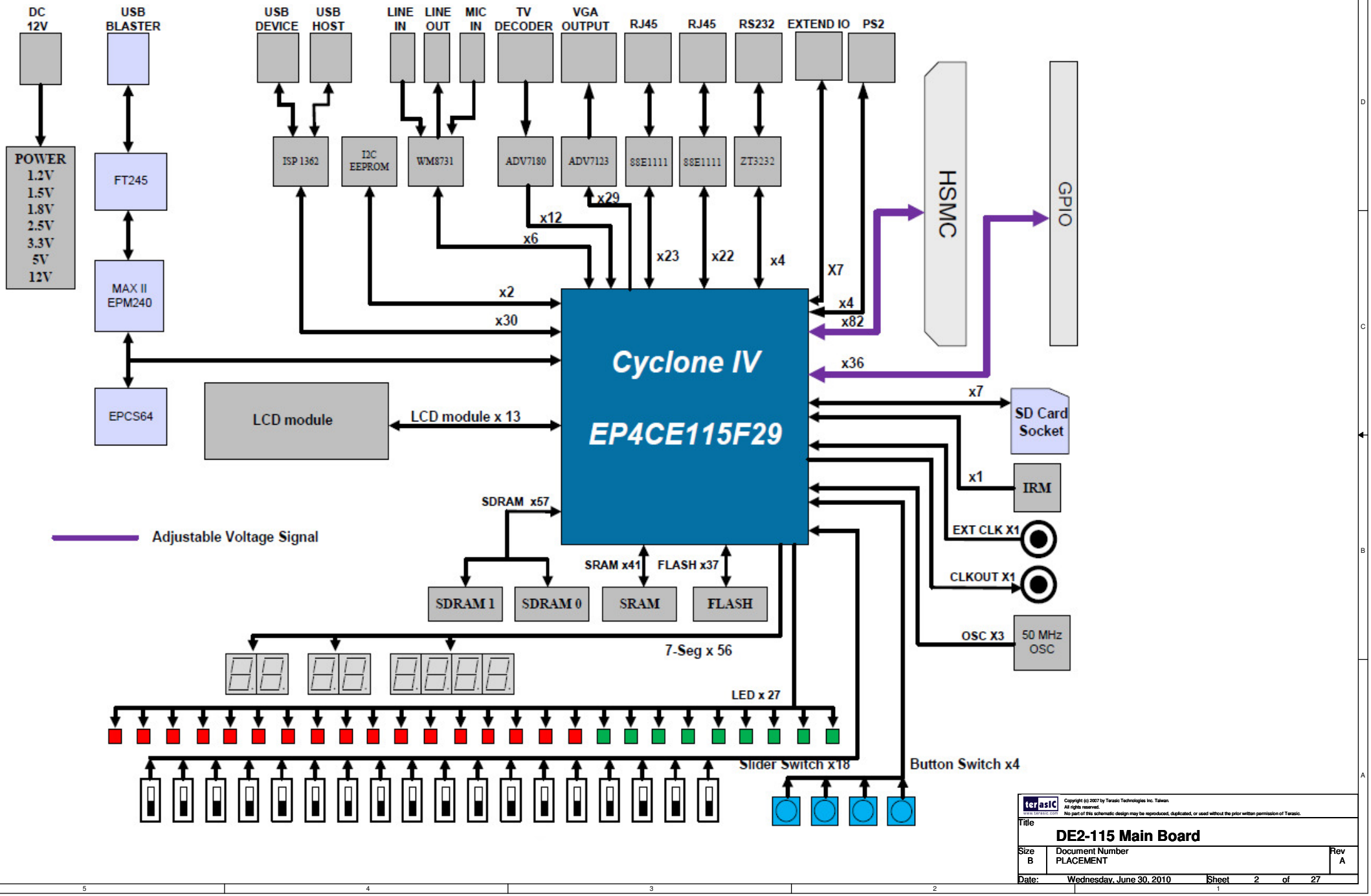
ALTERA Cyclone IV Development & Education Board (DE2-115)

Title: **DE2-115 Main Board**

Size	Document Number	Rev
B	COVER PAGE	A

Date: Wednesday, June 30, 2010 Sheet 1 of 27



Title	DE2-115 Main Board	
Size B	Document Number PLACEMENT	Rev A
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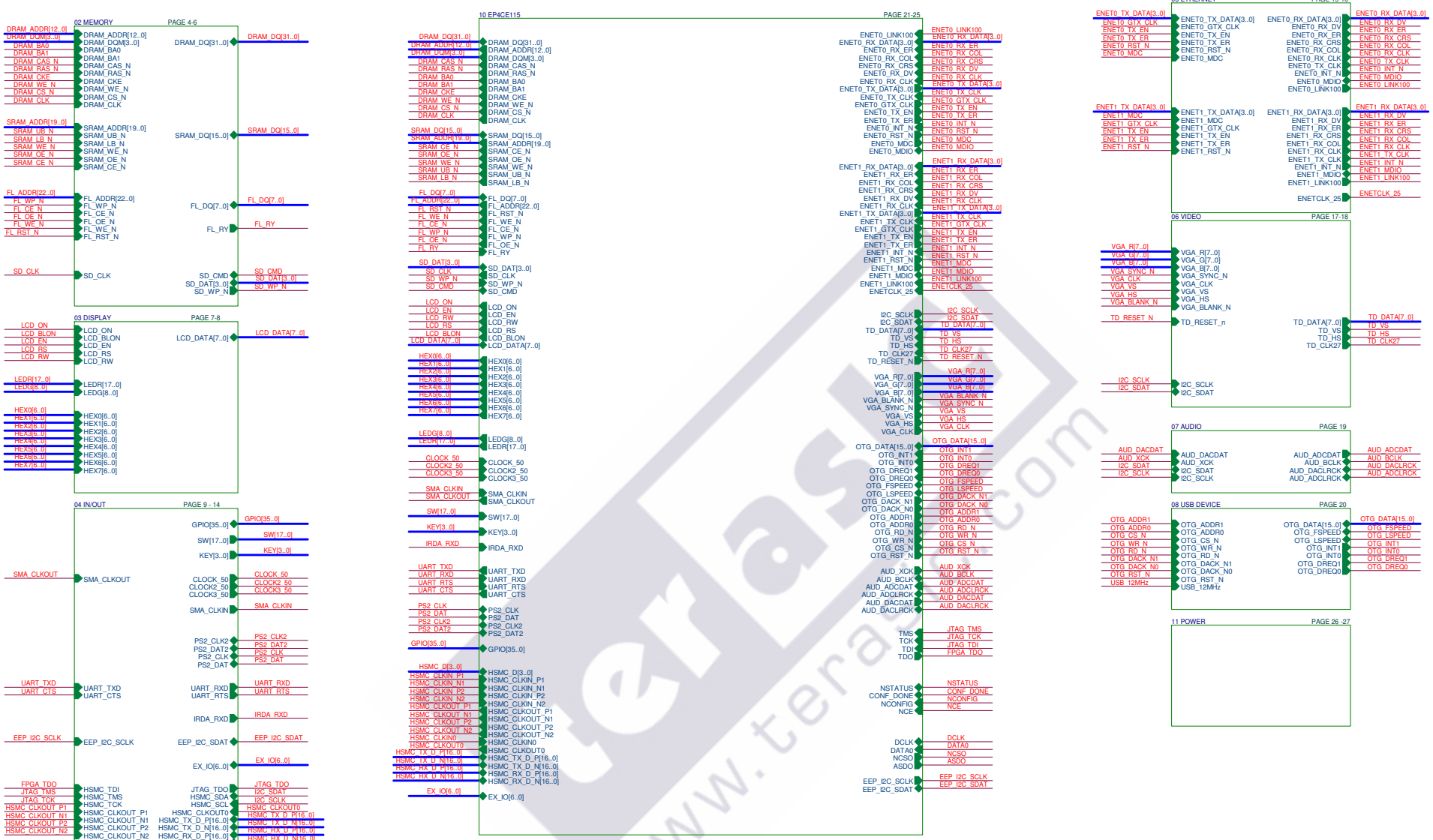
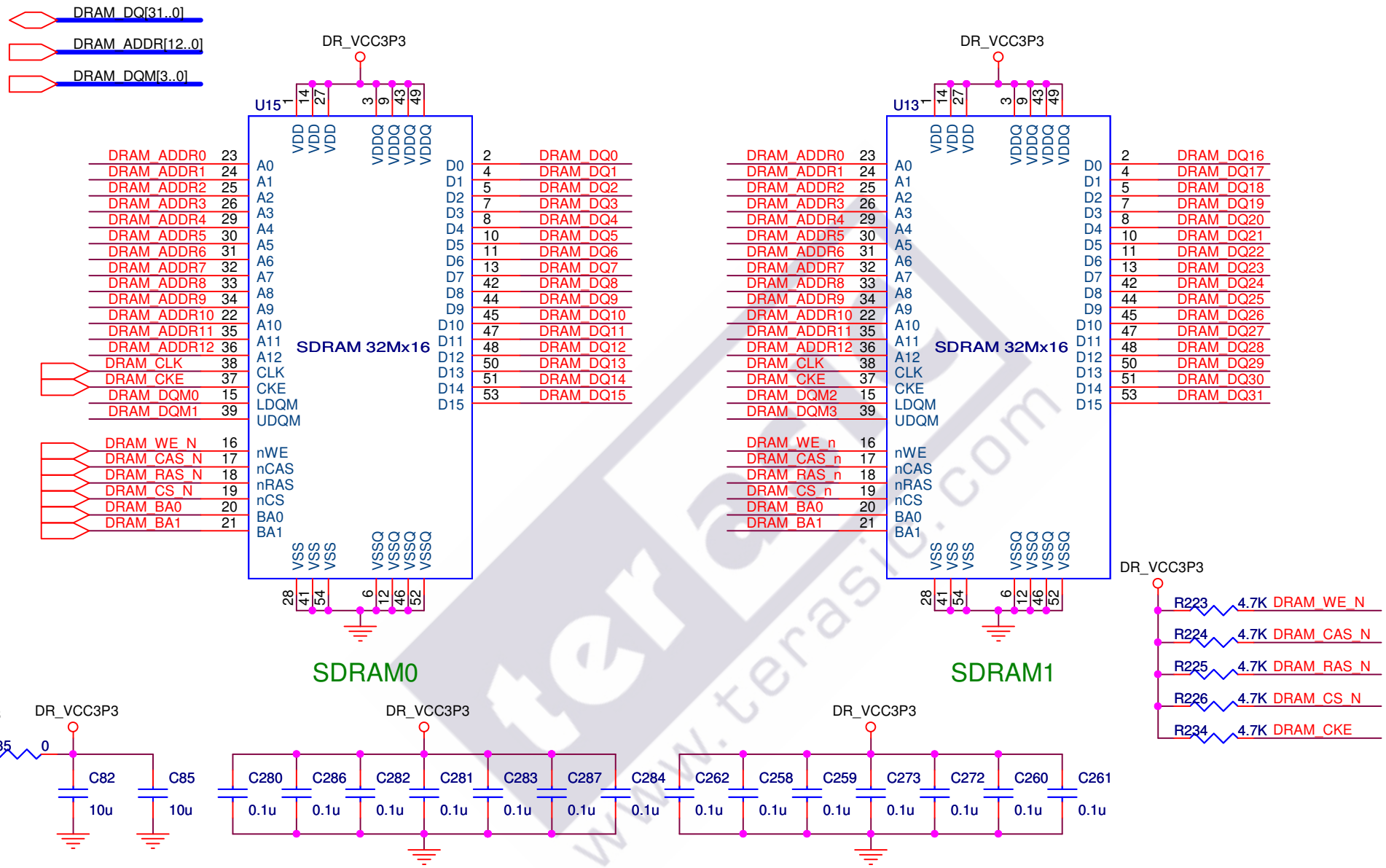


