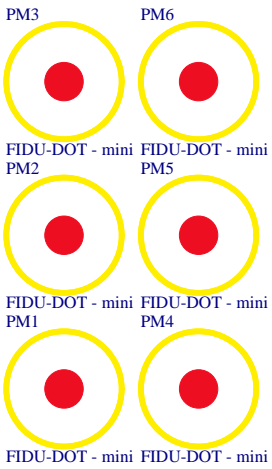
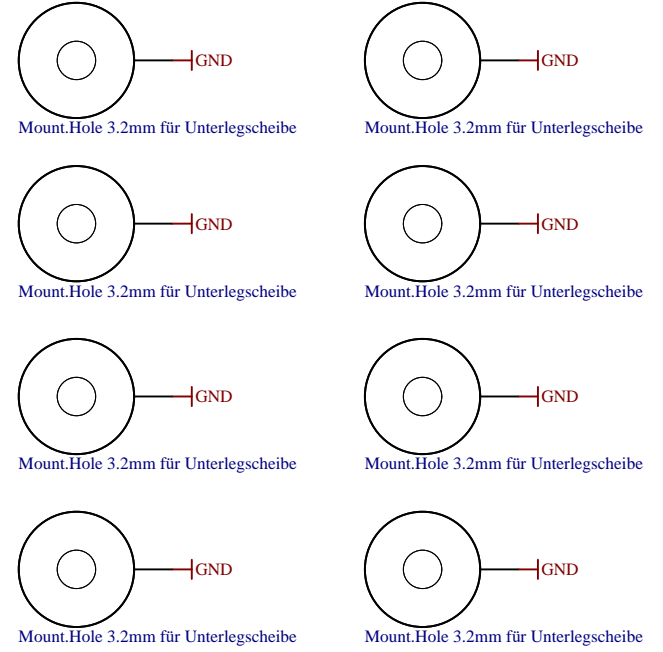


U_J1
J1.SchDoc
U_J2
J2.SchDoc
U_J3
J3.SchDoc
U_J4
J4.SchDoc
U_DDR4-TERM
DDR4-TERM.SchDoc
U_B64
B64.SchDoc
U_B65
B65.SchDoc
U_B66
B66.SchDoc
U_B_GT
B_GT.SchDoc
U_B_GT_2
B_GT_2.SchDoc
U_Legal Notices Modules
Legal Notices Modules.SchDoc

U_B_PS_GT
B_PS_GT.SchDoc
U_PS_DDR
PS_DDR.SchDoc
U_B_MIO
B_MIO.SchDoc
U_B_HD
B_HD.SchDoc
U_Clock
Clock.SchDoc
U_CONFIG
CONFIG.SchDoc
U_DDR4-RAM
DDR4-RAM.SchDoc
U_DDR4-RAM_2
DDR4-RAM_2.SchDoc
U_DDR4-RAM_3
DDR4-RAM_3.SchDoc
U_DDR4-RAM_4
DDR4-RAM_4.SchDoc
U_Power_Diagram.SchDoc
Power_Diagram.SchDoc

U_DDR4-TERM
DDR4-TERM.SchDoc
U_ZU_POWER
ZU_POWER.SchDoc
U_ZU_PS_POWER
ZU_PS_POWER.SchDoc
U_POWER
POWER.SchDoc
U_POWER_2
POWER_2.SchDoc
U_POWER_3
POWER_3.SchDoc
U_POWER_4
POWER_4.SchDoc
U_RC
Revision_Changes.SchDoc
U_TE0818-Overview
TE0818-Overview.SchDoc

Special notes:



Serial
Serial
Serialnummer 6,3 x 6.3mm

MECHI
TE Address Overlay

LOGO ADDRESS

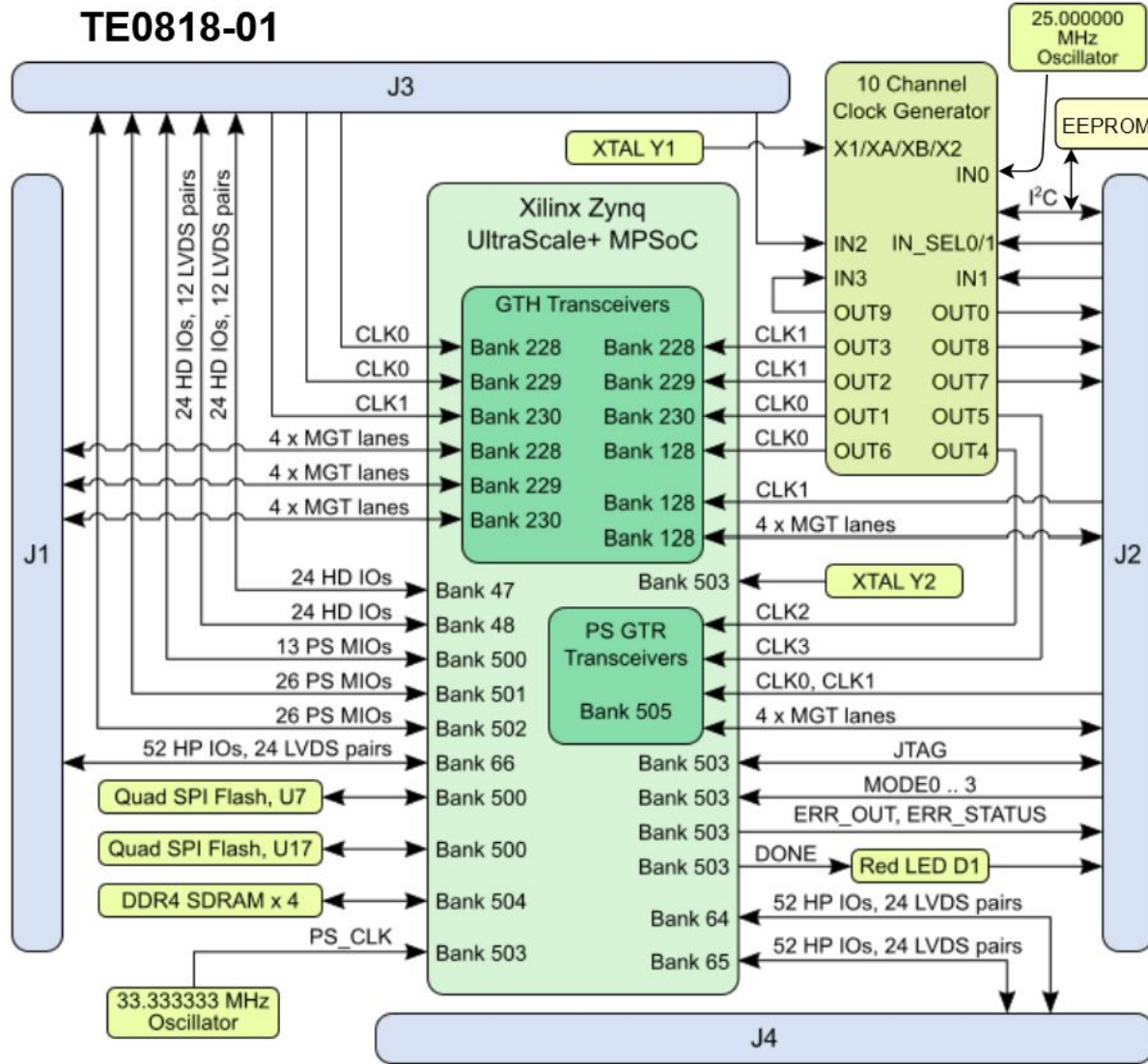
LOGO1
TE Logo PRINT Layer
LOGO PRINT


Design drawn by:	VT
Checked by:	IG
Assembly variant:	9GI76-A
Created by:	VT
Modified by:	VT
Modified at:	2021-05-19

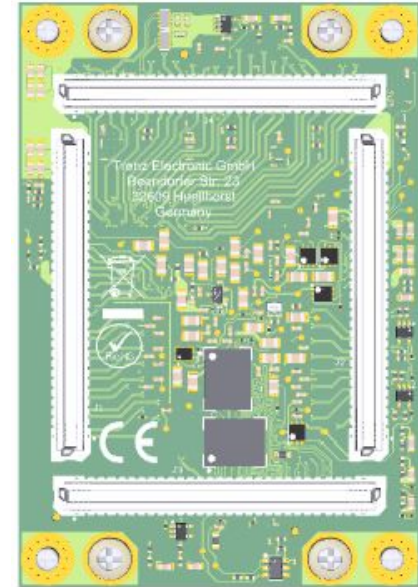
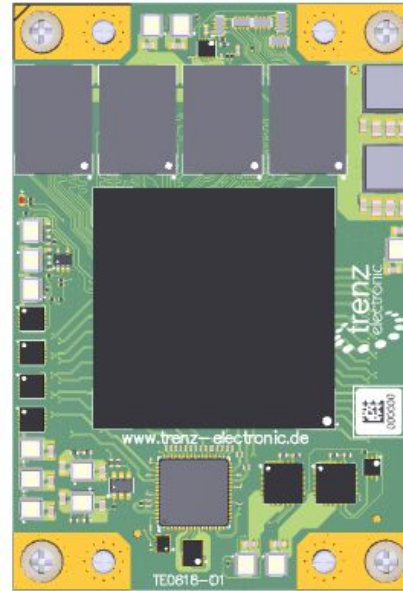
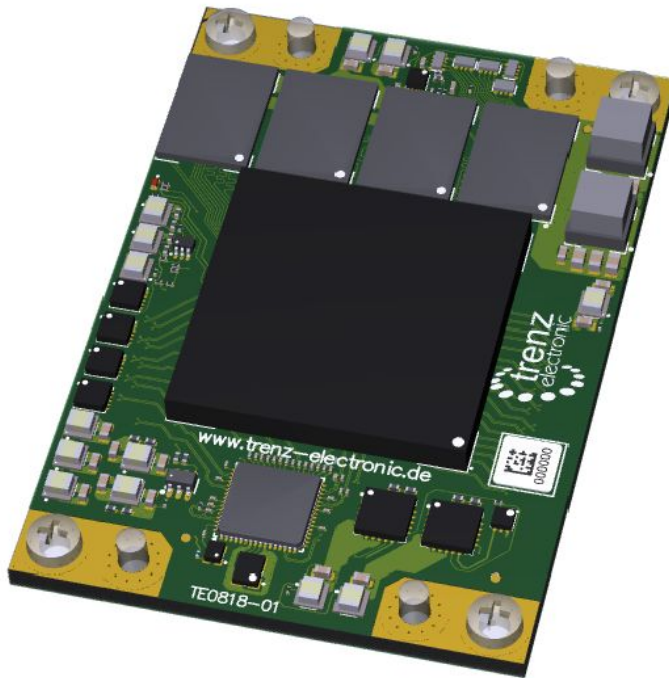


Title: TE0818		
A4	Number: TE0818 9GI76-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 1 of 31
Filename: TE0818.SchDoc		

TE0818-01




			Title: Module TE0818 - System Overview	
			A4	Number: TE0818 9GI76-A
Date: 2021-08-17		Copyright: Trenz Electronic GmbH		Page 2 of 31
Filename: TE0818-Overview.SchDoc				

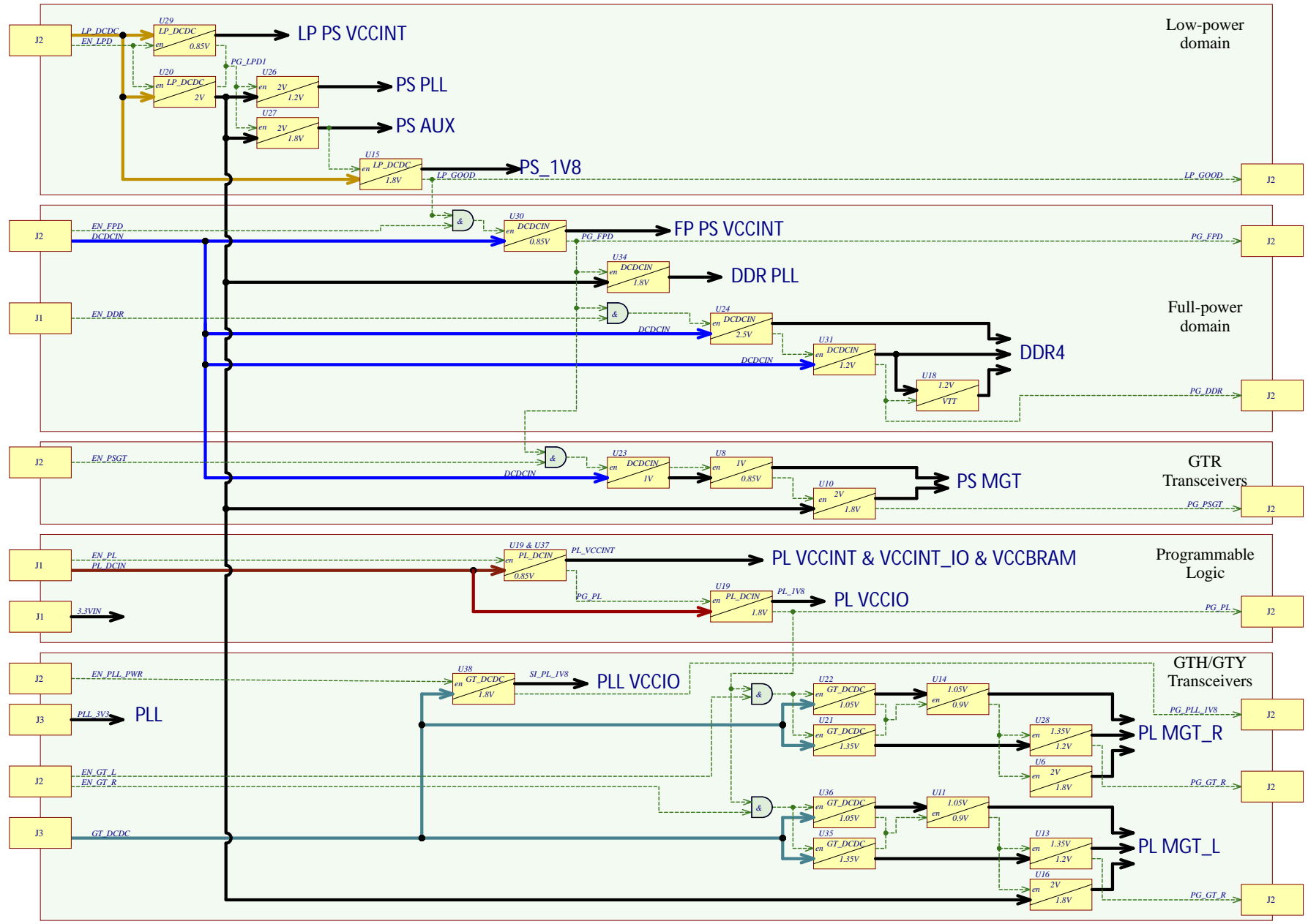


Regarding the usage of our schematics and alike documentation for Trenz module TE0818.

