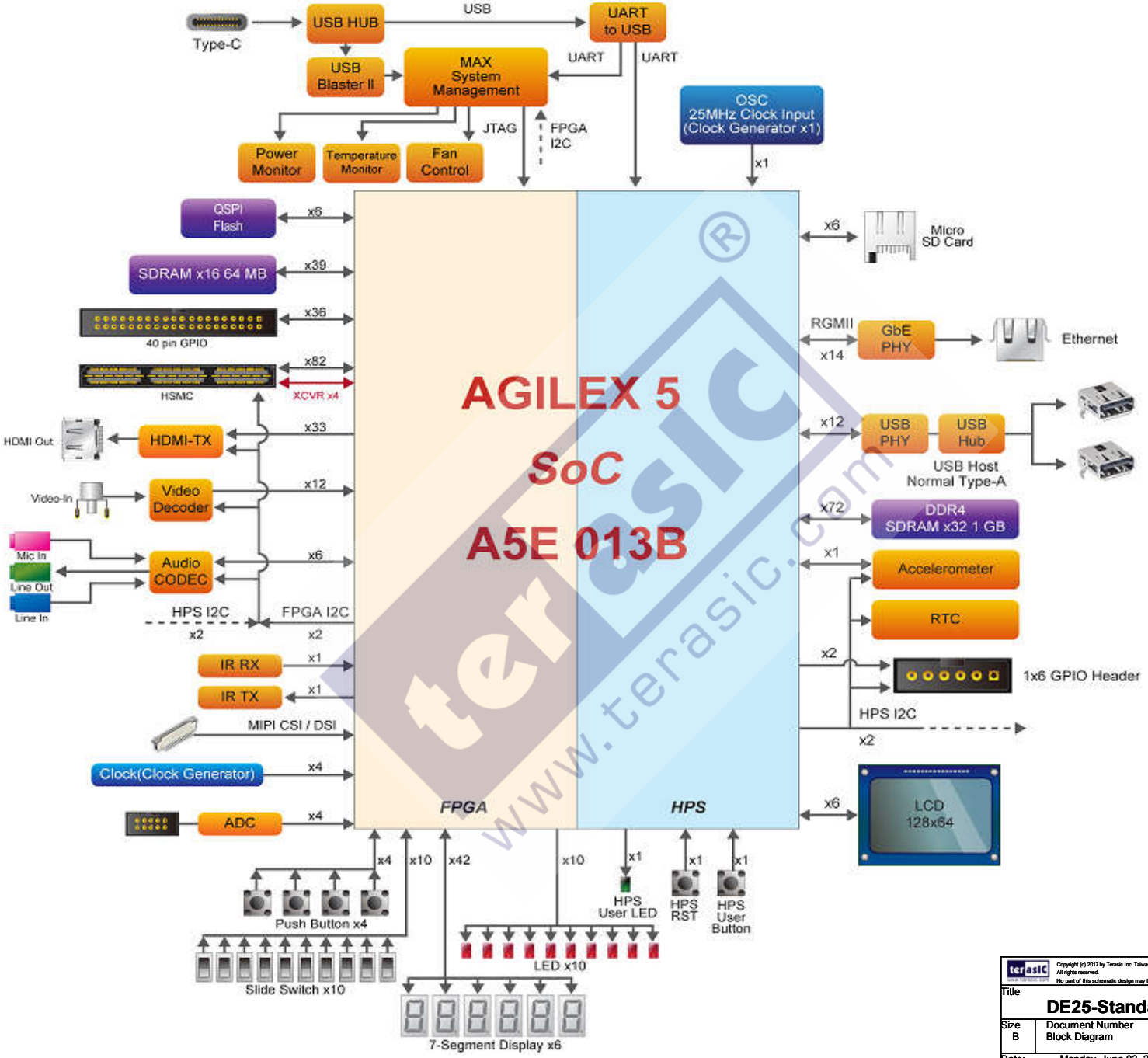
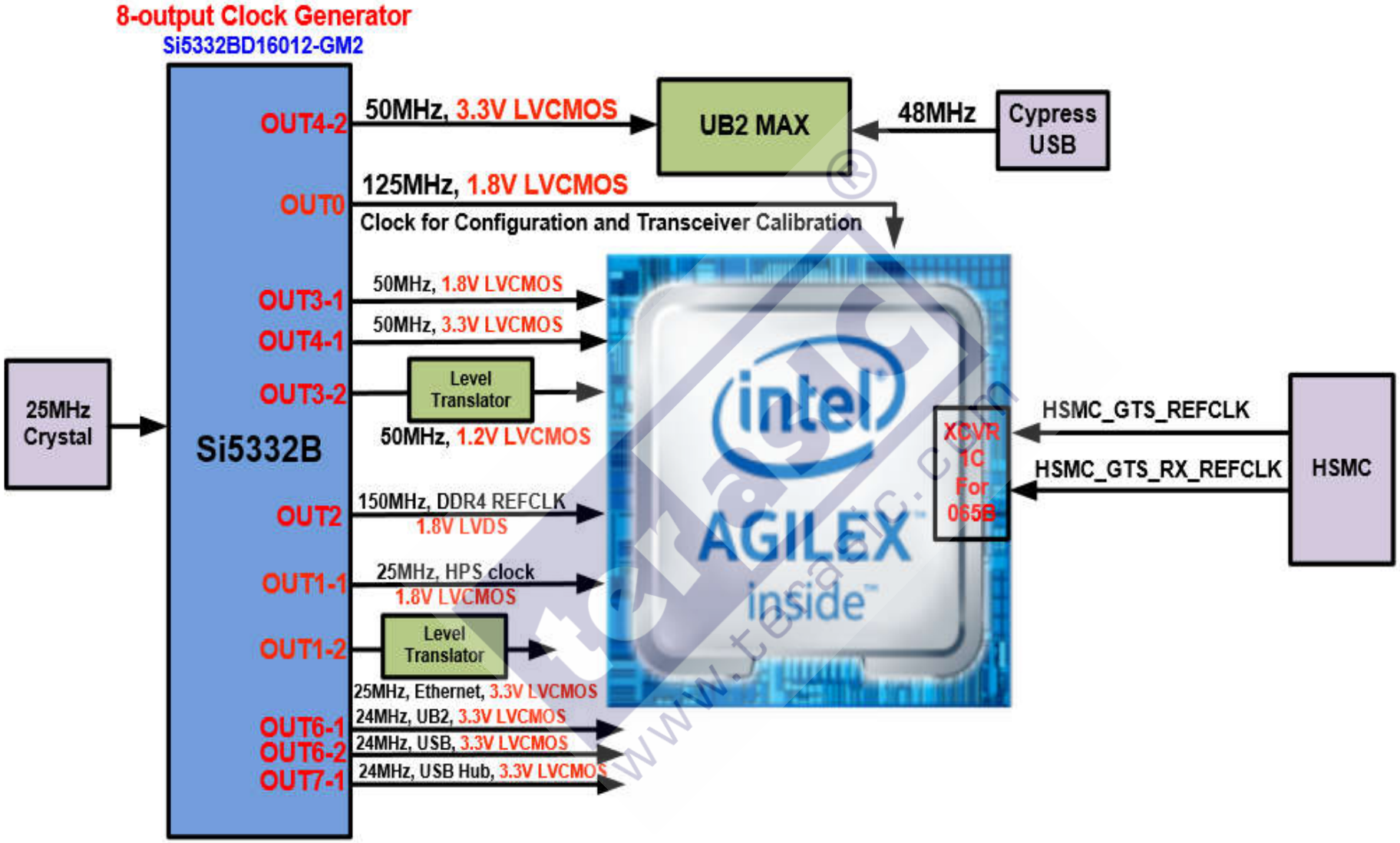
Block Diagram



Title	DE25-Standard Board	
Size B	Document Number Block Diagram	Rev B
Date: Monday, June 03, 2024	Sheet 2 of 49	

Clock Tree



Title	DE25-Standard Board	
Size B	Document Number Clock Tree	Rev B
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CAM_D_p[1..0] 29
CAM_D_n[1..0] 29
CAM_CLK_p 29
CAM_CLK_n 29
CLOCK3_50 4
TD_DATA[7..0] 32
TD_VS 32
TD_HS 32
TD_RESET_N 32
TD_CLK27 32
AUD_ADCLRCK 30
AUD_DACDAT 30
AUD_BCLK 30
AUD_XCK 30
AUD_DACLRCK 30
AUD_ADCDAT 30
31 IRDA_TXD
5,35 CPU_RST_n
30 IRDA_RXD
33 HDMI_TX_CLK

VCCIO = 1.2V

U30C

BANK 2AT

HDMI_TX_CLK	CH59	IOB, DIFF_IO_2A_T1N, DQ0
LEDR8	CF59	IOB, DIFF_IO_2A_T1P, DQ0
LEDR7	CH62	IOB, DIFF_IO_2A_T2N, DQ0
LEDR6	CF62	IOB, DIFF_IO_2A_T2P, DQ0
LEDR5	CC62	IOB, DIFF_IO_2A_T3N, DQ0
LEDR4	CA62	IOB, DIFF_IO_2A_T3P, DQ0
LEDR3	CF69	IOB, DIFF_IO_2A_T4N, DQSN0
LEDR2	CH69	IOB, DIFF_IO_2A_T4P, DQS0
LEDR1	CA71	IOB, CDR, DIFF_IO_2A_T5N, DQ0
LEDR0	CC71	IOB, CDR, DIFF_IO_2A_T5P, DQ0
KEY3	CH71	IOB, DIFF_IO_2A_T6N, DQ0
KEY2	CF71	IOB, DIFF_IO_2A_T6P, DQ0
KEY1	CA59	IOB, DIFF_IO_2A_T7N, DQ1
KEY0	BW59	IOB, DIFF_IO_2A_T7P, DQ1
SW9	BR59	IOB, DIFF_IO_2A_T8N, DQ1
SW8	BU59	IOB, DIFF_IO_2A_T8P, DQ1
SW7	BR62	IOB, DIFF_IO_2A_T9N, DQ1
SW6	BU62	IOB, DIFF_IO_2A_T9P, DQ1
CAM_CLK_n	CA69	IOB, DIFF_IO_2A_T10N, DQSN1
CAM_CLK_p	BW69	IOB, DIFF_IO_2A_T10P, DQS1
CAM_D_n1	BU71	IOB, CDR, DIFF_IO_2A_T11N, DQ1
CAM_D_p1	BR71	IOB, CDR, DIFF_IO_2A_T11P, DQ1
CAM_D_n0	BU69	IOB, DIFF_IO_2A_T12N, DQ1
CAM_D_p0	BR69	IOB, DIFF_IO_2A_T12P, DQ1
SW5	BK59	IOB, DIFF_IO_2A_T13N, DQ2
SW4	BM59	IOB, DIFF_IO_2A_T13P, DQ2
SW3	BH59	IOB, DIFF_IO_2A_T14N, DQ2
SW2	BH62	IOB, DIFF_IO_2A_T14P, DQ2
SW1	BP62	IOB, DIFF_IO_2A_T15N, DQ2
SW0	BM62	IOB, DIFF_IO_2A_T15P, DQ2
HEX52	BK69	IOB, PLL_2A_T_CLKOUT1N, DIFF_IO_2A_T16N, DQSN2
HEX56	BM69	IOB, PLL_2A_T_CLKOUT1P, PLL_2A_T_CLKOUT1, PLL_2A_T_FB1, DIFF_IO_2A_T16P, DQS2
HEX55	BH71	IOB, CDR, DIFF_IO_2A_T17N, DQ2
CAM_RZQ1	BH69	IOB, RZQ_T_2A, CDR, DIFF_IO_2A_T17P, DQ2
HEX53	BP71	IOB, CLK_T_2A_1N, DIFF_IO_2A_T18N, DQ2
CLOCK3_50	BM71	IOB, CLK_T_2A_1P, DIFF_IO_2A_T18P, DQ2
TD_DATA0	BF72	IOB, CLK_T_2A_0N, DIFF_IO_2A_T19N, DQS3
TD_CLK27	BF75	IOB, CLK_T_2A_0P, DIFF_IO_2A_T19P, DQ3
TD_DATA1	BE75	IOB, DIFF_IO_2A_T20N, DQ3
TD_DATA2	BE79	IOB, DIFF_IO_2A_T20P, DQ3
TD_DATA3	BF83	IOB, PLL_2A_T_CLKOUT0N, DIFF_IO_2A_T21N, DQ3
TD_DATA4	BE83	IOB, PLL_2A_T_CLKOUT0P, PLL_2A_T_CLKOUT0, PLL_2A_T_FB0, DIFF_IO_2A_T21P, DQ3
TD_DATA5	BE86	IOB, DIFF_IO_2A_T22N, DQSN3
TD_DATA6	BF86	IOB, DIFF_IO_2A_T22P, DQS3
TD_DATA7	BF90	IOB, CDR, DIFF_IO_2A_T23N, DQ3
TD_RESET_N	BF93	IOB, CDR, DIFF_IO_2A_T23P, DQ3
TD_HS	BE93	IOB, DIFF_IO_2A_T24N, DQ3
TD_VS	BE96	IOB, DIFF_IO_2A_T24P, DQ3

