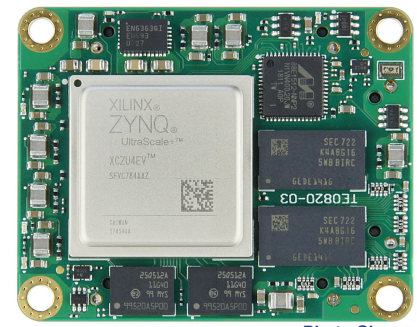
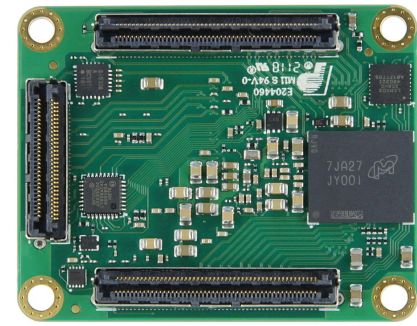




**Photo Shows Similar Product**



**Photo Shows Similar Product**



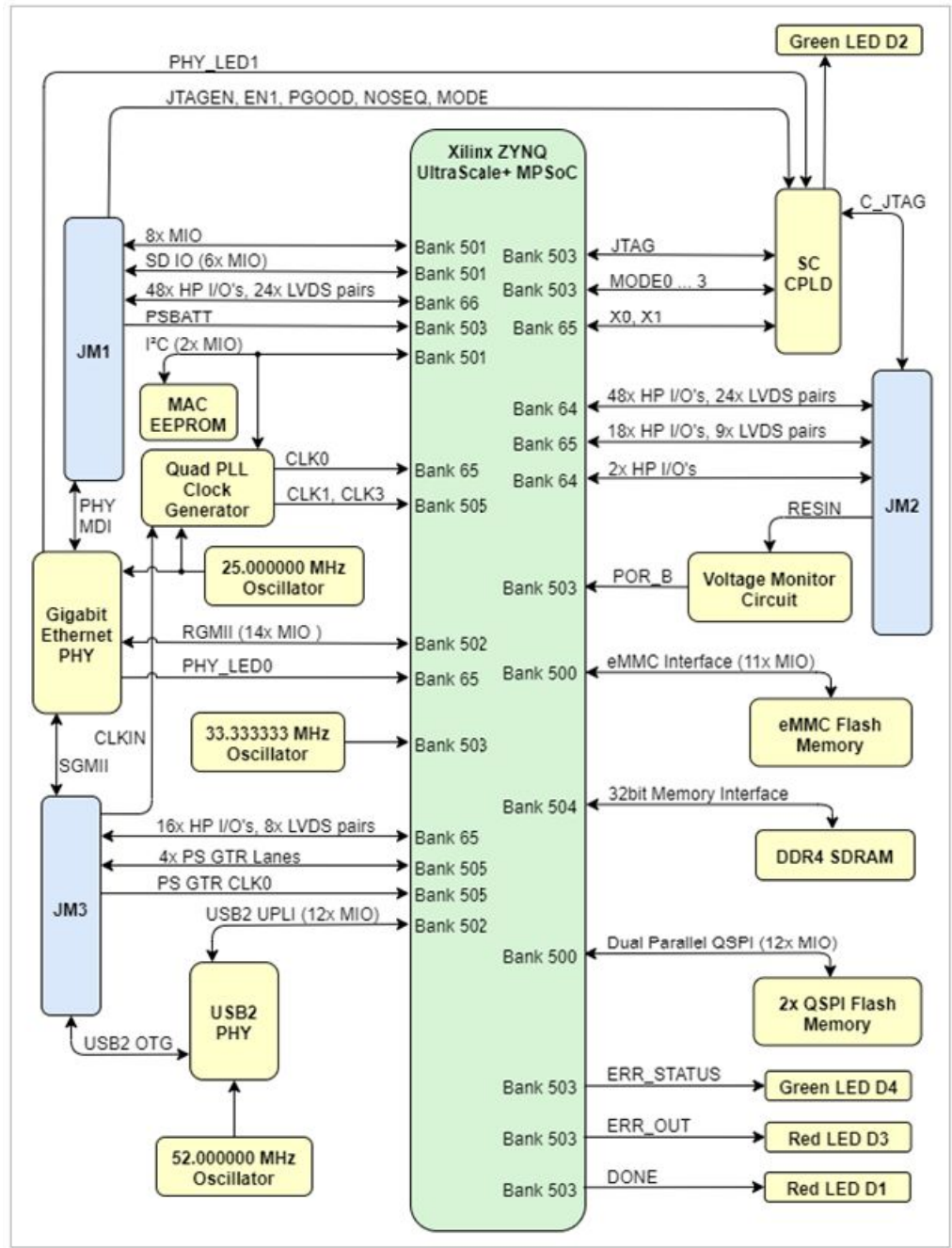
**Photo Shows Similar Product**

Regarding the usage of our schematics and alike documentation for Trenz module TE0820.

Project is protected under copyright and we strongly and strictly prohibit the reverse engineering or recreation, even if the design is just adapted or modified. TE0820 is protected under such right and in case of plagiarism we will have to do anything necessary in order to protect our assets.

Schematics and other handouts serve for informational purposes only!

	Title: <b>TE0820 - Legal Notices</b>		
	A4	Number: <b>TE0820 2AI21FA</b>	Rev. <b>04</b>
	Date: <b>2020-07-16</b>	Copyright: <b>Trenz Electronic GmbH / TT</b>	Page <b>1</b> of <b>23</b>
	Filename: <b>Legal Notices Modules.SchDoc</b>		



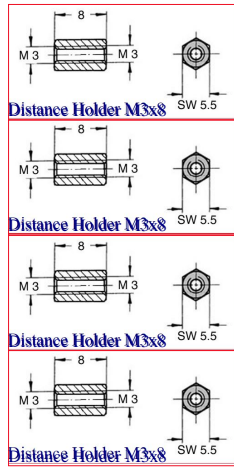
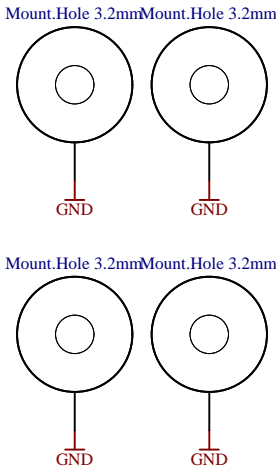
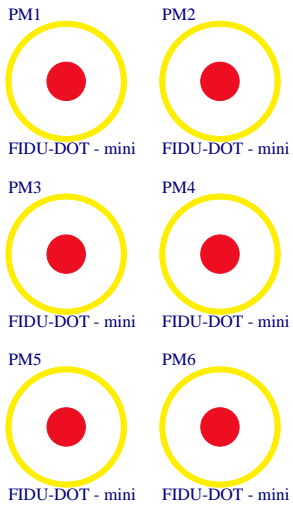
Title: TE0820 - System Overview		
A4	Number: TE0820 2AI21FA	Rev. 04
Date: 2020-10-20	Copyright: Trenz Electronic GmbH	Page 2 of 23
Filename: Overview.SchDoc		

U_USB-PHY USB-PHY.SchDoc
U_ETH-PHY ETH-PHY.SchDoc
U_B_HD B_HD.SchDoc
U_B64 B64.SchDoc
U_B65 B65.SchDoc
U_B66 B66.SchDoc
U_CONFIG CONFIG.SchDoc
U_B_MIO B_MIO.SchDoc
U_B_PS_GT B_PS_GT.SchDoc
U_CLK CLK.SchDoc
U_BD Overview.SchDoc

U_B2B-Connectors B2B-Connectors.SchDoc
U_eMMC eMMC.SchDoc
U_PS_DDR PS_DDR.SchDoc
U_ZU_POWER ZU_POWER.SchDoc
U_ZU_PS_POWER ZU_PS_POWER.SchDoc
U_DDR4-RAM_2 DDR4-RAM_2.SchDoc
U_DDR4-RAM DDR4-RAM.SchDoc
U_POWER POWER.SchDoc
U_POWER_1 POWER_1.SchDoc
U_REV_CH Revision Changes.SchDoc
U_LN Legal Notices Modules.SchDoc

Special notes:

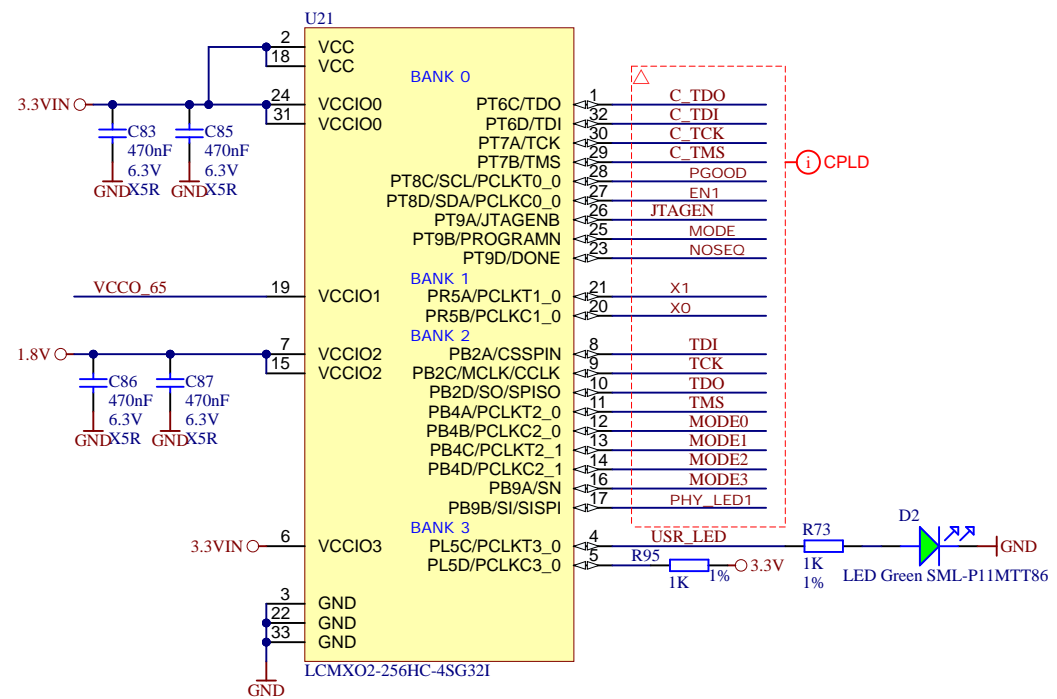
Serial  
Serialnumber 6,3 x 6,3mm



Assembly variant	2AI21FA
Created by	VY
Modified by	VY
Modified at	2019-04-24
SVN Revision	12571



Title: TE0820		
A4	Number: TE0820 2AI21FA	Rev. 04
Date: 2020-07-16	Copyright: 2015 Trenz Electronic GmbH	Page 3 of 23
Filename: TE0820.SchDoc		



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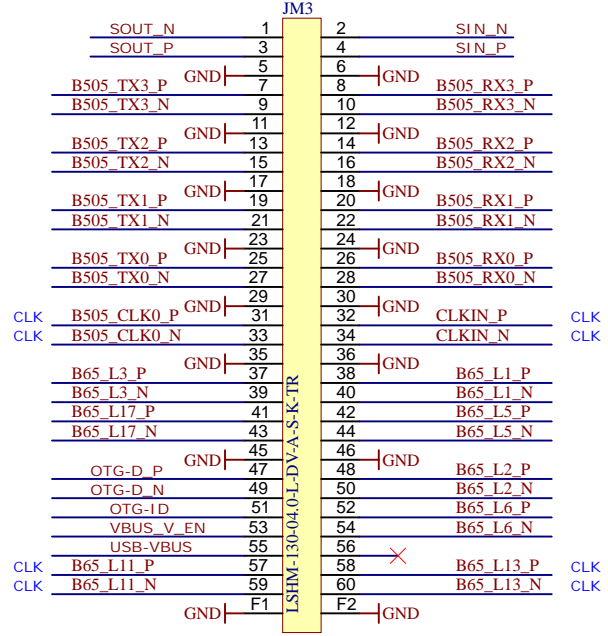
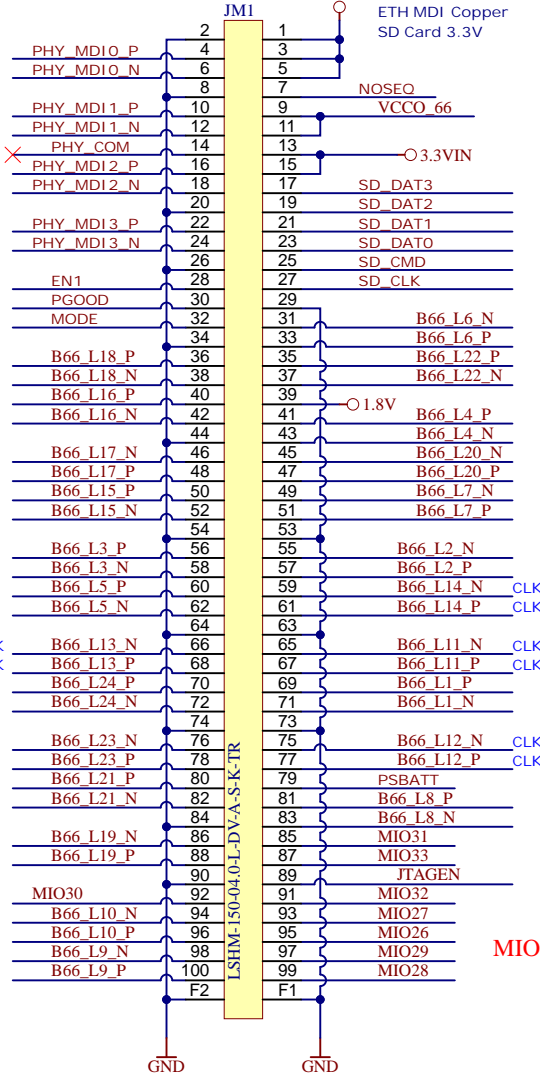
D

