

Image is for illustrative purposes only

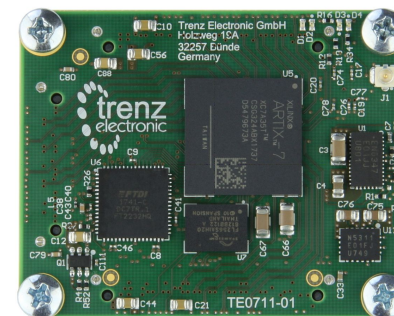


Image is for illustrative purposes only

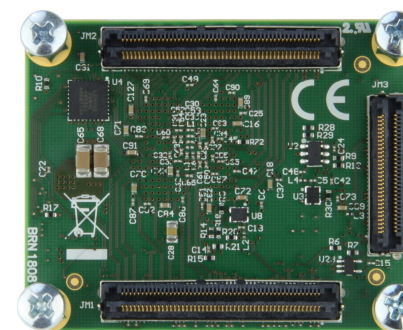



Image is for illustrative purposes only

Regarding the usage of our schematics and alike documentation for Trenz module TE0711.

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. TE0711 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>TE0711 - Legal Notices Modules</b>		
	A4	Number: <b>TE0711 72I-1-A</b>	Rev. <b>02</b>
	Date: <b>25-Jul-23</b>	Copyright: <b>Trenz Electronic GmbH</b>	Page <b>1</b> of <b>15</b>
	Filename: <b>Legal_Notices.SchDoc</b>		

1

2

3

4

A

A

B

B


C

C

D

D

REV	Description	
-01	Initial revision	
-02	1) Pages "Legal_Notices.SchDoc", "Revision_Changes.SchDoc", "Overview.SchDoc" and "Power_Diagram.SchDoc" were added 2) Signal groups tables and colors were added on page "B2B_Connector.SchDoc" 3) <a href="#">L1</a> - <a href="#">L6</a> were replaced from BKP0603HS121-T to MPZ0603S121HT000 4) All SCH and PCB components were updated 5) Fiducials were updated 6) Serial number was updated 7) <a href="#">D5</a> was added 8) <a href="#">U1</a> was updated from EN6347QI to MPM3860GQW-Z 9) <a href="#">Q1</a> was updated from TPS27082LDDCR to MP5077GG-Z 10) <a href="#">U11</a> was updated from EN5311QI to MPM3834CGPA 11) <a href="#">U23</a> was updated from TPS3805H33DCKR to STM6710LWB6F 12) <a href="#">R25</a> pullup was added 13) <a href="#">TP1</a> - <a href="#">TP19</a> were added 14) UKCA and CE logos were added 15) Fiducials on top and bottom were moved to same positions 16) <a href="#">R15</a> was changed from 2.2k to 470R 17) <a href="#">R22</a> was added 18) PCB net lengths were changed to improve routing	MT

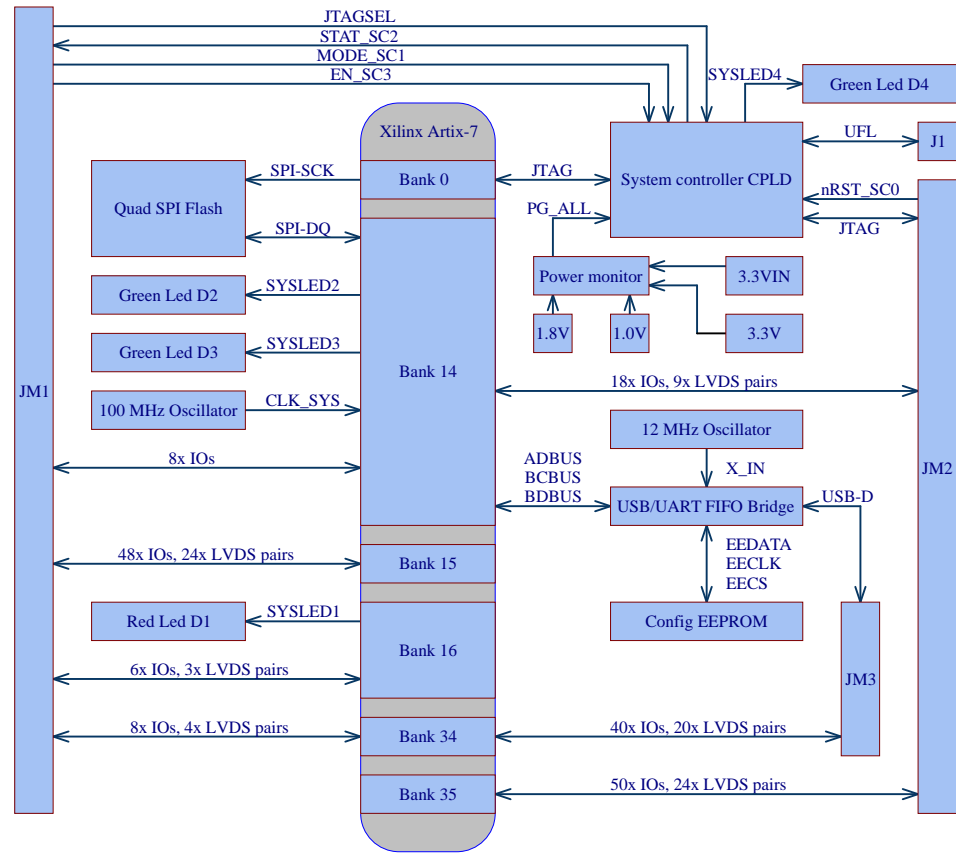
	Title: <b>TE0711 - Changes list</b>		
	A4	Number: <b>TE0711 72I-1-A</b>	Rev. <b>02</b>
	Date: <b>04-Sep-23</b>	Copyright: <b>Trenz Electronic GmbH</b>	Page <b>2</b> of <b>15</b>
	Filename: <b>Revision_Changes.SchDoc</b>		