Title: **DE2-115 Main Board**

Size	Document Number	Rev
C	TOP	A

Date: Wednesday, June 30, 2010 Sheet 3 of 27

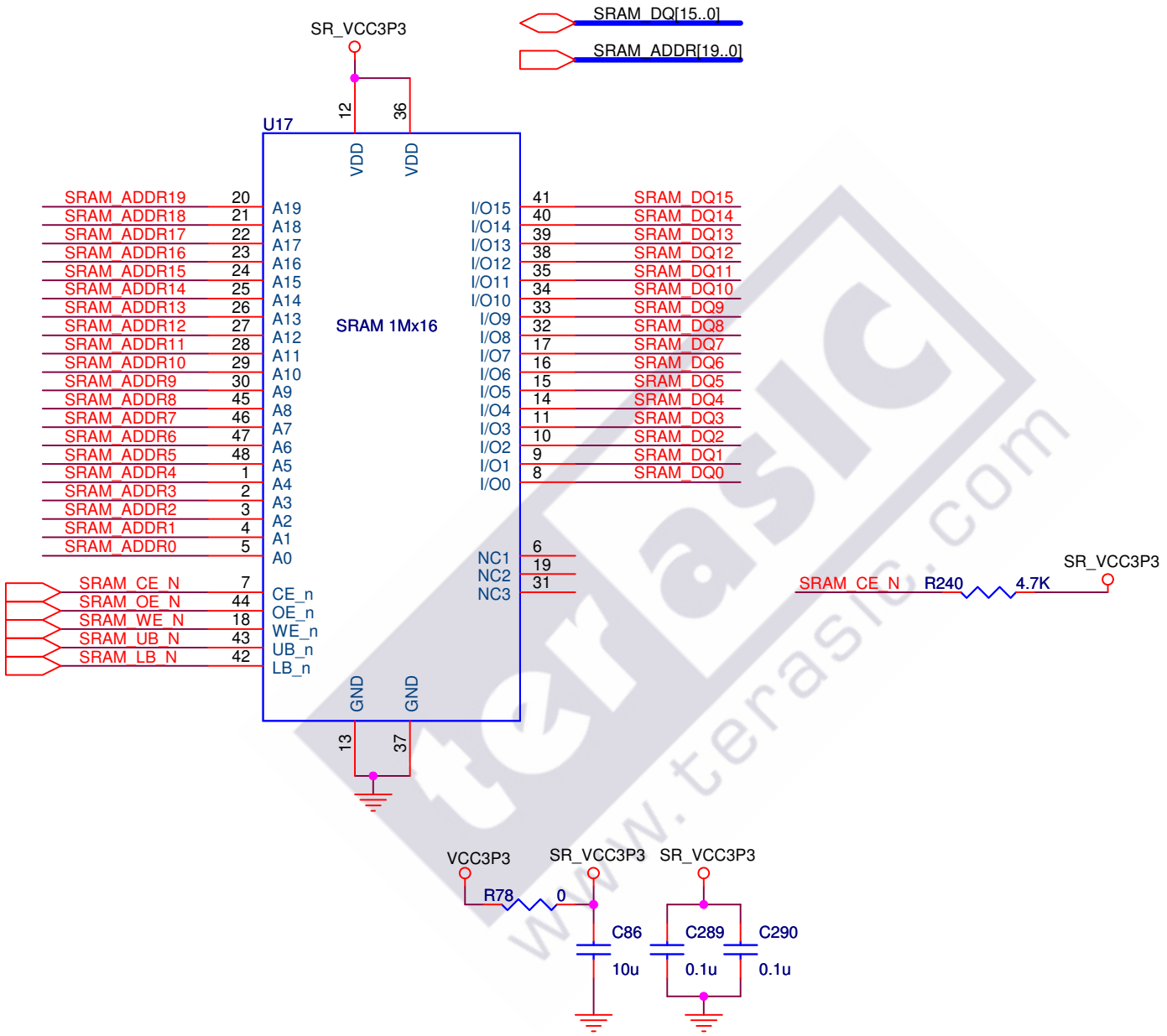


Title

DE2-115 Main Board

Size	Document Number	Rev
A	SDRAM	A

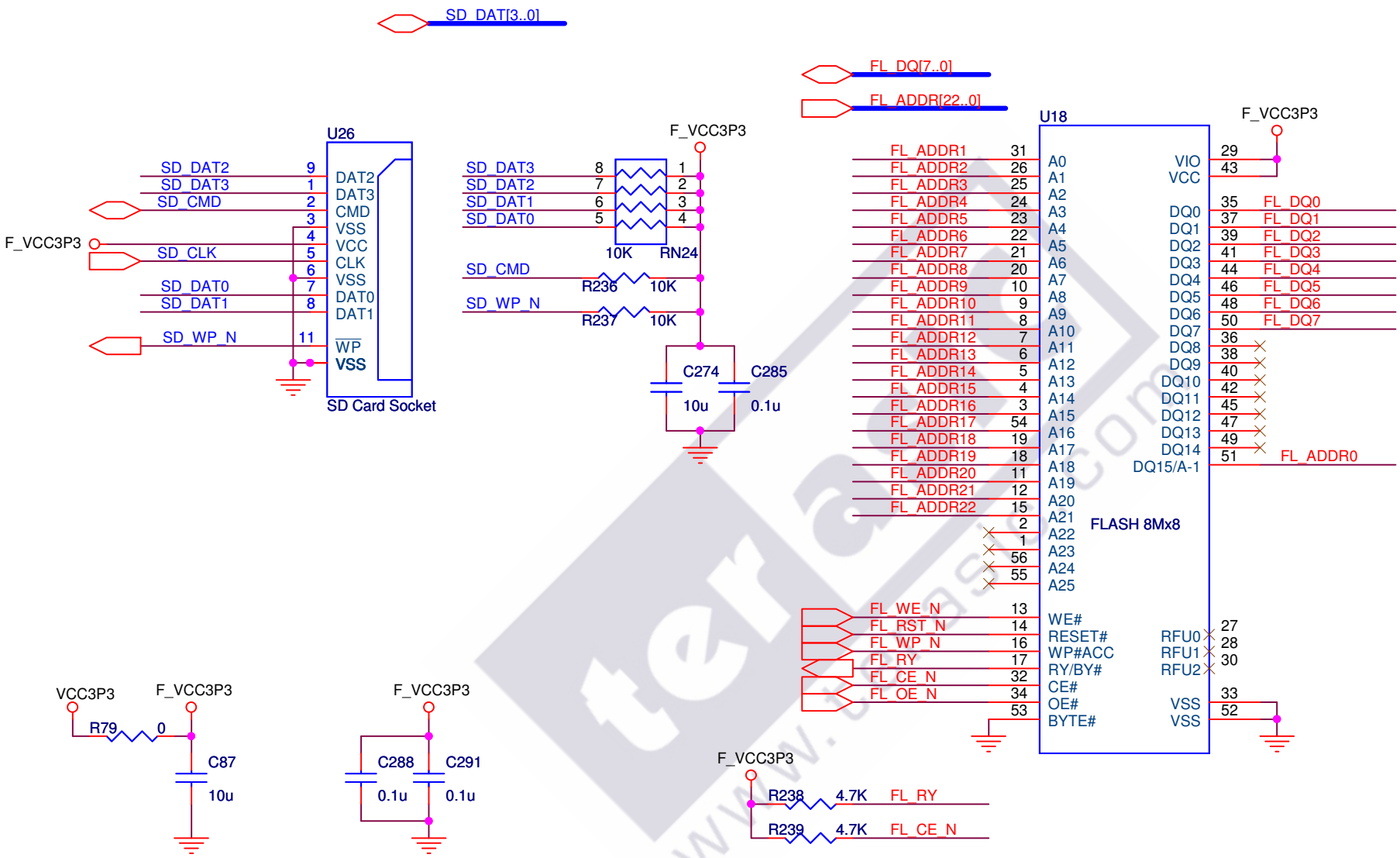
Date: Wednesday, June 30, 2010 Sheet 4 of 27



Title
DE2-115 Main Board

Size	Document Number	Rev
A	SRAM	A

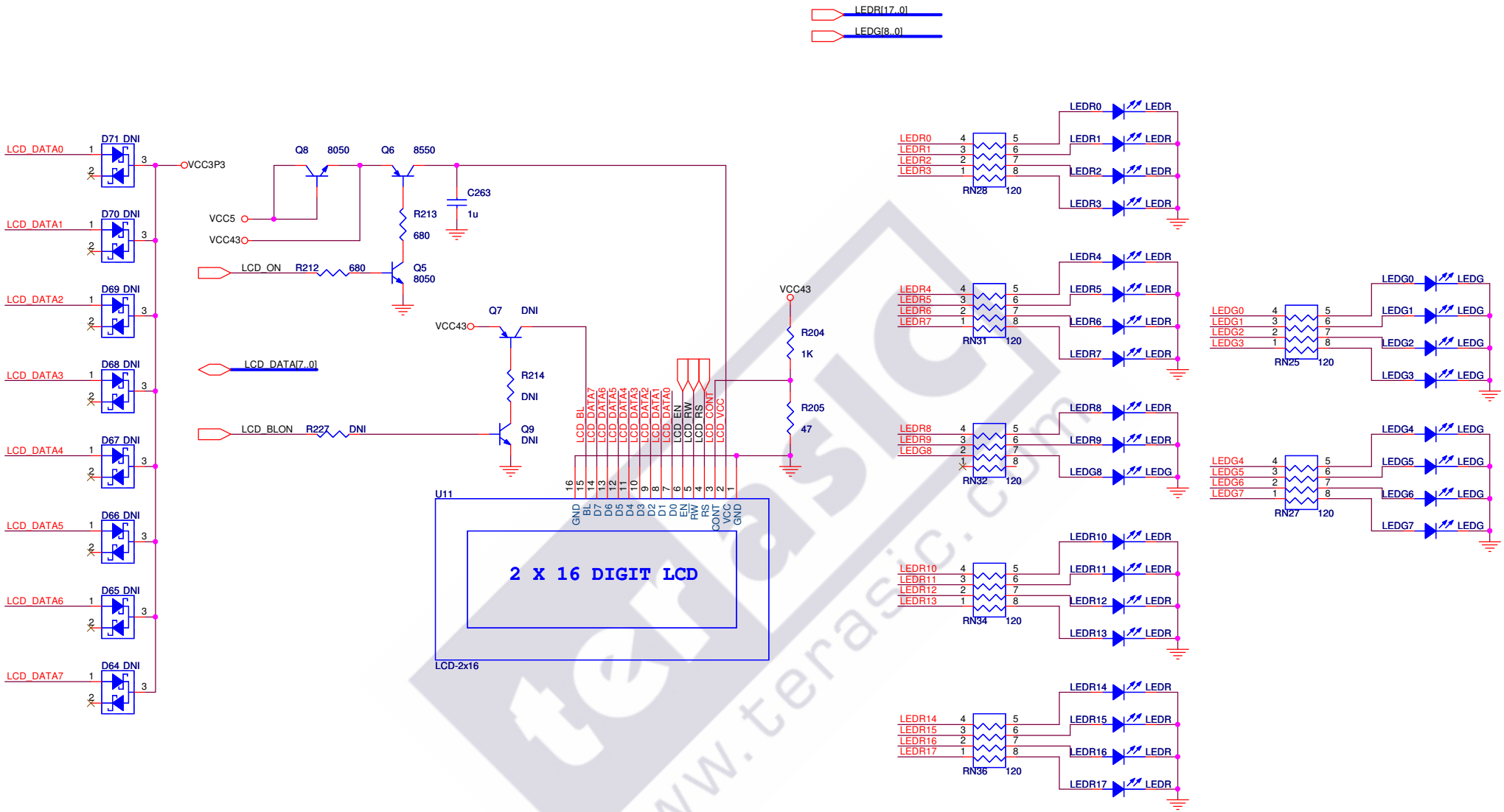
Date: Wednesday, June 30, 2010 Sheet 5 of 27



