



Regarding the usage of our schematics and alike documentation for Trenz module TE0720.

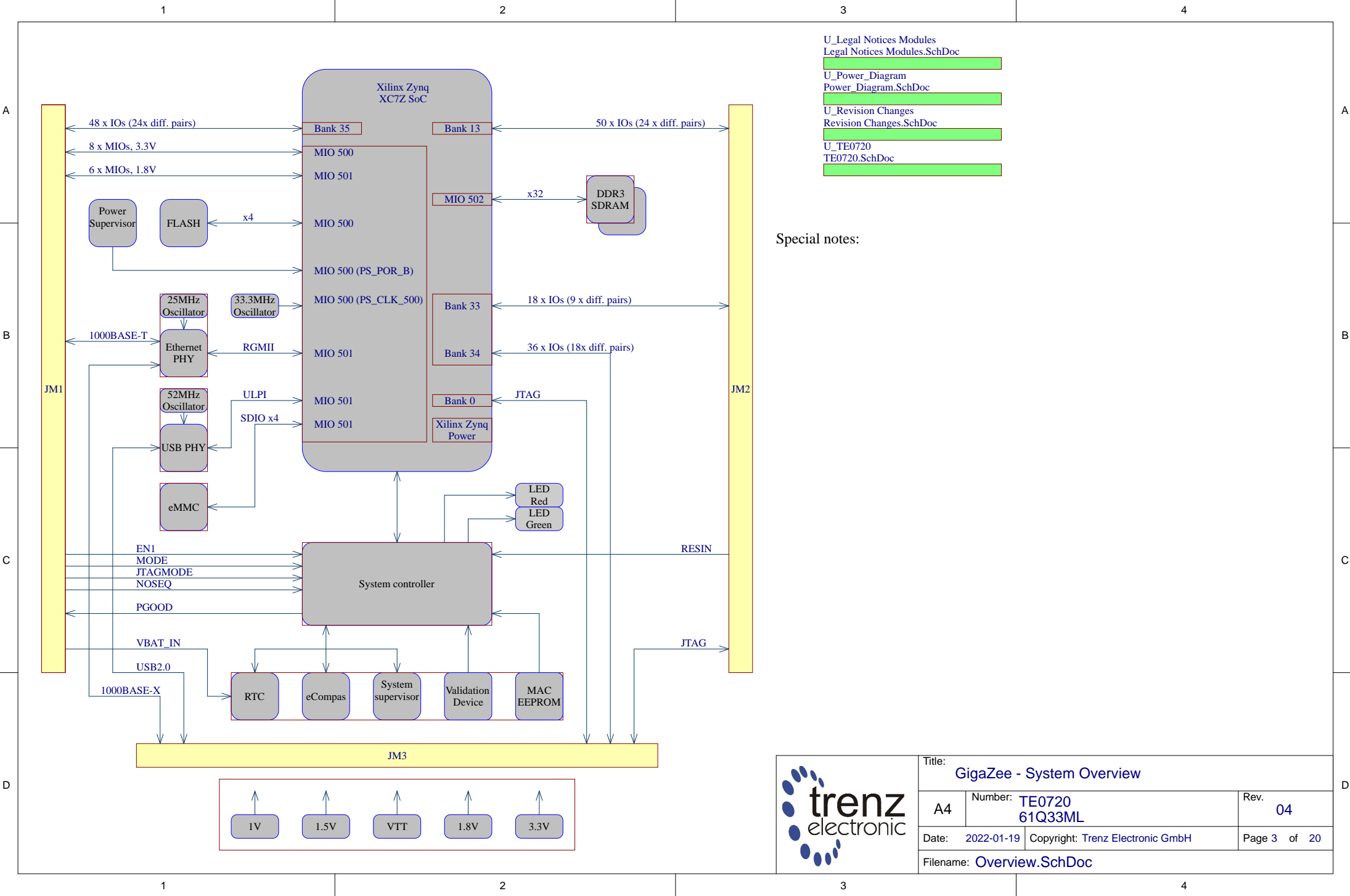
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Schematics and other handouts serve for informational purposes only!

	Title: <b>GigaZee</b>		
	A4	Number: <b>TE0720 61Q33ML</b>	Rev. <b>04</b>
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REV	Description	
-01	Initial revision	
-02		
-03		
-04	<p>1. Revised power supply circuit, replaced next components:</p> <ul style="list-style-type: none"> <li>- EN6347QI (U1) by MPM3840QV-Z,</li> <li>- EP53F8QI (U2, U3) by MPM3834CGPA,</li> <li>- TPS27082LDDCR (Q1) by MP5077GG-Z.</li> </ul> <p>2. Added power supervisor BD39040MUF (U27). Next signal connected to system controller:</p> <ul style="list-style-type: none"> <li>- PG_All (U27 - U19.C12) with pull-up resistor R67;</li> <li>- WDEN (U27.13 - U19.C6) with pull-down resistor R80;</li> <li>- WDIN (U27.14 - U19.N8);</li> <li>- WDOUT (U27.16 - U19.M3).</li> </ul> <p>3. Signal MIO8 (U5.E5) connected to system controller (U19.N7)</p> <p>4. Added pull-down resistors R64 (net ON_1V0) and R65 (net ON_1V8)</p> <p>5. Revised voltage supervisor U26 circuit: U26.6 (VDD) connected to 3.3VIN, Added protection diode D3 to U26.3 (#MR input)</p> <p>6. Replaced BKP0603HS (L1, L2, L3, L4, L5, L7, L8) by MPZ0603S121HT000</p> <p>7. Auxiliary information has been added on Samtec B2B connectors page</p> <p>8. PCB: Revised layout of power supplies</p> <p>9. PCB: Revised layout of Samtec B2B signals. The length of the tracks has been changed. Pinout of Samtec B2B connectors not affected</p> <p>10. PCB: Added option to install Heatsink SuperGrip (c)</p> <p>11. Added capacitors C7, C8 (100uF, 1V)</p> <p>12. Changed voltage divider resistors (R21, R61) to set the threshold for U26.</p>	VY
-04A	1. Added note regarding VCCIO34, page B2B-Connectors	VY

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Drawn by: VY			



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Legal Notices Modules.SchDoc
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- U\_Revision Changes  
Revision Changes.SchDoc
- U\_TE0720  
TE0720.SchDoc

Special notes:

			Title: <b>GigaZee - System Overview</b>	
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Filename: <b>Overview.SchDoc</b>				

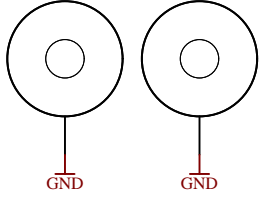
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2

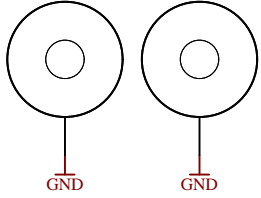
3

4

Mount.Hole 3.2mmMount.Hole 3.2mm



Mount.Hole 3.2mmMount.Hole 3.2mm



- 1V ○ TP1 ● Testpoint 0.8mm
- VIN ○ TP2 ● Testpoint 0.8mm
- 1.5V ○ TP3 ● Testpoint 0.8mm
- 1.8V ○ TP4 ● Testpoint 0.8mm
- VTT ○ TP5 ● Testpoint 0.8mm
- VTTREF ○ TP6 ● Testpoint 0.8mm
- 3.3VIN ○ TP7 ● Testpoint 0.8mm
- 3.3V ○ TP8 ● Testpoint 0.8mm
- VCCIO13 ○ TP9 ● Testpoint 0.8mm
- VCCIO33 ○ TP10 ● Testpoint 0.8mm
- VCCIO34 ○ TP11 ● Testpoint 0.8mm
- VCCIO35 ○ TP12 ● Testpoint 0.8mm
- AVCC ○ TP13 ● Testpoint 0.8mm
- AVREF ○ TP14 ● Testpoint 0.8mm
- AGND | TP15 ● Testpoint 0.8mm
- GND | TP16 ● Testpoint 0.8mm
- GND | TP17 ● Testpoint 0.8mm
- GND | TP18 ● Testpoint 0.8mm
- GND | TP19 ● Testpoint 0.8mm
- GND | TP20 ● Testpoint 0.8mm

A

A

B

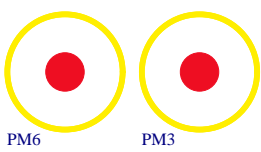
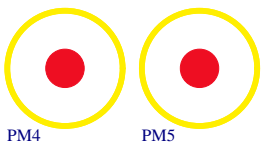
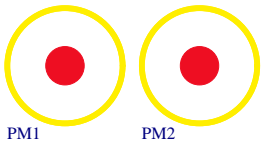
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C

C

D

D



Serial  
 Serial  
 Serialnumber 6,3 x 6.3mm

Assembly variant	61Q33ML
Created by	MR
Modified by	MR
Modified at	2021-07-06
SVN Revision	13140



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1

2

3

4

B35 48 IO, 24 LVDS Pairs  
 MIO0 8 IO, 3.3V  
 MIO1 6 IO 1.8V  
 ETH MDI Copper

B34 36 IO, 18 LVDS Pairs  
 USB OTG  
 ETH SGMI I

B33 18 IO, 9 LVDS Pairs  
 B13 48 IO, 24 LVDS Pairs  
 B13 2 IO

VCCIO34 must be connected to power even if the signals of this bank are not used externally.