I/O Lane 7
I/O Lane 6
I/O Lane 5
I/O Lane 4

R427 240

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BANK 2AB

BK78	IRDA_TXD	IOB, CDR, DIFF_IO_2A_B1N, DQ4
BM78	CPU_RST_n	IOB, CDR, DIFF_IO_2A_B1P, DQ4
BH78	LEDR9	IOB, DIFF_IO_2A_B2N, DQ4
BH81	IRDA_RXD	IOB, DIFF_IO_2A_B2P, DQ4
BP81	HEX00	IOB, DIFF_IO_2A_B3N, DQ4
BM81	HEX01	IOB, DIFF_IO_2A_B3P, DQ4
BM89	HEX02	IOB, PLL_2A_B_CLKOUT1N, DIFF_IO_2A_B4N, DQSN4
BK89	HEX03	IOB, PLL_2A_B_CLKOUT1P, PLL_2A_B_CLKOUT1, PLL_2A_B_FB1, DIFF_IO_2A_B4P, DQS4
BH92	HEX04	IOB, CDR, DIFF_IO_2A_B5N, DQ4
BH89	HEX54	IOB, RZQ_B_2A, CDR, DIFF_IO_2A_B5P, DQ4
BM92	HEX05	IOB, CLK_B_2A_1N, DIFF_IO_2A_B6N, DQ4
BP92	HEX06	IOB, CLK_B_2A_1P, DIFF_IO_2A_B6P, DQ4
CA78	HEX10	IOB, CLK_B_2A_0N, CDR, DIFF_IO_2A_B7N, DQ5
BW78	HEX11	IOB, CLK_B_2A_0P, CDR, DIFF_IO_2A_B7P, DQ5
BU78	HEX12	IOB, DIFF_IO_2A_B8N, DQ5
BR78	HEX13	IOB, DIFF_IO_2A_B8P, DQ5
BU81	HEX14	IOB, PLL_2A_B_CLKOUT0N, DIFF_IO_2A_B9N, DQ5
BR81	HEX15	IOB, PLL_2A_B_CLKOUT0P, PLL_2A_B_CLKOUT0, PLL_2A_B_FB0, DIFF_IO_2A_B9P, DQ5
CA89	HEX16	IOB, DIFF_IO_2A_B10N, DQSN5
BW89	HEX20	IOB, DIFF_IO_2A_B10P, DQS5
BU92	HEX21	IOB, CDR, DIFF_IO_2A_B11N, DQ5
BR92	HEX22	IOB, CDR, DIFF_IO_2A_B11P, DQ5
BU89	HEX23	IOB, DIFF_IO_2A_B12N, DQ5
BR89	HEX24	IOB, DIFF_IO_2A_B12P, DQ5
CF78	HEX25	IOB, CDR, DIFF_IO_2A_B13N, DQ6
CH78	HEX26	IOB, CDR, DIFF_IO_2A_B13P, DQ6
CC81	HEX30	IOB, DIFF_IO_2A_B14N, DQ6
CA81	HEX31	IOB, DIFF_IO_2A_B14P, DQ6
CH81	HEX32	IOB, DIFF_IO_2A_B15N, DQ6
CF81	HEX33	IOB, DIFF_IO_2A_B15P, DQ6
CF89	HEX34	IOB, DIFF_IO_2A_B16N, DQSN6
CH89	HEX35	IOB, DIFF_IO_2A_B16P, DQS6
CH92	HEX36	IOB, CDR, DIFF_IO_2A_B17N, DQ6
CF92	HEX40	IOB, CDR, DIFF_IO_2A_B17P, DQ6
CA92	HEX41	IOB, DIFF_IO_2A_B18N, DQ6
CC92	HEX42	IOB, DIFF_IO_2A_B18P, DQ6
CL76	HEX43	IOB, CDR, DIFF_IO_2A_B19N, DQ7
CK76	HEX44	IOB, CDR, DIFF_IO_2A_B19P, DQ7
CL82	HEX45	IOB, DIFF_IO_2A_B20N, DQ7
CK80	HEX46	IOB, DIFF_IO_2A_B20P, DQ7
CL85	HEX50	IOB, DIFF_IO_2A_B21N, DQ7
CK85	HEX51	IOB, DIFF_IO_2A_B21P, DQ7
CK88	AUD_ADCLRCK	IOB, DIFF_IO_2A_B22N, DQSN7
CL88	AUD_DACDAT	IOB, DIFF_IO_2A_B22P, DQS7
CL97	AUD_BCLK	IOB, CDR, DIFF_IO_2A_B23N, DQ7
CK97	AUD_XCK	IOB, CDR, DIFF_IO_2A_B23P, DQ7
CK94	AUD_DACLRCK	IOB, DIFF_IO_2A_B24N, DQ7
CL91	AUD_ADCDAT	IOB, DIFF_IO_2A_B24P, DQ7

I/O Lane 3
I/O Lane 2
I/O Lane 1
I/O Lane 0

HEX0[6..0] 34
HEX1[6..0] 34
HEX2[6..0] 7,34
HEX2[6..0] 7,34
HEX3[6..0] 34
HEX4[6..0] 34
HEX5[6..0] 34
KEY[3..0] 35
SW[9..0] 35
LEDR[9..0] 34

Title: DE25-Standard Board

Size	Document Number	Rev
B	FPGA Bank 2A	B

Date: Monday, June 03, 2024 Sheet 7 of 49

VCCIO = 1.2V

U30D

BANK 2BT (NC)

CC19	IOB, DIFF_IO_2B_T1N, DQ8
CF19	IOB, DIFF_IO_2B_T1P, DQ8
CH22	IOB, DIFF_IO_2B_T2N, DQ8
CF22	IOB, DIFF_IO_2B_T2P, DQ8
CA22	IOB, DIFF_IO_2B_T3N, DQ8
CC22	IOB, DIFF_IO_2B_T3P, DQ8
CC28	IOB, DIFF_IO_2B_T4N, DQSN8
CF28	IOB, DIFF_IO_2B_T4P, DQS8
CC31	IOB, CDR, DIFF_IO_2B_T5N, DQ8
CA31	IOB, CDR, DIFF_IO_2B_T5P, DQ8
CF31	IOB, DIFF_IO_2B_T6N, DQ8
CH31	IOB, DIFF_IO_2B_T6P, DQ8
CL6	IOB, DIFF_IO_2B_T7N, DQ9
CK8	IOB, DIFF_IO_2B_T7P, DQ9
CL8	IOB, DIFF_IO_2B_T8N, DQ9
CK11	IOB, DIFF_IO_2B_T8P, DQ9
CL11	IOB, DIFF_IO_2B_T9N, DQ9
CL14	IOB, DIFF_IO_2B_T9P, DQ9
CL17	IOB, DIFF_IO_2B_T10N, DQSN9
CK17	IOB, DIFF_IO_2B_T10P, DQS9
CK20	IOB, CDR, DIFF_IO_2B_T11N, DQ9
CL20	IOB, CDR, DIFF_IO_2B_T11P, DQ9
CK26	IOB, DIFF_IO_2B_T12N, DQ9
CL23	IOB, DIFF_IO_2B_T12P, DQ9
BF46	IOB, DIFF_IO_2B_T13N, DQ10
BE46	IOB, DIFF_IO_2B_T13P, DQ10
BE50	IOB, DIFF_IO_2B_T14N, DQ10
BF50	IOB, DIFF_IO_2B_T14P, DQ10
BF53	IOB, DIFF_IO_2B_T15N, DQ10
BF57	IOB, DIFF_IO_2B_T15P, DQ10
BE57	IOB, PLL_2B_T_CLKOUT1N, DIFF_IO_2B_T16N, DQSN10
BE61	IOB, PLL_2B_T_CLKOUT1P, PLL_2B_T_CLKOUT1, PLL_2B_T_FB1, DIFF_IO_2B_T16P, DQS10
BF64	IOB, CDR, DIFF_IO_2B_T17N, DQ10
BE64	IOB, RZQ_T_2B, CDR, DIFF_IO_2B_T17P, DQ10
BE68	IOB, CLK_T_2B_1N, DIFF_IO_2B_T18N, DQ10
BF68	IOB, CLK_T_2B_1P, DIFF_IO_2B_T18P, DQ10
BM38	IOB, CLK_T_2B_0N, DIFF_IO_2B_T19N, DQ11
BK38	IOB, CLK_T_2B_0P, DIFF_IO_2B_T19P, DQ11
BH41	IOB, DIFF_IO_2B_T20N, DQ11
BH38	IOB, DIFF_IO_2B_T20P, DQ11
BM41	IOB, PLL_2B_T_CLKOUT0N, DIFF_IO_2B_T21N, DQ11
BP41	IOB, PLL_2B_T_CLKOUT0P, PLL_2B_T_CLKOUT0, PLL_2B_T_FB0, DIFF_IO_2B_T21P, DQ11
BM49	IOB, DIFF_IO_2B_T22N, DQSN11
BK49	IOB, DIFF_IO_2B_T22P, DQS11
BH52	IOB, CDR, DIFF_IO_2B_T23N, DQ11
BH49	IOB, CDR, DIFF_IO_2B_T23P, DQ11
BP52	IOB, DIFF_IO_2B_T24N, DQ11
BM52	IOB, DIFF_IO_2B_T24P, DQ11

I/O Lane 7

I/O Lane 6

I/O Lane 5

I/O Lane 4

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(NC) BANK 2BB

BW38	IOB, CDR, DIFF_IO_2B_B1N, DQ12
CA38	IOB, CDR, DIFF_IO_2B_B1P, DQ12
BU38	IOB, DIFF_IO_2B_B2N, DQ12
BR38	IOB, DIFF_IO_2B_B2P, DQ12
BU41	IOB, DIFF_IO_2B_B3N, DQ12
BR41	IOB, DIFF_IO_2B_B3P, DQ12
CA49	IOB, PLL_2B_B_CLKOUT1N, DIFF_IO_2B_B4N, DQSN12
BW49	IOB, PLL_2B_B_CLKOUT1P, PLL_2B_B_CLKOUT1, PLL_2B_B_FB1, DIFF_IO_2B_B4P, DQS12
BU52	IOB, CDR, DIFF_IO_2B_B5N, DQ12
BR52	IOB, RZQ_B_2B, CDR, DIFF_IO_2B_B5P, DQ12
BU49	IOB, CLK_B_2B_1N, DIFF_IO_2B_B6N, DQ12
BR49	IOB, CLK_B_2B_1P, DIFF_IO_2B_B6P, DQ12
CF38	IOB, CLK_B_2B_0N, CDR, DIFF_IO_2B_B7N, DQ13
CH38	IOB, CLK_B_2B_0P, CDR, DIFF_IO_2B_B7P, DQ13
CA41	IOB, DIFF_IO_2B_B8N, DQ13
CC41	IOB, DIFF_IO_2B_B8P, DQ13
CF41	IOB, PLL_2B_B_CLKOUT0N, DIFF_IO_2B_B9N, DQ13
CH41	IOB, PLL_2B_B_CLKOUT0P, PLL_2B_B_CLKOUT0, PLL_2B_B_FB0, DIFF_IO_2B_B9P, DQ13
CH49	IOB, DIFF_IO_2B_B10N, DQSN13
CF49	IOB, DIFF_IO_2B_B10P, DQS13
CA52	IOB, CDR, DIFF_IO_2B_B11N, DQ13
CC52	IOB, CDR, DIFF_IO_2B_B11P, DQ13
CH52	IOB, DIFF_IO_2B_B12N, DQ13
CF52	IOB, DIFF_IO_2B_B12P, DQ13
CL26	IOB, CDR, DIFF_IO_2B_B13N, DQ14
CK30	IOB, CDR, DIFF_IO_2B_B13P, DQ14
CL30	IOB, DIFF_IO_2B_B14N, DQ14
CK33	IOB, DIFF_IO_2B_B14P, DQ14
CL35	IOB, DIFF_IO_2B_B15N, DQ14
CK35	IOB, DIFF_IO_2B_B15P, DQ14
CL39	IOB, DIFF_IO_2B_B16N, DQSN14
CK39	IOB, DIFF_IO_2B_B16P, DQS14
CL45	IOB, CDR, DIFF_IO_2B_B17N, DQ14
CK48	IOB, CDR, DIFF_IO_2B_B17P, DQ14
CK45	IOB, DIFF_IO_2B_B18N, DQ14
CL42	IOB, DIFF_IO_2B_B18P, DQ14
CK54	IOB, CDR, DIFF_IO_2B_B19N, DQ15
CL51	IOB, CDR, DIFF_IO_2B_B19P, DQ15
CL54	IOB, DIFF_IO_2B_B20N, DQ15
CK56	IOB, DIFF_IO_2B_B20P, DQ15
CL60	IOB, DIFF_IO_2B_B21N, DQ15
CL56	IOB, DIFF_IO_2B_B21P, DQ15
CL66	IOB, DIFF_IO_2B_B22N, DQSN15
CK63	IOB, DIFF_IO_2B_B22P, DQS15
CL73	IOB, CDR, DIFF_IO_2B_B23N, DQ15
CK73	IOB, CDR, DIFF_IO_2B_B23P, DQ15
CL70	IOB, DIFF_IO_2B_B24N, DQ15
CK66	IOB, DIFF_IO_2B_B24P, DQ15

