48N, DQ23	1
IO, LVDS2B_48P, DQ23	0

BOT

TOP

Bank 2B VCCIO = 1.2V

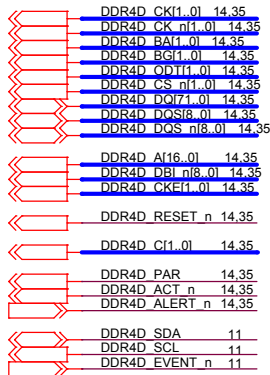
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IO, LVDS2B_1N, DQ16	
IO, LVDS2B_1P, DQ16	
IO, LVDS2B_2N, DQ16	
IO, LVDS2B_2P, DQ16	
IO, LVDS2B_3N, DQ16	
IO, LVDS2B_3P, DQ16	
IO, LVDS2B_4N, DQSN16	
IO, LVDS2B_4P, DQSN16	
IO, LVDS2B_5N, DQ16	
IO, LVDS2B_5P, DQ16	
IO, LVDS2B_6N, DQ16	
IO, LVDS2B_6P, DQ16	
IO, LVDS2B_7N, DQ17	
IO, LVDS2B_7P, DQ17	
IO, LVDS2B_8N, DQ17	
IO, LVDS2B_8P, DQ17	
IO, LVDS2B_9N, DQ17	
IO, LVDS2B_9P, DQ17	
IO, PLL_2B_T_CLKOUT1N, LVDS2B_10N, DQSN17	
IO, PLL_2B_T_CLKOUT1P, PLL_2B_T_CLKOUT1, PLL_2B_T_FB1, LVDS2B_10P, DQSN17	
IO, LVDS2B_11N, DQ17	
IO, RZQ_T_2B, LVDS2B_11P, DQ17	
IO, CLK_T_2B_1N, LVDS2B_12N, DQ17	
IO, CLK_T_2B_1P, LVDS2B_12P, DQ17	
IO, CLK_T_2B_0N, LVDS2B_13N, DQ18	
IO, CLK_T_2B_0P, LVDS2B_13P, DQ18	
IO, LVDS2B_14N, DQ18	
IO, LVDS2B_14P, DQ18	
IO, PLL_2B_T_CLKOUT0N, LVDS2B_15N, DQ18	
IO, PLL_2B_T_CLKOUT0P, PLL_2B_T_CLKOUT0, PLL_2B_T_FB0, LVDS2B_15P, DQ18	
IO, LVDS2B_16N, DQSN18	
IO, LVDS2B_16P, DQSN18	
IO, LVDS2B_17N, DQ18	
IO, LVDS2B_17P, DQ18	
IO, LVDS2B_18N, DQ18	
IO, LVDS2B_18P, DQ18	
IO, LVDS2B_19N, DQ19	
IO, LVDS2B_19P, DQ19	
IO, LVDS2B_20N, DQ19	
IO, LVDS2B_20P, DQ19	
IO, LVDS2B_21N, DQ19	
IO, LVDS2B_21P, DQ19	
IO, LVDS2B_22N, DQSN19	
IO, LVDS2B_22P, DQSN19	
IO, LVDS2B_23N, DQ19	
IO, LVDS2B_23P, DQ19	
IO, LVDS2B_24N, DQ19	
IO, LVDS2B_24P, DQ19	

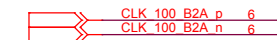
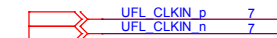
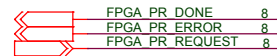
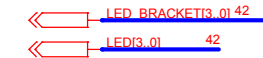
CT43	DDR4D_DQ66
CV43	DDR4D_DQ67
CR42	DDR4D_DQ65
CU42	DDR4D_DQ70
CT41	
CV41	DDR4D_DBI_n8
CR40	DDR4D_DQS_n8
CU40	DDR4D_DQS8
CT39	DDR4D_DQ89
CV39	DDR4D_DQ84
CR38	DDR4D_DQ88
CU38	DDR4D_DQ71
CY43	DDR4D_DQ32
DB43	DDR4D_DQ36
DA42	DDR4D_DQ33
DC42	DDR4D_DQ37
CY41	
DB41	DDR4D_DBI_n4
DA40	DDR4D_DQS_n4
DC40	DDR4D_DQS4
CV39	DDR4D_DQ38
DB39	DDR4D_DQ39
DA38	DDR4D_DQ35
DC38	DDR4D_DQ34
CR36	DDR4D_DQ57
CU36	DDR4D_DQ63
CT35	DDR4D_DQ59
CV35	DDR4D_DQ58
CR34	
CU34	DDR4D_DBI_n7
CT33	DDR4D_DQS_n7
CV33	DDR4D_DQS7
CR32	DDR4D_DQ62
CU32	DDR4D_DQ60
CT31	DDR4D_DQ56
CV31	DDR4D_DQ61
DA36	DDR4D_DQ48
DC36	DDR4D_DQ53
CY35	DDR4D_DQ52
DB35	DDR4D_DQ54
DA34	
DC34	DDR4D_DBI_n6
CY33	DDR4D_DQS_n6
DB33	DDR4D_DQS6
DA32	DDR4D_DQ55
DC32	DDR4D_DQ49
CY31	DDR4D_DQ50
DB31	DDR4D_DQ51

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Title DE10-Agilex Board			
Size B	Document Number FPGA Bank 2B		Rev A
Date:	Thursday, August 06, 2020		Sheet 14 of 51

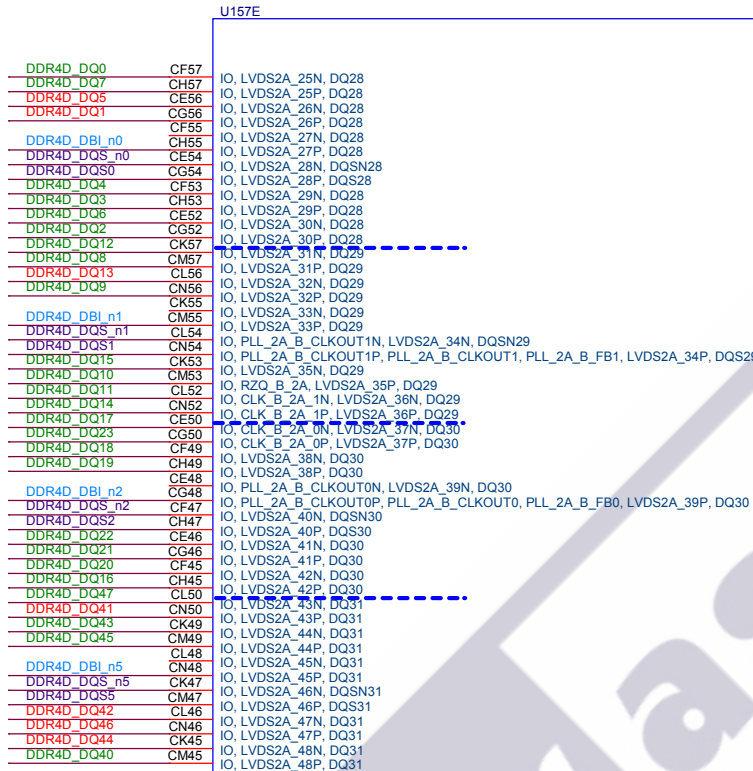
DDR4 SO-DIMM D



RAS_n is a multiplexed function with A16
CAS_n is a multiplexed function with A15
WE_n is a multiplexed function with A14



