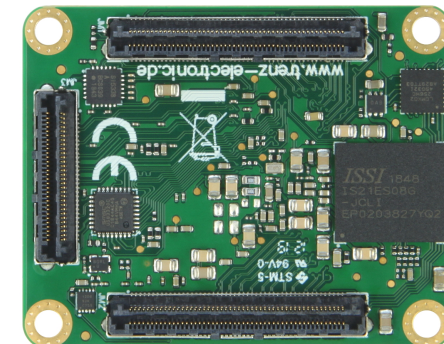




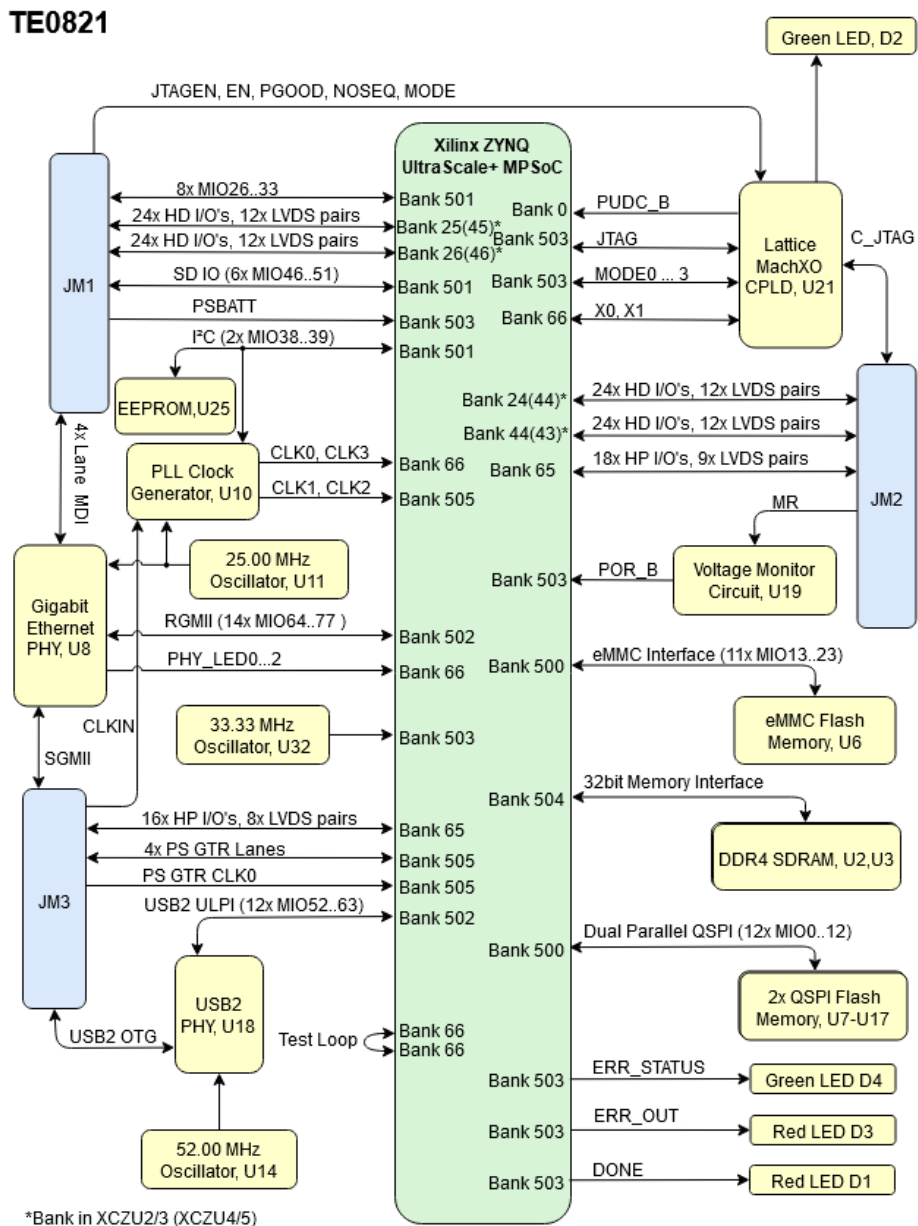
Regarding the usage of our schematics and alike documentation for Trenz module TE0821.

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. TE0821 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: Module TE0821		
	A4	Number: TE0821 2AE31KA	Rev. 01
	Date: 14.08.2020	Copyright: Trenz Electronic GmbH / TT	Page 1 of 24
	Filename: Legal Notices Modules.SchDoc		

TE0821



*Bank in XCZU2/3 (XCZU4/5)



Title:	Module TE0821 - System Overview
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A4	Number: TE0821 2AE31KA	Rev. 01
Date: 18.01.2022	Copyright: 2015 Trenz Electronic GmbH	Page 2 of 24
Filename: TE0821-Overview.SchDoc		

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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_Overview
TE0821-Overview.SchDoc

U_LN
Legal Notices Modules.SchDoc

U_B2B-Connectors
B2B-Connectors.SchDoc

U_B2B-Connectors_2
B2B-Connectors_2.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

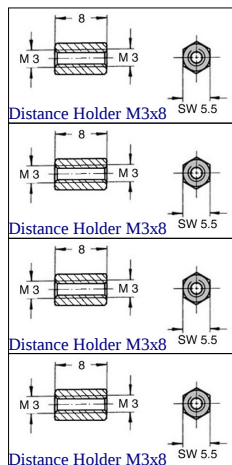
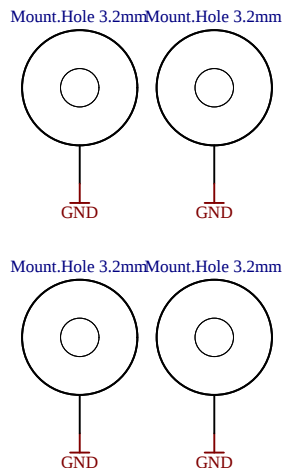
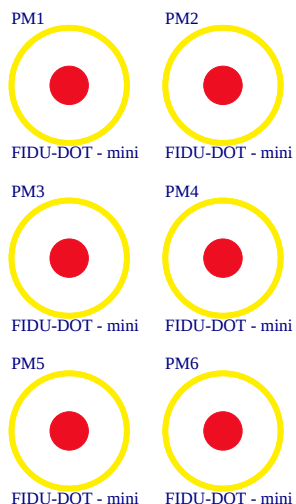
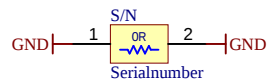
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DDR4-RAM_2.SchDoc

U_DDR4-RAM
DDR4-RAM.SchDoc

U_POWER
POWER.SchDoc

U_POWER_1
POWER_1.SchDoc

U_Revision_changes
Revision Changes.SchDoc



Special notes:

