

Photo Shows Similar Product

Regarding the usage of our schematics and alike documentation for Trenz module TE0710.

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Schematics and other handouts serve for informational purposes only!

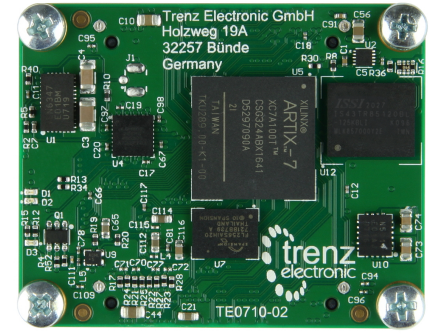


Photo Shows Similar Product

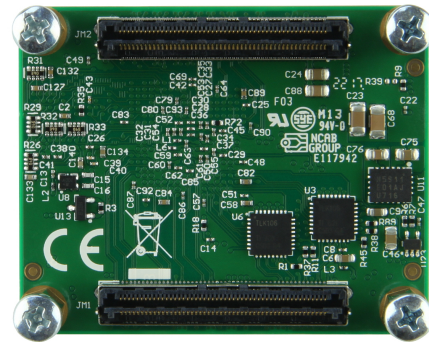


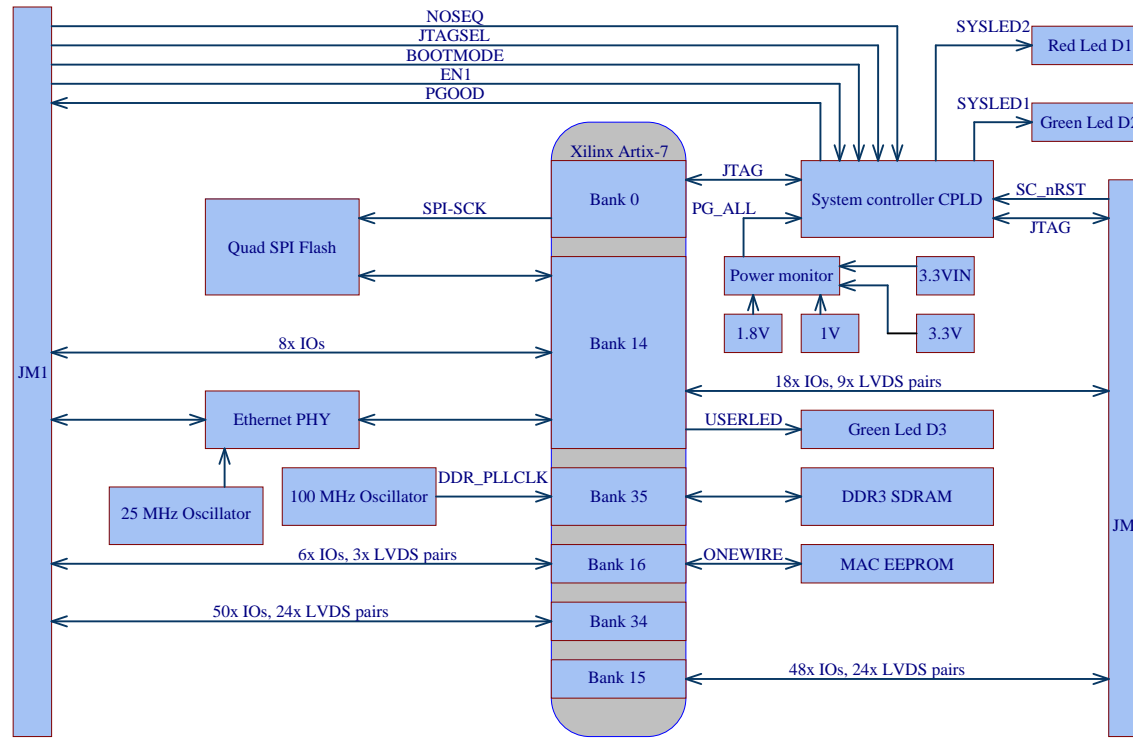


Photo Shows Similar Product

	Title: TE0710 - Legal Notices		
	A4	Number: TE0710 42C21-A	Rev. 03
	Date: 11-Jul-23	Copyright: Trenz Electronic GmbH	Page 1 of 16
	Filename: Legal Notices Modules.SchDoc		

REV	Description	
-01	Initial revision	
-02	Revision changes REV02.a (15.03.19): 1) Schematic: nets B14_IO0 and B14_IO4 renamed to B16_IO0 and B16_IO4 accordingly 2) Schematic: changed value of R12 and R15 to 240R Revision changes REV02.b (19.07.19): 3) VY: Replaced capacitors C39, C40, C43, C111 from 10nF 6.3V X5R to 10nF 10V X7R	VY
-03	1) [Q1] TPS27082LDDCR was changed to MP5077GG-Z on page "TE0710.SchDoc" 2) Full update SCH and PCB lib 3) [U23] TPS3805H33DCKR was changed to STM6710LWB6F on "TE0710.SchDoc" 4) Changed ferrite beads [L1], [L2], [L3], [L4], [L5], [L6] from BKP0603HS121-T to MPZ0603S121HT000 5) [U1] EN6347Q1 was changed to MPM3860GQW-Z on page "TE0710.SchDoc" 6) [U10] and [U11] EN5311Q1 were changed to MPM3834CGPA 7) Diode [D4] between INIT_B and PROG_B was added on page "FPGA_CFG.SchDoc" 8) [R50] PullUp resistor was added on net Prog_B on page "FPGA_CFG.SchDoc" 9) Power Diagram, Overview and Legal notices pages were added 10) All fiducials were changed from 1 mm to 0.5 mm and moved 11) B2B_connector page was updated. Additional info about signal groups was added 12) Testpoints [TP1]... [TP28] were added on page "TE0710.SchDoc" 13) [U9] was changed from SiT8008A1-73-XXS-25.000000E to SiT8008B1-73-XXS-25.000000E 14) Some net classes definitions were corrected on page "DDR3-MEM.SchDoc" 15) UKCA logo was added	MT

	Title: TE0710 - Revision Changes		
	A4	Number: TE0710 42C21-A	Rev. 03
	Date: 18-Jul-23	Copyright: Trenz Electronic GmbH / TT	Page 2 of 16
	Filename: RevisionChanges.SchDoc		



