


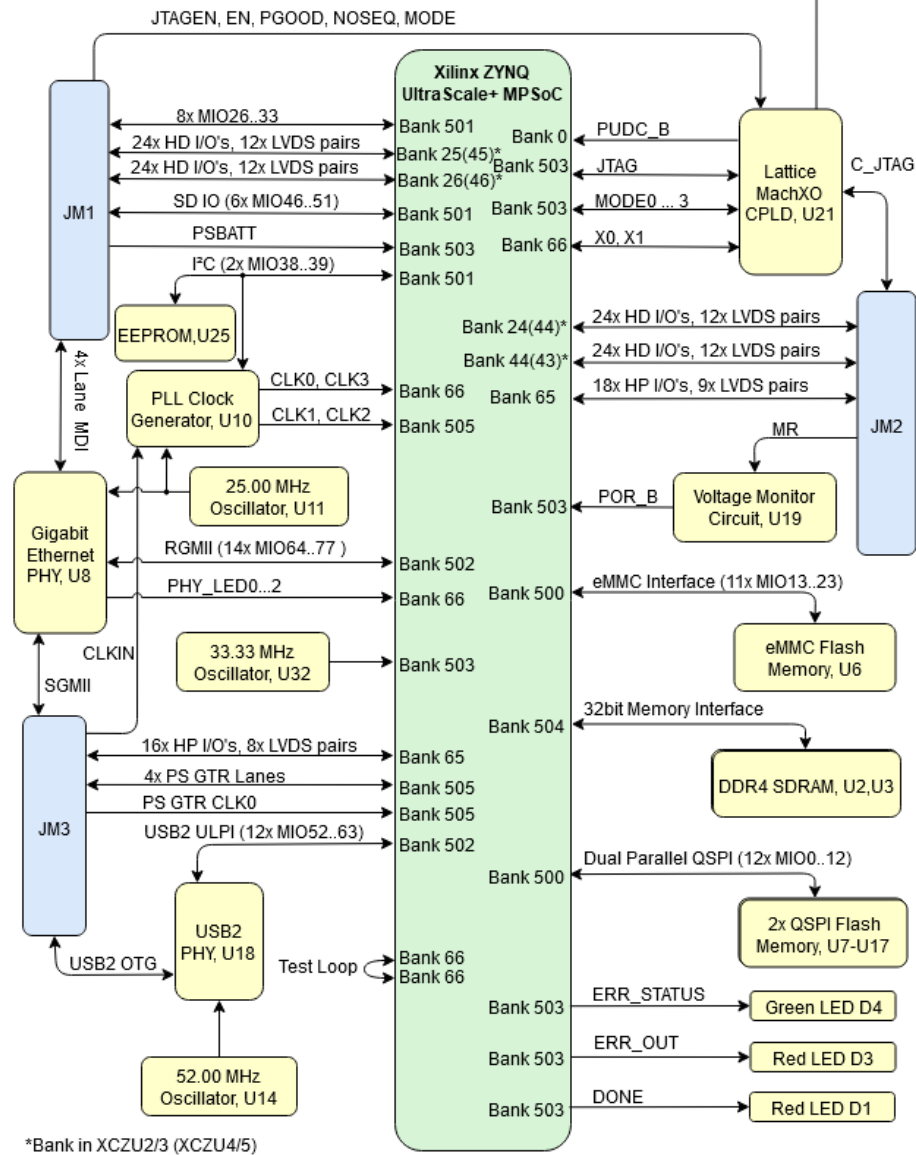
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Schematics and other handouts serve for informational purposes only!

	Title: Module TE0821		
	A4	Number: TE0821 3AE31KA	Rev. 01
	Date: 14.08.2020	Copyright: Trenz Electronic GmbH / TT	Page 1 of 24
	Filename: Legal Notices Modules.SchDoc		

TE0821

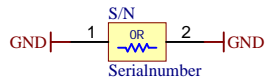
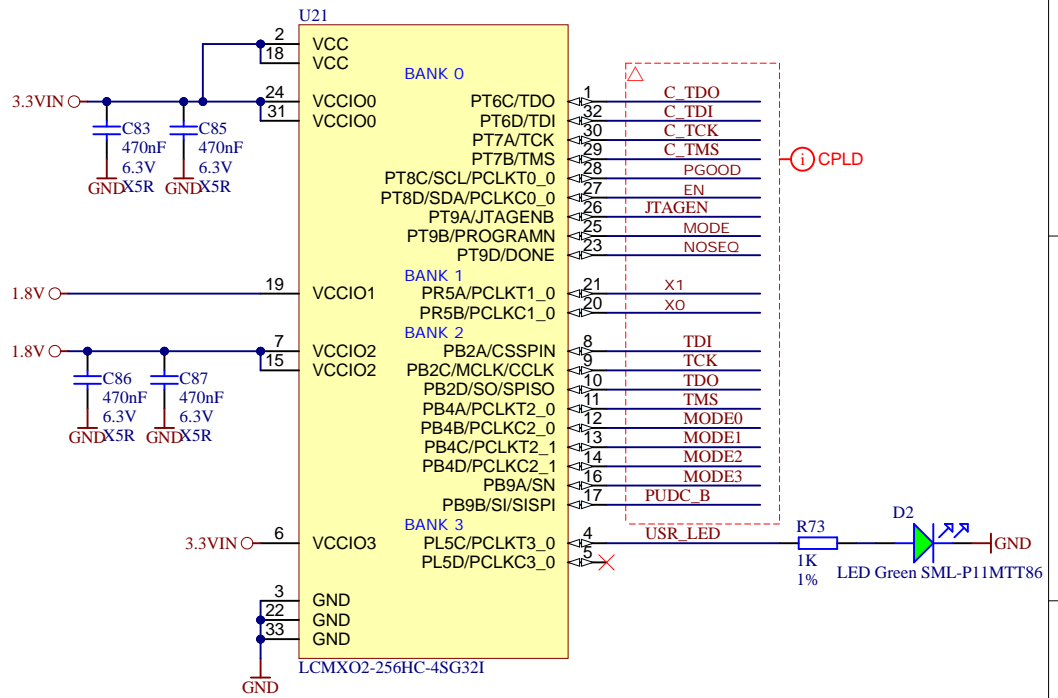


*Bank in XCZU2/3 (XCZU4/5)

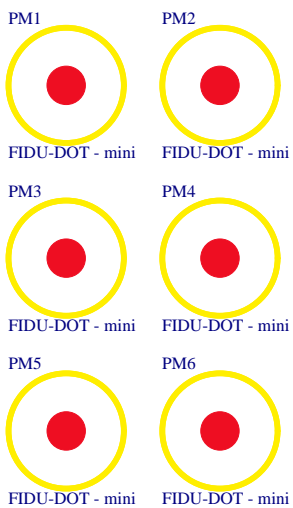
			Title: Module TE0821 - System Overview	
			A4	Number: TE0821 3AE31KA
Date: 18.01.2022		Copyright: 2015 Trenz Electronic GmbH		Page 2 of 24
Filename: TE0821-Overview.SchDoc				

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_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
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_Revision_changes Revision Changes.SchDoc