Component RC0201FR-0710KL removed



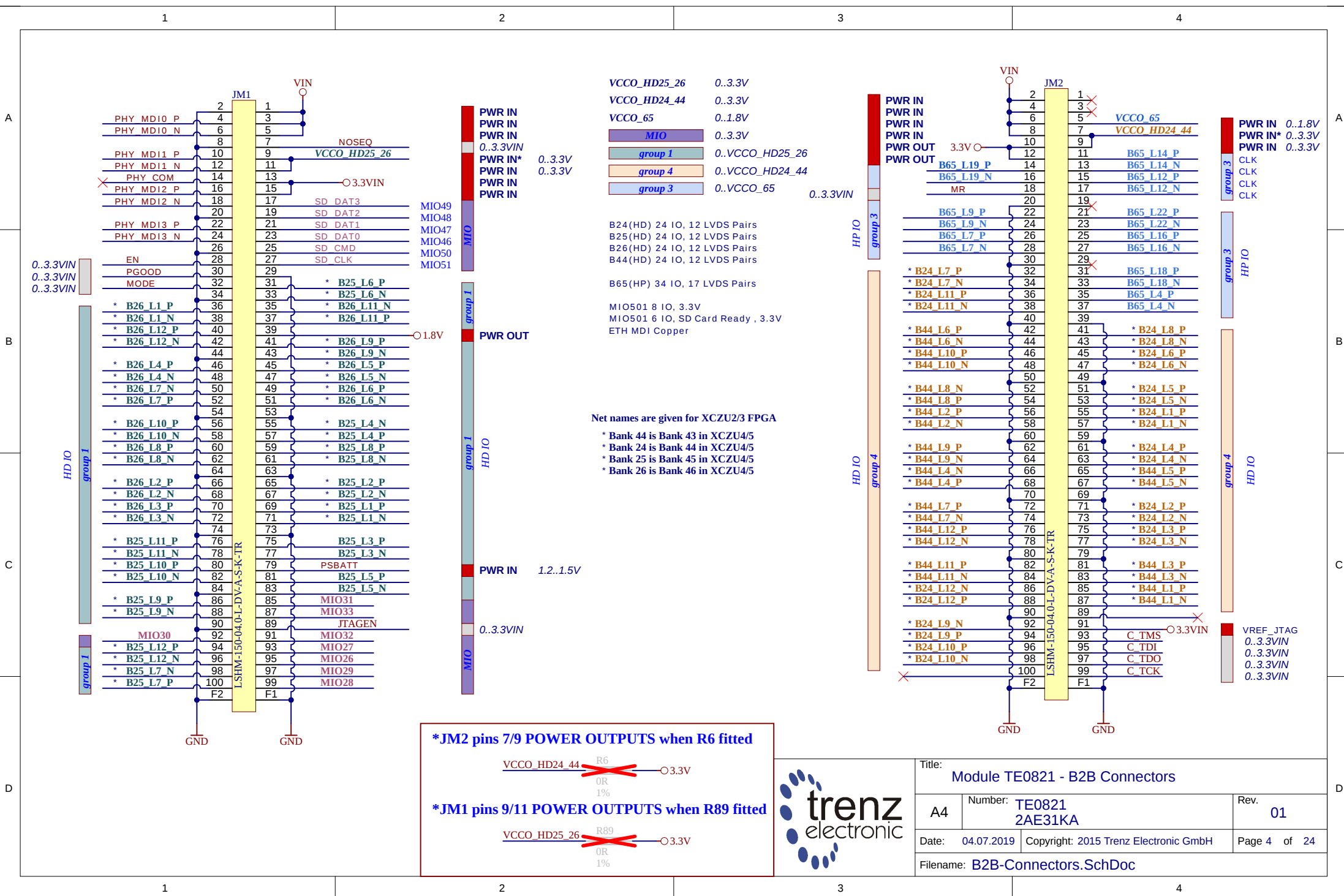
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A4	Number: TE0821 2AE31KA	Rev. 01
Date: 20.02.2019	Copyright: 2015 Trenz Electronic GmbH	Page 3 of 24
Filename: TE0821.SchDoc		

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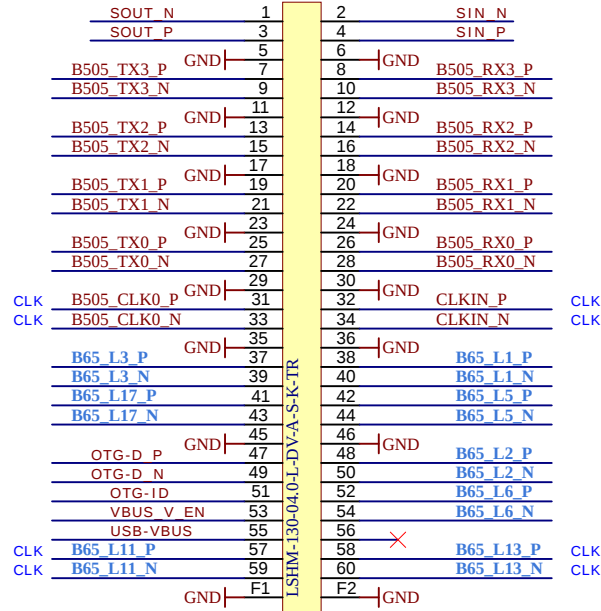
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USB OTG
ETH SGMII
PS_GTR 4 Lanes
PS_GTR CLK IN
PLL CLK IN

JM3





Title: Module TE0821 - B2B Connectors		
A4	Number: TE0821 2AE31KA	Rev. 01
Date: 20.02.2019	Copyright: 2015 Trenz Electronic GmbH	Page 5 of 24
Filename: B2B-Connectors_2.SchDoc		

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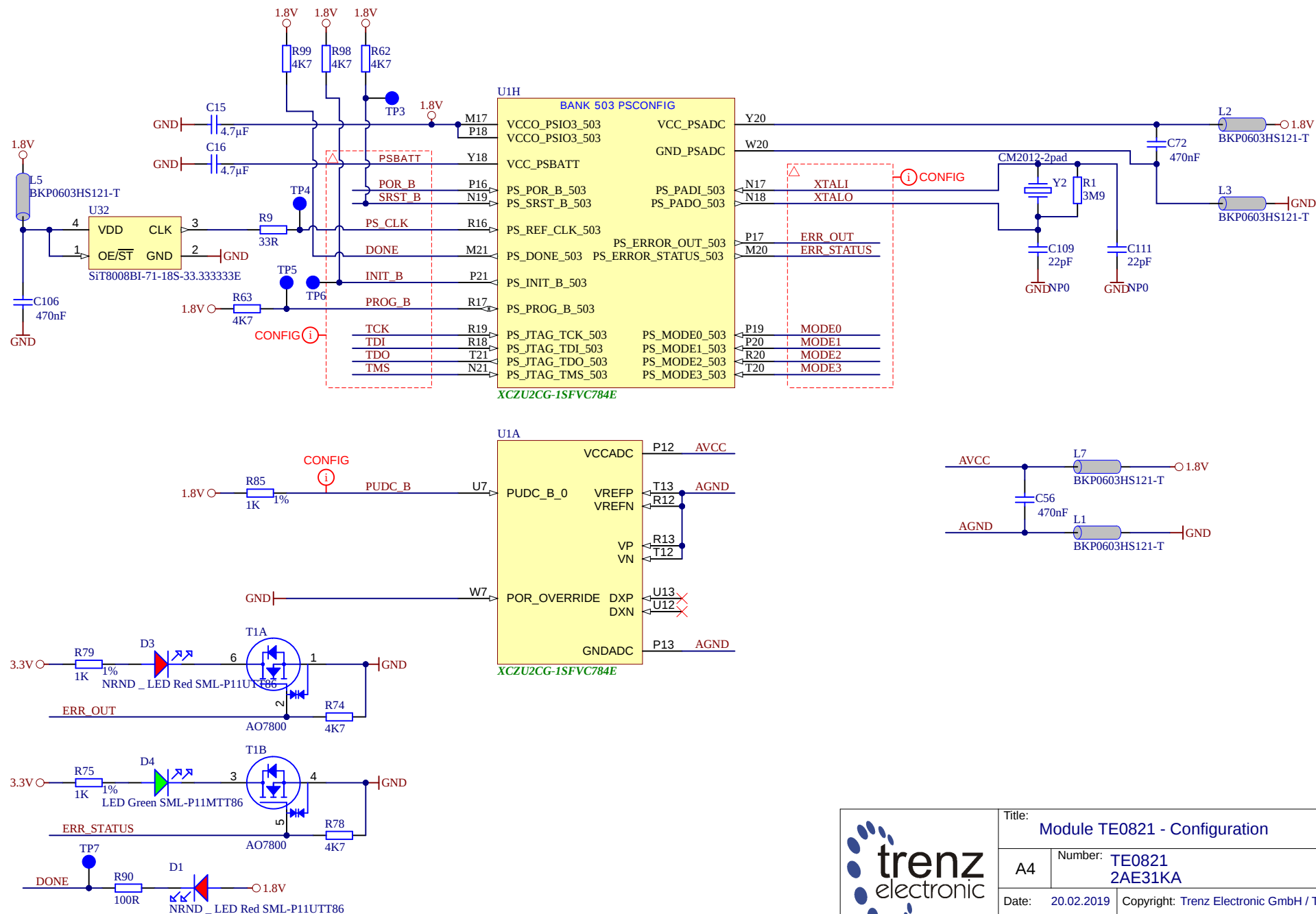
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Title: Module TE0821 - Configuration		
A4	Number: TE0821 2AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 6 of 24
Filename: CONFIG.SchDoc		

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U1C

BANK 26 HD (ZU4/5 BANK 46 HD)