A

A

B

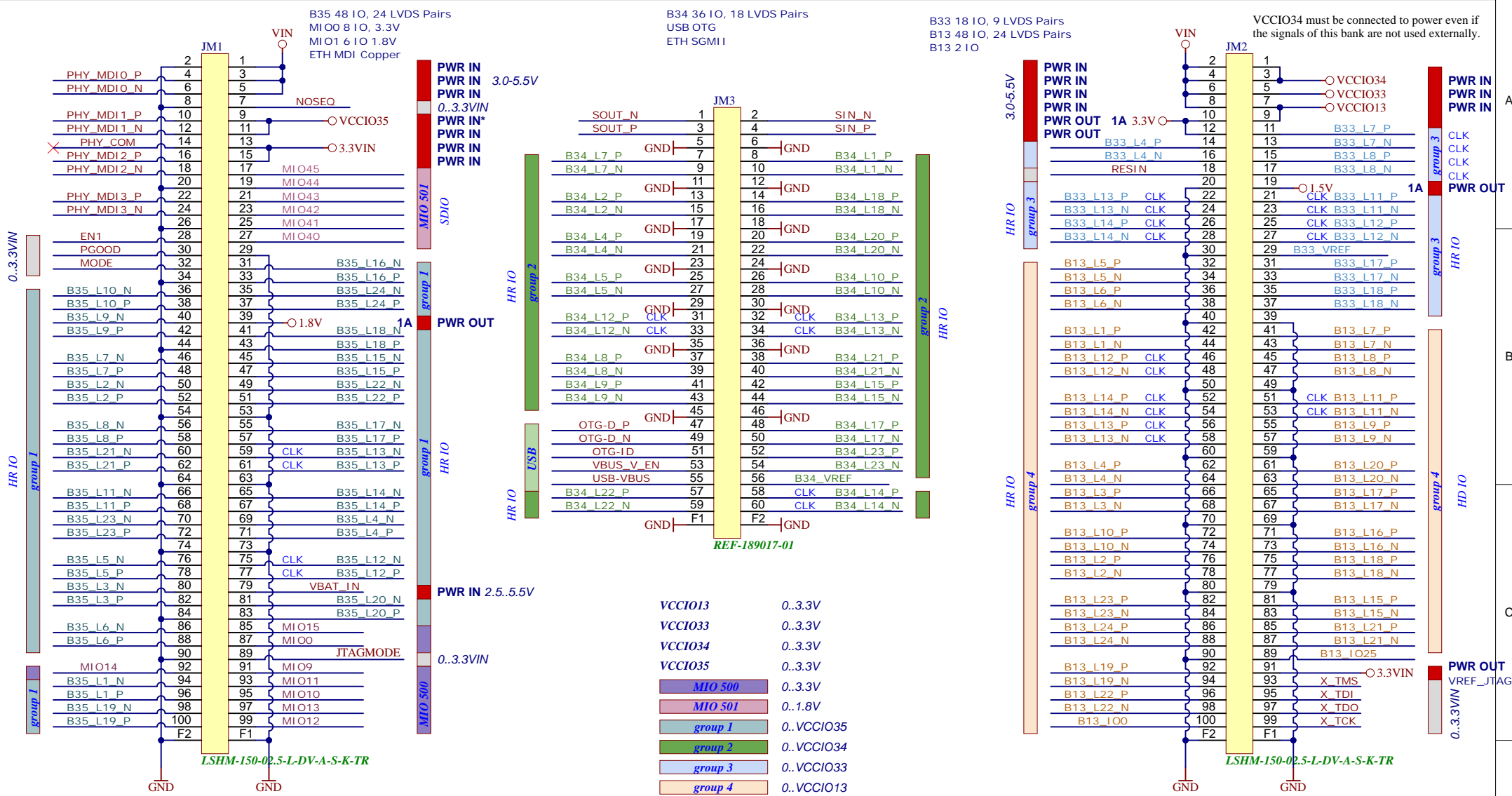
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C

C

D

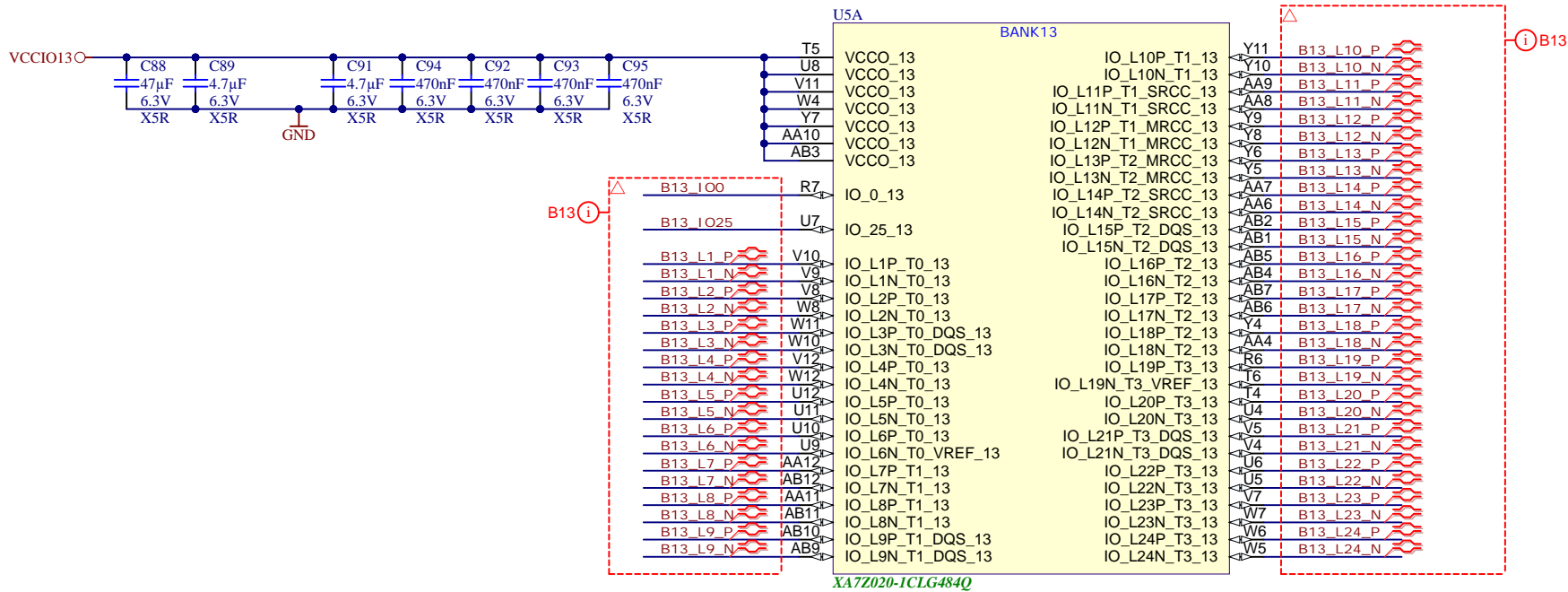
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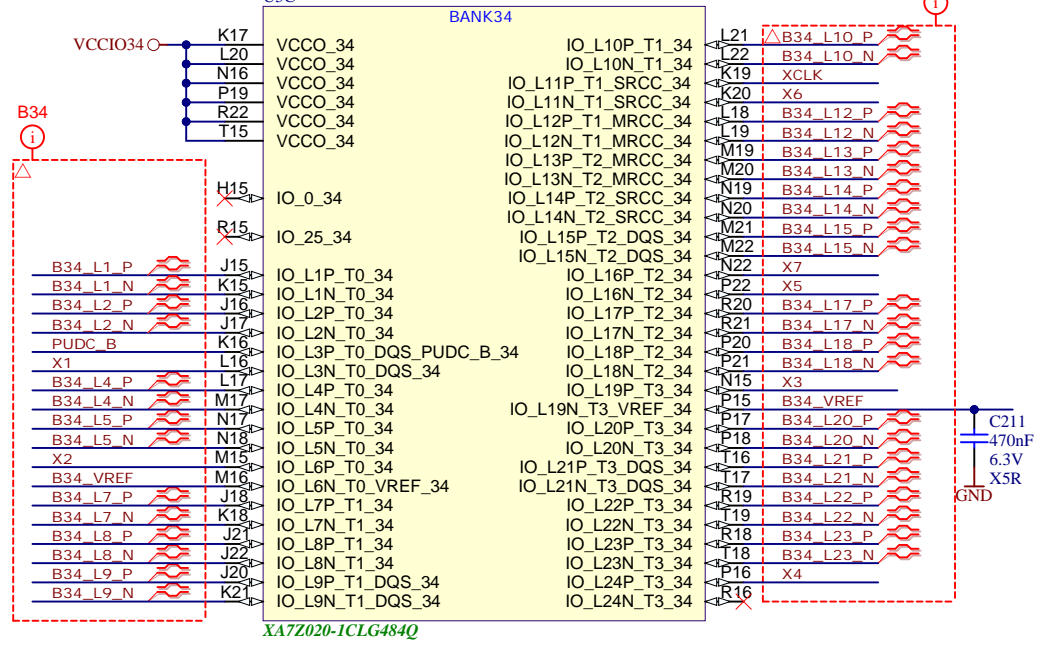
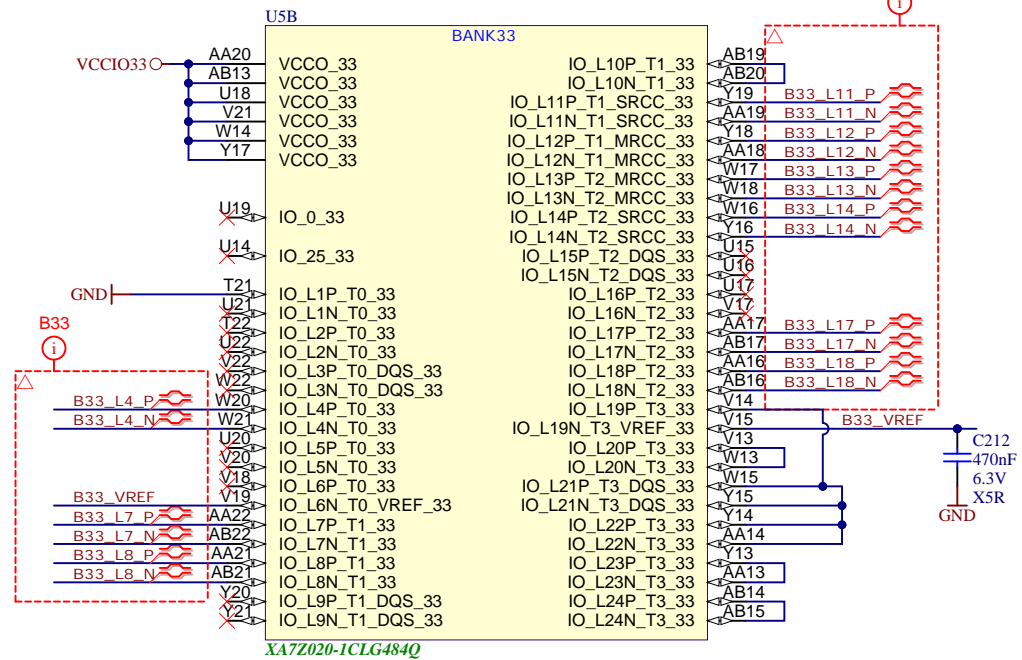
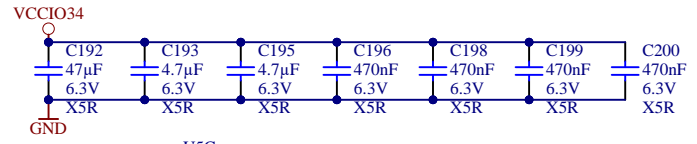
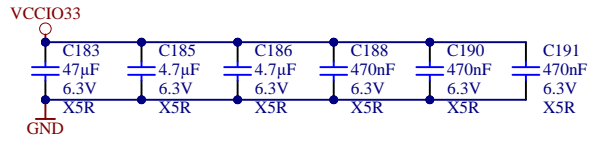
- VCCIO13 0..3.3V
- VCCIO33 0..3.3V
- VCCIO34 0..3.3V
- VCCIO35 0..3.3V
- MIO 500 0..3.3V
- MIO 501 0..1.8V
- group 1 0..VCCIO35
- group 2 0..VCCIO34
- group 3 0..VCCIO33
- group 4 0..VCCIO13