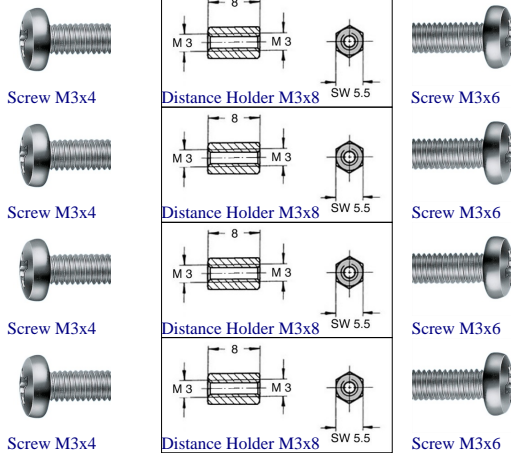


Serial
Serialnumber 6,3 x 6,3mm



Mount.Hole 3.2mm Mount.Hole 3.2mm

Mount.Hole 3.2mm Mount.Hole 3.2mm

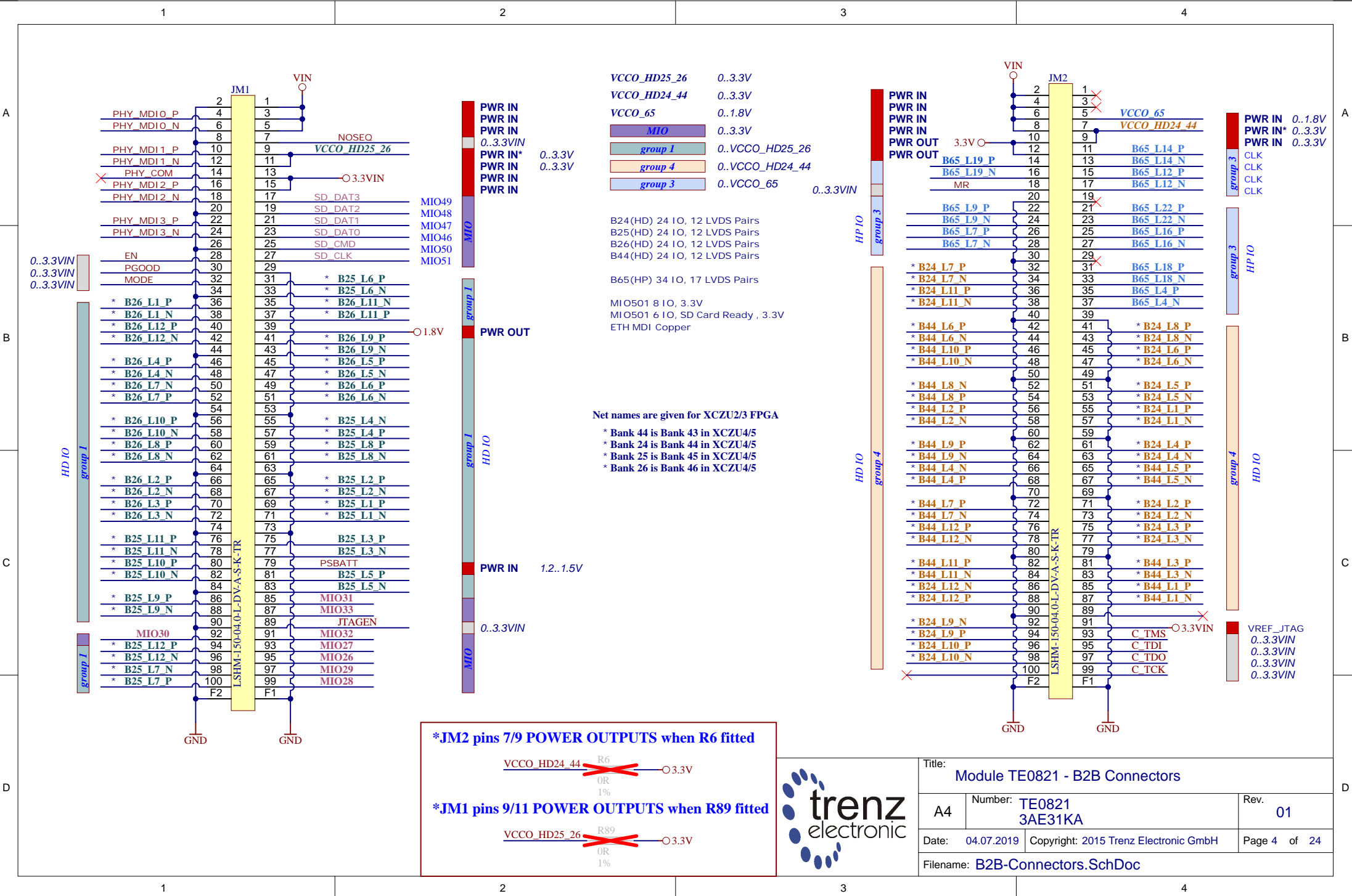


Special notes:

Component RC0201FR-0710KL removed



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



VCCO_HD25_26	0..3.3V
VCCO_HD24_44	0..3.3V
VCCO_65	0..1.8V
MIO	0..3.3V
group 1	0..VCCO_HD25_26
group 4	0..VCCO_HD24_44
group 3	0..VCCO_65

B24(HD) 24 IO, 12 LVDS Pairs
 B25(HD) 24 IO, 12 LVDS Pairs
 B26(HD) 24 IO, 12 LVDS Pairs
 B44(HD) 24 IO, 12 LVDS Pairs
 B65(HP) 34 IO, 17 LVDS Pairs
 MIO501 8 IO, 3.3V
 MIO501 6 IO, SD Card Ready, 3.3V
 ETH MDI Copper

Net names are given for XCZU2/3 FPGA
 * Bank 44 is Bank 43 in XCZU4/5
 * Bank 24 is Bank 44 in XCZU4/5
 * Bank 25 is Bank 45 in XCZU4/5
 * Bank 26 is Bank 46 in XCZU4/5

***JM2 pins 7/9 POWER OUTPUTS when R6 fitted**

VCCO_HD24_44 ~~R6~~ 0.3.3V
 OR
 1%

***JM1 pins 9/11 POWER OUTPUTS when R89 fitted**

VCCO_HD25_26 ~~R89~~ 0.3.3V
 OR
 1%



Title: Module TE0821 - B2B Connectors		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 04.07.2019	Copyright: 2015 Trenz Electronic GmbH	Page 4 of 24
Filename: B2B-Connectors.SchDoc		

1

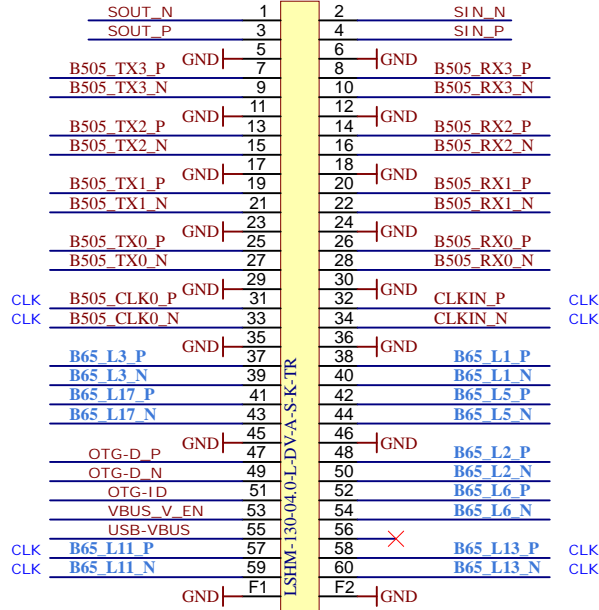
2

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4

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

JM3



X

HP IO
 group 3
 USB
 HP IO

group 3
 group 3
 group 3



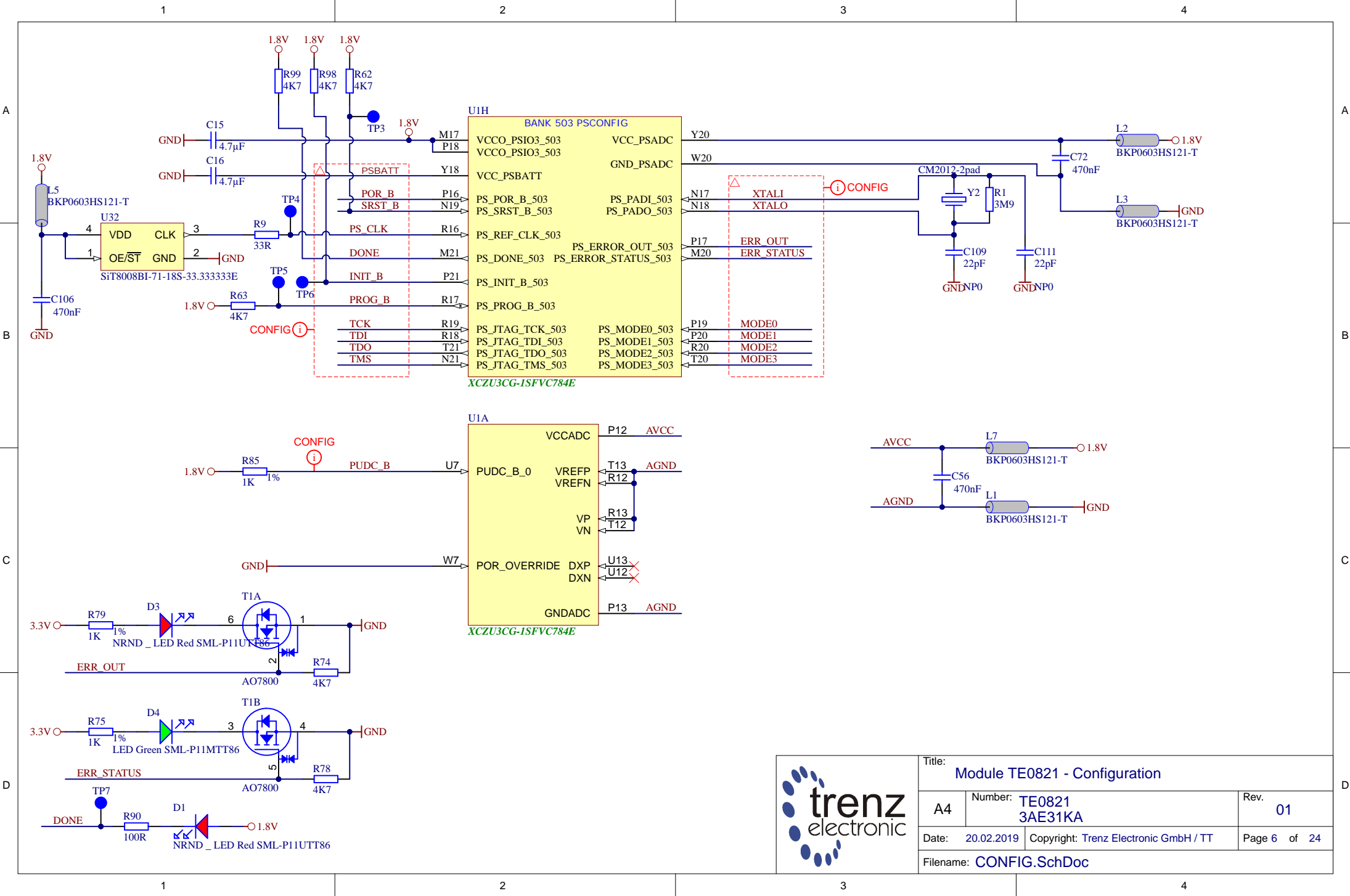
Title: Module TE0821 - B2B Connectors			
A4	Number: TE0821 3AE31KA	Rev. 01	
Date: 20.02.2019	Copyright: 2015 Trenz Electronic GmbH	Page 5 of 24	
Filename: B2B-Connectors_2.SchDoc			