IO_L1P_AD11P_26	IO_L7P_HDGC_AD5P_26
IO_L1N_AD11N_26	IO_L7N_HDGC_AD5N_26
IO_L2P_AD10P_26	IO_L8P_HDGC_AD4P_26
IO_L2N_AD10N_26	IO_L8N_HDGC_AD4N_26
IO_L3P_AD9P_26	IO_L9P_AD3P_26
IO_L3N_AD9N_26	IO_L9N_AD3N_26
IO_L4P_AD8P_26	IO_L10P_AD2P_26
IO_L4N_AD8N_26	IO_L10N_AD2N_26
IO_L5P_HDGC_AD7P_26	IO_L11P_AD1P_26
IO_L5N_HDGC_AD7N_26	IO_L11N_AD1N_26
IO_L6P_HDGC_AD6P_26	IO_L12P_AD0P_26
IO_L6N_HDGC_AD6N_26	IO_L12N_AD0N_26

B26 L7 P	B26 L7 N
B26 L8 P	B26 L8 N
B26 L9 P	B26 L9 N
B26 L10 P	B26 L10 N
B26 L11 P	B26 L11 N
B26 L12 P	B26 L12 N

BANK 44 HD (ZU4/5 BANK 43 HD)

IO_L1P_AD11P_44	IO_L7P_HDGC_AD5P_44
IO_L1N_AD11N_44	IO_L7N_HDGC_AD5N_44
IO_L2P_AD10P_44	IO_L8P_HDGC_AD4P_44
IO_L2N_AD10N_44	IO_L8N_HDGC_AD4N_44
IO_L3P_AD9P_44	IO_L9P_AD3P_44
IO_L3N_AD9N_44	IO_L9N_AD3N_44
IO_L4P_AD8P_44	IO_L10P_AD2P_44
IO_L4N_AD8N_44	IO_L10N_AD2N_44
IO_L5P_HDGC_AD7P_44	IO_L11P_AD1P_44
IO_L5N_HDGC_AD7N_44	IO_L11N_AD1N_44
IO_L6P_HDGC_AD6P_44	IO_L12P_AD0P_44
IO_L6N_HDGC_AD6N_44	IO_L12N_AD0N_44

B44 L7 P	B44 L7 N
B44 L8 P	B44 L8 N
B44 L9 P	B44 L9 N
B44 L10 P	B44 L10 N
B44 L11 P	B44 L11 N
B44 L12 P	B44 L12 N

U1B

BANK 24 HD (ZU4/5 BANK 44 HD)

IO_L1P_AD15P_24	IO_L7P_HDGC_24
IO_L1N_AD15N_24	IO_L7N_HDGC_24
IO_L2P_AD14P_24	IO_L8P_HDGC_24
IO_L2N_AD14N_24	IO_L8N_HDGC_24
IO_L3P_AD13P_24	IO_L9P_AD11P_24
IO_L3N_AD13N_24	IO_L9N_AD11N_24
IO_L4P_AD12P_24	IO_L10P_AD10P_24
IO_L4N_AD12N_24	IO_L10N_AD10N_24
IO_L5P_HDGC_24	IO_L11P_AD9P_24
IO_L5N_HDGC_24	IO_L11N_AD9N_24
IO_L6P_HDGC_24	IO_L12P_AD8P_24
IO_L6N_HDGC_24	IO_L12N_AD8N_24

B24 L7 P	B24 L7 N
B24 L8 P	B24 L8 N
B24 L9 P	B24 L9 N
B24 L10 P	B24 L10 N
B24 L11 P	B24 L11 N
B24 L12 P	B24 L12 N

BANK 25 HD (ZU4/5 BANK 45 HD)

IO_L1P_AD15P_25	IO_L7P_HDGC_25
IO_L1N_AD15N_25	IO_L7N_HDGC_25
IO_L2P_AD14P_25	IO_L8P_HDGC_25
IO_L2N_AD14N_25	IO_L8N_HDGC_25
IO_L3P_AD13P_25	IO_L9P_AD11P_25
IO_L3N_AD13N_25	IO_L9N_AD11N_25
IO_L4P_AD12P_25	IO_L10P_AD10P_25
IO_L4N_AD12N_25	IO_L10N_AD10N_25
IO_L5P_HDGC_25	IO_L11P_AD9P_25
IO_L5N_HDGC_25	IO_L11N_AD9N_25
IO_L6P_HDGC_25	IO_L12P_AD8P_25
IO_L6N_HDGC_25	IO_L12N_AD8N_25

B25 L7 P	B25 L7 N
B25 L8 P	B25 L8 N
B25 L9 P	B25 L9 N
B25 L10 P	B25 L10 N
B25 L11 P	B25 L11 N
B25 L12 P	B25 L12 N

XCZU2CG-1SFVC784E



Title:

Module TE0821 - HD Banks

A4

Number:

TE0821
2AE31KA

Rev.

01

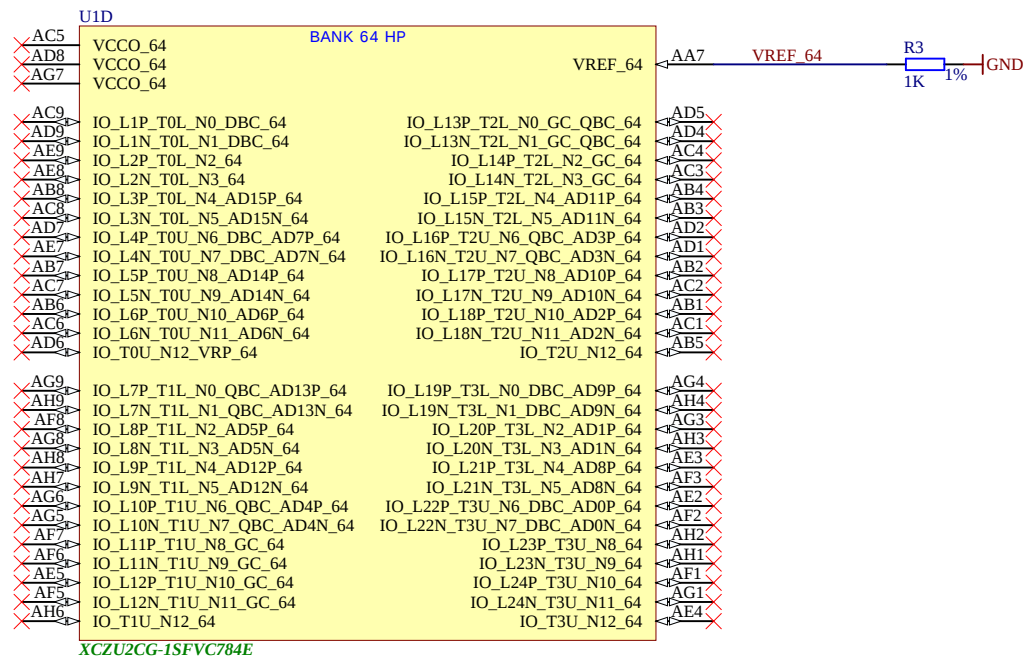
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20.02.2019

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Page 7 of 24

Filename: B_HD.SchDoc



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Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 8 of 24
Filename: B64.SchDoc		