Title: GigaZee - B2B Connector		
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Title: <b>GigaZee - B13</b>		
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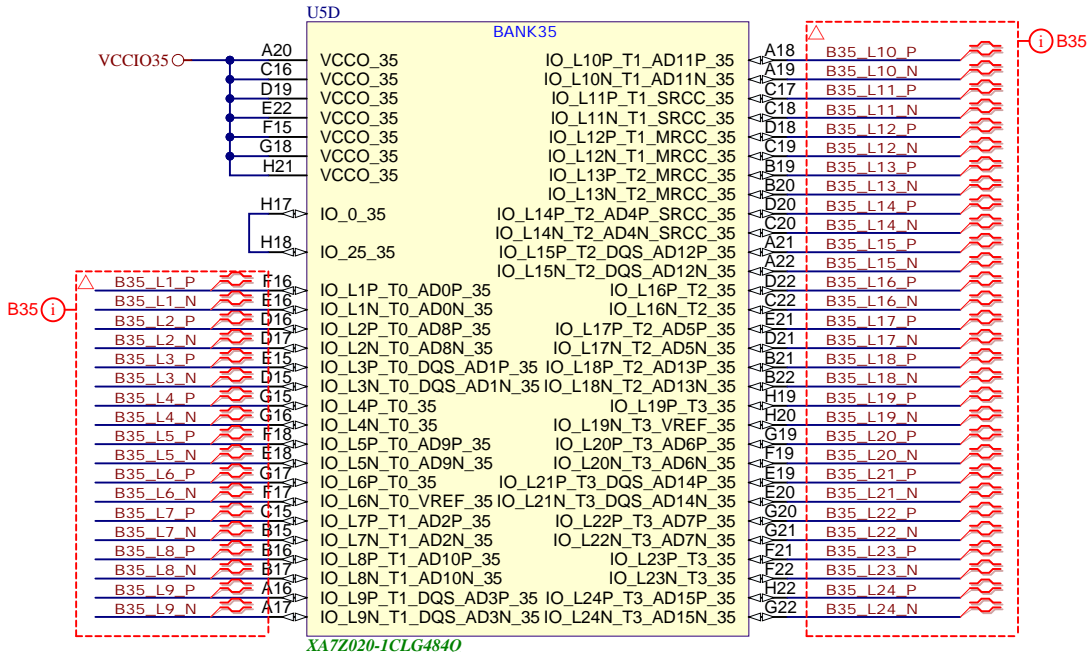
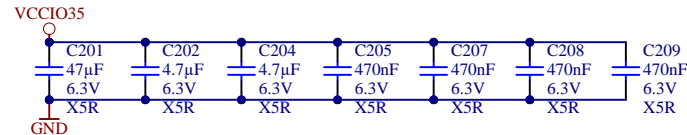
XA7Z020-1CLG484Q

XA7Z020-1CLG484Q



Title: GigaZee - B33 - B34		
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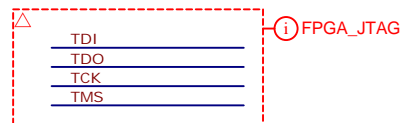
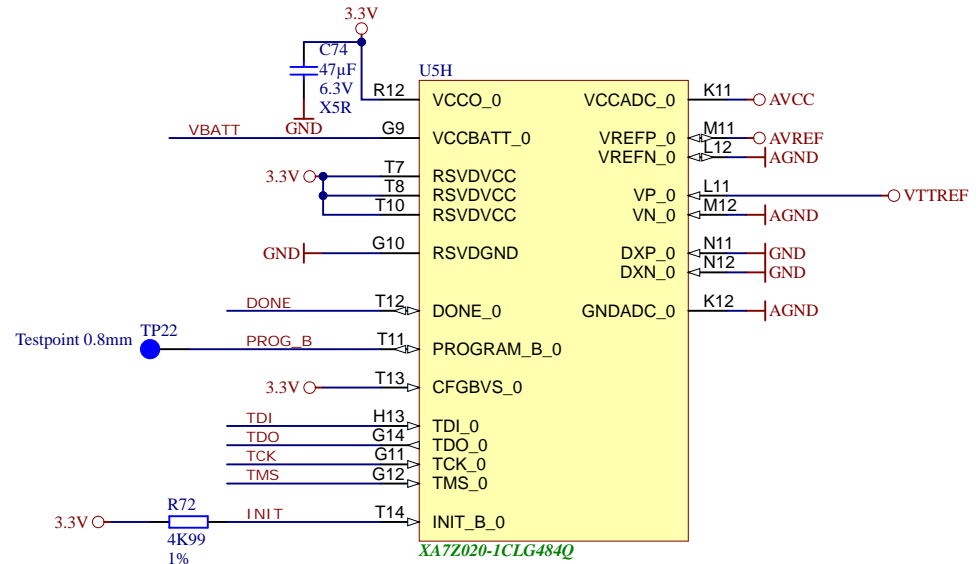
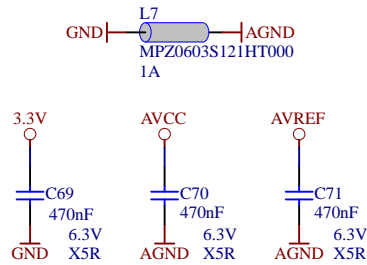
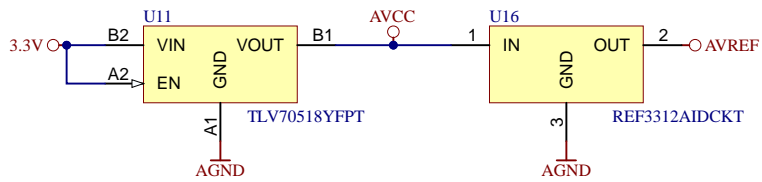


