

Image is for illustrative purposes only

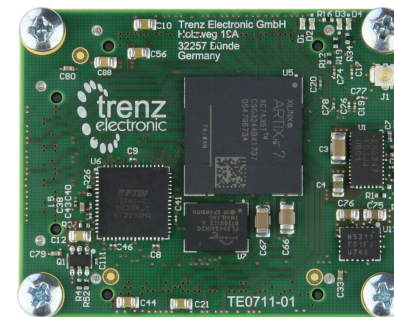


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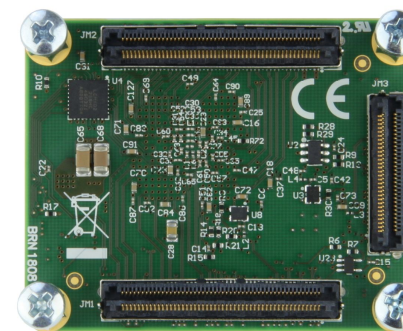



Image is for illustrative purposes only

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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: TE0711 - Legal Notices Modules | | |
| | A4 | Number: TE0711 42I-1-A | Rev. 02 |
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| | Filename: Legal_Notices.SchDoc | | |

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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) L1 - L6 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) D5 was added 8) U1 was updated from EN6347QI to MPM3860GQW-Z 9) Q1 was updated from TPS27082LDDCR to MP5077GG-Z 10) U11 was updated from EN5311QI to MPM3834CGPA 11) U23 was updated from TPS3805H33DCKR to STM6710LWB6F 12) R25 pullup was added 13) TP1 - TP19 were added 14) UKCA and CE logos were added 15) Fiducials on top and bottom were moved to same positions 16) R15 was changed from 2.2k to 470R 17) R22 was added 18) PCB net lengths were changed to improve routing | MT |

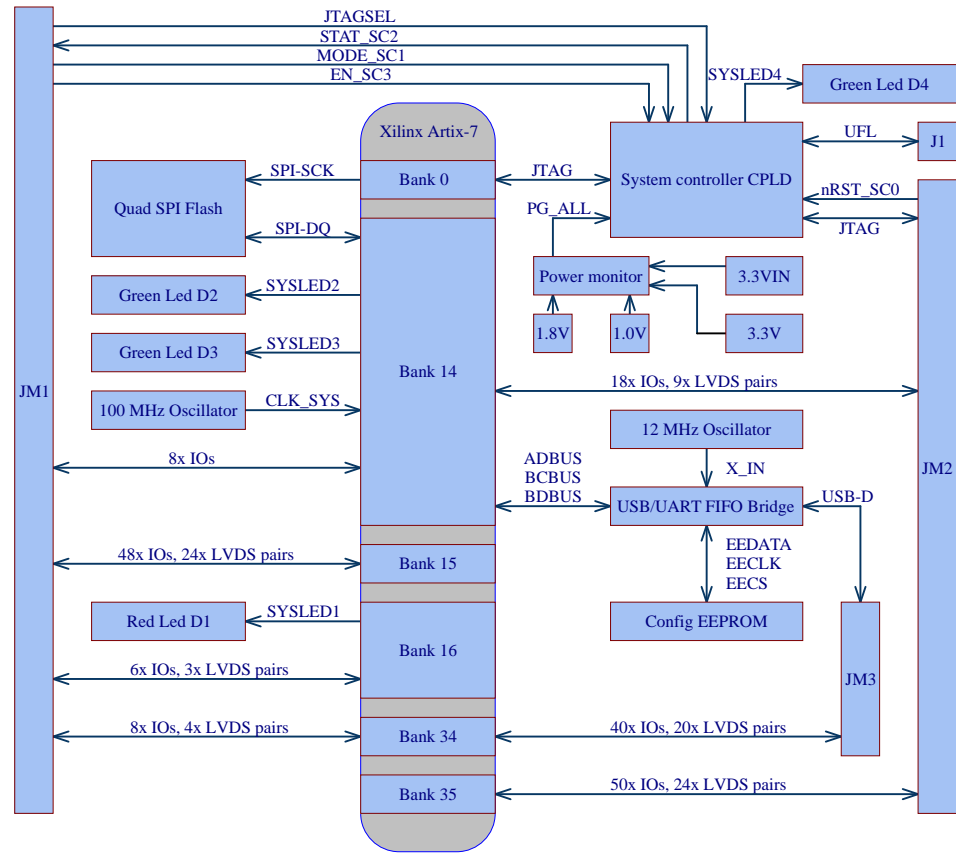
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|  | Title: TE0711 - Changes list | | |
| | A4 | Number: TE0711 42I-1-A | Rev. 02 |
| | Date: 04-Sep-23 | Copyright: Trenz Electronic GmbH | Page 2 of 15 |
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2

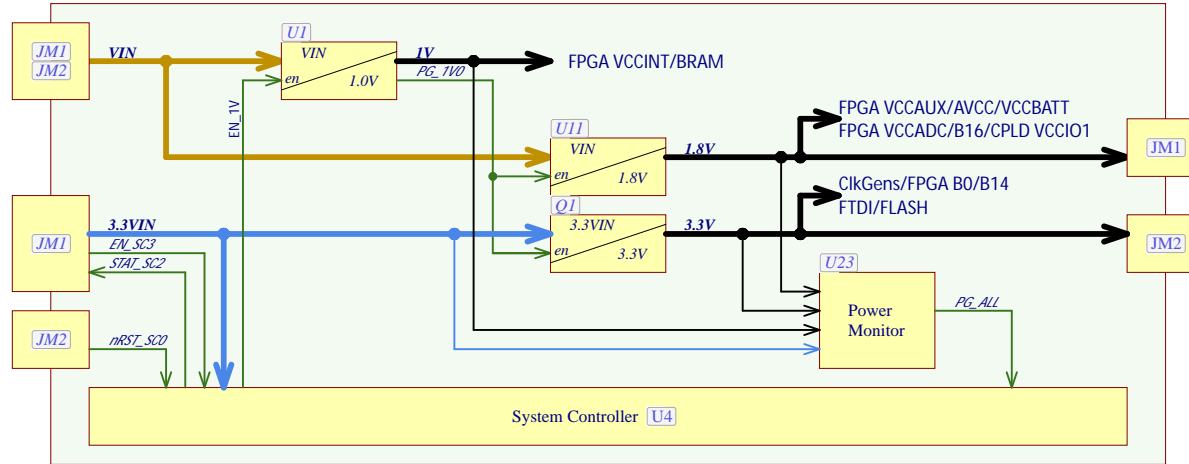
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4