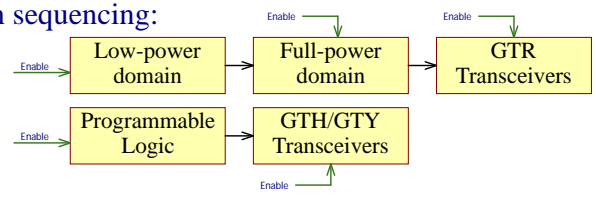
Project is protected under copyright and we strongly and strictly prohibit the reverse engineering or recreation, even if the design is just adapted or modified. TE0818 is protected under such right and in case of plagiarism we will have to do anything necessary in order to protect our assets.

Schematics and other handouts serve for informational purposes only!

	Title: TE0818		
	A4	Number: TE0818 9GI76-A	Rev. 01
	Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 3 of 31
	Filename: Legal Notices Modules.SchDoc		



Power-on sequencing:



Legend:

- Net name: EN_GT_R
- Power bus: \rightarrow
- Control signal: \dashrightarrow
- Power bus in FPGA speedgrade -1/-2/-3 assembly variants: \dashrightarrow (dotted)
- Power bus in FPGA speedgrade -1L/-2L assembly variants (low power): \dashrightarrow (dashed)
- Optional power converter: PL_DCIN (0.9V)
- Logic AND gate: $\&$



Title: TE0813 - Power Diagram		
A3	Number: TE0818 9G176-A	Rev. 01
Datum: 2021-01-19	Copyright: Trenz Electronic GmbH	Page 4 of 31
Filename: Power_Diagram.SchDoc		

1

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A

A

B

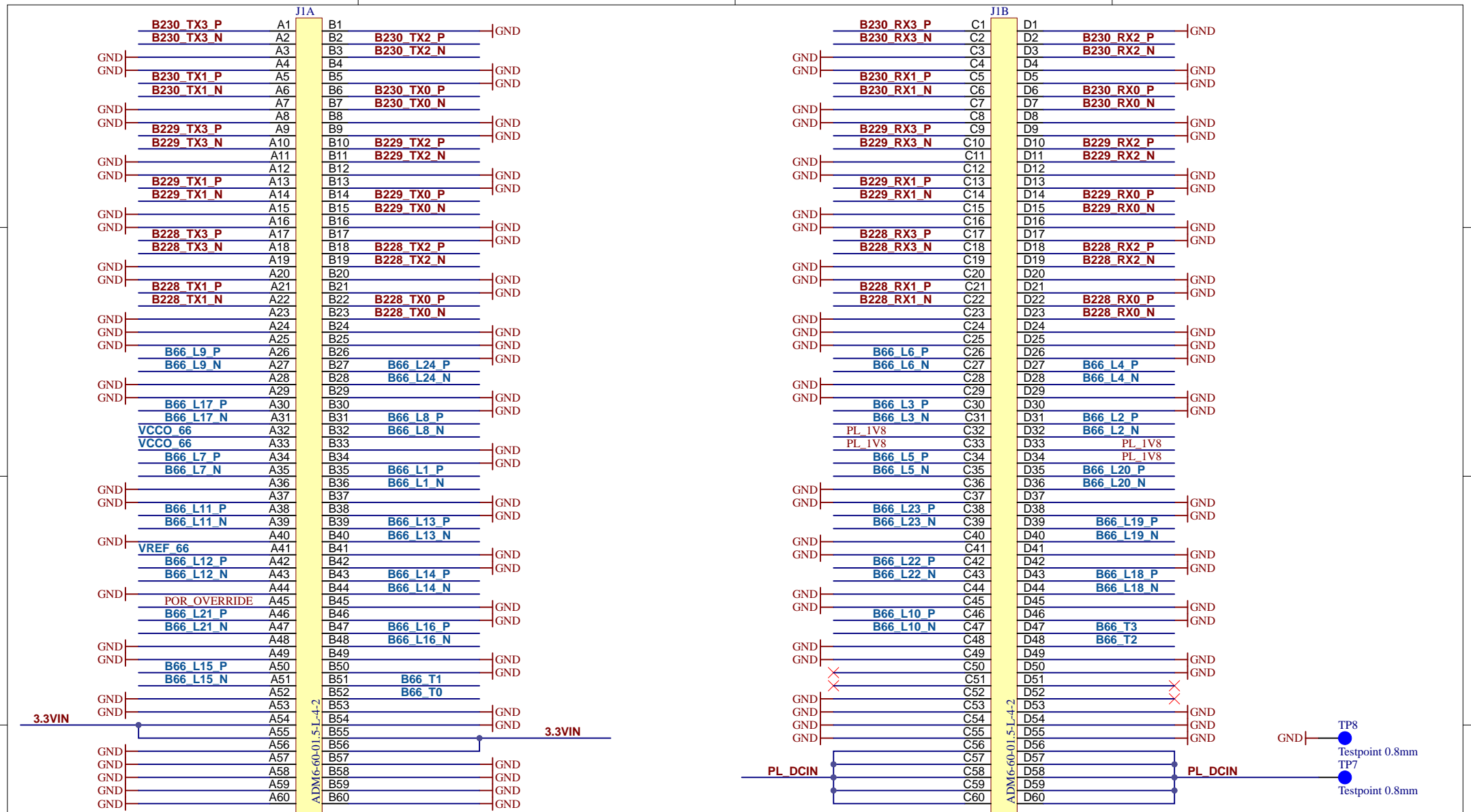
B

C

C

D

D



Title: TE0818 - Connector J1		
A4	Number: TE0818 9GI76-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 5 of 31
Filename: J1.SchDoc		

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A

A

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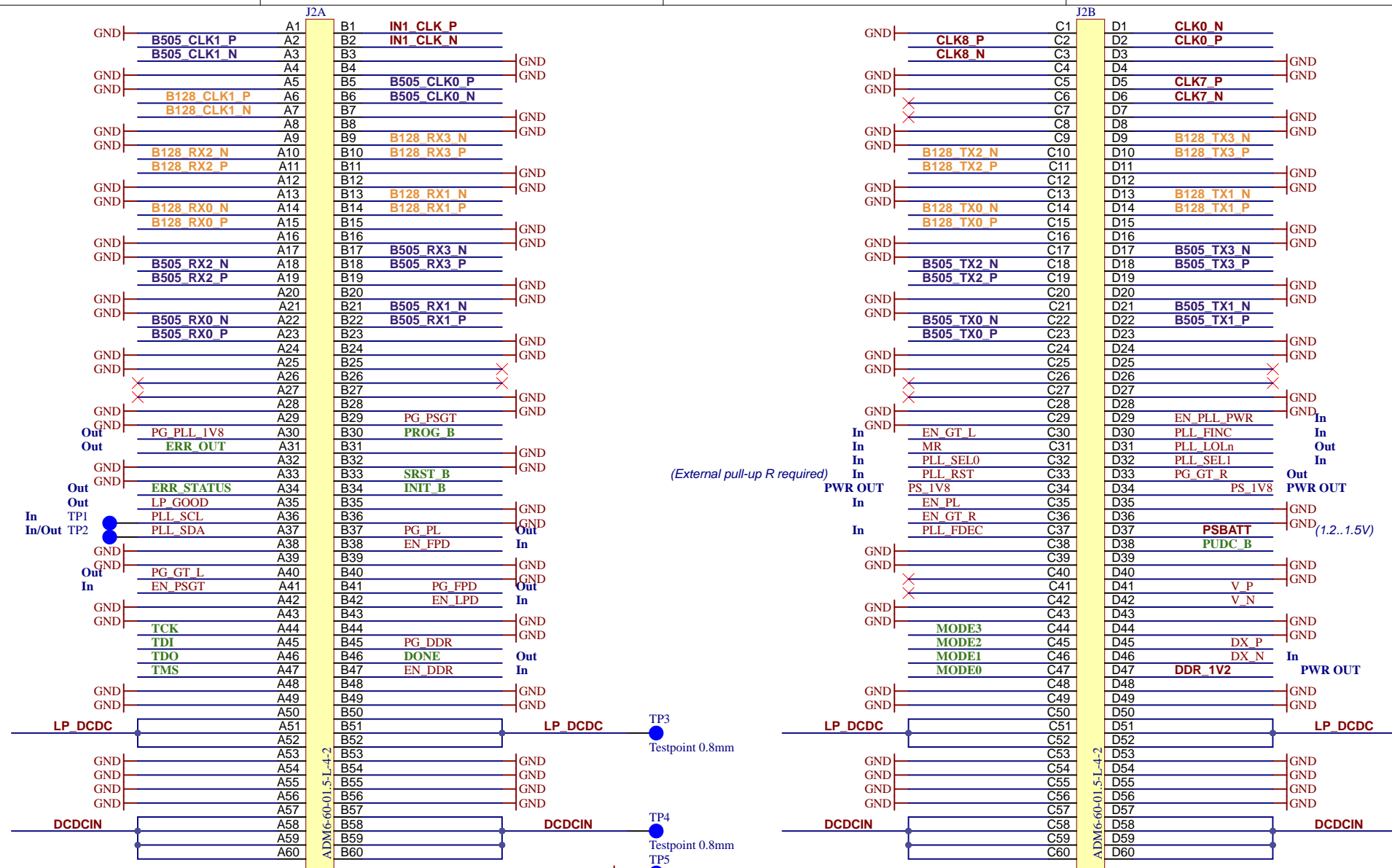
B

C

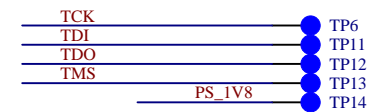
C

D

D



(External pull-up R required)



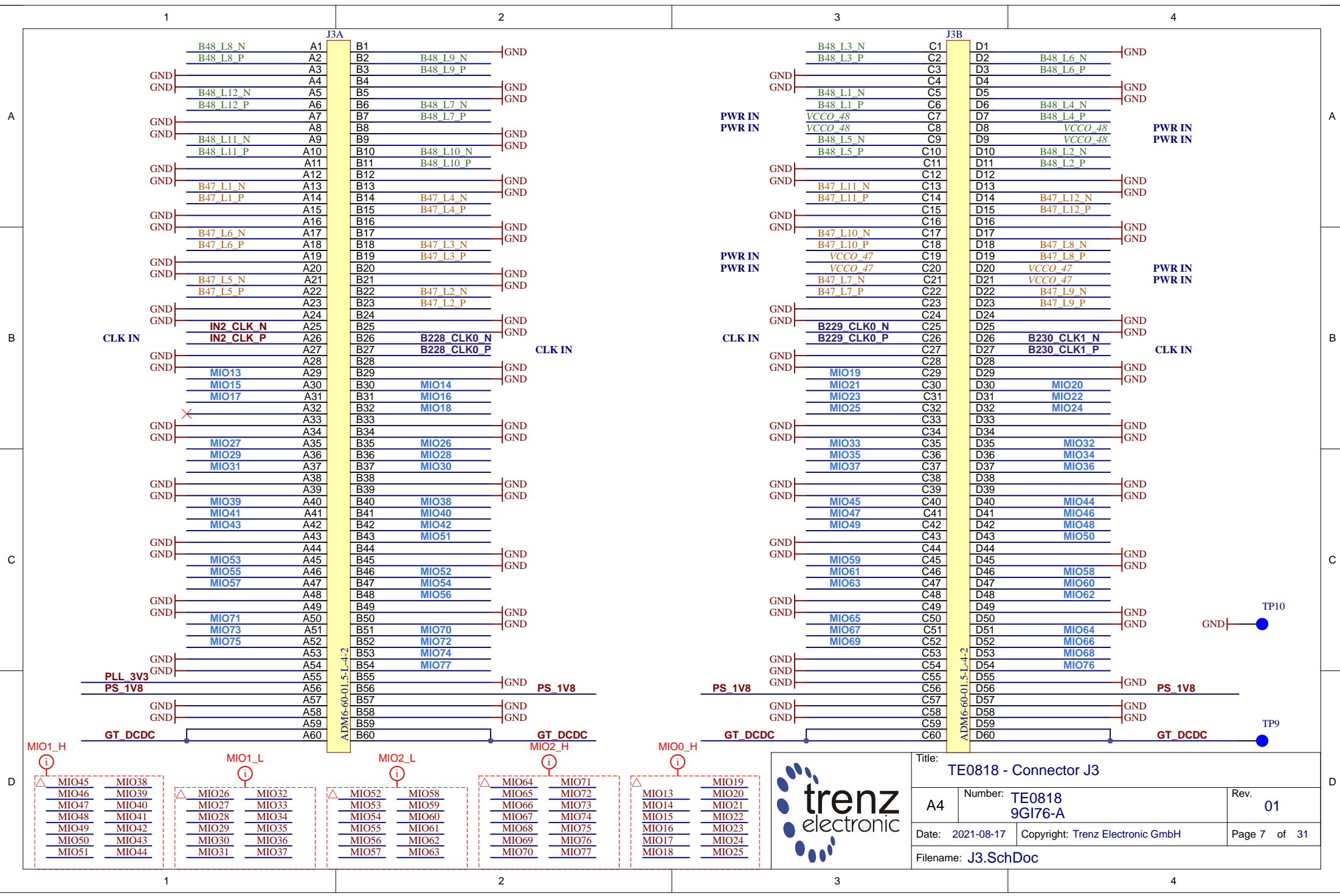
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		A4	Number: TE0818 9GI76-A
Date: 2021-08-17		Copyright: Trenz Electronic GmbH	
Filename: J2.SchDoc		Page 6 of 31	