D

B66(HP) 48 IO, 24 LVDS Pairs  
 MIO501 8 IO, 3.3V  
 ETH MDI Copper  
 SD Card 3.3V

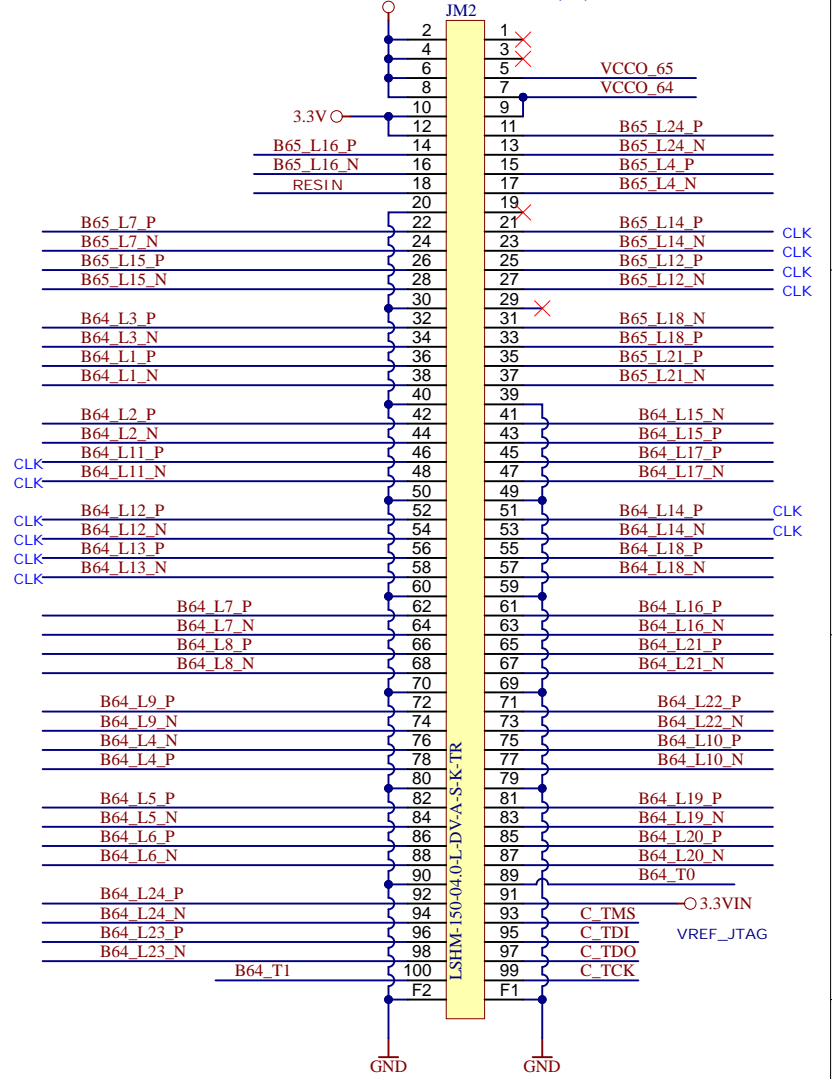
B65(HP) 16 IO, 8 LVDS Pairs  
 USB OTG  
 ETH SGMII  
 PS\_GTR 4 Lanes  
 PS\_GTR CLK IN  
 PLL CLK IN

B65(HP) 18 IO, 9 LVDS Pairs  
 B64(HP) 50 IO, 24 LVDS Pairs

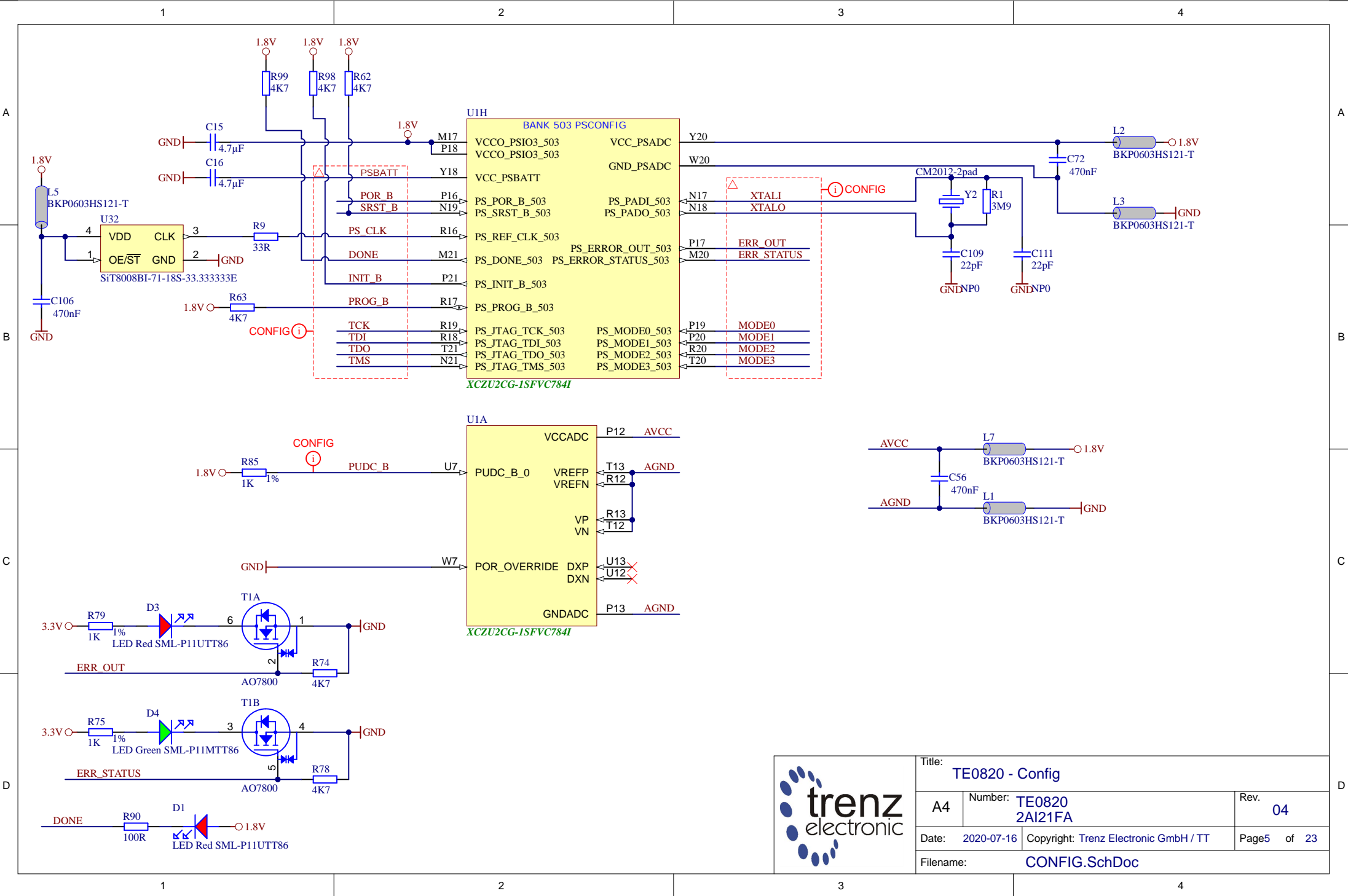



VCCO64, VCCO65, VCCO66 ->>> max. 1.8V (HP bank's)

MIO[29..26] ->PJTAG1



Title: TE0820 - B2B Connectors		
A4	Number: TE0820 2AI21FA	Rev. 04
Date: 2020-07-16	Copyright: 2015 Trenz Electronic GmbH	Page4 of 23
Filename: B2B-Connectors.SchDoc		



			Title: TE0820 - Config	
A4	Number: TE0820 2AI21FA	Rev. 04		
Date: 2020-07-16	Copyright: Trenz Electronic GmbH / TT	Page5 of 23		
Filename: CONFIG.SchDoc				

UIC

<del>F14</del>	VCCO_26	BANK 26 HD (ZU4/5 BANK 46 HD)	
<del>C15</del>	VCCO_26		
<del>B15</del>	IO_L1P_AD11P_26	IO_L7P_HDGC_AD5P_26	<del>G13</del>
<del>A15</del>	IO_L1N_AD11N_26	IO_L7N_HDGC_AD5N_26	<del>F13</del>
<del>B14</del>	IO_L2P_AD10P_26	IO_L8P_HDGC_AD4P_26	<del>F15</del>
<del>A14</del>	IO_L2N_AD10N_26	IO_L8N_HDGC_AD4N_26	<del>E15</del>
<del>B13</del>	IO_L3P_AD9P_26	IO_L9P_AD3P_26	<del>G15</del>
<del>A13</del>	IO_L3N_AD9N_26	IO_L9N_AD3N_26	<del>G14</del>
<del>C14</del>	IO_L4P_AD8P_26	IO_L10P_AD2P_26	<del>H14</del>
<del>C13</del>	IO_L4N_AD8N_26	IO_L10N_AD2N_26	<del>H13</del>
<del>D15</del>	IO_L5P_HDGC_AD7P_26	IO_L11P_AD1P_26	<del>K14</del>
<del>D14</del>	IO_L5N_HDGC_AD7N_26	IO_L11N_AD1N_26	<del>J14</del>
<del>E14</del>	IO_L6P_HDGC_AD6P_26	IO_L12P_AD0P_26	<del>L14</del>
<del>E13</del>	IO_L6N_HDGC_AD6N_26	IO_L12N_AD0N_26	<del>L13</del>

BANK 44 HD (ZU4/5 BANK 43 HD)

<del>AC10</del>	VCCO_44		
<del>AG12</del>	VCCO_44		
<del>AG10</del>	IO_L1P_AD11P_44	IO_L7P_HDGC_AD5P_44	<del>AD11</del>
<del>AH10</del>	IO_L1N_AD11N_44	IO_L7N_HDGC_AD5N_44	<del>AD10</del>
<del>AF11</del>	IO_L2P_AD10P_44	IO_L8P_HDGC_AD4P_44	<del>AB11</del>
<del>AG11</del>	IO_L2N_AD10N_44	IO_L8N_HDGC_AD4N_44	<del>AC11</del>
<del>AH12</del>	IO_L3P_AD9P_44	IO_L9P_AD3P_44	<del>AA11</del>
<del>AH11</del>	IO_L3N_AD9N_44	IO_L9N_AD3N_44	<del>AA10</del>
<del>AE10</del>	IO_L4P_AD8P_44	IO_L10P_AD2P_44	<del>W10</del>
<del>AF10</del>	IO_L4N_AD8N_44	IO_L10N_AD2N_44	<del>Y10</del>
<del>AE12</del>	IO_L5P_HDGC_AD7P_44	IO_L11P_AD1P_44	<del>Y9</del>
<del>AF12</del>	IO_L5N_HDGC_AD7N_44	IO_L11N_AD1N_44	<del>AA8</del>
<del>AC13</del>	IO_L6P_HDGC_AD6P_44	IO_L12P_AD0P_44	<del>AB10</del>
<del>AD12</del>	IO_L6N_HDGC_AD6N_44	IO_L12N_AD0N_44	<del>AB9</del>