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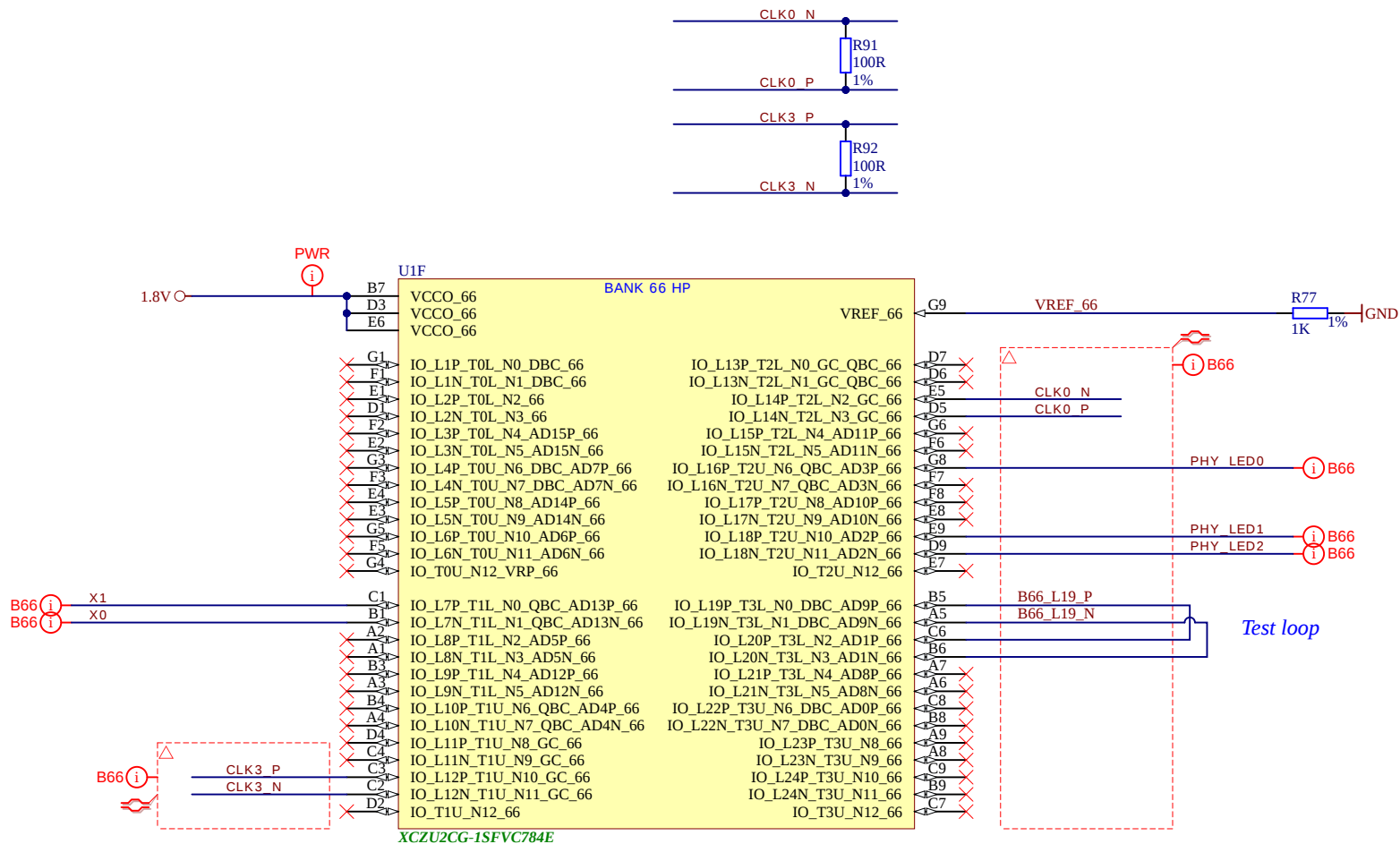
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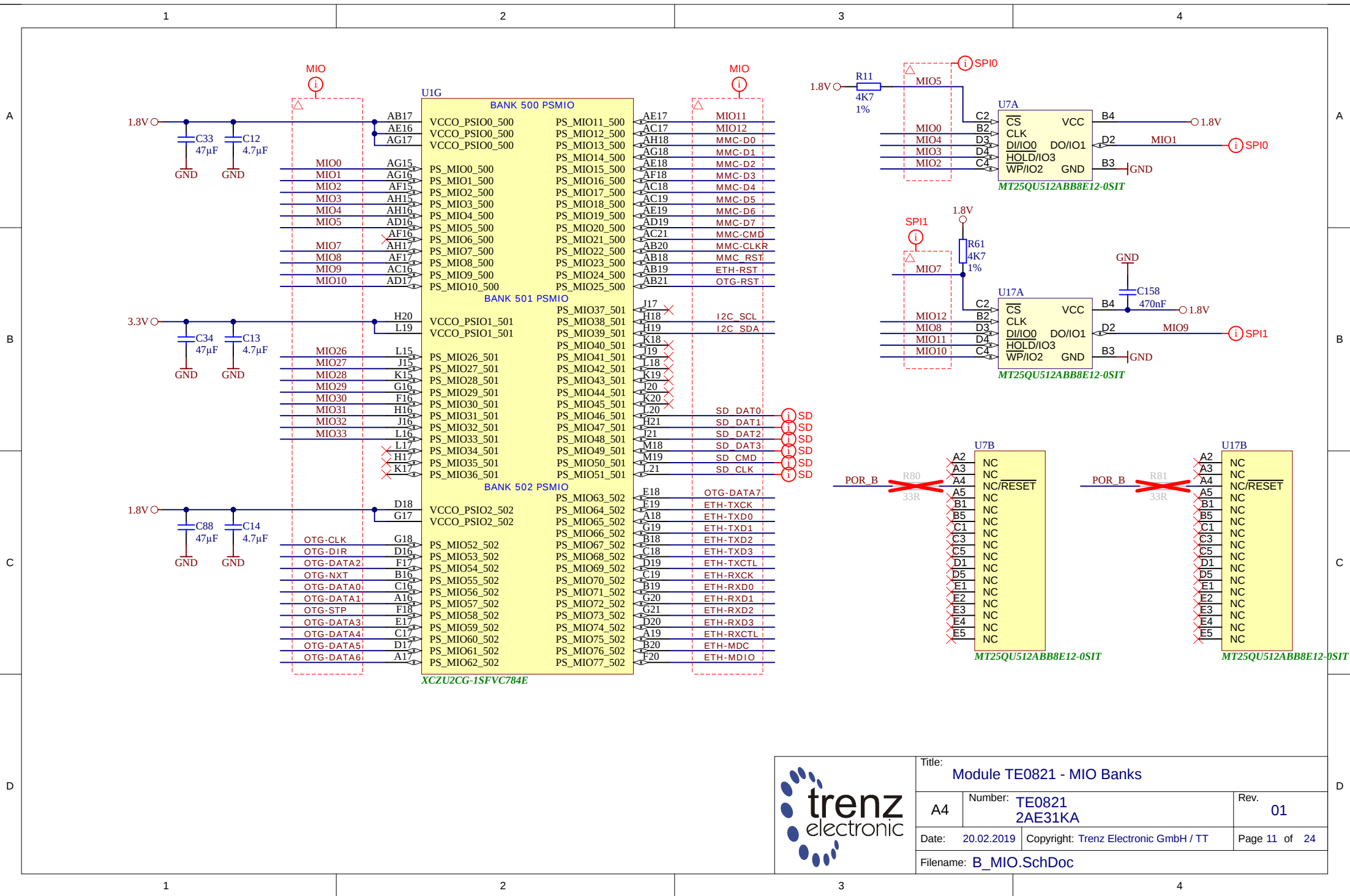
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A4	Number: TE0821 2AE31KA		Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT		Page 10 of 24
Filename: B66.SchDoc			