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Title: Module TE0821 - Configuration		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 6 of 24
Filename: CONFIG.SchDoc		

A

A

B

B

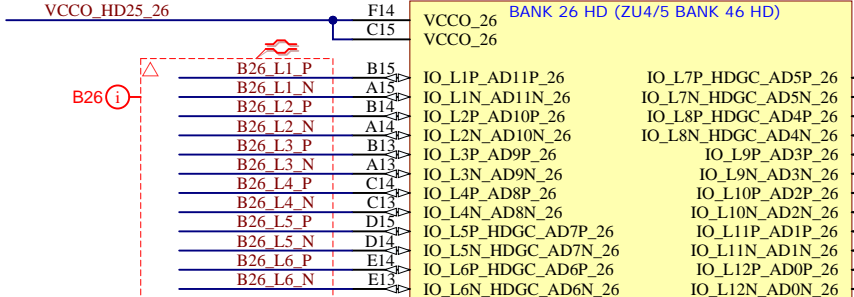
C

C

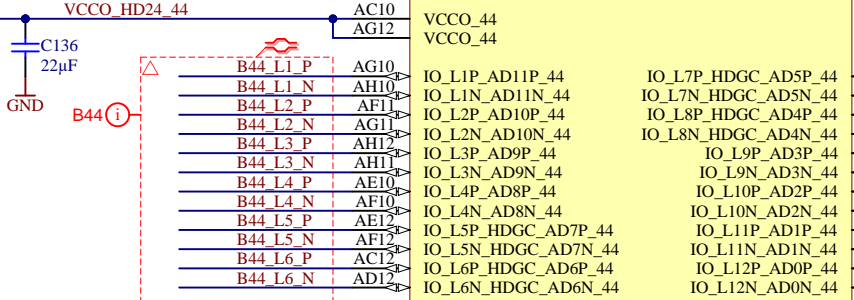
D

D

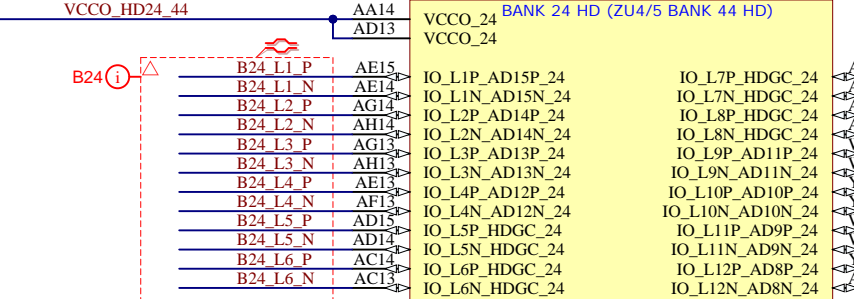
UIC



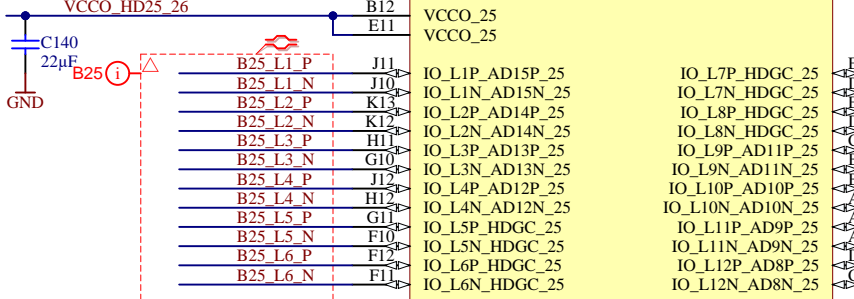
BANK 44 HD (ZU4/5 BANK 43 HD)



UIB XCZU3CG-1SFVC784E



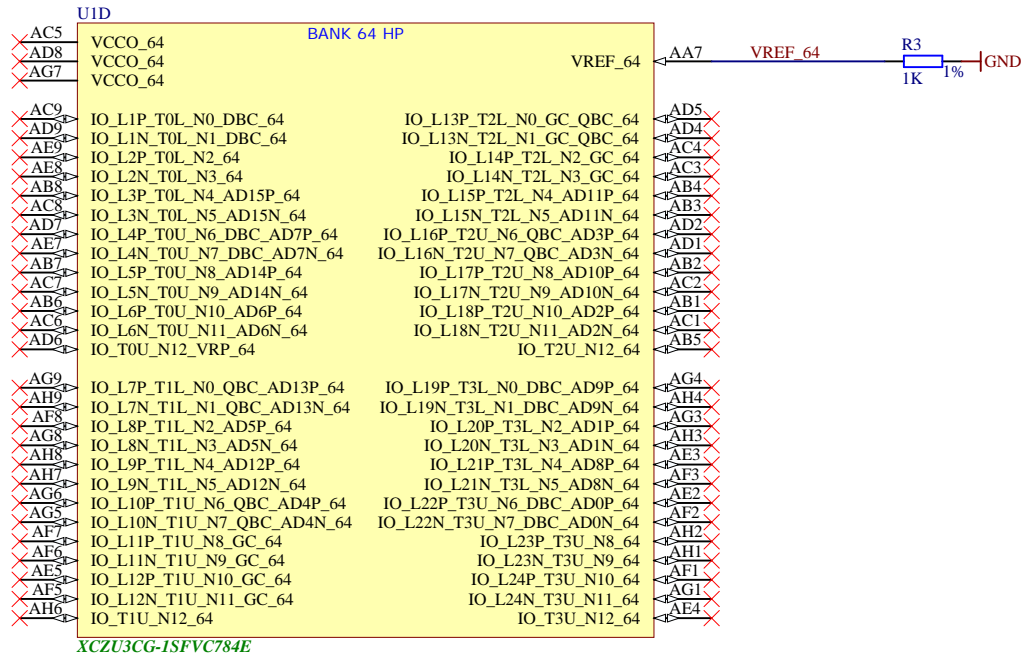
BANK 25 HD (ZU4/5 BANK 45 HD)