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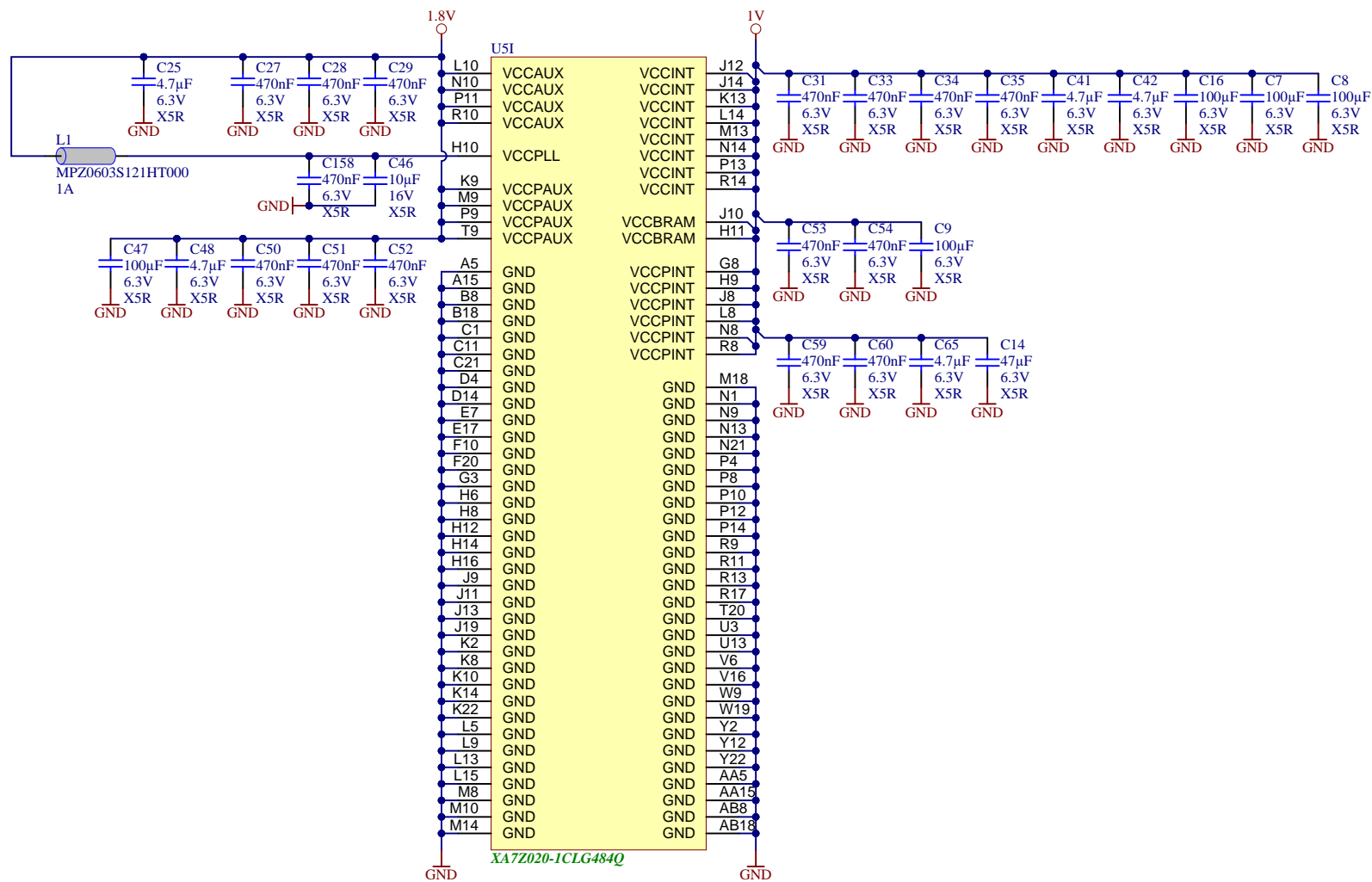


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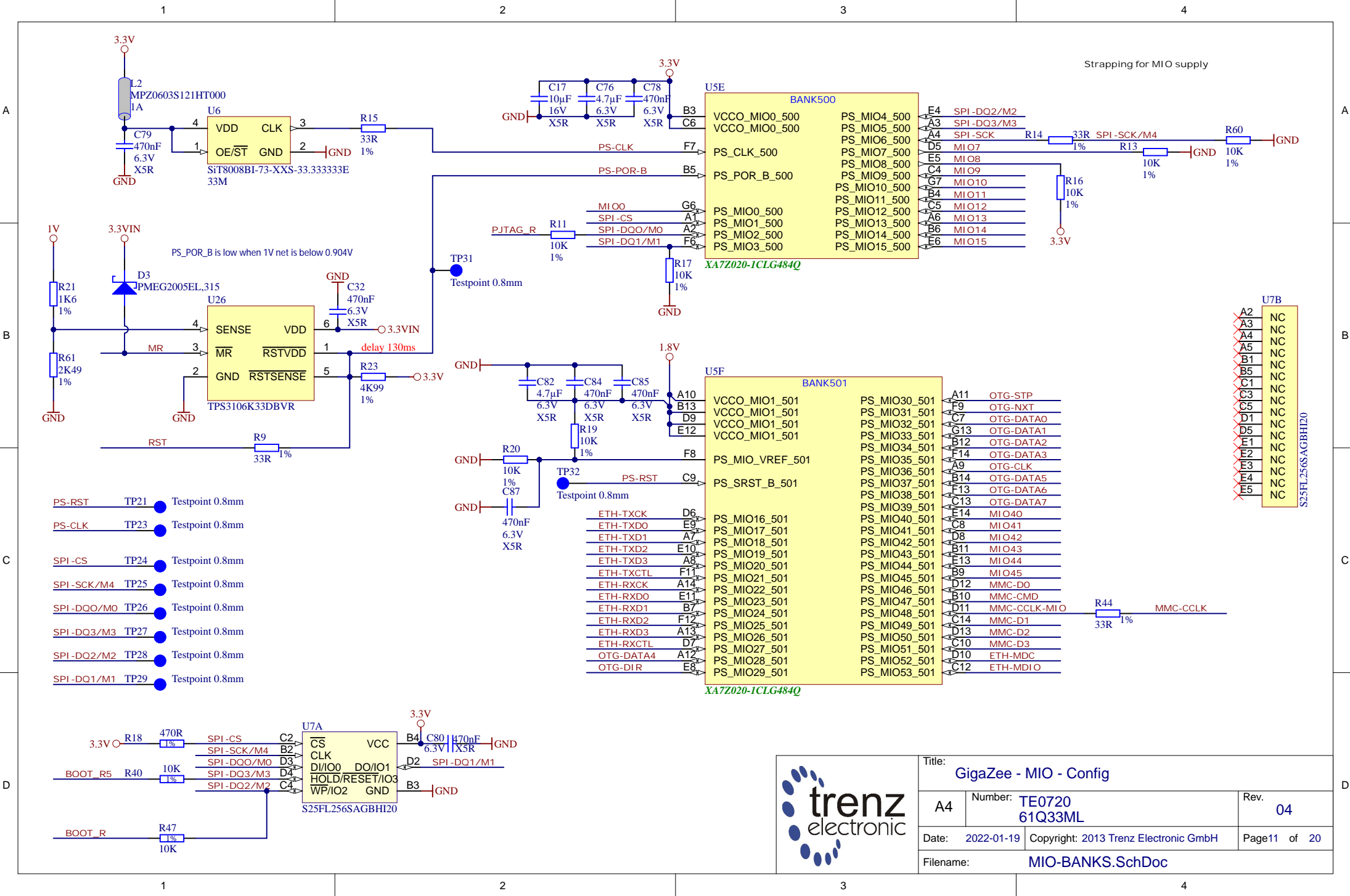




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Title: GigaZee - MIO - Config		
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Filename: MIO-BANKS.SchDoc		