1

2

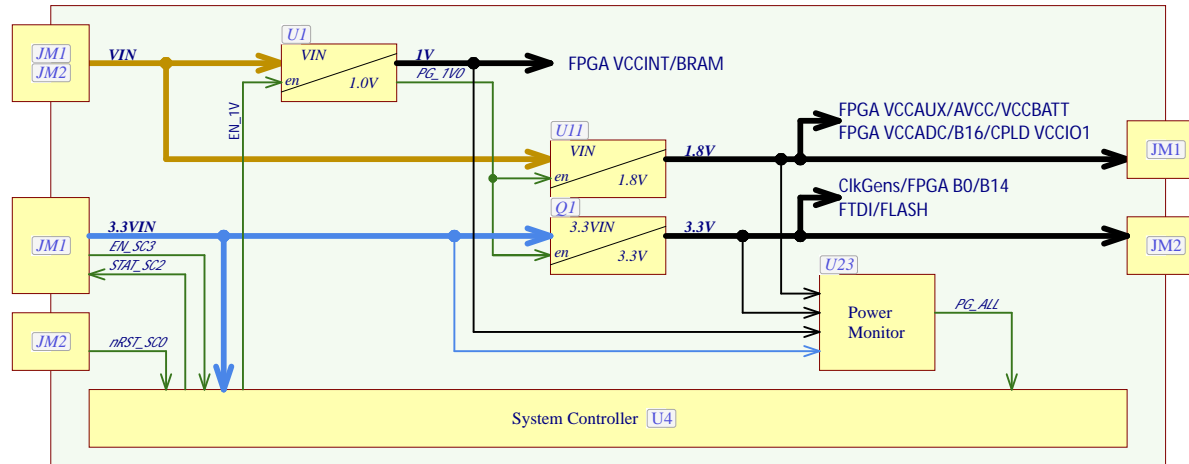
3

4



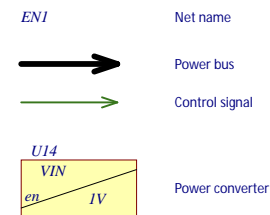
		Title: TE0711 - System Overview	
		A4	Number: TE0711 72I-1-A
Date: 23-Aug-23		Copyright: Trenz Electronic GmbH	
Date: 23-Aug-23		Page 3 of 15	
Filename: Overview.SchDoc			

## 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	-
VCCIO35	IN	1.2 - 3.3V	+/-3%	HR IO Bank35	-
3.3V	OUT	3.3V	+/-5%	Power for Carrier	-
1.8V	OUT	1.8V	+/-3%	Power for Carrier	-



Title: <b>TE0711 - Power Diagram</b>		
A4	Number: <b>TE0711 72I-1-A</b>	Rev. <b>02</b>
Date: <b>23-Aug-23</b>	Copyright: <b>Trenz Electronic GmbH</b>	Page <b>4</b> of <b>15</b>
Filename: <b>Power_Diagram.SchDoc</b>		

U\_FPGA\_PWR\_MISC  
FPGA\_PWR\_MISC.SchDoc

U\_FPGA\_CFG  
FPGA\_CFG.SchDoc

U\_B14\_B16  
B14\_B16.SchDoc

U\_B15  
B15.SchDoc

U\_B34  
B34.SchDoc

U\_B35  
B35.SchDoc

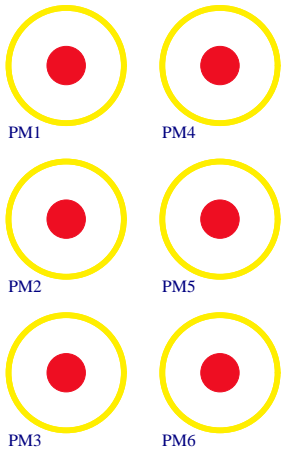
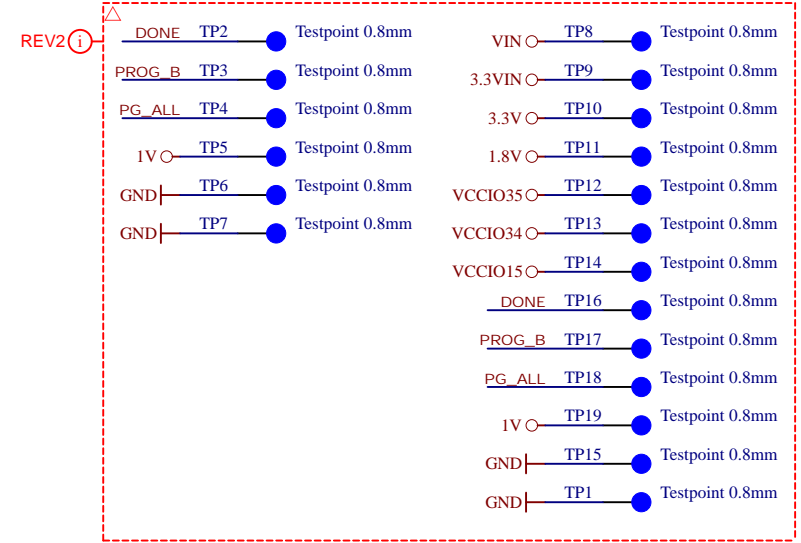
U\_SystemController  
SystemController.SchDoc

U\_FTDI  
FTDI.SchDoc

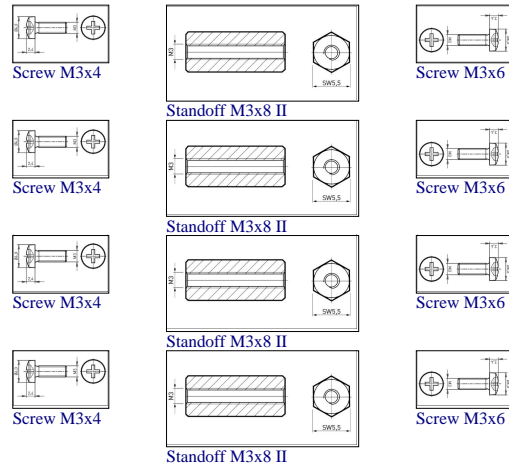
U\_POWER  
POWER.SchDoc

U\_B2B\_Connector  
B2B\_Connector.SchDoc

Special notes:



Top of Board



Serial  
Serialnumber 6,3 x 6.3mm

LOGO1  
TE Logo PRINT Layer

LOGO PRINT

UKCA1  
UKCA Logo on Top Overlay

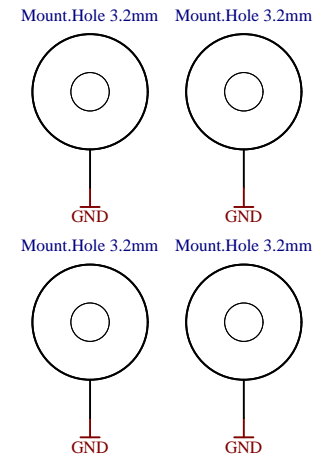
UKCA-TOPOVERLAY

CE1  
CE Logo on Top Overlay

CE-TOPOVERLAY



Title: TE0711		
A4	Number: TE0711 72I-1-A	Rev. 02
Date: 04-Aug-23	Copyright: Trenz Electronic GmbH / TT	Page 5 of 15
Filename: TE0711.SchDoc		



B14: 8 Pins: 8 Single ended; 3.3V Fixed VCCIO  
 B15: 48 Pins: 24 Differential; variable VCCIO  
 B16: 6 Pins: 3 Differential; 1.8V Fixed VCCIO  
 B34: 8 Pins: 4 Differential; variable VCCIO

B34: 40 Pins: 20 Differential; variable VCCIO  
 USB Device

B14: 18 Pins: 9 Differential; 3.3V Fixed VCCIO  
 B35: 50 Pins: 24 Differential; variable VCCIO  
 JTAG: 3.3V Levels