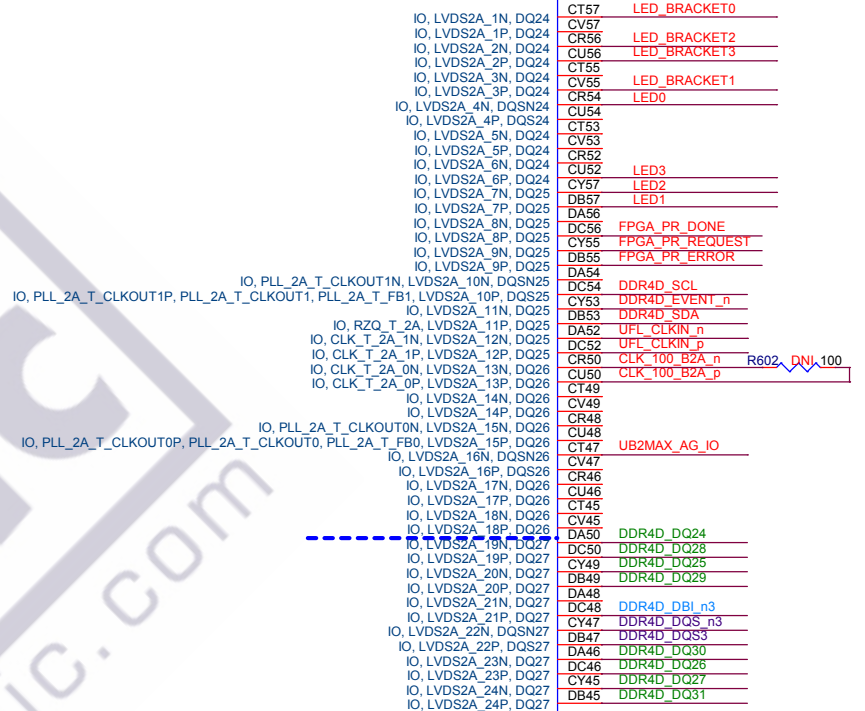
FPGA / UB2 MAX communication signal



BOT TOP

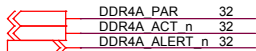
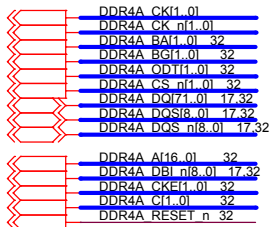
Bank 2AVCCIO = 1.2V

AGFB014R24A2E2VR0

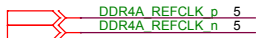


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Title		
DE10-Agilex Board		
Size	Document Number	Rev
B	FPGA Bank 2A	A
Date:	Thursday, August 06, 2020	Sheet 15 of 51

DDR4 SO-DIMM A



RAS_n is a multiplexed function with A16
CAS_n is a multiplexed function with A15
WE_n is a multiplexed function with A14



DDR4A_DQ22	V5	IO, LVDS3D_25N, DQ36	47
DDR4A_DQ21	T5	IO, LVDS3D_25P, DQ36	46
DDR4A_DQ18	W6	IO, LVDS3D_26N, DQ36	45
DDR4A_DQ16	U6	IO, LVDS3D_26P, DQ36	44
DDR4A_DBI_n2	T7	IO, LVDS3D_27N, DQ36	43
DDR4A_DQS_n2	W8	IO, LVDS3D_27P, DQ36	42
DDR4A_DQS2	U8	IO, LVDS3D_28N, DQSN36	41
DDR4A_DQ17	V9	IO, LVDS3D_28P, DQ36	40
DDR4A_DQ19	T9	IO, LVDS3D_29N, DQ36	39
DDR4A_DQ20	W10	IO, LVDS3D_29P, DQ36	38
DDR4A_DQ23	U10	IO, LVDS3D_30N, DQ36	37
DDR4A_DQ9	P5	IO, LVDS3D_30P, DQ36	36
DDR4A_DQ15	M5	IO, LVDS3D_31N, DQ37	35
DDR4A_DQ12	N6	IO, LVDS3D_31P, DQ37	34
DDR4A_DQ10	L6	IO, LVDS3D_32N, DQ37	33
DDR4A_DBI_n1	P7	IO, LVDS3D_32P, DQ37	32
DDR4A_DQS_n1	M7	IO, LVDS3D_33N, DQ37	31
DDR4A_DQS1	N8	IO, LVDS3D_33P, DQ37	30
DDR4A_DQS11	L8	IO, PLL_3D_B_CLKOUT1N, LVDS3D_34N, DQSN37	29
DDR4A_DQ13	P9	IO, PLL_3D_B_CLKOUT1P, PLL_3D_B_CLKOUT1, PLL_3D_B_FB1, LVDS3D_34P, DQSN37	28
DDR4A_DQ14	M9	IO, LVDS3D_35N, DQ37	27
DDR4A_DQ8	N10	IO, RZQ_B_3D, LVDS3D_35P, DQ37	26
DDR4A_DQ11	L10	IO, CLK_B_3D_1N, LVDS3D_36N, DQ37	25
DDR4A_DQ0	W12	IO, CLK_B_3D_1P, LVDS3D_36P, DQ37	24
DDR4A_DQ2	U12	IO, CLK_B_3D_0N, LVDS3D_37N, DQ38	23
DDR4A_DQ3	V13	IO, CLK_B_3D_0P, LVDS3D_37P, DQ38	22
DDR4A_DQ6	T13	IO, LVDS3D_38N, DQ38	21
DDR4A_DBI_n0	W14	IO, LVDS3D_38P, DQ38	20
DDR4A_DQS_n0	U14	IO, PLL_3D_B_CLKOUT0N, LVDS3D_39N, DQ38	19
DDR4A_DQS0	V15	IO, PLL_3D_B_CLKOUT0P, PLL_3D_B_CLKOUT0, PLL_3D_B_FB0, LVDS3D_39P, DQ38	18
DDR4A_DQ1	W16	IO, LVDS3D_40N, DQSN38	17
DDR4A_DQ7	U16	IO, LVDS3D_40P, DQ38	16
DDR4A_DQ5	V17	IO, LVDS3D_41N, DQ38	15
DDR4A_DQ4	T17	IO, LVDS3D_41P, DQ38	14
DDR4A_DQ31	N12	IO, LVDS3D_42N, DQ38	13
DDR4A_DQ25	L12	IO, LVDS3D_42P, DQ38	12
DDR4A_DQ28	P13	IO, LVDS3D_43N, DQ39	11
DDR4A_DQ29	M13	IO, LVDS3D_43P, DQ39	10
DDR4A_DBI_n3	N14	IO, LVDS3D_44N, DQ39	9
DDR4A_DQS_n3	L14	IO, LVDS3D_44P, DQ39	8
DDR4A_DQS3	P15	IO, LVDS3D_45N, DQ39	7
DDR4A_DQS3	M15	IO, LVDS3D_45P, DQ39	6
DDR4A_DQ24	N16	IO, LVDS3D_46N, DQSN39	5
DDR4A_DQ30	L16	IO, LVDS3D_46P, DQ39	4
DDR4A_DQ27	P17	IO, LVDS3D_47N, DQ39	3
DDR4A_DQ26	M17	IO, LVDS3D_47P, DQ39	2
		IO, LVDS3D_48N, DQ39	1
		IO, LVDS3D_48P, DQ39	0