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A

A

B

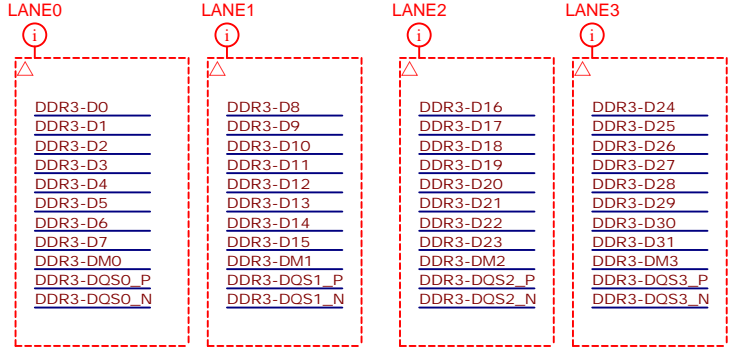
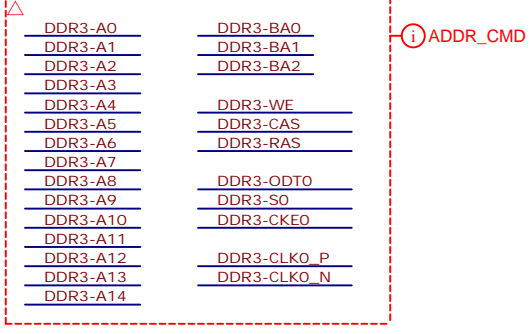
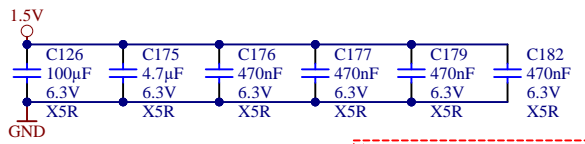
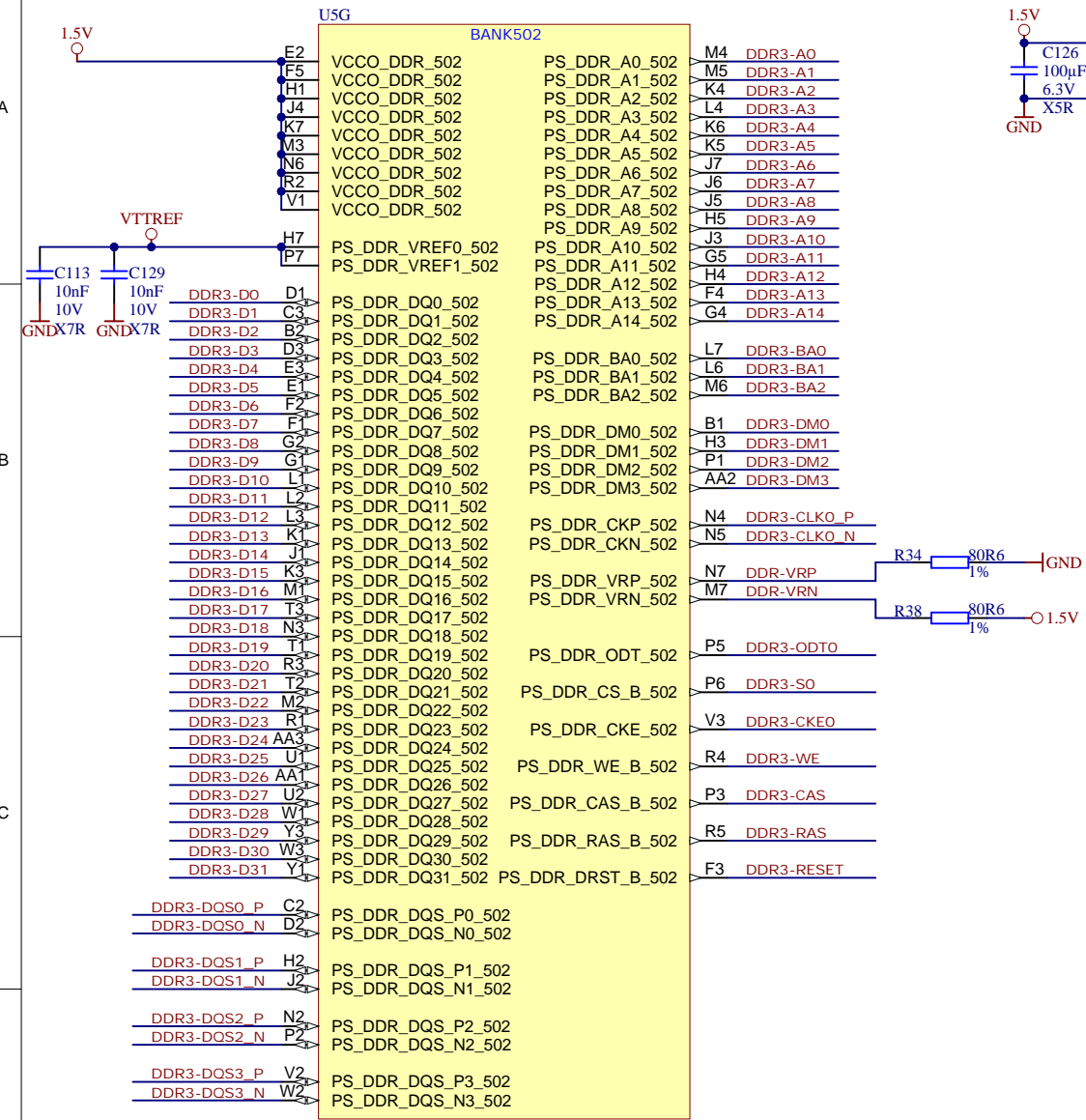
B