A

A

B

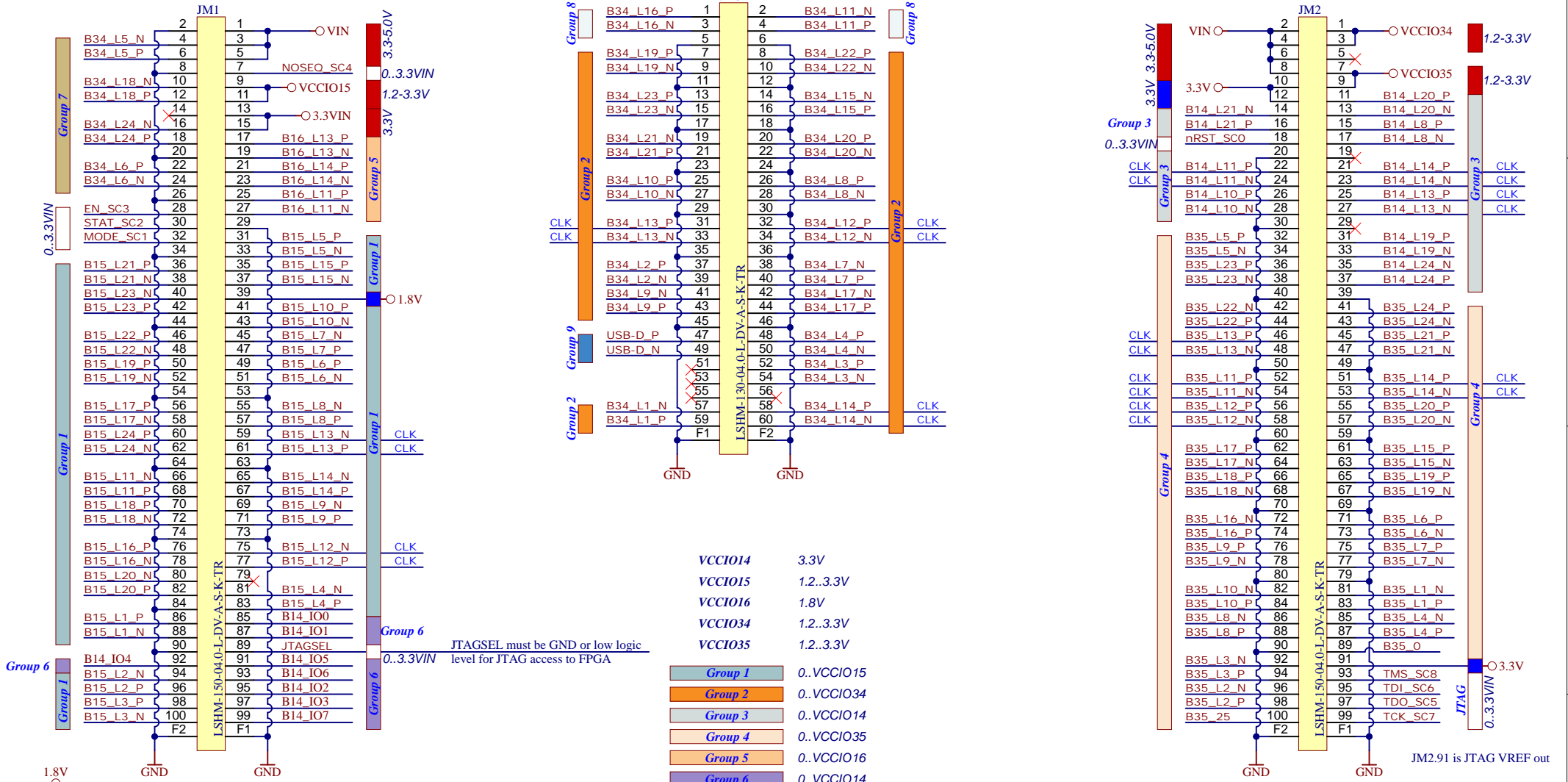
B

C

C

D

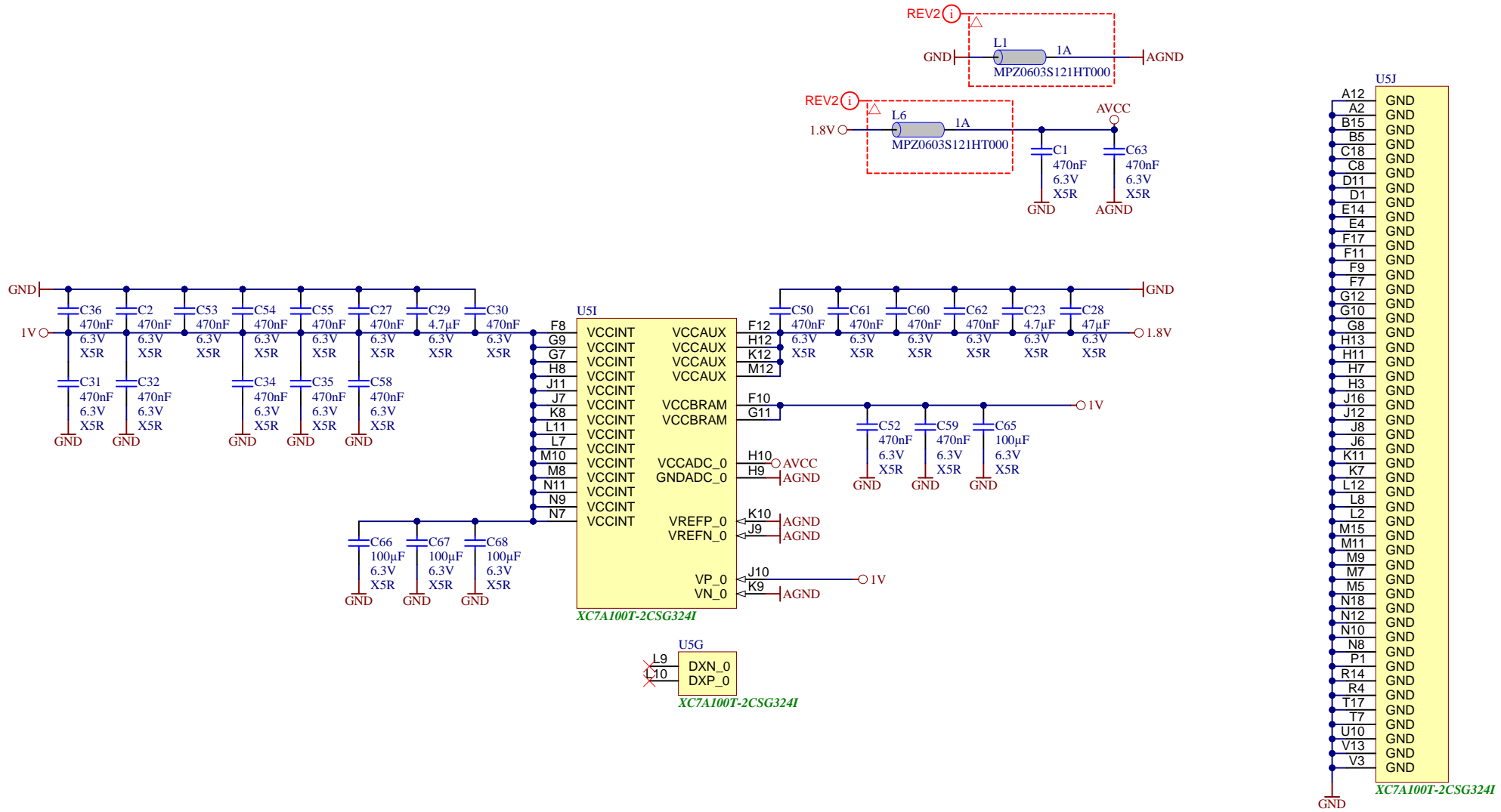
D



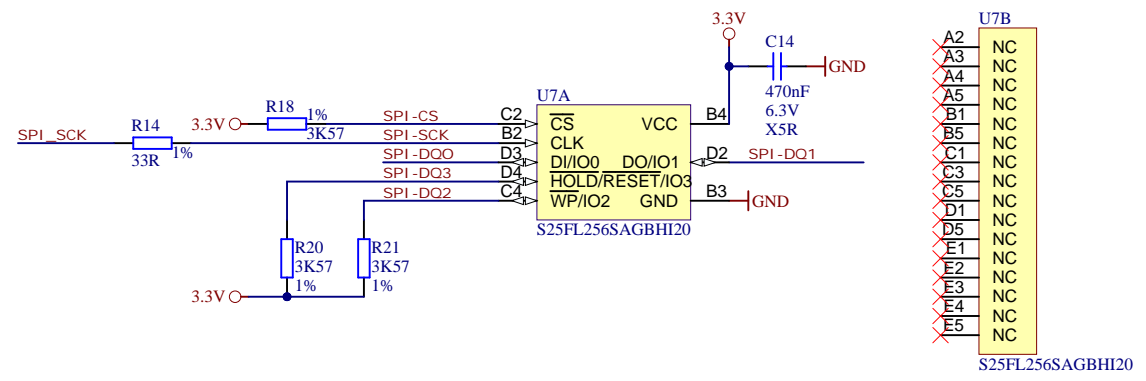
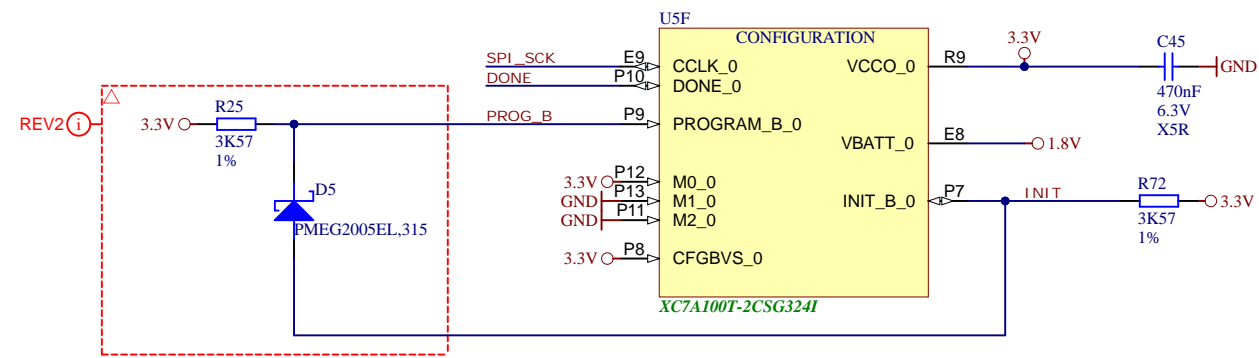
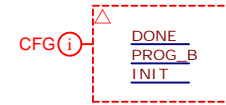
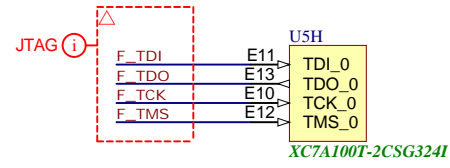
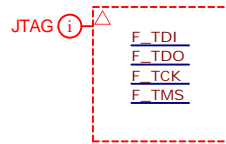
- VCCIO14 3.3V
- VCCIO15 1.2..3.3V
- VCCIO16 1.8V
- VCCIO34 1.2..3.3V
- VCCIO35 1.2..3.3V
- Group 1 0..VCCIO15
- Group 2 0..VCCIO34
- Group 3 0..VCCIO14
- Group 4 0..VCCIO35
- Group 5 0..VCCIO16
- Group 6 0..VCCIO14
- Group 7 0..VCCIO34
- Group 8 0..VCCIO34
- Group 9 USB\_OTG
- Special PWR\_in
- Special PWR\_out



Title: TE0711 - B2B-Connectors		
A4	Number: TE0711 72I-1-A	Rev. 02
Date: 23-Aug-23	Copyright: Trenz Electronic GmbH / TT	Page 6 of 15
Filename: B2B_Connector.SchDoc		