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MIO45	MIO38	MIO26	MIO32	MIO52	MIO58	MIO64	MIO71	MIO13	MIO19
MIO46	MIO39	MIO27	MIO33	MIO53	MIO59	MIO65	MIO72	MIO14	MIO20
MIO47	MIO40	MIO28	MIO34	MIO54	MIO60	MIO66	MIO73	MIO15	MIO21
MIO48	MIO41	MIO29	MIO35	MIO55	MIO61	MIO67	MIO74	MIO16	MIO22
MIO49	MIO42	MIO30	MIO36	MIO56	MIO62	MIO68	MIO75	MIO17	MIO23
MIO50	MIO43	MIO31	MIO37	MIO57	MIO63	MIO69	MIO76	MIO18	MIO24
MIO51	MIO44					MIO70	MIO77		



Title: TE0818 - Connector J3

A4	Number: TE0818 9GI76-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 7 of 31
Filename: J3.SchDoc		

1

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A

A

B

B

C

C

D

D

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A

A

B

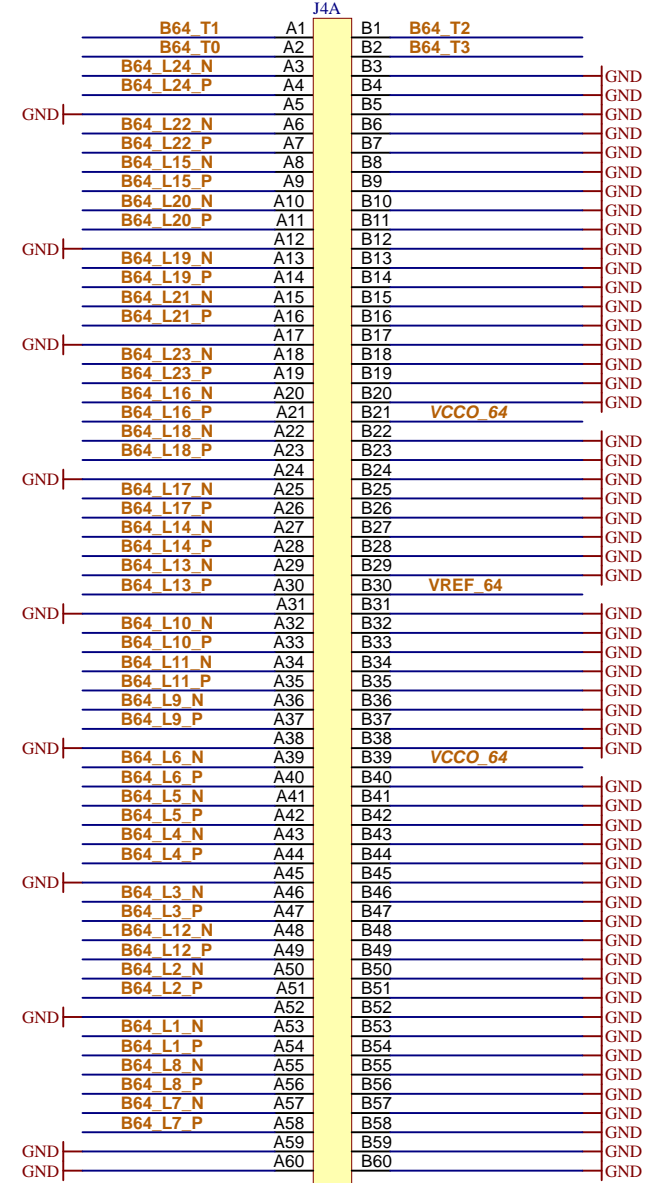
B

C

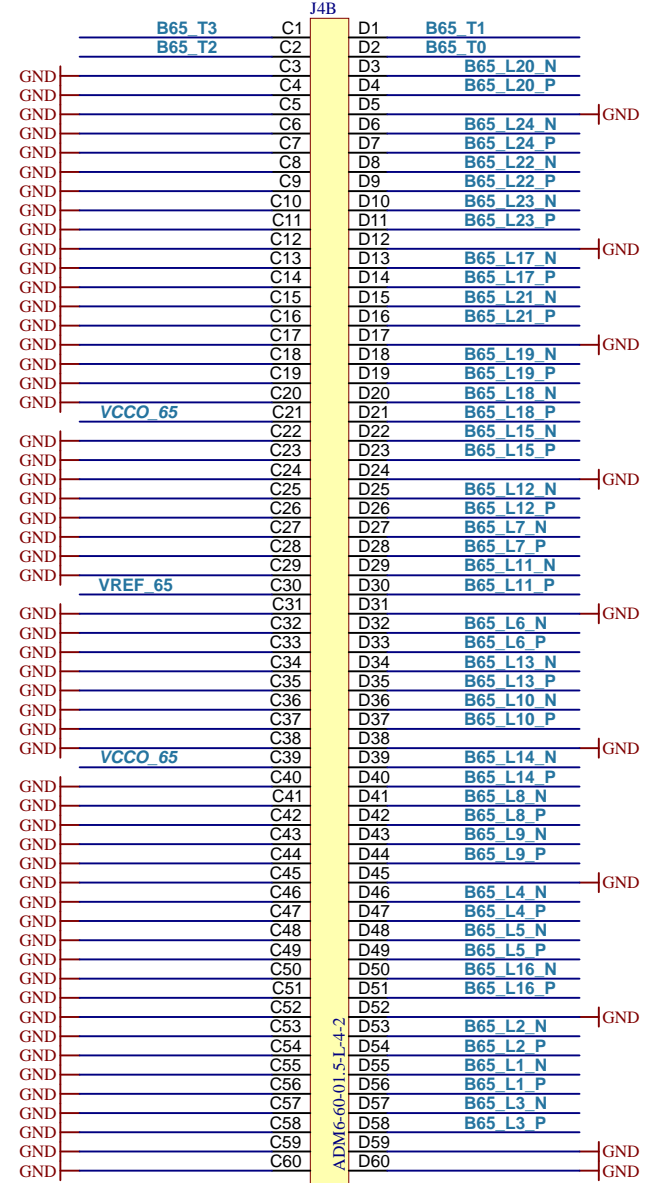
C

D

D



ADM6-60-01.5-L-4-2



ADM6-60-01.5-L-4-2



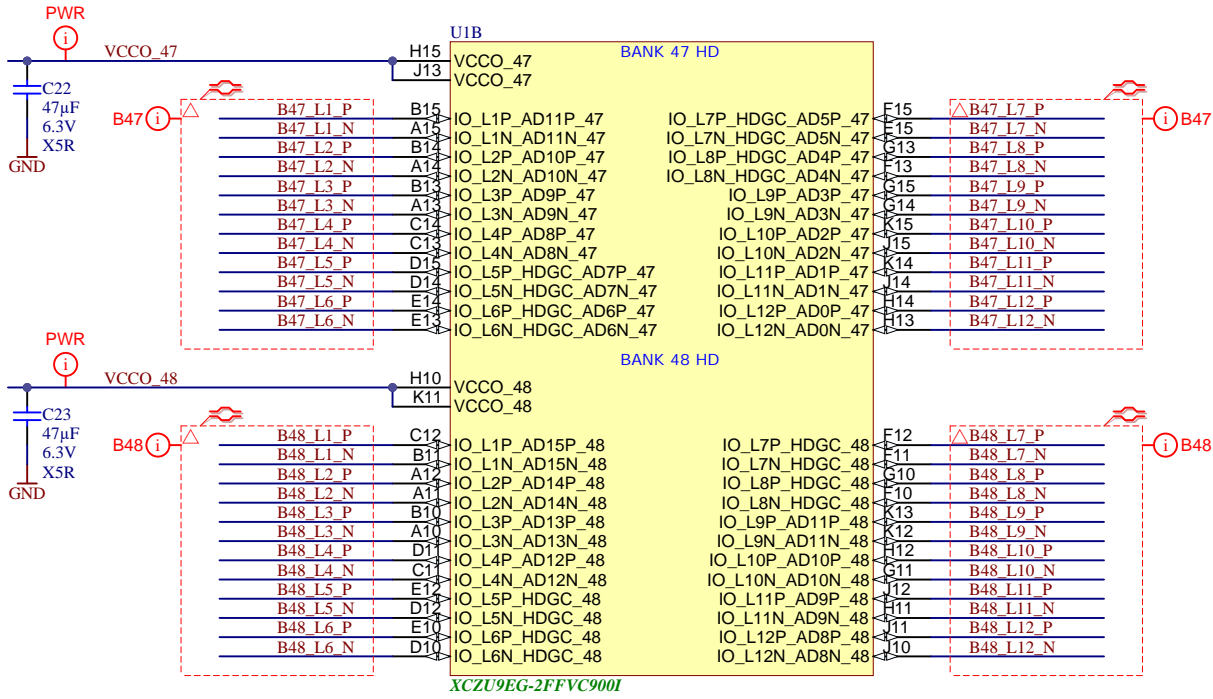
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 8 of 31
Filename: J4.SchDoc		

1


2

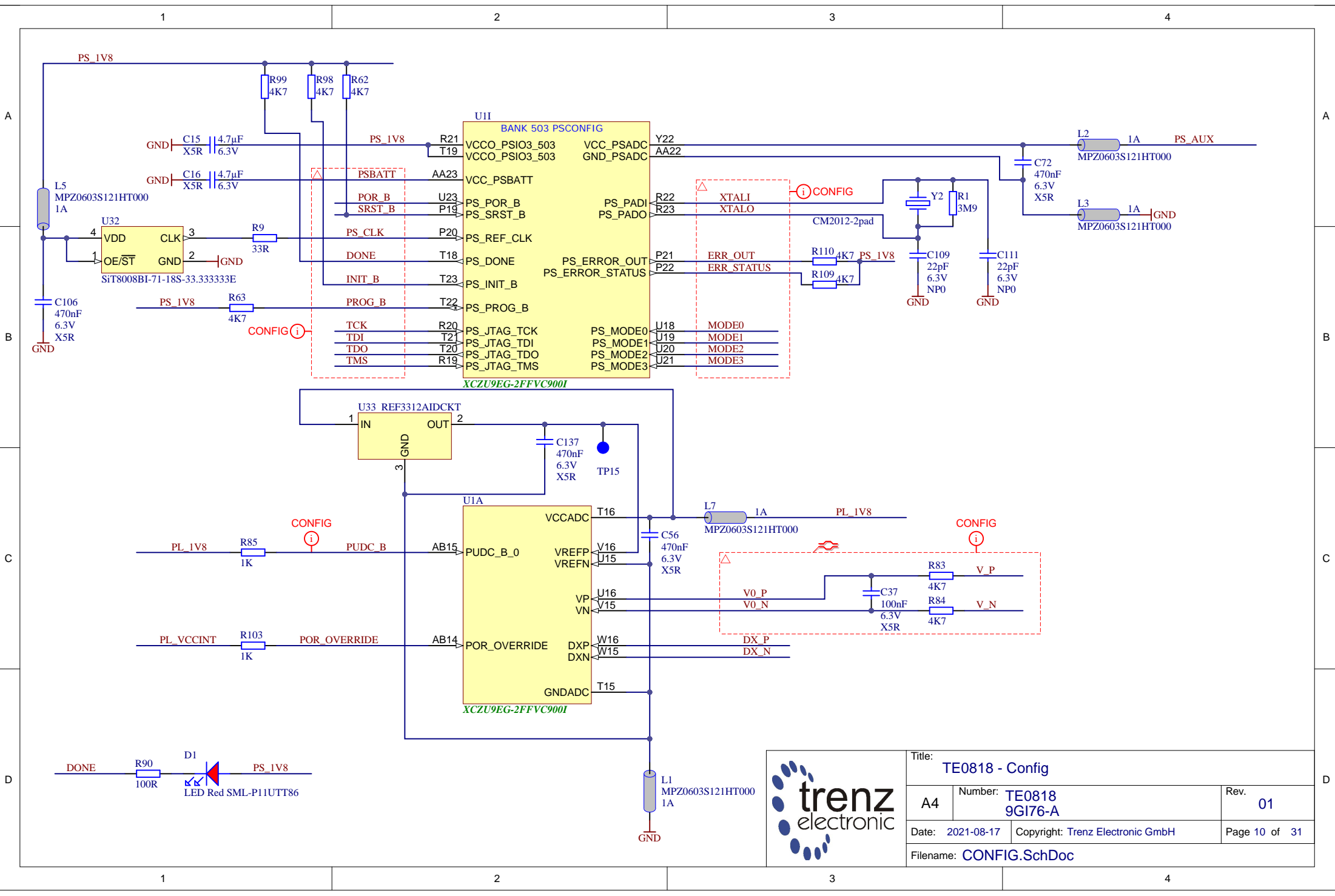
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4