UIB


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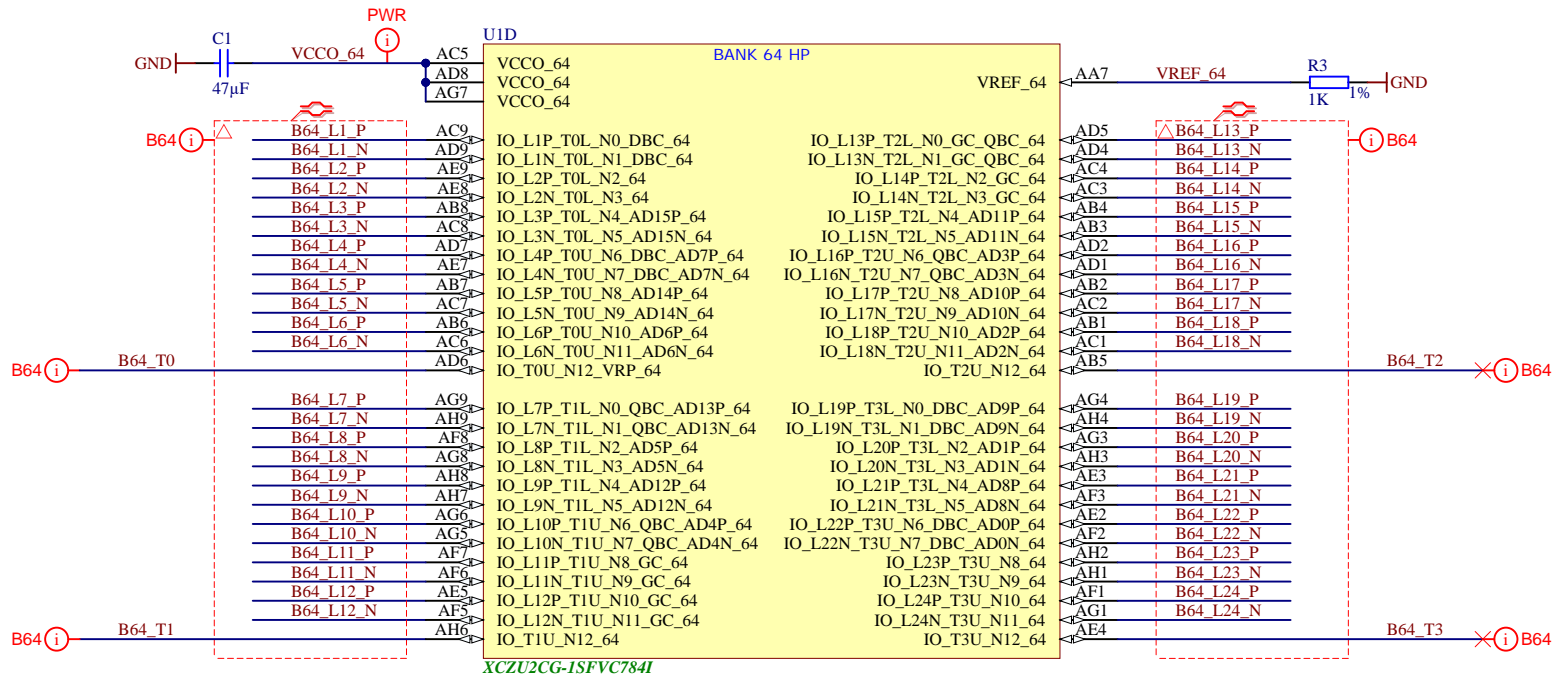
<del>AA14</del>	VCCO_24	BANK 24 HD (ZU4/5 BANK 44 HD)	
<del>AD13</del>	VCCO_24		
<del>AE15</del>	IO_L1P_AD15P_24	IO_L7P_HDGC_24	<del>AA13</del>
<del>AE14</del>	IO_L1N_AD15N_24	IO_L7N_HDGC_24	<del>AB13</del>
<del>AG14</del>	IO_L2P_AD14P_24	IO_L8P_HDGC_24	<del>AB15</del>
<del>AH14</del>	IO_L2N_AD14N_24	IO_L8N_HDGC_24	<del>AB14</del>
<del>AG13</del>	IO_L3P_AD13P_24	IO_L9P_AD11P_24	<del>W14</del>
<del>AH13</del>	IO_L3N_AD13N_24	IO_L9N_AD11N_24	<del>W13</del>
<del>AE13</del>	IO_L4P_AD12P_24	IO_L10P_AD10P_24	<del>Y14</del>
<del>AF13</del>	IO_L4N_AD12N_24	IO_L10N_AD10N_24	<del>Y13</del>
<del>AD13</del>	IO_L5P_HDGC_24	IO_L11P_AD9P_24	<del>W12</del>
<del>AD14</del>	IO_L5N_HDGC_24	IO_L11N_AD9N_24	<del>W11</del>
<del>AC14</del>	IO_L6P_HDGC_24	IO_L12P_AD8P_24	<del>Y12</del>
<del>AC13</del>	IO_L6N_HDGC_24	IO_L12N_AD8N_24	<del>AA12</del>

BANK 25 HD (ZU4/5 BANK 45 HD)

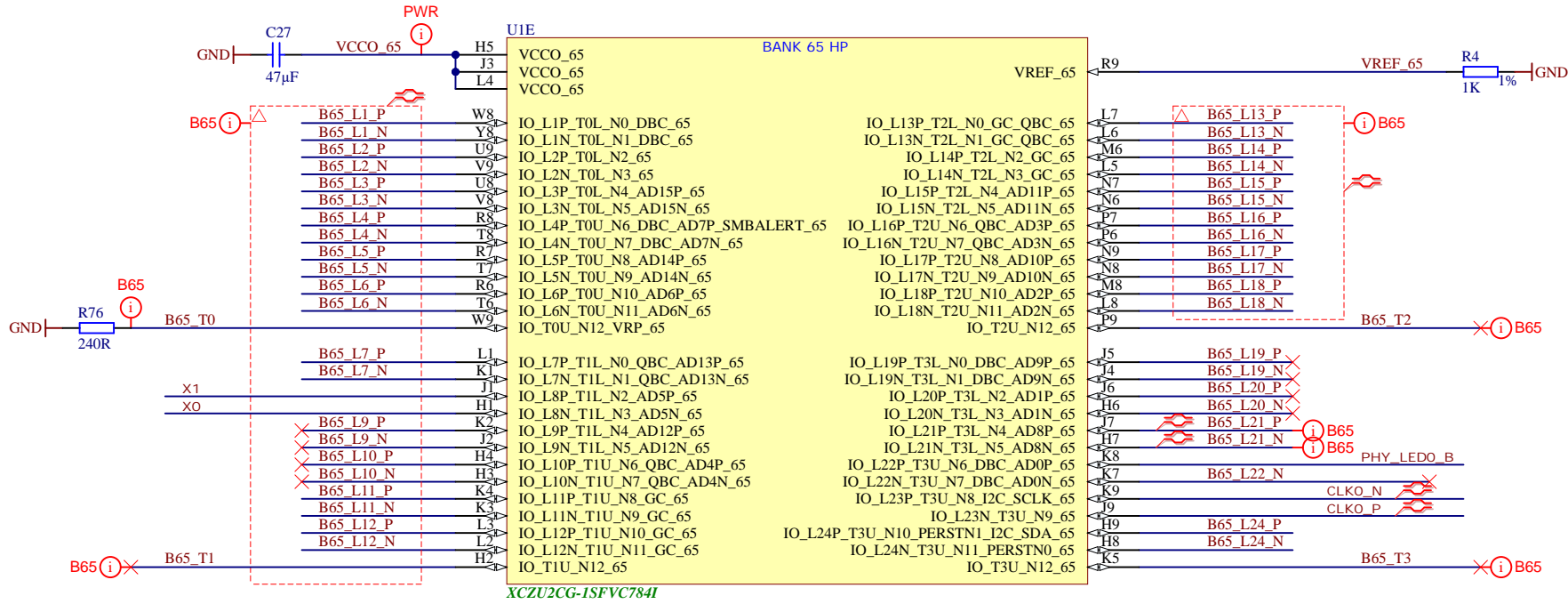
<del>B12</del>	VCCO_25		
<del>E11</del>	VCCO_25		
<del>J11</del>	IO_L1P_AD15P_25	IO_L7P_HDGC_25	<del>E10</del>
<del>J10</del>	IO_L1N_AD15N_25	IO_L7N_HDGC_25	<del>D10</del>
<del>K13</del>	IO_L2P_AD14P_25	IO_L8P_HDGC_25	<del>E12</del>
<del>K12</del>	IO_L2N_AD14N_25	IO_L8N_HDGC_25	<del>D11</del>
<del>H11</del>	IO_L3P_AD13P_25	IO_L9P_AD11P_25	<del>C11</del>
<del>G10</del>	IO_L3N_AD13N_25	IO_L9N_AD11N_25	<del>B10</del>
<del>J12</del>	IO_L4P_AD12P_25	IO_L10P_AD10P_25	<del>B11</del>
<del>H12</del>	IO_L4N_AD12N_25	IO_L10N_AD10N_25	<del>A10</del>
<del>G11</del>	IO_L5P_HDGC_25	IO_L11P_AD9P_25	<del>A12</del>
<del>F13</del>	IO_L5N_HDGC_25	IO_L11N_AD9N_25	<del>A11</del>
<del>F12</del>	IO_L6P_HDGC_25	IO_L12P_AD8P_25	<del>D12</del>
<del>F11</del>	IO_L6N_HDGC_25	IO_L12N_AD8N_25	<del>C12</del>

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	Title: TE0820 - HD Banks		
	A4	Number: TE0820 2AI21FA	Rev. 04
	Date: 2020-07-16	Copyright: Trenz Electronic GmbH / TT	Page6 of 23
	Filename: B_HD.SchDoc		

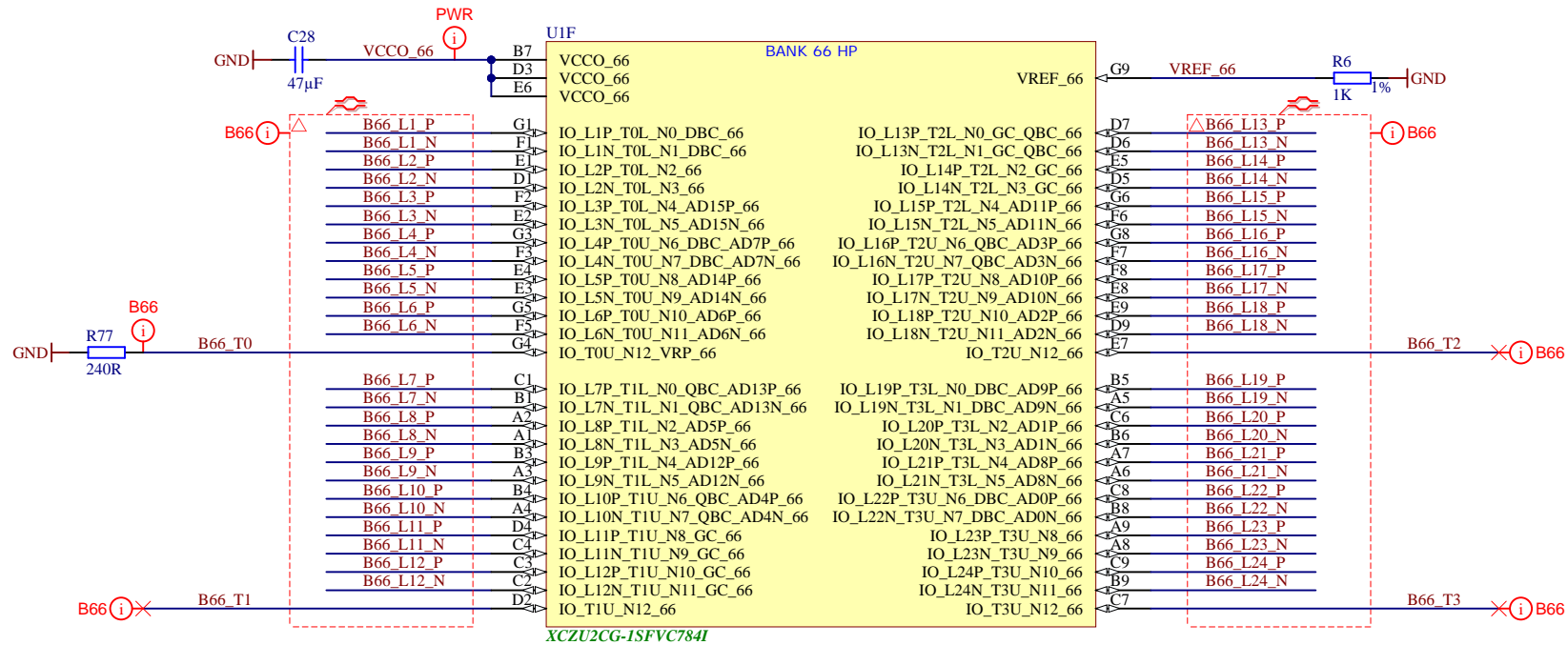


Title: TE0820 - B64		
A4	Number: TE0820 2AI21FA	Rev. 04
Date: 2020-07-16	Copyright: Trenz Electronic GmbH / TT	Page 7 of 23
Filename: B64.SchDoc		