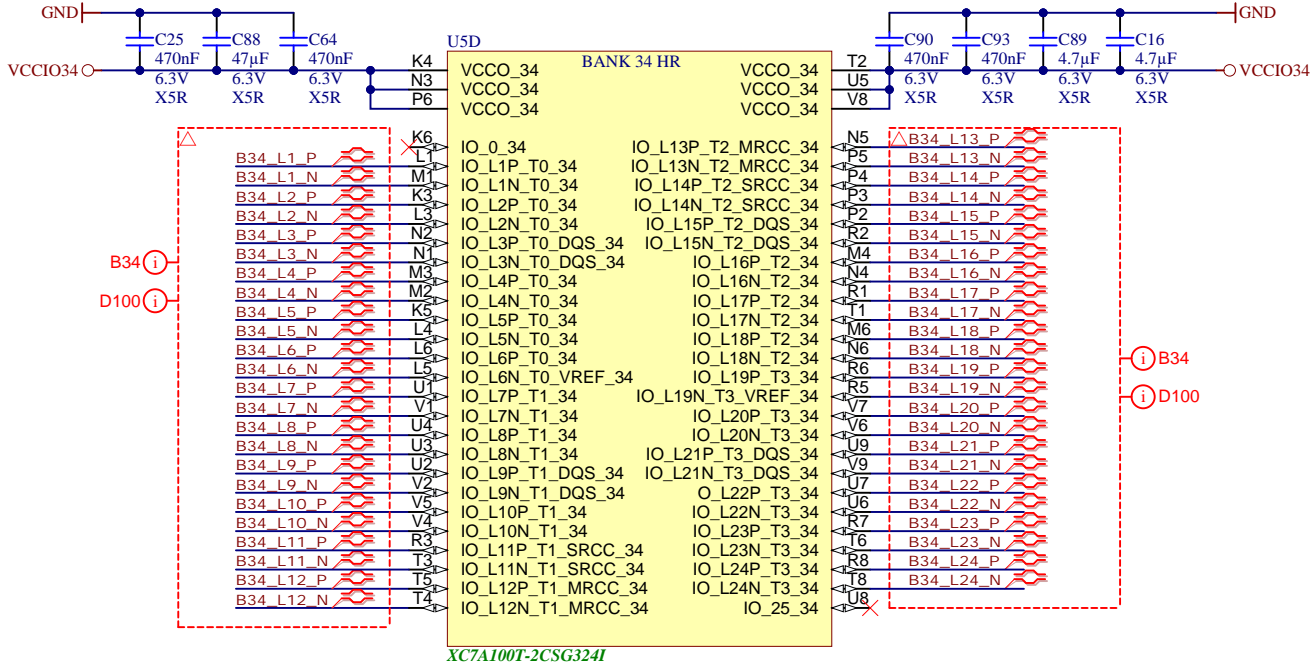


Title: TE0711 - FPGA PWR		
A4	Number: TE0711 72I-1-A	Rev. 02
Date: 27-Jul-23	Copyright: Trenz Electronic GmbH / TT	Page 7 of 15
Filename: FPGA_PWR_MISC.SchDoc		

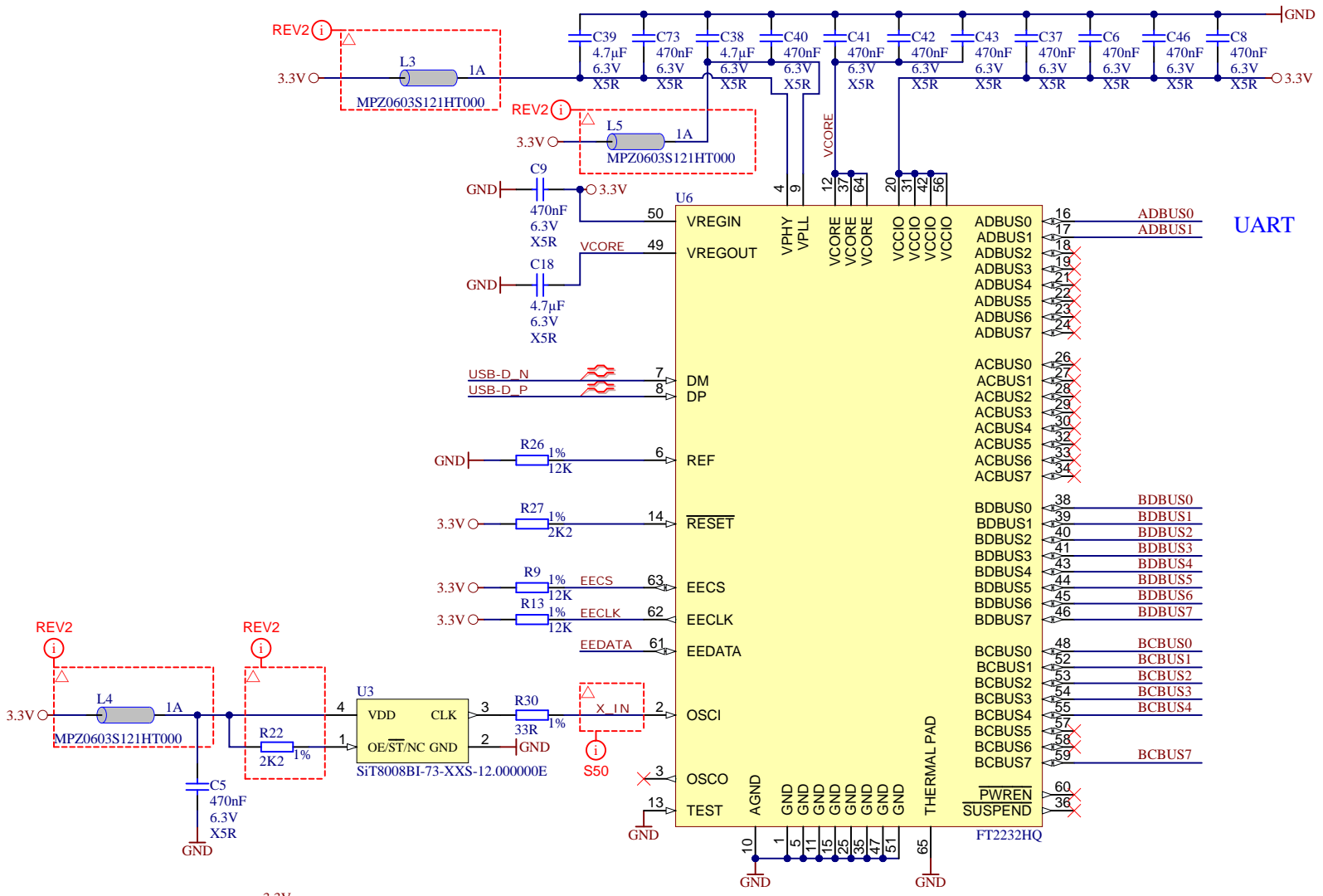


		Title: TE0711 - FPGA Configuration	
		A4	Number: TE0711 72I-1-A
Date: 28-Jul-23		Copyright: Trenz Electronic GmbH / TT	
Filename: FPGA_CFG.SchDoc		Page 8 of 15	