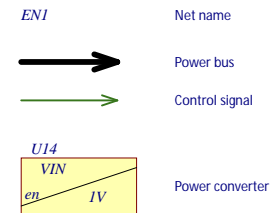
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|  | | Title: TE0711 - System Overview | |
| | | A4 | Number: TE0711 42I-1-A |
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| Filename: Overview.SchDoc | | | |

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 | - |



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|--------------------------------|----------------------------------|--------------|
| Title: TE0711 - Power Diagram | | |
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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

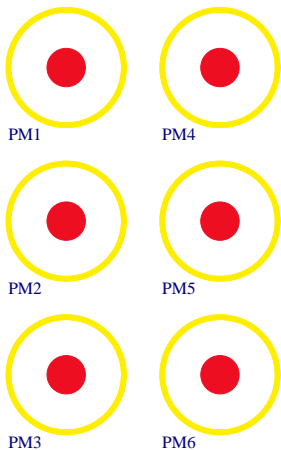
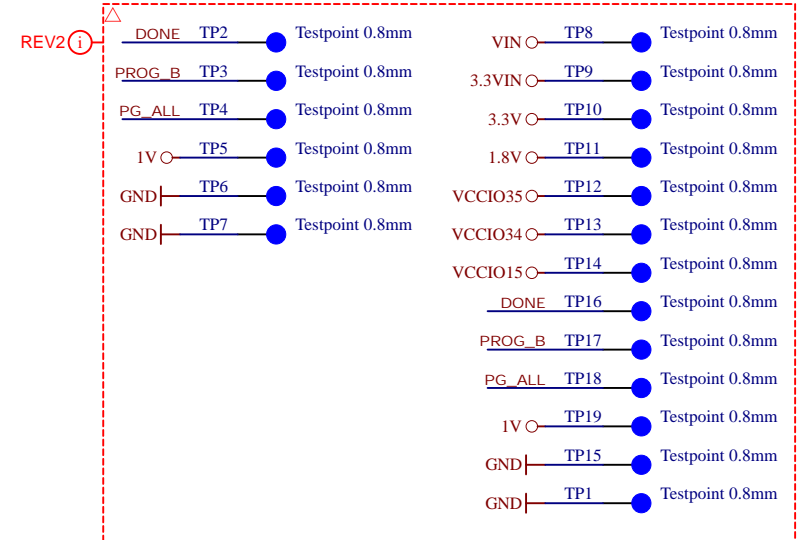
U_POWER

POWER.SchDoc

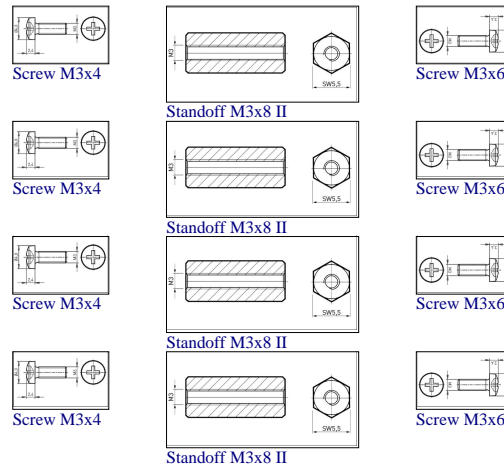
U_B2B_Connector

B2B_Connector.SchDoc

Special notes:



Top of Board



Serial
Serialnumber 6,3 x 6.3mm

LOGO1
TE Logo PRINT Layer

LOGO PRINT

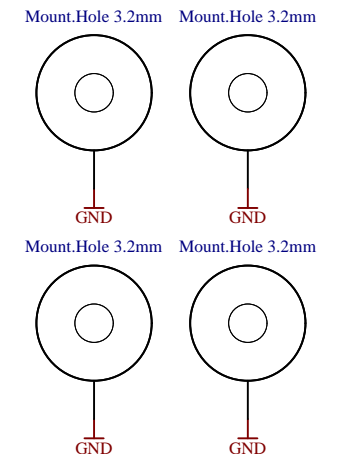
UKCA1
UKCA Logo on Top Overlay

UKCA-TOPOVERLAY

CE1
CE Logo on Top Overlay

CE-TOPOVERLAY

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|--|-------------------------|---------------------------------------|
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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

