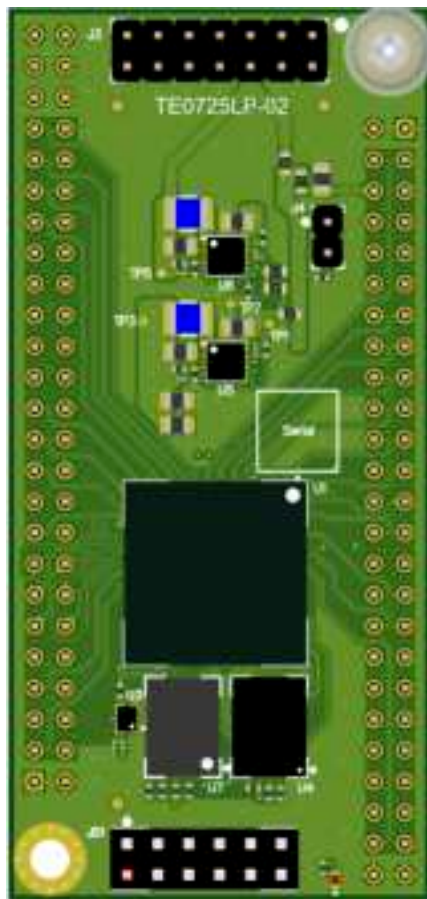




Regarding the usage of our schematics and alike documentation for Trenz module TE0725LP .

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. TE0725LP 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!

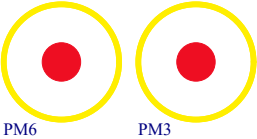
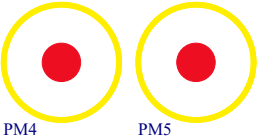
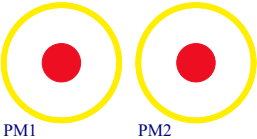
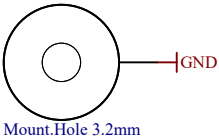
	Title: Legal Notices Modules		
	A4	Number: TE0725LP 72C-A	Rev. 04
	Date: 2023-07-14	Copyright: Trenz Electronic GmbH	Page 1 of 12
	Filename: Legal Notices Modules.SchDoc		