BOT TOP

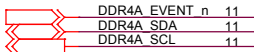
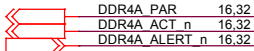
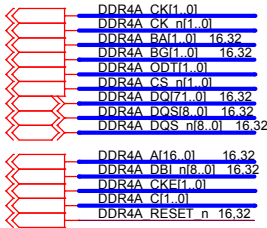
Bank 3D VCCIO = 1.2V

AGFB014R24A2E2VR0

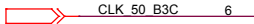
IO, LVDS3D_1N, DQ32	H5	DDR4A_CK_n1
IO, LVDS3D_1P, DQ32	F5	DDR4A_CK1
IO, LVDS3D_2N, DQ32	J6	
IO, LVDS3D_2P, DQ32	G6	
IO, LVDS3D_3N, DQ32	H7	
IO, LVDS3D_3P, DQ32	F7	
IO, LVDS3D_4N, DQSN32	J8	
IO, LVDS3D_4P, DQSN32	G8	
IO, LVDS3D_5N, DQ32	H9	
IO, LVDS3D_5P, DQ32	F9	
IO, LVDS3D_6N, DQ32	J10	DDR4A_C1
IO, LVDS3D_6P, DQ32	G10	DDR4A_C0
IO, LVDS3D_7N, DQ32	D5	DDR4A_BG0
IO, LVDS3D_7P, DQ32	B5	DDR4A_BA1
IO, LVDS3D_8N, DQ32	C6	DDR4A_BA0
IO, LVDS3D_8P, DQ32	A6	DDR4A_ALERT_n
IO, LVDS3D_9N, DQ32	D7	DDR4A_A16
IO, LVDS3D_9P, DQ32	B7	DDR4A_A15
IO, PLL_3D_T_CLKOUT1N, LVDS3D_10N, DQSN33	C8	DDR4A_A14
IO, PLL_3D_T_CLKOUT1P, PLL_3D_T_CLKOUT1, PLL_3D_T_FB1, LVDS3D_10P, DQSN33	A8	DDR4A_A13
IO, LVDS3D_11N, DQ33	D9	DDR4A_A12
IO, LVDS3D_11P, DQ33	B9	DDR4A_RZQ
IO, RZQ_T_3D, LVDS3D_11P, DQ33	C10	DDR4A_REFCLK_n
IO, CLK_T_3D_1N, LVDS3D_12N, DQ33	A10	DDR4A_REFCLK_p
IO, CLK_T_3D_1P, LVDS3D_12P, DQ33	J12	DDR4A_A11
IO, CLK_T_3D_0N, LVDS3D_13N, DQ34	G12	DDR4A_A10
IO, CLK_T_3D_0P, LVDS3D_13P, DQ34	H13	DDR4A_A9
IO, LVDS3D_14N, DQ34	F13	DDR4A_A8
IO, LVDS3D_14P, DQ34	J14	DDR4A_A7
IO, PLL_3D_T_CLKOUT0N, LVDS3D_15N, DQ34	G14	DDR4A_A6
IO, PLL_3D_T_CLKOUT0P, PLL_3D_T_CLKOUT0, PLL_3D_T_FB0, LVDS3D_15P, DQ34	H15	DDR4A_A5
IO, LVDS3D_16N, DQSN34	F15	DDR4A_A4
IO, LVDS3D_16P, DQSN34	J16	DDR4A_A3
IO, LVDS3D_17N, DQ34	G16	DDR4A_A2
IO, LVDS3D_17P, DQ34	H17	DDR4A_A1
IO, LVDS3D_18N, DQ34	F17	DDR4A_A0
IO, LVDS3D_18P, DQ34	C12	DDR4A_PAR
IO, LVDS3D_19N, DQ35	A12	DDR4A_CS_n1
IO, LVDS3D_19P, DQ35	D13	DDR4A_CK_n0
IO, LVDS3D_20N, DQ35	B13	DDR4A_CK0
IO, LVDS3D_20P, DQ35	C14	DDR4A_CKE1
IO, LVDS3D_21N, DQ35	A14	DDR4A_CKE0
IO, LVDS3D_21P, DQ35	D15	DDR4A_ODT1
IO, LVDS3D_22N, DQSN35	B15	DDR4A_ODT0
IO, LVDS3D_22P, DQSN35	C16	DDR4A_ACT_n
IO, LVDS3D_23N, DQ35	A16	DDR4A_CS_n0
IO, LVDS3D_23P, DQ35	D17	DDR4A_RESET_n
IO, LVDS3D_24N, DQ35	B17	DDR4A_BG1
IO, LVDS3D_24P, DQ35		



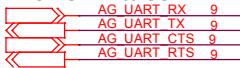
DDR4 SO-DIMM A



RAS_n is a multiplexed function with A16
CAS_n is a multiplexed function with A15
WE_n is a multiplexed function with A14



FPGA UART to USB



U157G

DDR4A_DQ57	V19	IO, LVDS3C_25N, DQ44
DDR4A_DQ63	T19	IO, LVDS3C_25P, DQ44
DDR4A_DQ60	W20	IO, LVDS3C_28N, DQ44
DDR4A_DQ59	U20	IO, LVDS3C_26P, DQ44
DDR4A_DBI_n7	V21	IO, LVDS3C_27N, DQ44
DDR4A_DQS_n7	T21	IO, LVDS3C_27P, DQ44
DDR4A_DQ37	W22	IO, LVDS3C_28N, DQSN44
DDR4A_DQ56	V23	IO, LVDS3C_28P, DQSN44
DDR4A_DQ61	T23	IO, LVDS3C_29N, DQ44
DDR4A_DQ62	W24	IO, LVDS3C_29P, DQ44
DDR4A_DQ58	U24	IO, LVDS3C_30N, DQ44
DDR4A_DQ68	P19	IO, LVDS3C_30P, DQ44
DDR4A_DQ69	M19	IO, LVDS3C_31N, DQ45
DDR4A_DQ65	N20	IO, LVDS3C_31P, DQ45
DDR4A_DQ66	L20	IO, LVDS3C_32P, DQ45
DDR4A_DBI_n8	P21	IO, LVDS3C_33N, DQ45
DDR4A_DQS_n8	M21	IO, LVDS3C_33P, DQ45
DDR4A_DQ35	N22	IO, PLL_3C_B_CLKOUT1N, LVDS3C_34N, DQSN45
DDR4A_DQ37	L22	IO, PLL_3C_B_CLKOUT1P, PLL_3C_B_CLKOUT1, PLL_3C_B_FB1, LVDS3C_34P, DQSN45
DDR4A_DQ67	P23	IO, LVDS3C_35N, DQ45
DDR4A_DQ64	M23	IO, RZQ_B_3C, LVDS3C_35P, DQ45
DDR4A_DQ71	N24	IO, CLK_B_3C_1N, LVDS3C_36N, DQ45
DDR4A_DQ70	L24	IO, CLK_B_3C_1P, LVDS3C_36P, DQ45
DDR4A_DQ50	W26	IO, CLK_B_3C_0N, LVDS3C_37N, DQ46
DDR4A_DQ53	U26	IO, CLK_B_3C_0P, LVDS3C_37P, DQ46
DDR4A_DQ52	V27	IO, LVDS3C_38N, DQ46
DDR4A_DQ48	T27	IO, LVDS3C_38P, DQ46
DDR4A_DBI_n6	U28	IO, PLL_3C_B_CLKOUT0N, LVDS3C_39N, DQ46
DDR4A_DQS_n6	V29	IO, PLL_3C_B_CLKOUT0P, PLL_3C_B_CLKOUT0, PLL_3C_B_FB0, LVDS3C_39P, DQ46
DDR4A_DQ35	T29	IO, LVDS3C_40N, DQSN46
DDR4A_DQ35	W30	IO, LVDS3C_40P, DQSN46
DDR4A_DQ49	U30	IO, LVDS3C_41N, DQ46
DDR4A_DQ51	V31	IO, LVDS3C_41P, DQ46
DDR4A_DQ54	T31	IO, LVDS3C_42N, DQ46
DDR4A_DQ41	N26	IO, LVDS3C_42P, DQ46
DDR4A_DQ45	L26	IO, LVDS3C_43N, DQ47
DDR4A_DQ44	P27	IO, LVDS3C_43P, DQ47
DDR4A_DQ40	M27	IO, LVDS3C_44N, DQ47
DDR4A_DQ40	N28	IO, LVDS3C_44P, DQ47
DDR4A_DBI_n5	L28	IO, LVDS3C_45N, DQ47
DDR4A_DQS_n5	P29	IO, LVDS3C_45P, DQ47
DDR4A_DQ35	M29	IO, LVDS3C_46N, DQSN47
DDR4A_DQ42	N30	IO, LVDS3C_46P, DQSN47
DDR4A_DQ46	L30	IO, LVDS3C_47N, DQ47
DDR4A_DQ43	P31	IO, LVDS3C_47P, DQ47
DDR4A_DQ47	M31	IO, LVDS3C_48N, DQ47
DDR4A_DQ47		IO, LVDS3C_48P, DQ47