B

C

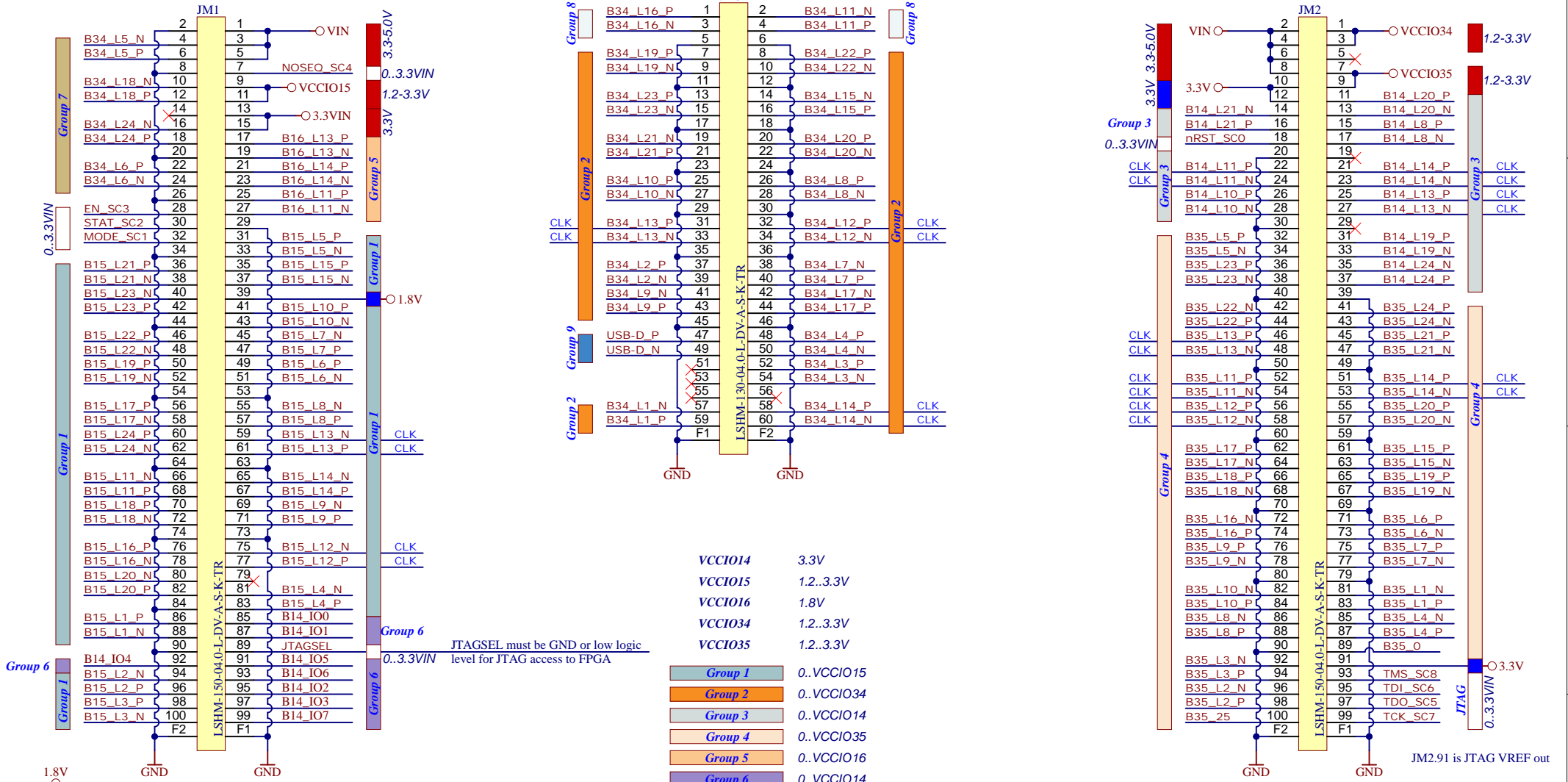
D

A

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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
- PWR_out