1	2	3	4													
A	<table><tr><th>REV</th><th>Description</th><th></th></tr><tr><td>-01</td><td>Initial revision</td><td></td></tr><tr><td>-02</td><td>1. L1 , L2 , L6 ferrit beads BKP0603HS121-T replaced with MPZ0603S121HT000. 2. Added J4 and R30 (JTAG only Enable). 3. Added Diode D1 for INIT reset. 4. Added Diode D3 for U8 input protection. 5. Added a pull-up resistor R29 on U7B RESET, pin A4. 6. Added a pull-up resistor R31 on SPI_DQ2, pin C4. 7. Added capacitor C22 to avoid false resetting. 8. Resistors R13 , R72 , R29 , R18 , R20 , R31 , R21 , R3 , R9 value 5.6kOhms changed to 2.2kOhms. 9. Resistor R7 10 kOhms replaced with 2.2 kOhms to optimise the voltage divider values. 10. Resistors R4 , R15 value 2kOhms changed to 330Ohms according to AMD specification (UG470). 11. Added a 2.4 kOhm resistor R32 . 12. Capacitor C21 value 47 uF changed to 100 uF, added additional decoupling capacitors C33 , C34 , C35 according to AMD specification (UG 483). 13. Added C24 to improve noise immunity. 14. AVCC power rail filter is improved. C1 connected to 1.8V. 15. Added pages Legal notices, power diagram. 16. Added System Overview. 17. Added testpoints TP1 - TP15 .</td><td>VG (05.08.2024)</td></tr></table>			REV	Description		-01	Initial revision		-02	1. L1 , L2 , L6 ferrit beads BKP0603HS121-T replaced with MPZ0603S121HT000. 2. Added J4 and R30 (JTAG only Enable). 3. Added Diode D1 for INIT reset. 4. Added Diode D3 for U8 input protection. 5. Added a pull-up resistor R29 on U7B RESET, pin A4. 6. Added a pull-up resistor R31 on SPI_DQ2, pin C4. 7. Added capacitor C22 to avoid false resetting. 8. Resistors R13 , R72 , R29 , R18 , R20 , R31 , R21 , R3 , R9 value 5.6kOhms changed to 2.2kOhms. 9. Resistor R7 10 kOhms replaced with 2.2 kOhms to optimise the voltage divider values. 10. Resistors R4 , R15 value 2kOhms changed to 330Ohms according to AMD specification (UG470). 11. Added a 2.4 kOhm resistor R32 . 12. Capacitor C21 value 47 uF changed to 100 uF, added additional decoupling capacitors C33 , C34 , C35 according to AMD specification (UG 483). 13. Added C24 to improve noise immunity. 14. AVCC power rail filter is improved. C1 connected to 1.8V. 15. Added pages Legal notices, power diagram. 16. Added System Overview. 17. Added testpoints TP1 - TP15 .	VG (05.08.2024)	A			
REV	Description															
-01	Initial revision															
-02	1. L1 , L2 , L6 ferrit beads BKP0603HS121-T replaced with MPZ0603S121HT000. 2. Added J4 and R30 (JTAG only Enable). 3. Added Diode D1 for INIT reset. 4. Added Diode D3 for U8 input protection. 5. Added a pull-up resistor R29 on U7B RESET, pin A4. 6. Added a pull-up resistor R31 on SPI_DQ2, pin C4. 7. Added capacitor C22 to avoid false resetting. 8. Resistors R13 , R72 , R29 , R18 , R20 , R31 , R21 , R3 , R9 value 5.6kOhms changed to 2.2kOhms. 9. Resistor R7 10 kOhms replaced with 2.2 kOhms to optimise the voltage divider values. 10. Resistors R4 , R15 value 2kOhms changed to 330Ohms according to AMD specification (UG470). 11. Added a 2.4 kOhm resistor R32 . 12. Capacitor C21 value 47 uF changed to 100 uF, added additional decoupling capacitors C33 , C34 , C35 according to AMD specification (UG 483). 13. Added C24 to improve noise immunity. 14. AVCC power rail filter is improved. C1 connected to 1.8V. 15. Added pages Legal notices, power diagram. 16. Added System Overview. 17. Added testpoints TP1 - TP15 .	VG (05.08.2024)														
B				B												
C				C												
D	 <table><tr><td colspan="3">Title: TE0725LP - Changes list</td></tr><tr><td>A4</td><td>Number: TE0725LP 72C-A</td><td>Rev. 02</td></tr><tr><td>Date: 2023-07-14</td><td>Copyright: Trenz Electronic GmbH</td><td>Page2 of 12</td></tr><tr><td colspan="3">Filename: Revision_Changes.SchDoc</td></tr></table>			Title: TE0725LP - Changes list			A4	Number: TE0725LP 72C-A	Rev. 02	Date: 2023-07-14	Copyright: Trenz Electronic GmbH	Page2 of 12	Filename: Revision_Changes.SchDoc			D
Title: TE0725LP - Changes list																
A4	Number: TE0725LP 72C-A	Rev. 02														
Date: 2023-07-14	Copyright: Trenz Electronic GmbH	Page2 of 12														
Filename: Revision_Changes.SchDoc																
1	2	3	4													

U_FPGA_PWR_MISC
FPGA_PWR_MISC.SchDoc

Power_Diagram
Power_Diagram.SchDoc

U_PowerSupply
POWER.SchDoc



Serial
Serialnumber 6,3 x 6.3mm

RoHS1
RoHS-TOPOVERLAY
RoHS Logo on Top Overlay

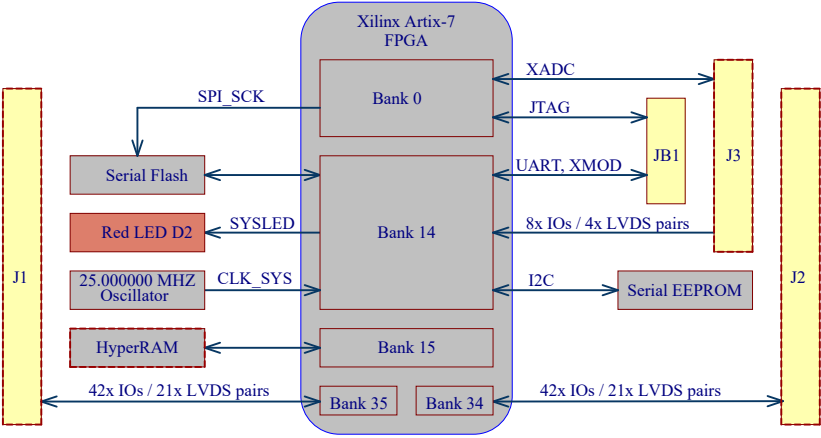
UKCA
UKCA-TOPOVERLAY
UKCA Logo on Top Overlay