Title
DE2-115 Main Board

Size	Document Number	Rev
A	Flash & SD	A

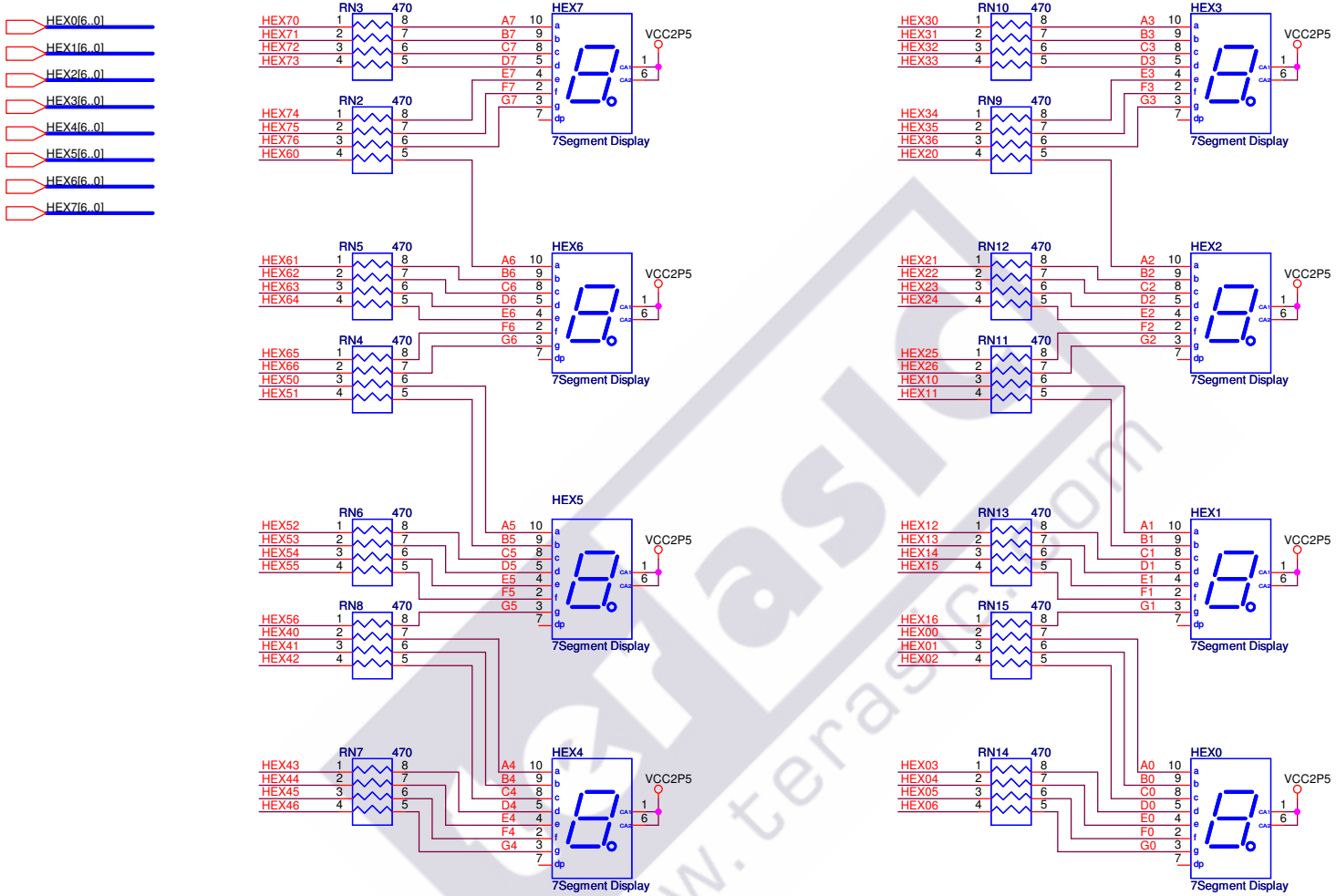
Date: Wednesday, June 30, 2010 Sheet 6 of 27



Title: **DE2-115 Main Board**

Size	Document Number	Rev
B	LCD & LED	A

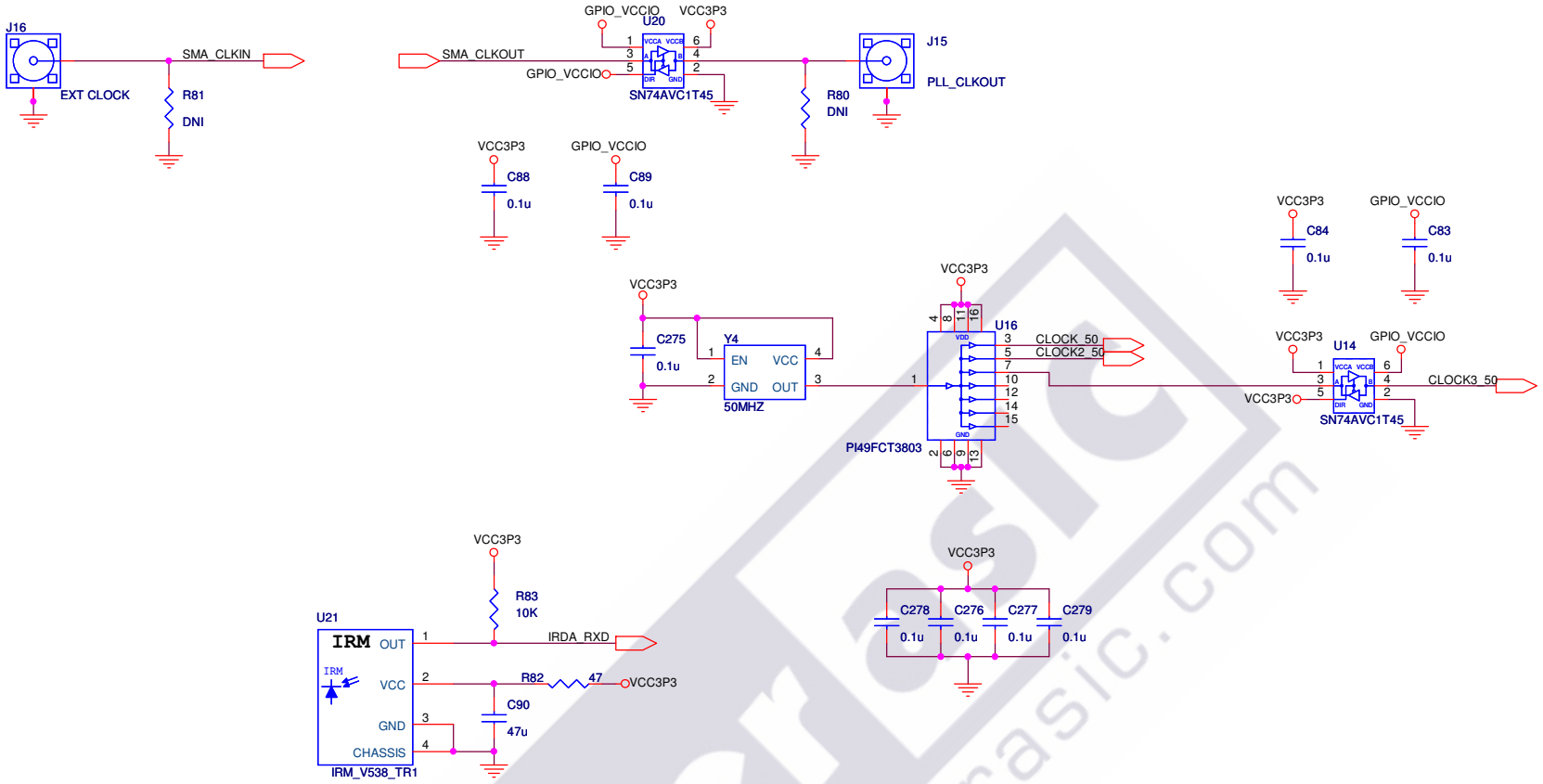
Date: Wednesday, June 30, 2010 Sheet 7 of 27



Title
DE2-115 Main Board

Size	Document Number	Rev
B	LCD & LED	A

Date: Wednesday, June 30, 2010 Sheet 8 of 27



Title
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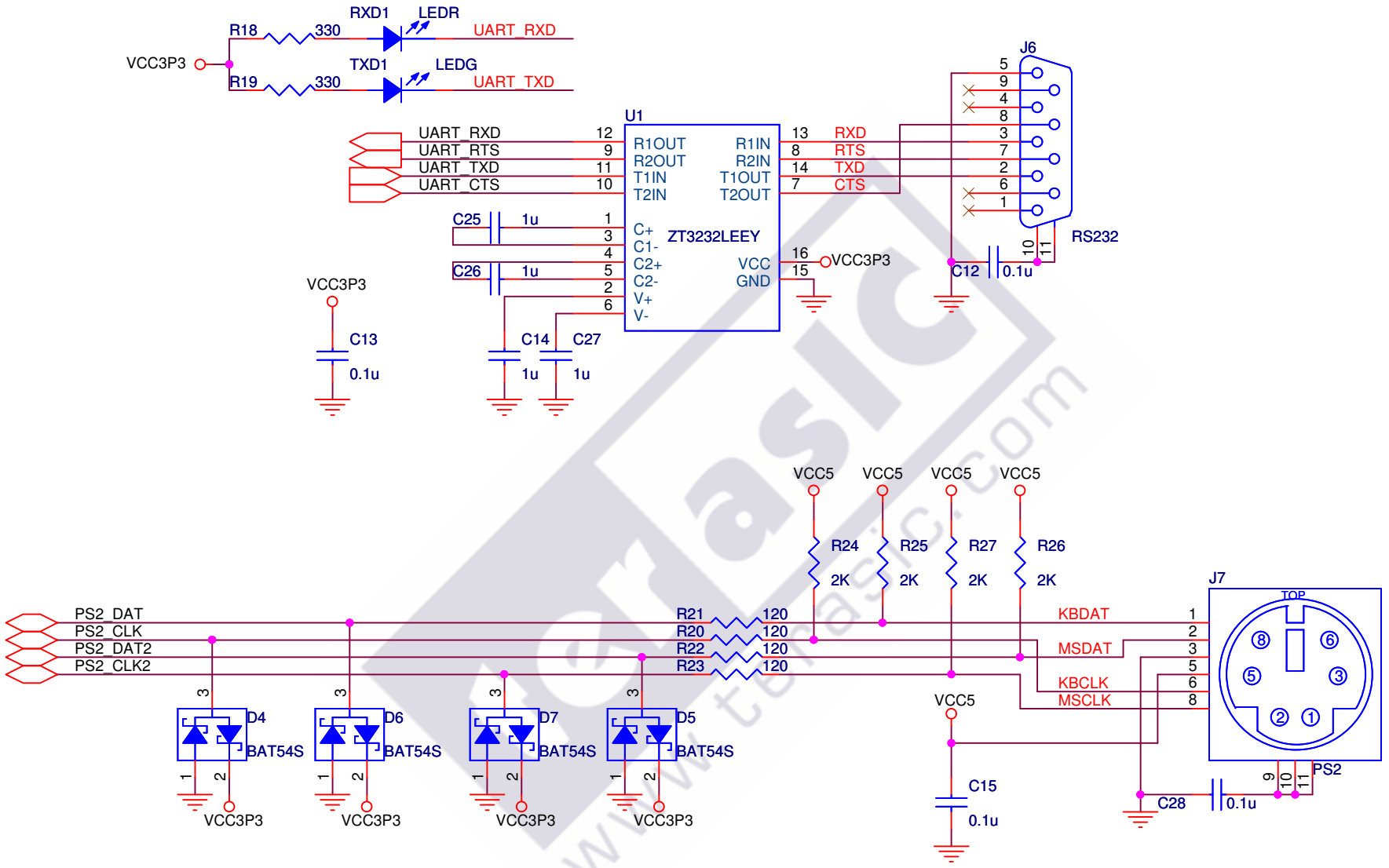
Size	Document Number	Rev
B	CLOCK & IrDA	A

Date: Wednesday, June 30, 2010 Sheet 9 of 27



Title

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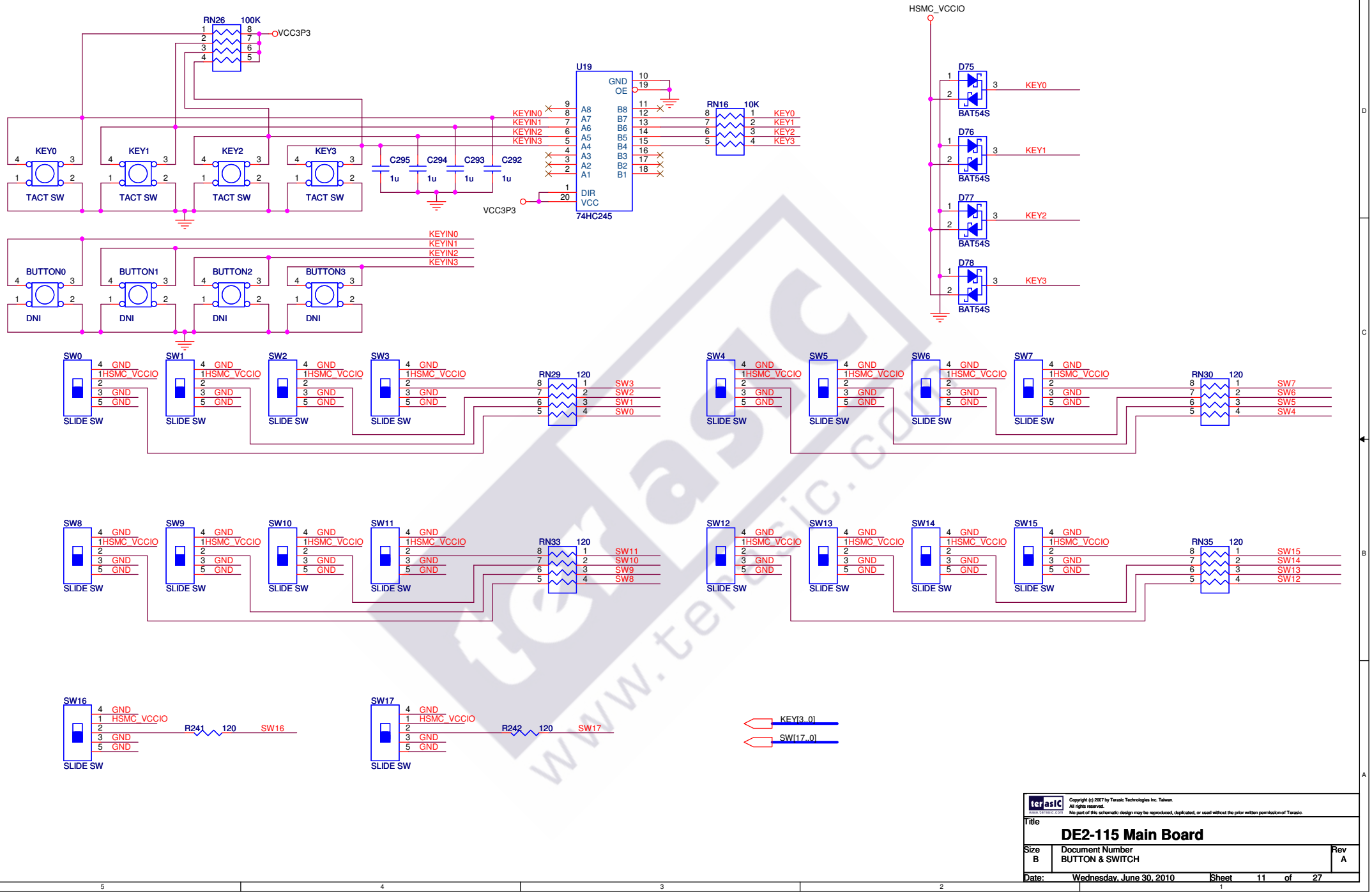
Size	Document Number	Rev
A	PS2 & RS232	A