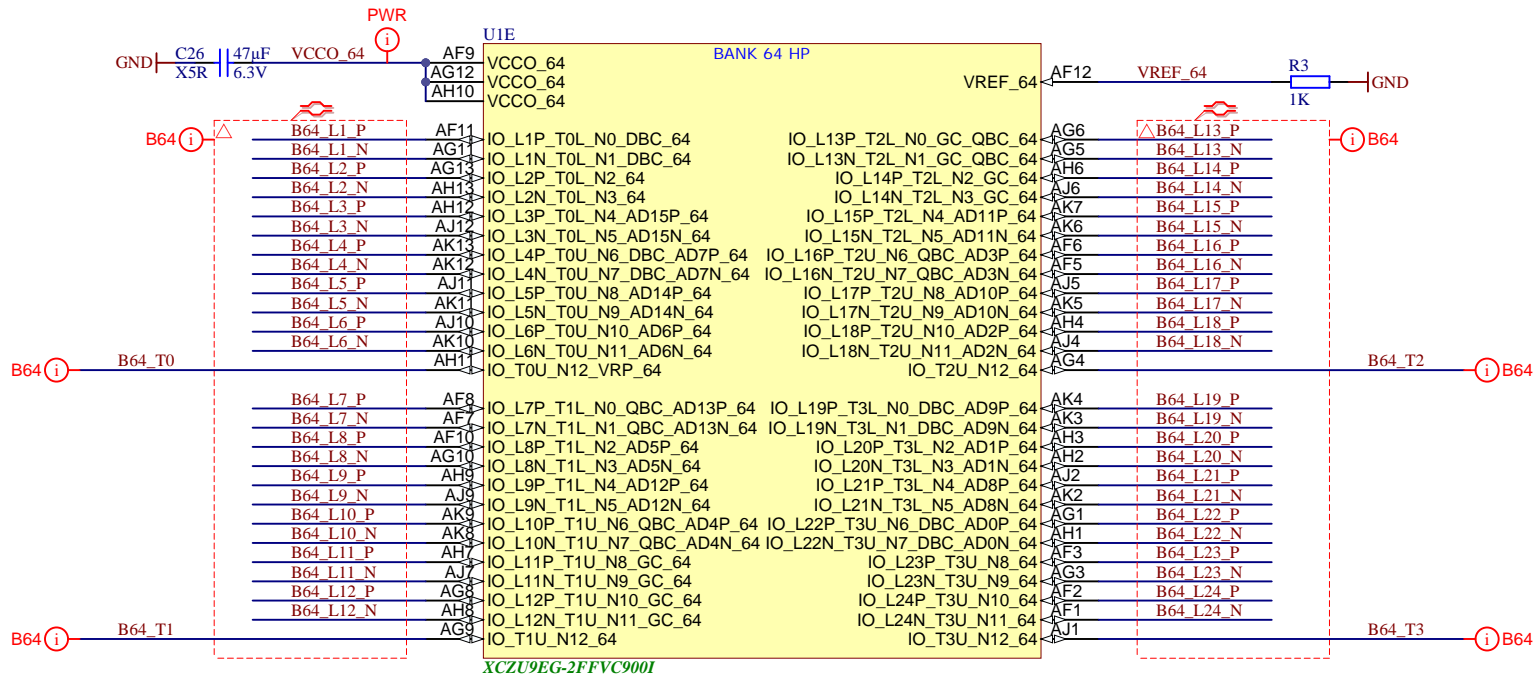


XCZU9EG-2FFVC900I

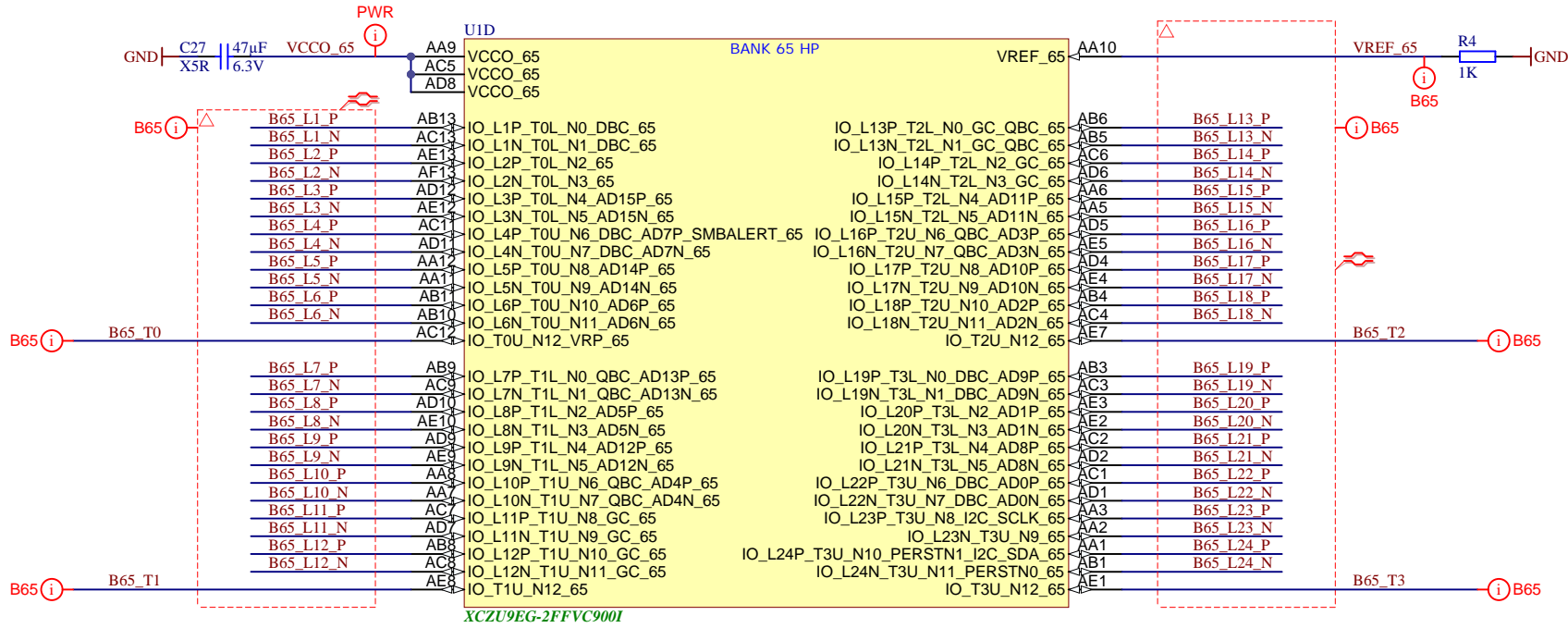
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	Date: 2021-08-17	Copyright: Trenz Electronic GmbH
	Filename: B_HD.SchDoc	
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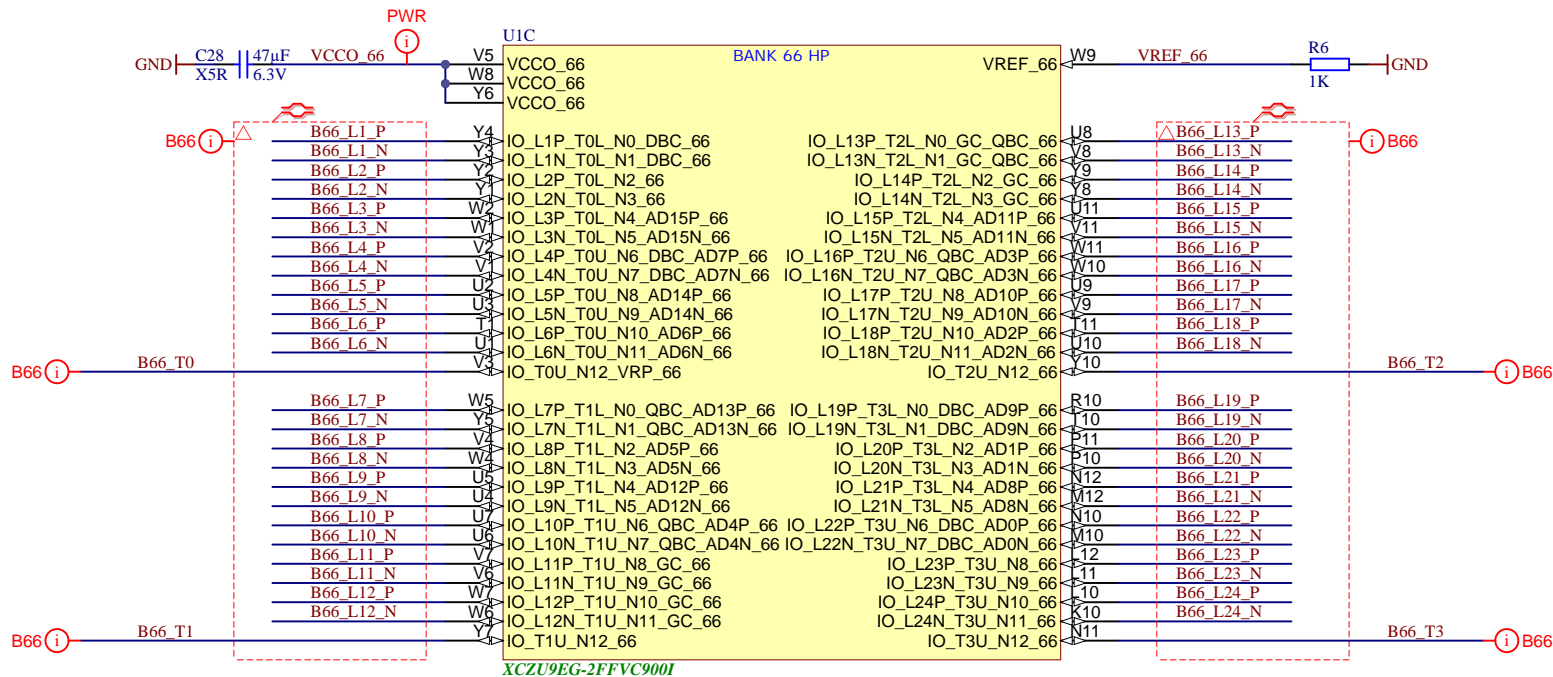
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 10 of 31
Filename: CONFIG.SchDoc		