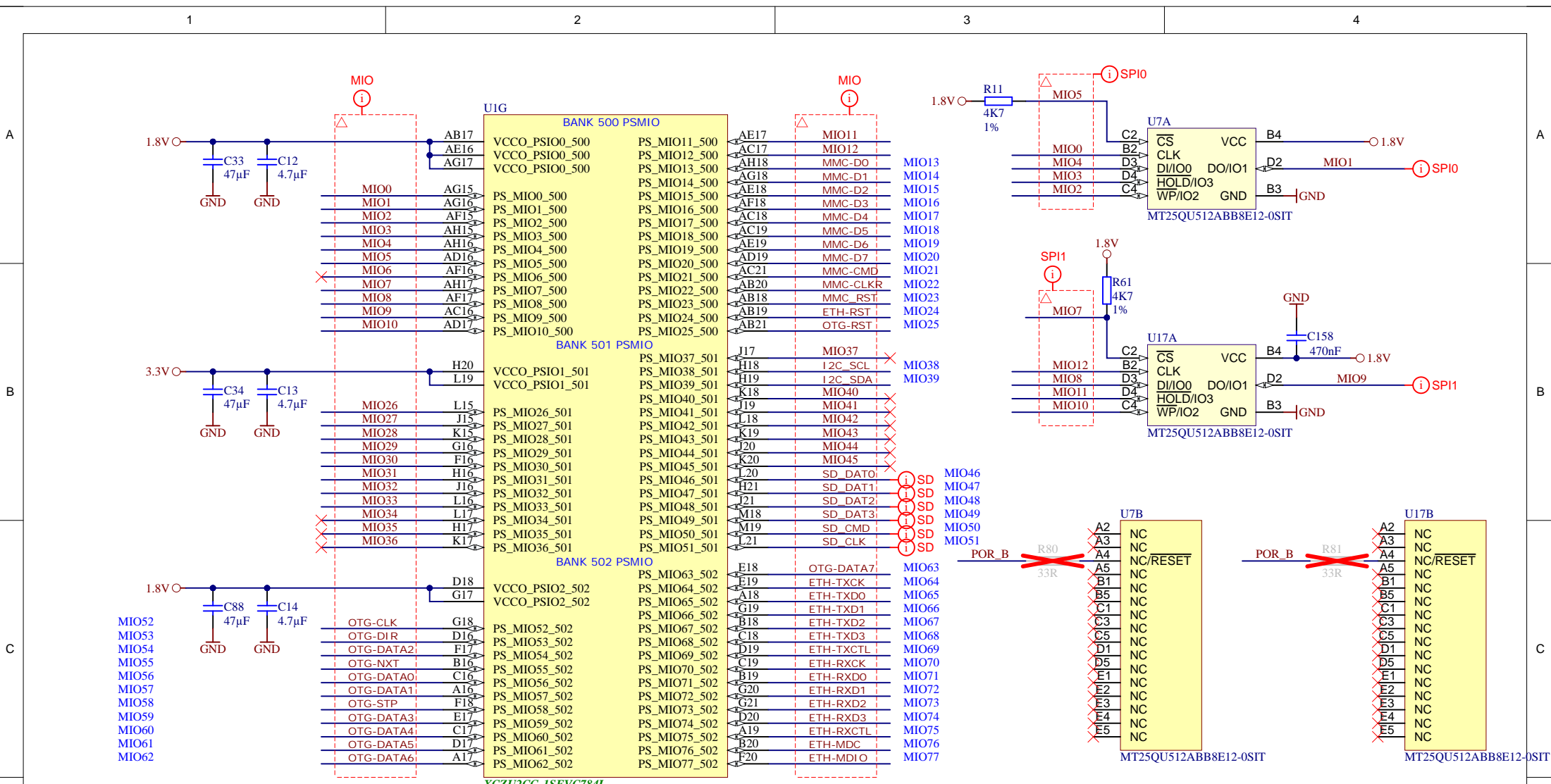


Title: TE0820 - B65		
A4	Number: TE0820 2AI21FA	Rev. 04
Date: 2020-07-16	Copyright: Trenz Electronic GmbH / TT	Page 8 of 23
Filename: B65.SchDoc		





Title: TE0820 - B66		
A4	Number: TE0820 2AI21FA	Rev. 04
Date: 2020-07-16	Copyright: Trenz Electronic GmbH / TT	Page9 of 23
Filename: B66.SchDoc		



		Title: TE0820 - MIO Banks	
		A4	Number: TE0820 2AI21FA
Date: 2020-07-16		Copyright: Trenz Electronic GmbH / TT	
Page 10 of 23		Page 10 of 23	
Filename: B_MIO.SchDoc			

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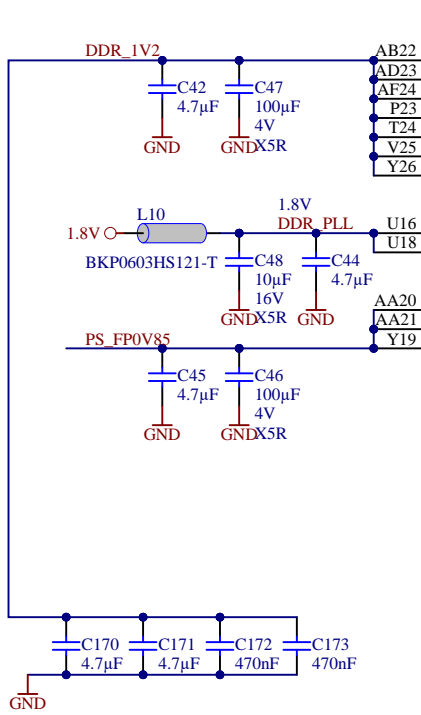
D

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**UII**

**BANK 504 PSDDR**

VCCO_PSDDR_504	PS_DDR_CK0_504	W25	DDR4-CLK0 P	
VCCO_PSDDR_504	PS_DDR_CK_N0_504	W26	DDR4-CLK0 N	
VCCO_PSDDR_504	PS_DDR_CKE0_504	V28	DDR4-CKE0	
VCCO_PSDDR_504	PS_DDR_CK1_504	Y24		✗
VCCO_PSDDR_504	PS_DDR_CK_N1_504	Y25		✗
VCCO_PSDDR_504	PS_DDR_CKE1_504	V27		✗
VCC_PSDDR_PLL	PS_DDR_A0_504	W28	DDR4-A0	
VCC_PSDDR_PLL	PS_DDR_A1_504	Y28	DDR4-A1	
VCC_PSDDR_PLL	PS_DDR_A2_504	AB28	DDR4-A2	
VCC_PSDDR_PLL	PS_DDR_A3_504	AA28	DDR4-A3	
VCC_PSDDR_PLL	PS_DDR_A4_504	Y27	DDR4-A4	
VCC_PSDDR_PLL	PS_DDR_A5_504	AA27	DDR4-A5	
VCC_PSDDR_PLL	PS_DDR_A6_504	Y22	DDR4-A6	
VCC_PSDDR_PLL	PS_DDR_A7_504	AA23	DDR4-A7	
VCC_PSDDR_PLL	PS_DDR_A8_504	AA22	DDR4-A8	
VCC_PSDDR_PLL	PS_DDR_A9_504	AB23	DDR4-A9	
VCC_PSDDR_PLL	PS_DDR_A10_504	AA25	DDR4-A10	
VCC_PSDDR_PLL	PS_DDR_A11_504	AA26	DDR4-A11	
VCC_PSDDR_PLL	PS_DDR_A12_504	AB25	DDR4-A12	
VCC_PSDDR_PLL	PS_DDR_A13_504	AB26	DDR4-A13	
VCC_PSDDR_PLL	PS_DDR_A14_504	AB24	DDR4-A14	
VCC_PSDDR_PLL	PS_DDR_A15_504	AC24	DDR4-A15	
VCC_PSDDR_PLL	PS_DDR_A16_504	AC23	DDR4-A16	
VCC_PSDDR_PLL	PS_DDR_A17_504	AC22	DDR4-A17	
VCC_PSINTFP_DDR	PS_DDR_CS_N0_504	W27	DDR4-CS	
VCC_PSINTFP_DDR	PS_DDR_CS_N1_504	V26		✗
VCC_PSINTFP_DDR	PS_DDR_BA0_504	V23	DDR4-BA0	
VCC_PSINTFP_DDR	PS_DDR_BA1_504	W22	DDR4-BA1	
VCC_PSINTFP_DDR	PS_DDR_BG0_504	W24	DDR4-BG0	
VCC_PSINTFP_DDR	PS_DDR_BG1_504	V22	DDR4-BG1	
VCC_PSINTFP_DDR	PS_DDR_PARITY_504	V24	DDR4-PAR	
VCC_PSINTFP_DDR	PS_DDR_RAM_RST_N_504	U23	DDR4-RESET	
VCC_PSINTFP_DDR	PS_DDR_ACT_N_504	Y23	DDR4-ACT	
VCC_PSINTFP_DDR	PS_DDR_ALERT_N_504	U25	DDR4-ALERT	
VCC_PSINTFP_DDR	PS_DDR_ZQ_504	U24		✗
VCC_PSINTFP_DDR	PS_DDR_ODT0_504	U28	DDR4-ODT0	
VCC_PSINTFP_DDR	PS_DDR_ODT1_504	U26		✗