C

C

D

D



XA7Z020-1CLG484Q

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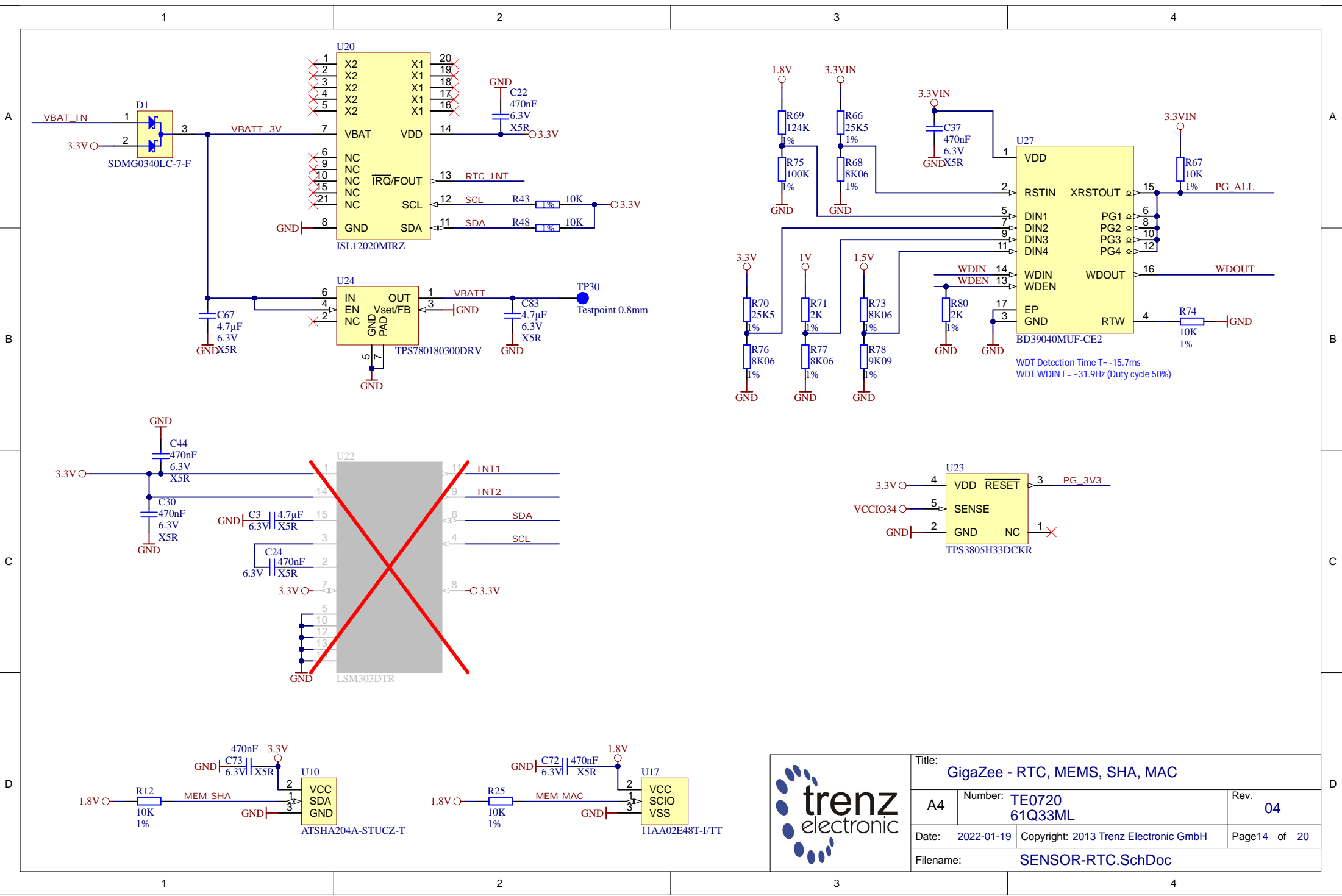
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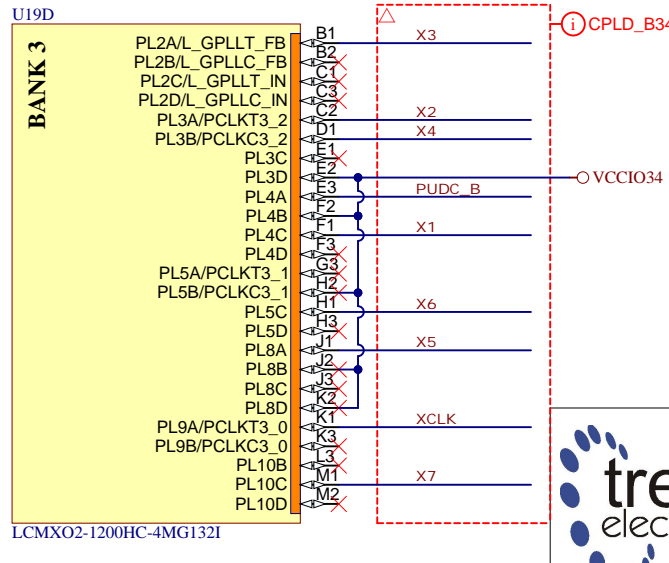
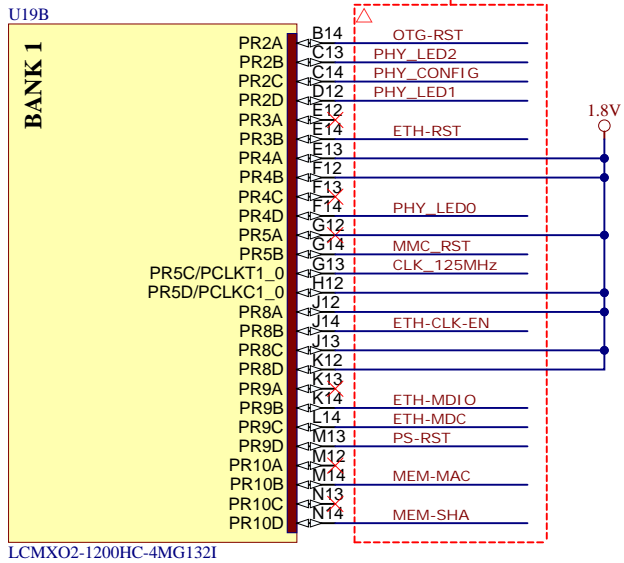
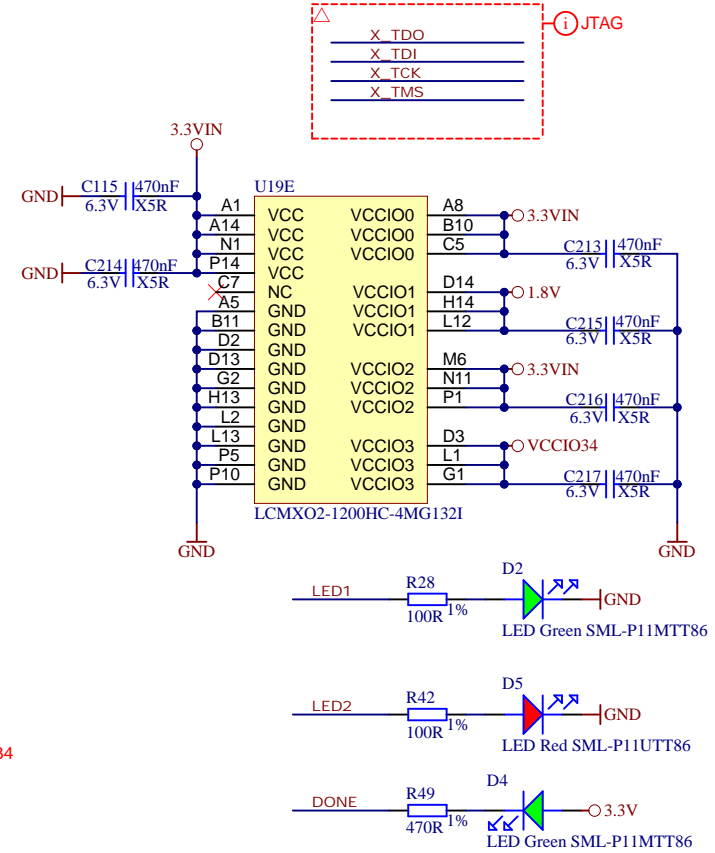
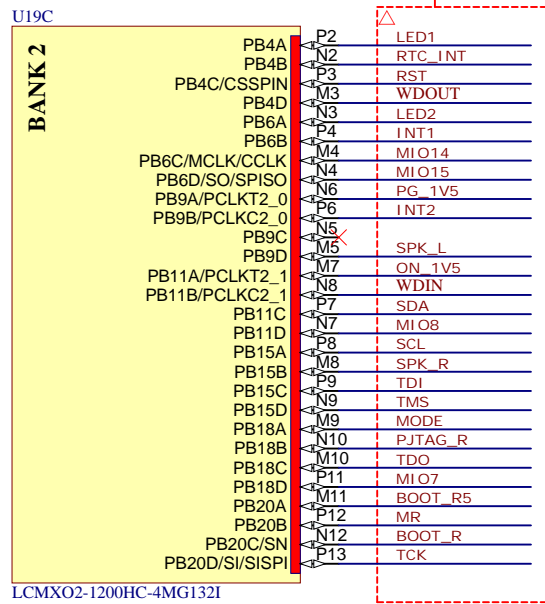
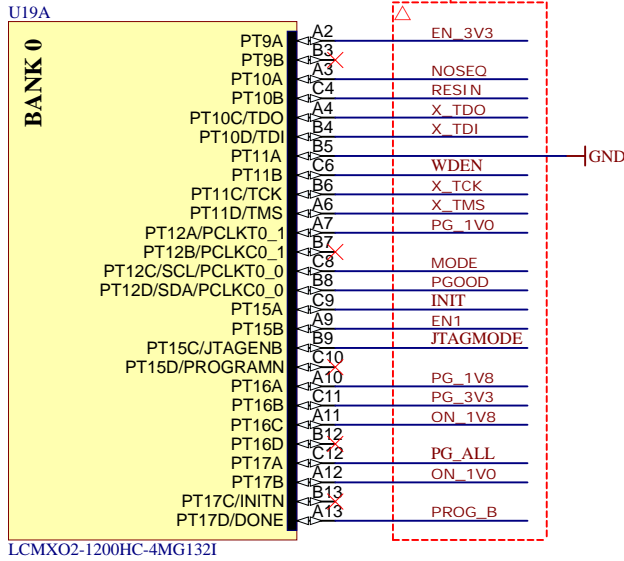
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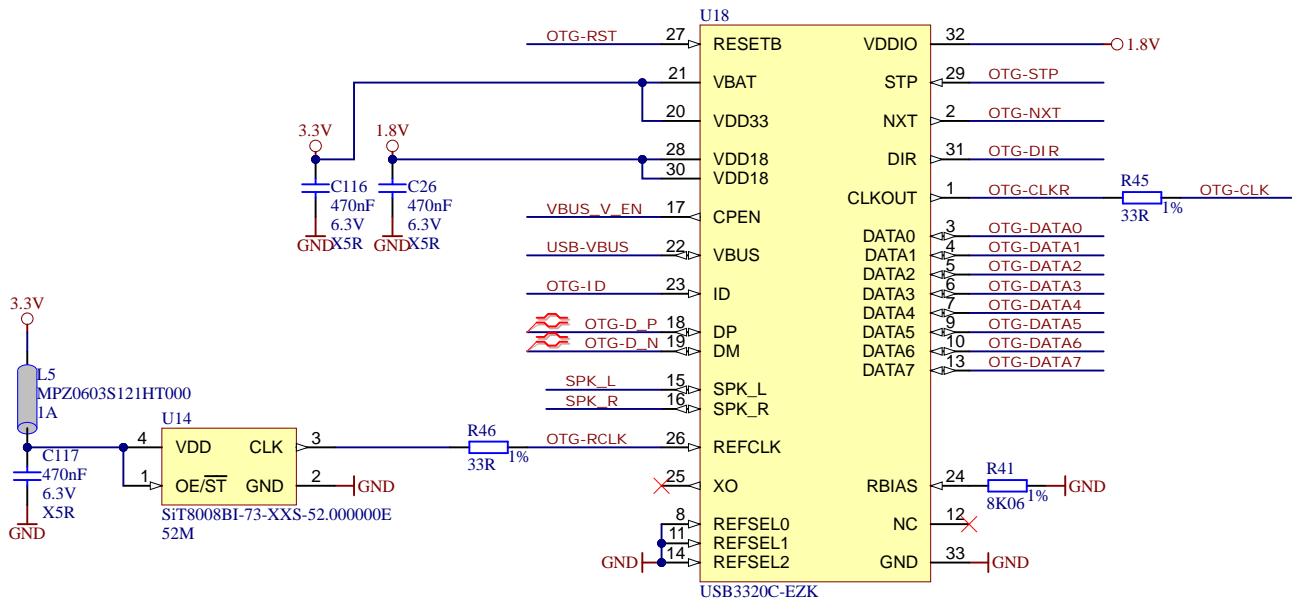