BOT

TOP

Bank 3C VCCIO = 1.2V

AGFB014R24A2E2VR0

IO, LVDS3C_1N, DQ40	H19	QSFPPDB_SDA
IO, LVDS3C_1P, DQ40	F19	
IO, LVDS3C_2N, DQ40	J20	
IO, LVDS3C_2P, DQ40	G20	QSFPPDA_SCL
IO, LVDS3C_3N, DQ40	H21	
IO, LVDS3C_3P, DQ40	F21	
IO, LVDS3C_4N, DQSN40	J22	
IO, LVDS3C_4P, DQSN40	G22	QSFPPDA_SDA
IO, LVDS3C_5N, DQ40	H23	
IO, LVDS3C_5P, DQ40	J24	
IO, LVDS3C_6N, DQ40	G24	
IO, LVDS3C_6P, DQ40	D19	
IO, LVDS3C_7N, DQ41	B19	
IO, LVDS3C_7P, DQ41	C20	
IO, LVDS3C_8N, DQ41	A20	EXP_EN
IO, LVDS3C_8P, DQ41	D21	
IO, LVDS3C_9N, DQ41	B21	
IO, LVDS3C_9P, DQ41	C22	
IO, PLL_3C_T_CLKOUT1N, LVDS3C_10N, DQSN41	A22	AG_UART_RX
IO, PLL_3C_T_CLKOUT1P, PLL_3C_T_CLKOUT1, PLL_3C_T_FB1, LVDS3C_10P, DQSN41	D23	AG_UART_TX
IO, LVDS3C_11N, DQ41	B23	AG_UART_CTS
IO, RZQ_T_3C, LVDS3C_11P, DQ41	C24	AG_UART_RTS
IO, CLK_T_3C_1N, LVDS3C_12N, DQ41	A24	
IO, CLK_T_3C_1P, LVDS3C_12P, DQ41	J26	
IO, CLK_T_3C_0N, LVDS3C_13N, DQ42	G26	CLK_50_B3C
IO, CLK_T_3C_0P, LVDS3C_13P, DQ42	H27	
IO, LVDS3C_14N, DQ42	F27	
IO, LVDS3C_14P, DQ42	J28	DDR4A_SDA
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	H29	DDR4A_EVENT_n
IO, LVDS3C_16N, DQSN42	F29	
IO, LVDS3C_16P, DQSN42	J30	DDR4A_SCL
IO, LVDS3C_17N, DQ42	G30	
IO, LVDS3C_17P, DQ42	H31	
IO, LVDS3C_18N, DQ42	F31	
IO, LVDS3C_18P, DQ42	C26	DDR4A_DQ36
IO, LVDS3C_19N, DQ43	A26	DDR4A_DQ35
IO, LVDS3C_19P, DQ43	D27	DDR4A_DQ37
IO, LVDS3C_20N, DQ43	B27	DDR4A_DQ32
IO, LVDS3C_20P, DQ43	C28	
IO, LVDS3C_21N, DQ43	A28	DDR4A_DBI_n4
IO, LVDS3C_21P, DQ43	D29	DDR4A_DQS_n4
IO, LVDS3C_22N, DQSN43	B29	DDR4A_DQ34
IO, LVDS3C_22P, DQSN43	C30	DDR4A_DQ38
IO, LVDS3C_23N, DQ43	A30	DDR4A_DQ33
IO, LVDS3C_23P, DQ43	D31	DDR4A_DQ38
IO, LVDS3C_24N, DQ43	B31	DDR4A_DQ34
IO, LVDS3C_24P, DQ43		

DDR4 SO-DIMM B

DDR4B_CK[1..0]_33
DDR4B_CK_n[1..0]_33
DDR4B_BA[1..0]_33
DDR4B_BG[1..0]_33
DDR4B_ODT[1..0]_33
DDR4B_CS_n[1..0]_33
DDR4B_DQ[71..0]_19_33
DDR4B_DQS[8..0]_19_33
DDR4B_DQS_n[8..0]_19_33

DDR4B_A[16..0]_33
DDR4B_DB[16..0]_19_33
DDR4B_CKE[1..0]_33

DDR4B_RESET_n_33

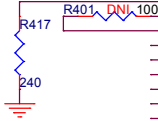
DDR4B_C[1..0]_33

DDR4B_PAR_33
DDR4B_ACT_n_33
DDR4B_ALERT_n_33

DDR4B_SDA_11.19
DDR4B_SCL_11.19
DDR4B_EVENT_n_11.19

RAS_n is a multiplexed function with A16
CAS_n is a multiplexed function with A15
WE_n is a multiplexed function with A14