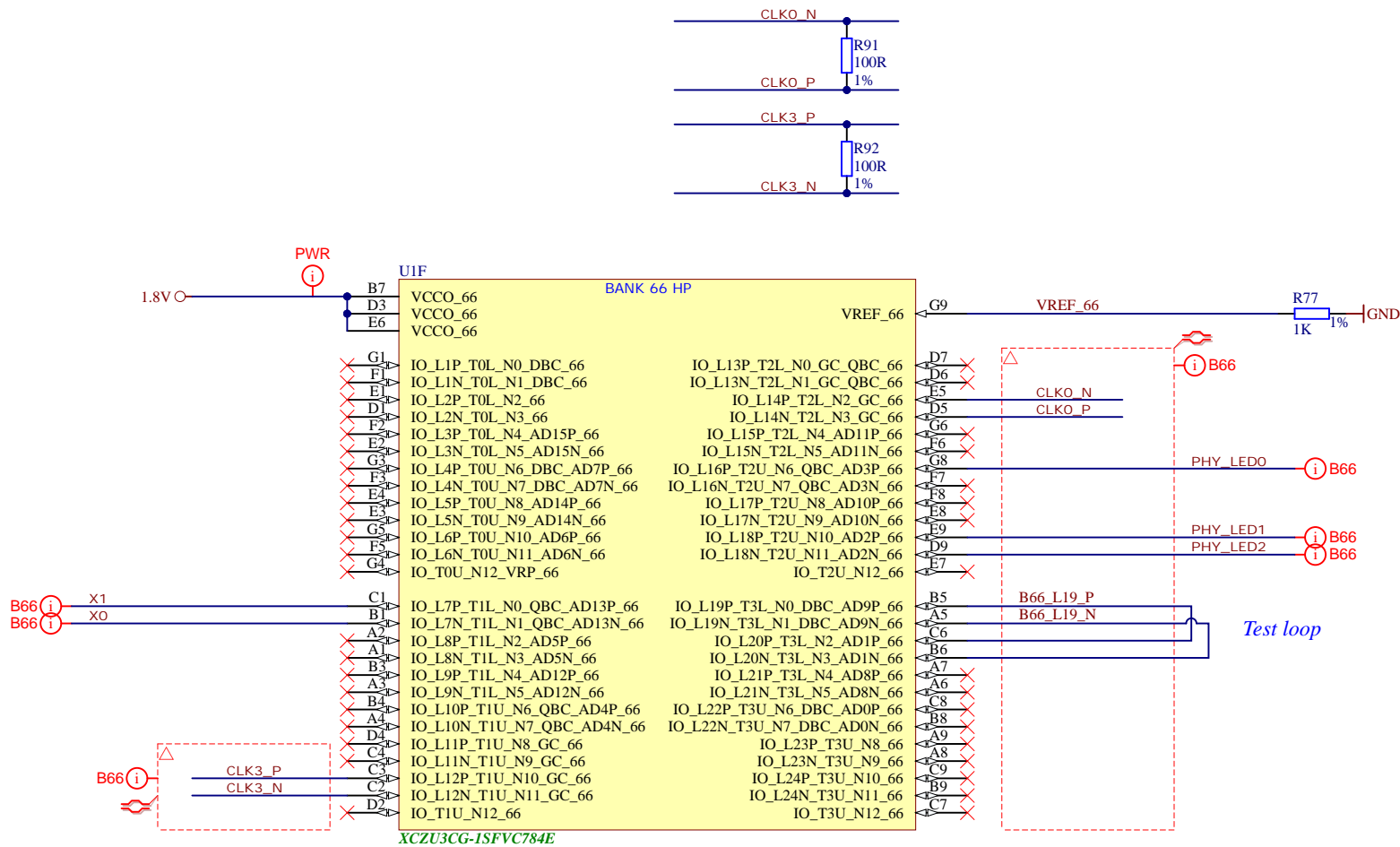
XCZU3CG-1SFVC784E



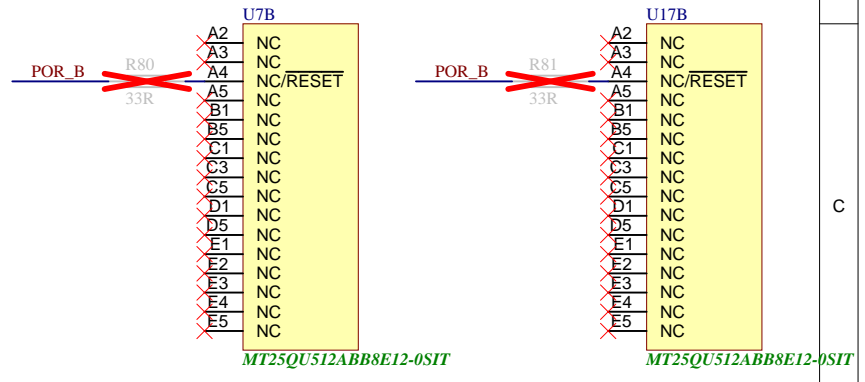
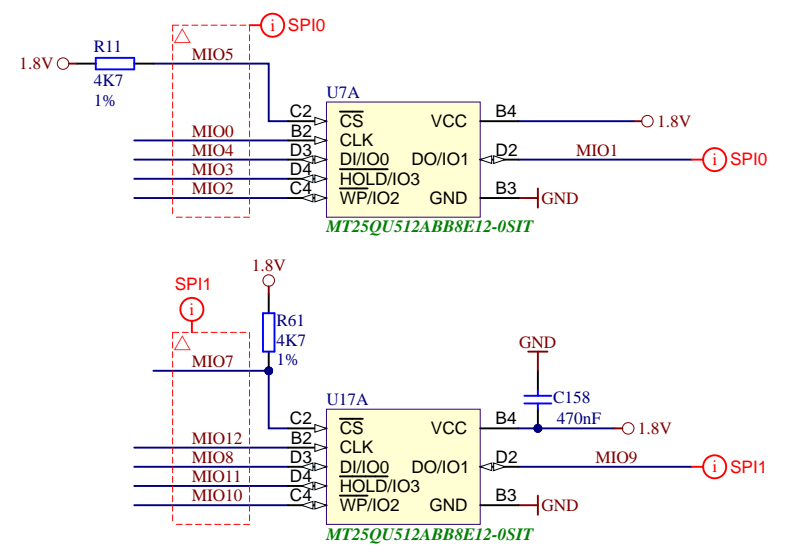
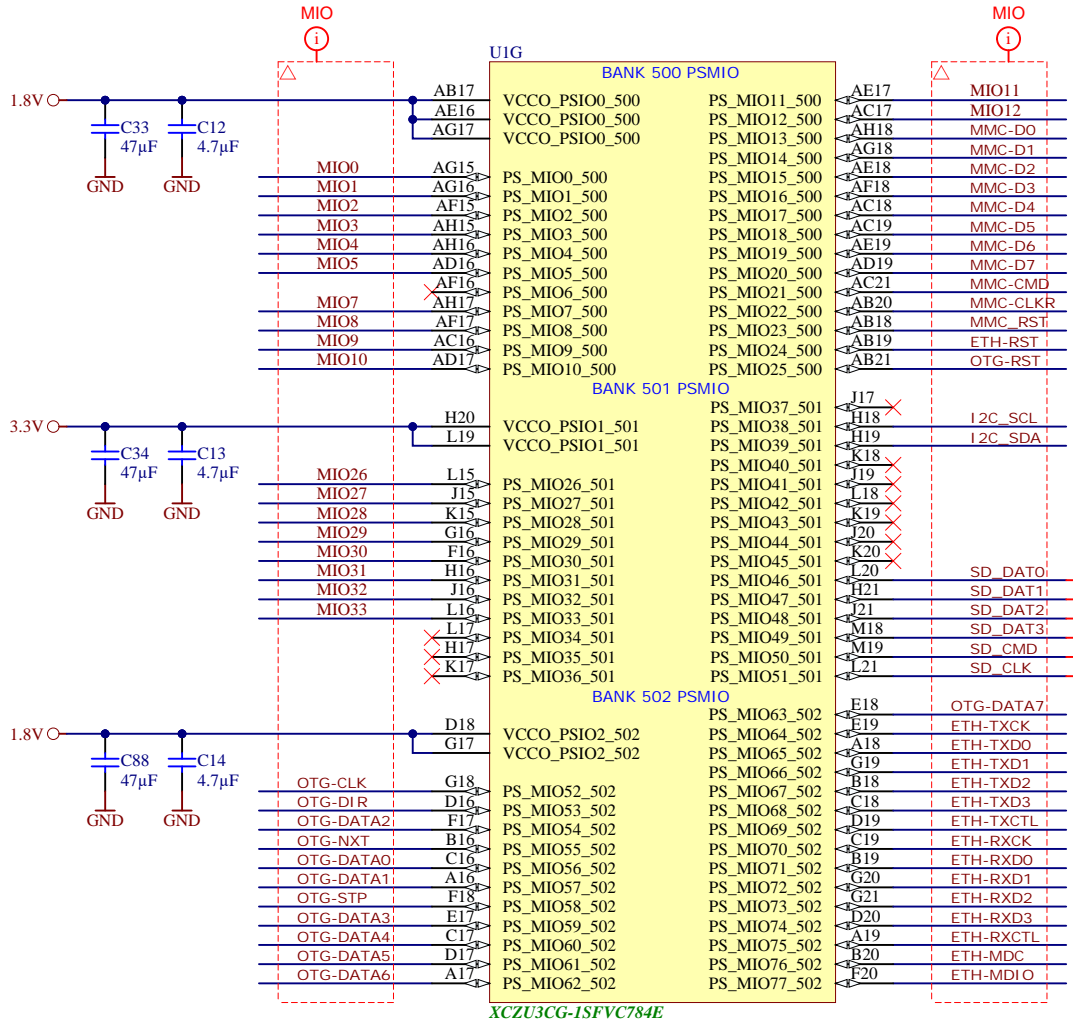
Title: Module TE0821 - HD Banks		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 7 of 24
Filename: B_HD.SchDoc		