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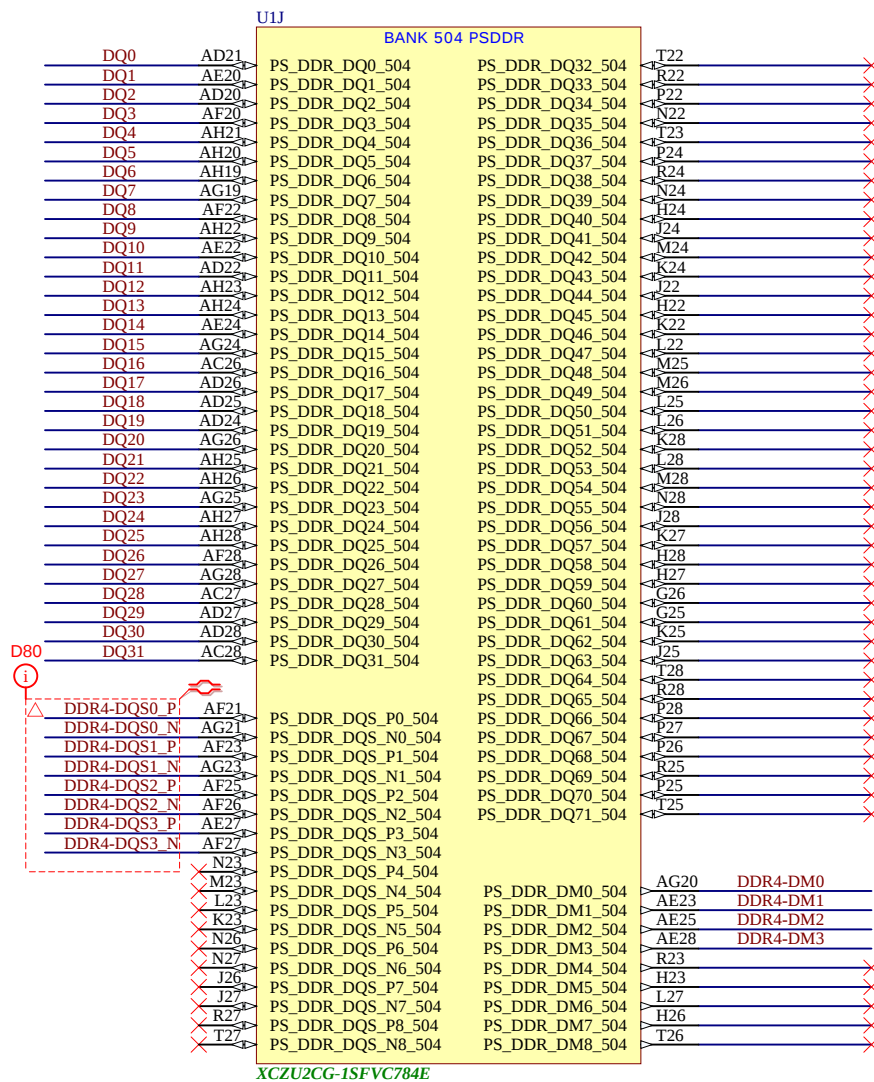
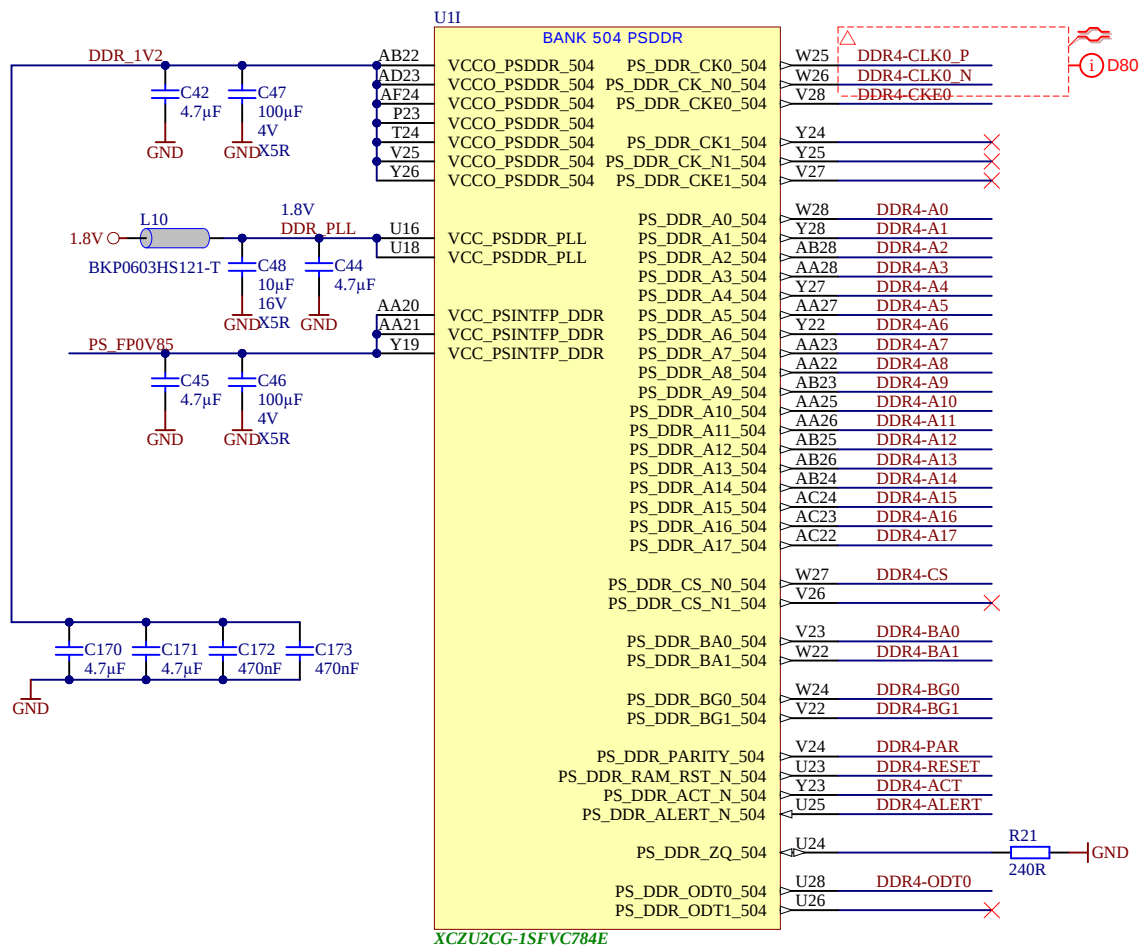
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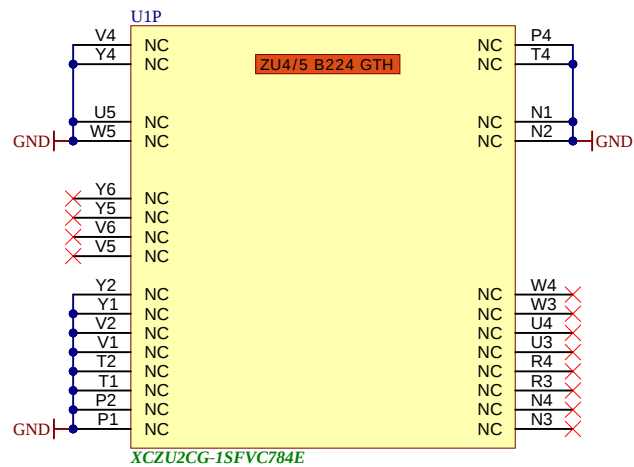
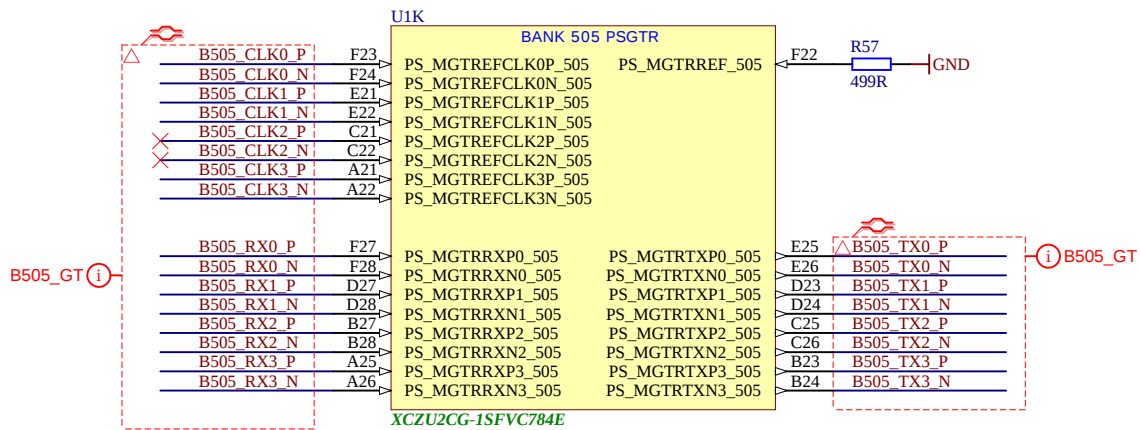
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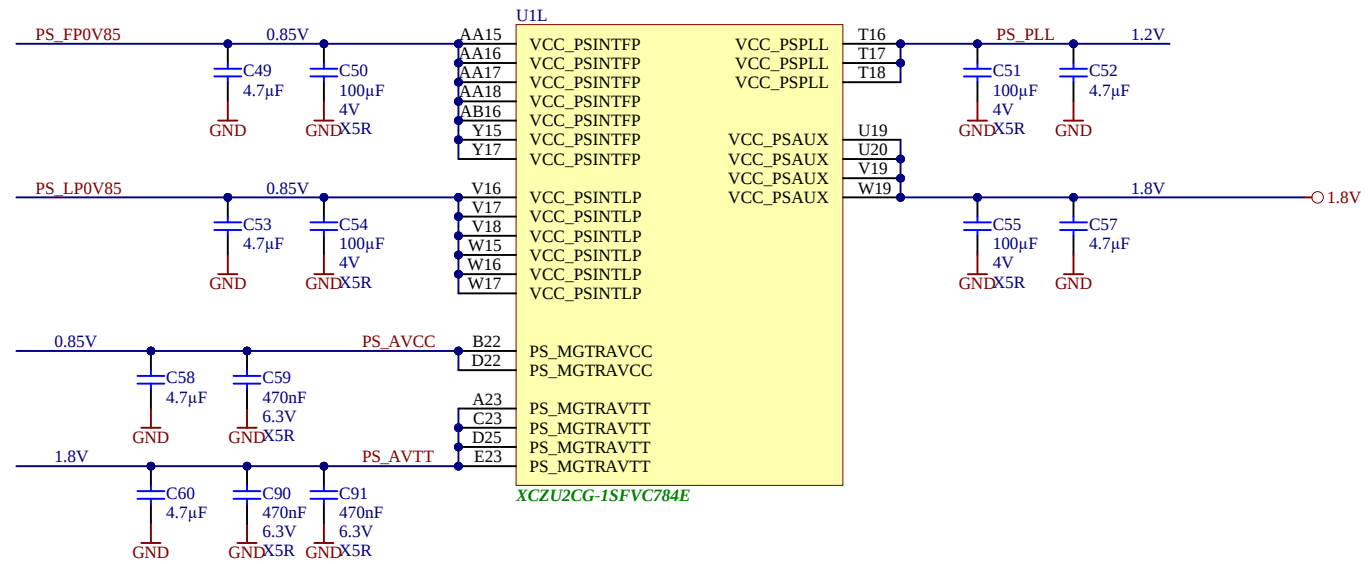