U_Legal Notices Modules

U_Revision Changes

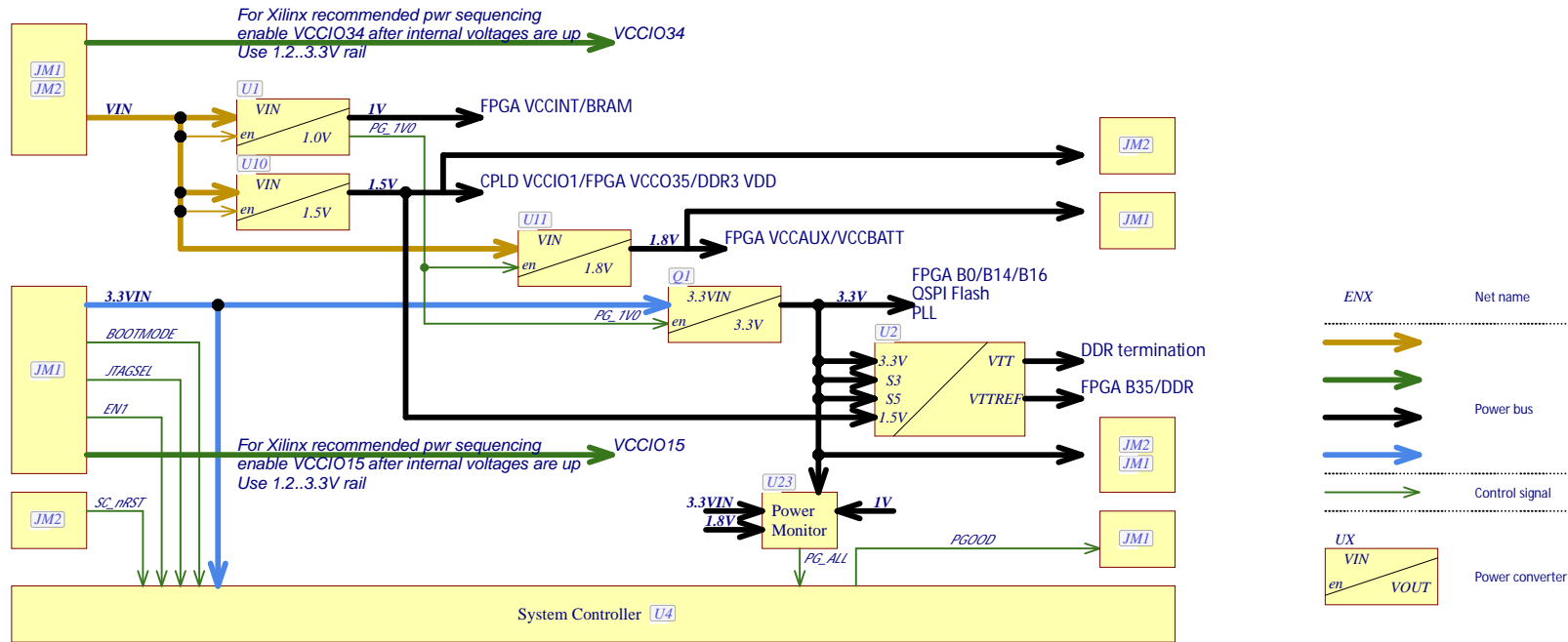
U_Power_Diagram

U_Power_Diagram



Title: TE0710 - System Overview		
A4	Number: TE0710 42C21-A	Rev. 03
Date: 14-Jul-23	Copyright: Trenz Electronic GmbH	Page 3 of 16
Filename: Overview.SchDoc		

Power-on sequencing:



Supported Voltage Ranges:

Power Rail	Direction	Range	Tolerance	Description	Note
VIN	IN	3.3 - 5.0V	+/-5%	Micromodule Power	-
3.3VIN	IN	3.3V	+/-5%	Micromodule Power	-
VCCIO15	IN	1.2 - 3.3V	+/-3%	HR IO Bank15	-
VCCIO34	IN	1.2 - 3.3V	+/-3%	HR IO Bank34	-
3.3V	OUT	3.3V	+/-3%	Internal Voltage	-
1.8V	OUT	1.8V	+/-3%	Internal Voltage	-
1.5V	OUT	1.5V	+/-3%	Internal Voltage	-



Title: TE0710 - Power Diagram		
A4	Number: TE0710 42C21-A	Rev. 03
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Filename: Power_Diagram.SchDoc		

UKCA

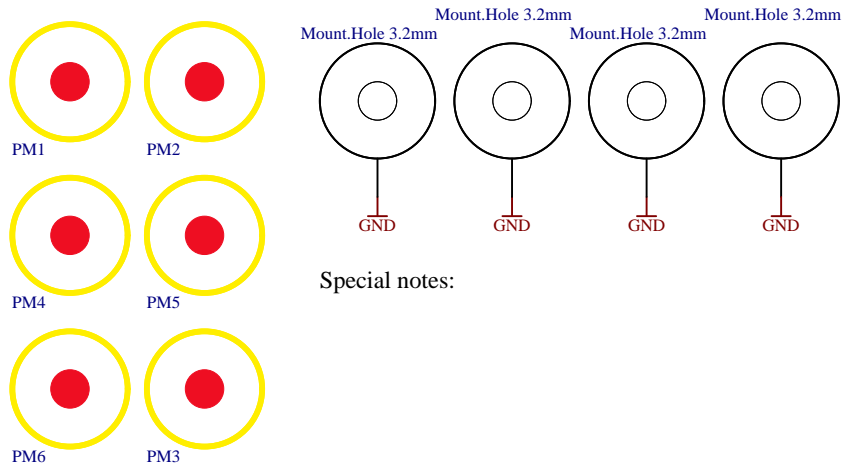
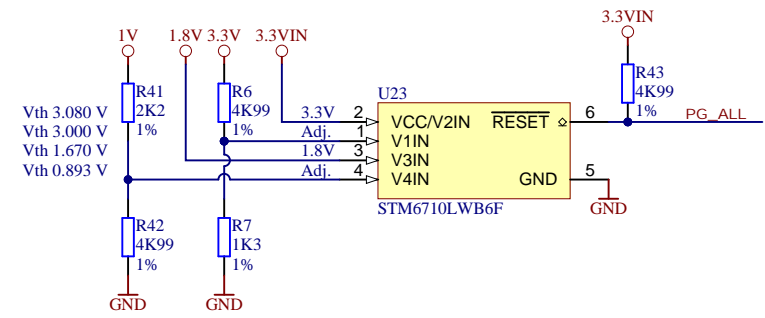
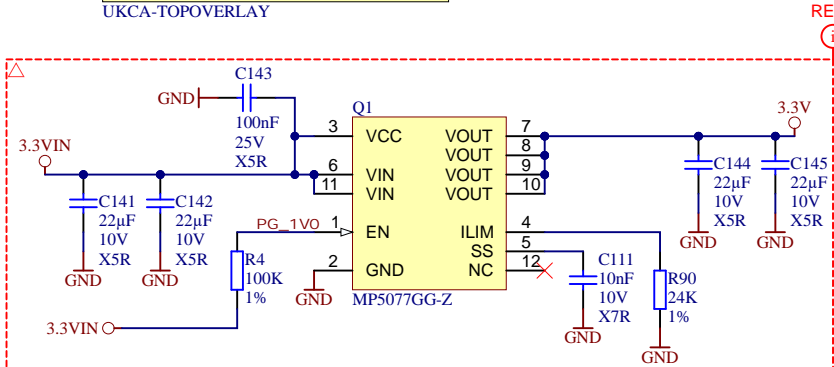
UKCA Logo on Top Overlay

UKCA-TOPOVERLAY

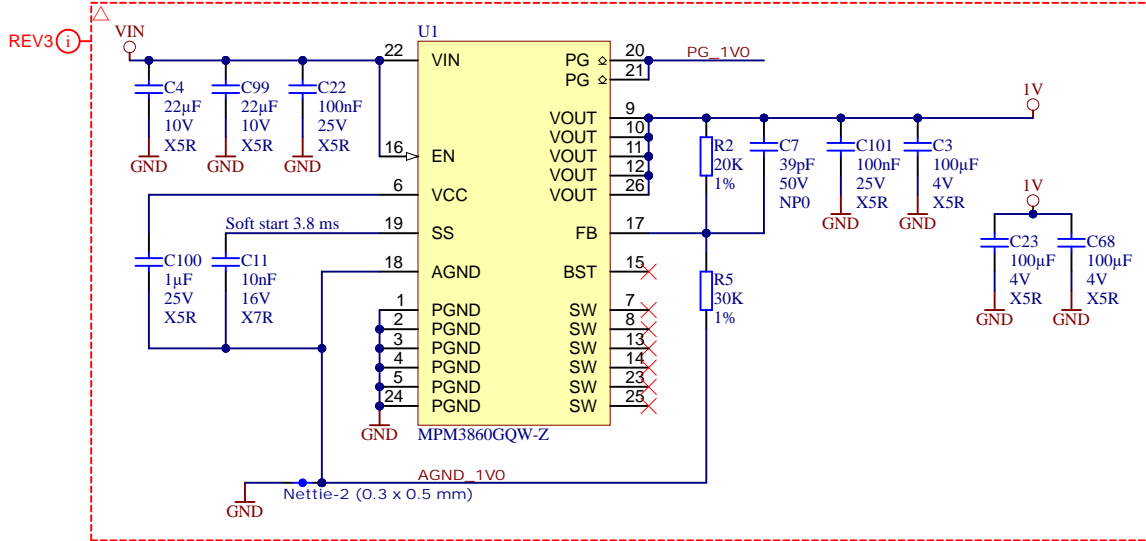
Serial

Serial

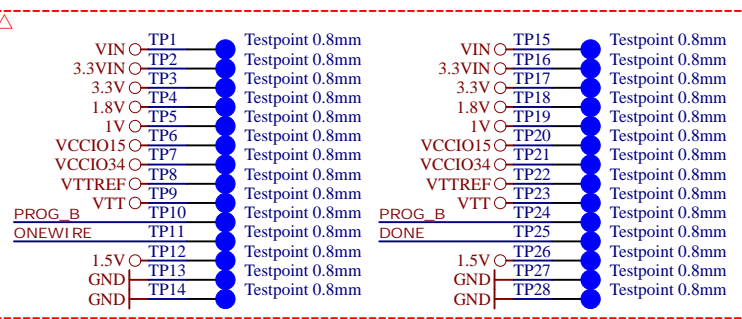
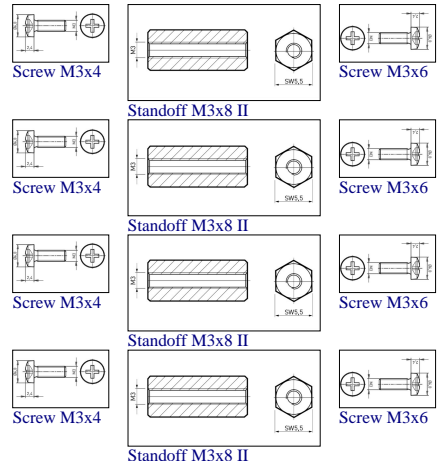
Serialnumber 6,3 x 6.3mm