Title: Module TE0821 - B64		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 8 of 24
Filename: B64.SchDoc		



Title: Module TE0821 - B66		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 10 of 24
Filename: B66.SchDoc		



			Title: Module TE0821 - MIO Banks	
			A4	Number: TE0821 3AE31KA
Date: 20.02.2019		Copyright: Trenz Electronic GmbH / TT		Page 11 of 24
Filename: B_MIO.SchDoc				

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A

A

B

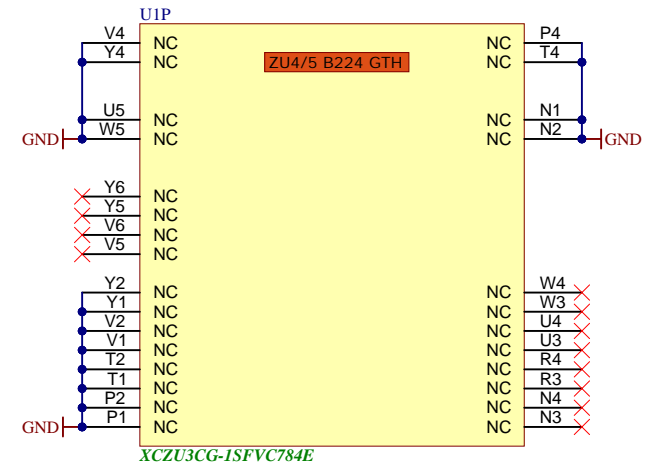
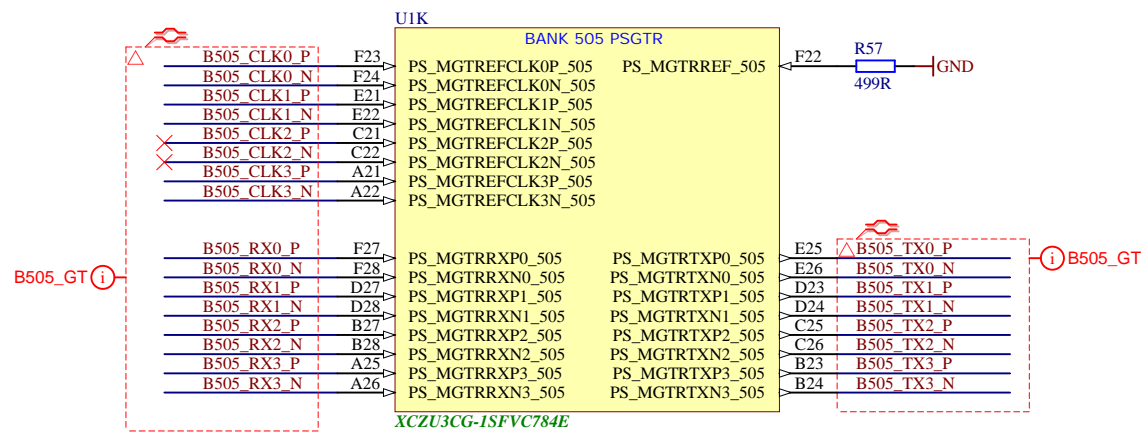

B

C

C

D

D

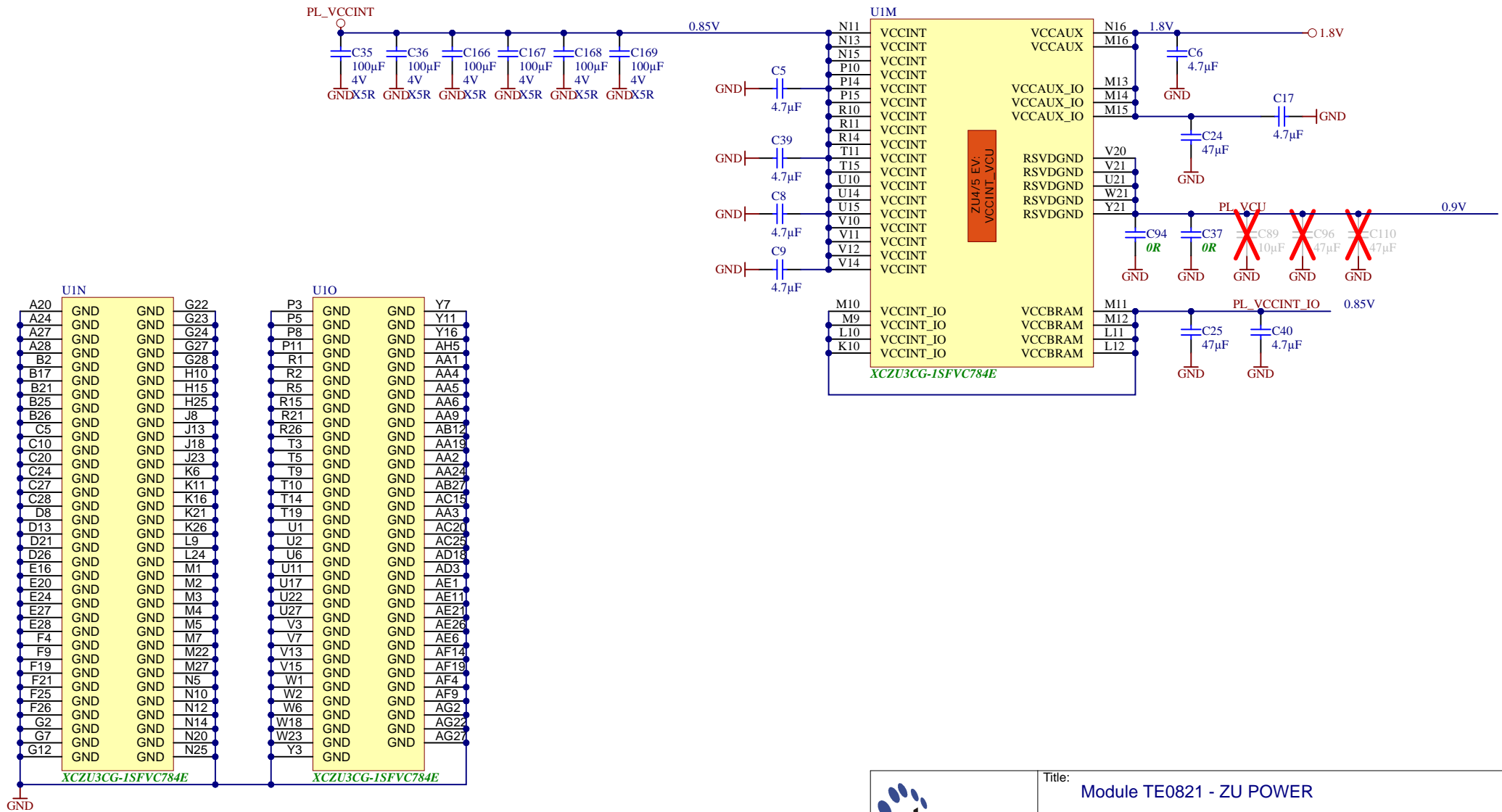
Title: Module TE0821 - PS MGT		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 13 of 24
Filename: B_PS_GT.SchDoc		