I/O Lane 3

I/O Lane 2

I/O Lane 1

I/O Lane 0

Title: **DE25-Standard Board**

Size	Document Number	Rev
B	FPGA Bank 2B (NC)	B

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DDR4

DDR4_CK 25
DDR4_CK_n 25
DDR4_BA[1..0] 25
DDR4_BG[1..0] 25
DDR4_ODT 25
DDR4_CS_n 25
DDR4_DQ[31..0] 25
DDR4_DQS[3..0] 25
DDR4_DQS_n[3..0] 25
DDR4_A[16..0] 25
DDR4_DBI_n[3..0] 25
DDR4_CKE 25
DDR4_RESET_n 25
DDR4_PAR 25
DDR4_ACT_n 25
DDR4_ALERT_n 25
DDR4_REFCLK_p 4
DDR4_REFCLK_n 4

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

VCCIO = 1.2V

U30E

BANK 3AT

A91	IOB, DIFF_IO_3A_T1N, DQ16	
B88	IOB, DIFF_IO_3A_T1P, DQ16	
A94	IOB, DIFF_IO_3A_T2N, DQ16	
B91	IOB, DIFF_IO_3A_T2P, DQ16	
A97	IOB, DIFF_IO_3A_T3N, DQ16	
B97	IOB, DIFF_IO_3A_T3P, DQ16, AVST_READY	I/O Lane 7
B101	IOB, DIFF_IO_3A_T4N, DQSN16	
A101	IOB, DIFF_IO_3A_T4P, DQS16	
A110	IOB, CDR, DIFF_IO_3A_T5N, DQ16	
B106	IOB, CDR, DIFF_IO_3A_T5P, DQ16	
B103	IOB, DIFF_IO_3A_T6N, DQ16	
A106	IOB, DIFF_IO_3A_T6P, DQ16	
D84	IOB, DIFF_IO_3A_T7N, DQ17, AVST_DATA10	DDR4_DQ25
F84	IOB, DIFF_IO_3A_T7P, DQ17, AVST_DATA9	DDR4_DQ29
M87	IOB, DIFF_IO_3A_T8N, DQ17, AVST_DATA8	DDR4_DQ31
K87	IOB, DIFF_IO_3A_T8P, DQ17, AVST_VALID	DDR4_DQ27
F87	IOB, DIFF_IO_3A_T9N, DQ17, AVST_DATA7	
H87	IOB, DIFF_IO_3A_T9P, DQ17, AVST_DATA6	DDR4_DBI_n3
D95	IOB, DIFF_IO_3A_T10N, DQSN17, AVST_DATA5	DDR4_DQS_n3
F95	IOB, DIFF_IO_3A_T10P, DQS17, AVST_DATA4	DDR4_DQS3
K98	IOB, CDR, DIFF_IO_3A_T11N, DQ17, AVST_DATA3	DDR4_DQ26
M98	IOB, CDR, DIFF_IO_3A_T11P, DQ17, AVST_DATA2	DDR4_DQ24
F98	IOB, DIFF_IO_3A_T12N, DQ17, AVST_DATA1	DDR4_DQ28
H98	IOB, DIFF_IO_3A_T12P, DQ17, AVST_DATA0	DDR4_DQ30
P84	IOB, DIFF_IO_3A_T13N, DQ18	DDR4_DQ23
T84	IOB, DIFF_IO_3A_T13P, DQ18	DDR4_DQ22
M84	IOB, DIFF_IO_3A_T14N, DQ18	DDR4_DQ19
K84	IOB, DIFF_IO_3A_T14P, DQ18	DDR4_DQ17
T87	IOB, DIFF_IO_3A_T15N, DQ18	
V87	IOB, DIFF_IO_3A_T15P, DQ18	DDR4_DBI_n2
M95	IOB, PLL_3A_T_CLKOUT1N, DIFF_IO_3A_T16N, DQSN18	DDR4_DQS_n2
K95	IOB, PLL_3A_T_CLKOUT1P, PLL_3A_T_CLKOUT1, PLL_3A_T_FB1, DIFF_IO_3A_T16P, DQS18	DDR4_DQS2
T95	IOB, CDR, DIFF_IO_3A_T17N, DQ18	DDR4_DQ16
P95	IOB, RZQ_T_3A, CDR, DIFF_IO_3A_T17P, DQ18	DDR4_DQ18
T98	IOB, CLK_T_3A_1N, DIFF_IO_3A_T18N, DQ18	DDR4_DQ20
V98	IOB, CLK_T_3A_1P, DIFF_IO_3A_T18P, DQ18	DDR4_DQ21
Y84	IOB, CLK_T_3A_0N, DIFF_IO_3A_T19N, DQ19	DDR4_DQ15
Y87	IOB, CLK_T_3A_0P, DIFF_IO_3A_T19P, DQ19	DDR4_DQ13
Y95	IOB, DIFF_IO_3A_T20N, DQ19	DDR4_DQ11
Y98	IOB, DIFF_IO_3A_T20P, DQ19	DDR4_DQ9
AC86	IOB, PLL_3A_T_CLKOUT0N, DIFF_IO_3A_T21N, DQ19	
AC90	IOB, PLL_3A_T_CLKOUT0P, PLL_3A_T_CLKOUT0, PLL_3A_T_FB0, DIFF_IO_3A_T21P, DQ19	DDR4_DBI_n1
AG93	IOB, DIFF_IO_3A_T22N, DQSN19, AVST_CLK	DDR4_DQS_n1
AG90	IOB, DIFF_IO_3A_T22P, DQS19, AVST_DATA15	DDR4_DQS1
AC96	IOB, CDR, DIFF_IO_3A_T23N, DQ19, AVST_DATA14	DDR4_DQ12
AC100	IOB, CDR, DIFF_IO_3A_T23P, DQ19, AVST_DATA13	DDR4_DQ14
AG104	IOB, DIFF_IO_3A_T24N, DQ19, AVST_DATA12	DDR4_DQ10
AG100	IOB, DIFF_IO_3A_T24P, DQ19, AVST_DATA11	DDR4_DQ8

I/O Lane 6
I/O Lane 5
I/O Lane 4

BANK 3AB

	IOB, CDR, DIFF_IO_3A_B1N, DQ20	
	IOB, CDR, DIFF_IO_3A_B1P, DQ20	
	IOB, DIFF_IO_3A_B2N, DQ20	
	IOB, DIFF_IO_3A_B2P, DQ20	I/O Lane 3
	IOB, DIFF_IO_3A_B3N, DQ20	
	IOB, DIFF_IO_3A_B3P, DQ20	
	IOB, PLL_3A_B_CLKOUT1N, DIFF_IO_3A_B4N, DQSN20	
	IOB, PLL_3A_B_CLKOUT1P, PLL_3A_B_CLKOUT1, PLL_3A_B_FB1, DIFF_IO_3A_B4P, DQS20	
	IOB, CDR, DIFF_IO_3A_B5N, DQ20	
	IOB, RZQ_B_3A, CDR, DIFF_IO_3A_B5P, DQ20	
	IOB, CLK_B_3A_1N, DIFF_IO_3A_B6N, DQ20	
	IOB, CLK_B_3A_1P, DIFF_IO_3A_B6P, DQ20	
	IOB, CLK_B_3A_0N, CDR, DIFF_IO_3A_B7N, DQ21	
	IOB, CLK_B_3A_0P, CDR, DIFF_IO_3A_B7P, DQ21	
	IOB, DIFF_IO_3A_B8N, DQ21	
	IOB, DIFF_IO_3A_B8P, DQ21	
	IOB, PLL_3A_B_CLKOUT0N, DIFF_IO_3A_B9N, DQ21	
	IOB, PLL_3A_B_CLKOUT0P, PLL_3A_B_CLKOUT0, PLL_3A_B_FB0, DIFF_IO_3A_B9P, DQ21	
	IOB, DIFF_IO_3A_B10N, DQSN21	I/O Lane 2
	IOB, DIFF_IO_3A_B10P, DQS21	
	IOB, CDR, DIFF_IO_3A_B11N, DQ21	
	IOB, CDR, DIFF_IO_3A_B11P, DQ21	
	IOB, DIFF_IO_3A_B12N, DQ21	
	IOB, DIFF_IO_3A_B12P, DQ21	
	IOB, CDR, DIFF_IO_3A_B13N, DQ22	
	IOB, CDR, DIFF_IO_3A_B13P, DQ22	
	IOB, DIFF_IO_3A_B14N, DQ22	
	IOB, DIFF_IO_3A_B14P, DQ22	
	IOB, DIFF_IO_3A_B15N, DQ22	I/O Lane 1
	IOB, DIFF_IO_3A_B15P, DQ22	
	IOB, DIFF_IO_3A_B16N, DQSN22	
	IOB, DIFF_IO_3A_B16P, DQS22	
	IOB, CDR, DIFF_IO_3A_B17N, DQ22	
	IOB, CDR, DIFF_IO_3A_B17P, DQ22	
	IOB, DIFF_IO_3A_B18N, DQ22	
	IOB, DIFF_IO_3A_B18P, DQ22	
	IOB, CDR, DIFF_IO_3A_B19N, DQ23	
	IOB, CDR, DIFF_IO_3A_B19P, DQ23	
	IOB, DIFF_IO_3A_B20N, DQ23	
	IOB, DIFF_IO_3A_B20P, DQ23	I/O Lane 0
	IOB, DIFF_IO_3A_B21N, DQ23	
	IOB, DIFF_IO_3A_B21P, DQ23	
	IOB, DIFF_IO_3A_B22N, DQSN23	
	IOB, DIFF_IO_3A_B22P, DQS23	
	IOB, CDR, DIFF_IO_3A_B23N, DQ23	
	IOB, CDR, DIFF_IO_3A_B23P, DQ23	
	IOB, DIFF_IO_3A_B24N, DQ23	
	IOB, DIFF_IO_3A_B24P, DQ23	

AB105	DDR4_BG0	
Y105	DDR4_BA1	
AB108	DDR4_BA0	
Y108	DDR4_ALERT_n	
AK104	DDR4_A16	
AK107	DDR4_A15	
AB114	DDR4_A14	
Y114	DDR4_A13	
AG111	DDR4_A12	
AK111	RZQ_B_3A	R418 240
Y117	DDR4_REFCLK_n	
AB117	DDR4_REFCLK_p	R405 100 DNI
K105	DDR4_A11	
M105	DDR4_A10	
P105	DDR4_A9	
T105	DDR4_A8	
T108	DDR4_A7	
V108	DDR4_A6	
K114	DDR4_A5	
M114	DDR4_A4	
T117	DDR4_A3	
V117	DDR4_A2	
P114	DDR4_A1	
T114	DDR4_A0	
K108	DDR4_PAR	
M108		
F108	DDR4_CK_n	
H108	DDR4_CK	
D105		
F105	DDR4_CKE	
D114		
F114	DDR4_ODT	
M117	DDR4_ACT_n	
K117	DDR4_CS_n	
H117	DDR4_RESET_n	
F117	DDR4_BG1	
A113	DDR4_DQ7	
B113	DDR4_DQ5	
A116	DDR4_DQ1	
B116	DDR4_DQ3	
A122		
B119	DDR4_DBI_n0	
A125	DDR4_DQS_n0	
B122	DDR4_DQS0	
A130	DDR4_DQ6	
B130	DDR4_DQ4	
A128	DDR4_DQ2	
B128	DDR4_DQ0	

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Title: **DE25-Standard Board**

Size	Document Number	Rev
B	FPGA Bank 3A	B

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VCCIO = 1.2V

U30F

BANK 3BT (NC)