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**UIJ**

**BANK 504 PSDDR**

DQ0	AD21	PS_DDR_DQ0_504	PS_DDR_DQ32_504	T22	
DQ1	AE20	PS_DDR_DQ1_504	PS_DDR_DQ33_504	R22	✗
DQ2	AD20	PS_DDR_DQ2_504	PS_DDR_DQ34_504	P22	✗
DQ3	AF20	PS_DDR_DQ3_504	PS_DDR_DQ35_504	N22	✗
DQ4	AH21	PS_DDR_DQ4_504	PS_DDR_DQ36_504	T23	✗
DQ5	AH20	PS_DDR_DQ5_504	PS_DDR_DQ37_504	P24	✗
DQ6	AH19	PS_DDR_DQ6_504	PS_DDR_DQ38_504	R24	✗
DQ7	AG19	PS_DDR_DQ7_504	PS_DDR_DQ39_504	N24	✗
DQ8	AF22	PS_DDR_DQ8_504	PS_DDR_DQ40_504	H24	✗
DQ9	AH22	PS_DDR_DQ9_504	PS_DDR_DQ41_504	J24	✗
DQ10	AE22	PS_DDR_DQ10_504	PS_DDR_DQ42_504	M24	✗
DQ11	AD23	PS_DDR_DQ11_504	PS_DDR_DQ43_504	K24	✗
DQ12	AH23	PS_DDR_DQ12_504	PS_DDR_DQ44_504	J22	✗
DQ13	AH24	PS_DDR_DQ13_504	PS_DDR_DQ45_504	H22	✗
DQ14	AE24	PS_DDR_DQ14_504	PS_DDR_DQ46_504	K22	✗
DQ15	AG24	PS_DDR_DQ15_504	PS_DDR_DQ47_504	J22	✗
DQ16	AC26	PS_DDR_DQ16_504	PS_DDR_DQ48_504	M25	✗
DQ17	AD26	PS_DDR_DQ17_504	PS_DDR_DQ49_504	M26	✗
DQ18	AD25	PS_DDR_DQ18_504	PS_DDR_DQ50_504	L25	✗
DQ19	AD24	PS_DDR_DQ19_504	PS_DDR_DQ51_504	L26	✗
DQ20	AG26	PS_DDR_DQ20_504	PS_DDR_DQ52_504	K28	✗
DQ21	AH25	PS_DDR_DQ21_504	PS_DDR_DQ53_504	L28	✗
DQ22	AH26	PS_DDR_DQ22_504	PS_DDR_DQ54_504	M28	✗
DQ23	AG25	PS_DDR_DQ23_504	PS_DDR_DQ55_504	N28	✗
DQ24	AH27	PS_DDR_DQ24_504	PS_DDR_DQ56_504	J28	✗
DQ25	AH28	PS_DDR_DQ25_504	PS_DDR_DQ57_504	K27	✗
DQ26	AF28	PS_DDR_DQ26_504	PS_DDR_DQ58_504	H28	✗
DQ27	AG28	PS_DDR_DQ27_504	PS_DDR_DQ59_504	H27	✗
DQ28	AC27	PS_DDR_DQ28_504	PS_DDR_DQ60_504	G26	✗
DQ29	AD27	PS_DDR_DQ29_504	PS_DDR_DQ61_504	G25	✗
DQ30	AD28	PS_DDR_DQ30_504	PS_DDR_DQ62_504	K25	✗
DQ31	AC28	PS_DDR_DQ31_504	PS_DDR_DQ63_504	J25	✗
		PS_DDR_DQ64_504	PS_DDR_DQ64_504	T28	✗
		PS_DDR_DQ65_504	PS_DDR_DQ65_504	R28	✗
DDR4-DQS0 P	AF21	PS_DDR_DQS_P0_504	PS_DDR_DQ66_504	P28	✗
DDR4-DQS0 N	AG21	PS_DDR_DQS_N0_504	PS_DDR_DQ67_504	P27	✗
DDR4-DQS1 P	AF23	PS_DDR_DQS_P1_504	PS_DDR_DQ68_504	P26	✗
DDR4-DQS1 N	AG23	PS_DDR_DQS_N1_504	PS_DDR_DQ69_504	R25	✗
DDR4-DQS2 P	AF25	PS_DDR_DQS_P2_504	PS_DDR_DQ70_504	P25	✗
DDR4-DQS2 N	AF26	PS_DDR_DQS_N2_504	PS_DDR_DQ71_504	J25	✗
DDR4-DQS3 P	AE27	PS_DDR_DQS_P3_504			
DDR4-DQS3 N	AE27	PS_DDR_DQS_N3_504			
	N23	PS_DDR_DQS_P4_504			
	M23	PS_DDR_DQS_N4_504	PS_DDR_DM0_504	AG20	DDR4-DM0
	L23	PS_DDR_DQS_P5_504	PS_DDR_DM1_504	AE23	DDR4-DM1
	K23	PS_DDR_DQS_N5_504	PS_DDR_DM2_504	AE25	DDR4-DM2
	N26	PS_DDR_DQS_P6_504	PS_DDR_DM3_504	AE28	DDR4-DM3
	N27	PS_DDR_DQS_N6_504	PS_DDR_DM4_504	R23	
	J26	PS_DDR_DQS_P7_504	PS_DDR_DM5_504	H23	
	J27	PS_DDR_DQS_N7_504	PS_DDR_DM6_504	L27	
	R27	PS_DDR_DQS_P8_504	PS_DDR_DM7_504	H26	
	T27	PS_DDR_DQS_N8_504	PS_DDR_DM8_504	T26	

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Title: <b>TE0820 - PS_DDR</b>		
A4	Number: <b>TE0820 2AI21FA</b>	Rev. <b>04</b>
Date: <b>2020-07-16</b>	Copyright: <b>Trenz Electronic GmbH / TT</b>	Page <b>11</b> of <b>23</b>
Filename: <b>PS_DDR.SchDoc</b>		

1

2

3

4

A

A

B

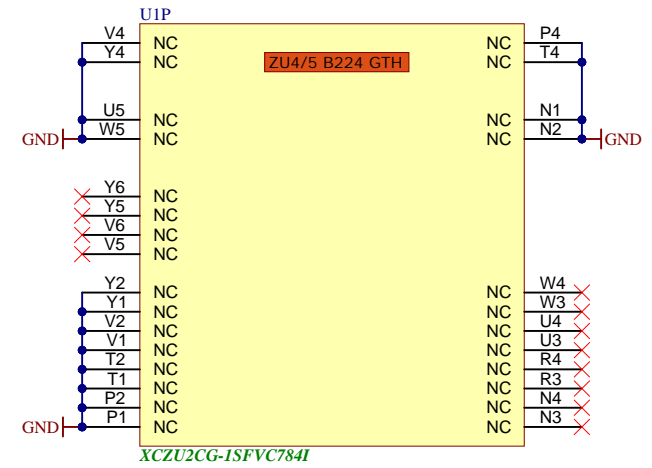
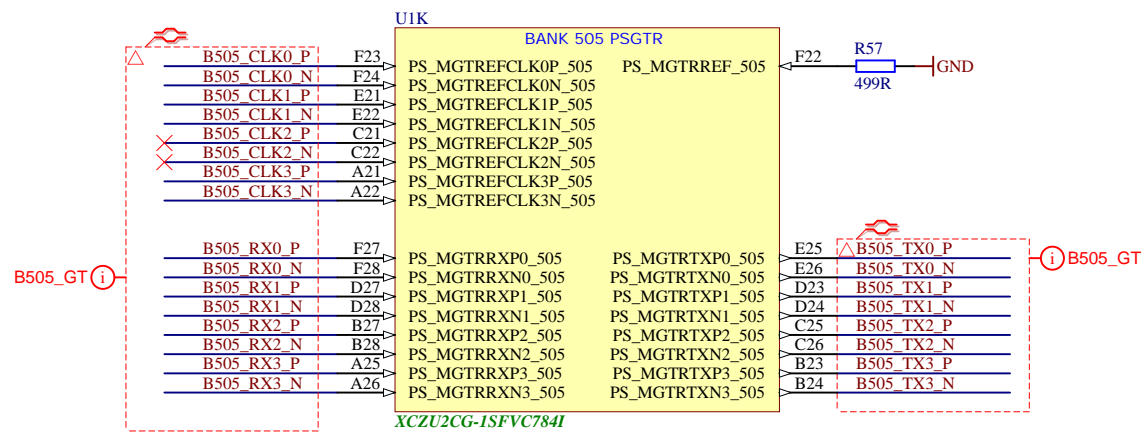

B

C

C

D

D

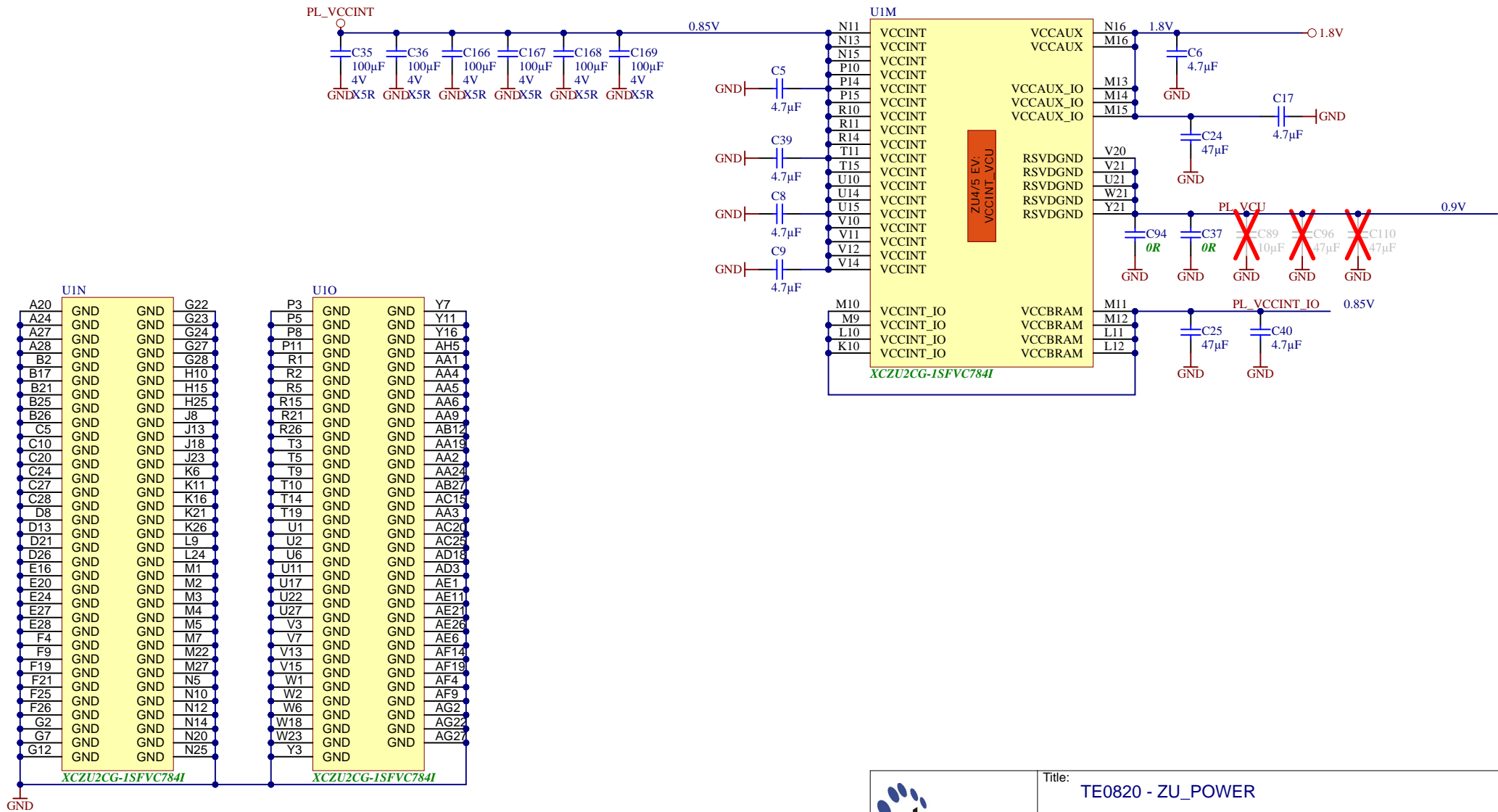
Title: TE0820 - PS_GT		
A4	Number: TE0820 2AI21FA	Rev. 04
Date: 2020-07-16	Copyright: Trenz Electronic GmbH / TT	Page 12 of 23
Filename: B_PS_GT.SchDoc		

1

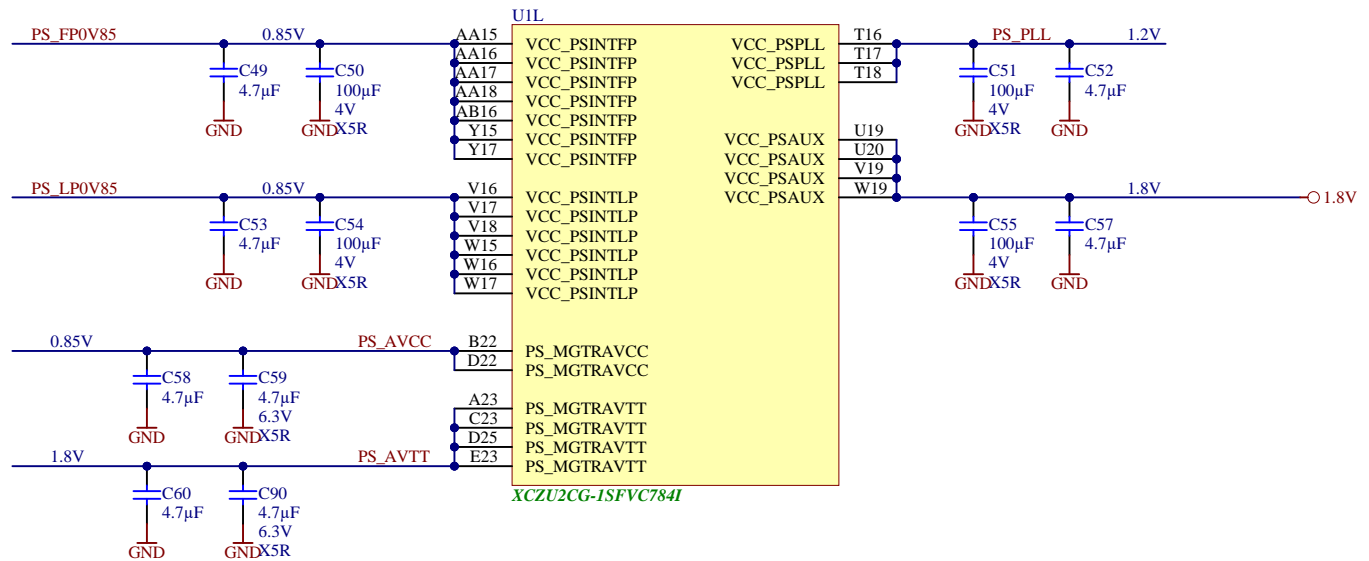
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3