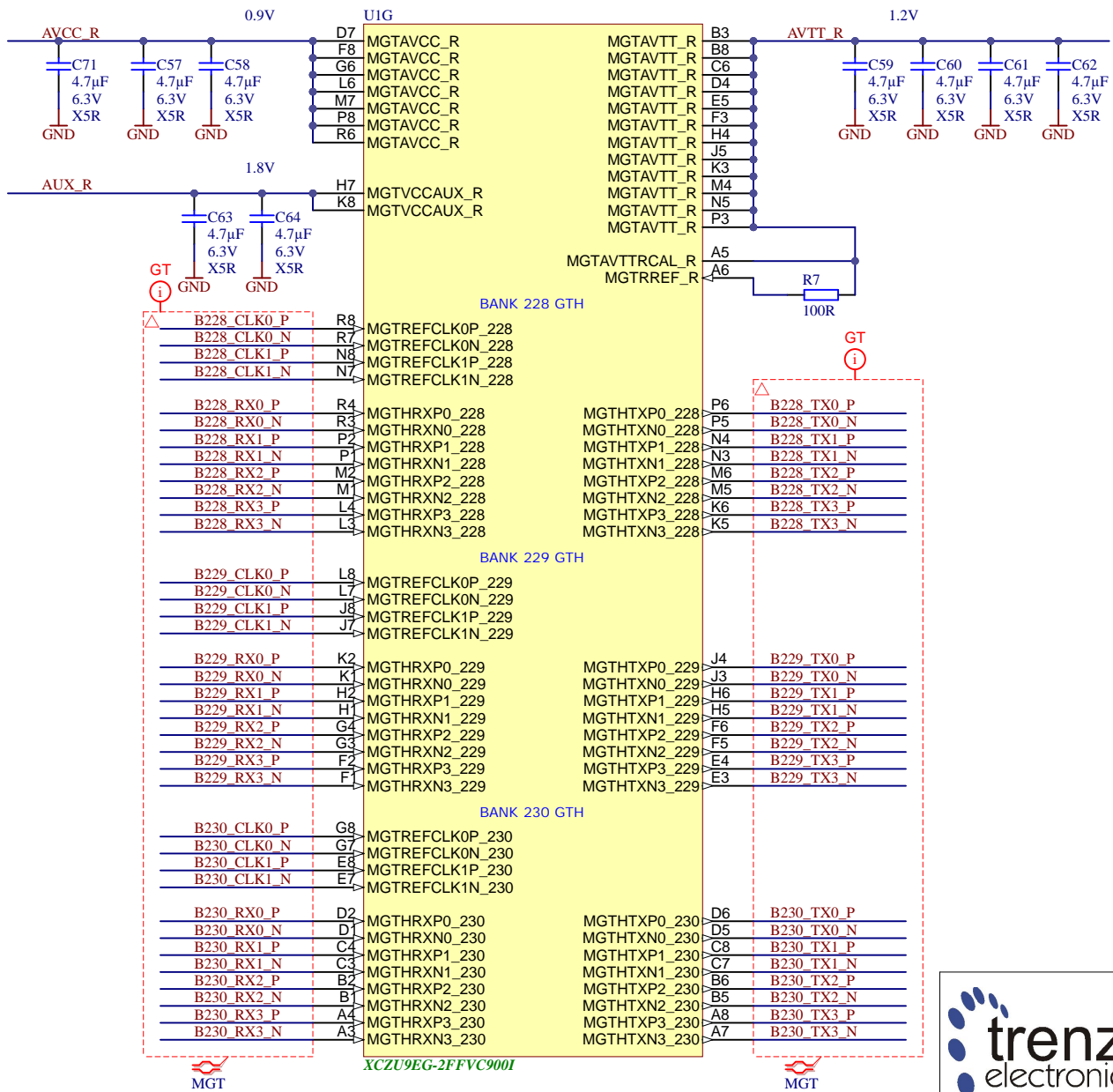
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 11 of 31
Filename: B64.SchDoc		



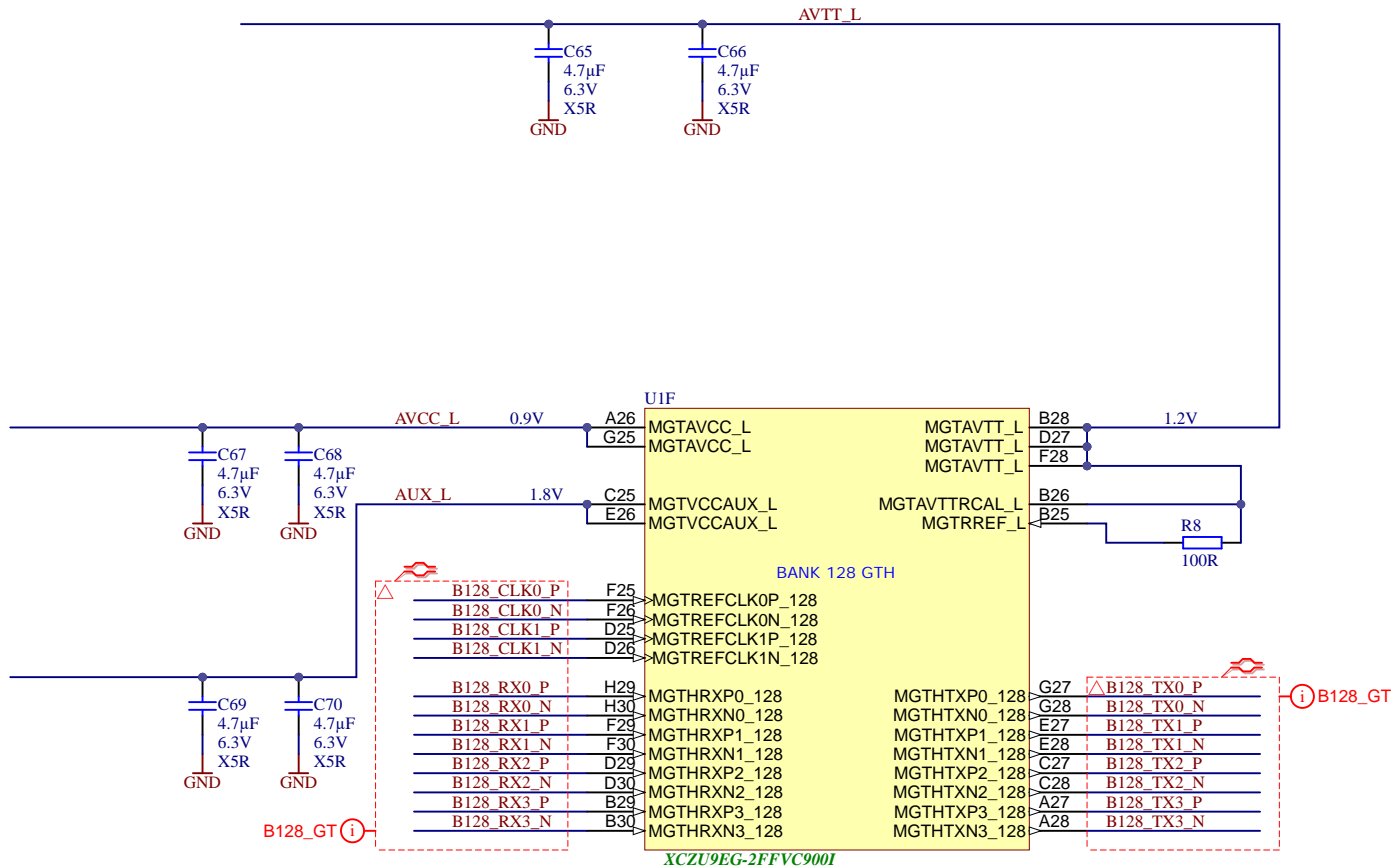
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 12 of 31
Filename: B65.SchDoc		




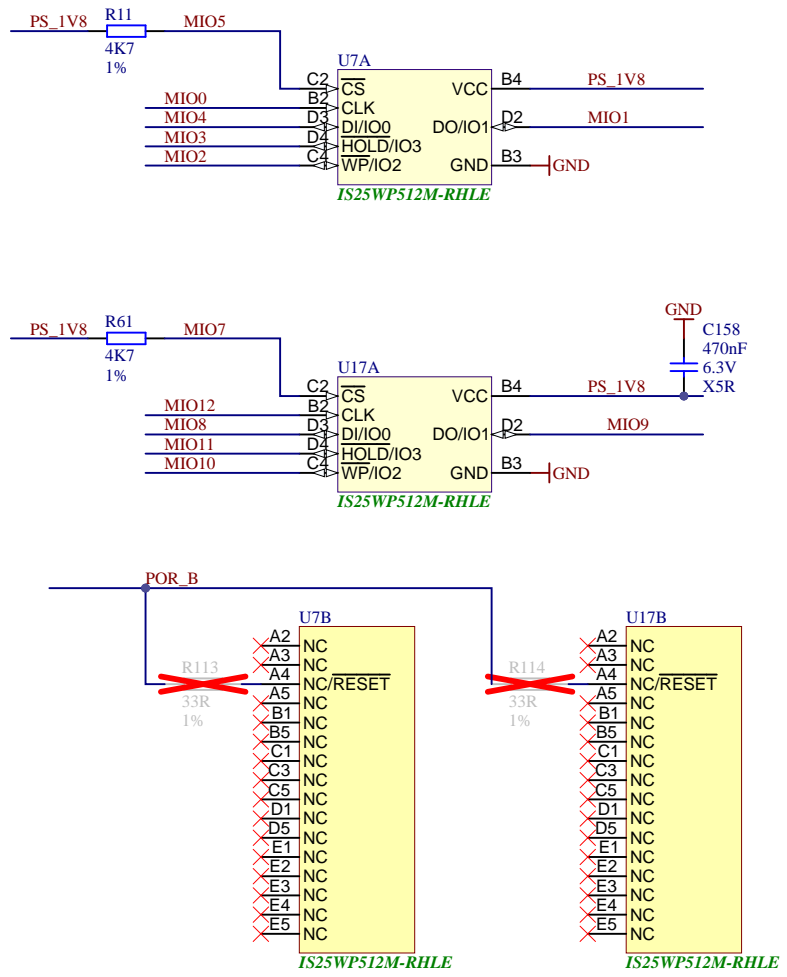
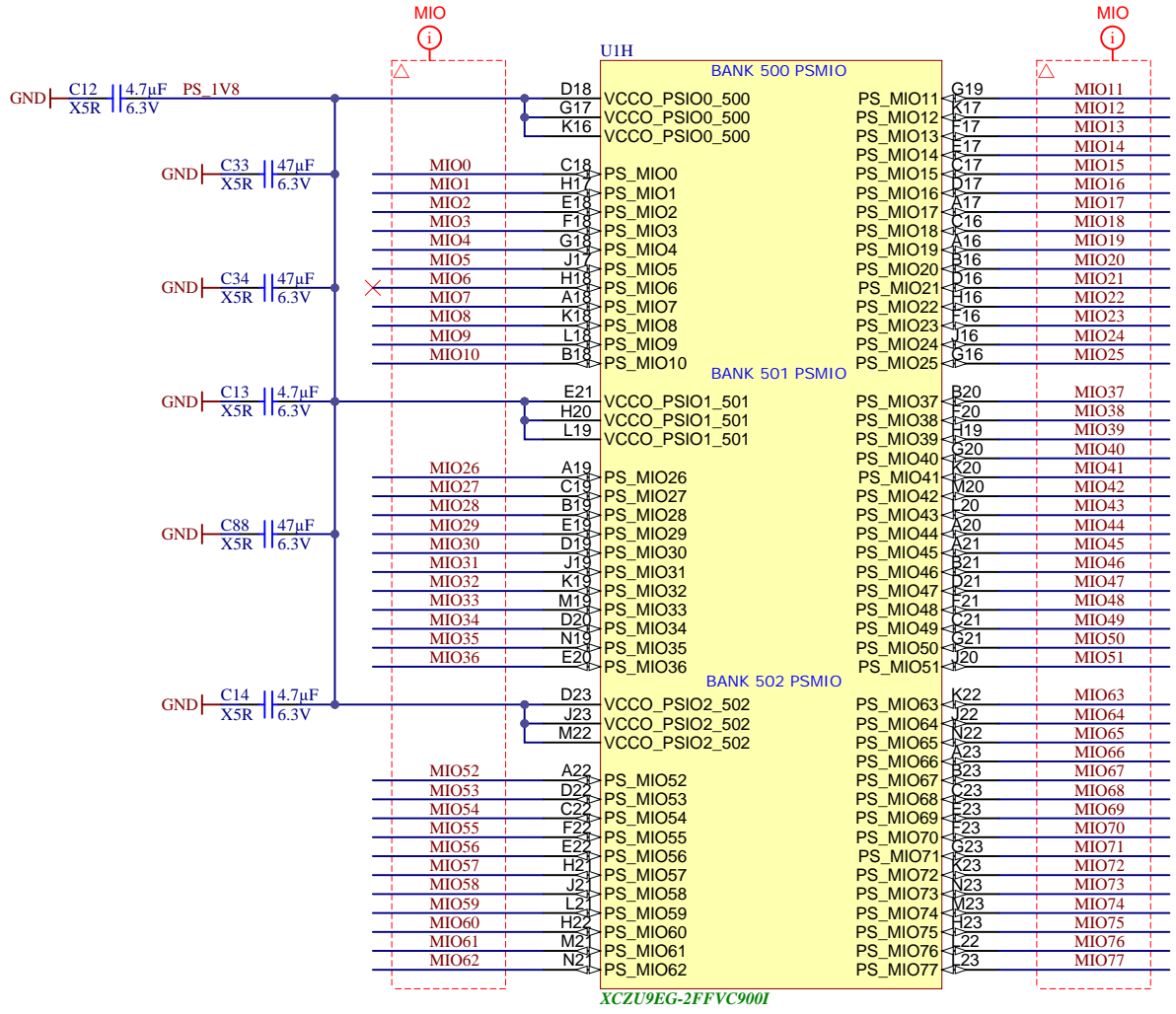
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Date: 2021-08-17		Copyright: Trenz Electronic GmbH	
Filename: B66.SchDoc		Page 13 of 31	



Title: TE0818 - B228GTH_B229GTH_B230GTH		
A4	Number: TE0818 9GI76-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	
Filename: B_GT.SchDoc		Page 14 of 31



		Title: TE0818 - B128GTH	
		A4	Number: TE0818 9GI76-A
Date: 2021-08-17		Copyright: Trenz Electronic GmbH	
Filename: B_GT_2.SchDoc		Page 15 of 31	



		Title: TE0818 - MIO Banks	
		A4	Number: TE0818 9GI76-A
Date: 2021-08-17		Copyright: Trenz Electronic GmbH	
Page 16 of 31		Filename: B_MIO.SchDoc	