B42	IOB, DIFF_IO_3B_T1N, DQ24
A45	IOB, DIFF_IO_3B_T1P, DQ24
A48	IOB, DIFF_IO_3B_T2N, DQ24
B45	IOB, DIFF_IO_3B_T2P, DQ24
A51	IOB, DIFF_IO_3B_T3N, DQ24
B51	IOB, DIFF_IO_3B_T3P, DQ24
B54	IOB, DIFF_IO_3B_T4N, DQSN24
A54	IOB, DIFF_IO_3B_T4P, DQS24
B60	IOB, CDR, DIFF_IO_3B_T5N, DQ24
A63	IOB, CDR, DIFF_IO_3B_T5P, DQ24
A60	IOB, DIFF_IO_3B_T6N, DQ24
B56	IOB, DIFF_IO_3B_T6P, DQ24
F44	IOB, DIFF_IO_3B_T7N, DQ25
D44	IOB, DIFF_IO_3B_T7P, DQ25
H47	IOB, DIFF_IO_3B_T8N, DQ25
F47	IOB, DIFF_IO_3B_T8P, DQ25
K47	IOB, DIFF_IO_3B_T9N, DQ25
M47	IOB, DIFF_IO_3B_T9P, DQ25
D55	IOB, DIFF_IO_3B_T10N, DQSN25
F55	IOB, DIFF_IO_3B_T10P, DQS25
K58	IOB, CDR, DIFF_IO_3B_T11N, DQ25
M58	IOB, CDR, DIFF_IO_3B_T11P, DQ25
F58	IOB, DIFF_IO_3B_T12N, DQ25
H58	IOB, DIFF_IO_3B_T12P, DQ25
M44	IOB, DIFF_IO_3B_T13N, DQ26
K44	IOB, DIFF_IO_3B_T13P, DQ26
T44	IOB, DIFF_IO_3B_T14N, DQ26
P44	IOB, DIFF_IO_3B_T14P, DQ26
T47	IOB, DIFF_IO_3B_T15N, DQ26
V47	IOB, DIFF_IO_3B_T15P, DQ26
M55	IOB, PLL_3B_T_CLKOUT1N, DIFF_IO_3B_T16N, DQSN26
K55	IOB, PLL_3B_T_CLKOUT1P, PLL_3B_T_CLKOUT1, PLL_3B_T_FB1, DIFF_IO_3B_T16P, DQS26
T58	IOB, CDR, DIFF_IO_3B_T17N, DQ26
V58	IOB, RZQ_T_3B, CDR, DIFF_IO_3B_T17P, DQ26
T55	IOB, CLK_T_3B_1N, DIFF_IO_3B_T18N, DQ26
P55	IOB, CLK_T_3B_1P, DIFF_IO_3B_T18P, DQ26
Y47	IOB, CLK_T_3B_0N, DIFF_IO_3B_T19N, DQ27
Y44	IOB, CLK_T_3B_0P, DIFF_IO_3B_T19P, DQ27
Y55	IOB, DIFF_IO_3B_T20N, DQ27
Y58	IOB, DIFF_IO_3B_T20P, DQ27
AC50	IOB, PLL_3B_T_CLKOUT0N, DIFF_IO_3B_T21N, DQ27
AC53	IOB, PLL_3B_T_CLKOUT0P, PLL_3B_T_CLKOUT0, PLL_3B_T_FB0, DIFF_IO_3B_T21P, DQ27
AG53	IOB, DIFF_IO_3B_T22N, DQSN27
AG57	IOB, DIFF_IO_3B_T22P, DQS27
AC61	IOB, CDR, DIFF_IO_3B_T23N, DQ27
AG61	IOB, CDR, DIFF_IO_3B_T23P, DQ27
AG64	IOB, DIFF_IO_3B_T24N, DQ27
AC64	IOB, DIFF_IO_3B_T24P, DQ27

I/O Lane 7

I/O Lane 6

I/O Lane 5

I/O Lane 4

BANK 3BB (NC)

Y65	IOB, CDR, DIFF_IO_3B_B1N, DQ28
Y67	IOB, CDR, DIFF_IO_3B_B1P, DQ28
Y74	IOB, DIFF_IO_3B_B2N, DQ28
Y77	IOB, DIFF_IO_3B_B2P, DQ28
AC83	IOB, DIFF_IO_3B_B3N, DQ28
AG83	IOB, DIFF_IO_3B_B3P, DQ28
AG75	IOB, PLL_3B_B_CLKOUT1N, DIFF_IO_3B_B4N, DQSN28
AG72	IOB, PLL_3B_B_CLKOUT1P, PLL_3B_B_CLKOUT1, PLL_3B_B_FB1, DIFF_IO_3B_B4P, DQS28
AG79	IOB, CDR, DIFF_IO_3B_B5N, DQ28
AC79	IOB, RZQ_B_3B, CDR, DIFF_IO_3B_B5P, DQ28
AC72	IOB, CLK_B_3B_1N, DIFF_IO_3B_B6N, DQ28
AC68	IOB, CLK_B_3B_1P, DIFF_IO_3B_B6P, DQ28
P65	IOB, CLK_B_3B_0N, CDR, DIFF_IO_3B_B7N, DQ29
T65	IOB, CLK_B_3B_0P, CDR, DIFF_IO_3B_B7P, DQ29
K65	IOB, DIFF_IO_3B_B8N, DQ29
M65	IOB, DIFF_IO_3B_B8P, DQ29
T67	IOB, PLL_3B_B_CLKOUT0N, DIFF_IO_3B_B9N, DQ29
V67	IOB, PLL_3B_B_CLKOUT0P, PLL_3B_B_CLKOUT0, PLL_3B_B_FB0, DIFF_IO_3B_B9P, DQ29
K74	IOB, DIFF_IO_3B_B10N, DQSN29
M74	IOB, DIFF_IO_3B_B10P, DQS29
T77	IOB, CDR, DIFF_IO_3B_B11N, DQ29
V77	IOB, CDR, DIFF_IO_3B_B11P, DQ29
T74	IOB, DIFF_IO_3B_B12N, DQ29
P74	IOB, DIFF_IO_3B_B12P, DQ29
D65	IOB, CDR, DIFF_IO_3B_B13N, DQ30
F65	IOB, CDR, DIFF_IO_3B_B13P, DQ30
F67	IOB, DIFF_IO_3B_B14N, DQ30
H67	IOB, DIFF_IO_3B_B14P, DQ30
K67	IOB, DIFF_IO_3B_B15N, DQ30
M67	IOB, DIFF_IO_3B_B15P, DQ30
F74	IOB, DIFF_IO_3B_B16N, DQSN30
D74	IOB, DIFF_IO_3B_B16P, DQS30
H77	IOB, CDR, DIFF_IO_3B_B17N, DQ30
F77	IOB, CDR, DIFF_IO_3B_B17P, DQ30
M77	IOB, DIFF_IO_3B_B18N, DQ30
K77	IOB, DIFF_IO_3B_B18P, DQ30
A66	IOB, CDR, DIFF_IO_3B_B19N, DQ31
B66	IOB, CDR, DIFF_IO_3B_B19P, DQ31
A70	IOB, DIFF_IO_3B_B20N, DQ31
B70	IOB, DIFF_IO_3B_B20P, DQ31
A76	IOB, DIFF_IO_3B_B21N, DQ31
B73	IOB, DIFF_IO_3B_B21P, DQ31
B76	IOB, DIFF_IO_3B_B22N, DQSN31
A80	IOB, DIFF_IO_3B_B22P, DQS31
A85	IOB, CDR, DIFF_IO_3B_B23N, DQ31
B85	IOB, CDR, DIFF_IO_3B_B23P, DQ31
B82	IOB, DIFF_IO_3B_B24N, DQ31
A82	IOB, DIFF_IO_3B_B24P, DQ31

I/O Lane 3

I/O Lane 2

I/O Lane 1

I/O Lane 0

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Title: **DE25-Standard Board**

Size	Document Number	Rev
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HDMI TX

33 HDMI_TX_D[23..0]

33 HDMI_TX_HS
33 HDMI_TX_VS
33 HDMI_TX_DE
33 HDMI_TX_INT

FPGA I2C Interface

FPGA_I2C_SDA 6,28,29,30,32,33,40
FPGA_I2C_SCL 6,28,29,30,32,33,40

HDMI Audio Interface

33 HDMI_I2S0
33 HDMI_MCLK
33 HDMI_LRCLK
33 HDMI_SCLK

CAM_GPIO 29
CAM_I2C_SDA 29
CAM_I2C_SCL 29

4 CLOCK_50

7,11,34 LEDR[9..0]

28 HSMC_B5B_D0_E
28 HSMC_B5B_D1_E

LEDR[9..0] 7,11,34

VCCIO = 3.3V

U30G

HDMI_TX_D0	CD134	HVIO_5A_1, SYSPLLREFCLK_L1A_0, TXCLK1, DATA_CTRL1		HVIO_5B_1, SYSPLLREFCLK_L1A_2, TXCLK1, DATA_CTRL1	BF111 HDMI_TX_D19
HDMI_TX_D1	CD135	HVIO_5A_2, SYSPLLREFCLK_L1A_1, TXCLK2, DATA_CTRL2		HVIO_5B_2, SYSPLLREFCLK_L1A_3, TXCLK2, DATA_CTRL2	BH109 HDMI_TX_D20
HDMI_TX_D2	CG134	HVIO_5A_3, SYSPLLREFCLK_L1B_0, TXCLK3, DATA_CTRL3		HVIO_5B_3, SYSPLLREFCLK_L1B_2, TXCLK3, DATA_CTRL3	BE115 HDMI_TX_D21
HDMI_TX_D3	CG135	HVIO_5A_4, SYSPLLREFCLK_L1B_1, TXCLK4, DATA_CTRL4		HVIO_5B_4, SYSPLLREFCLK_L1B_3, TXCLK4, DATA_CTRL4	BF115 HDMI_TX_D22
HDMI_TX_D4	CH132	HVIO_5A_5, PIN_PERST_N_CVP_L1A_0, TXCLK5, DATA_CTRL5		HVIO_5B_5, PIN_PERST_N_CVP_L1A_1, TXCLK5, DATA_CTRL5	BF107 HSMC_B5B_D0_E (Reset input in PCIe)
HDMI_TX_D5	CF132	HVIO_5A_6, PIN_PERST_N_CVP_L1B_0, TXCLK6, DATA_CTRL6		HVIO_5B_6, PIN_PERST_N_CVP_L1B_1, TXCLK6, DATA_CTRL6	BU109 HDMI_TX_D23
HDMI_TX_D6	CF128	HVIO_5A_7, PIN_PERST_N_CVP_L1C_0, TXCLK7, DATA_CTRL7		HVIO_5B_7, PIN_PERST_N_CVP_L1C_1, TXCLK7, DATA_CTRL7	BF104 HSMC_B5B_D1_E
HDMI_TX_D7	CK134	HVIO_5A_8, TXCLK8, DATA_CTRL8		HVIO_5B_8, TXCLK8, DATA_CTRL8	BR109 HDMI_TX_HS
CLOCK_50	CH128	HVIO_5A_9, PLLREFCLK1, TXCLK9, RXCLK1, DATA_CTRL9		HVIO_5B_9, PLLREFCLK1, TXCLK9, RXCLK1, DATA_CTRL9	BE107 HDMI_TX_VS
HDMI_TX_D8	CL125	HVIO_5A_10, PLLREFCLK2, TXCLK10, RXCLK2, DATA_CTRL10		HVIO_5B_10, PLLREFCLK2, TXCLK10, RXCLK2, DATA_CTRL10	BK109 HDMI_TX_DE
HDMI_TX_D9	CF121	HVIO_5A_11, SOURCE_SYNC_CLK1, TXCLK11, RXCLK3, DATA_CTRL11		HVIO_5B_11, SOURCE_SYNC_CLK1, TXCLK11, RXCLK3, DATA_CTRL11	BE111 HDMI_TX_INT
HDMI_TX_D10	CF118	HVIO_5A_12, SOURCE_SYNC_CLK2, TXCLK12, RXCLK4, DATA_CTRL12		HVIO_5B_12, SOURCE_SYNC_CLK2, TXCLK12, RXCLK4, DATA_CTRL12	BM109 FPGA_I2C_SDA
HDMI_TX_D11	BU118	HVIO_5A_13, TXCLK13, DATA_CTRL13		HVIO_5B_13, TXCLK13, DATA_CTRL13	BR112 FPGA_I2C_SCL
HDMI_TX_D12	BR118	HVIO_5A_14, TXCLK14, DATA_CTRL14		HVIO_5B_14, TXCLK14, DATA_CTRL14	BK118 HDMI_I2S0
HDMI_TX_D13	CA118	HVIO_5A_15, TXCLK15, DATA_CTRL15		HVIO_5B_15, TXCLK15, DATA_CTRL15	BM118 HDMI_MCLK
HDMI_TX_D14	BW118	HVIO_5A_16, TXCLK16, DATA_CTRL16		HVIO_5B_16, TXCLK16, DATA_CTRL16	BP112 HDMI_LRCLK
HDMI_TX_D15	CL128	HVIO_5A_17, TXCLK17, DATA_CTRL17		HVIO_5B_17, TXCLK17, DATA_CTRL17	BM112 HDMI_SCLK
HDMI_TX_D16	CL130	HVIO_5A_18, TXCLK18, DATA_CTRL18		HVIO_5B_18, TXCLK18, DATA_CTRL18	BK112 CAM_GPIO
HDMI_TX_D17	CK125	HVIO_5A_19, SYSPLLREFCLK_L1C_0, TXCLK19, DATA_CTRL19		HVIO_5B_19, SYSPLLREFCLK_L1C_1, TXCLK19, DATA_CTRL19	BH118 CAM_I2C_SDA
HDMI_TX_D18	CK128	HVIO_5A_20, TXCLK20, DATA_CTRL20		HVIO_5B_20, TXCLK20, DATA_CTRL20	BF120 CAM_I2C_SCL

BANK 5A

BANK 5B

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Title: **DE25-Standard Board**