1

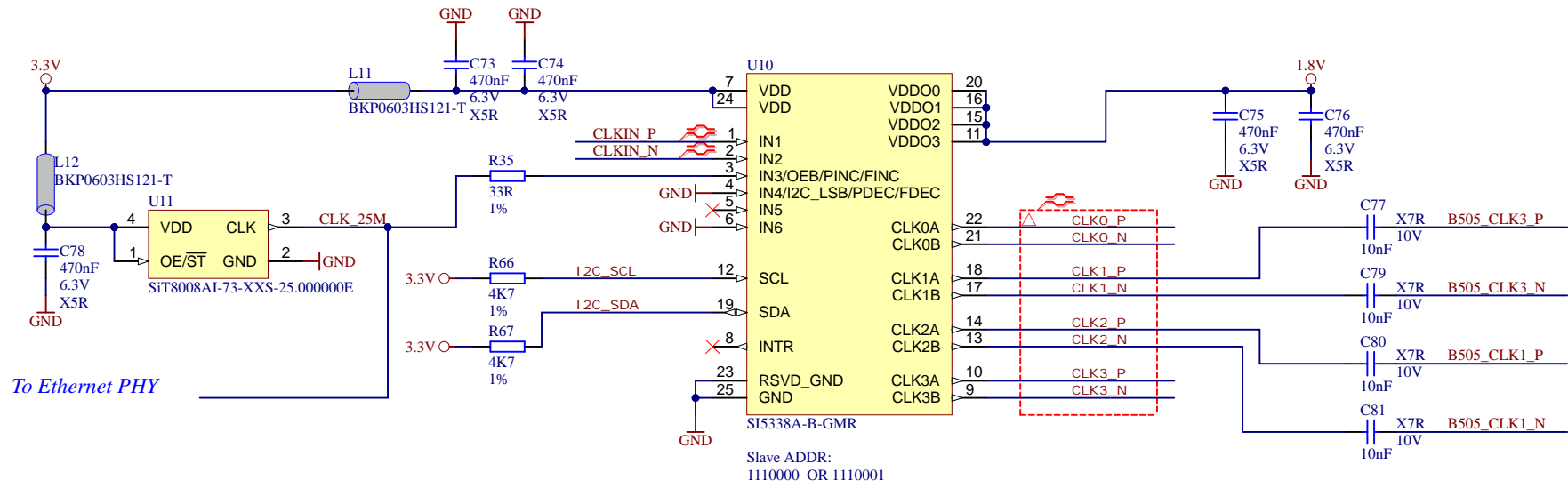
2

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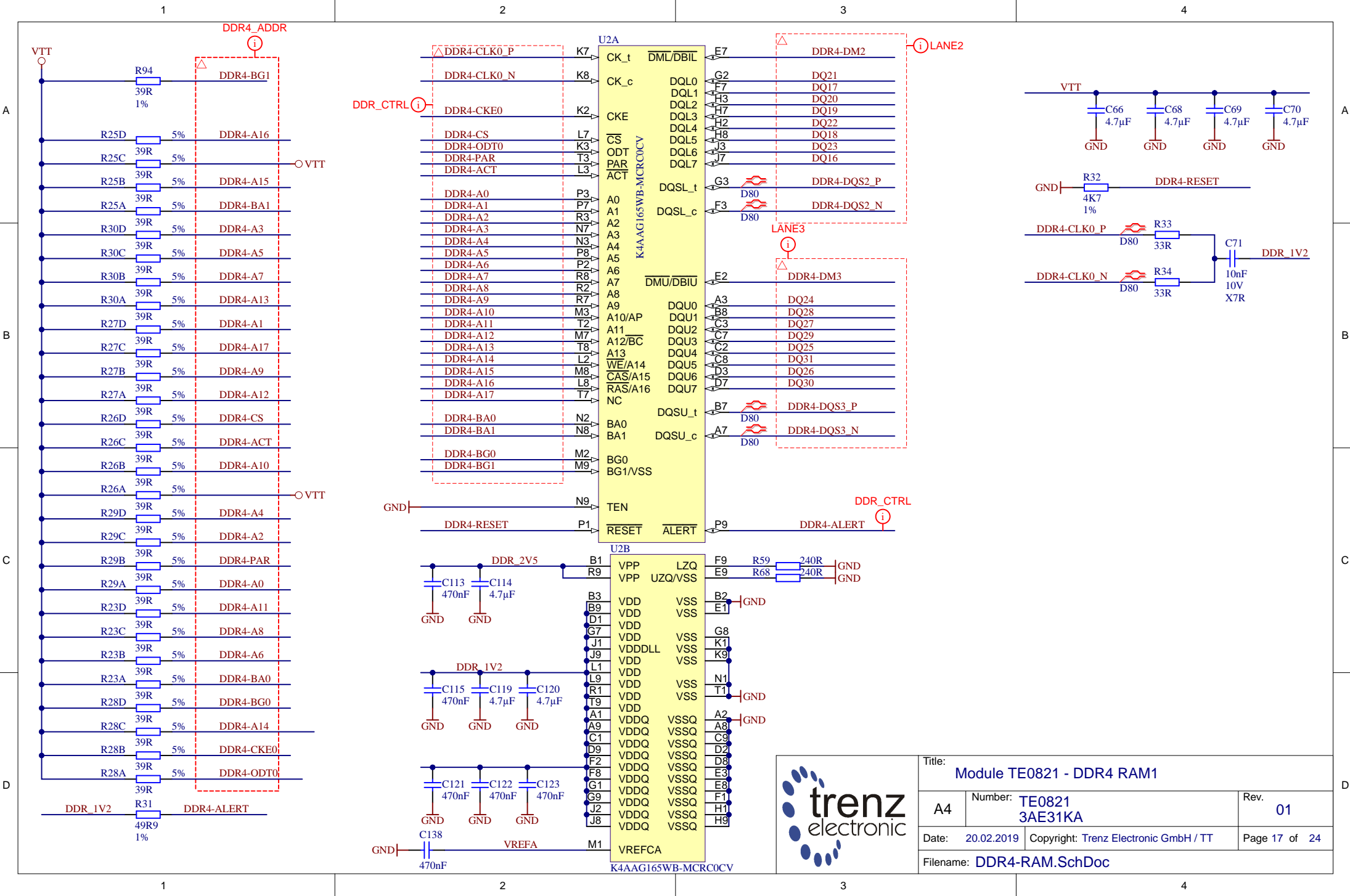


Title: Module TE0821 - ZU POWER		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	
Page 14 of 24		
Filename: ZU_POWER.SchDoc		



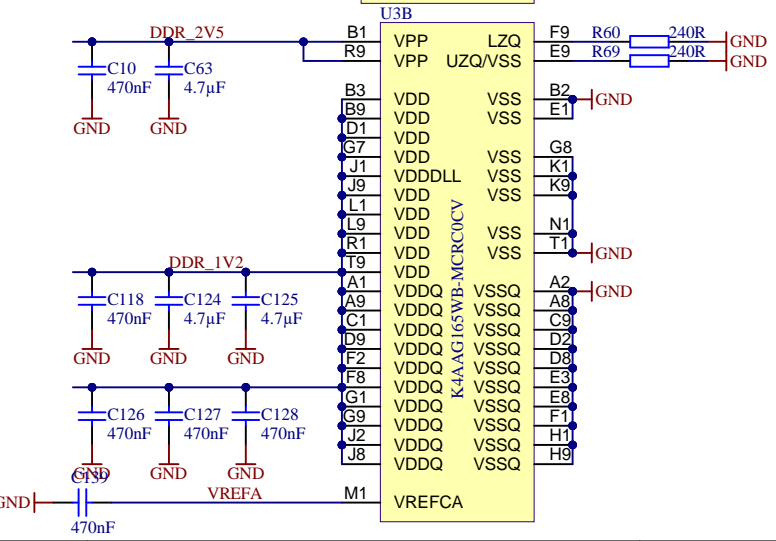
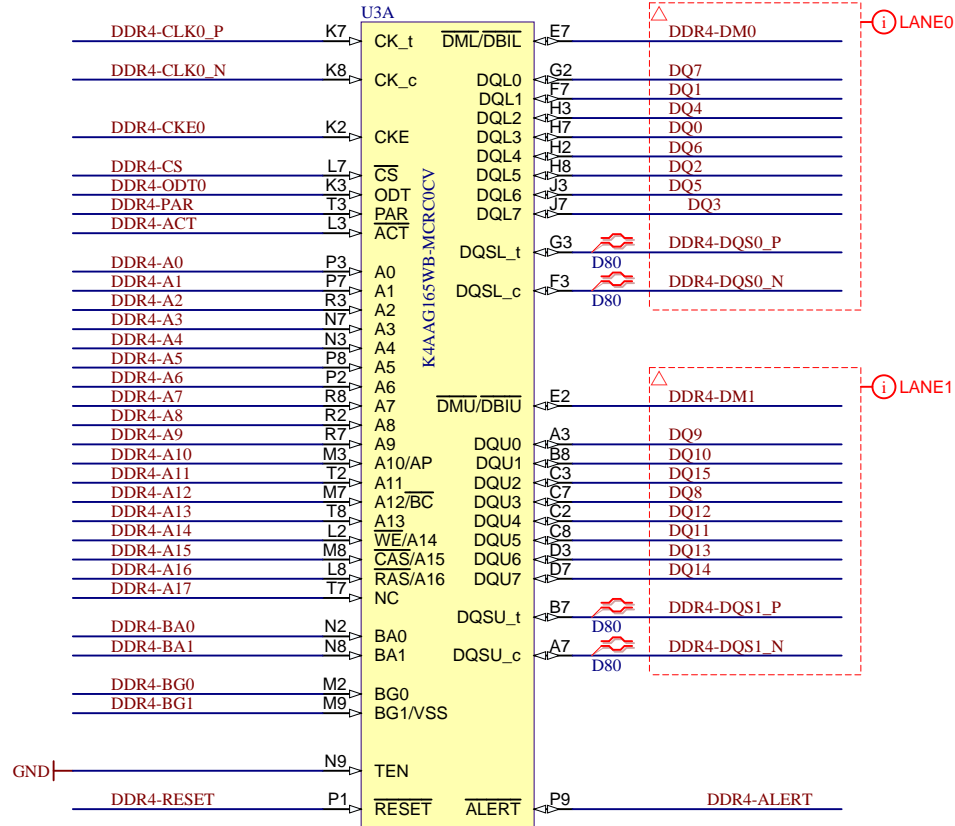
To Ethernet PHY