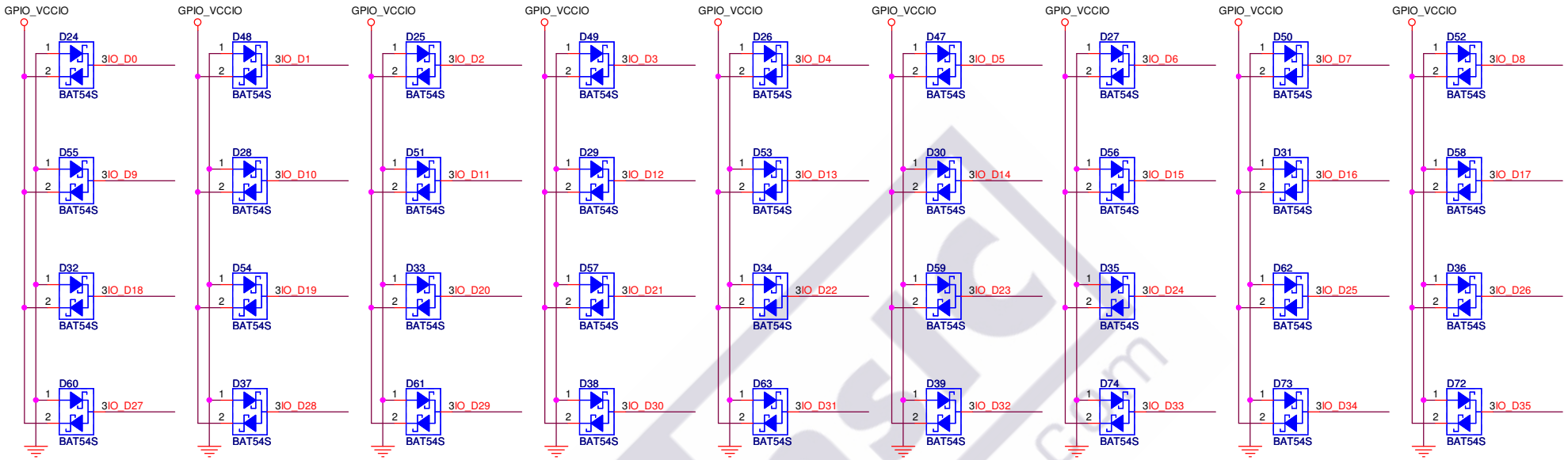
Date: Wednesday, June 30, 2010 Sheet 10 of 27



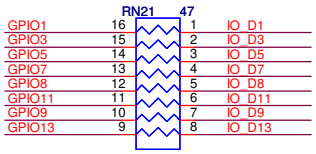
Title: **DE2-115 Main Board**

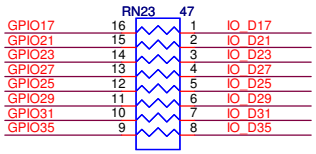
Size	Document Number	Rev
B	BUTTON & SWITCH	A

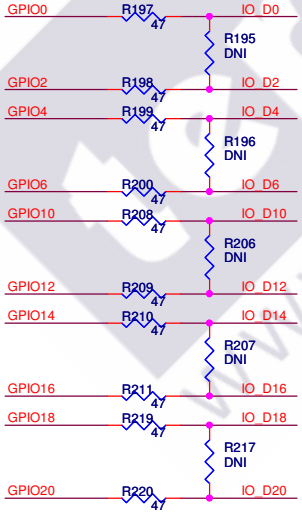
Date: Wednesday, June 30, 2010 Sheet 11 of 27

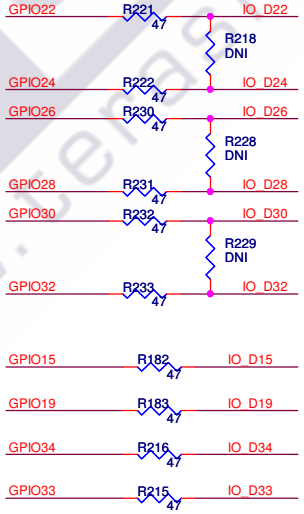


GPIO[35..0]

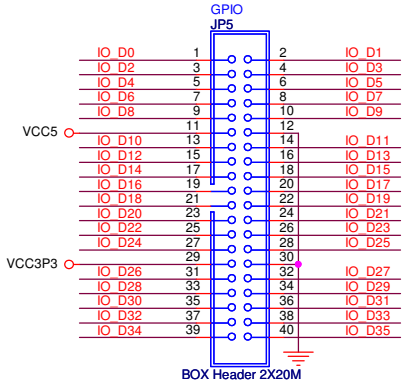








Close to FPGA



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Size	Document Number	Rev
B	GPIO	A

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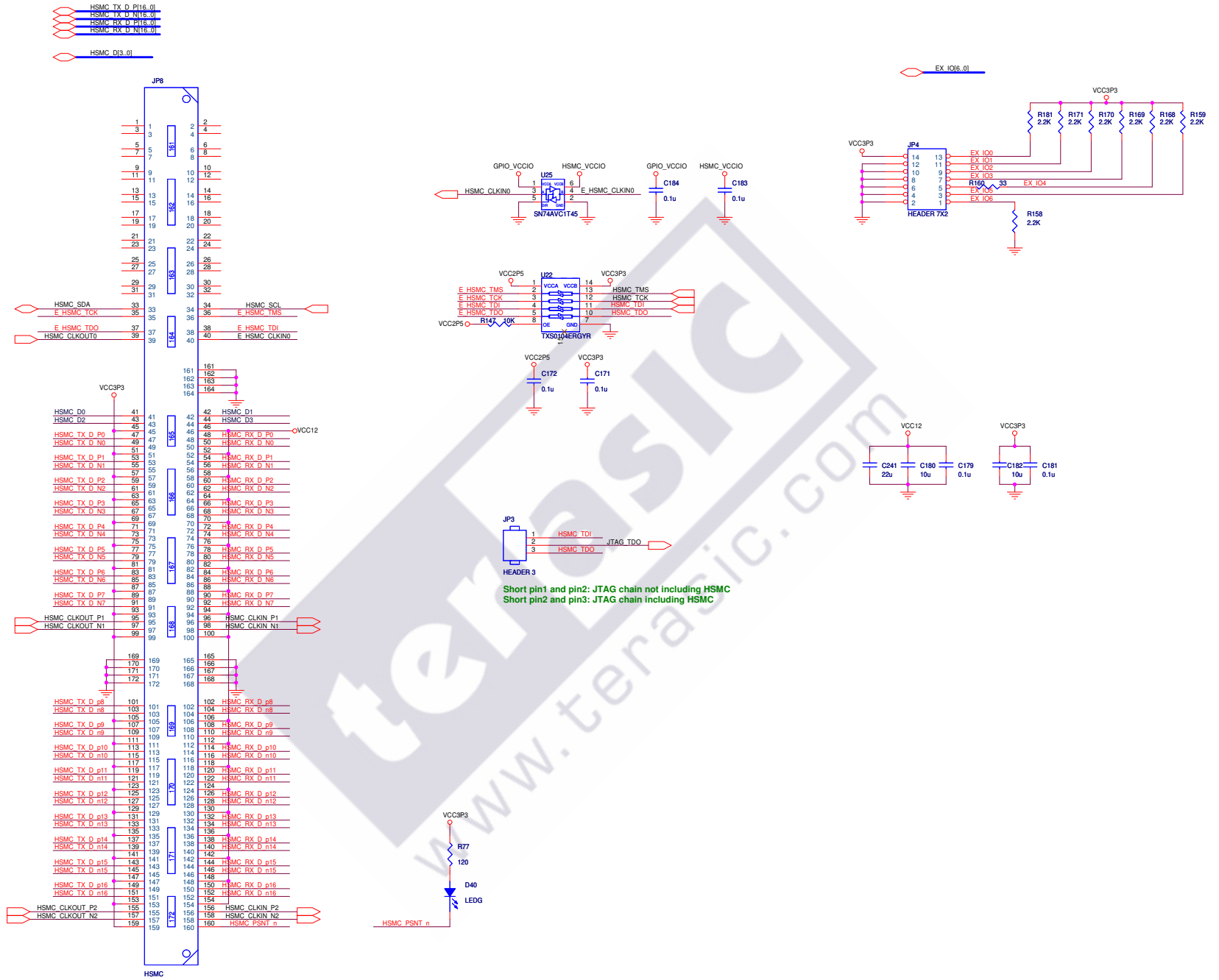

Title: **DE2-115 Main Board**

Size	Document Number	Rev
C	HSMC	A

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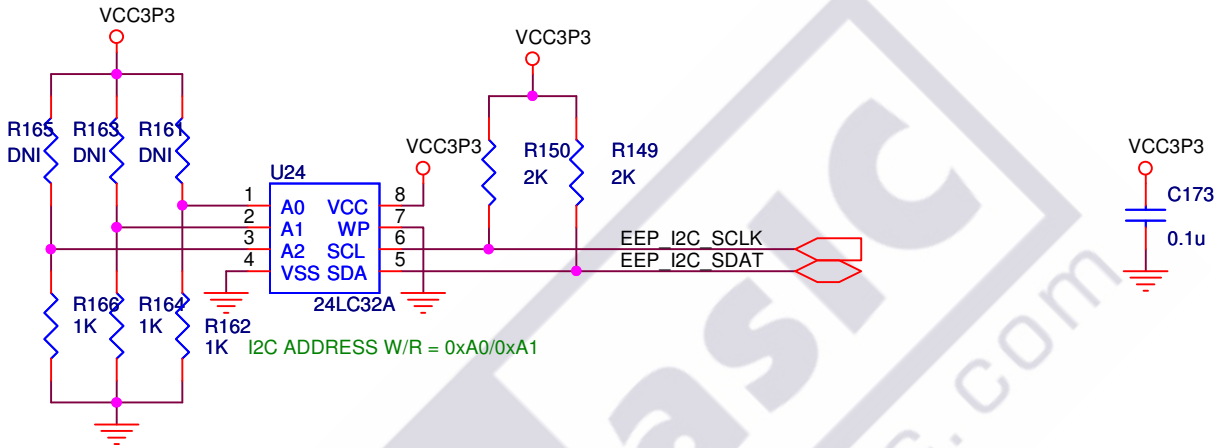

Title

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Size	Document Number	Rev
A	EEPROM	A