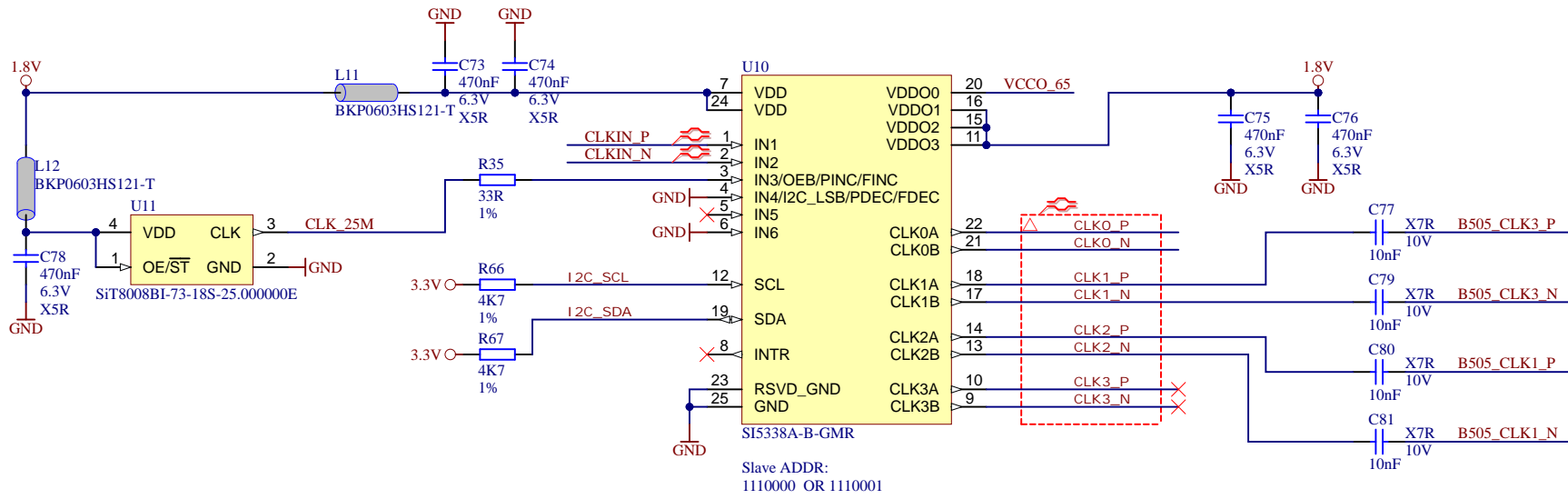
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Title: TE0820 - ZU_POWER		
A4	Number: TE0820 2AI21FA	Rev. 04
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Filename: ZU_POWER.SchDoc		



	Title: TE0820 - ZU_PS_POWER		
	A4	Number: TE0820 2AI21FA	Rev. 04
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	Filename: ZU_PS_POWER.SchDoc		



Slave ADDR:  
1110000 OR 1110001

		Title: TE0820 - CLK	
		A4	Number: TE0820 2AI21FA
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Page 15 of 23		Filename: CLK.SchDoc	

A

B

C

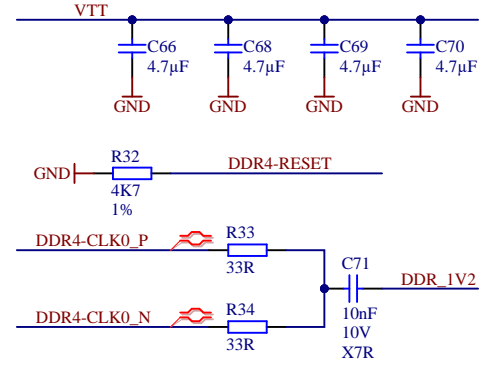
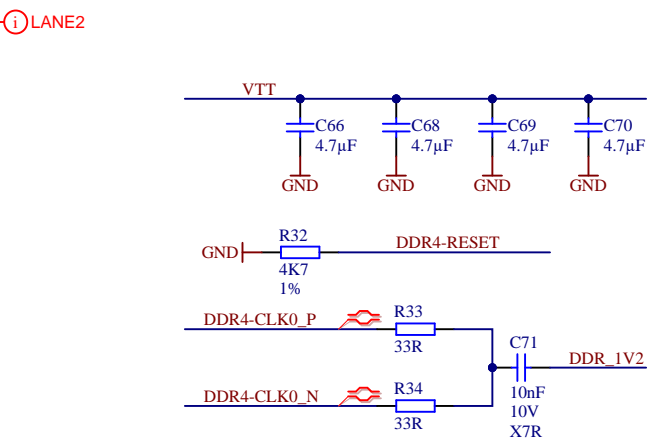
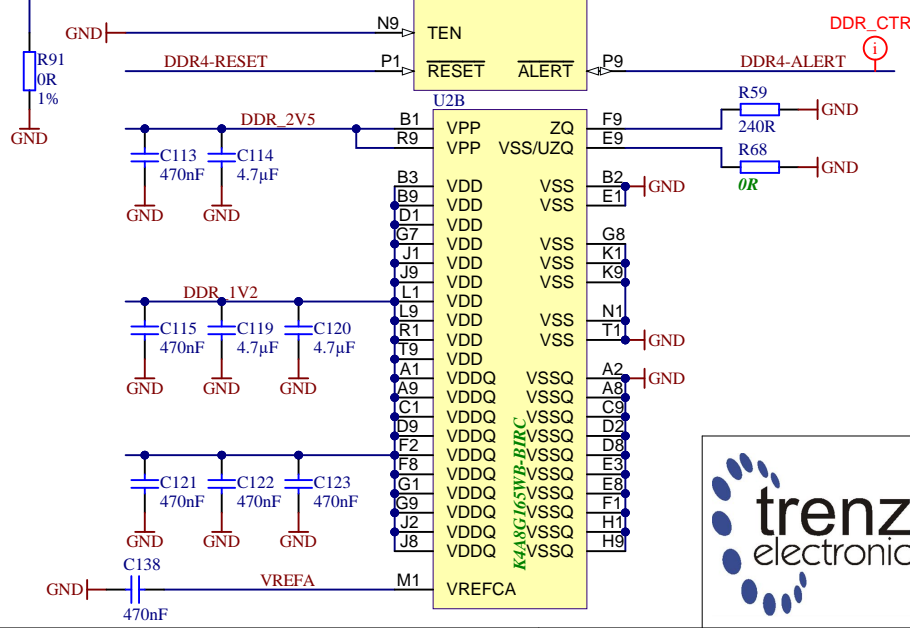
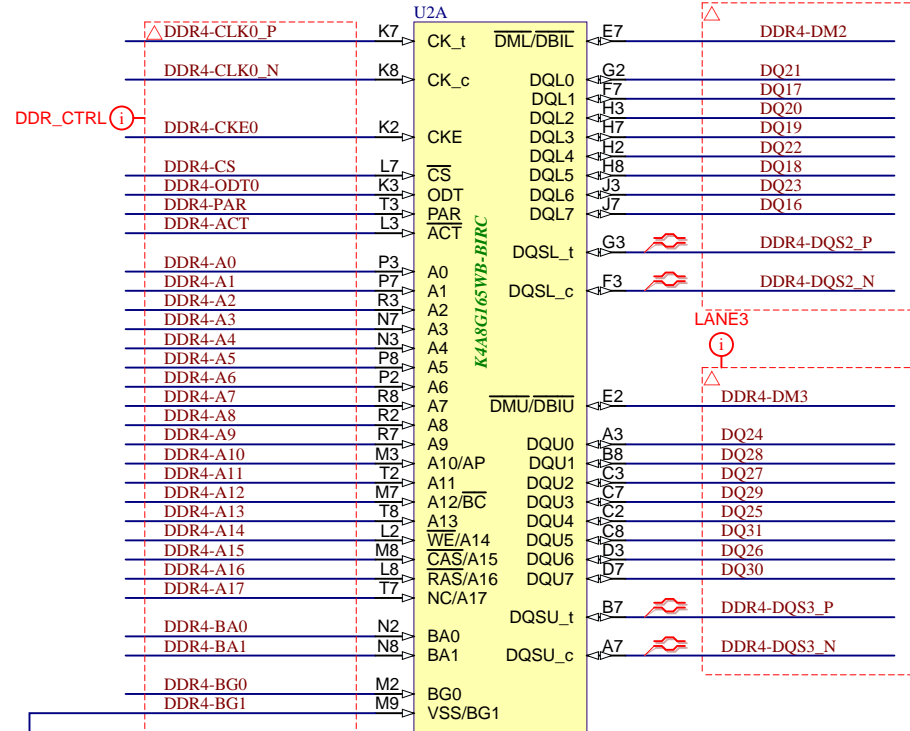
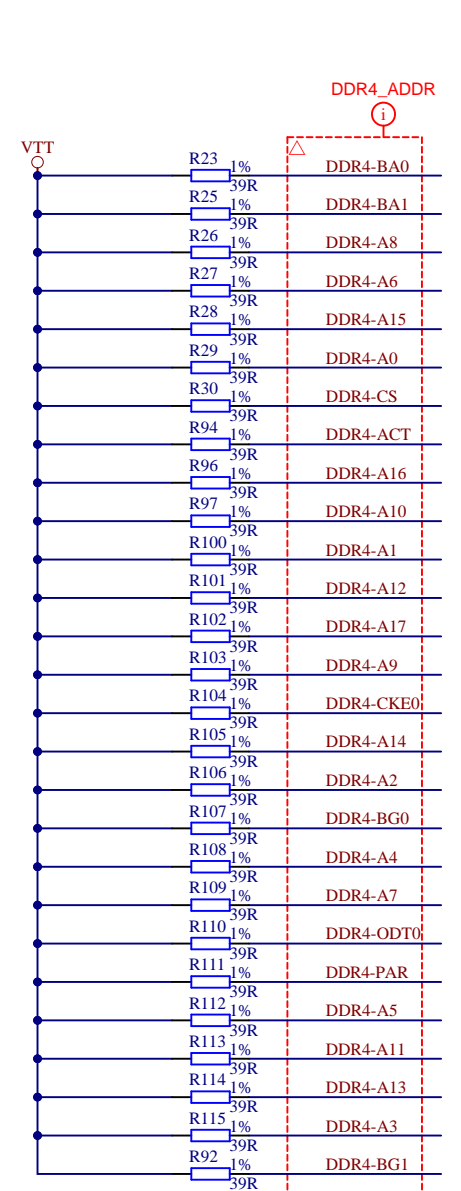
D