		Title: Module TE0821 - CLK	
		A4	Number: TE0821 3AE31KA Date: 20.02.2019 Filename: CLK.SchDoc



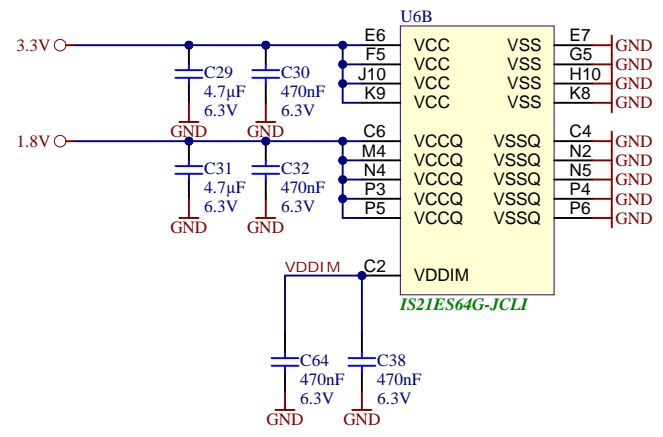
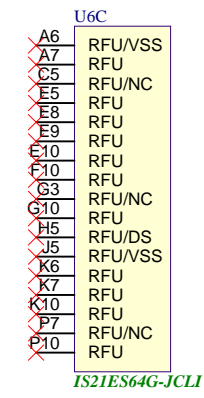
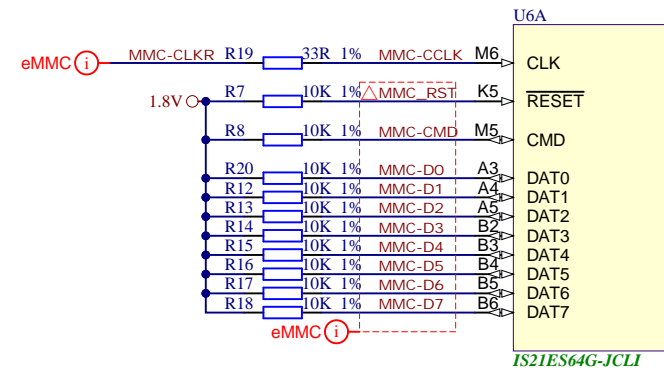
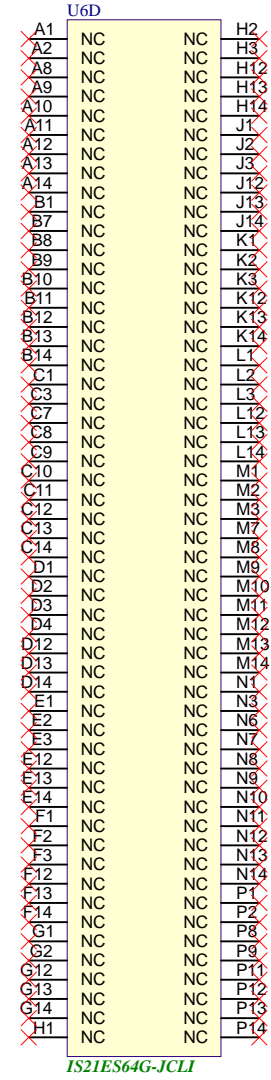
Title: Module TE0821 - DDR4 RAM1		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 17 of 24
Filename: DDR4-RAM.SchDoc		



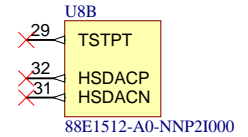
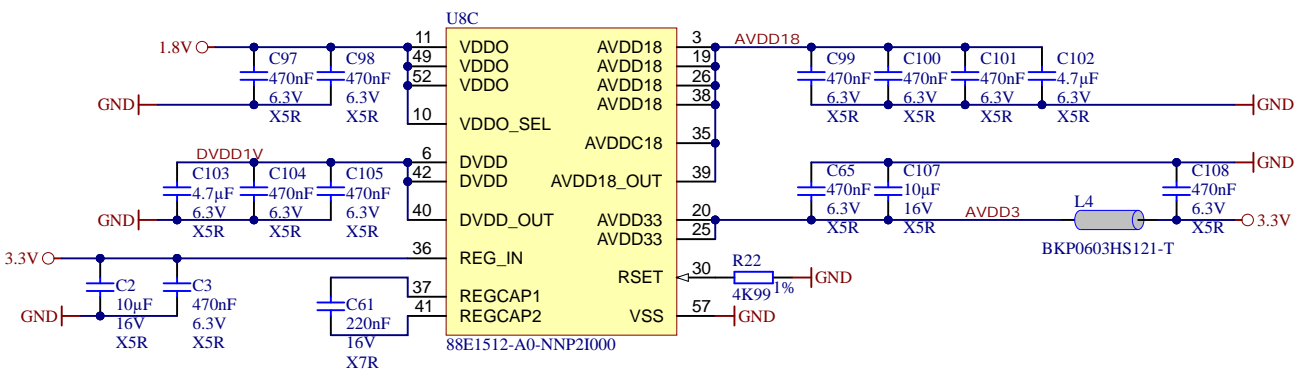
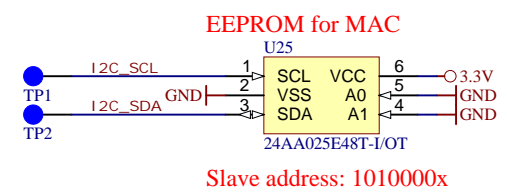
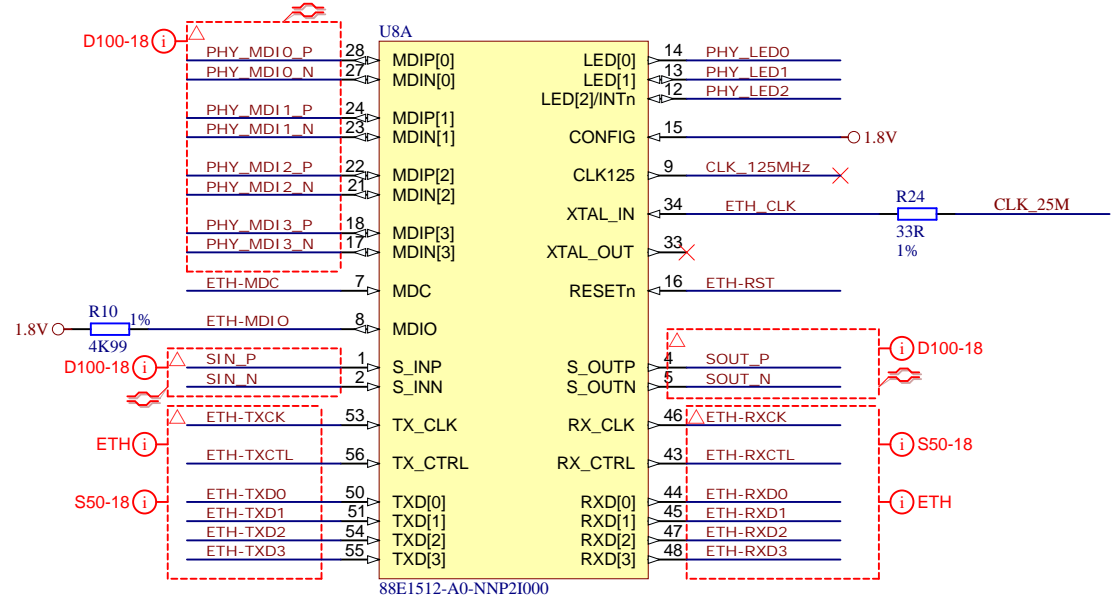