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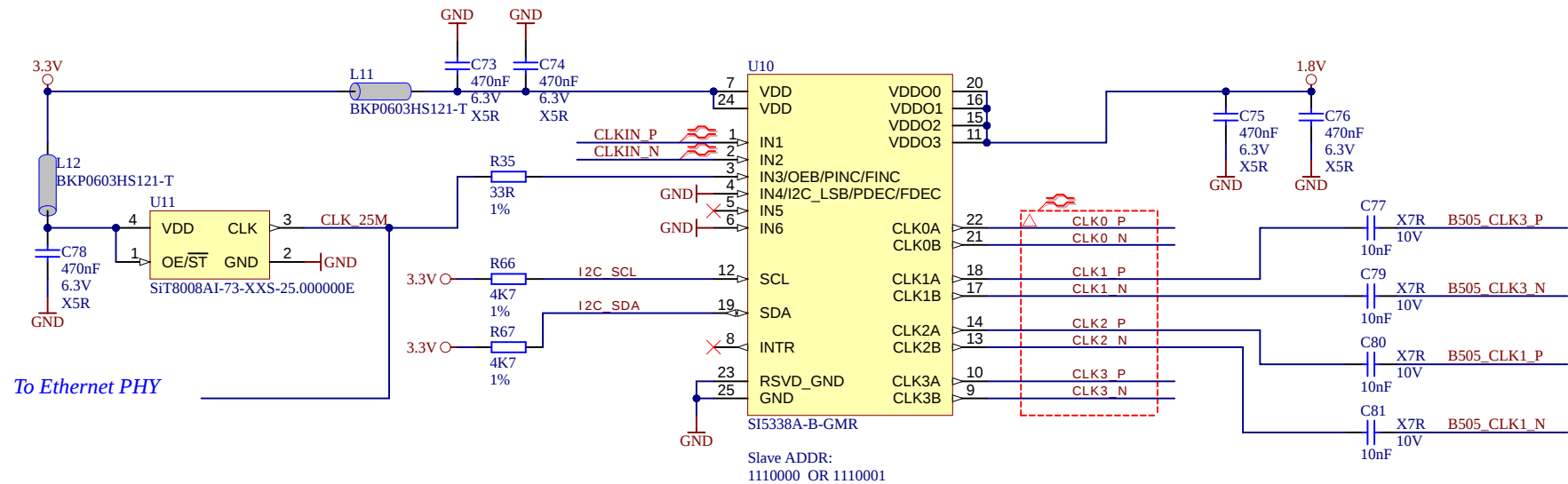
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A4	Number: TE0821 2AE31KA		Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT		Page 12 of 24
Filename: PS_DDR.SchDoc			