DDR4B_REFCLK_p_5
DDR4B_REFCLK_n_5



DDR4B_CK_n1 V45
DDR4B_CK1 T45
W44
U44
V43
T43
W42
U42
V41
T41
W40
DDR4B_C0 U40
DDR4B_BG0 P45
DDR4B_BA1 M45
DDR4B_BA0 N44
DDR4B_ALERT_n L44
DDR4B_A16 P43
DDR4B_A15 M43
DDR4B_A14 N42
DDR4B_A13 L42
DDR4B_A12 P41
DDR4B_RZQ M41
DDR4B_REFCLK_n N40
DDR4B_REFCLK_p L40
DDR4B_A11 W38
DDR4B_A10 U38
DDR4B_A9 V37
DDR4B_A8 T37
DDR4B_A7 W36
DDR4B_A6 U36
DDR4B_A5 V35
DDR4B_A4 T35
DDR4B_A3 W34
DDR4B_A2 U34
DDR4B_A1 V33
DDR4B_A0 T33
DDR4B_PAR N38
DDR4B_CS_n1 L38
DDR4B_CK_n0 P37
DDR4B_CK0 M37
DDR4B_CKE1 N36
DDR4B_CKE0 L36
DDR4B_ODT1 P35
DDR4B_ODT0 M35
DDR4B_ACT_n N34
DDR4B_CS_n0 L34
DDR4B_RESET_n P33
DDR4B_BG1 M33

U157H

IO, LVDS3B_25N, DQ52 47
IO, LVDS3B_25P, DQ52 46
IO, LVDS3B_26N, DQ52 45
IO, LVDS3B_26P, DQ52 44
IO, LVDS3B_27N, DQ52 43
IO, LVDS3B_27P, DQ52 42
IO, LVDS3B_28N, DQ52 41
IO, LVDS3B_28P, DQ52 40
IO, LVDS3B_29N, DQ52 39
IO, LVDS3B_29P, DQ52 38
IO, LVDS3B_30N, DQ52 37
IO, LVDS3B_30P, DQ52 36
IO, LVDS3B_31N, DQ52 35
IO, LVDS3B_31P, DQ52 34
IO, LVDS3B_32N, DQ52 33
IO, LVDS3B_32P, DQ52 32
IO, LVDS3B_33N, DQ52 31
IO, LVDS3B_33P, DQ52 30
IO, PLL_3B_B_CLKOUT1N, LVDS3B_34N, DQ52 29
IO, PLL_3B_B_CLKOUT1P, PLL_3B_B_CLKOUT1, PLL_3B_B_FB1, LVDS3B_34P, DQ52 28
IO, LVDS3B_35N, DQ52 27
IO, RZQ_B_3B, LVDS3B_35P, DQ52 26
IO, CLK_T_3B_1N, LVDS3B_36N, DQ52 25
IO, CLK_B_3B_1P, LVDS3B_36P, DQ52 24
IO, CLK_B_3B_0N, LVDS3B_37N, DQ52 23
IO, CLK_B_3B_0P, LVDS3B_37P, DQ52 22
IO, LVDS3B_38N, DQ52 21
IO, LVDS3B_38P, DQ52 20
IO, PLL_3B_B_CLKOUT0N, LVDS3B_39N, DQ52 19
IO, PLL_3B_B_CLKOUT0P, PLL_3B_B_CLKOUT0, PLL_3B_B_FB0, LVDS3B_39P, DQ52 18
IO, LVDS3B_40N, DQ52 17
IO, LVDS3B_40P, DQ52 16
IO, LVDS3B_41N, DQ52 15
IO, LVDS3B_41P, DQ52 14
IO, LVDS3B_42N, DQ52 13
IO, LVDS3B_42P, DQ52 12
IO, LVDS3B_43N, DQ52 11
IO, LVDS3B_43P, DQ52 10
IO, LVDS3B_44N, DQ52 9
IO, LVDS3B_44P, DQ52 8
IO, LVDS3B_45N, DQ52 7
IO, LVDS3B_45P, DQ52 6
IO, LVDS3B_46N, DQ52 5
IO, LVDS3B_46P, DQ52 4
IO, LVDS3B_47N, DQ52 3
IO, LVDS3B_47P, DQ52 2
IO, LVDS3B_48N, DQ52 1
IO, LVDS3B_48P, DQ52 0

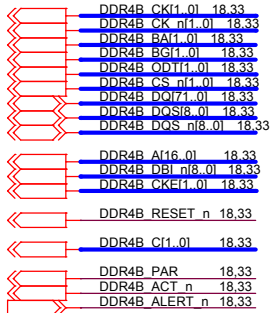
BOT TOP

Bank 3B VCCIO = 1.2V

AGFB014R24A2E2VR0

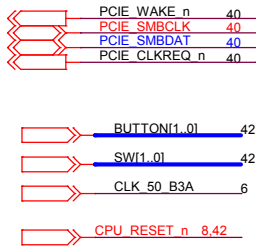
IO, LVDS3B_1N, DQ48 H45 DDR4B_DQ4
IO, LVDS3B_1P, DQ48 F45 DDR4B_DQ5
IO, LVDS3B_2N, DQ48 J44 DDR4B_DQ0
IO, LVDS3B_2P, DQ48 G44 DDR4B_DQ2
IO, LVDS3B_3N, DQ48 H43
IO, LVDS3B_3P, DQ48 F43 DDR4B_DBI_n0
IO, LVDS3B_4N, DQ52 J42 DDR4B_DQS_n0
IO, LVDS3B_4P, DQ52 G42 DDR4B_DQS0
IO, LVDS3B_5N, DQ48 H41 DDR4B_DQ6
IO, LVDS3B_5P, DQ48 F41 DDR4B_DQ3
IO, LVDS3B_6N, DQ48 J40 DDR4B_DQ1
IO, LVDS3B_6P, DQ48 G40 DDR4B_DQ7
IO, LVDS3B_7N, DQ48 D45 DDR4B_DQ20
IO, LVDS3B_7P, DQ48 B45 DDR4B_DQ18
IO, LVDS3B_8N, DQ49 C44 DDR4B_DQ19
IO, LVDS3B_8P, DQ49 A44 DDR4B_DQ22
IO, LVDS3B_9N, DQ49 D43
IO, LVDS3B_9P, DQ49 B43 DDR4B_DBI_n2
IO, PLL_3B_T_CLKOUT1N, LVDS3B_10N, DQ52 C42 DDR4B_DQS_n2
IO, PLL_3B_T_CLKOUT1P, PLL_3B_T_CLKOUT1, PLL_3B_T_FB1, LVDS3B_10P, DQ52 A42 DDR4B_DQS2
IO, LVDS3B_11N, DQ49 D41 DDR4B_DQ16
IO, RZQ_T_3B, LVDS3B_11P, DQ49 B41 DDR4B_DQ23
IO, CLK_T_3B_1N, LVDS3B_12N, DQ49 C40 DDR4B_DQ21
IO, CLK_B_3B_1P, LVDS3B_12P, DQ49 A40 DDR4B_DQ17
IO, CLK_T_3B_0N, LVDS3B_13N, DQ50 J38 DDR4B_DQ12
IO, CLK_B_3B_0P, LVDS3B_13P, DQ50 G38 DDR4B_DQ13
IO, LVDS3B_14N, DQ50 H37 DDR4B_DQ9
IO, LVDS3B_14P, DQ50 F37 DDR4B_DQ14
IO, PLL_3B_T_CLKOUT0N, LVDS3B_15N, DQ50 J36
IO, PLL_3B_T_CLKOUT0P, PLL_3B_T_CLKOUT0, PLL_3B_T_FB0, LVDS3B_15P, DQ50 G36 DDR4B_DBI_n1
IO, LVDS3B_16N, DQ50 H35 DDR4B_DQS_n1
IO, LVDS3B_16P, DQ50 F35 DDR4B_DQS1
IO, LVDS3B_17N, DQ50 J34 DDR4B_DQ8
IO, LVDS3B_17P, DQ50 G34 DDR4B_DQ15
IO, LVDS3B_18N, DQ50 H33 DDR4B_DQ10
IO, LVDS3B_18P, DQ50 F33 DDR4B_DQ11
IO, LVDS3B_19N, DQ51 C38 DDR4B_DQ31
IO, LVDS3B_19P, DQ51 A38 DDR4B_DQ27
IO, LVDS3B_20N, DQ51 D37 DDR4B_DQ26
IO, LVDS3B_20P, DQ51 B37 DDR4B_DQ30
IO, LVDS3B_21N, DQ51 C36
IO, LVDS3B_21P, DQ51 A36 DDR4B_DBI_n3
IO, LVDS3B_22N, DQ51 D35 DDR4B_DQS_n3
IO, LVDS3B_22P, DQ51 B35 DDR4B_DQS3
IO, LVDS3B_23N, DQ51 C34 DDR4B_DQ29
IO, LVDS3B_23P, DQ51 A34 DDR4B_DQ25
IO, LVDS3B_24N, DQ51 D33 DDR4B_DQ28
IO, LVDS3B_24P, DQ51 B33 DDR4B_DQ24