JTAGSEL must be GND or low logic level for JTAG access to FPGA

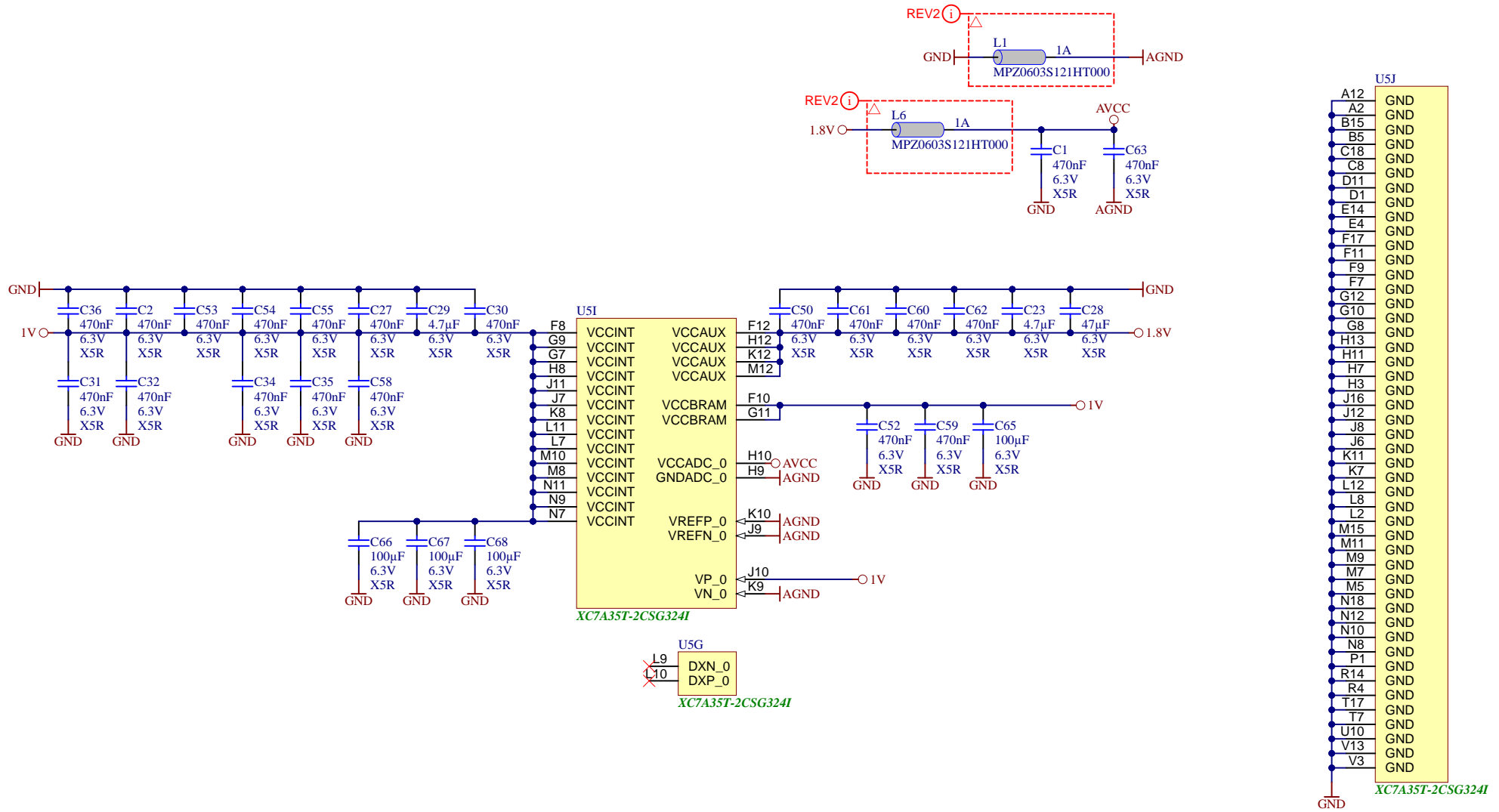
JM2.91 is JTAG VREF out




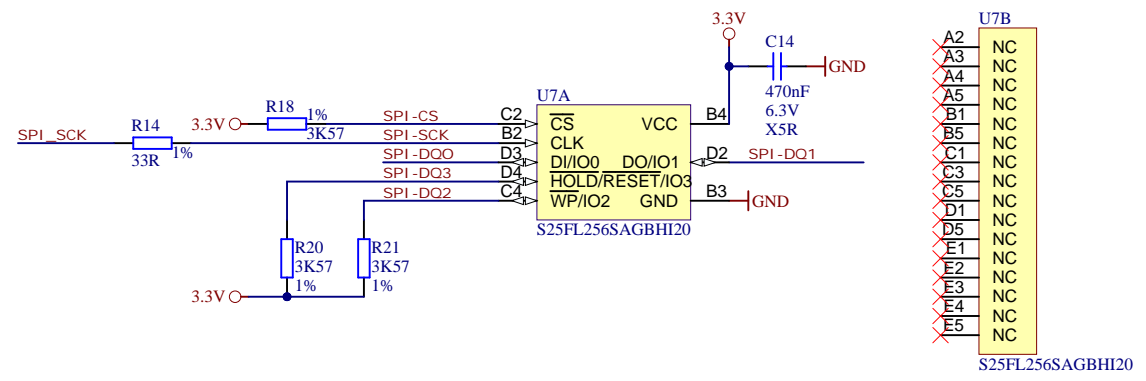
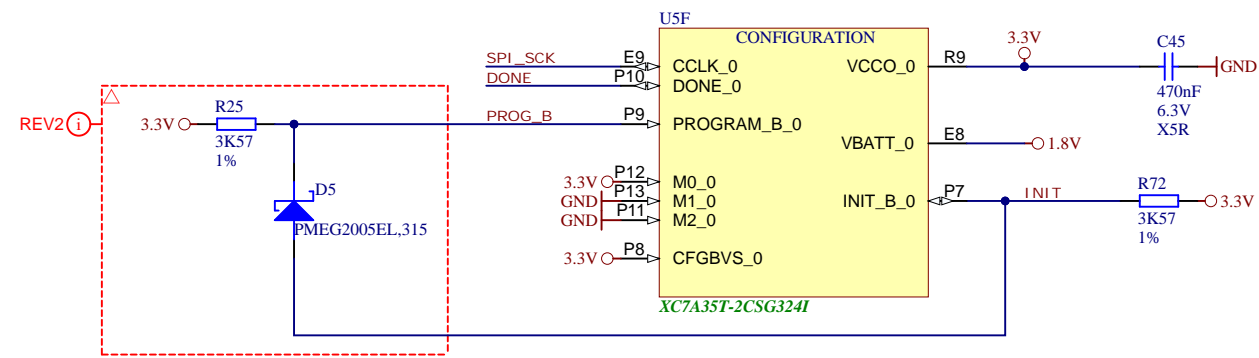
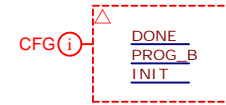
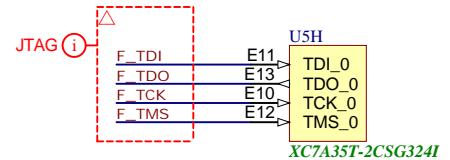
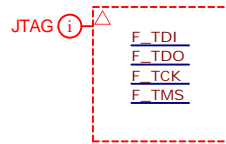
Some information about Trenz modules compatibility and differences [here](#)



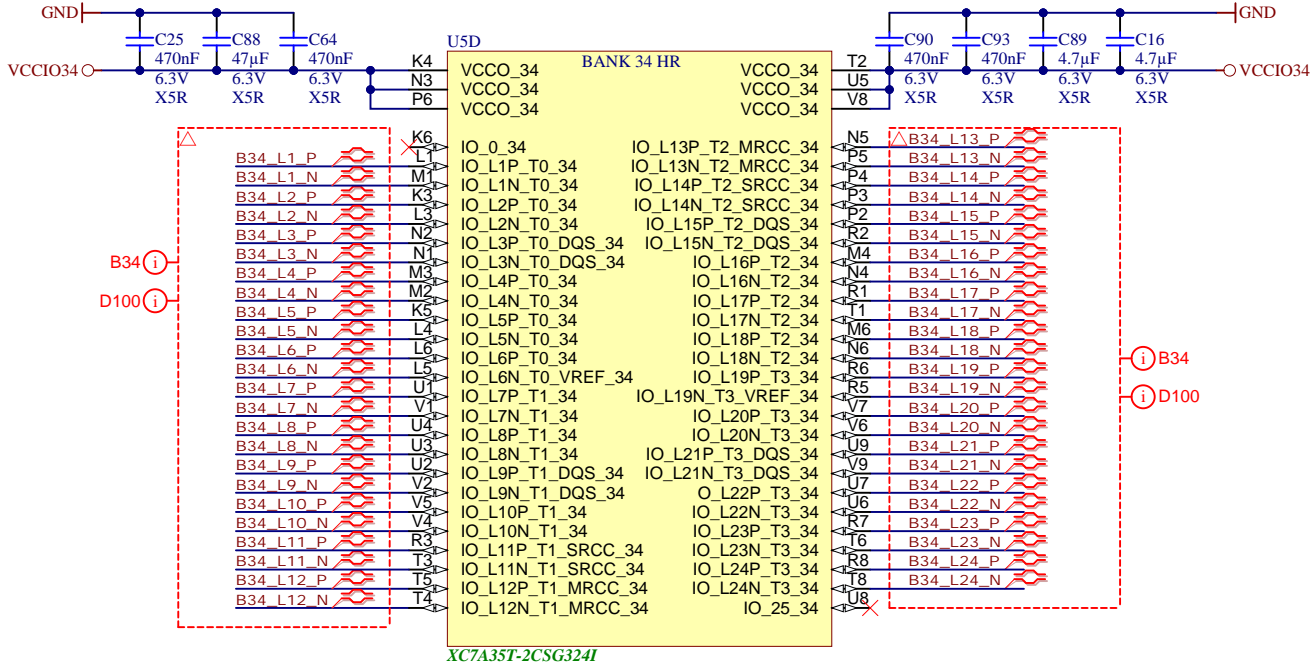

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|--------------------------------|---------------------------------------|--------------|
| Title: TE0711 - B2B-Connectors | | |
| A4 | Number: TE0711 42I-1-A | Rev. 02 |
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| Filename: B2B_Connector.SchDoc | | |