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A

A

B

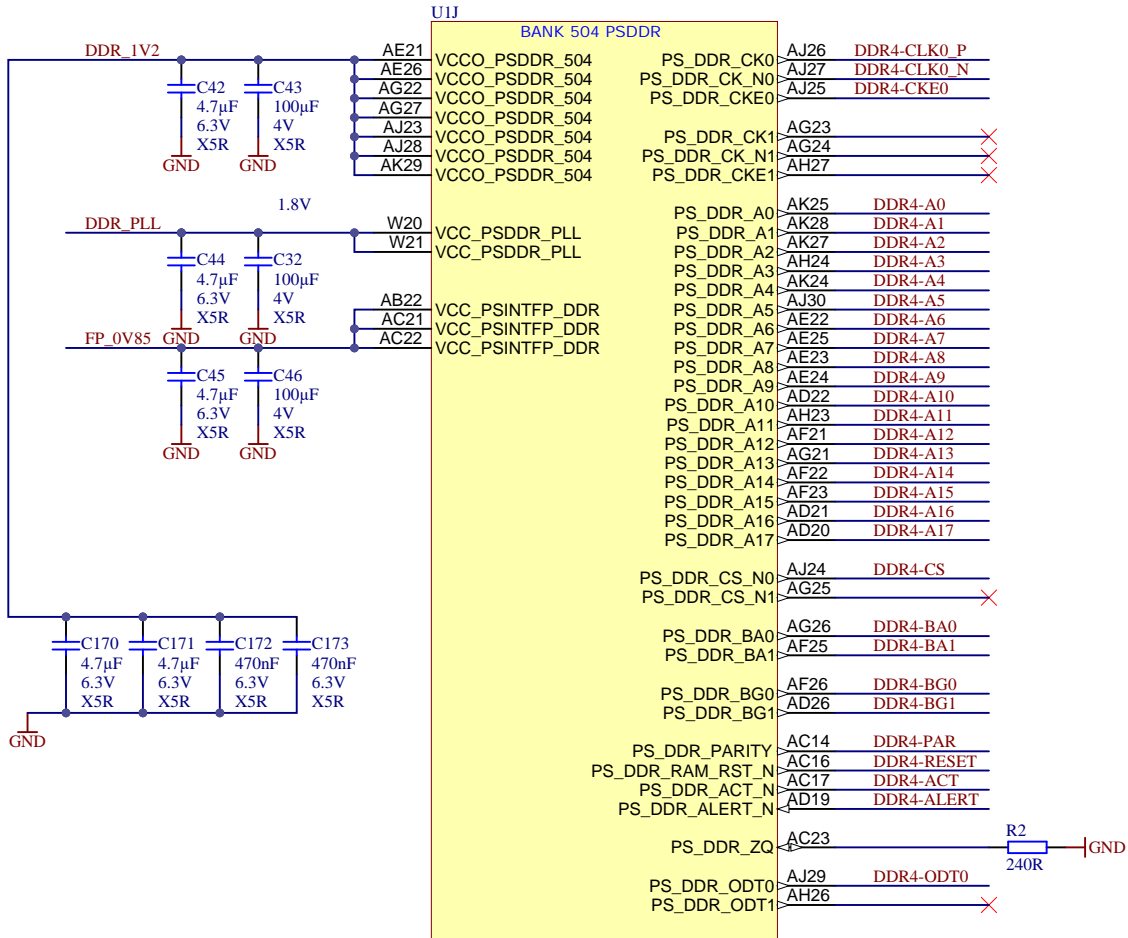
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C

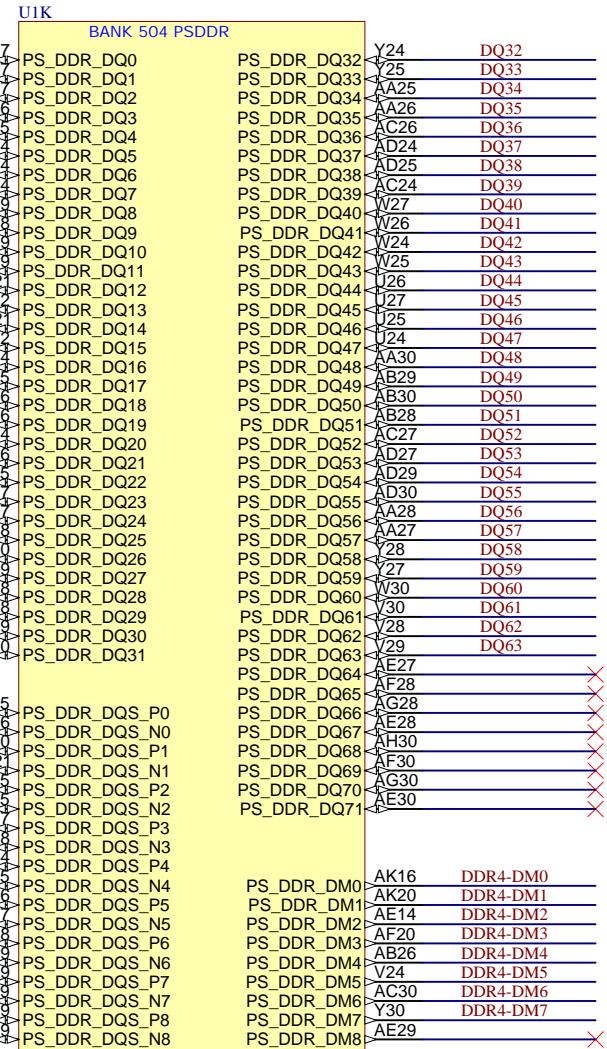
C

D

D



XCZU9EG-2FFVC9001



XCZU9EG-2FFVC9001



Title: TE0818 - PS_DDR		
A4	Number: TE0818 9GI76-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 17 of 31
Filename: PS_DDR.SchDoc		

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A

A

B

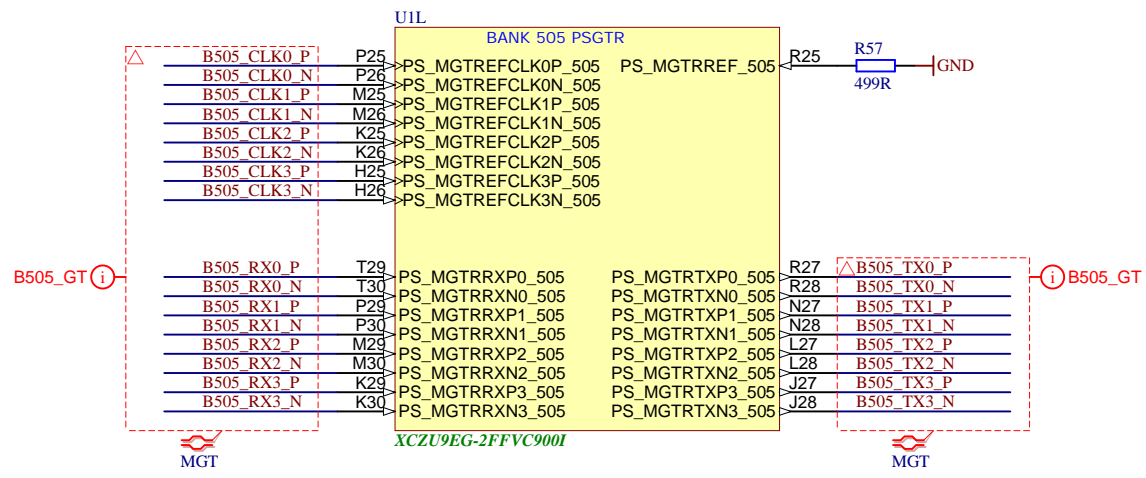
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C

C

D

D



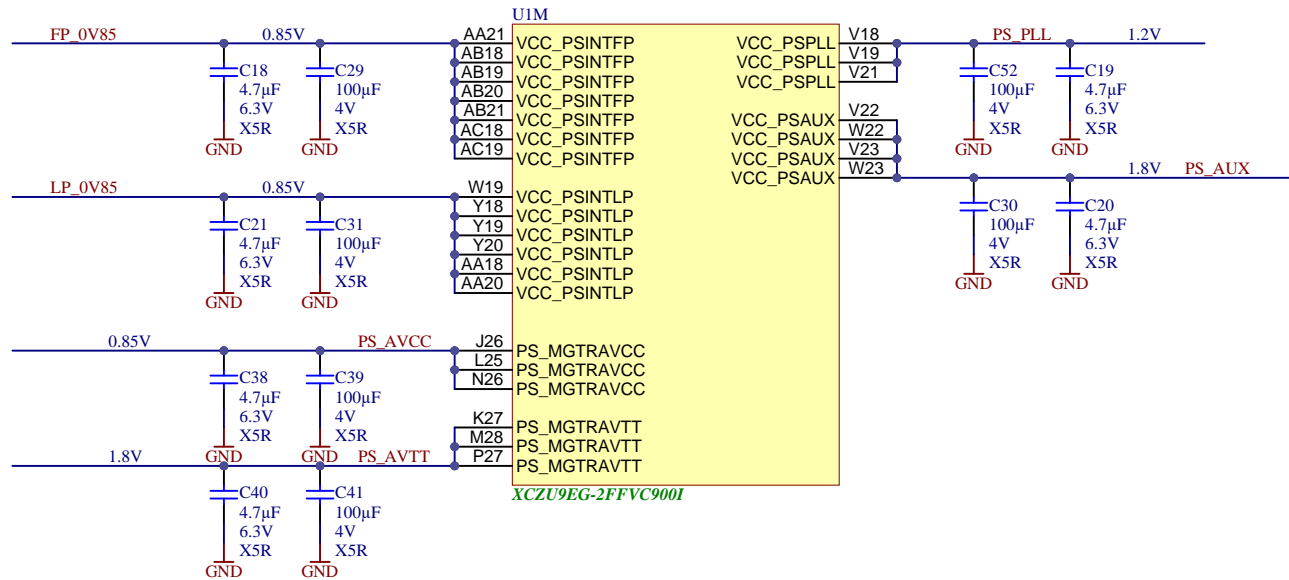

	Title: TE0818 - PS_GT		
	A4	Number: TE0818 9GI76-A	Rev. 01
	Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 18 of 31
	Filename: B_PS_GT.SchDoc		

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Title: TE0818 - ZU_PS_POWER		
A4	Number: TE0818 9GI76-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 19 of 31
Filename: ZU_PS_POWER.SchDoc		

U10

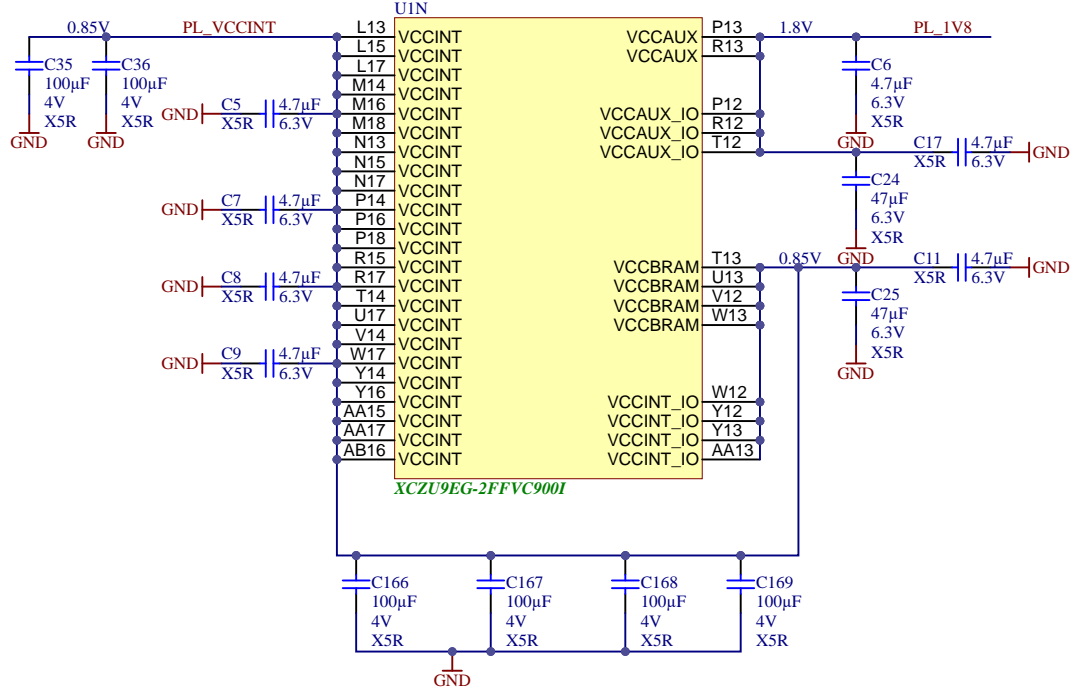
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A2	GND	G22
A9	GND	G24
A24	GND	G26
A25	GND	G29
A29	GND	G30
A30	GND	H3
B4	GND	H8
B7	GND	H9
B9	GND	H24
B12	GND	H27
B17	GND	H28
B22	GND	J1
B24	GND	J2
B27	GND	J6
C1	GND	J9
C2	GND	J18
C5	GND	J24
C9	GND	J25
C10	GND	J29
C15	GND	J30
C20	GND	K4
C24	GND	K7
C26	GND	K9
C29	GND	K21
C30	GND	K24
D3	GND	K28
D8	GND	L1
D9	GND	L2
D13	GND	L5
D24	GND	L9
D28	GND	L14
E1	GND	L16
E2	GND	L24
E6	GND	L26
E9	GND	L29
E11	GND	L30
E16	GND	M3
E24	GND	M8
E25	GND	M9
E29	GND	M11
E30	GND	M13
F4	GND	M15
F7	GND	M17
F9	GND	M24
F14	GND	M27
F19	GND	N1
F24	GND	N2
F27	GND	N6
G1	GND	N9
G2	GND	N14
G5	GND	N16
G9	GND	N18