DDR4 SO-DIMM B

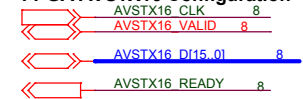


RAS_n is a multiplexed function with A16
CAS_n is a multiplexed function with A15
WE_n is a multiplexed function with A14

PCIe Control signal



FPGA AVSTX16 Configuration



U1571

DDR4B_DQ57	V59	IO, LVDS3A_25N, DQ60
DDR4B_DQ62	T59	IO, LVDS3A_25P, DQ60
DDR4B_DQ56	W58	IO, LVDS3A_26N, DQ60
DDR4B_DQ58	U58	IO, LVDS3A_26P, DQ60
DDR4B_DBI_n7	V57	IO, LVDS3A_27N, DQ60
DDR4B_DQS_n7	T57	IO, LVDS3A_27P, DQ60
DDR4B_DQ57	W56	IO, LVDS3A_28N, DQSN60
DDR4B_DQ59	V55	IO, LVDS3A_28P, DQ560
DDR4B_DQ61	T55	IO, LVDS3A_29N, DQ60
DDR4B_DQ63	W54	IO, LVDS3A_29P, DQ60
DDR4B_DQ60	U54	IO, LVDS3A_30N, DQ60
DDR4B_DQ61	P59	IO, LVDS3A_30P, DQ60
DDR4B_DQ55	M59	IO, LVDS3A_31N, DQ61
DDR4B_DQ54	N58	IO, LVDS3A_31P, DQ61
DDR4B_DQ48	L58	IO, LVDS3A_32P, DQ61
DDR4B_DBI_n6	P57	IO, LVDS3A_33N, DQ61
DDR4B_DQS_n6	M57	IO, LVDS3A_33P, DQ61
DDR4B_DQ56	L56	IO, PLL_3A_B_CLKOUT1N, LVDS3A_34N, DQSN61
DDR4B_DQ50	P55	IO, PLL_3A_B_CLKOUT1P, PLL_3A_B_CLKOUT1, PLL_3A_B_FB1, LVDS3A_34P, DQ561
DDR4B_DQ53	M55	IO, LVDS3A_35N, DQ61
DDR4B_DQ52	N54	IO, RZQ_B_3A, LVDS3A_35P, DQ61
DDR4B_DQ49	L54	IO, CLK_B_3A_1N, LVDS3A_36N, DQ61
DDR4B_DQ46	W52	IO, CLK_B_3A_1P, LVDS3A_36P, DQ61
DDR4B_DQ42	U52	IO, CLK_B_3A_0N, LVDS3A_37N, DQ62
DDR4B_DQ47	V51	IO, CLK_B_3A_0P, LVDS3A_37P, DQ62
DDR4B_DQ44	T51	IO, LVDS3A_38N, DQ62
DDR4B_DBI_n5	W50	IO, PLL_3A_B_CLKOUT0N, LVDS3A_39N, DQ62
DDR4B_DQS_n5	U50	IO, PLL_3A_B_CLKOUT0P, PLL_3A_B_CLKOUT0, PLL_3A_B_FB0, LVDS3A_39P, DQ62
DDR4B_DQ55	V49	IO, LVDS3A_40N, DQSN62
DDR4B_DQ43	T49	IO, LVDS3A_40P, DQ562
DDR4B_DQ40	U48	IO, LVDS3A_41N, DQ62
DDR4B_DQ41	V47	IO, LVDS3A_41P, DQ62
DDR4B_DQ45	T47	IO, LVDS3A_42N, DQ62
DDR4B_DQ71	N52	IO, LVDS3A_42P, DQ62
DDR4B_DQ70	L52	IO, LVDS3A_43N, DQ63
DDR4B_DQ68	P51	IO, LVDS3A_43P, DQ63
DDR4B_DQ67	M51	IO, LVDS3A_44N, DQ63
DDR4B_DBI_n8	L50	IO, LVDS3A_45N, DQ63
DDR4B_DQS_n8	P49	IO, LVDS3A_45P, DQ63
DDR4B_DQ58	M49	IO, LVDS3A_46N, DQSN63
DDR4B_DQ65	N48	IO, LVDS3A_46P, DQ563
DDR4B_DQ64	L48	IO, LVDS3A_47N, DQ63
DDR4B_DQ65	P47	IO, LVDS3A_47P, DQ63
DDR4B_DQ69	M47	IO, LVDS3A_48N, DQ63
		IO, LVDS3A_48P, DQ63