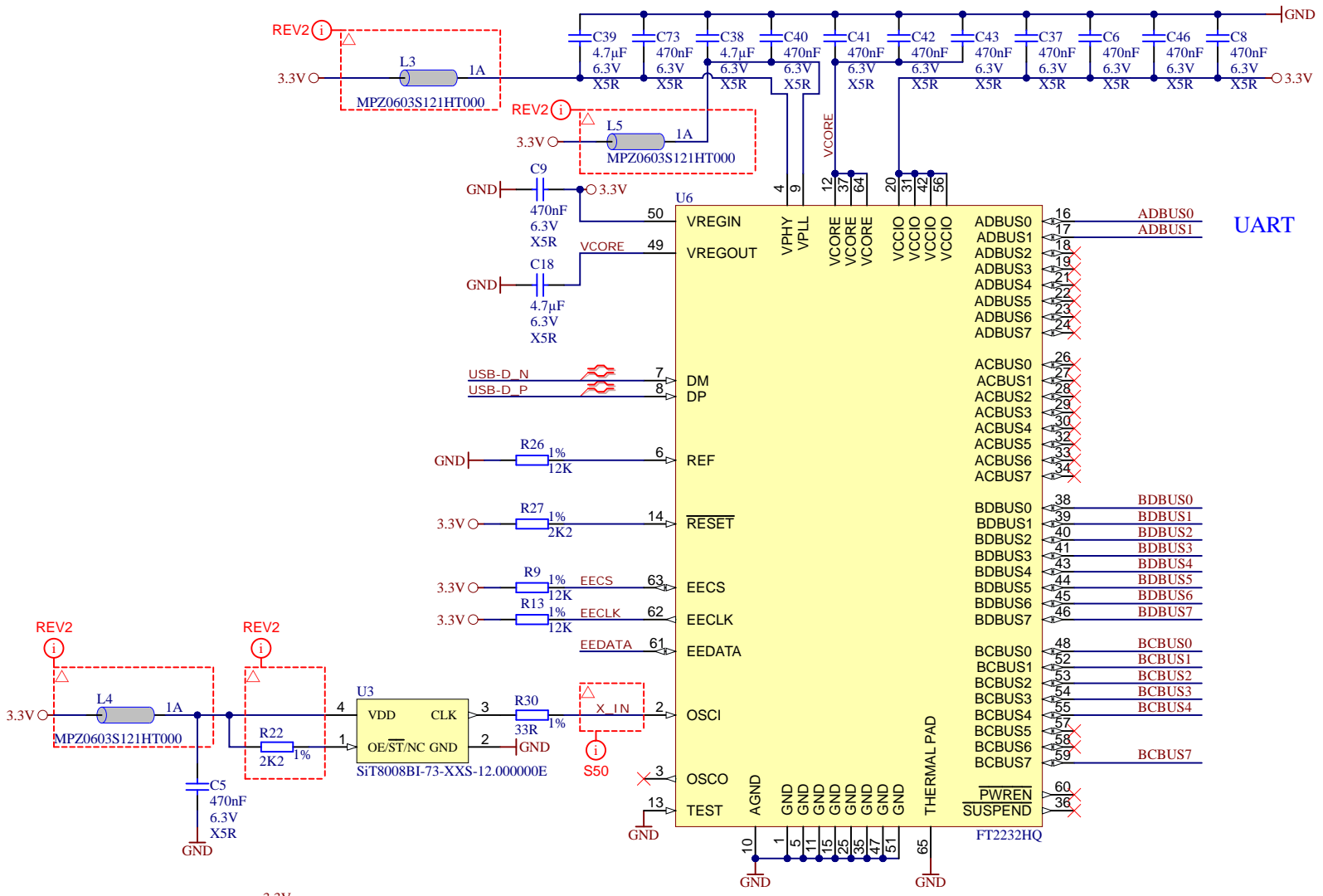
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|  | | | Title: TE0711 - FPGA PWR | |
| | | | A4 | Number: TE0711 42I-1-A |
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| Filename: FPGA_PWR_MISC.SchDoc | | | | |



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|---------------------------|--|---------------------------------------|---------------------------|
| | | Title: TE0711 - FPGA Configuration | |
| | | A4 | Number: TE0711 42I-1-A |
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| Filename: FPGA_CFG.SchDoc | | | |