Special notes:



Top of Board



Assembly variant 42C21-A
 Created by VY
 Modified by MT
 Modified at 2023-05-02



Title: TE0710		
A4	Number: TE0710 42C21-A	Rev. 03
Date: 30-Nov-23	Copyright: Trenz Electronic GmbH / TT	Page 5 of 16
Filename: TE0710.SchDoc		

Dual 10/100 Ethernet Interface
 5 system controller IO Pins; 3.3V VCCIO
 B14: 6 Pins Single ended IO; 3.3V Fixed VCCIO; replacing MIO0 pins on TE0720
 B15: 48 Pins; 24 Differential pairs; variable VCCIO
 B16: 8 Pins; 3 Differential pairs; 3.3V Fixed VCCIO; TE0720 SD Card compatible

Total maximum I/O: 112
 JM1 total I/O: 50
 JM1 total I/O: 62

B34: 50 Pins; 24 Differential pairs; variable VCCIO
 JTAG or IO (4 pins); 3.3V Levels
 B35: 40 DDR3 Pins; DATA (8bits), ADDR (16bits), Clock and CTRL nets; 1.5V Fixed VCCIO
 1 system controller IO Pins; 3.3V VCCIO

A

A

B

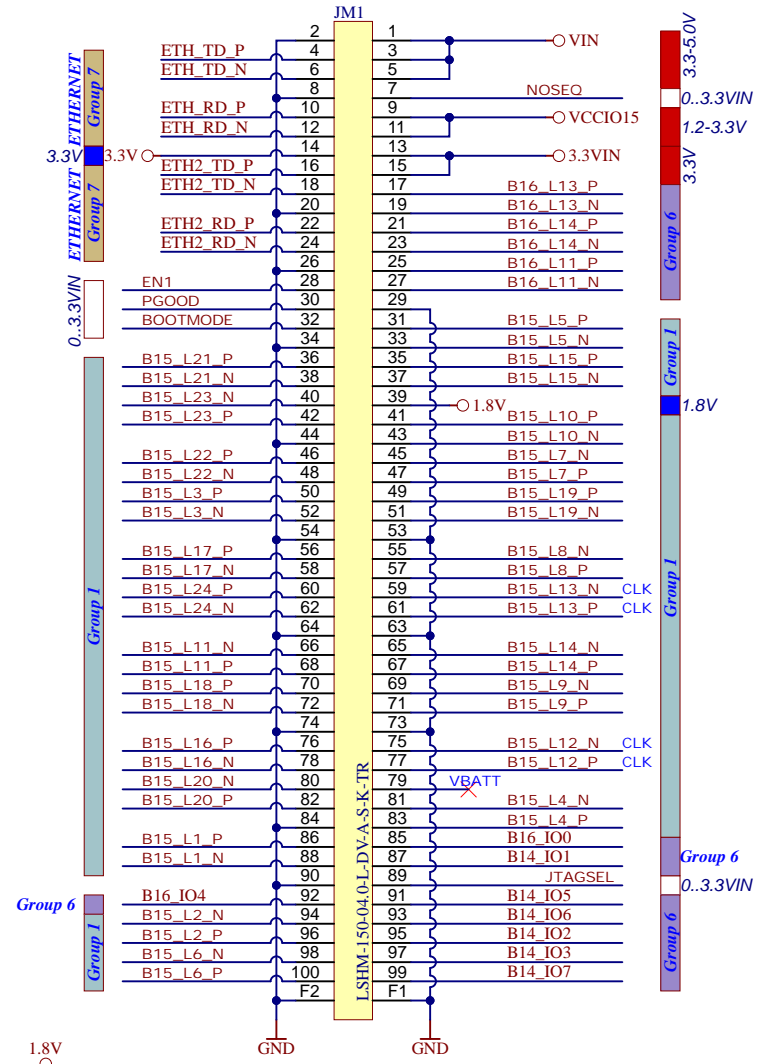
B

C

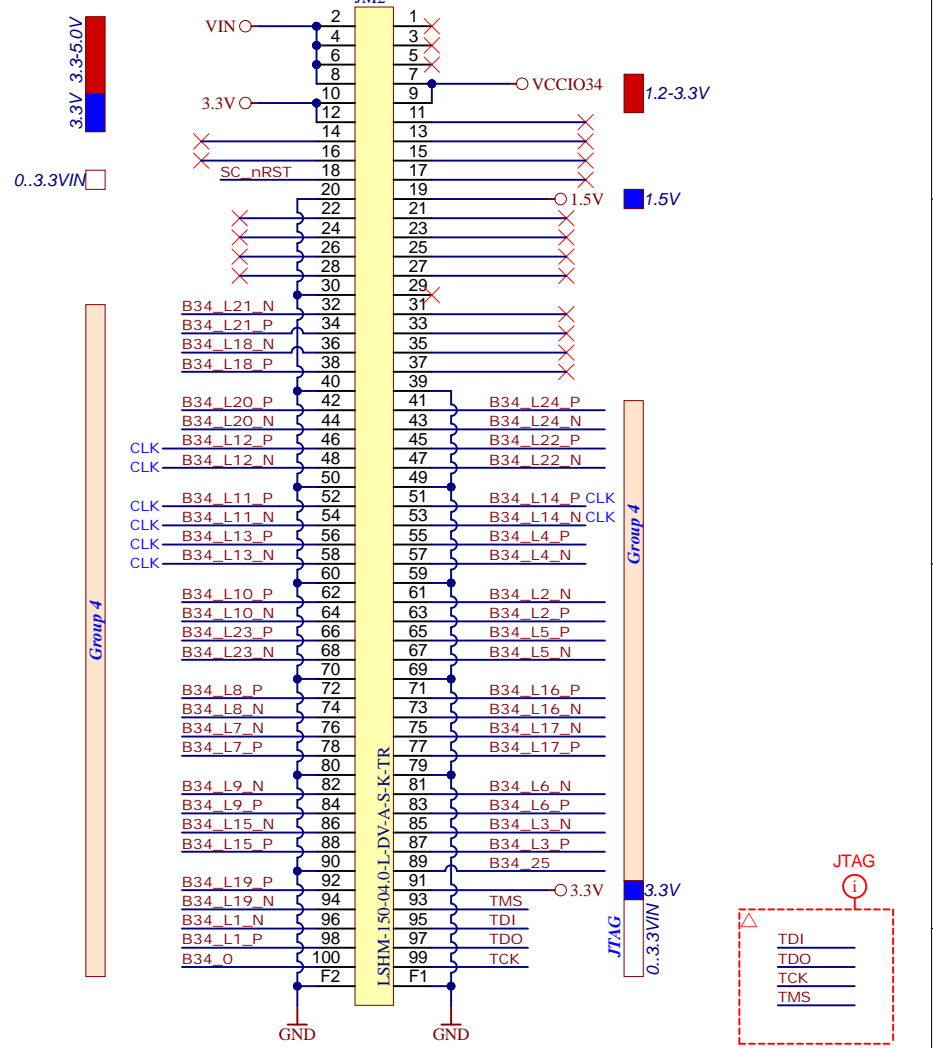
C

D

D

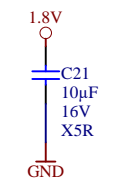


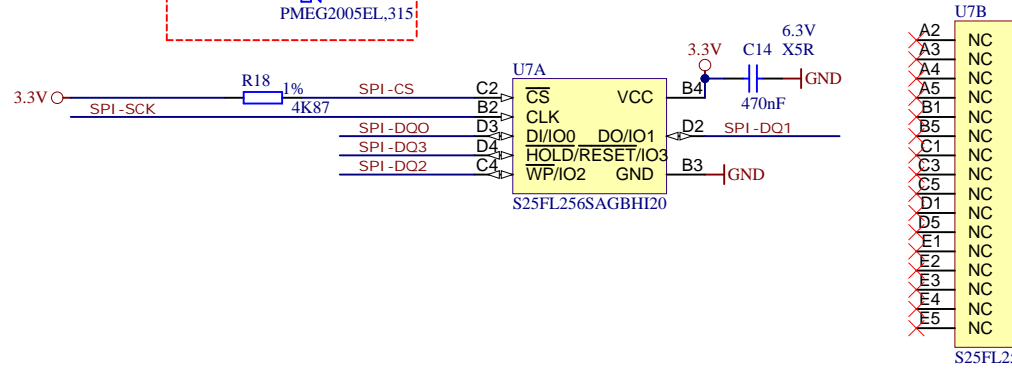
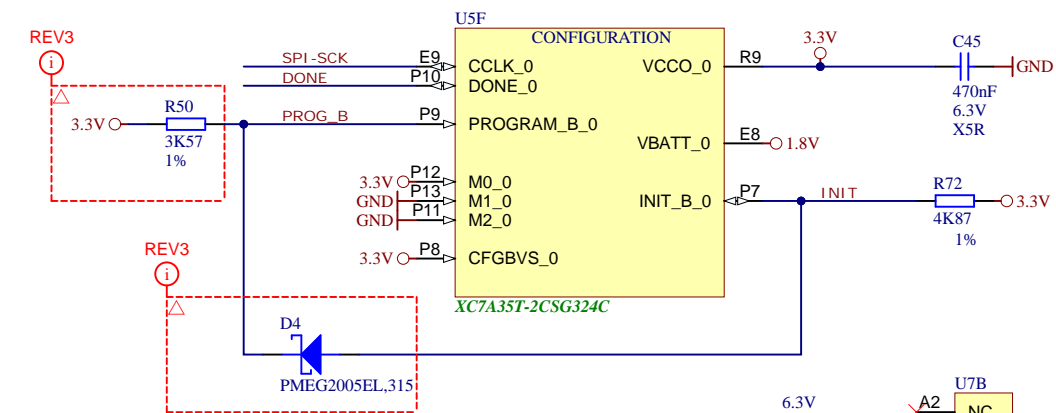
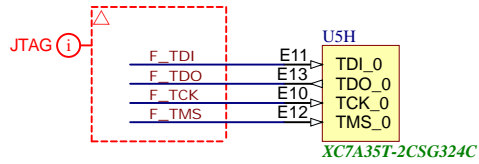
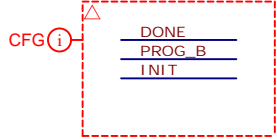
VCCIO14/16	3.3V
VCCIO15	1.2..3.3V
VCCIO34	1.2..3.3V
VCCIO35	1.5V
Group 1	0..VCCIO15
Group 4	0..VCCIO34
Group 6	0..VCCIO14/16
Group 7	ETHERNET
Special	
DDR3	0..VCCIO35
PWR_in	
PWR_out	



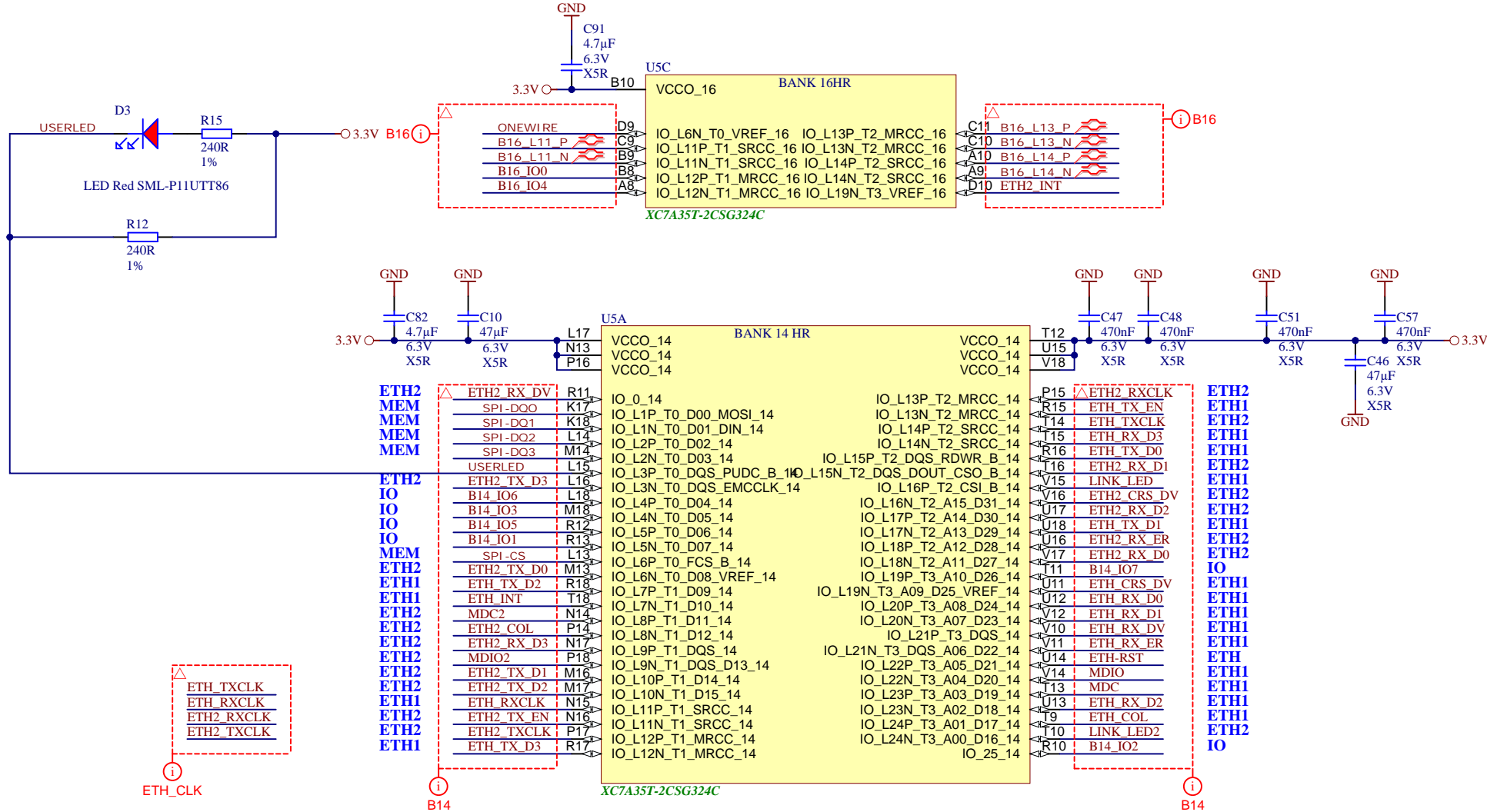
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A4	Number: TE0710 42C21-A	Rev. 03	
Date: 14-Jul-23	Copyright: Trenz Electronic GmbH / TT	Page 6 of 16	
Filename: B2B_Connector.SchDoc			

Some information about Trenz modules compatibility and differences [here](#)