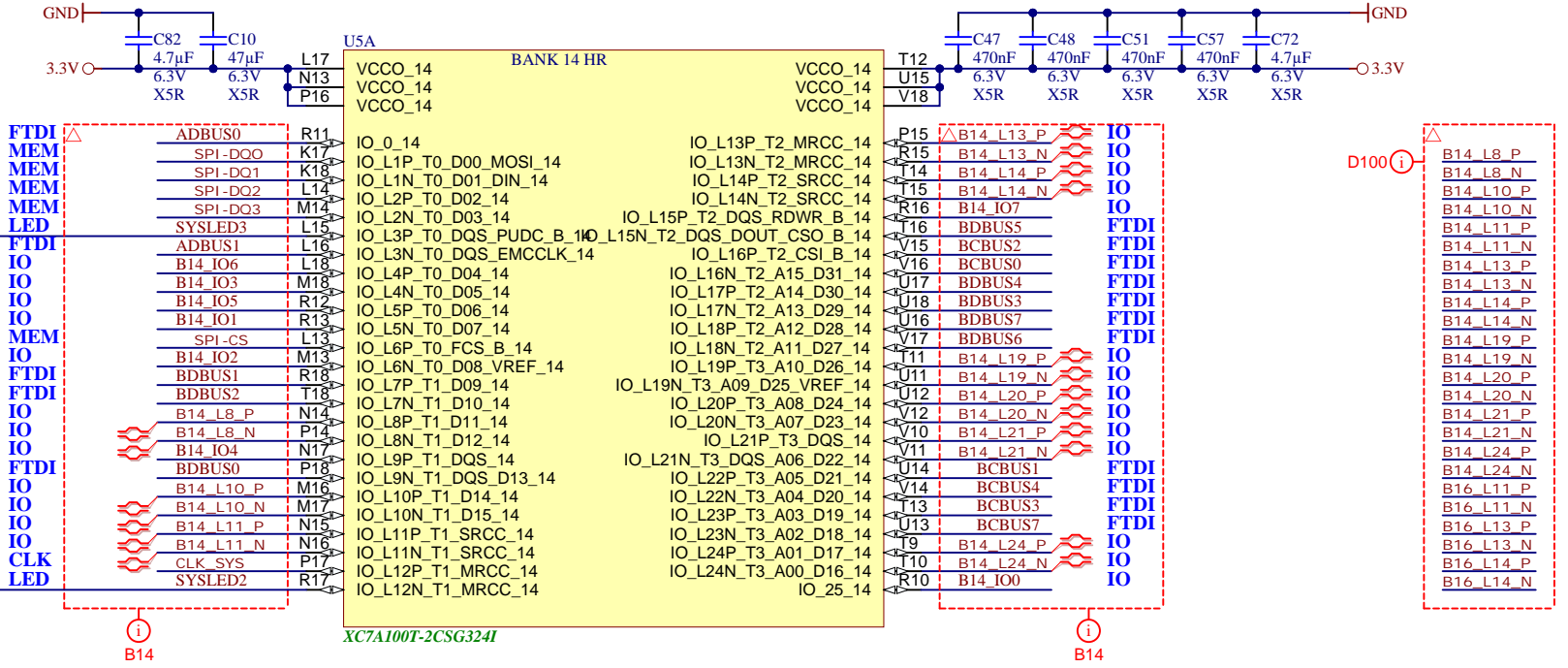
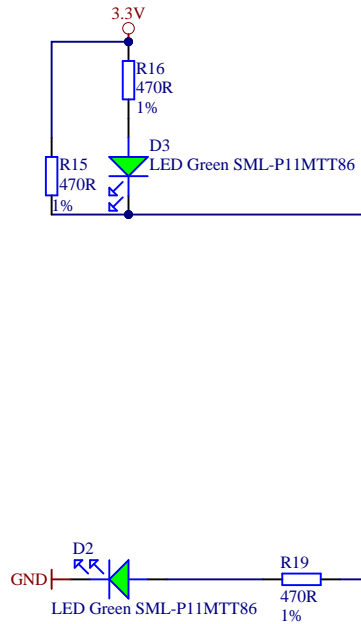
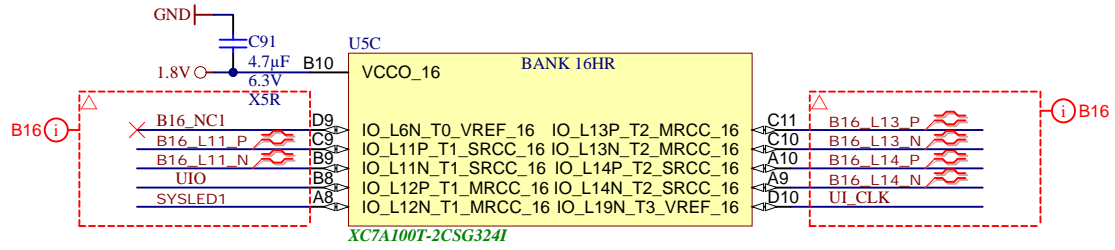
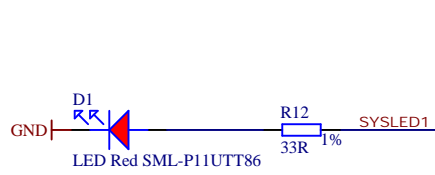
Title: <b>TE0711 - FPGA B34</b>		
A4	Number: <b>TE0711 72I-1-A</b>	Rev. <b>02</b>
Date: <b>24-Aug-23</b>	Copyright: <b>Trenz Electronic GmbH / TT</b>	
Page <b>9</b> of <b>15</b>		
Filename: <b>B34.SchDoc</b>		