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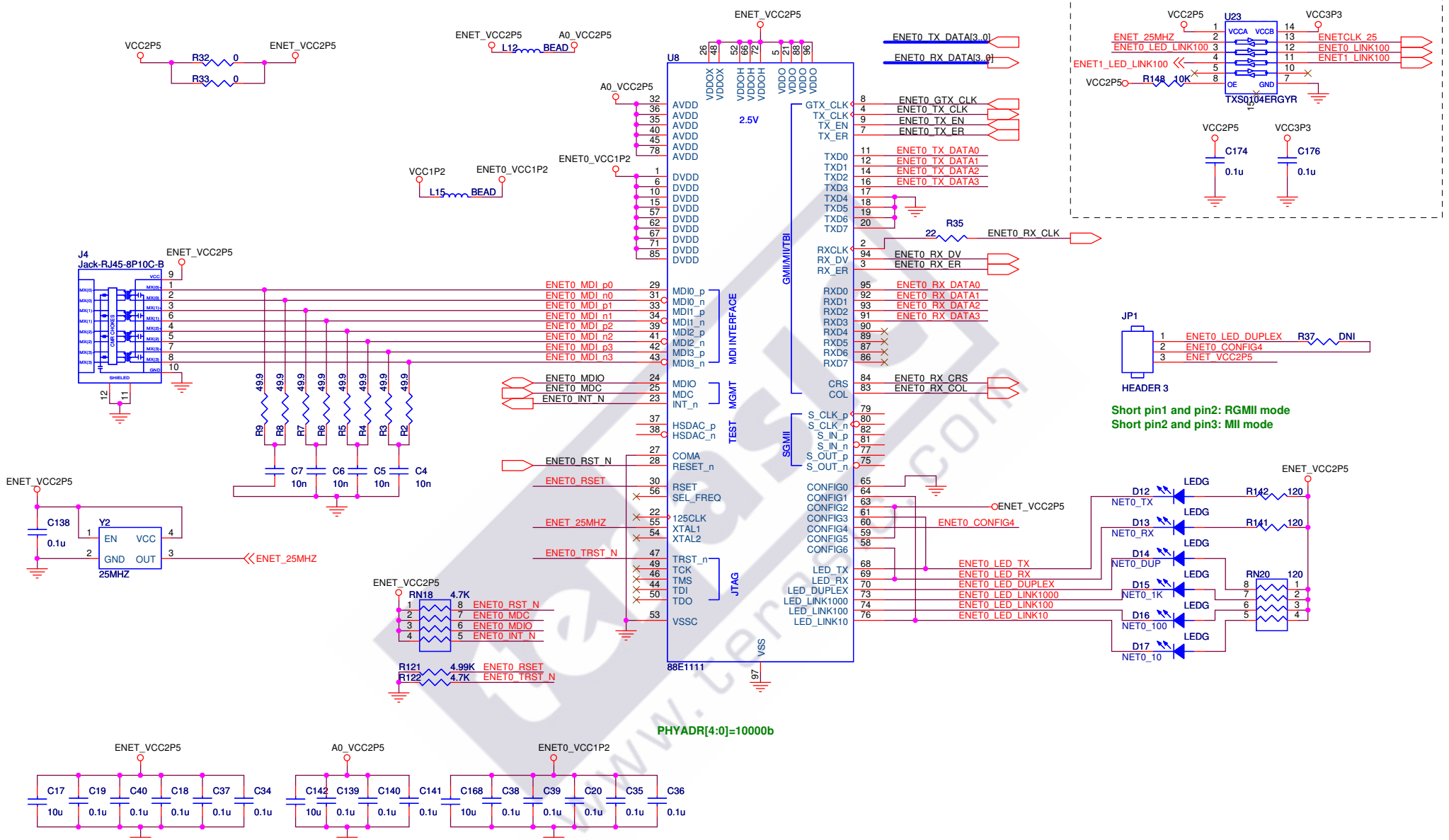

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Size	Document Number	Rev
B	Ethernet 0	A

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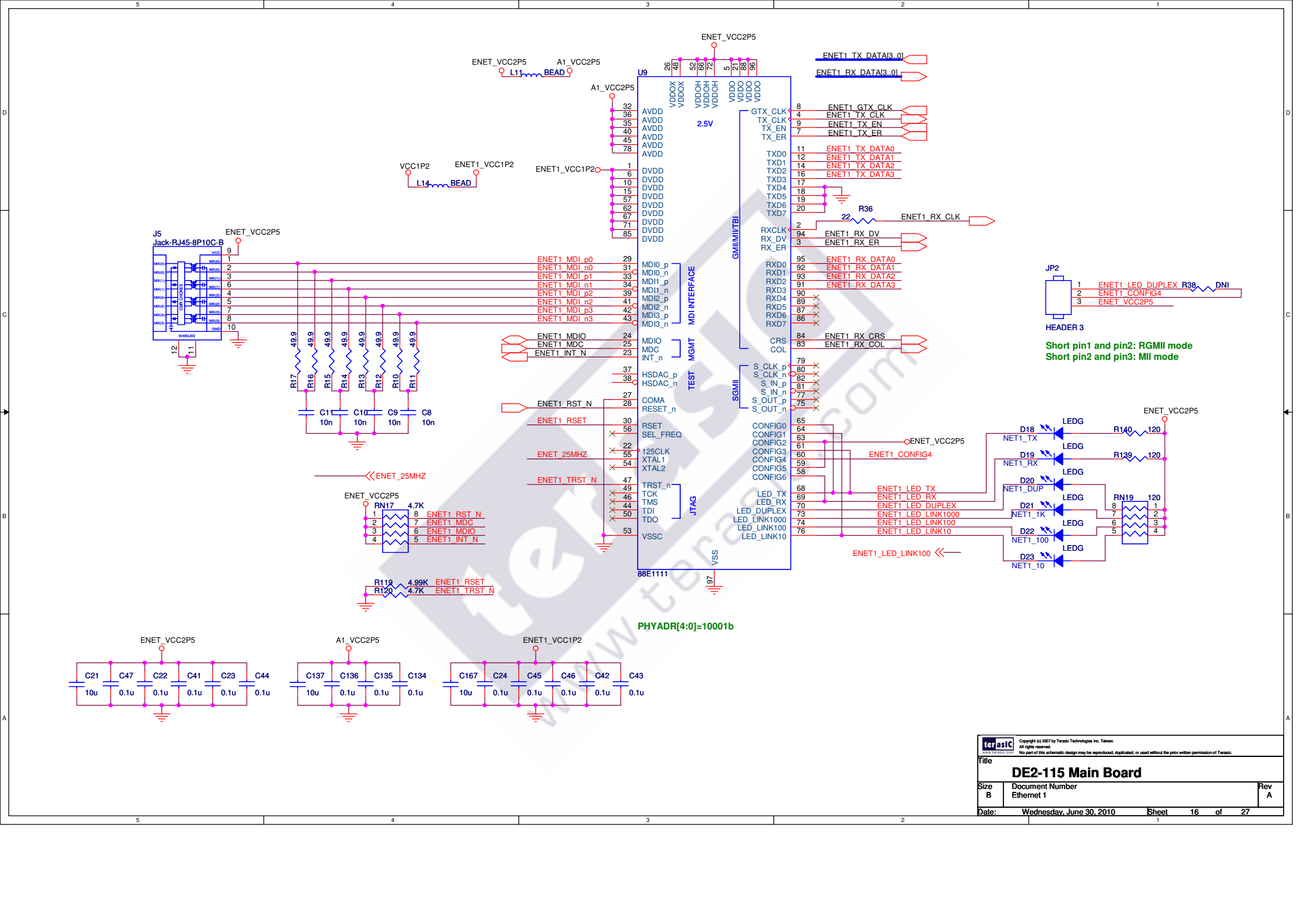

Title	DE2-115 Main Board	
Size B	Document Number Ethernet 1	Rev A
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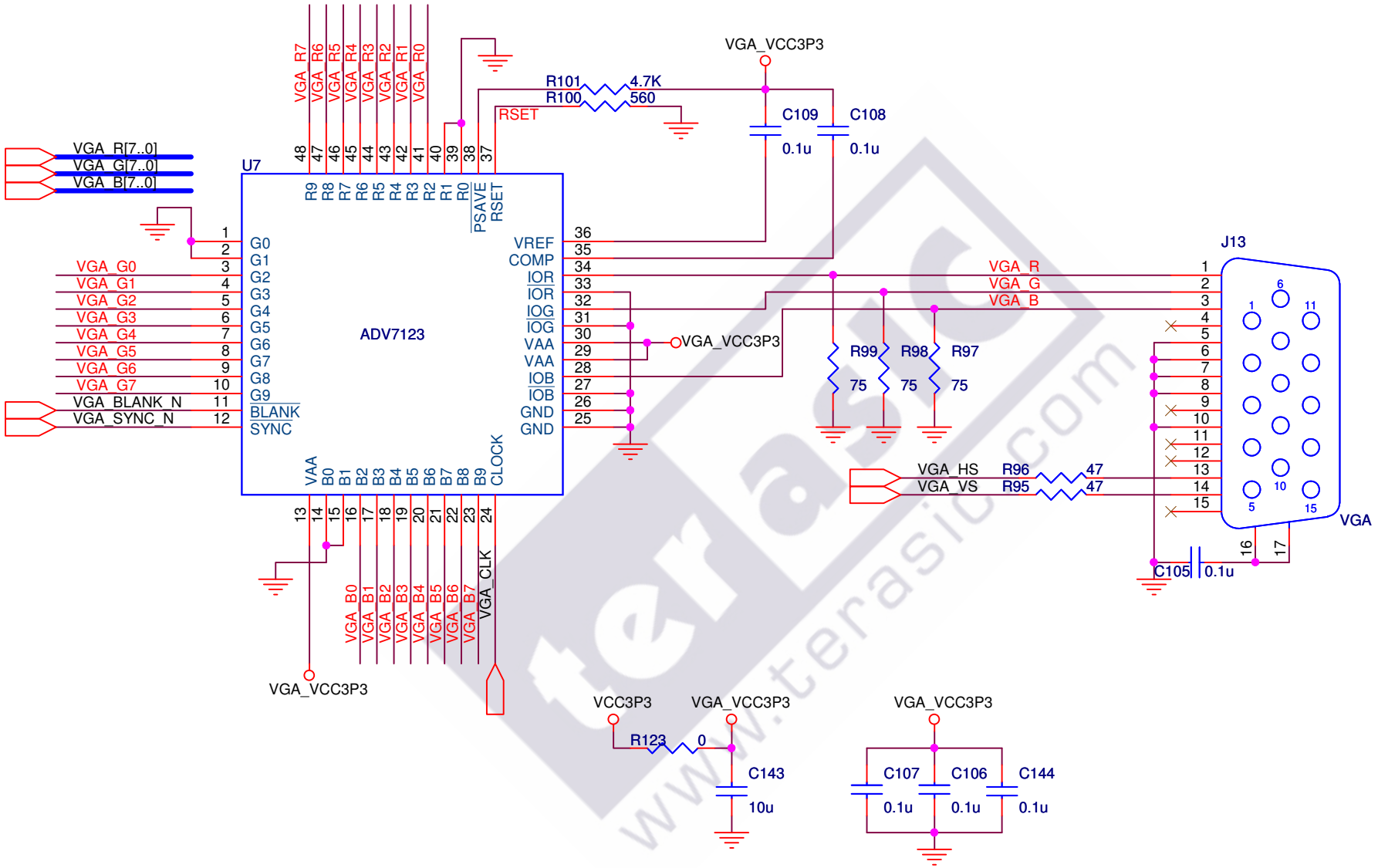

Title

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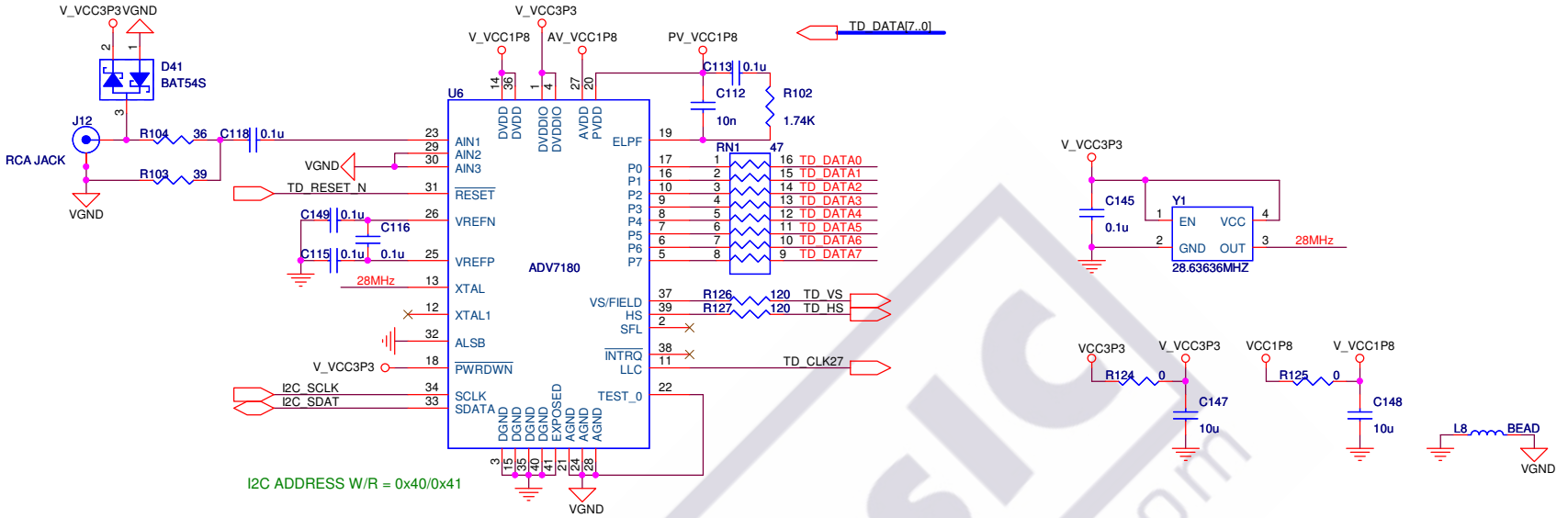
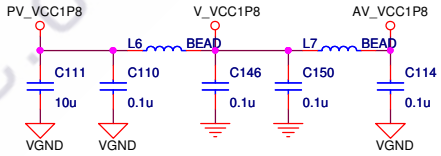
Size	Document Number	Rev
A	ADV7123 VGA	A