MECH1
TE Address Overlay

LOGO ADDRESS
LOGO1
TE Logo PRINT Layer

LOGO PRINT
CE
CE Logo on Top Overlay
CE-TOPOVERLAY

System Overview



Drawn by	VG
Checked by	MT
Assembly variant	72C-A
Created by	
Modified by	
Modified at	



Title: TE0725LP - Overview		
A4	Number: TE0725LP 72C-A	Rev. 02
Date: 2023-07-14	Copyright: Trenz Electronic GmbH	Page3 of 12
Filename: TE0725LP.SchDoc		

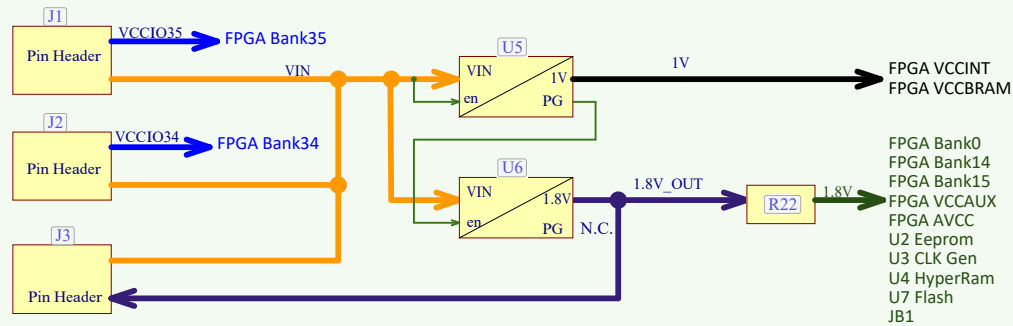
1

2

3

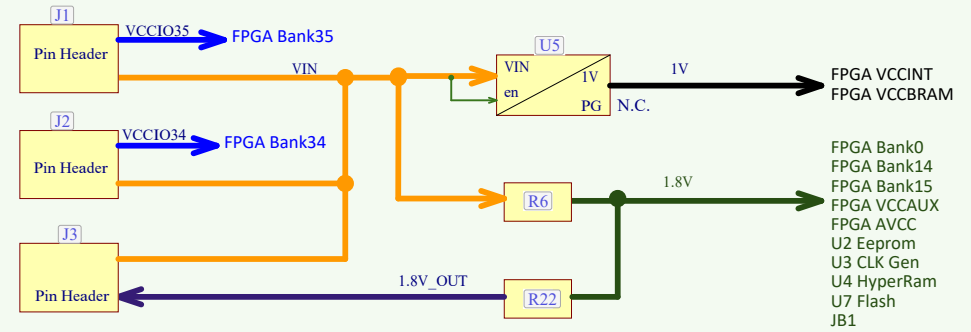
4

Power-on sequencing: VIN = 3.3V



Depends on assembly option

Power-on sequencing: VIN = 1.8V



Depends on assembly option

Supported Voltage Ranges:

Power Rail	Direction	Range	Tolerance	Description	Note
VIN	IN	3.3V / 1.8V	+/-3%	Micromodule Power	J1, J2, J3
1.8V_OUT	OUT	1.8V	+/-3%	Power supply for external use	J3
VCCIO35	IN	1.8V ... 3.3V	+/-3%	Power of Bank 35	J1
VCCIO34	IN	1.8V ... 3.3V	+/-3%	Power of Bank 34	J2

Programmable Logic, supplied by power rail

Low-Power Domain, supplied by power rail

EN_GT_R

Net name

Power bus

Control signal



Power converter



Title:

Power Diagram

A4

Number: TE0725LP
72C-ARev.
02

Date: 2023-07-14

Copyright: Trenz Electronic GmbH

Page4 of 12

Filename:

Power_Diagram.SchDoc

1

2

3

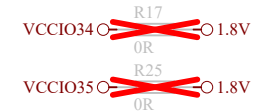
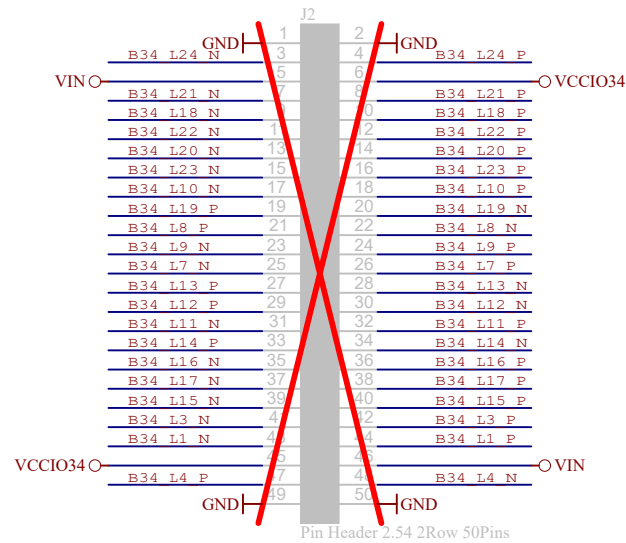
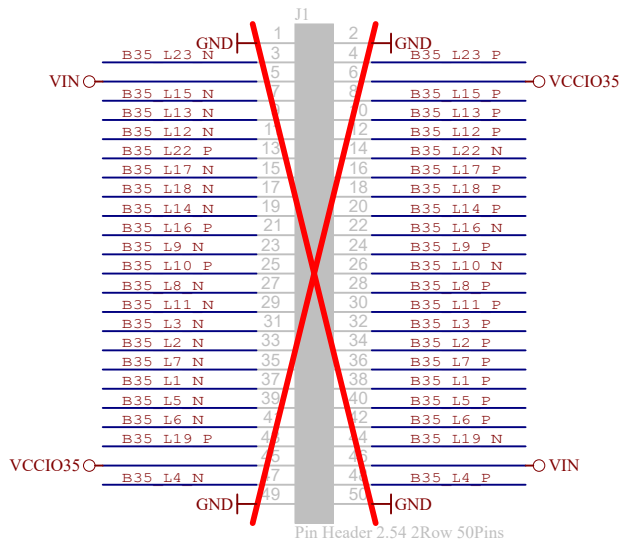
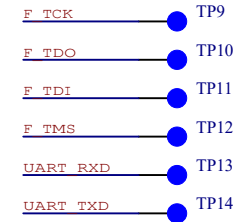
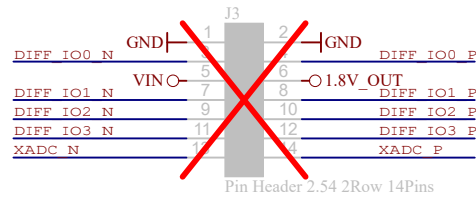
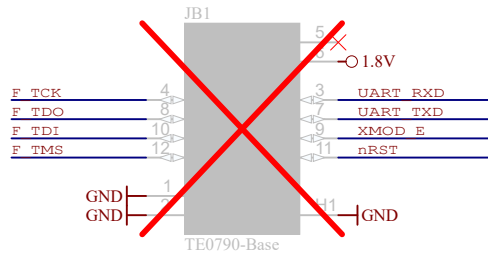
4

1

2

3

4



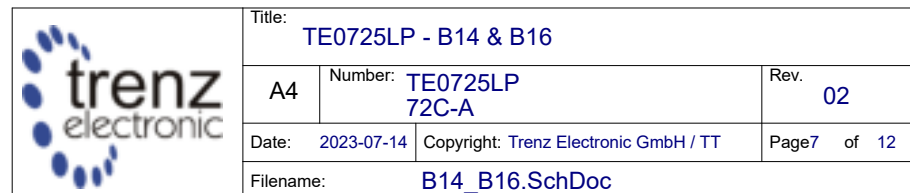
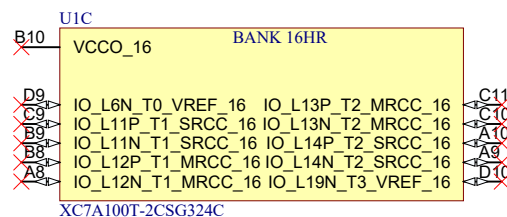
Title: TE0725LP - B2B Connectors			
A4	Number: TE0725LP 72C-A	Rev. 02	
Date: 2023-07-14	Copyright: Trenz Electronic GmbH / TT	Page5 of 12	
Filename: B2B_Connector.SchDoc			