		Title: Module TE0821 - PS MGT	
		A4 Number: TE0821 2AE31KA	Rev. 01
Date: 20.02.2019		Copyright: Trenz Electronic GmbH / TT	
Filename: B_PS_GT.SchDoc		Page 13 of 24	



		Title: Module TE0821 - ZU PS POWER	
		Number: TE0821 2AE31KA	Rev. 01
Date:	20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 15 of 24
Filename: ZU_PS_POWER.SchDoc			



		Title: Module TE0821 - CLK	
		A4 Number: TE0821 2AE31KA	Rev. 01
Date: 20.02.2019		Copyright: 2015 Trenz Electronic GmbH	
Filename: CLK.SchDoc		Page 16 of 24	

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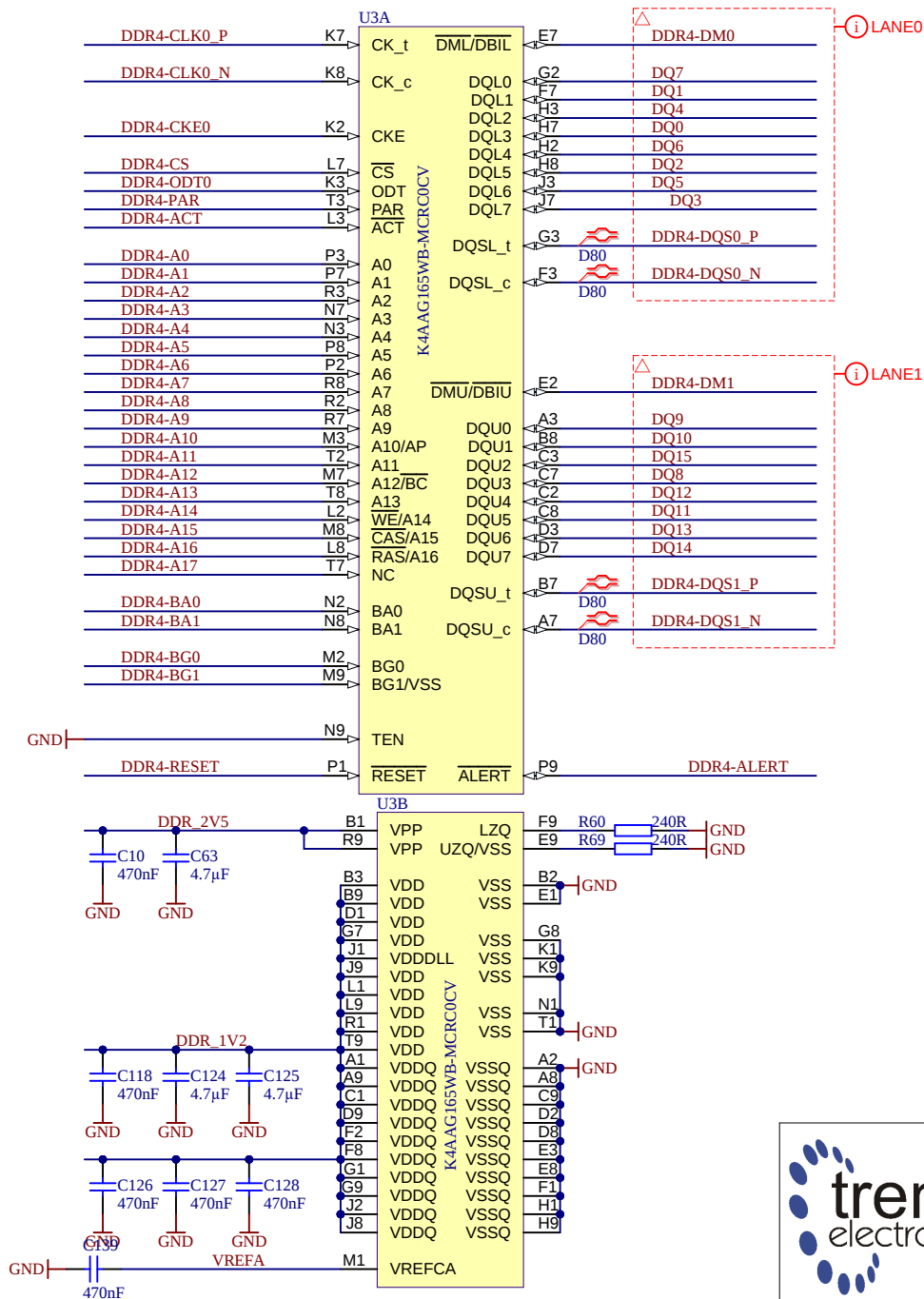
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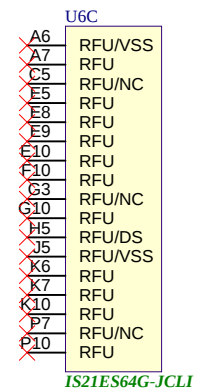
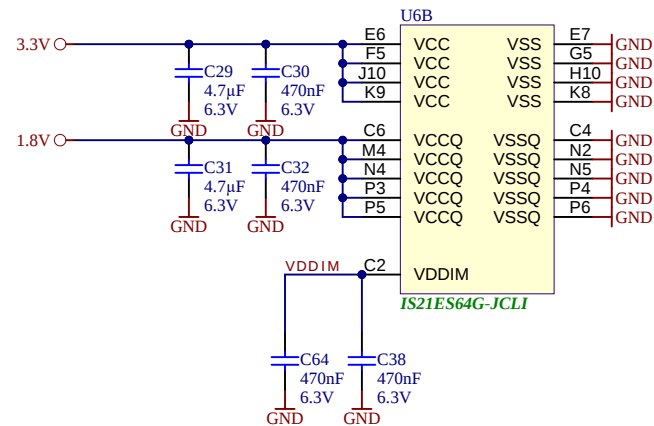
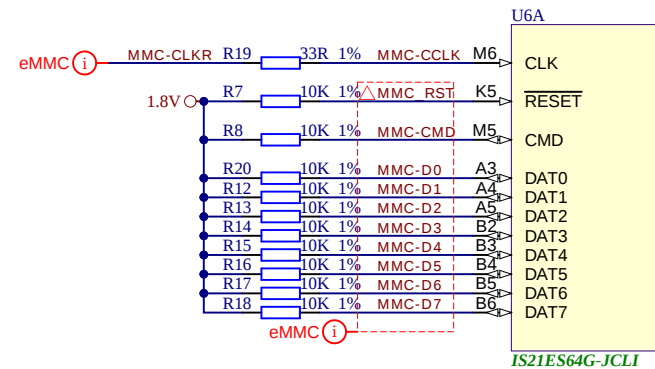
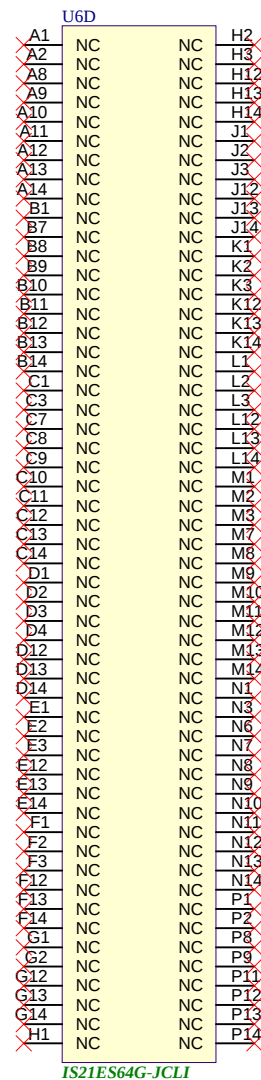
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Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT		Page 18 of 24
Filename: DDR4-RAM_2.SchDoc			



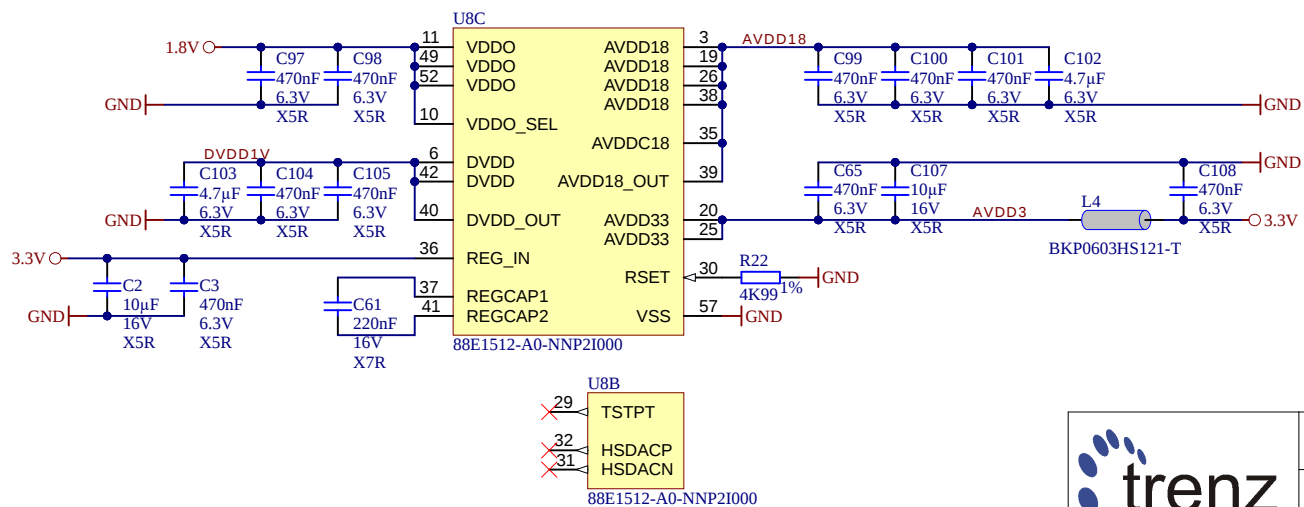
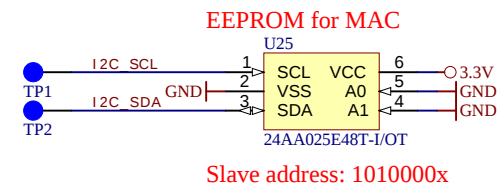
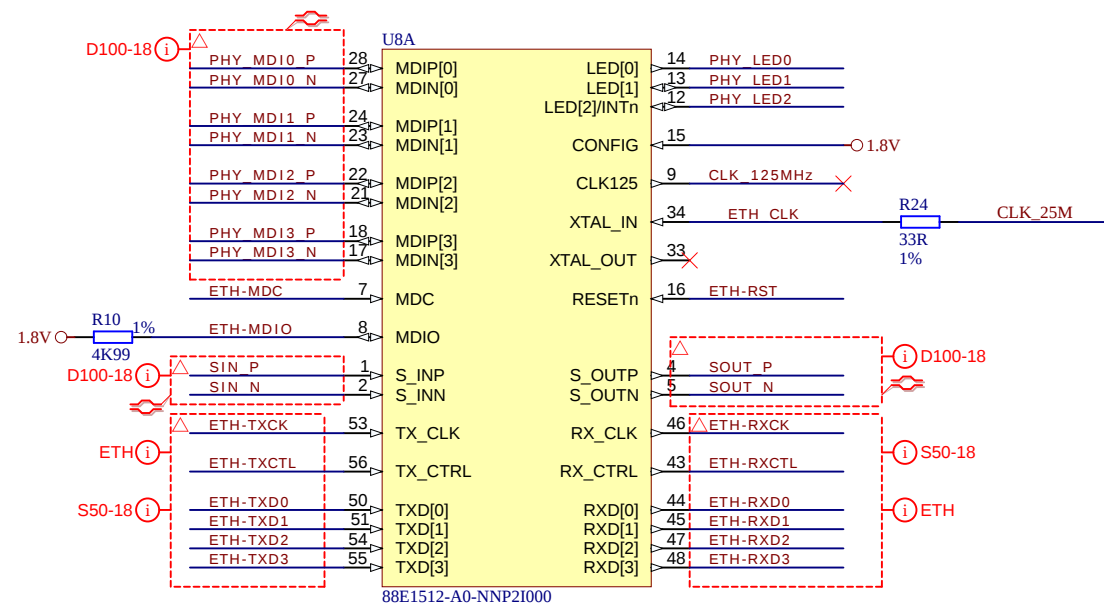
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A4	Number: TE0821 2AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 19 of 24
Filename: eMMC.SchDoc		