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GPIO

GPIO[35..0] 27

ADC_CONVST 31
ADC_DIN 31
ADC_DOUT 31
ADC_SCLK 31

U30H

VCCIO = 3.3V

GPIO9	BU28	HVIO_6A_1, SYSPLLREFCLK_R4A_0, TXCLK1, DATA_CTRL1	
GPIO7	BP31	HVIO_6A_2, SYSPLLREFCLK_R4A_1, TXCLK2, DATA_CTRL2	
GPIO17	BR28	HVIO_6A_3, SYSPLLREFCLK_R4B_0, TXCLK3, DATA_CTRL3	
GPIO8	BR31	HVIO_6A_4, SYSPLLREFCLK_R4B_1, TXCLK4, DATA_CTRL4	
GPIO10	BU31	HVIO_6A_5, PIN_PERST_N_R4A_0, TXCLK5, DATA_CTRL5	
GPIO6	BM28	HVIO_6A_6, PIN_PERST_N_R4B_0, TXCLK6, DATA_CTRL6	
GPIO11	BW28	HVIO_6A_7, PIN_PERST_N_R4C_0, TXCLK7, DATA_CTRL7	
GPIO5	BM31	HVIO_6A_8, TXCLK8, DATA_CTRL8	
GPIO0	BK31	HVIO_6A_9, PLLREFCLK1, TXCLK9, RXCLK1, DATA_CTRL9	
ADC_CONVST	BP22	HVIO_6A_10, PLLREFCLK2, TXCLK10, RXCLK2, DATA_CTRL10	
GPIO4	BK28	HVIO_6A_11, SOURCE_SYNC_CLK1, TXCLK11, RXCLK3, DATA_CTRL11	
GPIO12	BR22	HVIO_6A_12, SOURCE_SYNC_CLK2, TXCLK12, RXCLK4, DATA_CTRL12	
GPIO28	CH12	HVIO_6A_13, TXCLK13, DATA_CTRL13	
GPIO14	BU22	HVIO_6A_14, TXCLK14, DATA_CTRL14	
GPIO15	BW19	HVIO_6A_15, TXCLK15, DATA_CTRL15	
GPIO16	BH28	HVIO_6A_16, TXCLK16, DATA_CTRL16	
GPIO20	BM22	HVIO_6A_17, TXCLK17, DATA_CTRL17	
GPIO29	CF12	HVIO_6A_18, TXCLK18, DATA_CTRL18	
GPIO24	BK19	HVIO_6A_19, SYSPLLREFCLK_R4C_0, TXCLK19, DATA_CTRL19	
GPIO27	CF9	HVIO_6A_20, TXCLK20, DATA_CTRL20	

BANK 6A

BANK 6B

		HVIO_6B_1, SYSPLLREFCLK_R4A_2, TXCLK1, DATA_CTRL1	BF21 GPIO33
		HVIO_6B_2, SYSPLLREFCLK_R4A_3, TXCLK2, DATA_CTRL2	BE21 GPIO35
		HVIO_6B_3, SYSPLLREFCLK_R4B_2, TXCLK3, DATA_CTRL3	BE43 GPIO1
		HVIO_6B_4, SYSPLLREFCLK_R4B_3, TXCLK4, DATA_CTRL4	BF40 GPIO3
		HVIO_6B_5, PIN_PERST_N_R4A_1, TXCLK5, DATA_CTRL5	BE29 GPIO19
		HVIO_6B_6, PIN_PERST_N_R4B_1, TXCLK6, DATA_CTRL6	BE25 GPIO32
		HVIO_6B_7, PIN_PERST_N_R4C_1, TXCLK7, DATA_CTRL7	BF32 ADC_DIN
		HVIO_6B_8, TXCLK8, DATA_CTRL8	BF36 GPIO18
		HVIO_6B_9, PLLREFCLK1, TXCLK9, RXCLK1, DATA_CTRL9	BF29 GPIO2
		HVIO_6B_10, PLLREFCLK2, TXCLK10, RXCLK2, DATA_CTRL10	BF25 GPIO26
		HVIO_6B_11, SOURCE_SYNC_CLK1, TXCLK11, RXCLK3, DATA_CTRL11	BF16 GPIO34
		HVIO_6B_12, SOURCE_SYNC_CLK2, TXCLK12, RXCLK4, DATA_CTRL12	BH19 GPIO25
		HVIO_6B_13, TXCLK13, DATA_CTRL13	BK22 GPIO21
		HVIO_6B_14, TXCLK14, DATA_CTRL14	BM19 GPIO23
		HVIO_6B_15, TXCLK15, DATA_CTRL15	BU19 GPIO13
		HVIO_6B_16, TXCLK16, DATA_CTRL16	BR19 GPIO22
		HVIO_6B_17, TXCLK17, DATA_CTRL17	CK2 GPIO30
		HVIO_6B_18, TXCLK18, DATA_CTRL18	CJ2 GPIO31
		HVIO_6B_19, SYSPLLREFCLK_R4C_1, TXCLK19, DATA_CTRL19	CK4 ADC_DOUT
		HVIO_6B_20, TXCLK20, DATA_CTRL20	CH4 ADC_SCLK

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Title: **DE25-Standard Board**

Size	Document Number	Rev
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SDRAM

4 CLOCK2_50

DRAM_ADDR[12..0] 26
DRAM_DQ[15..0] 26
DRAM_CLK 26
DRAM_CKE 26
DRAM_LDQM 26
DRAM_UDQM 26
DRAM_WE_N 26
DRAM_CAS_N 26
DRAM_RAS_N 26
DRAM_CS_N 26
DRAM_BA0 26
DRAM_BA1 26

VCCIO = 1.8V

U30I

DRAM_ADDR0	F27	HVIO_6C_1, TXCLK1, DATA_CTRL1		HVIO_6D_1, TXCLK1, DATA_CTRL1	A8	DRAM_DQ5
DRAM_ADDR1	F24	HVIO_6C_2, TXCLK2, DATA_CTRL2		HVIO_6D_2, TXCLK2, DATA_CTRL2	B4	DRAM_DQ7
DRAM_ADDR2	H27	HVIO_6C_3, TXCLK3, DATA_CTRL3		HVIO_6D_3, TXCLK3, DATA_CTRL3	A11	DRAM_DQ1
DRAM_ADDR3	D24	HVIO_6C_4, TXCLK4, DATA_CTRL4		HVIO_6D_4, TXCLK4, DATA_CTRL4	B11	DRAM_DQ3
DRAM_ADDR4	H18	HVIO_6C_5, TXCLK5, DATA_CTRL5		HVIO_6D_5, TXCLK5, DATA_CTRL5	B14	DRAM_DQ2
DRAM_ADDR5	D15	HVIO_6C_6, TXCLK6, DATA_CTRL6		HVIO_6D_6, TXCLK6, DATA_CTRL6	A14	DRAM_DQ0
DRAM_ADDR6	F18	HVIO_6C_7, TXCLK7, DATA_CTRL7		HVIO_6D_7, TXCLK7, DATA_CTRL7	A20	DRAM_DQ4
DRAM_ADDR7	F15	HVIO_6C_8, TXCLK8, DATA_CTRL8		HVIO_6D_8, TXCLK8, DATA_CTRL8	A17	DRAM_ADDR11
CLOCK2_50	D8	HVIO_6C_9, PLLREFCLK1, TXCLK9, RXCLK1, DATA_CTRL9		HVIO_6D_9, PLLREFCLK1, TXCLK9, RXCLK1, DATA_CTRL9	A23	DRAM_DQ6
DRAM_ADDR8	K8	HVIO_6C_10, PLLREFCLK2, TXCLK10, RXCLK2, DATA_CTRL10		HVIO_6D_10, PLLREFCLK2, TXCLK10, RXCLK2, DATA_CTRL10	B20	DRAM_DQ8
DRAM_ADDR9	F8	HVIO_6C_11, SOURCE_SYNC_CLK1, TXCLK11, RXCLK3, DATA_CTRL11		HVIO_6D_11, SOURCE_SYNC_CLK1, TXCLK11, RXCLK3, DATA_CTRL11	B23	DRAM_DQ9
DRAM_CS_N	H8	HVIO_6C_12, SOURCE_SYNC_CLK2, TXCLK12, RXCLK4, DATA_CTRL12		HVIO_6D_12, SOURCE_SYNC_CLK2, TXCLK12, RXCLK4, DATA_CTRL12	B26	DRAM_DQ10
DRAM_ADDR10	C2	HVIO_6C_13, TXCLK13, DATA_CTRL13		HVIO_6D_13, TXCLK13, DATA_CTRL13	B30	DRAM_DQ11
DRAM_ADDR12	D4	HVIO_6C_14, TXCLK14, DATA_CTRL14		HVIO_6D_14, TXCLK14, DATA_CTRL14	A30	DRAM_DQ13
DRAM_BA1	F4	HVIO_6C_15, TXCLK15, DATA_CTRL15		HVIO_6D_15, TXCLK15, DATA_CTRL15	A35	DRAM_DQ14
DRAM_LDQM	K4	HVIO_6C_16, TXCLK16, DATA_CTRL16		HVIO_6D_16, TXCLK16, DATA_CTRL16	A33	DRAM_DQ15
DRAM_UDQM	G2	HVIO_6C_17, TXCLK17, DATA_CTRL17		HVIO_6D_17, TXCLK17, DATA_CTRL17	A39	DRAM_DQ12
DRAM_WE_N	J2	HVIO_6C_18, TXCLK18, DATA_CTRL18		HVIO_6D_18, TXCLK18, DATA_CTRL18	B35	DRAM_CKE
DRAM_CAS_N	J1	HVIO_6C_19, TXCLK19, DATA_CTRL19		HVIO_6D_19, TXCLK19, DATA_CTRL19	D34	DRAM_BA0
DRAM_RAS_N	G1	HVIO_6C_20, TXCLK20, DATA_CTRL20		HVIO_6D_20, TXCLK20, DATA_CTRL20	B39	DRAM_CLK

BANK 6C

BANK 6D

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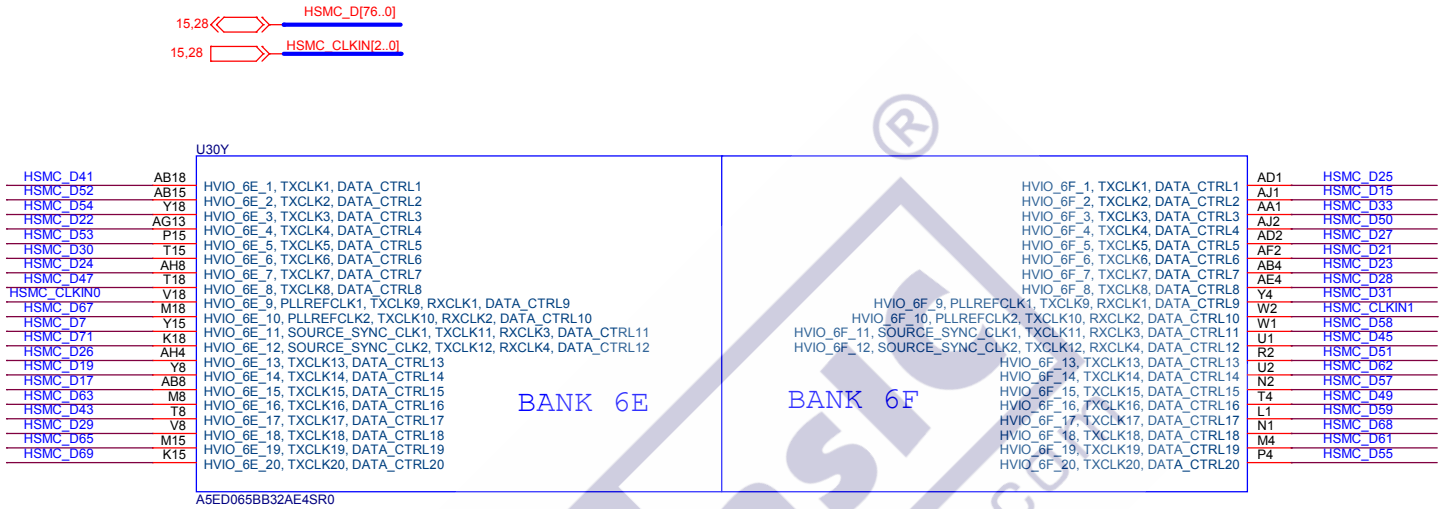
Title: **DE25-Standard Board**

Size	Document Number	Rev
B	FPGA Bank 6C、6D	B

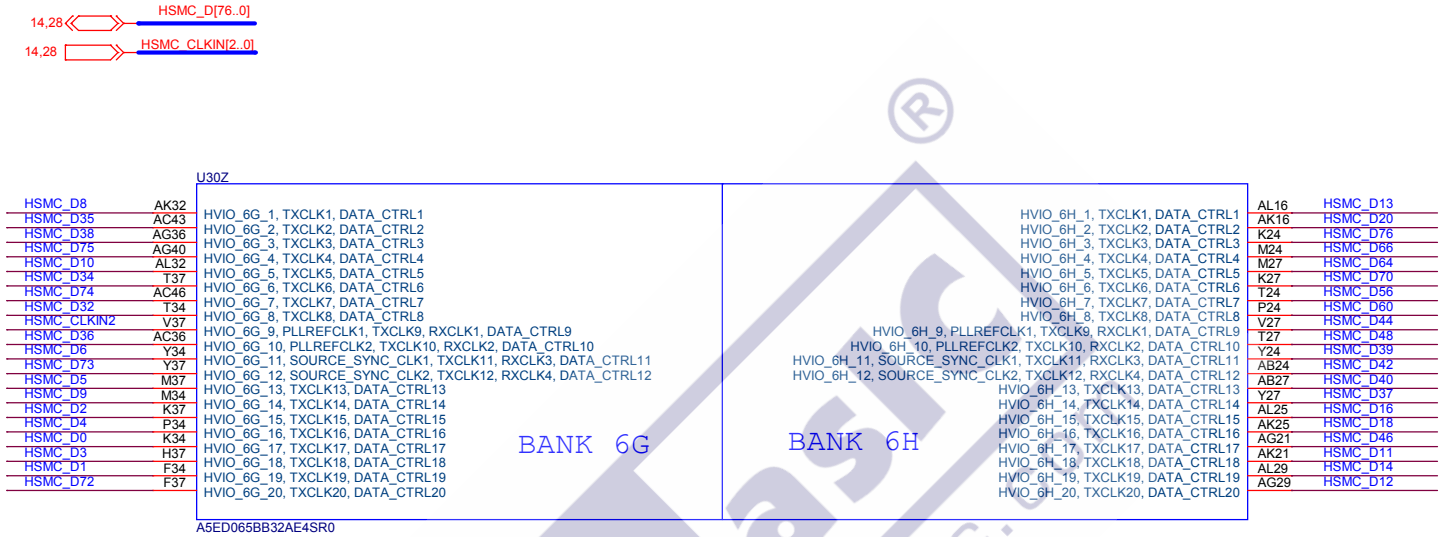
Date: Monday, June 03, 2024 Sheet 13 of 49