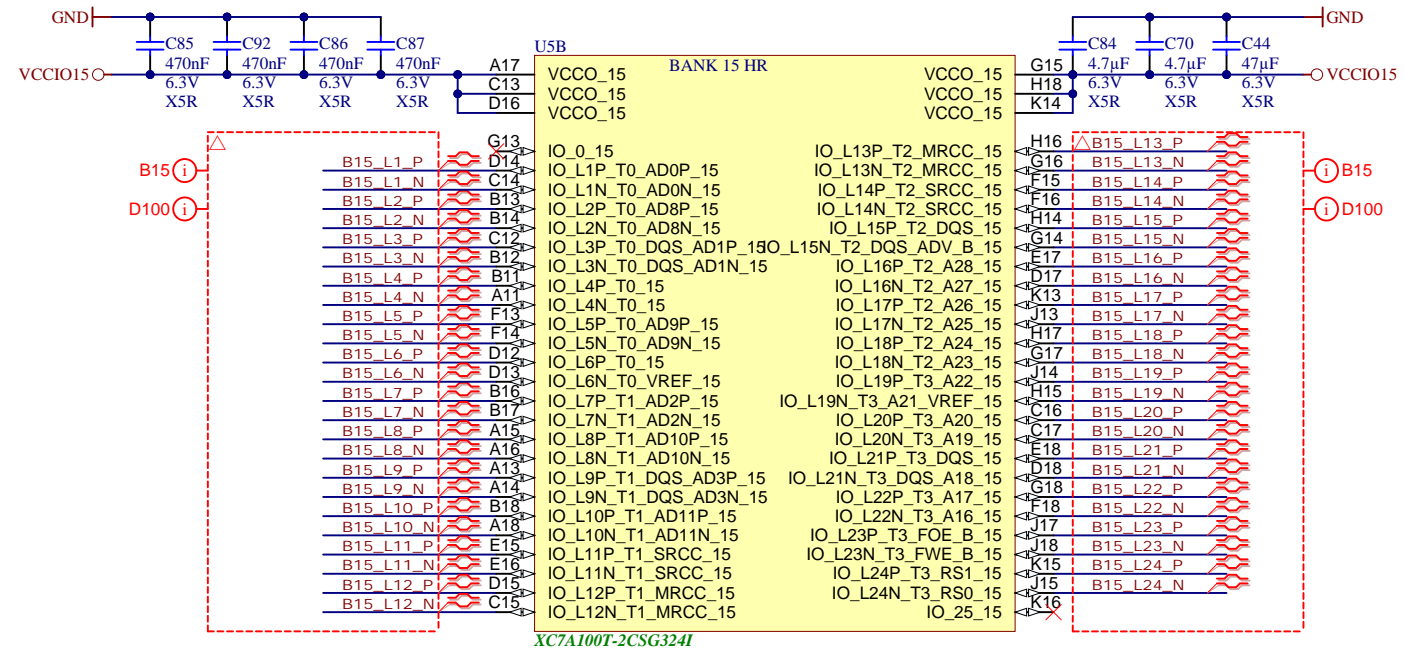
UART



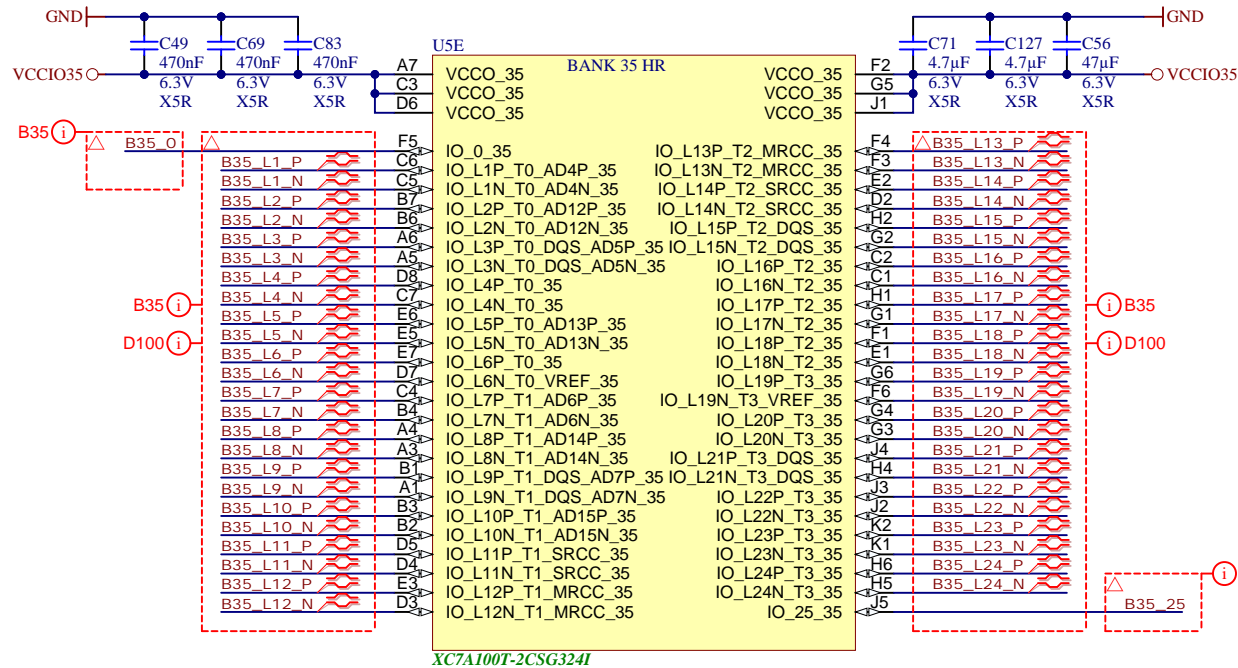
Title: <b>TE0711 - FTDI</b>		
A4	Number: <b>TE0711 72I-1-A</b>	Rev. <b>02</b>
Date: <b>24-Aug-23</b>	Copyright: <b>Trenz Electronic GmbH</b>	Page <b>10</b> of <b>15</b>
Filename: <b>FTDI.SchDoc</b>		




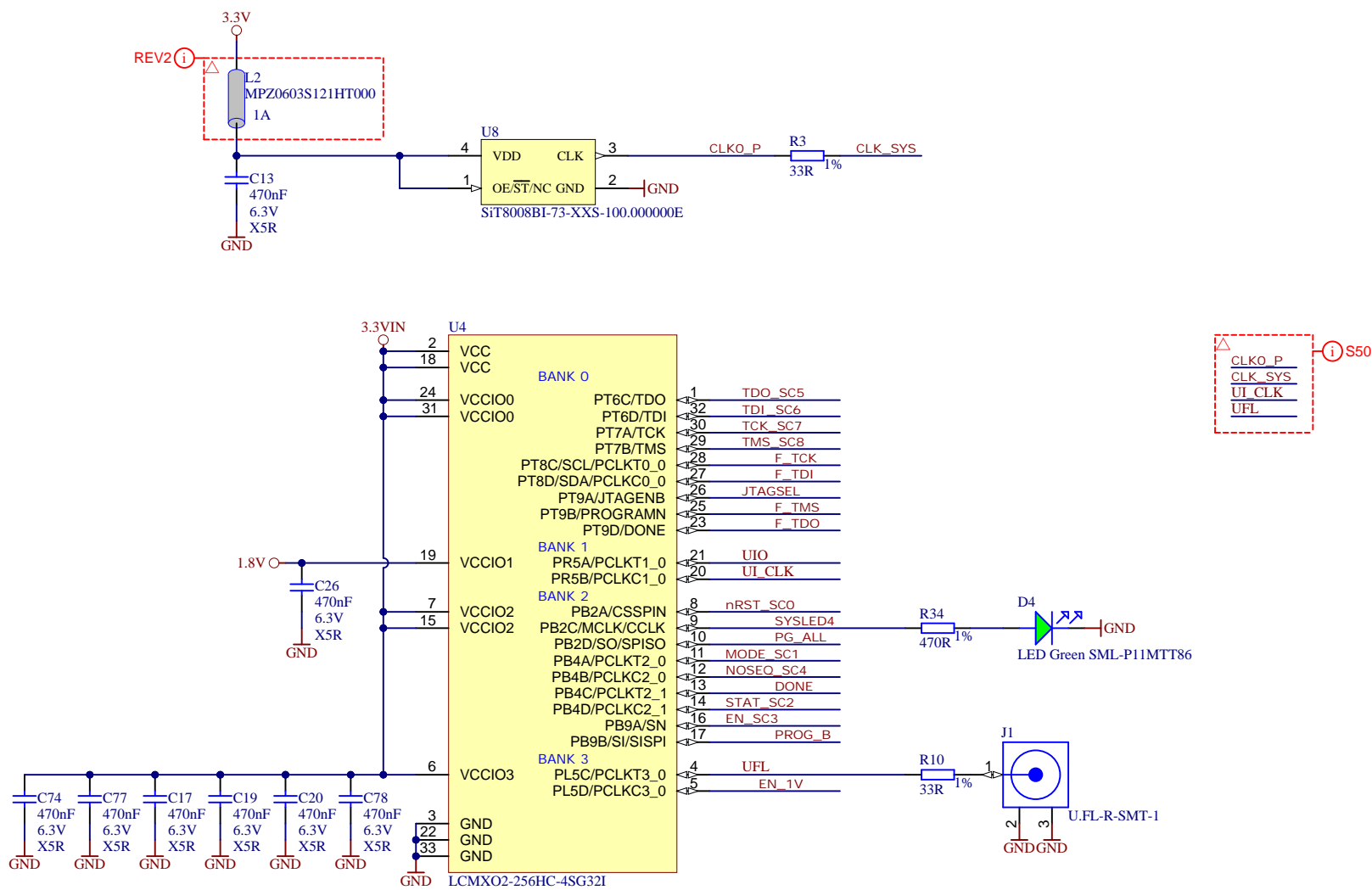
Title: TE0711 - FPGA B14_16		
A4	Number: TE0711 72I-1-A	Rev. 02
Date: 24-Aug-23	Copyright: Trenz Electronic GmbH / TT	Page 11 of 15
Filename: B14_B16.SchDoc		