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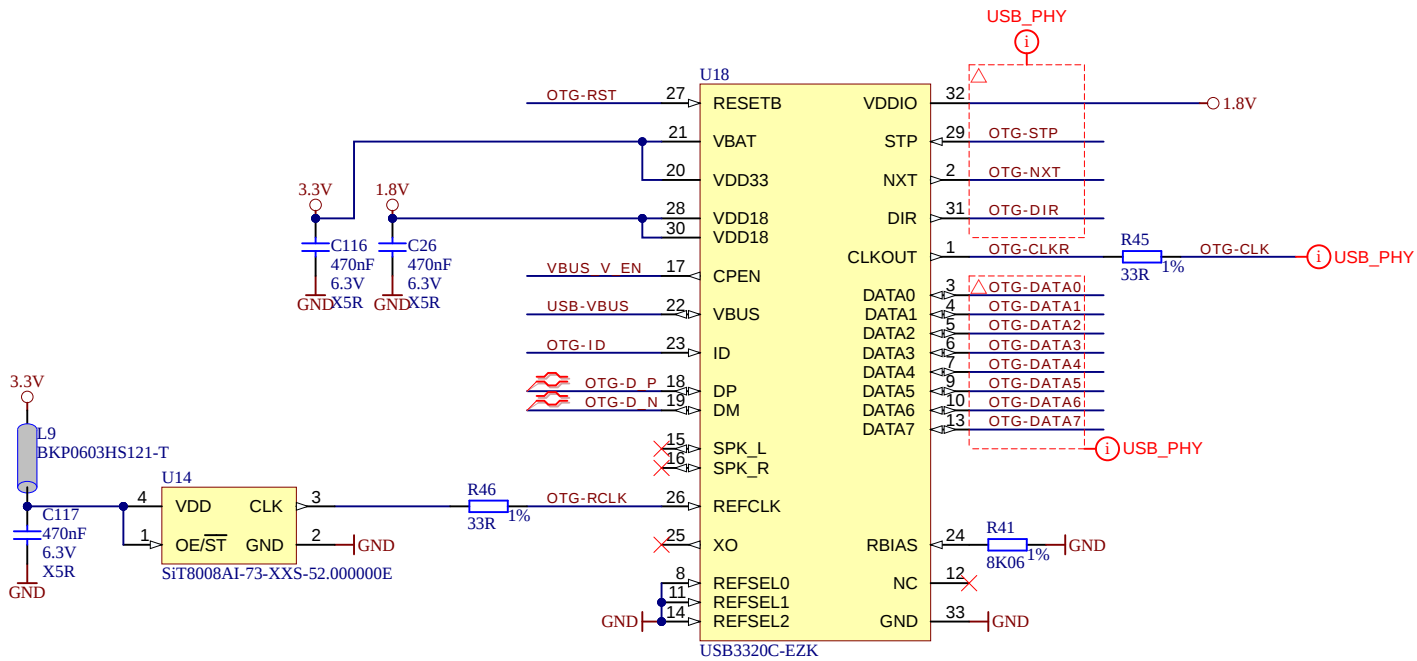
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Date: 20.02.2019	Copyright: 2015 Trenz Electronic GmbH	Page 20 of 24
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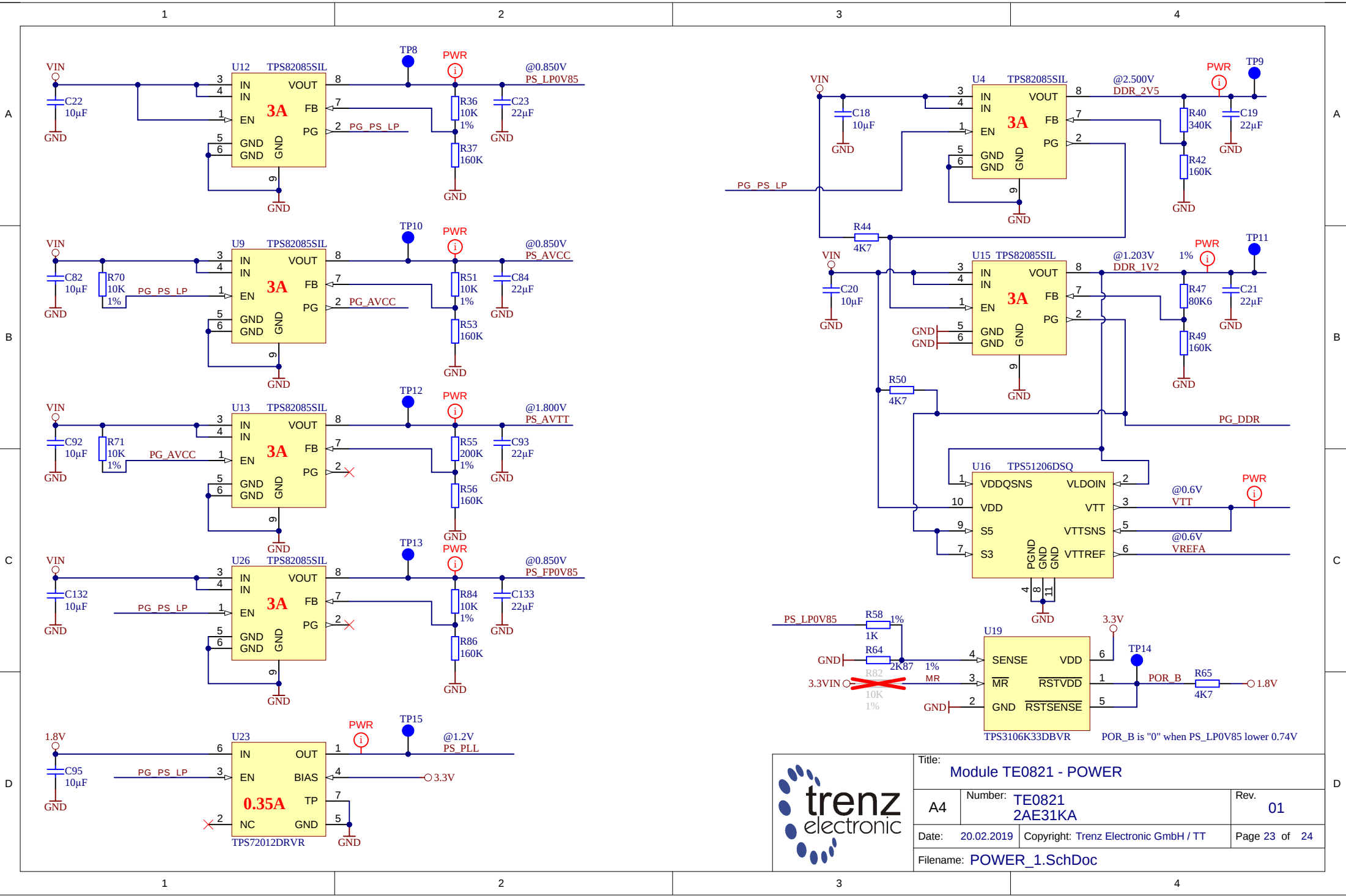
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		A4 Number: TE0821 2AE31KA	Rev. 01
Date: 20.02.2019		Copyright: 2015 Trenz Electronic GmbH	
Filename: USB-PHY.SchDoc		Page 21 of 24	



Title: Module TE0821 - POWER		
A4	Number: TE0821 2AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 23 of 24
Filename: POWER_1.SchDoc		

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Revision 01a (01.07.2020):

1. VY: R38 value was changed to 20K (was: 40K2) to set VCU 0.9V

Revision 01b (29.10.2020):

1. VY: Updated Block diagram

(07.02.2024):
2. OT: R82 set to not fitted

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Title: Module TE0821 - Revision Changes			
A4	Number: TE0821 2AE31KA		Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT		Page 24 of 24
Filename: Revision Changes.SchDoc			

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