Date: Wednesday, June 30, 2010 Sheet 17 of 27





Title: **DE2-115 Main Board**

Size	Document Number	Rev
B	ADV7180 DECODER	A

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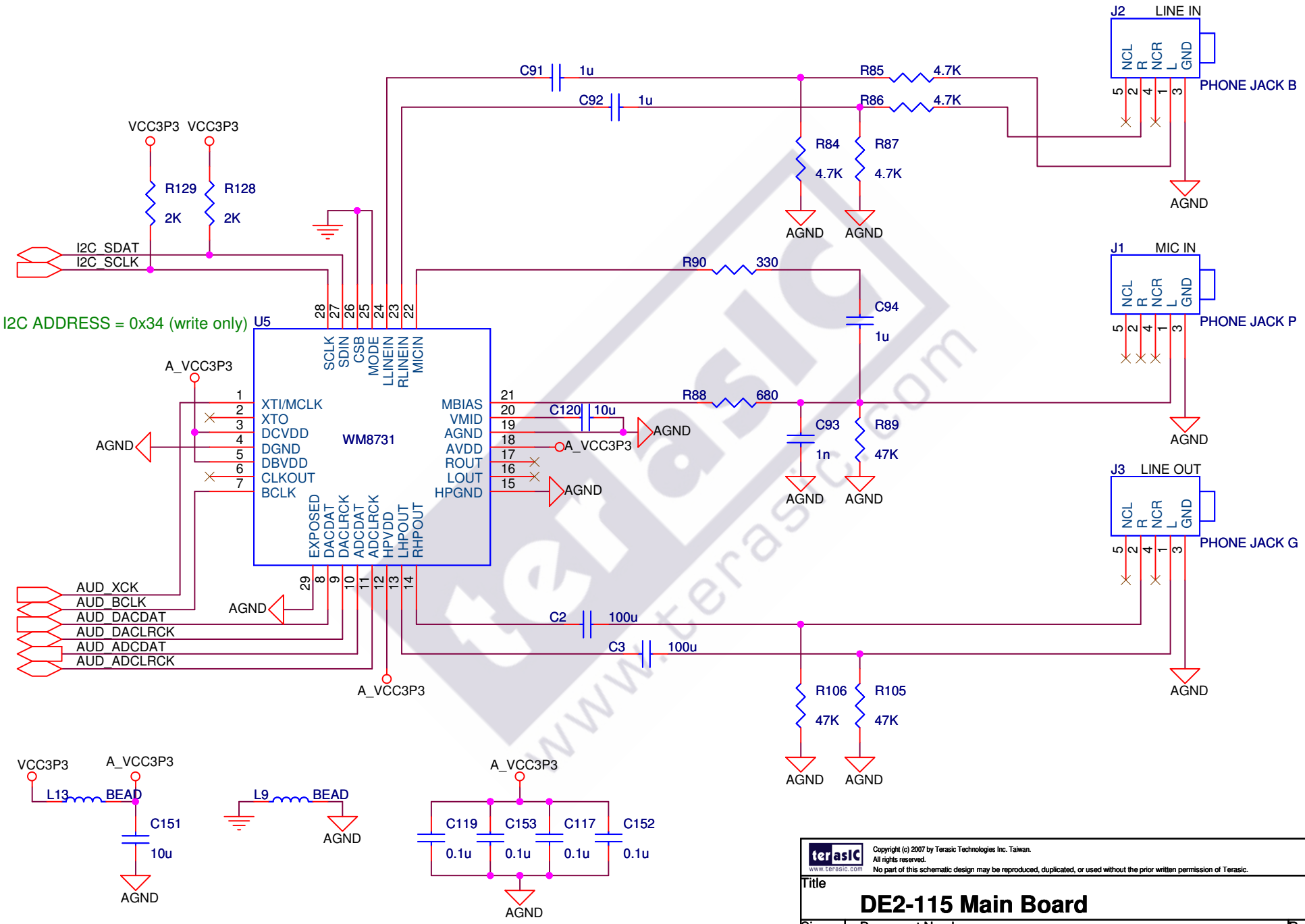

Title
DE2-115 Main Board

Size	Document Number	Rev
A	WM8731 Audio	A

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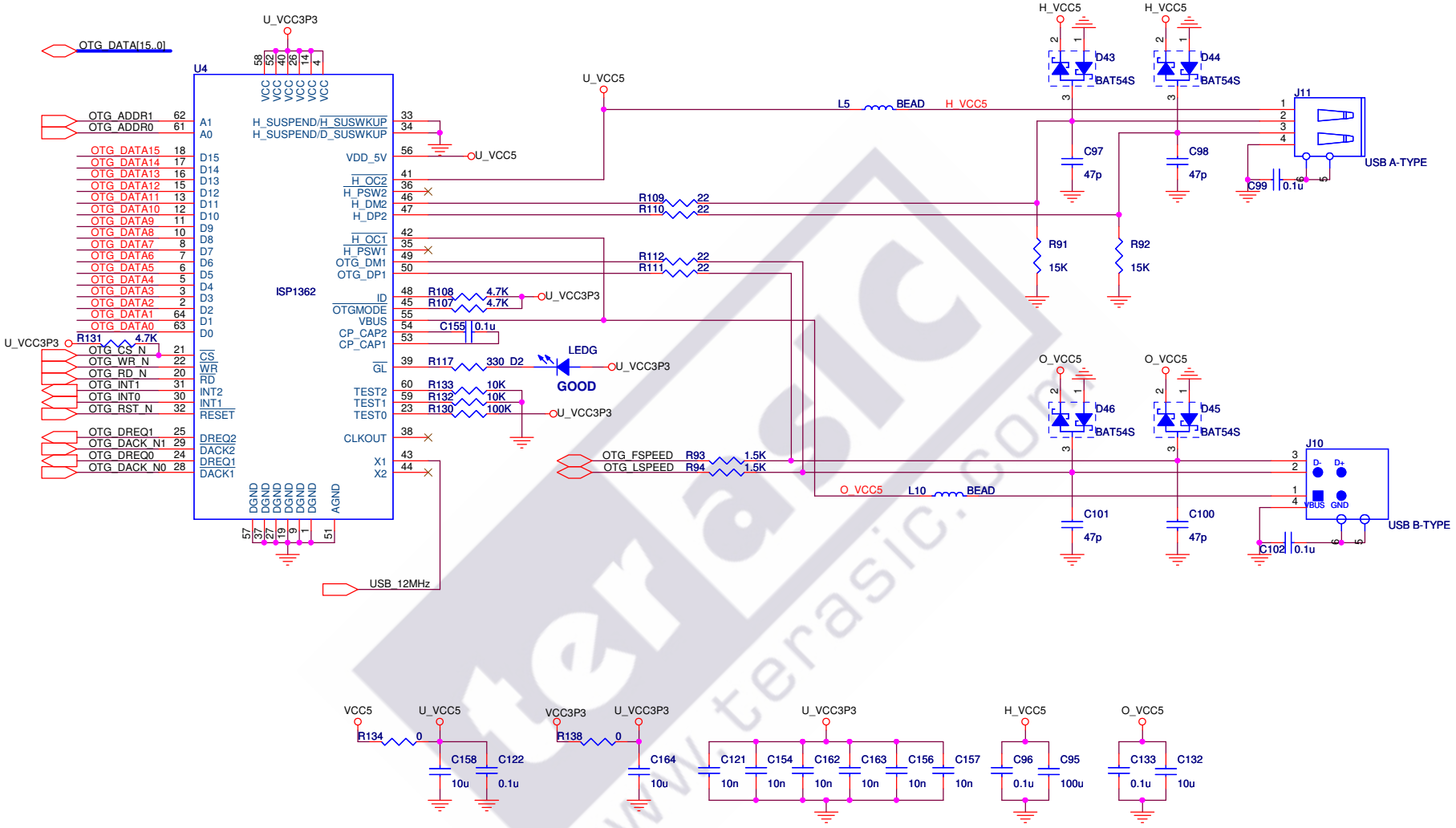