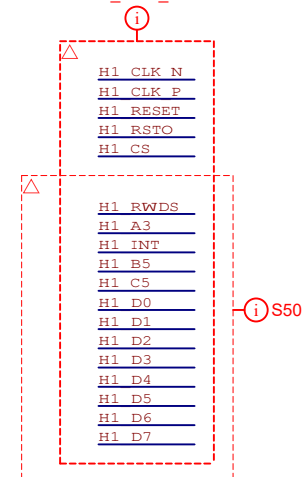
1

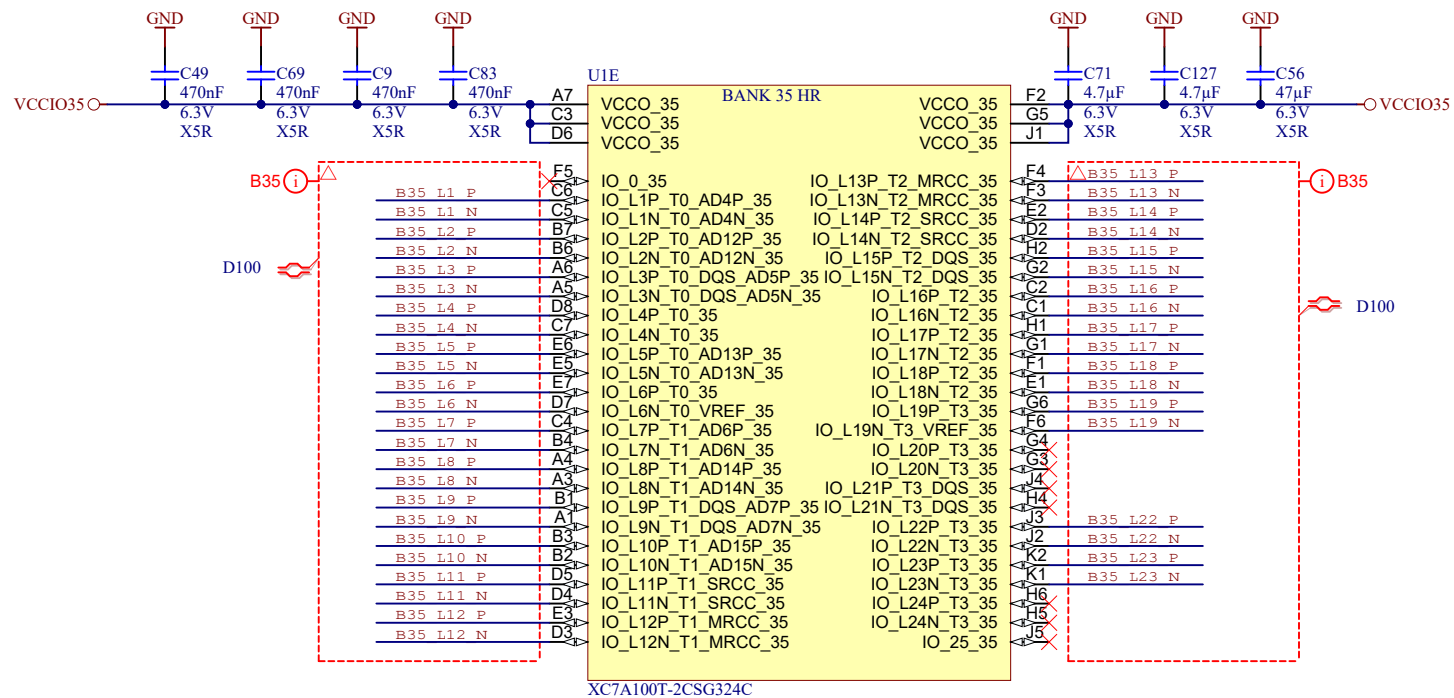
2

3

4

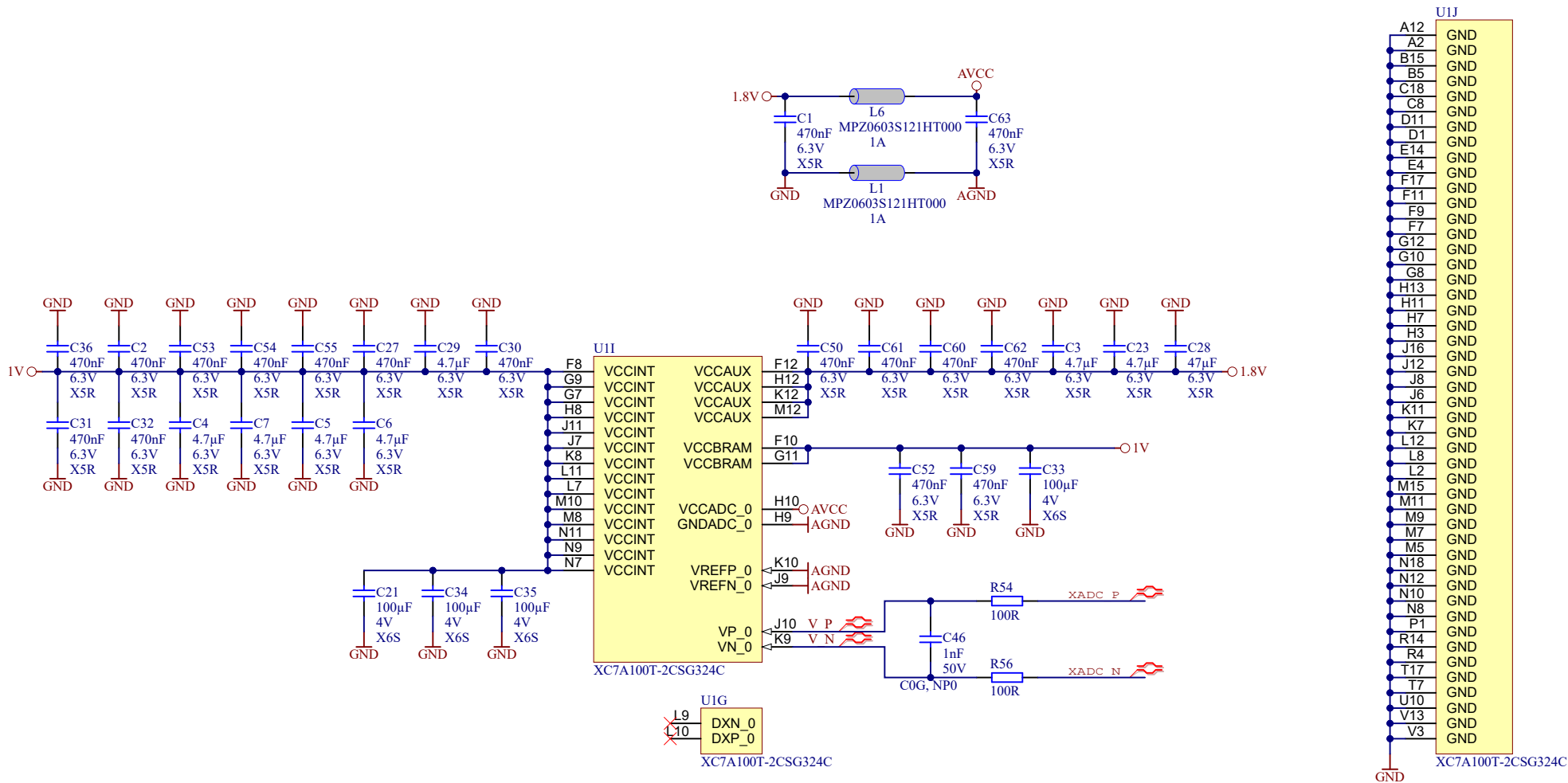




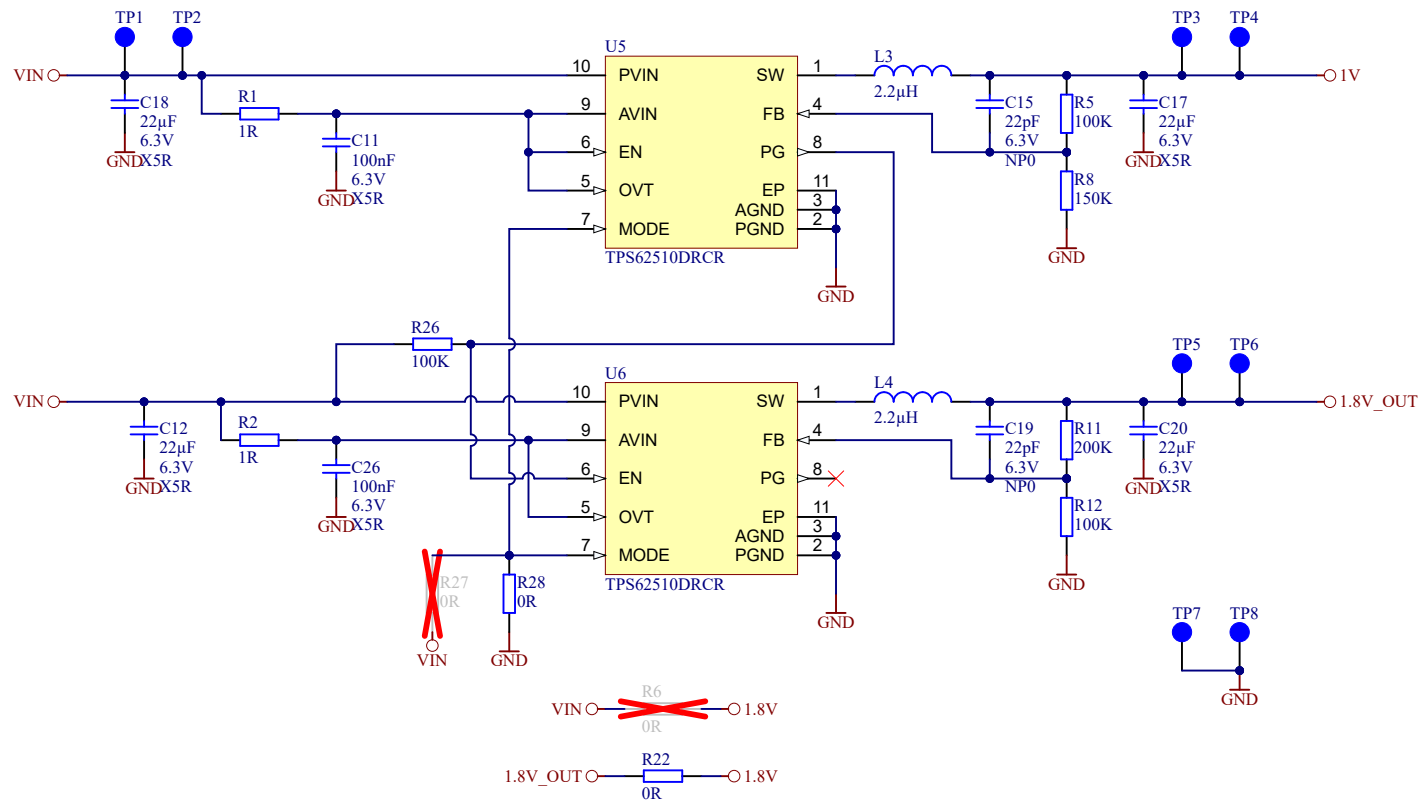


Title: TE0725LP - B35			
A4	Number: TE0725LP 72C-A		Rev. 02
	Date: 2023-07-14	Copyright: Trenz Electronic GmbH / TT	Page10 of 12
Filename: B35.SchDoc			





		Title: TE0725LP - FPGA PWR MISC	
		A4	Rev. 02
Date:	2023-07-14	Copyright: Trenz Electronic GmbH / TT	Page 11 of 12
Filename:		FPGA_PWR_MISC.SchDoc	



	Title: TE0725LP - POWER		
	A4	Number: TE0725LP 72C-A	Rev. 02
	Date: 2023-07-14	Copyright: Trenz Electronic GmbH	Page12 of 12
	Filename: POWER.SchDoc		