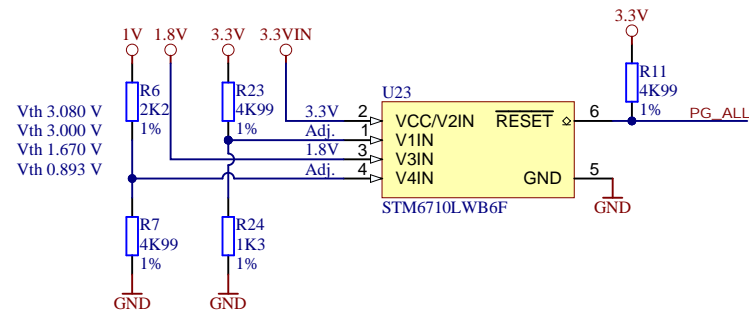
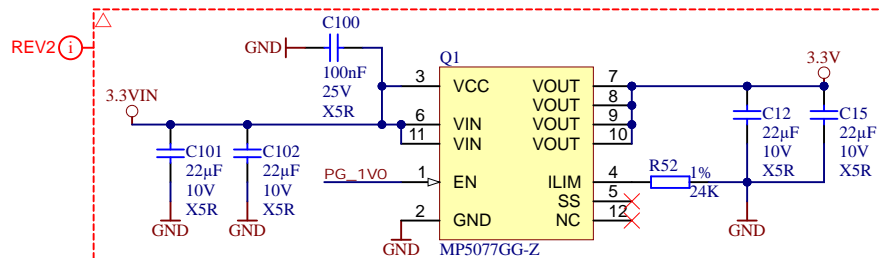
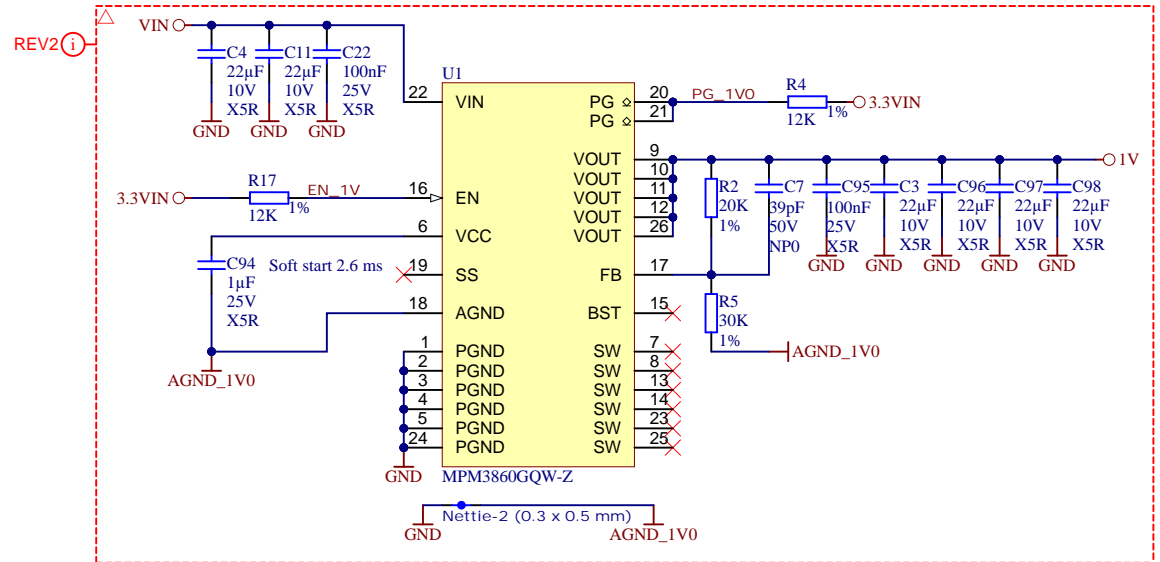
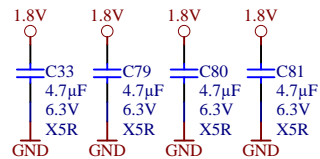
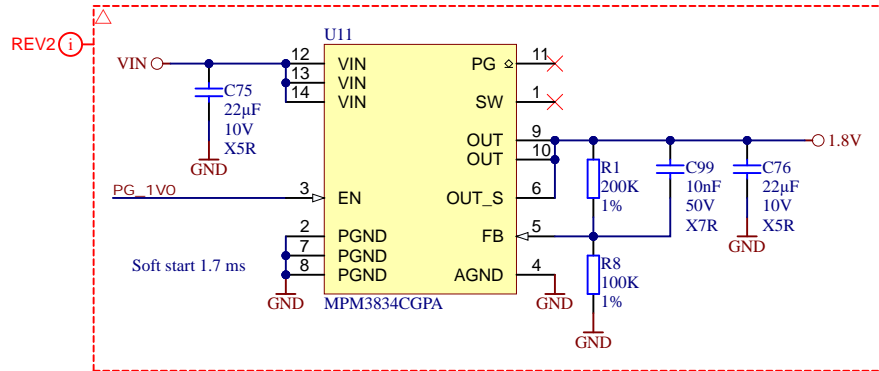
Title: <b>TE0711 - FPGA B15</b>		
A4	Number: <b>TE0711 72I-1-A</b>	Rev. <b>02</b>
Date: <b>23-Aug-23</b>	Copyright: <b>Trenz Electronic GmbH / TT</b>	
Page <b>12</b> of <b>15</b>		
Filename: <b>B15.SchDoc</b>		



		Title: <b>TE0711 - FPGA B35</b>	
		A4	Number: <b>TE0711 72I-1-A</b>
Date: <b>24-Aug-23</b>		Copyright: <b>Trenz Electronic GmbH / TT</b>	
Filename: <b>B35.SchDoc</b>			



		Title: TE0711 - System Controller	
		A4	Number: TE0711 72I-1-A
Date: 24-Aug-23		Copyright: Trenz Electronic GmbH	
Filename: SystemController.SchDoc		Page 14 of 15	



Title: TE0711 - POWER		
A4	Number: TE0711 72I-1-A	Rev. 02
Date: 23-Aug-23	Copyright: Trenz Electronic GmbH	Page 15 of 15
Filename: POWER.SchDoc		