Title: **DE2-115 Main Board**

Size	Document Number	Rev
B	ISP1362	A

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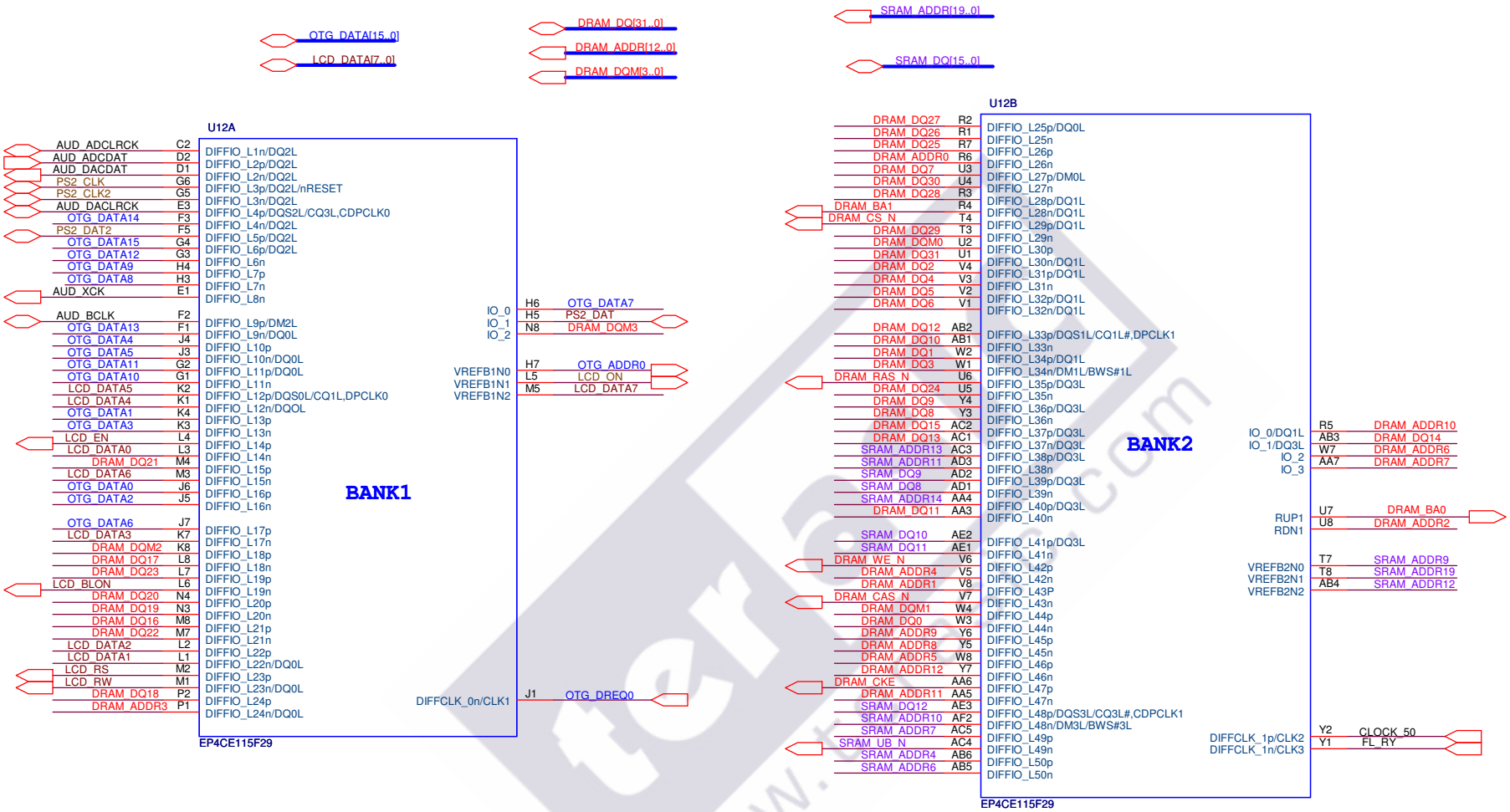
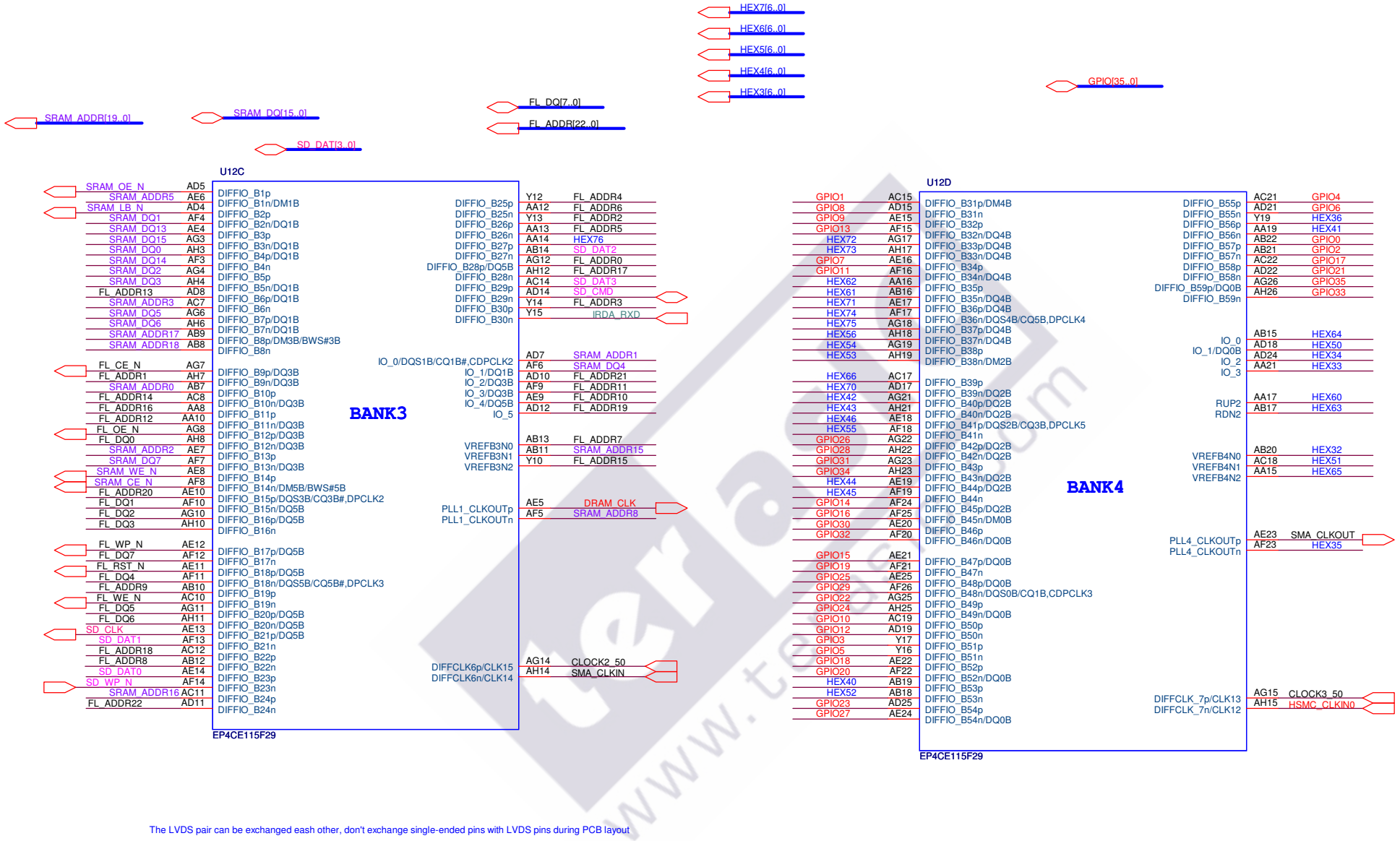


Title
DE2-115 Main Board

Size	Document Number	Rev
B	EP4CE115 BANK 1 and BANK 2	A

Date: Wednesday, June 30, 2010 Sheet 21 of 27



Title	DE2-115 Main Board	
Size B	Document Number EP4CE115 BANK 3 and BANK 4	Rev A
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The LVDS pair can be exchanged eash other, don't exchange single-ended pins with LVDS pins during PCB layout

HEX3[6..0]

SW[17..0]

KEY[3..0]

HSMC_TX_D_P[16..0]

HSMC_TX_D_N[16..0]

HSMC_RX_D_P[16..0]

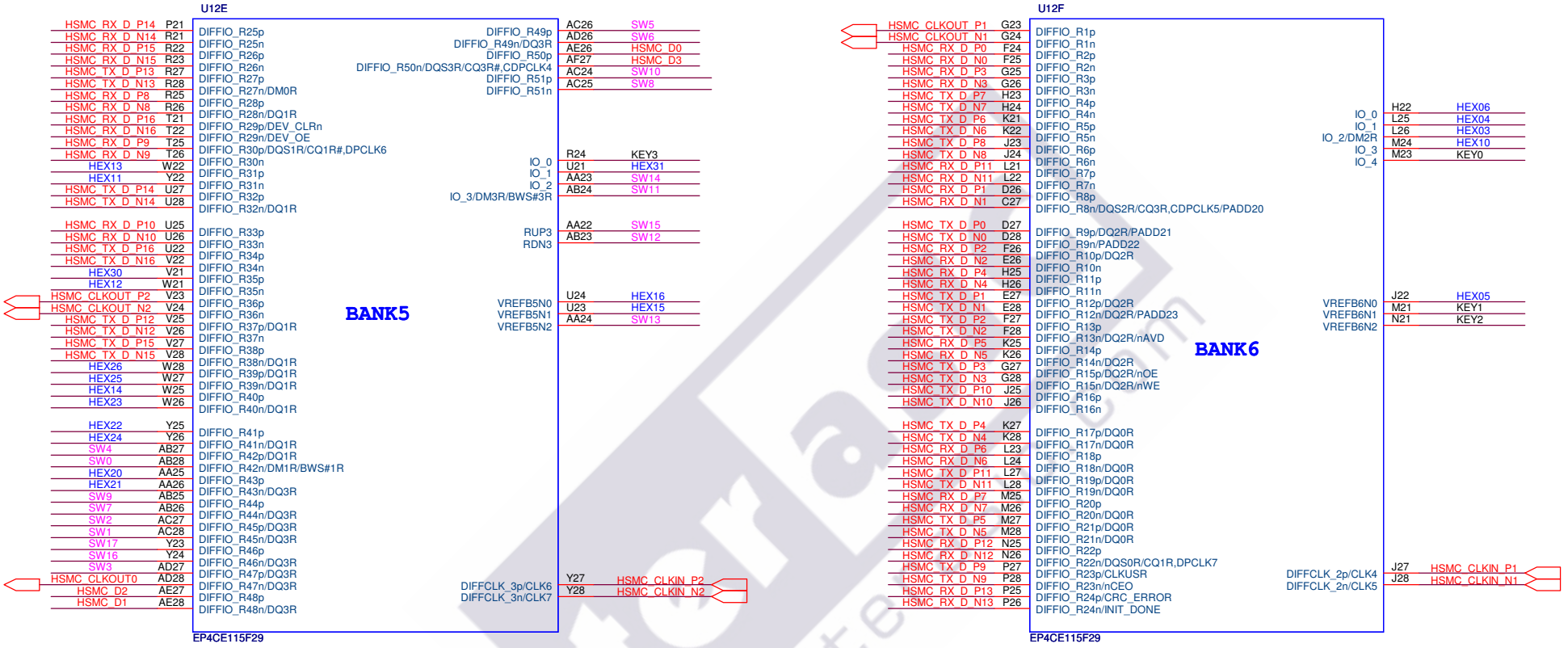
HSMC_RX_D_N[16..0]

HSMC_D[3..0]

HEX2[6..0]

HEX1[6..0]

HEX0[6..0]