Title: **DE25-Standard Board**

Size	Document Number	Rev
B	FPGA Bank 6E、6F	B

Date: Monday, June 03, 2024 Sheet 14 of 49



Title: **DE25-Standard Board**

Size	Document Number	Rev
B	FPGA Bank 6G、6H	B

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Ethernet PHY Interface (RGMII)

38 HPS_ENET_TX_DATA[3..0]
38 HPS_ENET_TX_CLK
38 HPS_ENET_TX_CTL
38 HPS_ENET_RX_DATA[3..0]
38 HPS_ENET_RX_CLK
38 HPS_ENET_RX_CTL
38 HPS_ENET_MDC
38 HPS_ENET_MDIO

UBS PHY Interface (ULPI)

37 HPS_USB_DATA[7..0]
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37 HPS_USB_NXT
37 HPS_USB_DIR
37 HPS_USB_STP

SD Card

HPS_SD_DATA[3..0] 42
HPS_SD_CLK 42
HPS_SD_CMD 42

HPS 25MHz Clock

HPS_CLK_25 4

HPS GPIO

29 HPS_GPIO[1..0]

HPS I2C Interface

29 HPS_I2C_SDA
29 HPS_I2C_SCL

HPS User Button

HPS_KEY 36

HPS User LED

HPS_LED 36

UART Interface

HPS_UART_RX 5
HPS_UART_TX 5

HPS LCD

HPS_LCM_RST_n 41
HPS_LCM_SPIM_SS 41
HPS_LCM_BK 41
HPS_LCM_SPIM_CLK 41
HPS_LCM_SPIM_MOSI 41
HPS_LCM_D_C 41

HPS_GSENSOR_INT 41

HPS_USB_CLK	W135
HPS_USB_STP	U135
HPS_USB_DIR	W134
HPS_USB_DATA0	AK115
HPS_USB_DATA1	U134
HPS_USB_NXT	AL120
HPS_USB_DATA2	R134
HPS_USB_DATA3	AG115
HPS_USB_DATA4	N135
HPS_USB_DATA5	AK120
HPS_USB_DATA6	N134
HPS_USB_DATA7	T132
HPS_ENET_TX_CLK	P132
HPS_ENET_TX_CTL	L135
HPS_ENET_RX_CLK	J135
HPS_ENET_RX_CTL	AD135
HPS_ENET_TX_DATA0	M132
HPS_ENET_TX_DATA1	AD134
HPS_ENET_RX_DATA0	K132
HPS_ENET_RX_DATA1	AG129
HPS_ENET_TX_DATA2	J134
HPS_ENET_TX_DATA3	AG120
HPS_ENET_RX_DATA2	G134
HPS_ENET_RX_DATA3	G135
HPS_SD_DATA0	E135
HPS_SD_DATA1	F132
HPS_SD_CLK	D132
HPS_CLK_25	AG123
HPS_GSENSOR_INT	B134
HPS_SD_DATA2	AA135
HPS_SD_DATA3	V127
HPS_SD_CMD	AB132
HPS_GPIO0	T127
HPS_GPIO1	Y132
HPS_LCM_RST_n	T124
HPS_LCM_D_C	P124
HPS_I2C_SDA	M127
HPS_I2C_SCL	K127
HPS_UART_TX	M124
HPS_UART_RX	AB127
HPS_KEY	K124
HPS_LED	Y127
HPS_LCM_BK	H127
HPS_LCM_SPIM_SS	AB124
HPS_LCM_SPIM_CLK	F127
HPS_LCM_SPIM_MOSI	Y124
HPS_ENET_MDIO	F124
HPS_ENET_MDC	D124

U30B

HPS_IOA_1, GPIO0_IO0, SPIM0_SS1_N, SPIS0_CLK, UART0_CTS_N, NAND_ADQ0, SDMMC_DATA0, USB0_CLK, EMAC0_PPS0, TRACE_D10
HPS_IOA_2, GPIO0_IO1, SPIM1_SS1_N, SPIS0_MOSI, UART0_RTS_N, NAND_ADQ1, SDMMC_DATA1, USB0_STP, EMAC0_PPSTRIG0, TRACE_D9
HPS_IOA_3, GPIO0_IO2, SPIS0_SS0_N, UART0_TX, I2C1_SDA, NAND_WE_N, SDMMC_CLK, USB0_DIR, EMAC1_PPS1, TRACE_D8
HPS_IOA_4, GPIO0_IO3, SPIS0_MISO, UART0_RX, I2C1_SCL, NAND_RE_N, USB0_DATA0, EMAC1_PPSTRIG1, TRACE_D7
HPS_IOA_5, GPIO0_IO4, SPIM0_CLK, UART1_CTS_N, I2C0_SDA, NAND_WP_N, SDMMC_WRITE_PROTECT, USB0_DATA1, EMAC2_PPS2, TRACE_D6
HPS_IOA_6, GPIO0_IO5, SPIM0_MOSI, UART1_RTS_N, I2C0_SCL, NAND_ADQ2, SDMMC_DATA2, USB0_NXT, EMAC2_PPSTRIG2, TRACE_D5
HPS_IOA_7, GPIO0_IO6, SPIM0_MISO, MDIO2_MDIO, UART1_TX, I2C_EMAC2_SDA, NAND_ADQ3, SDMMC_DATA3, USB0_DATA2, TRACE_D4
HPS_IOA_8, GPIO0_IO7, SPIM0_SS0_N, MDIO2_MDC, UART1_RX, I2C_EMAC2_SCL, NAND_CLE, SDMMC_CMD, USB0_DATA3, TRACE_D15
HPS_IOA_9, GPIO0_IO8, SPIM1_CLK, SPIS1_CLK, MDIO1_MDIO, I2C_EMAC1_SDA, NAND_ADQ4, SDMMC_DATA4, USB0_DATA4, I3C1_SDA, TRACE_D14
HPS_IOA_10, GPIO0_IO9, SPIM1_MOSI, SPIS1_MOSI, MDIO1_MDC, I2C_EMAC1_SCL, NAND_ADQ5, SDMMC_DATA5, USB0_DATA5, I3C1_SCL, TRACE_D13
HPS_IOA_11, GPIO0_IO10, SPIM1_MISO, SPIS1_SS0_N, MDIO0_MDIO, I2C_EMAC0_SDA, NAND_ADQ6, SDMMC_DATA6, USB0_DATA6, I3C0_SDA, TRACE_D12
HPS_IOA_12, GPIO0_IO11, SPIM1_SS0_N, SPIS1_MISO, MDIO0_MDC, I2C_EMAC0_SCL, NAND_ADQ7, SDMMC_DATA7, USB0_DATA7, I3C0_SCL, TRACE_D11
HPS_IOA_13, GPIO0_IO12, NAND_ALE, SDMMC_PU_PD_DATA2, USB1_CLK, EMAC0_TX_CLK, TRACE_D10
HPS_IOA_14, GPIO0_IO13, NAND_RB_N, SDMMC_BUS_PWR, USB1_STP, EMAC0_TX_CTL, TRACE_D9
HPS_IOA_15, GPIO0_IO14, NAND_CE_N, USB1_DIR, EMAC0_RX_CLK, TRACE_D8
HPS_IOA_16, GPIO0_IO15, NAND_DQS, SDMMC_DATA_STROBE, USB1_DATA0, EMAC0_RX_CTL, TRACE_D7
HPS_IOA_17, GPIO0_IO16, I3C1_SDA, NAND_ADQ8, USB1_DATA1, EMAC0_TXD0, TRACE_D6
HPS_IOA_18, GPIO0_IO17, I3C1_SCL, NAND_ADQ9, USB1_NXT, EMAC0_TXD1, TRACE_D5
HPS_IOA_19, GPIO0_IO18, I3C0_SDA, NAND_ADQ10, USB1_DATA2, EMAC0_RXD0, TRACE_D4
HPS_IOA_20, GPIO0_IO19, SPIM1_SS1_N, I3C0_SCL, NAND_ADQ11, USB1_DATA3, EMAC0_RXD1, TRACE_CLK
HPS_IOA_21, GPIO0_IO20, SPIM1_CLK, SPIS0_CLK, UART0_CTS_N, I2C1_SDA, NAND_ADQ12, USB1_DATA4, EMAC0_TXD2, TRACE_D0
HPS_IOA_22, GPIO0_IO21, SPIM1_MOSI, SPIS0_MOSI, UART0_RTS_N, I2C1_SCL, NAND_ADQ13, USB1_DATA5, EMAC0_TXD3, TRACE_D1
HPS_IOA_23, GPIO0_IO22, SPIM1_MISO, SPIS0_SS0_N, UART0_TX, I2C0_SDA, NAND_ADQ14, USB1_DATA6, EMAC0_RXD2, TRACE_D2
HPS_IOA_24, GPIO0_IO23, SPIM1_SS0_N, SPIS0_MISO, UART0_RX, I2C0_SCL, NAND_ADQ15, USB1_DATA7, EMAC0_RXD3, TRACE_D3

HPS_IOB_1, GPIO1_IO0, SPIM1_CLK, CM_PLL_CLK0, UART0_CTS_N, EMAC0_PPS0, NAND_ADQ0, SDMMC_DATA0, EMAC1_TX_CLK, TRACE_D10
HPS_IOB_2, GPIO1_IO1, SPIM1_MOSI, CM_PLL_CLK1, UART0_RTS_N, EMAC0_PPSTRIG0, NAND_ADQ1, SDMMC_DATA1, EMAC1_TX_CTL, TRACE_D9
HPS_IOB_3, GPIO1_IO2, SPIM1_MISO, CM_PLL_CLK2, UART0_TX, I2C0_SDA, NAND_WE_N, SDMMC_CLK, EMAC1_RX_CLK, TRACE_D8
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HPS_IOB_6, GPIO1_IO5, SPIS1_MOSI, UART1_RTS_N, EMAC2_PPSTRIG2, NAND_ADQ2, SDMMC_DATA2, I3C1_SCL, EMAC1_TXD1, TRACE_D5
HPS_IOB_7, GPIO1_IO6, SPIS1_SS0_N, UART1_TX, I2C1_SDA, NAND_ADQ3, SDMMC_DATA3, I3C0_SDA, EMAC1_RXD0, TRACE_D4
HPS_IOB_8, GPIO1_IO7, SPIS1_MISO, UART1_RX, I2C1_SCL, NAND_CLE, SDMMC_CMD, I3C0_SCL, EMAC1_RXD1, TRACE_D15
HPS_IOB_9, GPIO1_IO8, JTAG_TCK, SPIS0_CLK, MDIO2_MDIO, I2C_EMAC2_SDA, NAND_ADQ4, SDMMC_DATA4, EMAC1_TXD2, TRACE_D14
HPS_IOB_10, GPIO1_IO9, JTAG_TMS, SPIS0_MOSI, MDIO2_MDC, I2C_EMAC2_SCL, NAND_ADQ5, SDMMC_DATA5, EMAC1_TXD3, TRACE_D13
HPS_IOB_11, GPIO1_IO10, JTAG_TDO, SPIS0_SS0_N, MDIO0_MDIO, I2C_EMAC0_SDA, NAND_ADQ6, SDMMC_DATA6, EMAC1_RXD2, TRACE_D12
HPS_IOB_12, GPIO1_IO11, JTAG_TDI, SPIS0_MISO, MDIO0_MDC, I2C_EMAC0_SCL, NAND_ADQ7, SDMMC_DATA7, EMAC1_RXD3, TRACE_D11
HPS_IOB_13, GPIO1_IO12, I2C1_SDA, NAND_ALE, SDMMC_PU_PD_DATA2, EMAC2_TX_CLK, TRACE_D10
HPS_IOB_14, GPIO1_IO13, I2C1_SCL, NAND_RB_N, SDMMC_BUS_PWR, EMAC2_TX_CTL, TRACE_D9
HPS_IOB_15, GPIO1_IO14, UART1_TX, NAND_CE_N, I3C1_SDA, EMAC2_RX_CLK, TRACE_D8
HPS_IOB_16, GPIO1_IO15, UART1_RX, NAND_DQS, SDMMC_DATA_STROBE, I3C1_SCL, EMAC2_RX_CTL, TRACE_D7
HPS_IOB_17, GPIO1_IO16, UART1_CTS_N, NAND_ADQ8, I3C0_SDA, EMAC2_TXD0, TRACE_D6
HPS_IOB_18, GPIO1_IO17, SPIM0_SS1_N, UART1_RTS_N, NAND_ADQ9, I3C0_SCL, EMAC2_TXD1, TRACE_D5
HPS_IOB_19, GPIO1_IO18, SPIM0_MISO, MDIO1_MDIO, I2C_EMAC1_SDA, NAND_ADQ10, EMAC2_RXD0, TRACE_D4
HPS_IOB_20, GPIO1_IO19, SPIM0_SS0_N, MDIO1_MDC, I2C_EMAC1_SCL, NAND_ADQ11, EMAC2_RXD1, TRACE_CLK
HPS_IOB_21, GPIO1_IO20, SPIM0_CLK, SPIS1_CLK, I2C_EMAC2_SDA, NAND_ADQ12, EMAC2_TXD2, TRACE_D0
HPS_IOB_22, GPIO1_IO21, SPIM0_MOSI, SPIS1_MOSI, I2C_EMAC2_SCL, NAND_ADQ13, EMAC2_TXD3, TRACE_D1
HPS_IOB_23, GPIO1_IO22, SPIM0_MISO, SPIS1_SS0_N, MDIO0_MDIO, I2C_EMAC0_SDA, NAND_ADQ14, EMAC2_RXD2, TRACE_D2
HPS_IOB_24, GPIO1_IO23, SPIM0_SS0_N, SPIS1_MISO, MDIO0_MDC, I2C_EMAC0_SCL, NAND_ADQ15, EMAC2_RXD3, TRACE_D3