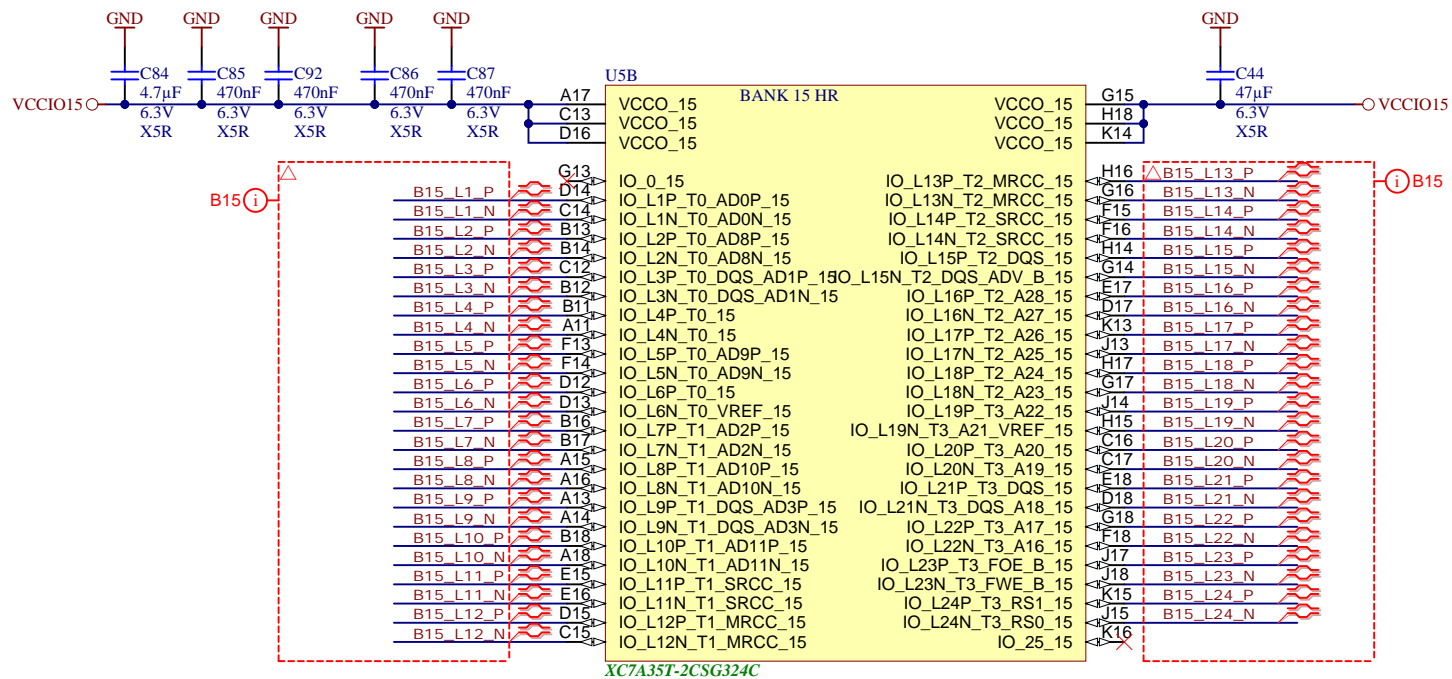




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Date: 22-Aug-23	Copyright: Trenz Electronic GmbH / TT	Page 7 of 16
Filename: FPGA_CFG.SchDoc		



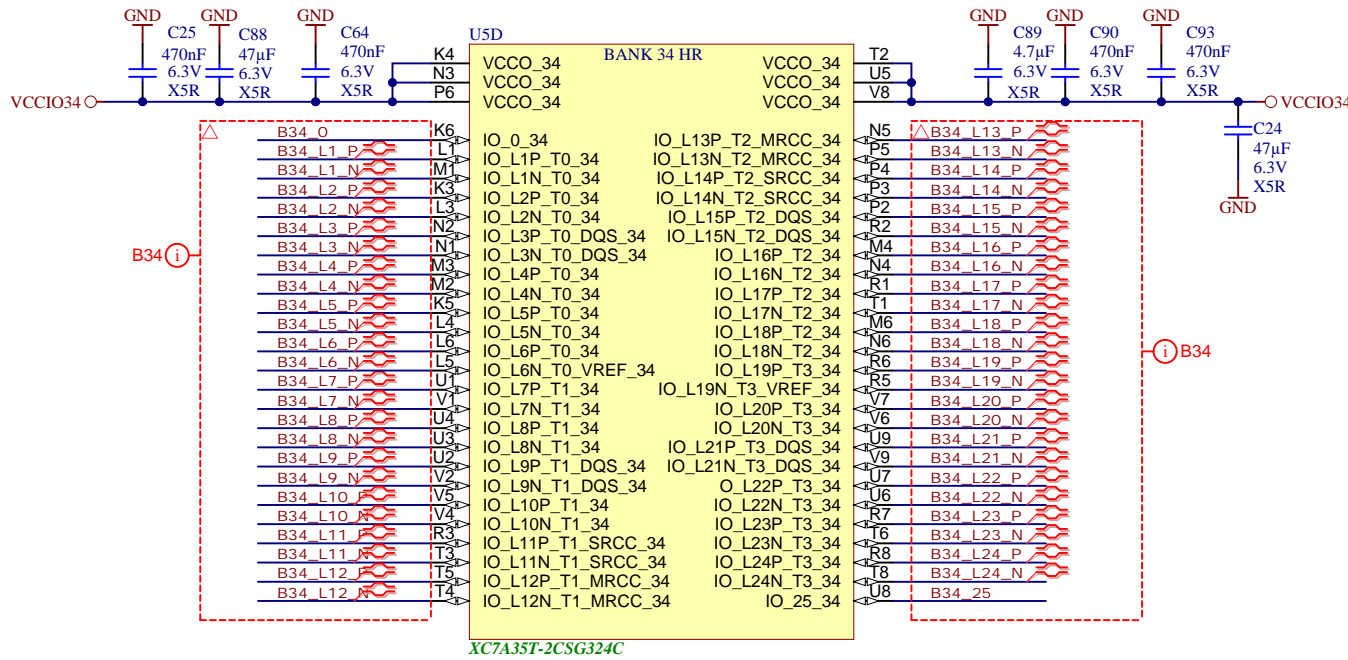
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A4	Number: TE0710 42C21-A	Rev. 03
Date: 22-Aug-23	Copyright: Trenz Electronic GmbH / TT	Page 8 of 16
Filename: B14_B16.SchDoc		



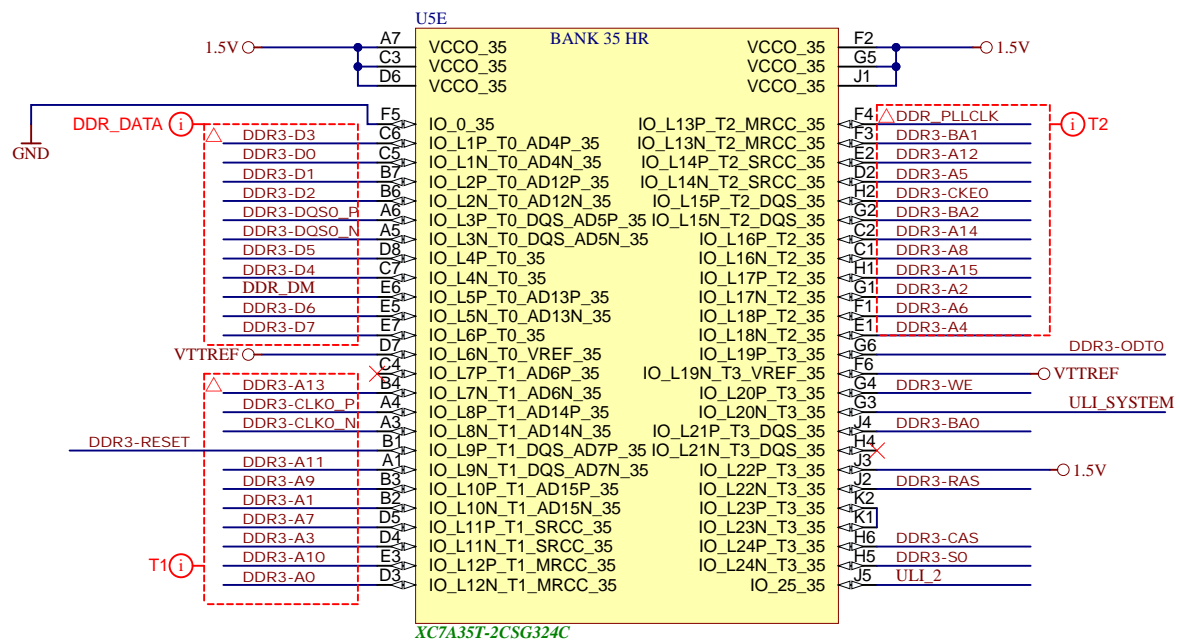
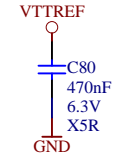
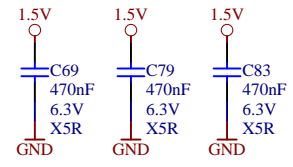
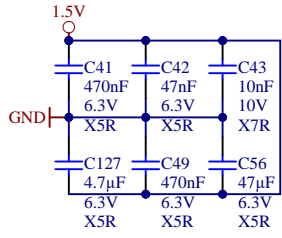
XC7A35T-2CSG324C