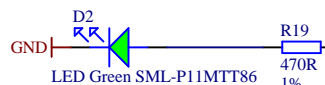
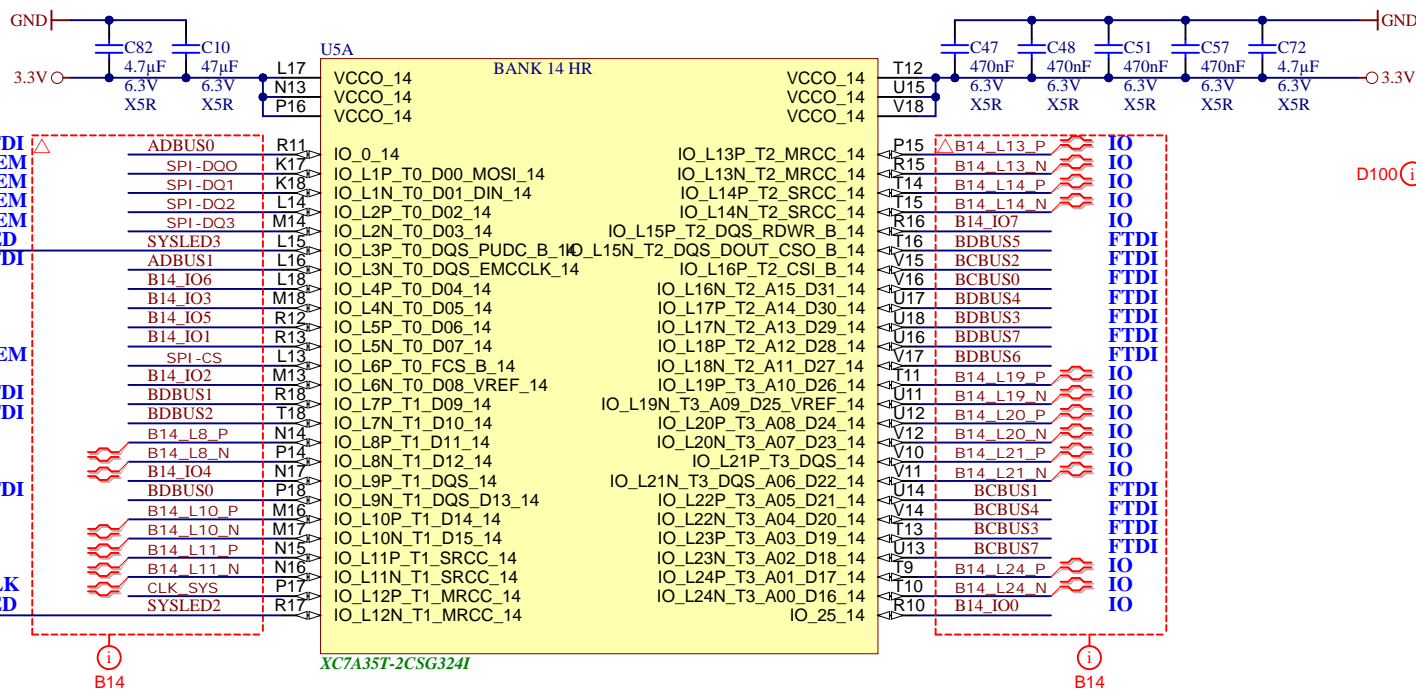
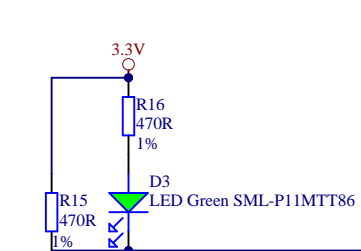
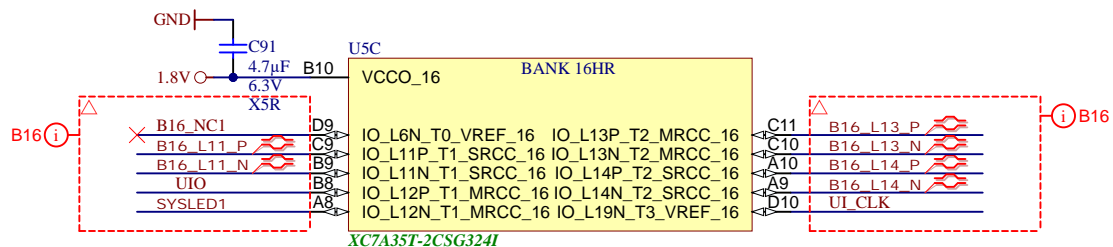
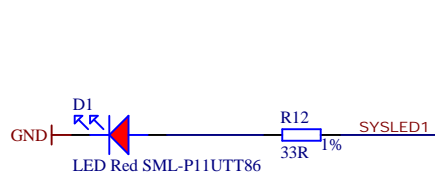
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| Title: TE0711 - FPGA B34 | | |
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UART