HPS

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Title: **DE25-Standard Board**

Size	Document Number	Rev
B	FPGA Bank HPS	B

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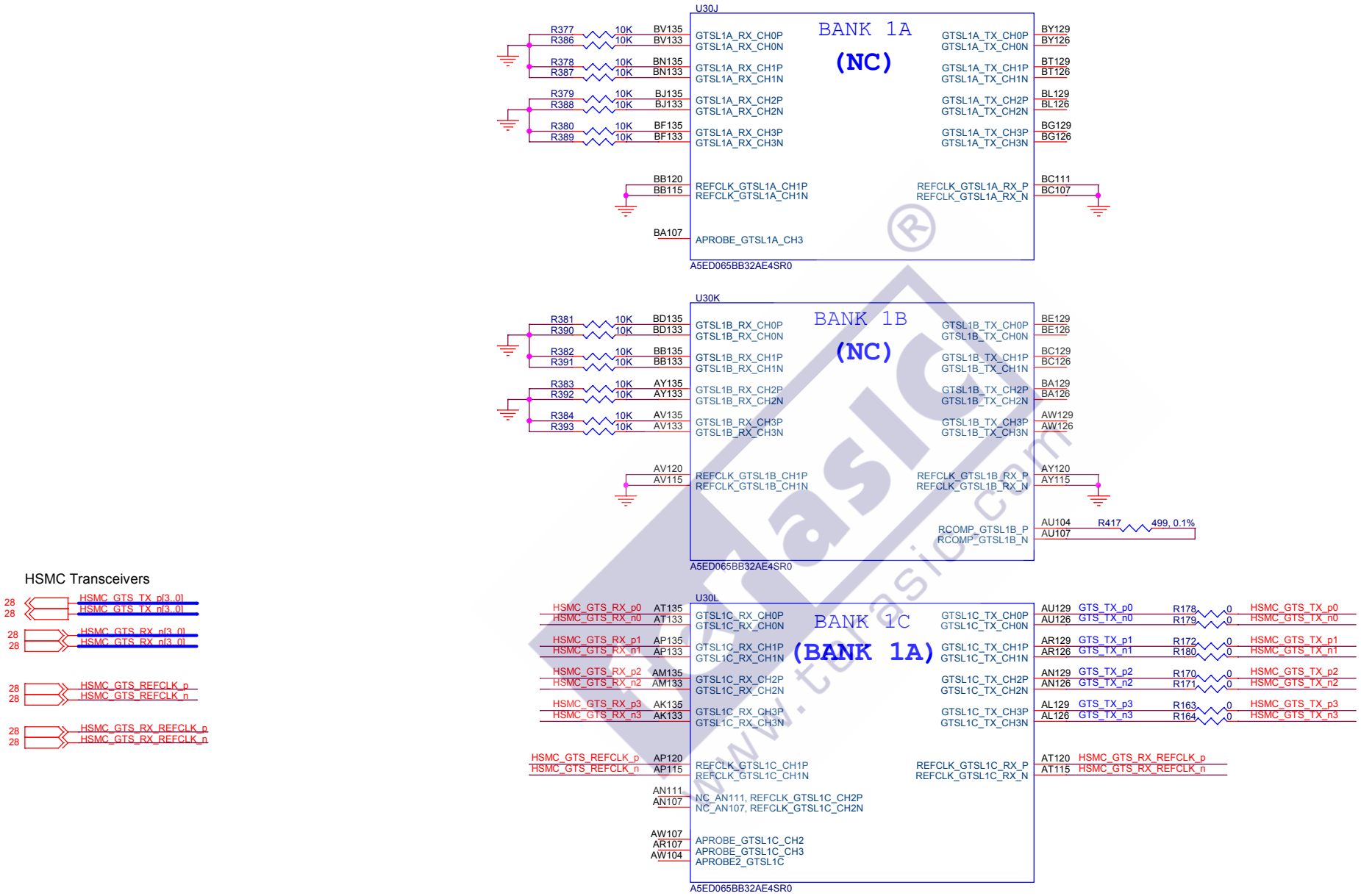
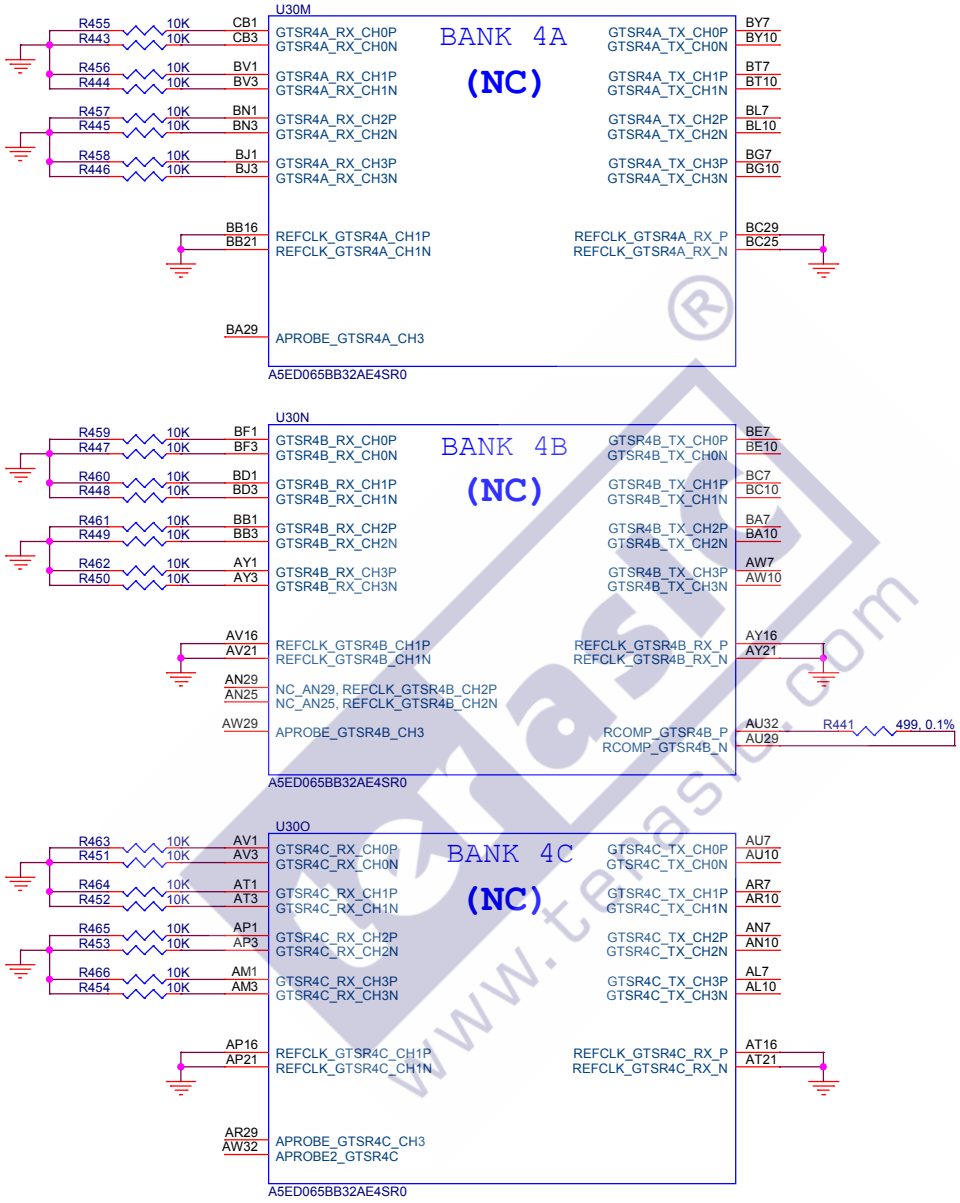


Title	DE25-Standard Board	
Size B	Document Number FPGA XCVR Bank 1A (NC) 、1B (NC) 、1C	Rev B
Date: Monday, June 03, 2024	Sheet 17 of 49	



Title: **DE25-Standard Board**

Size	Document Number	Rev
B	FPGA XCVR Bank 4A、4B、4C	B

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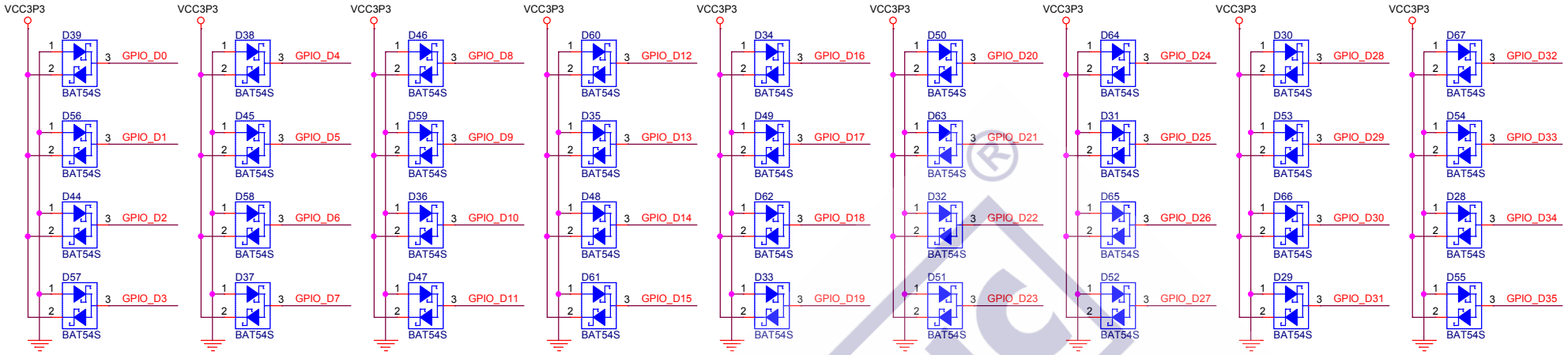


GPIO

GPIO[35..0] 12

RN2
GPIO0 GPIO1 GPIO2 GPIO3 → GPIO_D0 GPIO_D1 GPIO_D2 GPIO_D3
47

RN3
GPIO4 GPIO5 GPIO6 GPIO7 → GPIO_D4 GPIO_D5 GPIO_D6 GPIO_D7
47

RN4
GPIO8 GPIO9 GPIO10 GPIO11 → GPIO_D8 GPIO_D9 GPIO_D10 GPIO_D11
47

RN5
GPIO12 GPIO13 GPIO14 GPIO15 → GPIO_D12 GPIO_D13 GPIO_D14 GPIO_D15
47

RN6
GPIO16 GPIO17 GPIO18 GPIO19 → GPIO_D16 GPIO_D17 GPIO_D18 GPIO_D19
47

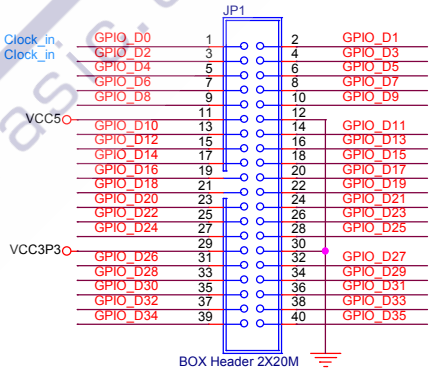
RN7
GPIO20 GPIO21 GPIO22 GPIO23 → GPIO_D20 GPIO_D21 GPIO_D22 GPIO_D23
47