U1P

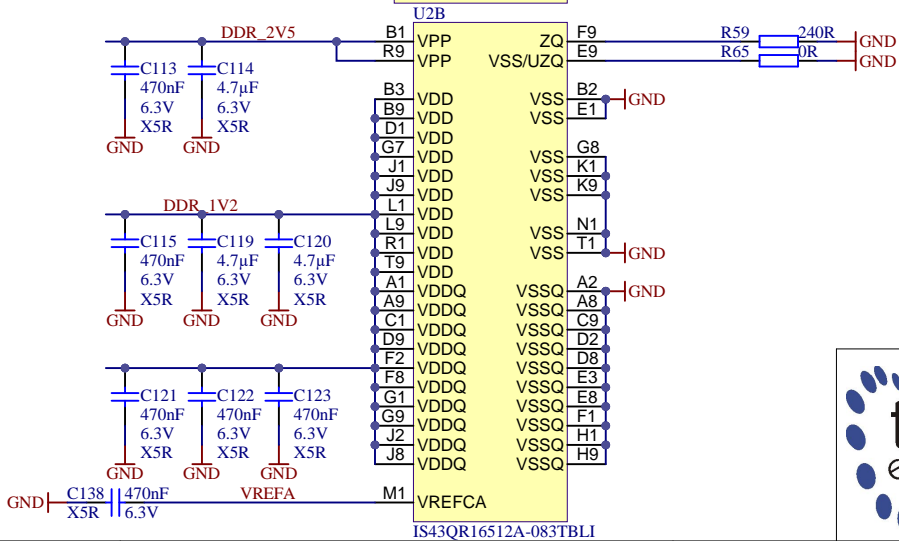
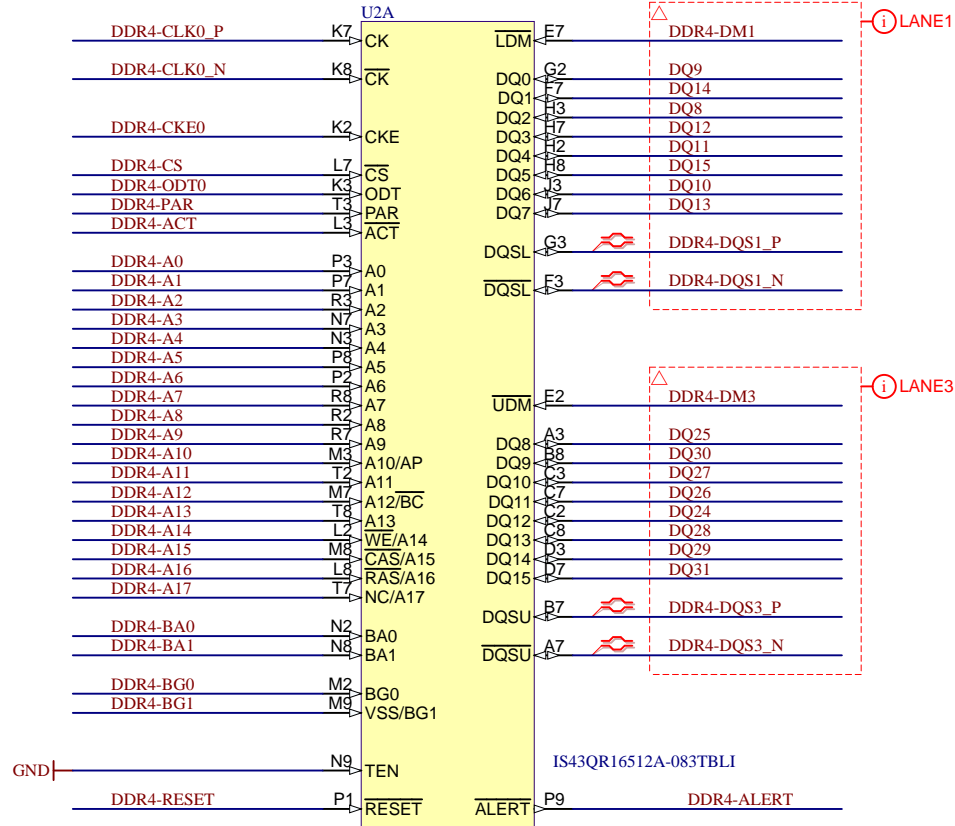
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N24	GND	Y15
N25	GND	Y17
N29	GND	Y21
N30	GND	Y23
P4	GND	Y26
P7	GND	AA4
P9	GND	AA14
P15	GND	AA16
P17	GND	AA19
P23	GND	AA24
P24	GND	AA29
P28	GND	AB2
R1	GND	AB7
R2	GND	AB12
R5	GND	AB17
R9	GND	AB23
R11	GND	AB27
R14	GND	AC10
R16	GND	AC15
R18	GND	AC20
R24	GND	AC25
R26	GND	AD3
R29	GND	AD13
R30	GND	AD18
T2	GND	AD23
T3	GND	AD28
T4	GND	AE6
T5	GND	AE11
T6	GND	AE16
T7	GND	AF4
T8	GND	AF14
T9	GND	AF19
T17	GND	AF24
T24	GND	AF27
T25	GND	AF29
T26	GND	AG2
T27	GND	AG7
T28	GND	AG17
U12	GND	AH5
U14	GND	AH15
U22	GND	AH20
U28	GND	AH22
U29	GND	AH25
U30	GND	AH28
V10	GND	AJ3
V13	GND	AJ8
V17	GND	AJ13
V20	GND	AJ18
V25	GND	AK1
W3	GND	AK26
W14	GND	AK23
W18	GND	AK30
W28	GND	

XCZU9EG-2FFVC9001

XCZU9EG-2FFVC9001



Title: TE0818 - ZU_POWER		
A4	Number: TE0818 9G176-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	
Page 20 of 31		Filename: ZU_POWER.SchDoc



Title: TE0818 - DDR4_1_RAM		
A4	Number: TE0818 9GI76-A	Rev. 01
Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 21 of 31
Filename: DDR4-RAM.SchDoc		

A

A

B

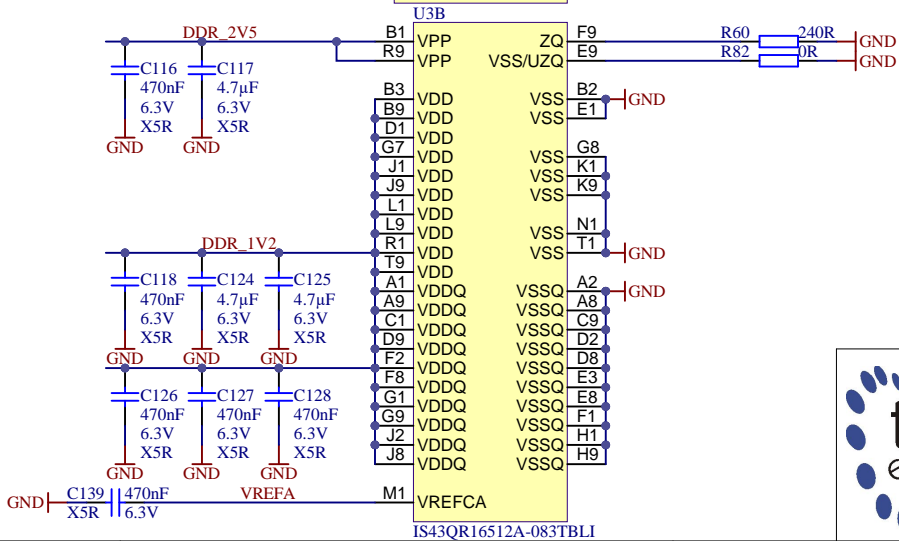
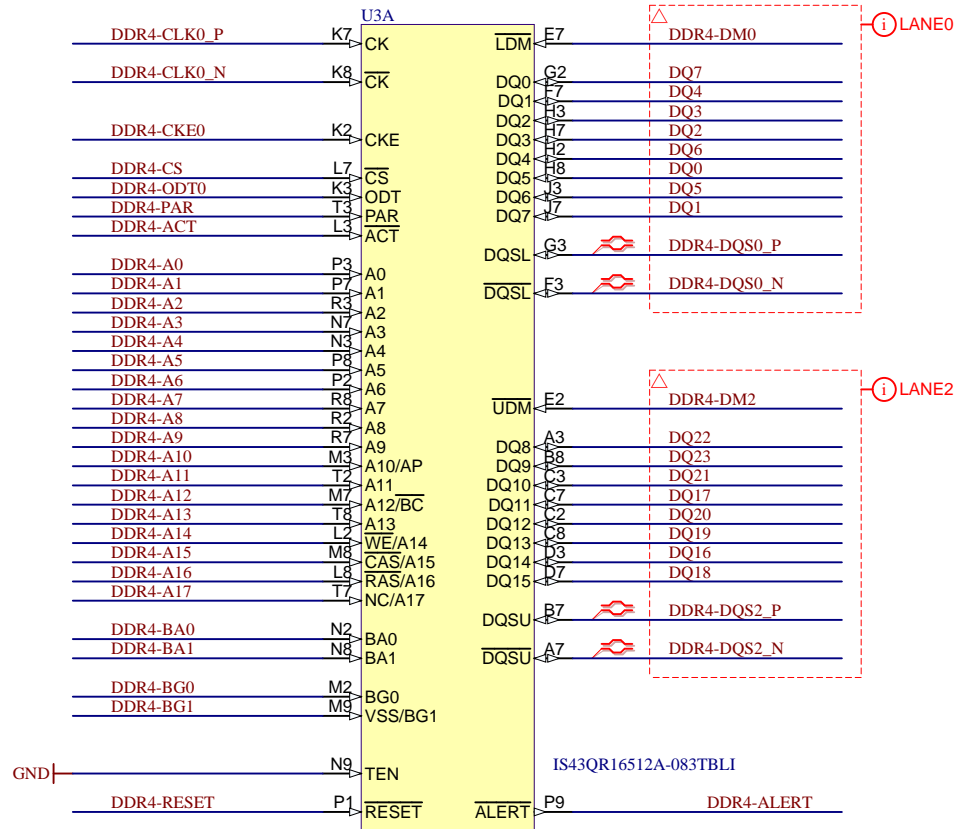
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C

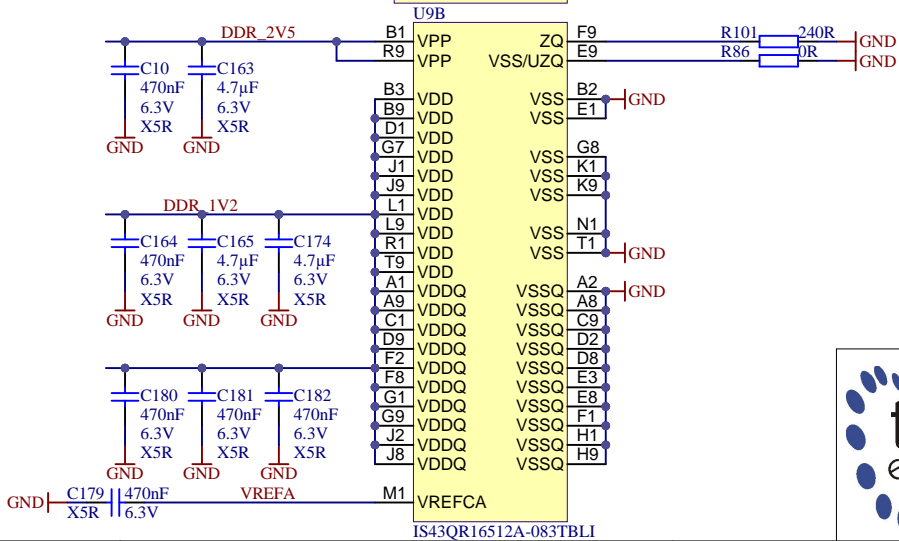
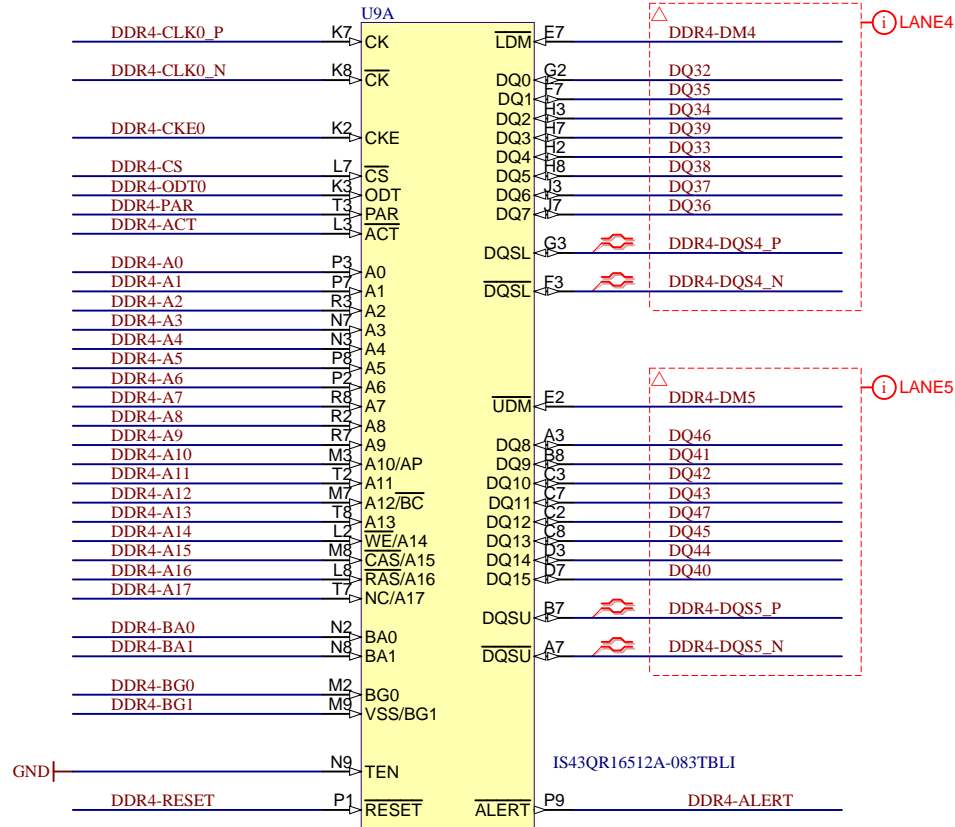
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D