Title: TE0710 - FPGA Bank 15		
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Date: 22-Aug-23	Copyright: Trenz Electronic GmbH / TT	Page 9 of 16
Filename: B15.SchDoc		



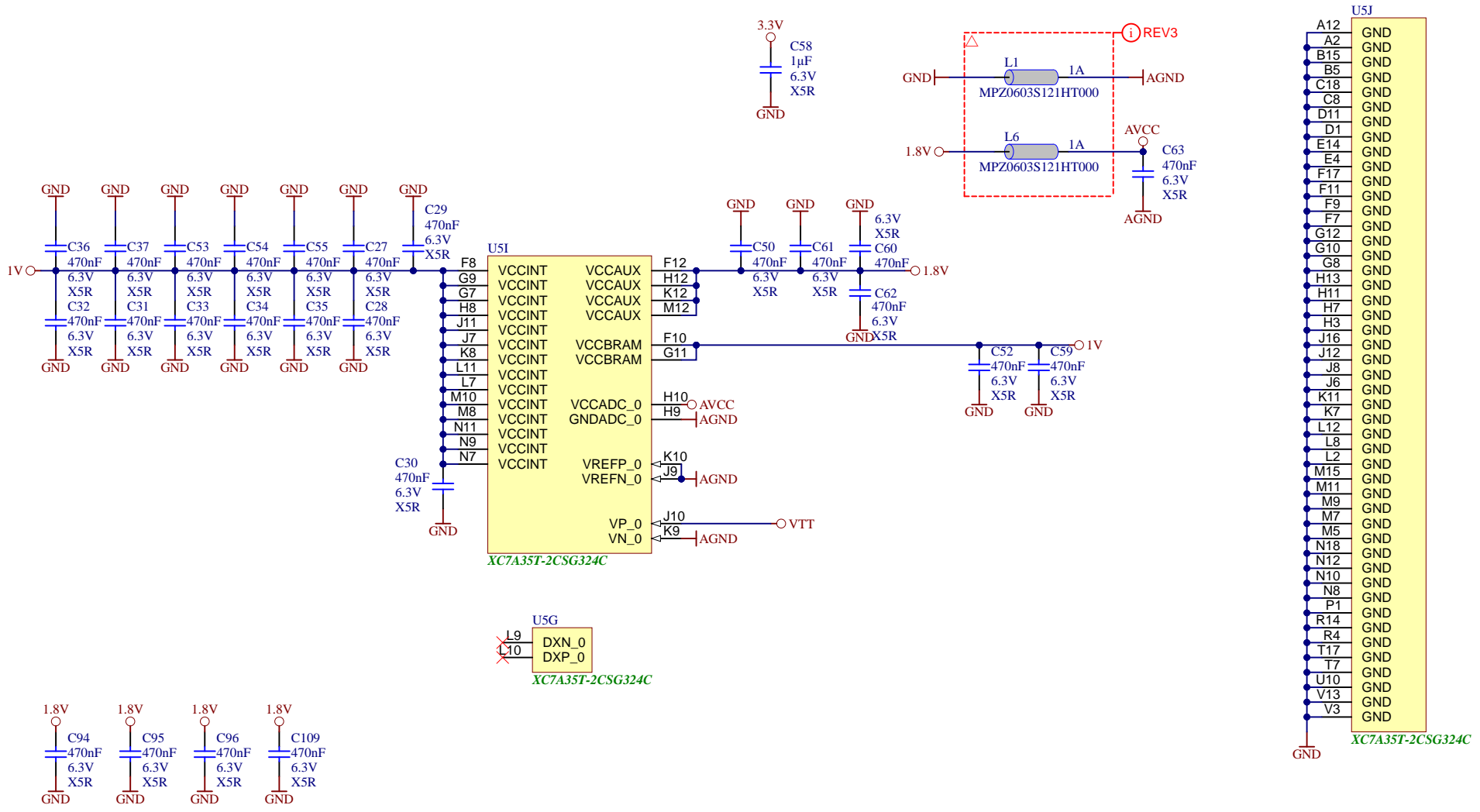
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Date: 22-Aug-23	Copyright: Trenz Electronic GmbH / TT	Page 10 of 16
Filename: B34.SchDoc		




XC7A35T-2CSG324C



Title: TE0710 - FPGA Bank 35 DDR3		
A4	Number: TE0710 42C21-A	Rev. 03
Date: 22-Aug-23	Copyright: Trenz Electronic GmbH / TT	Page 11 of 16
Filename: B35-RAM.SchDoc		



		Title: TE0710 - FPGA PWR	
		A4	Number: TE0710 42C21-A
Date: 14-Jul-23		Copyright: Trenz Electronic GmbH / TT	
Filename: FPGA_PWR_MISC.SchDoc			
Date: 14-Jul-23		Page 12 of 16	

1

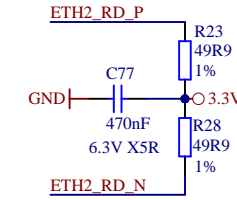
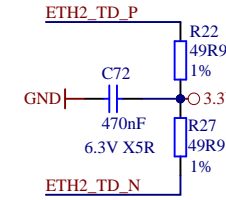
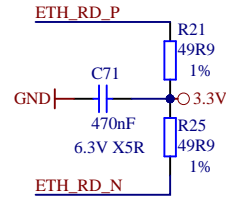
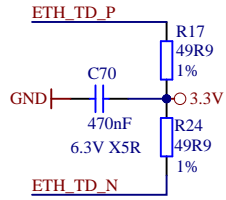
2