RN8
GPIO24 GPIO25 GPIO26 GPIO27 → GPIO_D24 GPIO_D25 GPIO_D26 GPIO_D27
47

RN9
GPIO28 GPIO29 GPIO30 GPIO31 → GPIO_D28 GPIO_D29 GPIO_D30 GPIO_D31
47

RN10
GPIO32 GPIO33 GPIO34 GPIO35 → GPIO_D32 GPIO_D33 GPIO_D34 GPIO_D35
47

DE-GPIO



Title: **DE25-Standard Board**

Size	Document Number	Rev
B	GPIO (2x20)	B

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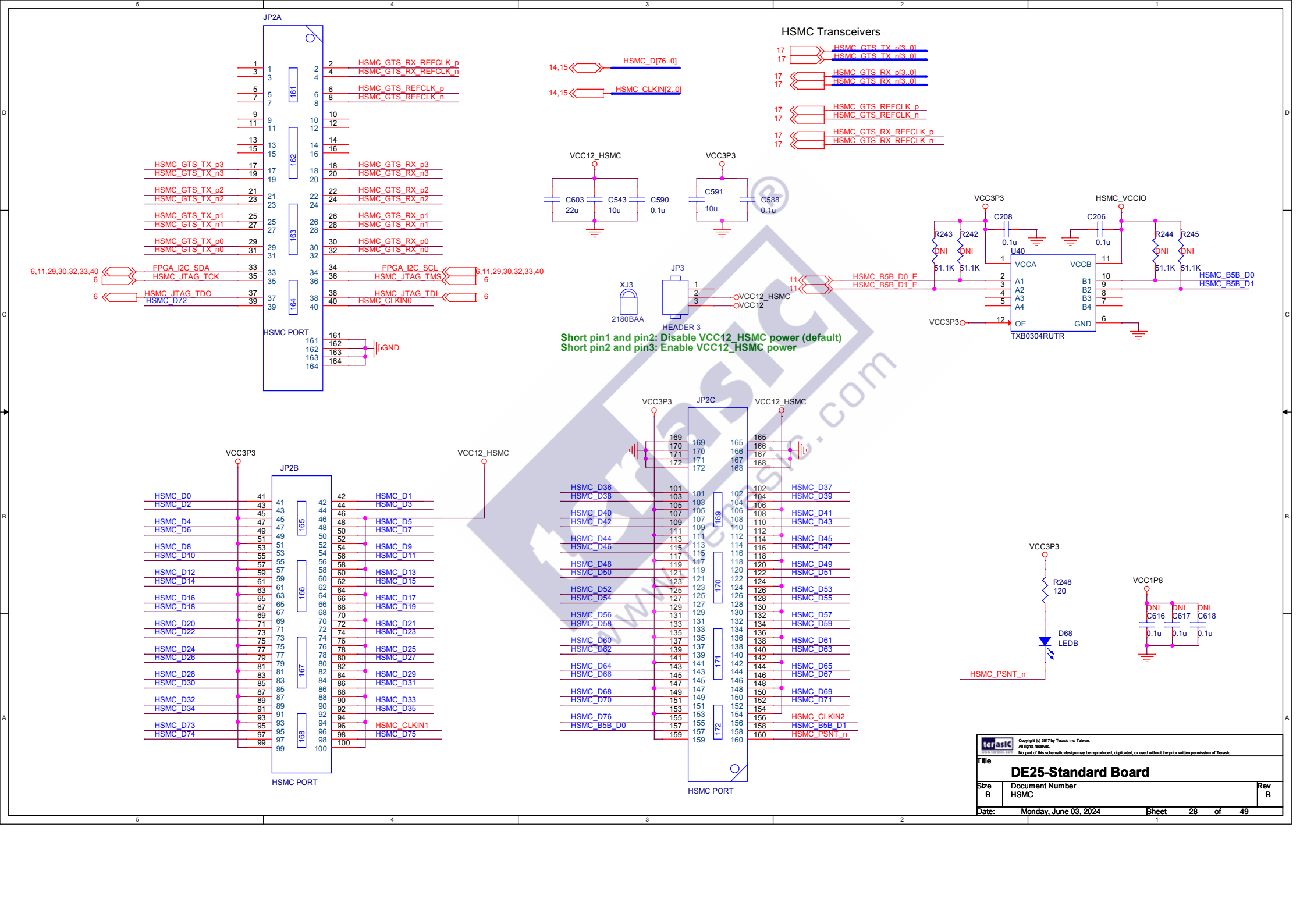
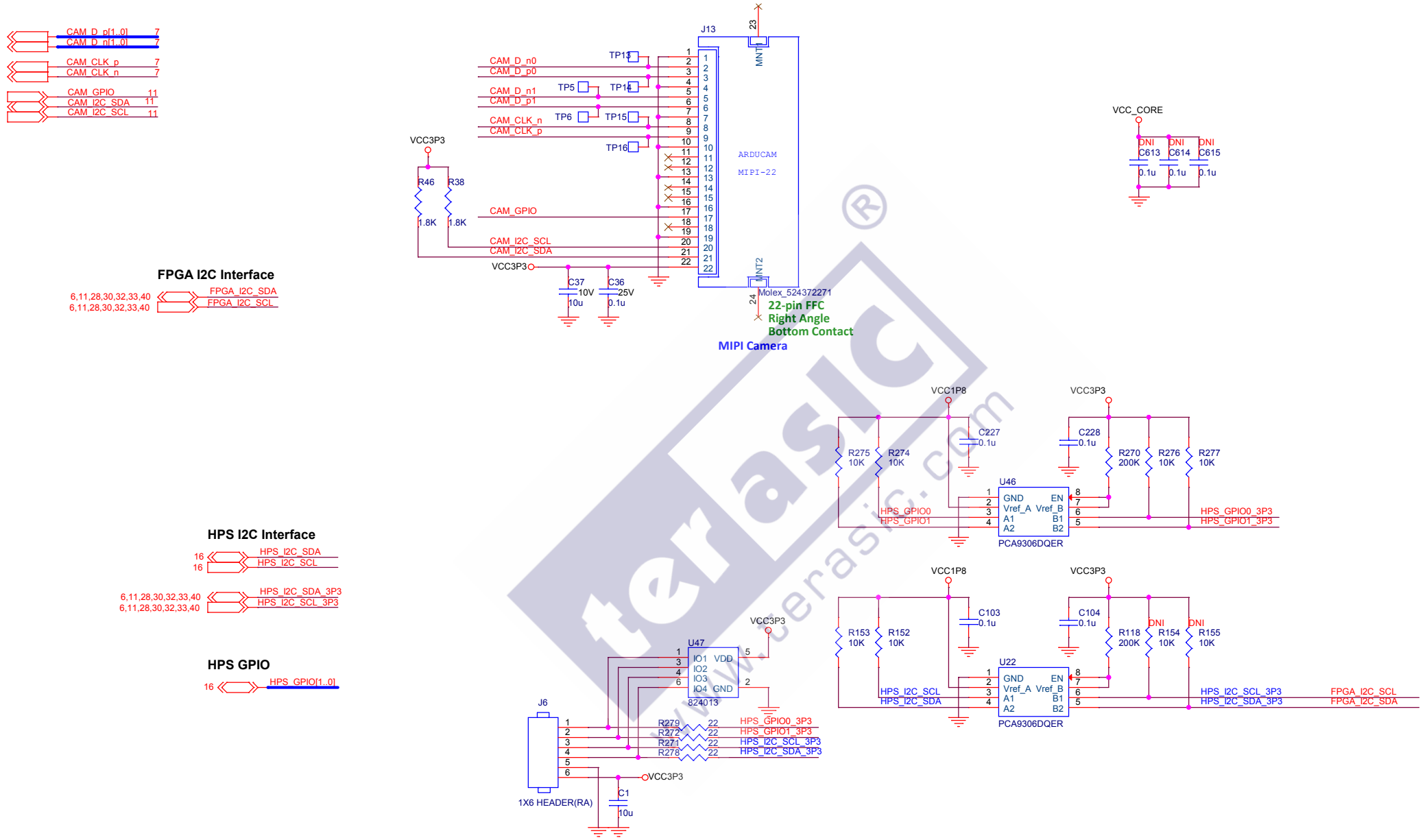
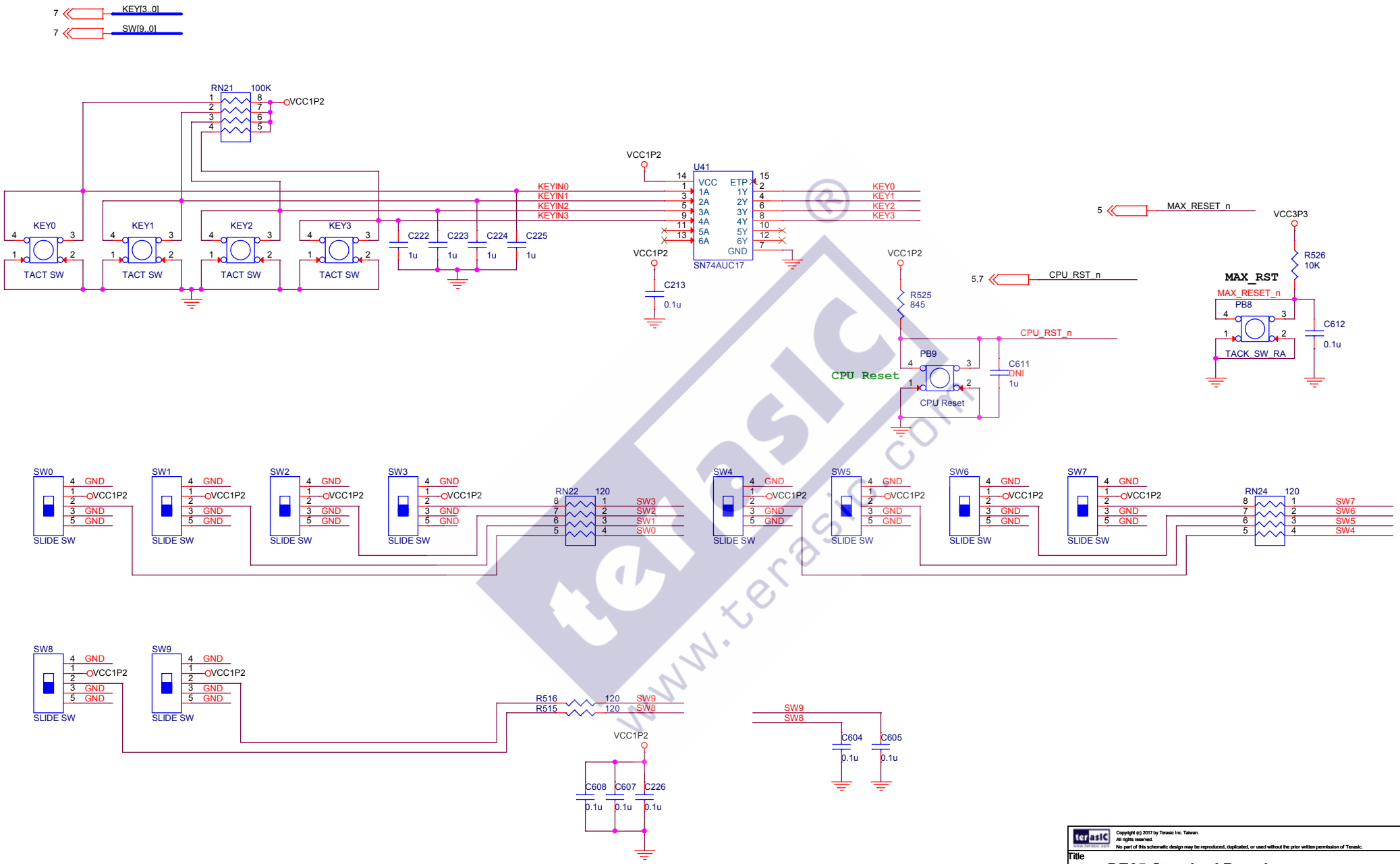


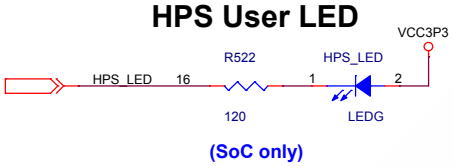
Title	DE25-Standard Board	
Size B	Document Number HSMC	Rev B
Date: Monday, June 03, 2024	Sheet 28 of 49	

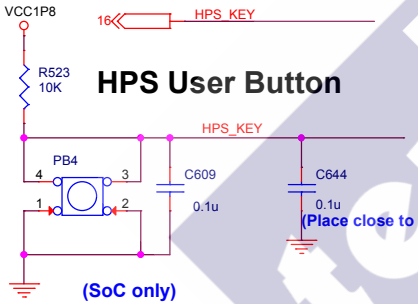


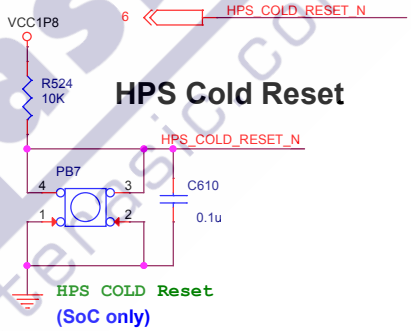
Title	DE25-Standard Board	
Size B	Document Number MIPI Connectors, HPS 2x3 GPIO	Rev B
Date: Monday, June 03, 2024	Sheet 29 of 49	



Title	DE25-Standard Board	
Size B	Document Number FPGA BUTTON, Switch	Rev B
Date: Monday, June 03, 2024	Sheet 35 of 49	







Title: **DE25-Standard Board**

Size	Document Number	Rev
B	HPS BUTTON, HPS LED	B

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