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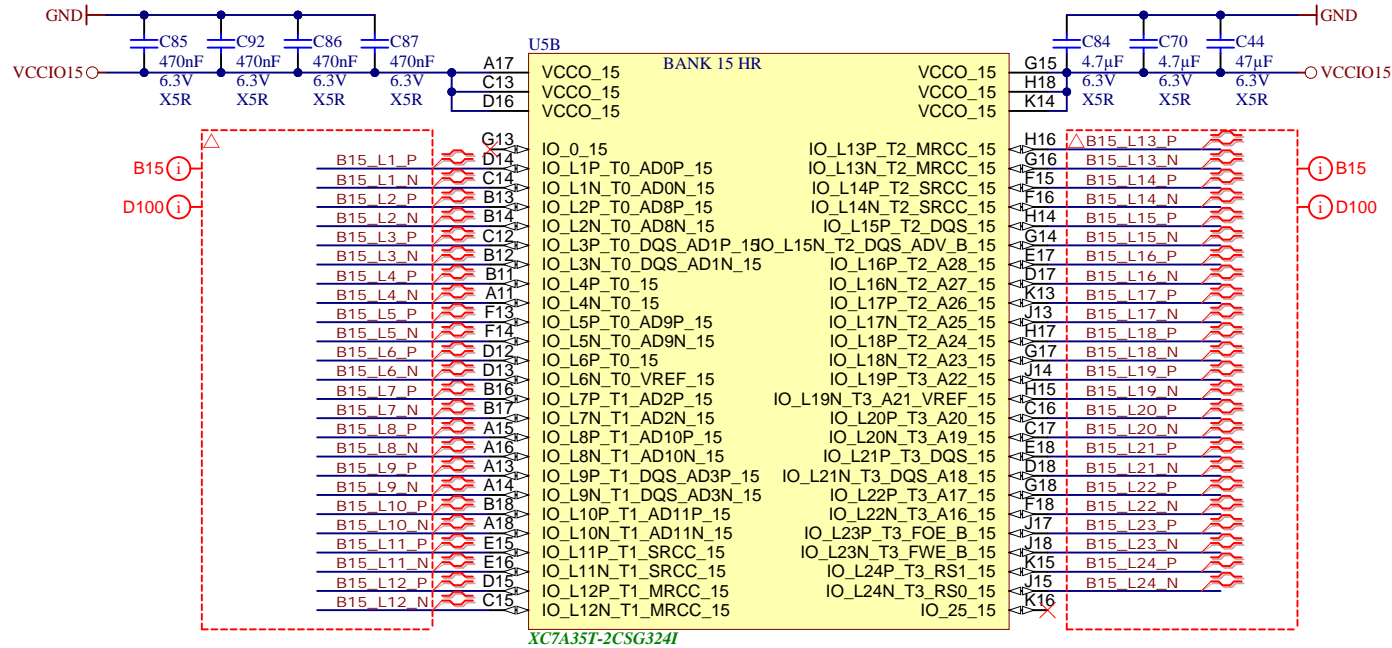
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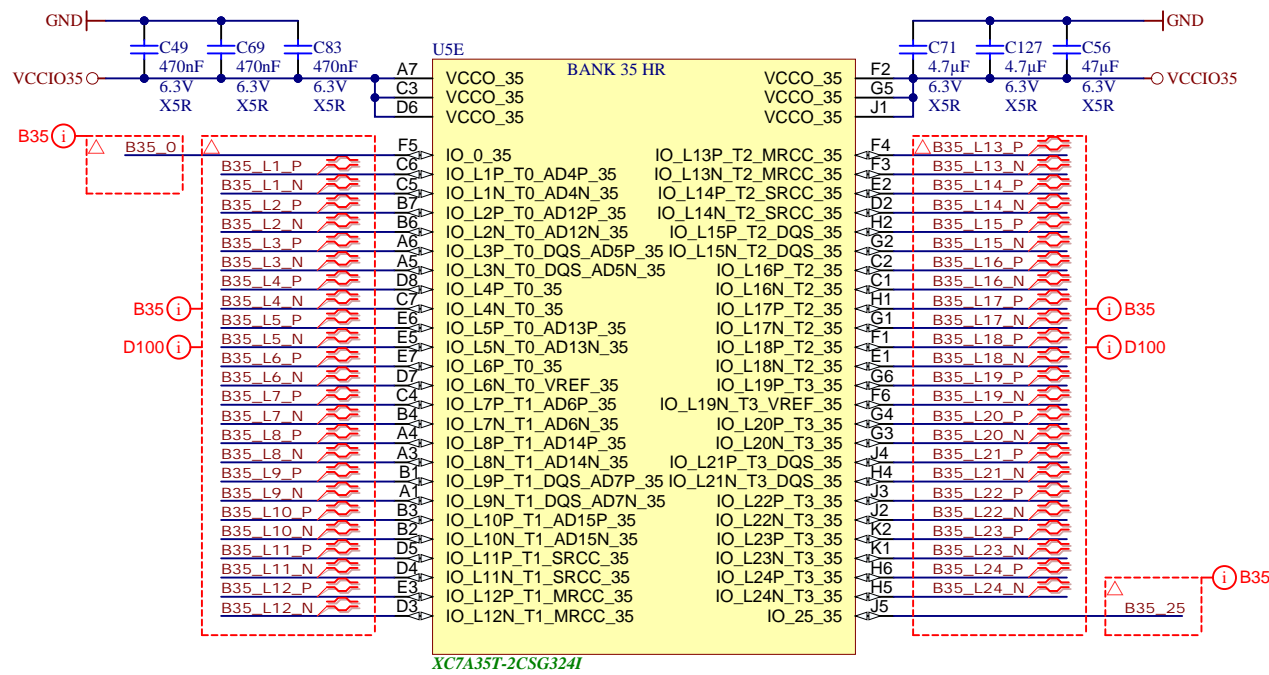
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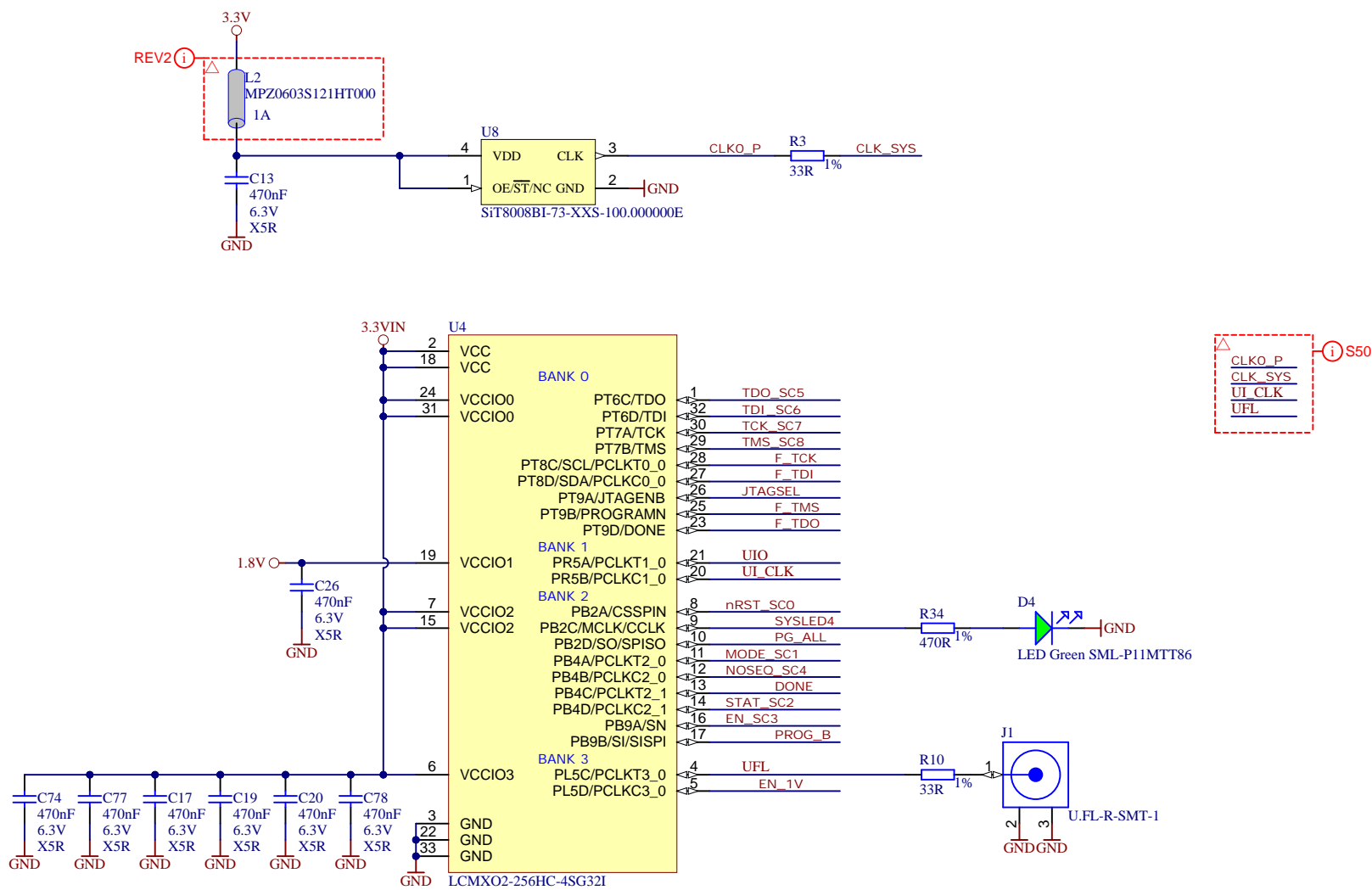
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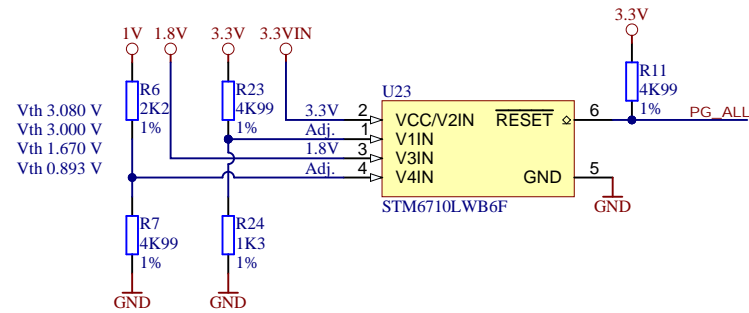