AGFB014R24A2E2VR0

BOT TOP

Bank 3A VCCIO = 1.2V

IO, LVDS3A_1N, DQ56	H59	PCIE_SMBCLK
IO, LVDS3A_1P, DQ56	F59	PCIE_CLKREQ_n
IO, LVDS3A_2N, DQ56	J58	PCIE_WAKE_n
IO, LVDS3A_2P, DQ56	G58	DDR4B_SDA
IO, LVDS3A_3N, DQ56	H57	AVSTX16_READY
IO, LVDS3A_3P, DQ56, AVST_READY	F57	DDR4B_EVENT_n
IO, LVDS3A_4N, DQSN56, SDM_MISSION_DATA31	G56	CPU_RESET_n
IO, LVDS3A_4P, DQ56, SDM_MISSION_DATA30	H55	DDR4B_SCL
IO, LVDS3A_5N, DQ56, SDM_MISSION_DATA29	F55	BUTTON0
IO, LVDS3A_5P, DQ56, SDM_MISSION_DATA28	J54	BUTTON1
IO, LVDS3A_6N, DQ56, SDM_MISSION_DATA27	G54	DDR4B_DQ36
IO, LVDS3A_6P, DQ56, SDM_MISSION_DATA26	H61	DDR4B_DQ35
IO, LVDS3A_7N, DQ57, SDM_MISSION_DATA25	D59	DDR4B_DQ39
IO, LVDS3A_7P, DQ57, SDM_MISSION_DATA24	C58	DDR4B_DQ34
IO, LVDS3A_8N, DQ57, SDM_MISSION_DATA23	D57	DDR4B_DBI_n4
IO, LVDS3A_8P, DQ57, SDM_MISSION_DATA22	B57	DDR4B_DQS_n4
IO, LVDS3A_9N, DQ57, SDM_MISSION_DATA21	C56	DDR4B_DQ34
IO, LVDS3A_9P, DQ57, SDM_MISSION_DATA20	A56	DDR4B_DQ33
IO, PLL_3A_T_CLKOUT1N, LVDS3A_10N, DQSN57, SDM_MISSION_DATA19	B55	DDR4B_DQ38
IO, PLL_3A_T_CLKOUT1P, PLL_3A_T_CLKOUT1, PLL_3A_T_FB1, LVDS3A_10P, DQ57, SDM_MISSION_DATA18	C54	DDR4B_DQ37
IO, LVDS3A_11N, DQ57, SDM_MISSION_DATA17	A54	DDR4B_DQ32
IO, RZQ_T_3A, LVDS3A_11P, DQ57, SDM_MISSION_DATA16	J52	PCIE_SMBDAT
IO, CLK_T_3A_1N, LVDS3A_12N, DQ57	G52	CLK_50_B3A
IO, CLK_T_3A_1P, LVDS3A_12P, DQ57	H51	SW0
IO, CLK_T_3A_0N, LVDS3A_13N, DQ58	F51	SW1
IO, CLK_T_3A_0P, LVDS3A_13P, DQ58	J50	
IO, LVDS3A_14N, DQ58	G50	AVSTX16_CLK
IO, LVDS3A_14P, DQ58	H49	AVSTX16_D15
IO, PLL_3A_T_CLKOUT0N, LVDS3A_15N, DQ58	F49	AVSTX16_D14
IO, PLL_3A_T_CLKOUT0P, PLL_3A_T_CLKOUT0, PLL_3A_T_FB0, LVDS3A_15P, DQ58	G48	AVSTX16_D13
IO, LVDS3A_16N, DQSN58, SDM_MISSION_CLK	H47	AVSTX16_D12
IO, LVDS3A_16P, DQ58, SDM_MISSION_DATA15	F47	AVSTX16_D11
IO, LVDS3A_17N, DQ58, SDM_MISSION_DATA14	C52	AVSTX16_D10
IO, LVDS3A_17P, DQ58, SDM_MISSION_DATA13	A52	AVSTX16_D9
IO, LVDS3A_18N, DQ58, SDM_MISSION_DATA12	D51	AVSTX16_D8
IO, LVDS3A_18P, DQ58, SDM_MISSION_DATA11	B51	AVSTX16_VALID
IO, LVDS3A_19N, DQ59, SDM_MISSION_DATA10	C50	AVSTX16_D7
IO, LVDS3A_19P, DQ59, SDM_MISSION_DATA9	A50	AVSTX16_D6
IO, LVDS3A_20N, DQ59, SDM_MISSION_DATA8	D49	AVSTX16_D5
IO, LVDS3A_20P, DQ59, SDM_MISSION_DATA7	B49	AVSTX16_D4
IO, LVDS3A_21N, DQ59, SDM_MISSION_DATA6	C48	AVSTX16_D3
IO, LVDS3A_21P, DQ59, SDM_MISSION_DATA5	A48	AVSTX16_D2
IO, LVDS3A_22N, DQSN59, SDM_MISSION_DATA4	D47	AVSTX16_D1
IO, LVDS3A_22P, DQ59, SDM_MISSION_DATA3	B47	AVSTX16_D0
IO, LVDS3A_23N, DQ59, SDM_MISSION_DATA2		
IO, LVDS3A_23P, DQ59, SDM_MISSION_DATA1		
IO, LVDS3A_24N, DQ59, SDM_MISSION_DATA0		
IO, LVDS3A_24P, DQ59, SDM_MISSION_DATA0		

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Title DE10-Agilex Board		
Size B	Document Number FPGA Bank 3A	Rev A
Date:	Thursday, August 06, 2020	Sheet 19 of 51