A

B

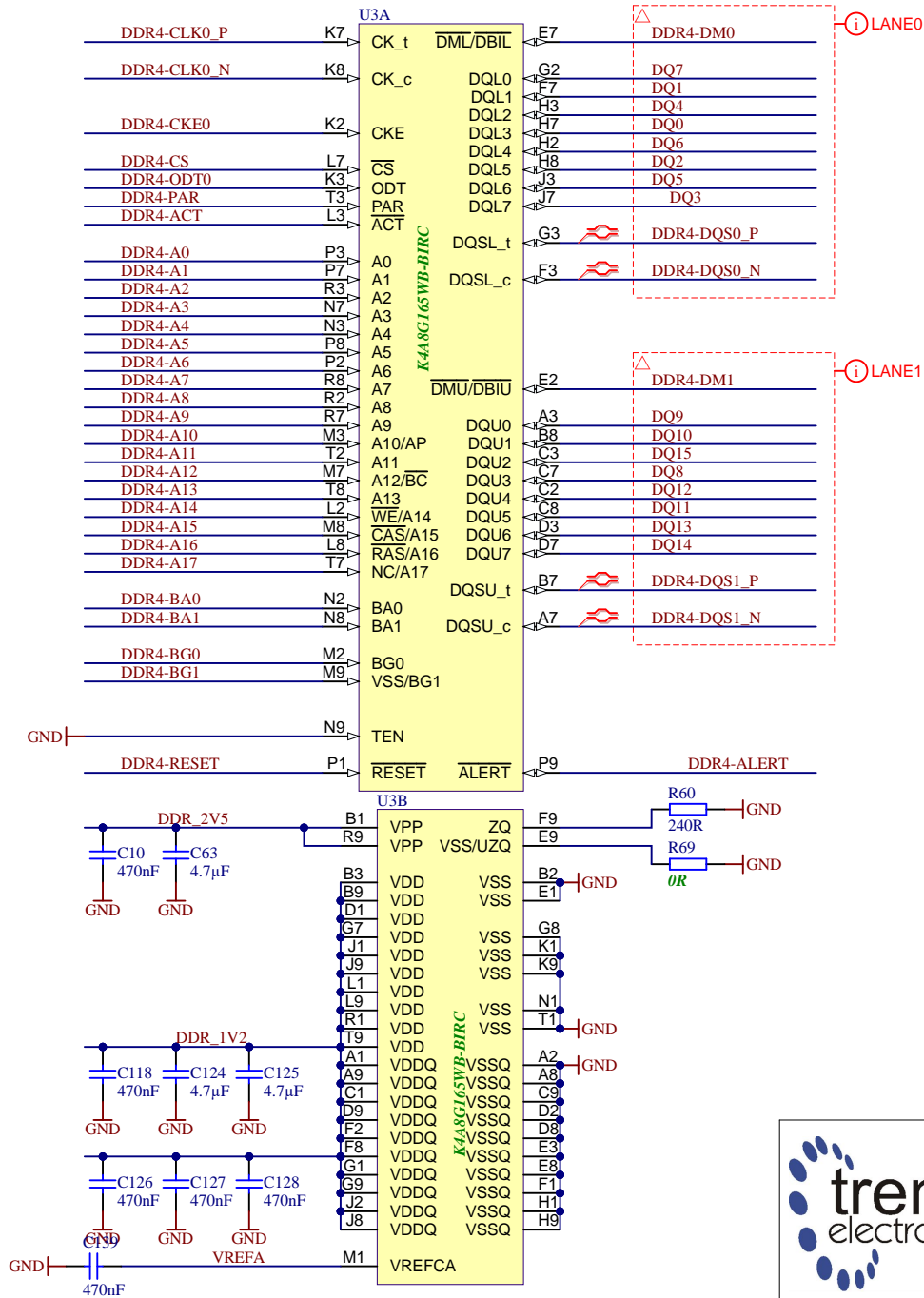

C

D



Title: TE0820 - DDR4_1_RAM		
A4	Number: TE0820 2AI21FA	Rev. 04
Date: 2020-07-16	Copyright: Trenz Electronic GmbH / TT	Page 16 of 23
Filename: DDR4-RAM.SchDoc		



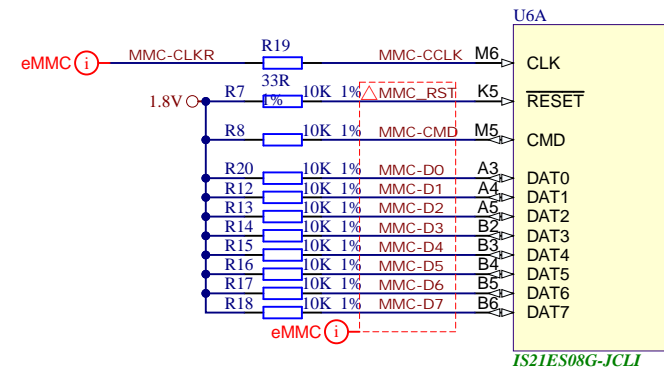



Title: TE0820 - DDR4_2_RAM		
A4	Number: TE0820 2AI21FA	Rev. 04
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Filename: DDR4-RAM_2.SchDoc		

U6D

A1	NC	NC	H2
A2	NC	NC	H3
A8	NC	NC	H12
A9	NC	NC	H13
A10	NC	NC	H14
A11	NC	NC	J1
A12	NC	NC	J2
A13	NC	NC	J3
A14	NC	NC	J12
B1	NC	NC	J13
B7	NC	NC	J14
B8	NC	NC	K1
B9	NC	NC	K2
B10	NC	NC	K3
B11	NC	NC	K12
B12	NC	NC	K13
B13	NC	NC	K14
B14	NC	NC	L1
C1	NC	NC	L2
C3	NC	NC	L3
C7	NC	NC	L12
C8	NC	NC	L13
C9	NC	NC	L14
C10	NC	NC	M4
C11	NC	NC	M2
C12	NC	NC	M3
C13	NC	NC	M7
C14	NC	NC	M8
D1	NC	NC	M9
D2	NC	NC	M10
D3	NC	NC	M11
D4	NC	NC	M12
D12	NC	NC	M13
D13	NC	NC	M14
D14	NC	NC	N1
E1	NC	NC	N3
E2	NC	NC	N6
E3	NC	NC	N7
E12	NC	NC	N8
E13	NC	NC	N9
E14	NC	NC	N10
F1	NC	NC	N11
F2	NC	NC	N12
F3	NC	NC	N13
F12	NC	NC	N14
F13	NC	NC	P1
F14	NC	NC	P2
G1	NC	NC	P8
G2	NC	NC	P9
G12	NC	NC	P11
G13	NC	NC	P12
G14	NC	NC	P13
H1	NC	NC	P14

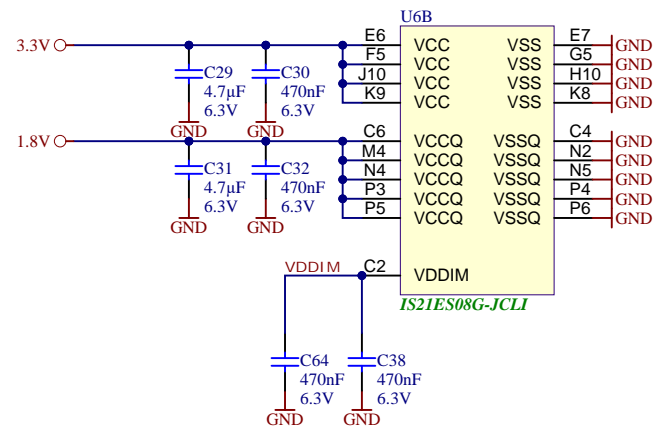
IS21ES08G-JCLI



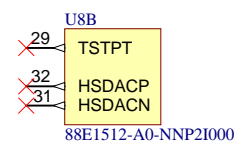
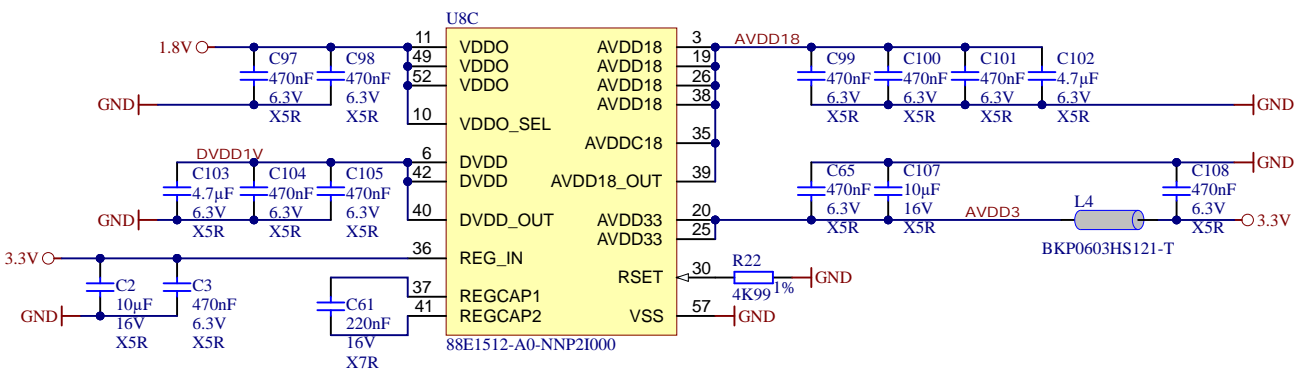
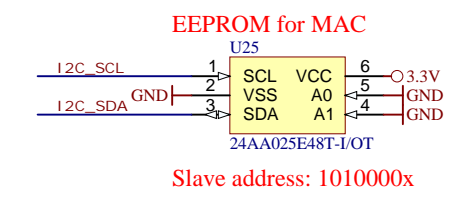
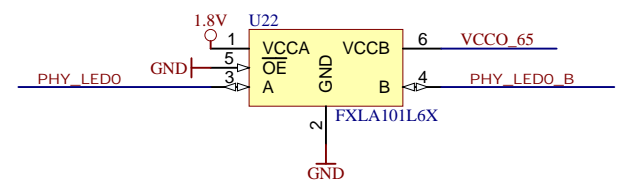
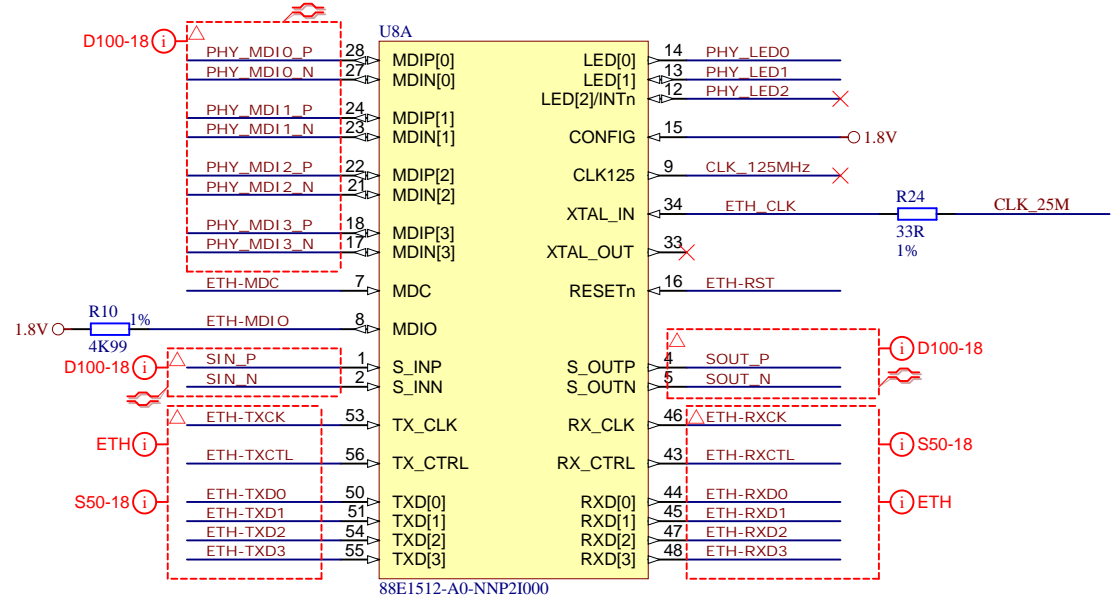
U6C

A6	RFU/VSS
A7	RFU
C5	RFU/NC
E5	RFU
E8	RFU
E9	RFU
E10	RFU
F10	RFU
G3	RFU/NC
G10	RFU
H5	RFU/DS
J5	RFU/VSS
K6	RFU
K7	RFU
K10	RFU
P7	RFU/NC
P10	RFU

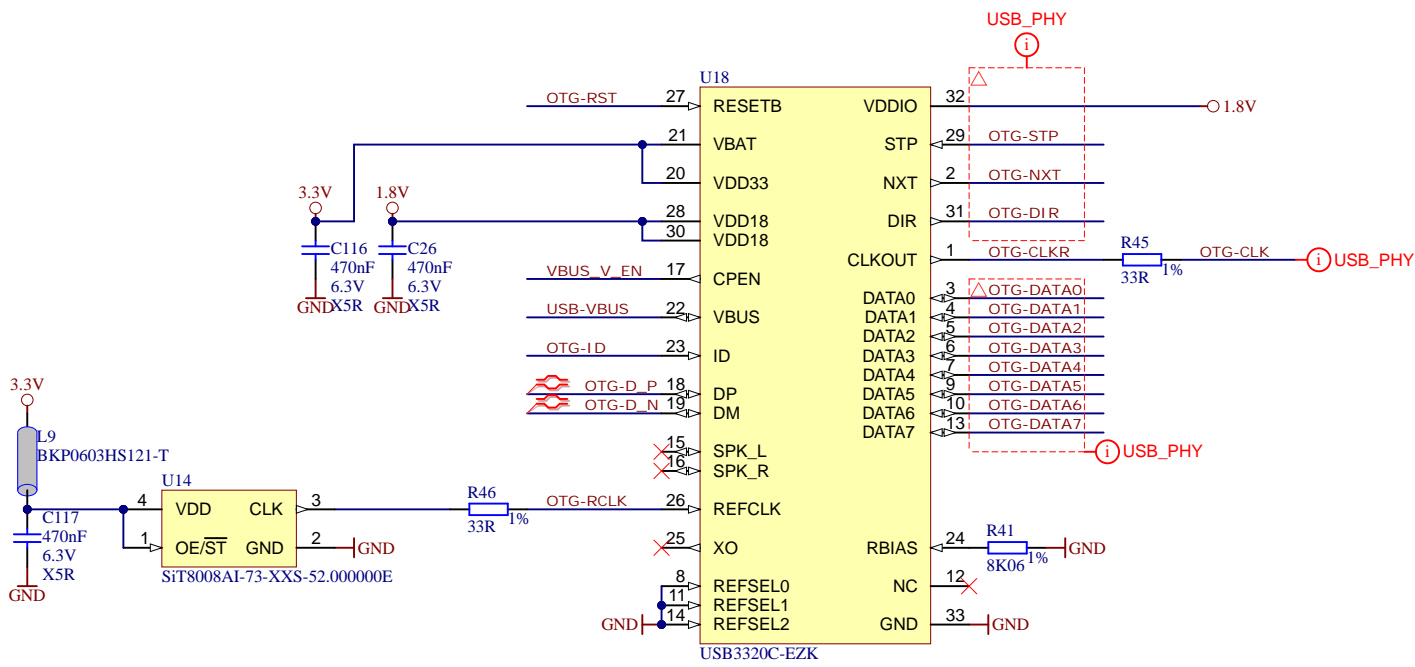
IS21ES08G-JCLI




Title: TE0820 - eMMC		
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Title: TE0820 - Eth_PHY		
A4	Number: TE0820 2AI21FA	Rev. 04
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Filename: ETH-PHY.SchDoc		