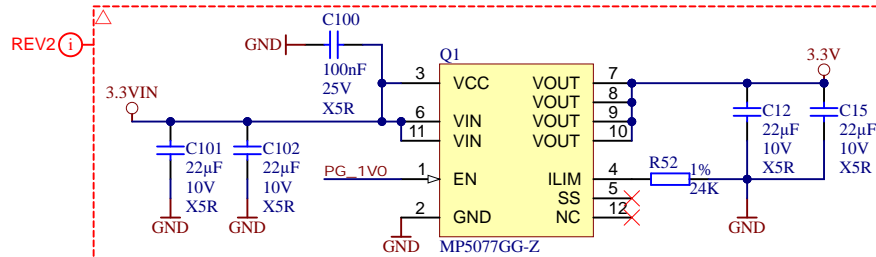
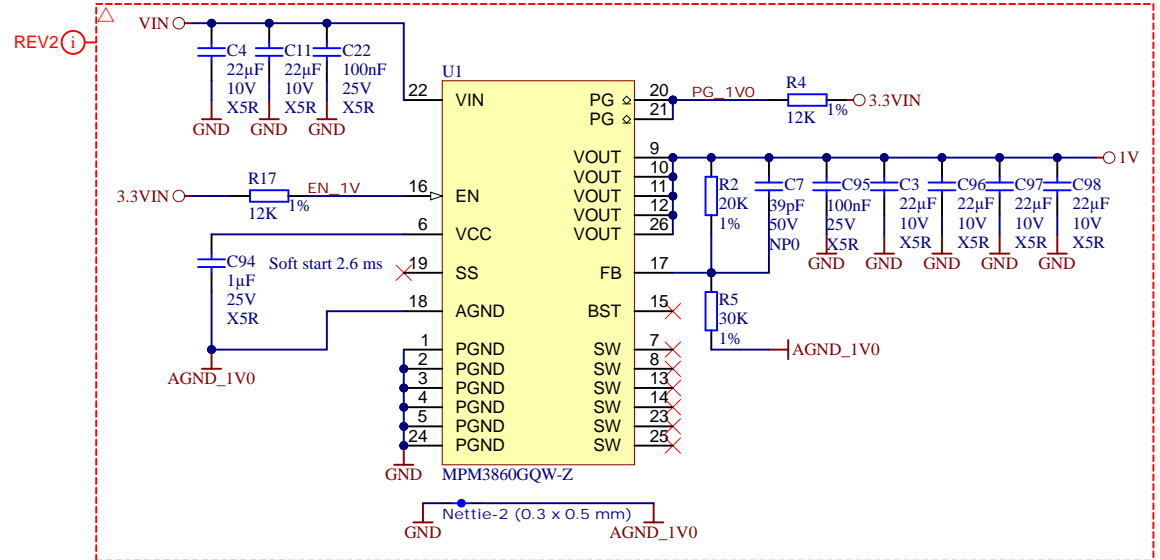
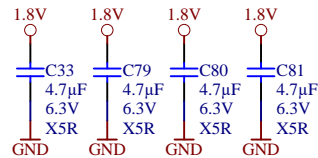
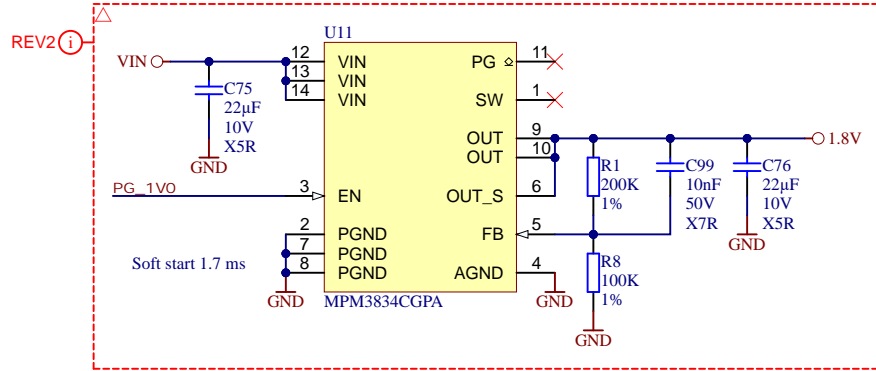
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| Title: TE0711 - FPGA B15 | | |
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