Title: GigaZee - RTC, MEMS, SHA, MAC		
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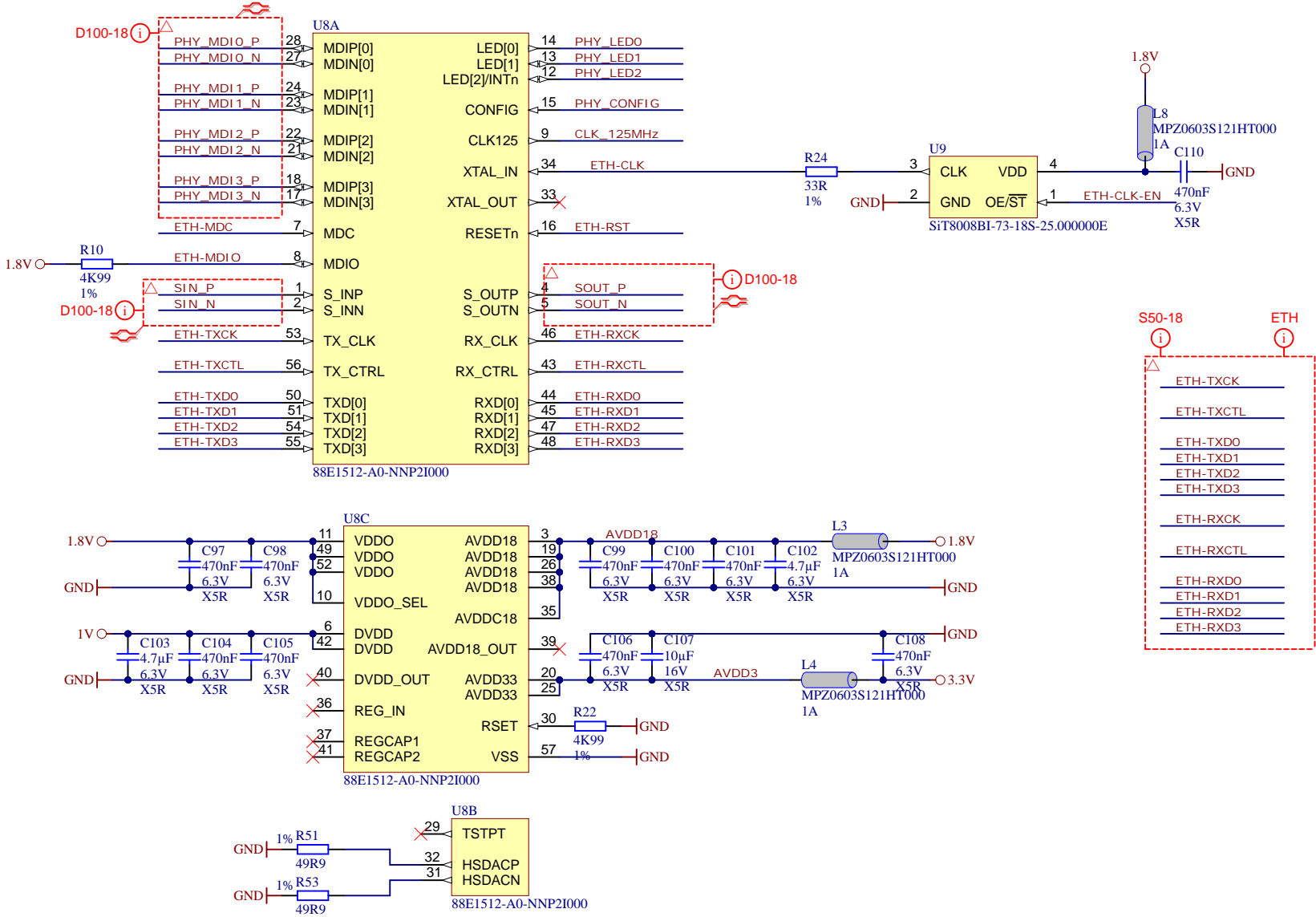



Title: GigaZee - System Controller		
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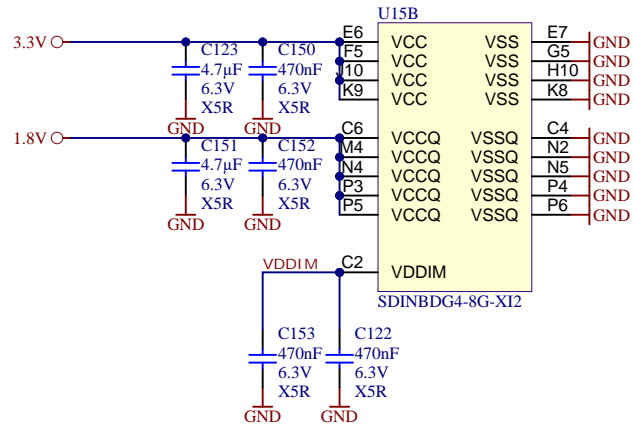
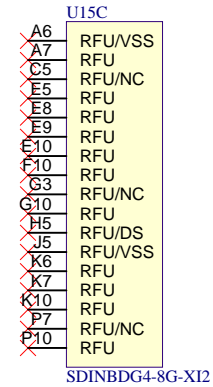
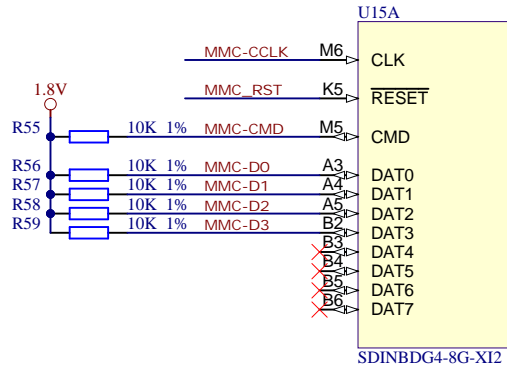
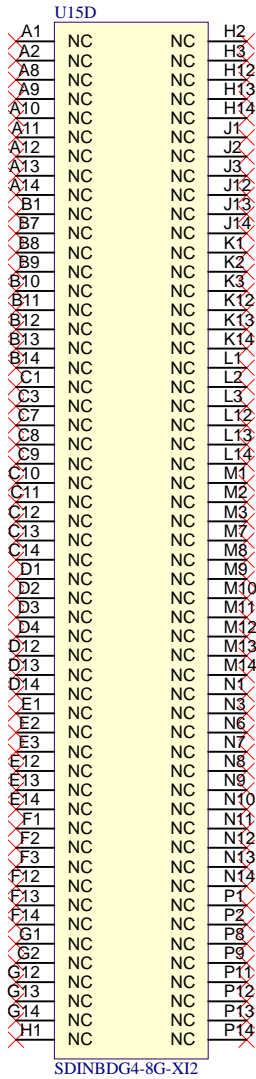