FPGA Bank - HPS

U157J

AH5 HPS_IOA_1, GPIO0_IO0, SPIM0_SS1_N, SPIS0_CLK, UART0_CTS_N, NAND_ADQ0, USB0_CLK, SDMMC_CCLK
AD1 HPS_IOA_2, GPIO0_IO1, SPIM1_SS1_N, SPIS0_MOSI, UART0_RTS_N, NAND_ADQ1, USB0_STP, SDMMC_CMD
AG6 HPS_IOA_3, GPIO0_IO2, SPIS0_SS0_N, UART0_TX, I2C1_SDA, NAND_WE_N, USB0_DIR, SDMMC_DATA0
AB1 HPS_IOA_4, GPIO0_IO3, SPIS0_MISO, UART0_RX, I2C1_SCL, NAND_RE_N, USB0_DATA0, SDMMC_DATA1
AG4 HPS_IOA_5, GPIO0_IO4, SPIM0_CLK, UART1_CTS_N, I2C0_SDA, NAND_WP_N, USB0_DATA1, SDMMC_DATA2
AD3 HPS_IOA_6, GPIO0_IO5, SPIM0_MOSI, UART1_RTS_N, I2C0_SCL, NAND_ADQ2, USB0_NXT, SDMMC_DATA3
AF5 HPS_IOA_7, GPIO0_IO6, SPIM0_MISO, MDIO2_MDIO, UART1_TX, I2C_EMAC2_SDA, NAND_ADQ3, USB0_DATA2, SDMMC_DATA4
AC2 HPS_IOA_8, GPIO0_IO7, SPIM0_SS0_N, MDIO2_MDC, UART1_RX, I2C_EMAC2_SCL, NAND_CLE, USB0_DATA3, SDMMC_DATA5
AF1 HPS_IOA_9, GPIO0_IO8, SPIM1_CLK, SPIS1_CLK, MDIO1_MDIO, I2C_EMAC1_SDA, NAND_ADQ4, USB0_DATA4, SDMMC_DATA6
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
AA2 HPS_IOA_12, GPIO0_IO11, SPIM1_SS0_N, SPIS1_MISO, MDIO0_MDC, I2C_EMAC0_SCL, NAND_ADQ7, USB0_DATA7
AC4 HPS_IOA_13, GPIO0_IO12, NAND_ALE, USB1_CLK, EMAC0_TX_CLK
V1 HPS_IOA_14, GPIO0_IO13, NAND_RB, USB1_STP, EMAC0_TX_CTL
AA4 HPS_IOA_15, GPIO0_IO14, NAND_CE_N, USB1_DIR, EMAC0_RX_CLK
T1 HPS_IOA_16, GPIO0_IO15, USB1_DATA0, EMAC0_RX_CTL
AD5 HPS_IOA_17, GPIO0_IO16, NAND_ADQ8, USB1_DATA1, EMAC0_TXD0
P1 HPS_IOA_18, GPIO0_IO17, NAND_ADQ9, USB1_NXT, EMAC0_TXD1
AF7 HPS_IOA_19, GPIO0_IO18, NAND_ADQ10, USB1_DATA2, EMAC0_RXD0
M1 HPS_IOA_20, GPIO0_IO19, SPIM1_SS1_N, NAND_ADQ11, USB1_DATA3, EMAC0_RXD1
AF9 HPS_IOA_21, GPIO0_IO20, SPIM1_CLK, SPIS0_CLK, UART0_CTS_N, I2C1_SDA, NAND_ADQ12, USB1_DATA4, EMAC0_TXD2
W2 HPS_IOA_22, GPIO0_IO21, SPIM1_MOSI, SPIS0_MOSI, UART0_RTS_N, I2C1_SCL, NAND_ADQ13, USB1_DATA5, EMAC0_TXD3
AB5 HPS_IOA_23, GPIO0_IO22, SPIM1_MISO, SPIS0_SS0_N, UART0_TX, I2C0_SDA, NAND_ADQ14, USB1_DATA6, EMAC0_RXD2
U2 HPS_IOA_24, GPIO0_IO23, SPIM1_SS0_N, SPIS0_MISO, UART0_RX, I2C0_SCL, NAND_ADQ15, USB1_DATA7, EMAC0_RXD3
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
F1 HPS_IOB_3, GPIO1_IO2, SPIM1_MISO, UART0_TX, I2C0_SDA, NAND_WE_N, EMAC1_RX_CLK
AD7 HPS_IOB_4, GPIO1_IO3, SPIM1_SS0_N, UART0_RX, I2C0_SCL, NAND_RE_N, EMAC1_RX_CTL
N2 HPS_IOB_5, GPIO1_IO4, SPIM1_SS1_N, SPIS1_CLK, UART1_CTS_N, NAND_WP_N, EMAC1_TXD0
AB7 HPS_IOB_6, GPIO1_IO5, SPIS1_MOSI, UART1_RTS_N, NAND_ADQ2, EMAC1_TXD1
L2 HPS_IOB_7, GPIO1_IO6, SPIS1_SS0_N, UART1_TX, I2C1_SDA, NAND_ADQ3, EMAC1_RXD0
AC8 HPS_IOB_8, GPIO1_IO7, SPIS1_MISO, UART1_RX, I2C1_SCL, NAND_CLE, EMAC1_RXD1
J2 HPS_IOB_9, GPIO1_IO8, JTAG_TCK, SPIS0_CLK, MDIO2_MDIO, I2C_EMAC2_SDA, NAND_ADQ4, EMAC1_TXD2
AA8 HPS_IOB_10, GPIO1_IO9, JTAG_TMS, SPIS0_MOSI, MDIO2_MDC, I2C_EMAC2_SCL, NAND_ADQ5, EMAC1_TXD3
G2 HPS_IOB_11, GPIO1_IO10, JTAG_TDO, SPIS0_SS0_N, MDIO0_MDIO, I2C_EMAC0_SDA, NAND_ADQ6, EMAC1_RXD2
AD9 HPS_IOB_12, GPIO1_IO11, JTAG_TDI, SPIS0_MISO, MDIO0_MDC, I2C_EMAC0_SCL, NAND_ADQ7, EMAC1_RXD3
V3 HPS_IOB_13, GPIO1_IO12, I2C1_SDA, NAND_ALE, SDMMC_DATA0, EMAC2_TX_CLK
AB9 HPS_IOB_14, GPIO1_IO13, I2C1_SCL, NAND_RB, SDMMC_CMD, EMAC2_TX_CTL
T3 HPS_IOB_15, GPIO1_IO14, UART1_TX, NAND_CE_N, SDMMC_CCLK, EMAC2_RX_CLK
AC10 HPS_IOB_16, GPIO1_IO15, UART1_RX, SDMMC_DATA1, EMAC2_RX_CTL
P3 HPS_IOB_17, GPIO1_IO16, UART1_CTS_N, NAND_ADQ8, SDMMC_DATA2, EMAC2_TXD0
AD11 HPS_IOB_18, GPIO1_IO17, SPIM0_SS1_N, UART1_RTS_N, NAND_ADQ9, SDMMC_DATA3, EMAC2_TXD1
M3 HPS_IOB_19, GPIO1_IO18, SPIM0_MISO, MDIO1_MDIO, I2C_EMAC1_SDA, NAND_ADQ10, SDMMC_DATA4, EMAC2_RXD0
AC12 HPS_IOB_20, GPIO1_IO19, SPIM0_SS0_N, MDIO1_MDC, I2C_EMAC1_SCL, NAND_ADQ11, SDMMC_DATA5, EMAC2_RXD1
H3 HPS_IOB_21, GPIO1_IO20, SPIM0_CLK, SPIS1_CLK, I2C_EMAC2_SDA, NAND_ADQ12, SDMMC_DATA6, EMAC2_TXD2
AD13 HPS_IOB_22, GPIO1_IO21, SPIM0_MOSI, SPIS1_MOSI, I2C_EMAC2_SCL, NAND_ADQ13, SDMMC_DATA7, EMAC2_TXD3
F3 HPS_IOB_23, GPIO1_IO22, SPIM0_MISO, SPIS1_SS0_N, MDIO0_MDIO, I2C_EMAC0_SDA, NAND_ADQ14, EMAC2_RXD2
HPS_IOB_24, GPIO1_IO23, SPIM0_SS0_N, SPIS1_MISO, MDIO0_MDC, I2C_EMAC0_SCL, NAND_ADQ15, EMAC2_RXD3

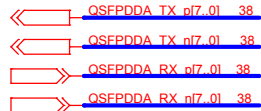
AH19 DNU6
AJ20 DNU7

HPS IO VCCIO = 1.8V

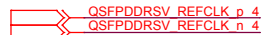
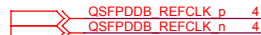
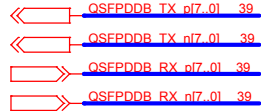
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Title		
DE10-Agilex Board		
Size	Document Number	Rev
B	FPGA Bank HPS	A
Date:	Thursday, August 06, 2020	Sheet 20 of 51

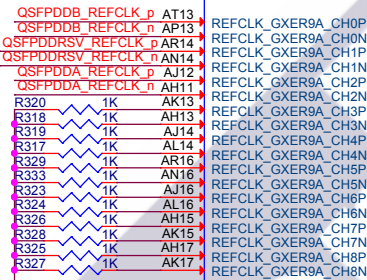
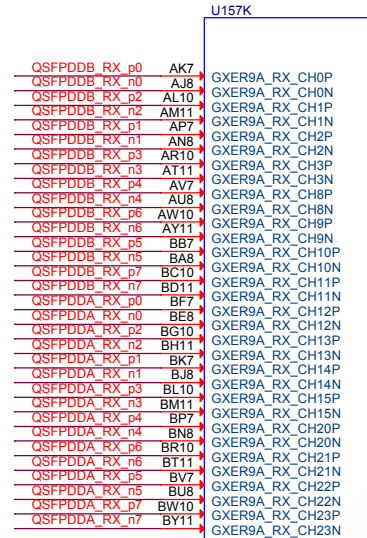
QSFPDD Port A Transceivers



QSFPDD Port B Transceivers



FPGA Temperature diode

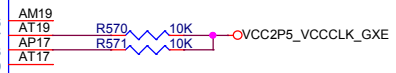
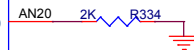



Bank 9A

IO_AUX_RREF20

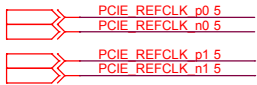
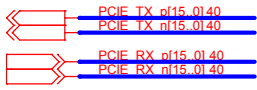
TEMPDIODE4P
TEMPDIODE4N

DNU16
DNU17
DNU18
DNU19



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