3

4

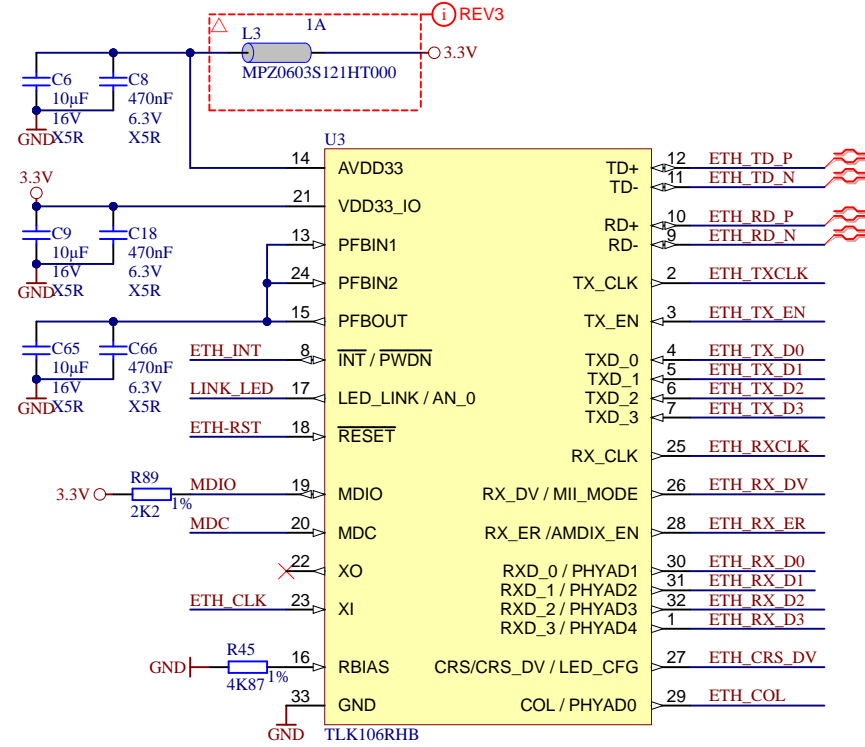
A

A

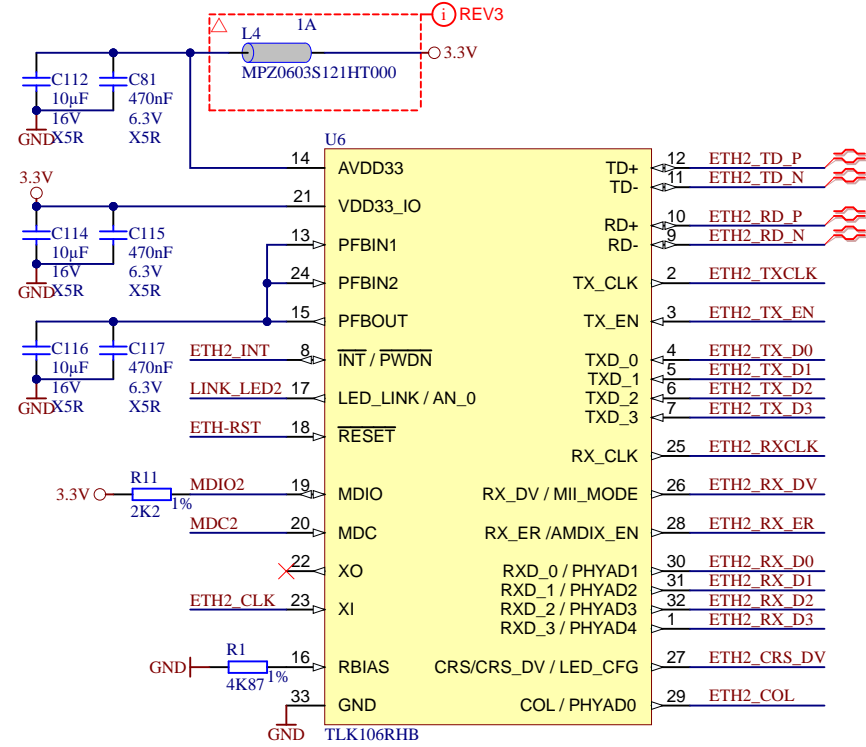


B

B



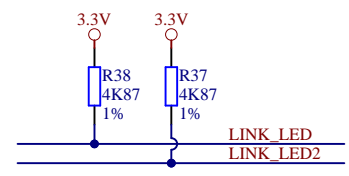
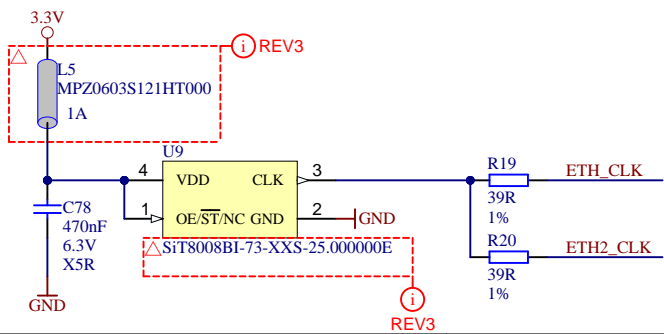
TLK106 is pin compatible with DP83822



TLK106 is pin compatible with DP83822

D

D



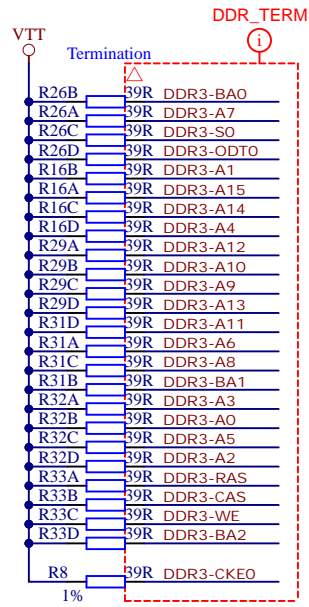
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	Date: 22-Aug-23	Copyright: Trenz Electronic GmbH / TT	Page 13 of 16
	Filename: ETHERNET.SchDoc		