	Title: GigaZee - USB		
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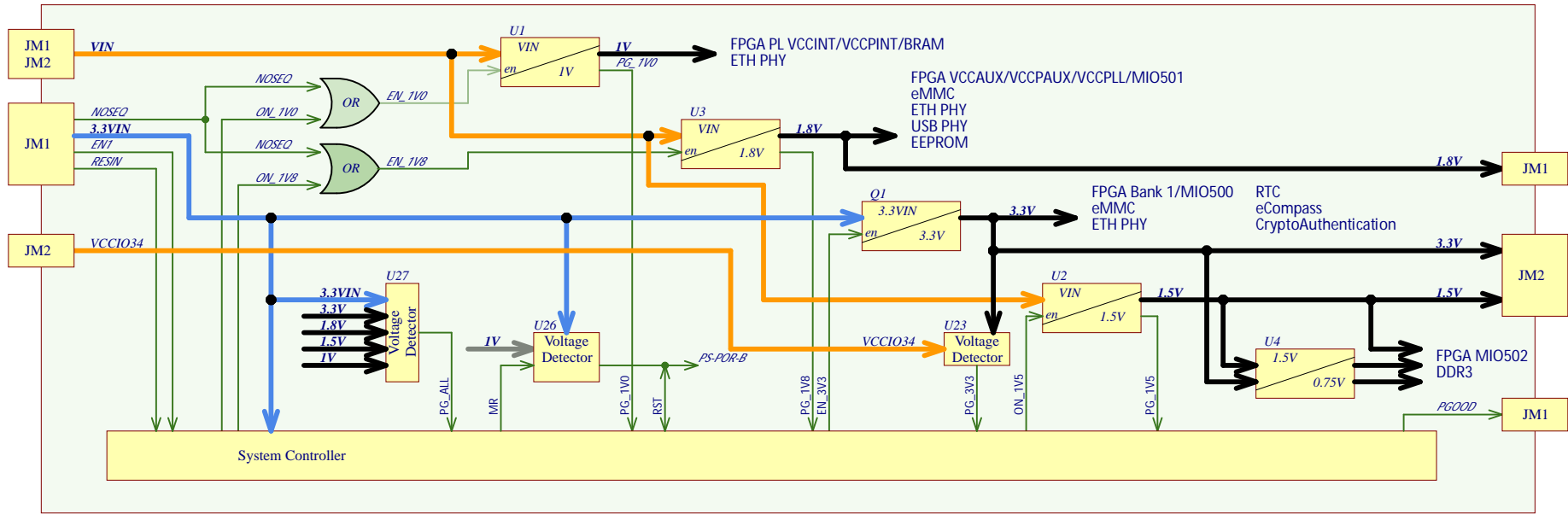


			Title: GigaZee - Ethernet	
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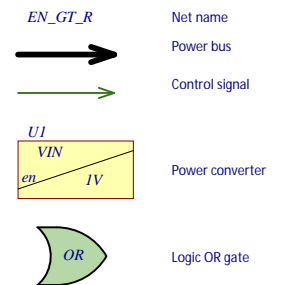
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## Power-on sequencing:

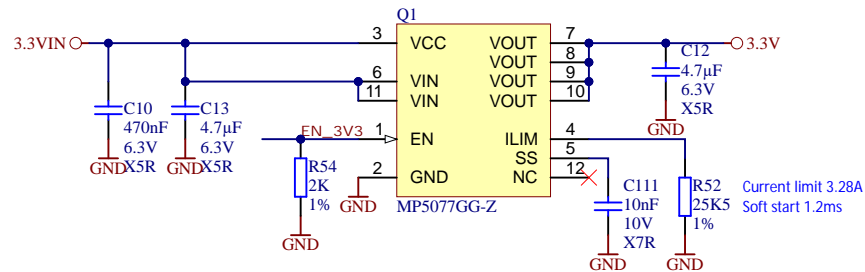
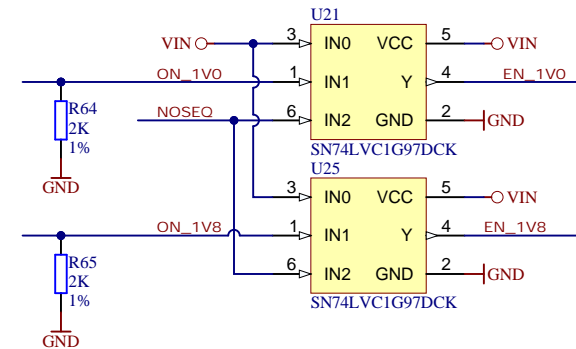
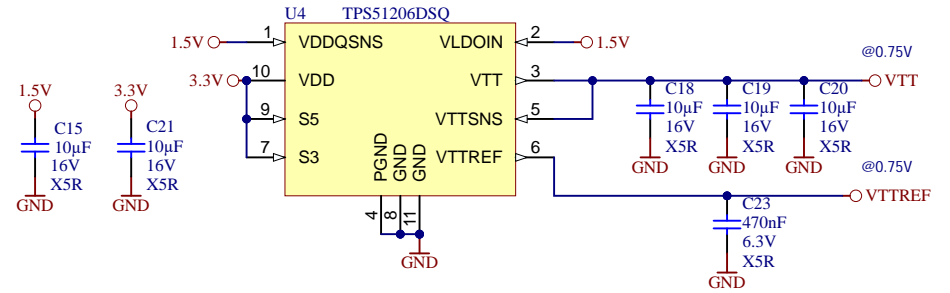
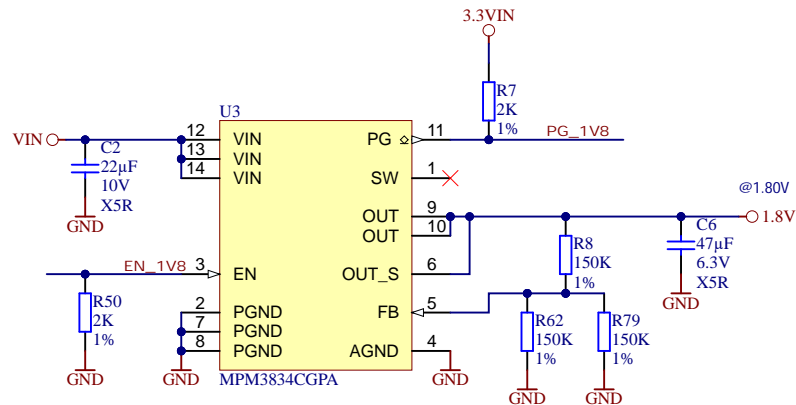
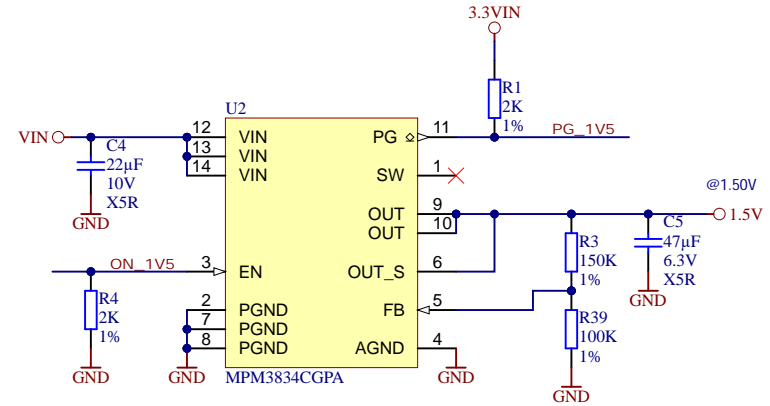
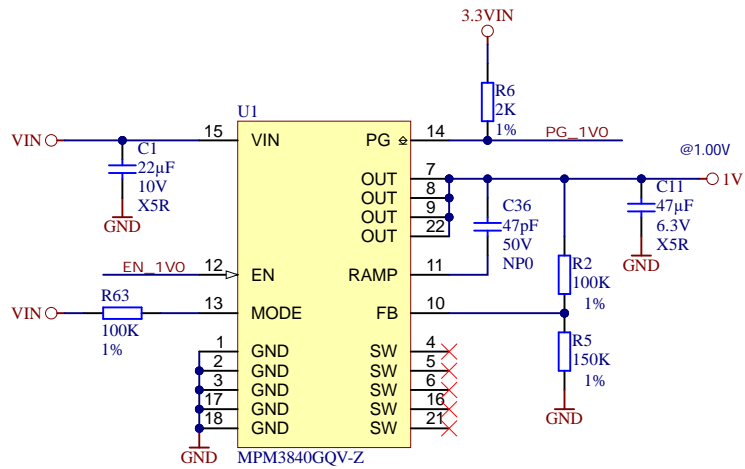



## Recommended Operating Conditions

Power Rail	Direction	Range	Tolerance	Description	Note
VIN	IN	3.3 - 5V	+/-5%	Micromodule Power	Mandatory
3.3VIN	IN	3.3V	+/-5%	Micromodule Power	Mandatory
VCCIO13	IN	1.2 - 3.3V	+/-5%	HR IO Bank13	Mandatory
VCCIO33	IN	1.2 - 3.3V	+/-5%	HR IO Bank33	-
VCCIO34	IN	1.2 - 3.3V	+/-5%	HR IO Bank34	Mandatory
VCCIO35	IN	1.2 - 3.3V	+/-5%	HR IO Bank35	-
VBAT_IN	IN	2.5 - 5V	+/-5%	RTC	-
1.8V	OUT	1.8V	+/-5%	For Carrier card Periphery	-
3.3V	OUT	3.3V	+/-5%	For Carrier card Periphery	-
DDR_PWR	OUT	1.5V	+/-5%	For Carrier card Periphery	-
VREF_JTAG	OUT	3.3V	+/-5%	For Carrier card Periphery	Connected to 3.3VIN



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