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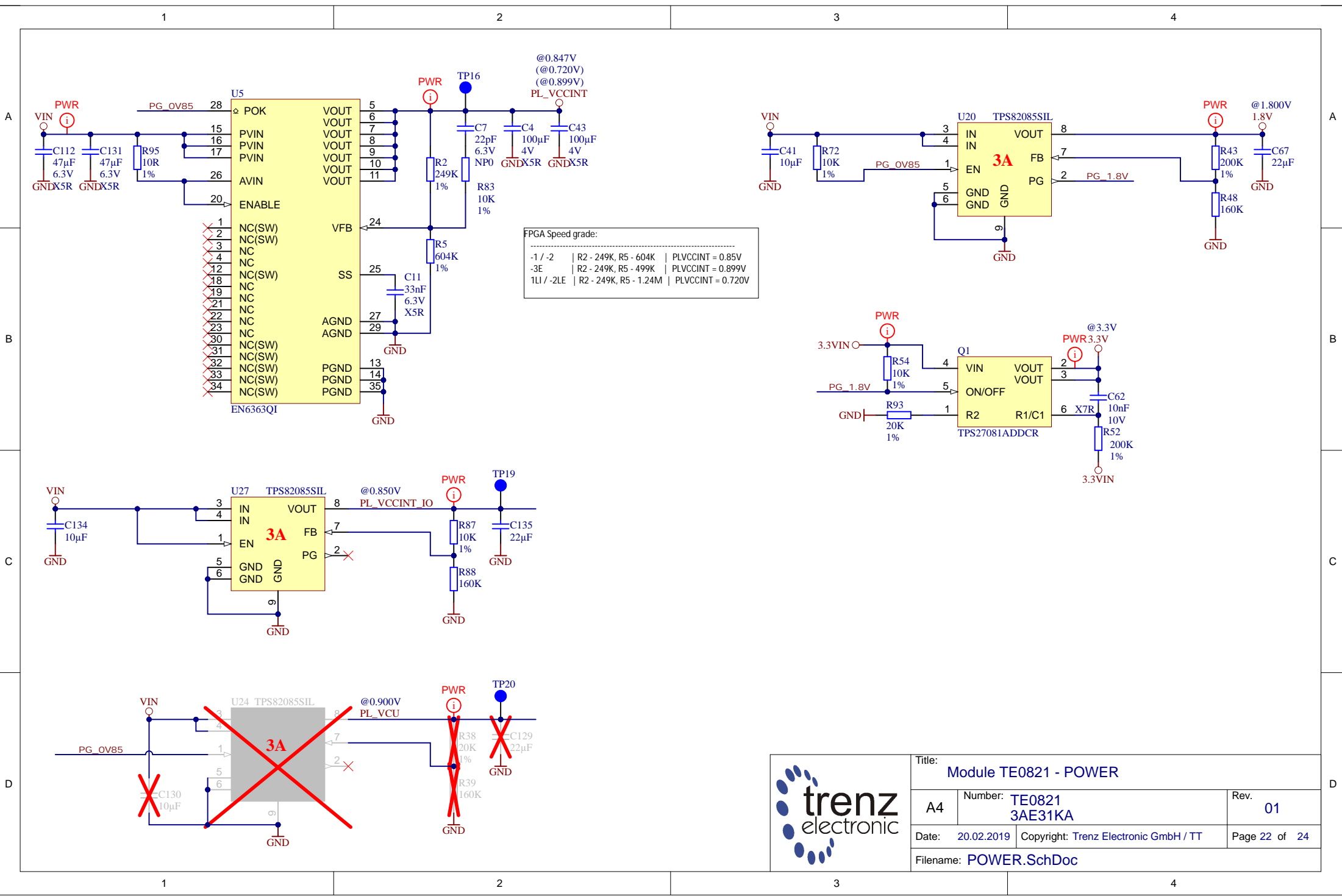

Title: Module TE0821 - DDR4 RAM2		
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Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 18 of 24
Filename: DDR4-RAM_2.SchDoc		



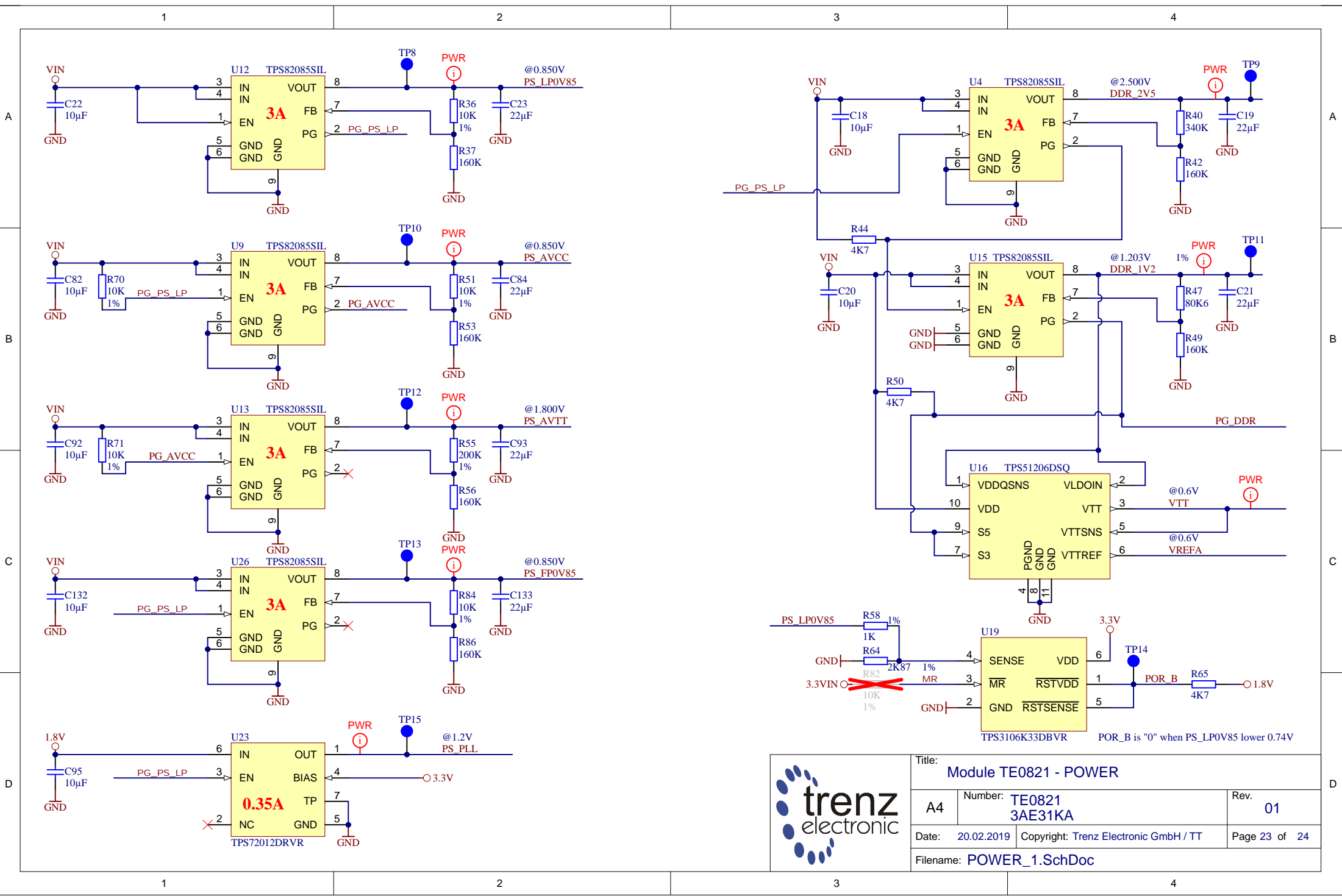
Title: Module TE0821 - eMMC		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 19 of 24
Filename: eMMC.SchDoc		



Title: Module TE0821 - Ethernet PHY		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 20.02.2019	Copyright: 2015 Trenz Electronic GmbH	Page 20 of 24
Filename: ETH-PHY.SchDoc		

Title: Module TE0821 - POWER		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	
Page 22 of 24		
Filename: POWER.SchDoc		



Title: Module TE0821 - POWER		
A4	Number: TE0821 3AE31KA	Rev. 01
Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	
Filename: POWER_1.SchDoc		Page 23 of 24

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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

A

A

B


B

C

C

D

D

	Title: Module TE0821 - Revision Changes		
	A4	Number: TE0821 3AE31KA	Rev. 01
	Date: 20.02.2019	Copyright: Trenz Electronic GmbH / TT	Page 24 of 24
	Filename: Revision Changes.SchDoc		

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