1

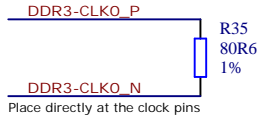
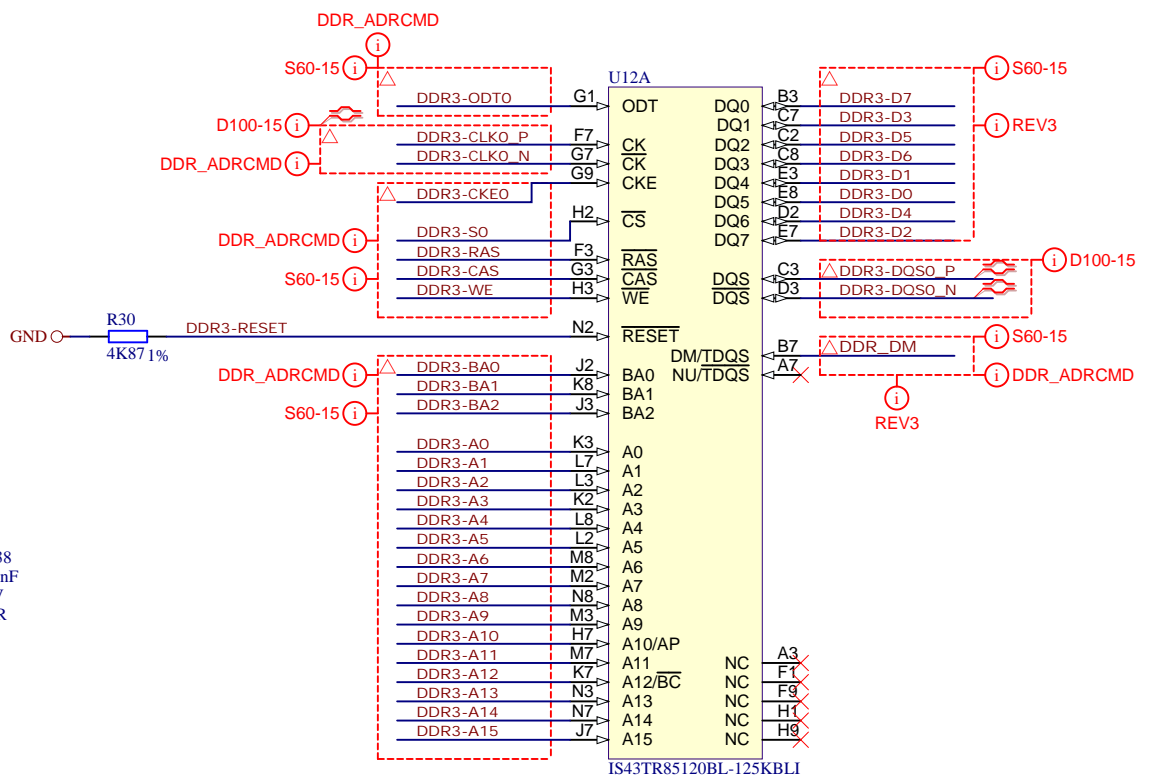
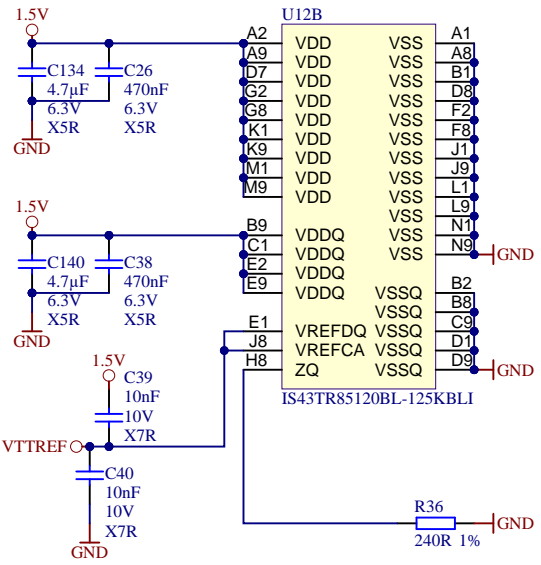
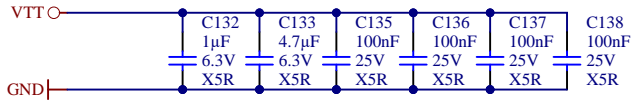
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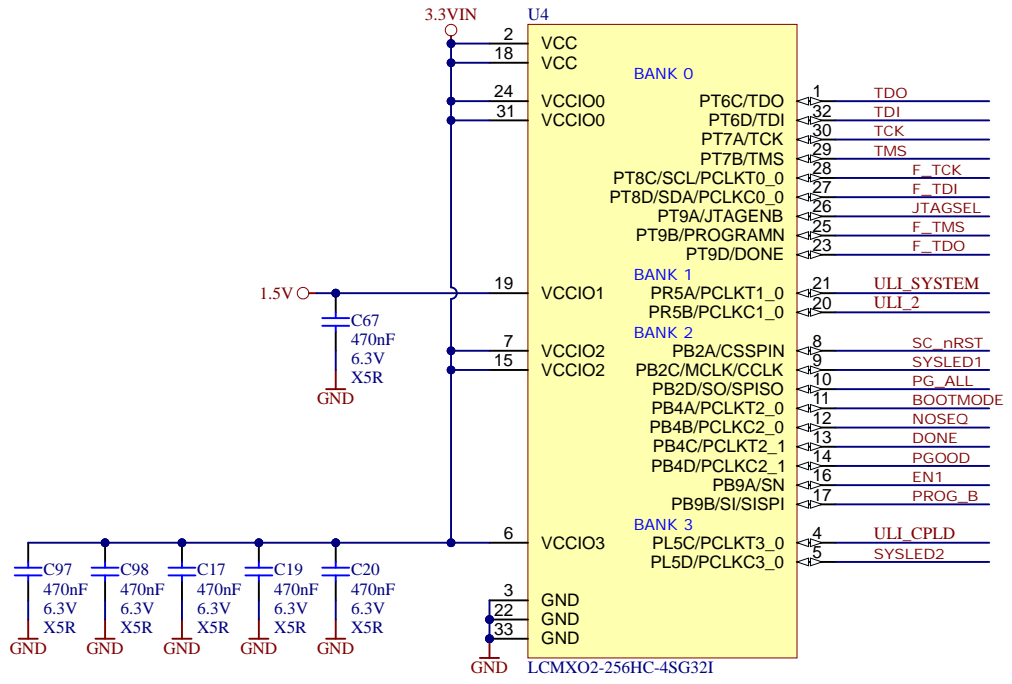
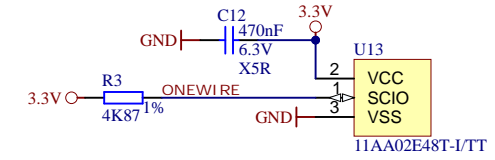
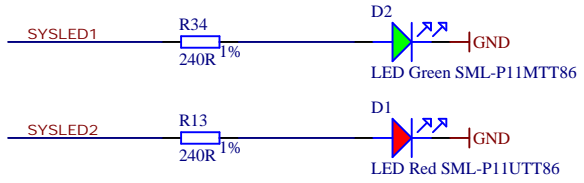
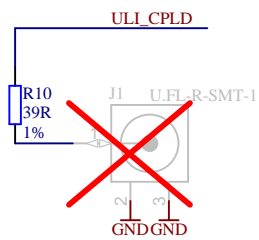
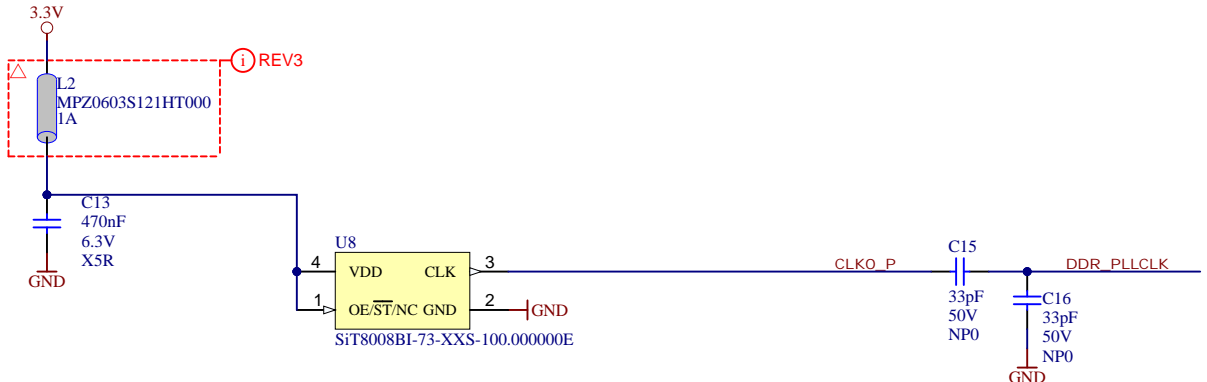
4




Resistors can be swap to better routing

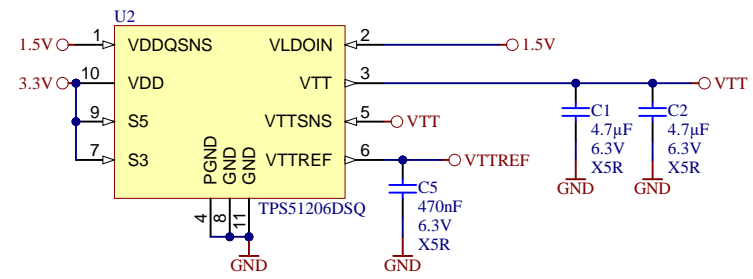
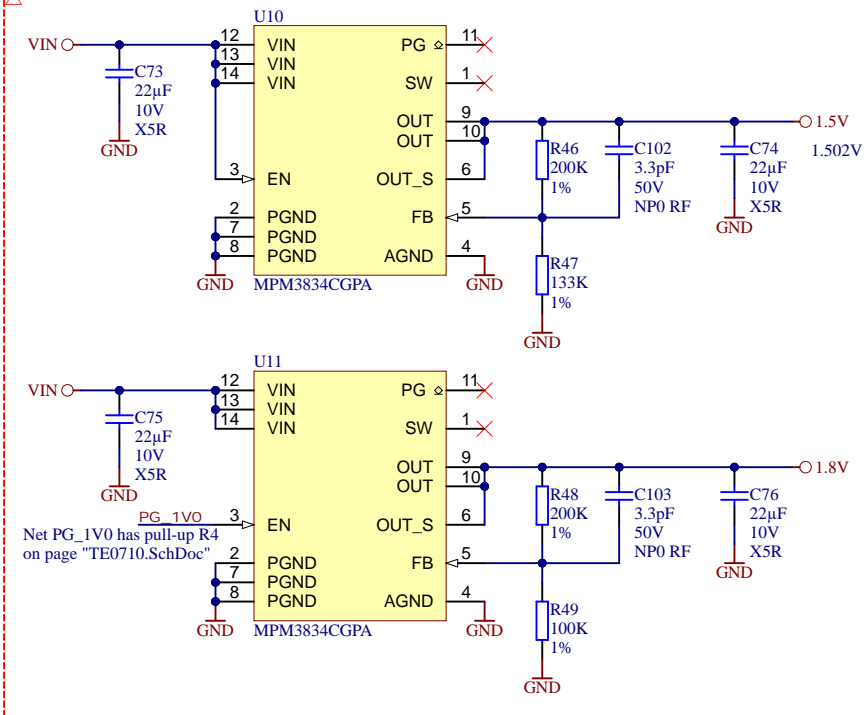


Title: TE0710 - DDR3		
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Date: 22-Aug-23	Copyright: Trenz Electronic GmbH / TT	Page 14 of 16
Filename: DDR3-MEM.SchDoc		



		Title: TE0710 - System Controller	
		A4	Number: TE0710 42C21-A
Date: 22-Aug-23		Copyright: Trenz Electronic GmbH	
Filename: SC.SchDoc		Page 15 of 16	

REV3
i



Title: TE0710 - Power		
A4	Number: TE0710 42C21-A	Rev. 03
Date: 22-Aug-23	Copyright: Trenz Electronic GmbH	Page 16 of 16
Filename: POWER.SchDoc		