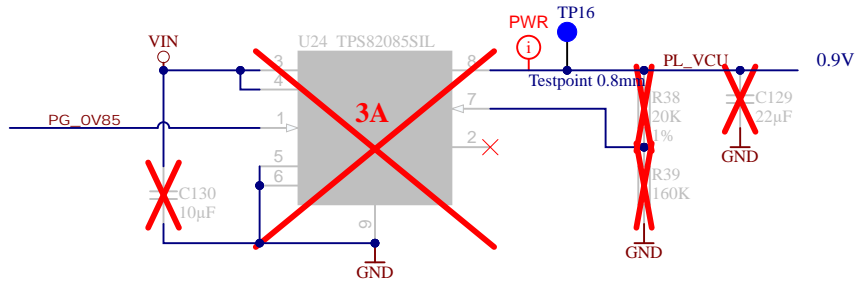
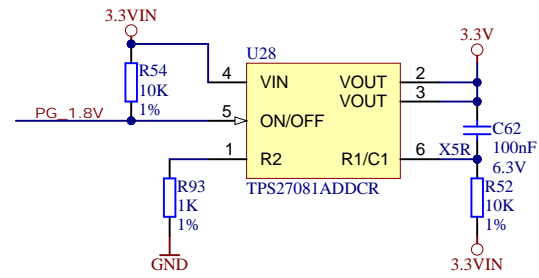
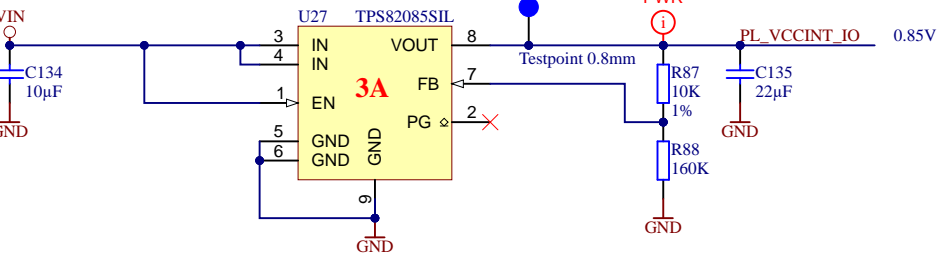
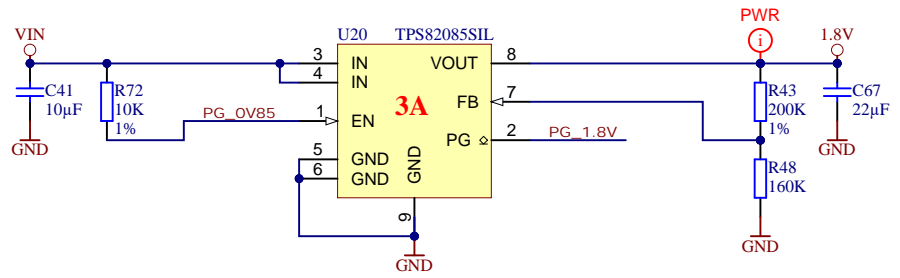
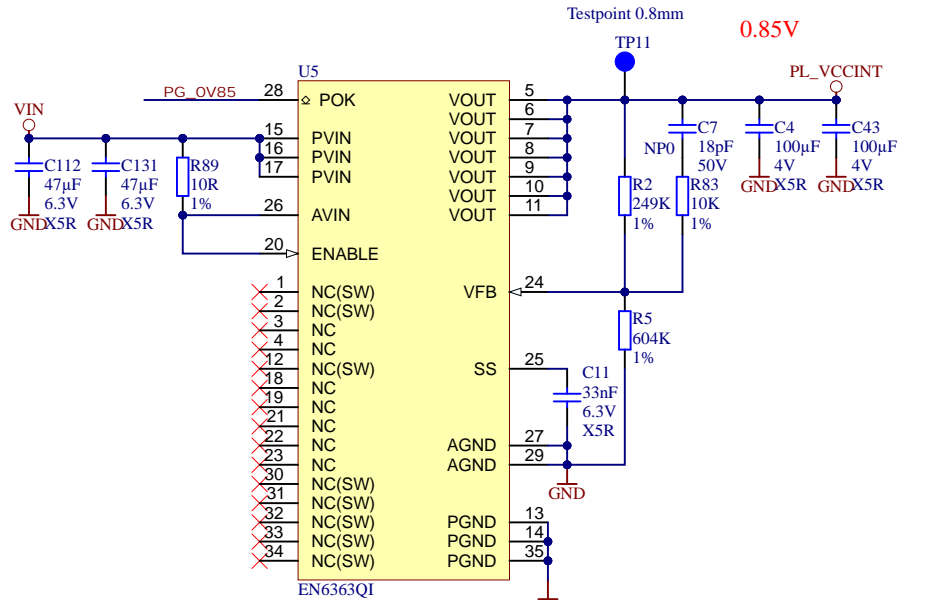
	Title: TE0820 - USB_PHY		
	A4	Number: TE0820 2AI21FA	Rev. 04
	Date: 2020-07-16	Copyright: 2015 Trenz Electronic GmbH	Page20 of 23
	Filename: USB-PHY.SchDoc		

A A

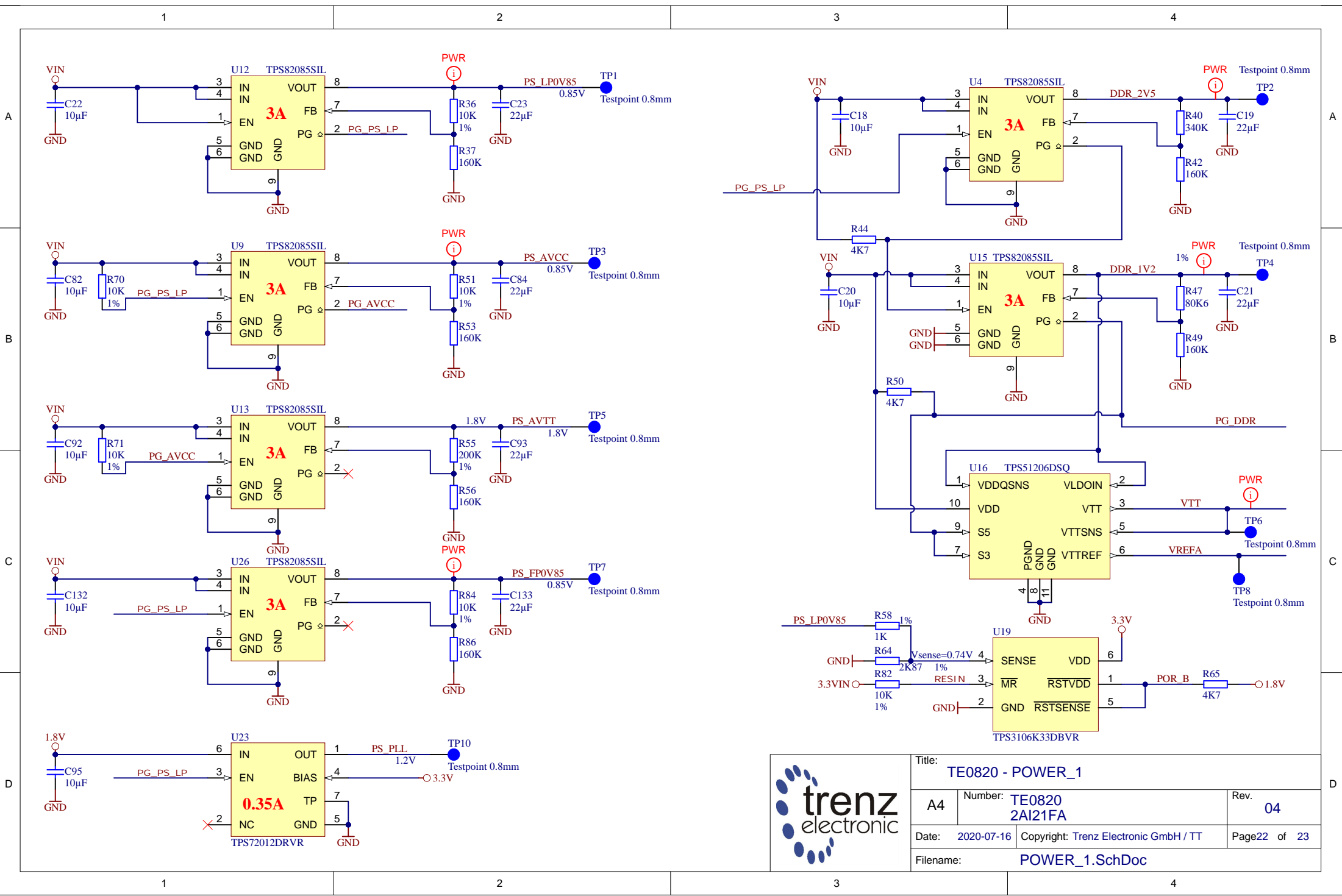
B B


C C

D D



Title: TE0820 - POWER		
A4	Number: TE0820 2AI21FA	Rev. 04
Date: 2020-07-16	Copyright: Trenz Electronic GmbH / TT	
Filename: POWER.SchDoc		Page21 of 23



			Title: TE0820 - POWER_1	
			A4	Number: TE0820 2AI21FA
Date: 2020-07-16		Copyright: Trenz Electronic GmbH / TT		Rev. 04
Filename: POWER_1.SchDoc		Page 22 of 23		

CHANGES REV01 to REV02

- 1) Added MAC EEPROM (slave address:)
- 2) LIB components update
- 3) Fixed SD Card connection
- 4) Fixed sense connection from DCDC
- 5) Made correct power connection for VCU (removed DCDC, added resistors and caps like as Xilinx recommended)
- 6) Added resistors for variants (ZU+ with/without VCU)
- 7) Added termination resistors (240R) to VRP pins fro all HP-banks

CHANGES REV02 to REV03


- 1) Fixed VCU connection: add additional DCDC (0.9V)
- 2) LIB components update
- 3) Change package 1K resistors (0402 -> 0201)
- 4) Added LEDs (1x user LED, 1x LED for ERR\_STATUS, 1xLED for ERR\_OUT)
- 5) Change obsolete 2xSPI Flash (256MBit) -> 2xSPI Flash (512MBit)
- 6) Added additional DCDCs (PL\_VCCINT\_IO, PS\_FP0V85)
- 7) Changed DCDC (U5) 6A (optional 4A)

CHANGES REV03 to REV04

- VT: 1) Fixed DDR4 connection (BG1), support B-die DDR4 Industrial grade chips
- VT: 2) Added R93, changed value C62, change obsolete U28
- VT: 3) Added R89 (10R)
- VT: 4) Added additional caps 4.7uF to PS\_AVTT/PS\_AVCC (Xilinx doc UG583)
- VT: 5) Changed R51 20k ->10K (PS\_AVCC = 0.85V, Xilinx doc DS925 v1.17)
- VT: 6) Fixed DDR4 connection (Alert)
- VT: 7) Added 3.3V signal to CPLD
- VT: 8) Added testpoints
- VT: 9) LIB components update

Revision 04a (29.10.2020):

- 1. VY: added block diagram, updated module pictures

		Title: <b>TE0820 - Revision Changes</b>		
		A4	Number: <b>TE0820 2AI21FA</b>	Rev. <b>04</b>
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		Filename: <b>Revision Changes.SchDoc</b>		