Close to FPGA

HSMC_RX_D_p0 R55 DNI HSMC_RX_D_n0

HSMC_RX_D_p1 R57 DNI HSMC_RX_D_n1

HSMC_RX_D_p2 R56 DNI HSMC_RX_D_n2

HSMC_RX_D_p3 R60 DNI HSMC_RX_D_n3

HSMC_RX_D_p4 R58 DNI HSMC_RX_D_n4

HSMC_RX_D_p5 R61 DNI HSMC_RX_D_n5

HSMC_RX_D_p6 R59 DNI HSMC_RX_D_n6

HSMC_RX_D_p7 R66 DNI HSMC_RX_D_n7

HSMC_RX_D_p8 R65 DNI HSMC_RX_D_n8

HSMC_RX_D_p9 R69 DNI HSMC_RX_D_n9

HSMC_RX_D_p10 R70 DNI HSMC_RX_D_n10

HSMC_RX_D_p11 R67 DNI HSMC_RX_D_n11

HSMC_RX_D_p12 R71 DNI HSMC_RX_D_n12

HSMC_RX_D_p13 R72 DNI HSMC_RX_D_n13

HSMC_RX_D_p14 R73 DNI HSMC_RX_D_n14

HSMC_RX_D_p15 R74 DNI HSMC_RX_D_n15

HSMC_RX_D_p16 R76 DNI HSMC_RX_D_n16

HSMC_CLKIN_P1 R64 DNI HSMC_CLKIN_N1

HSMC_CLKIN_P2 R75 DNI HSMC_CLKIN_N2

Title: DE2-115 Main Board

Size: B | Document Number: EP4CE115 BANK 5 and BANK 6 | Rev: A

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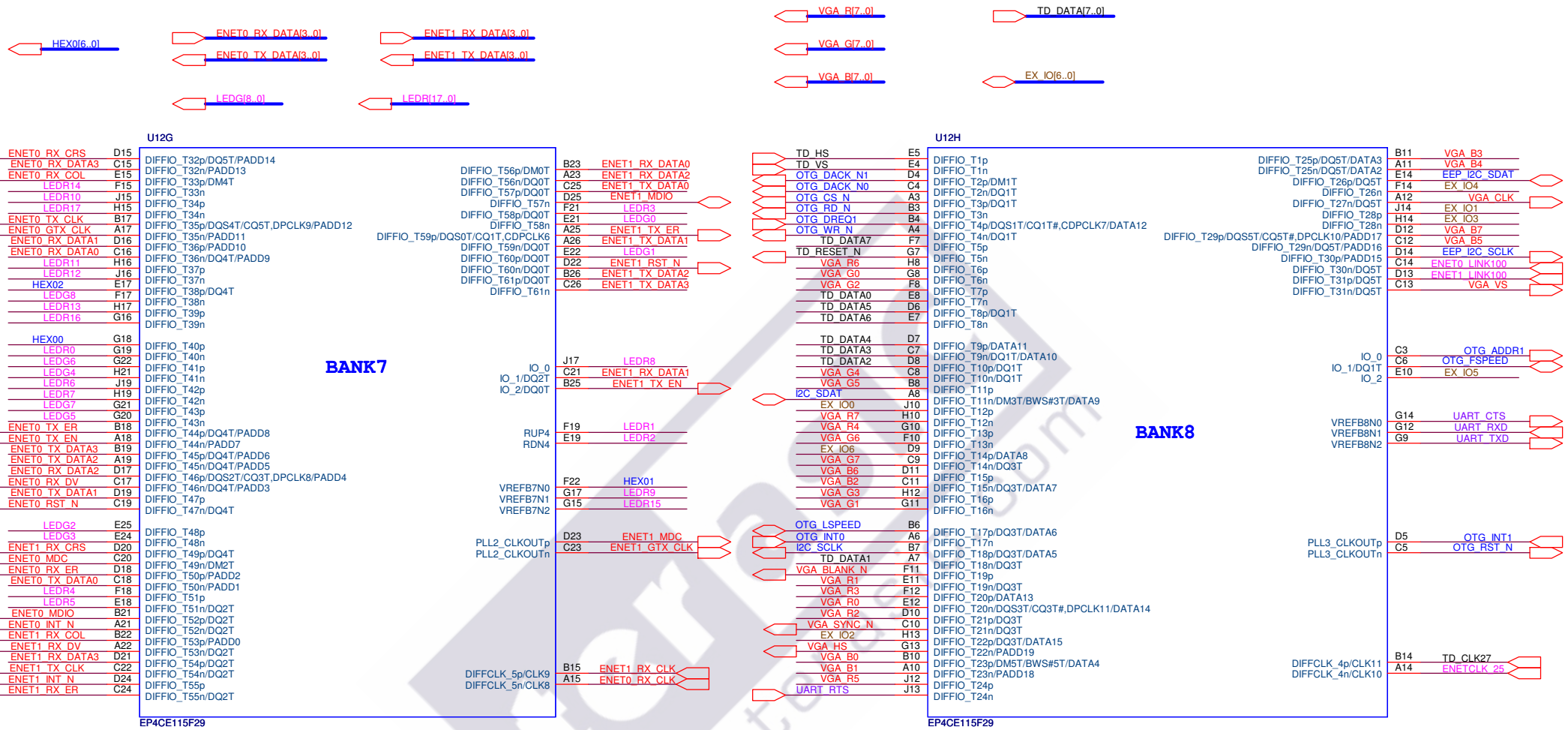
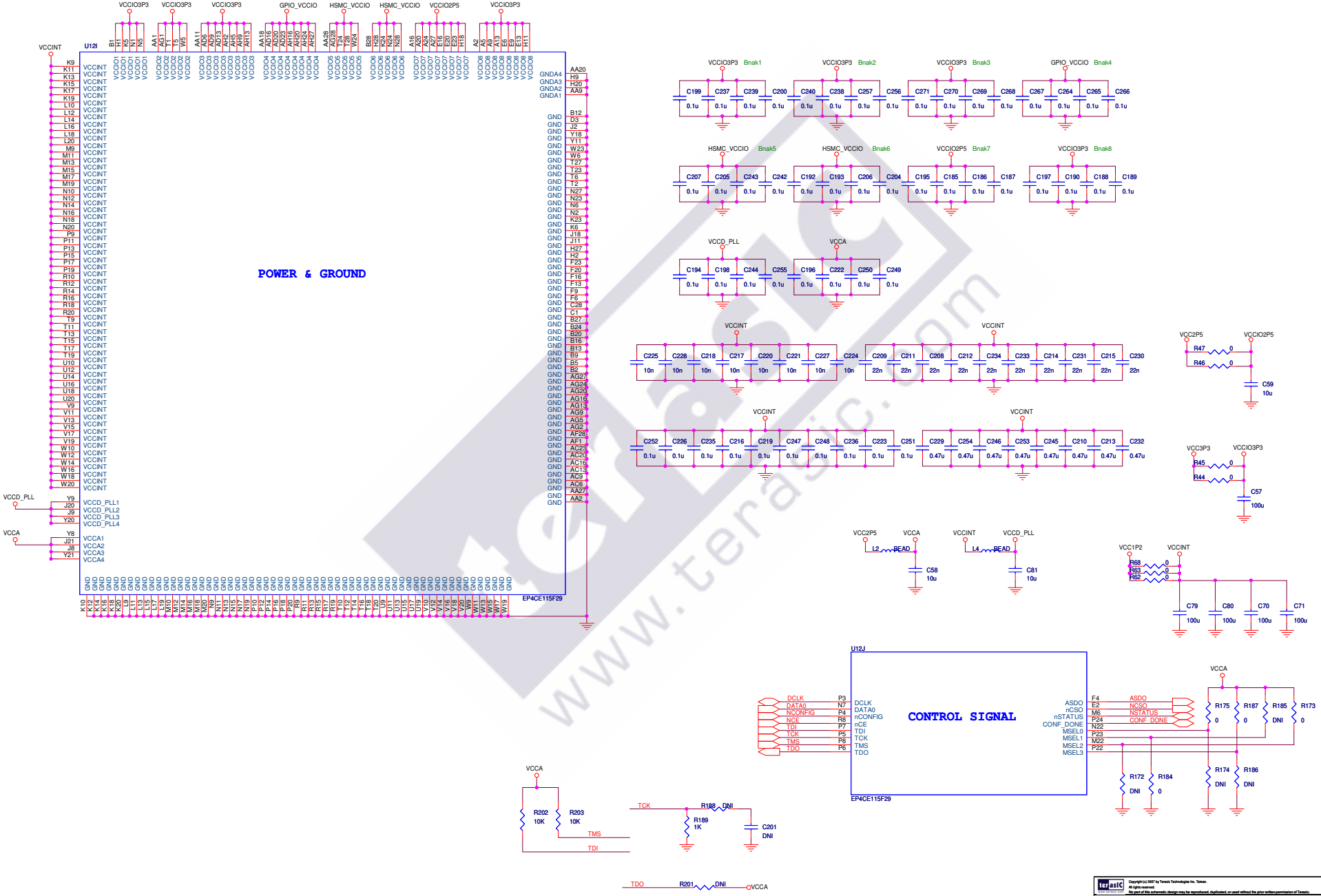


Title: **DE2-115 Main Board**

Size	Document Number	Rev
B	EP4CE115 BANK 7 and BANK 8	A

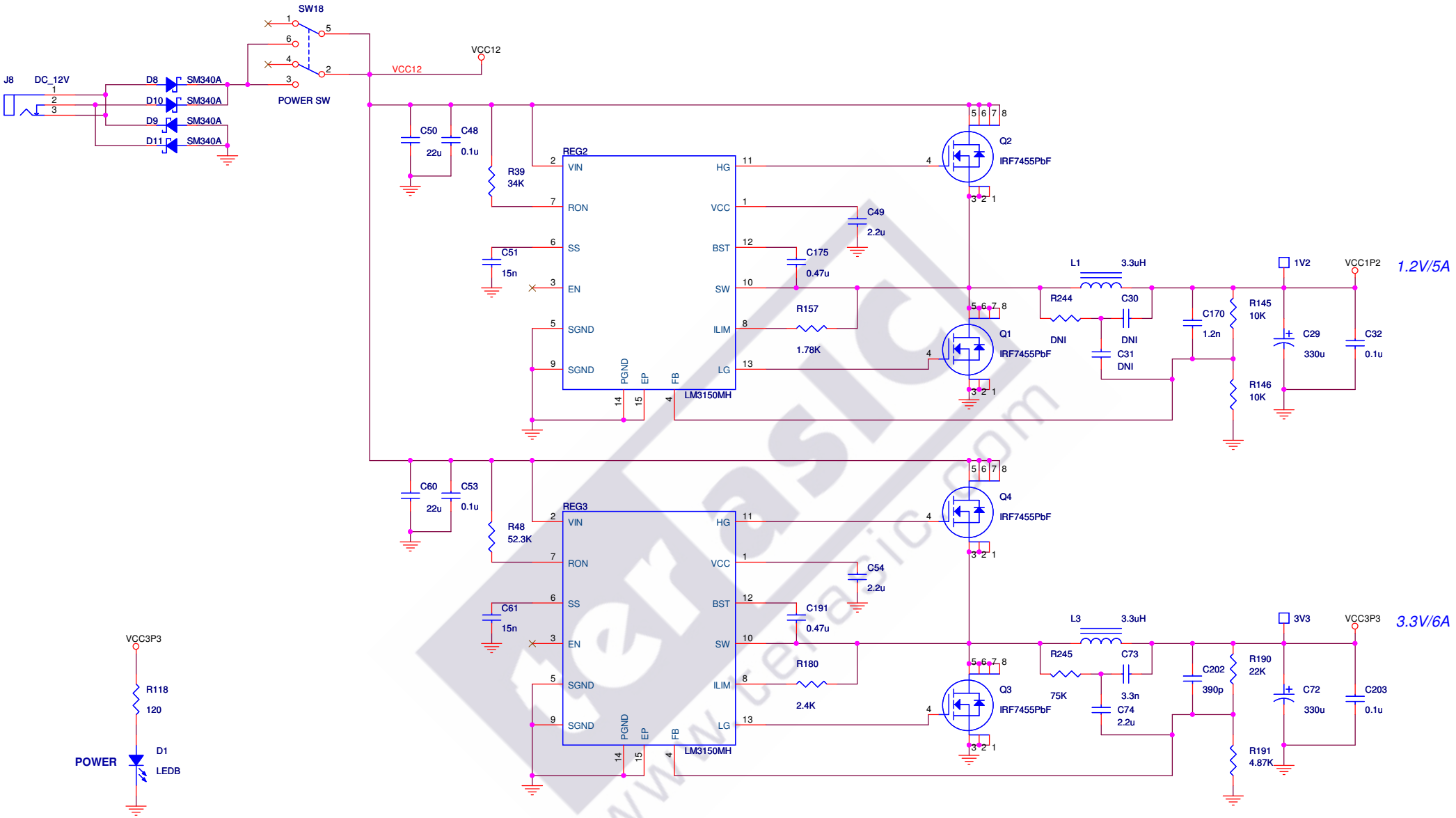
Date: Wednesday, June 30, 2010 Sheet 24 of 27



Title: **DE2-115 Main Board**

Size	Document Number	Rev
C	EP4CE115 POWER and CONFIG	A

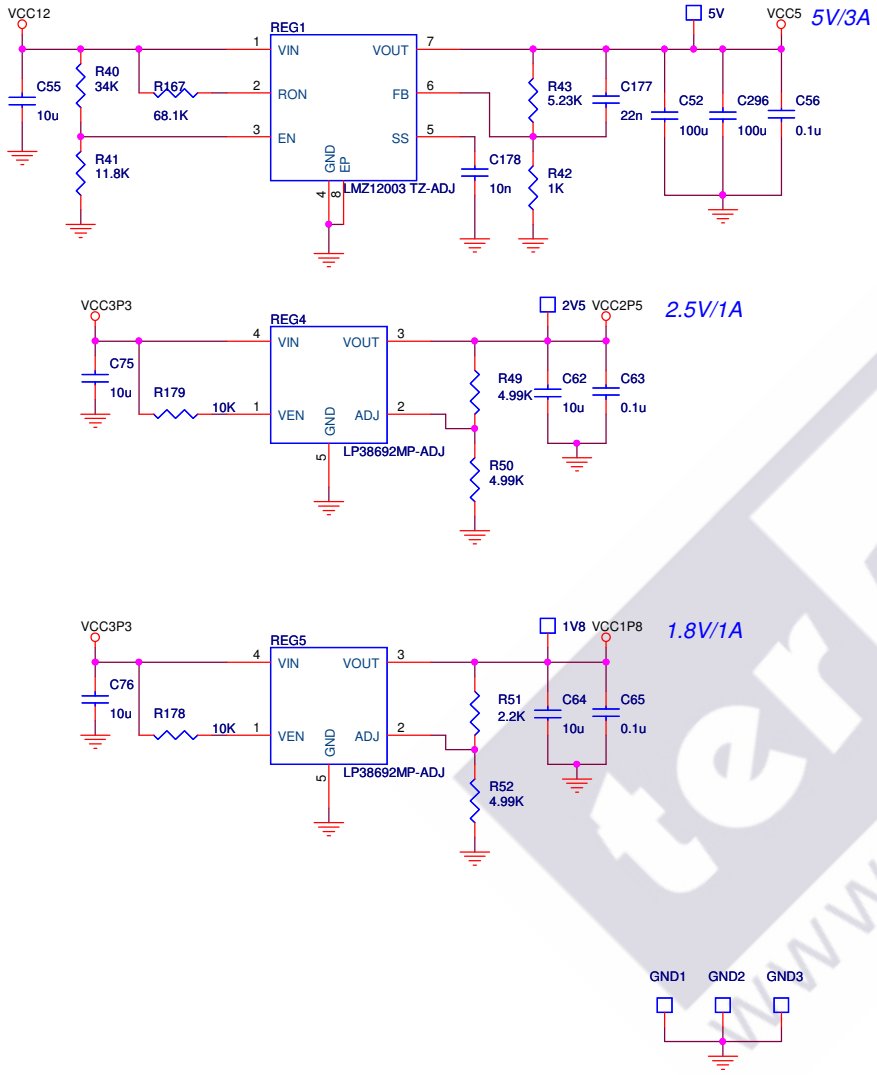
Date: Wednesday, June 30, 2010 Sheet 25 of 27



Title
DE2-115 Main Board

Size	Document Number	Rev
B	POWER 1.2V & 3.3V	A

Date: Wednesday, June 30, 2010 Sheet 26 of 27



Title: **DE2-115 Main Board**

Size	Document Number	Rev
B	POWER 1.8V & 2.5V & 5V	A

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