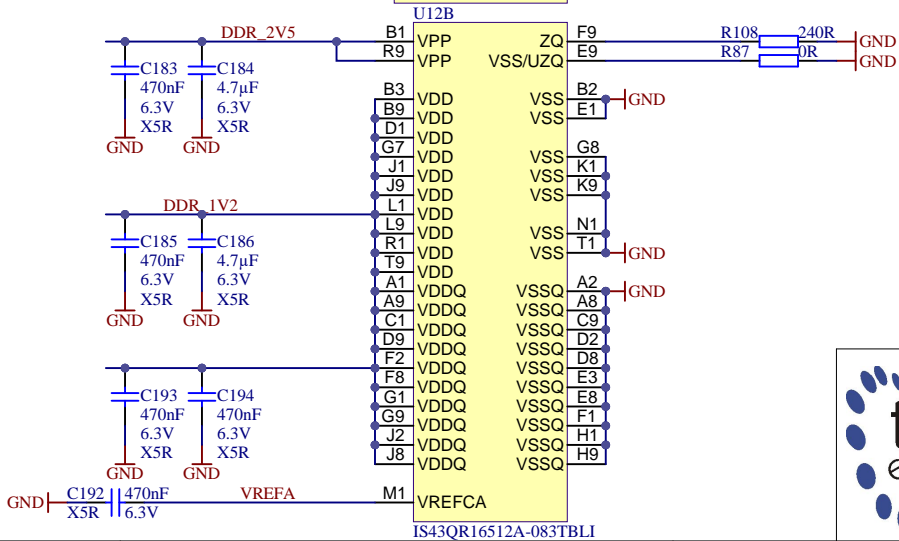
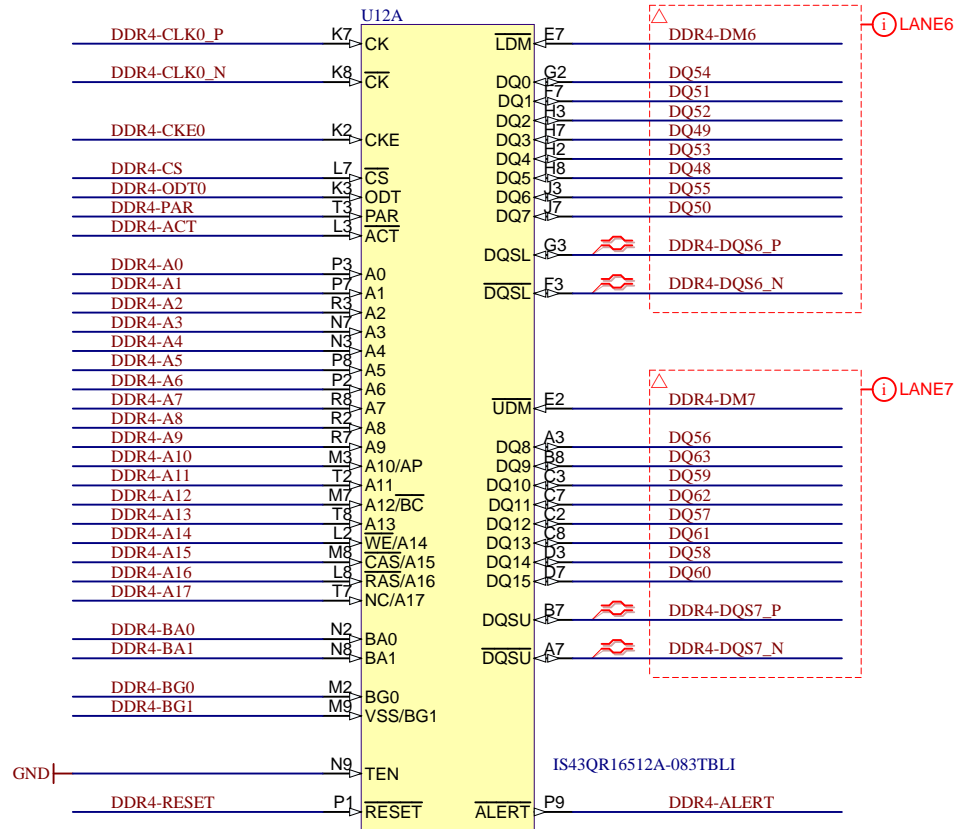
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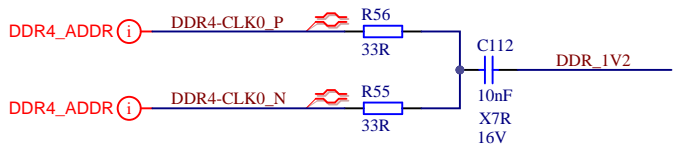
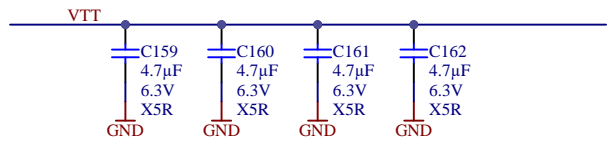
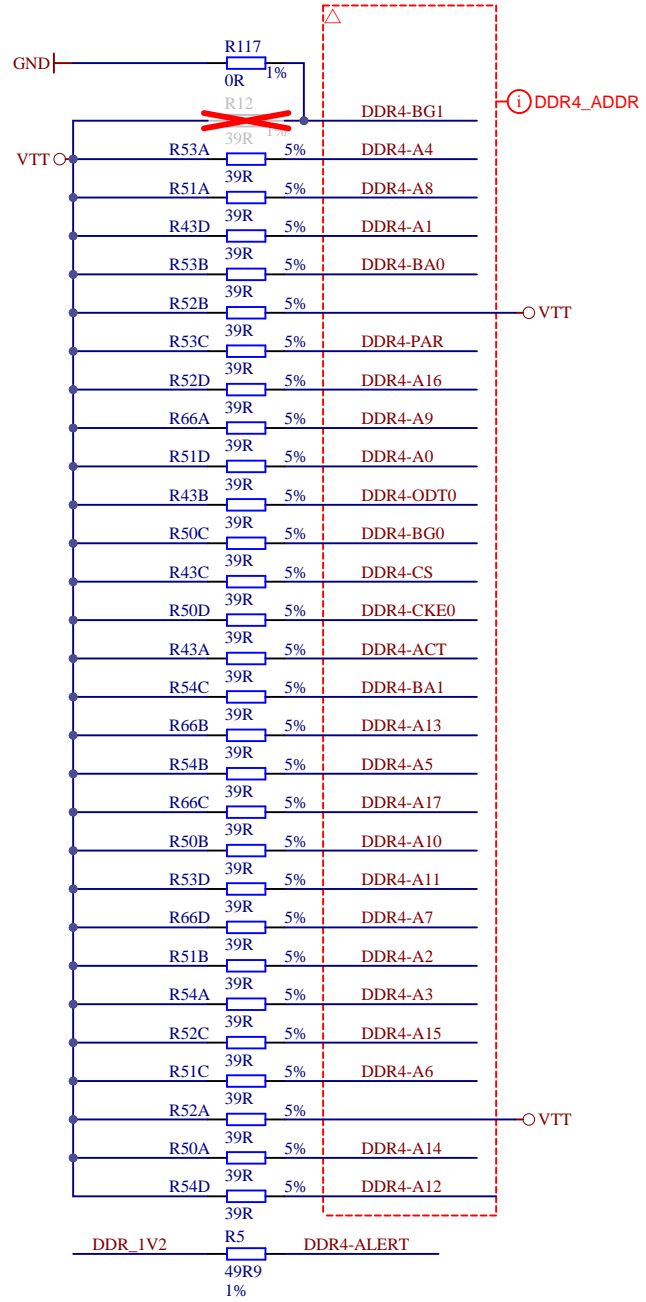
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 22 of 31
Filename: DDR4-RAM_2.SchDoc		



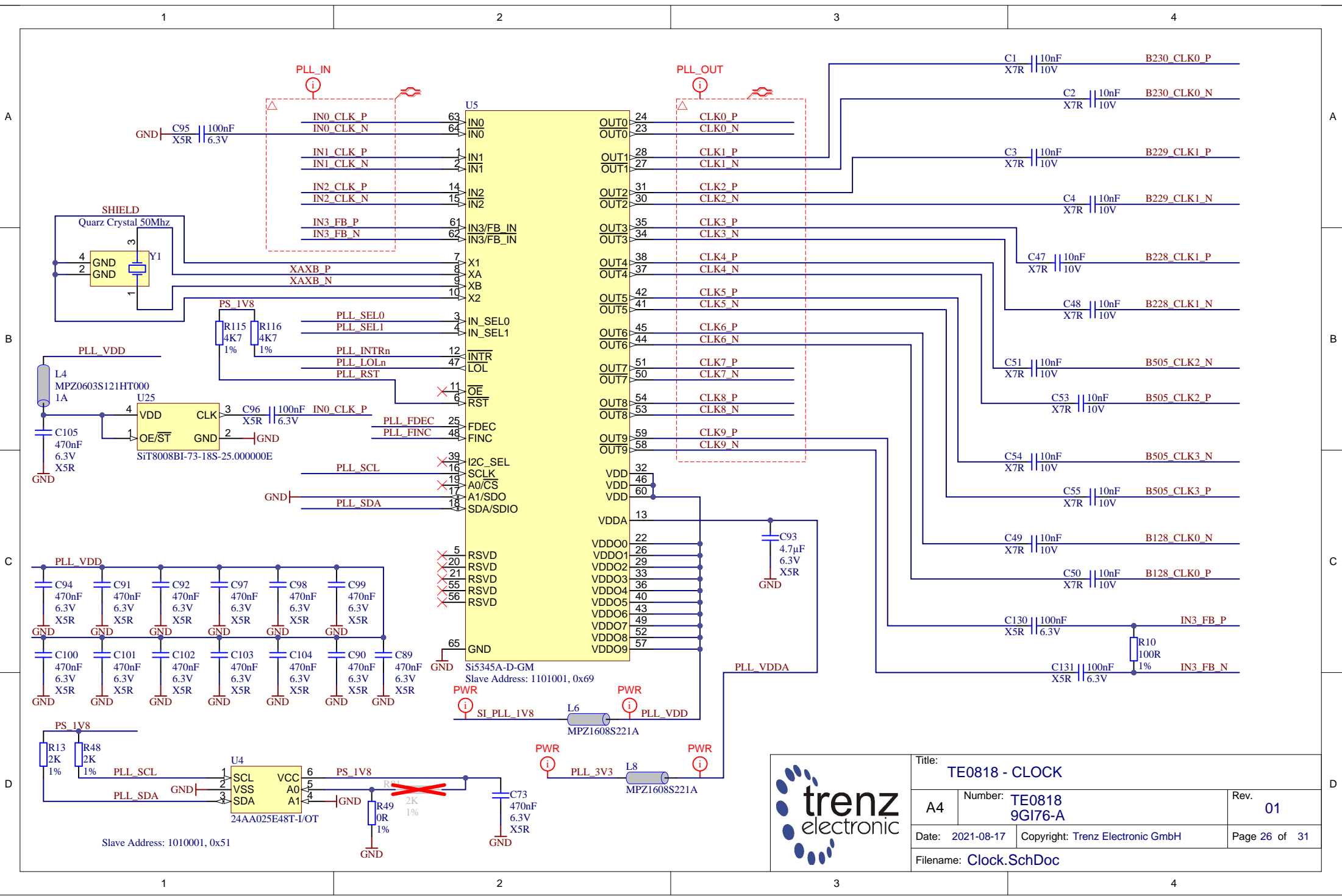
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 23 of 31
Filename: DDR4-RAM_3.SchDoc		



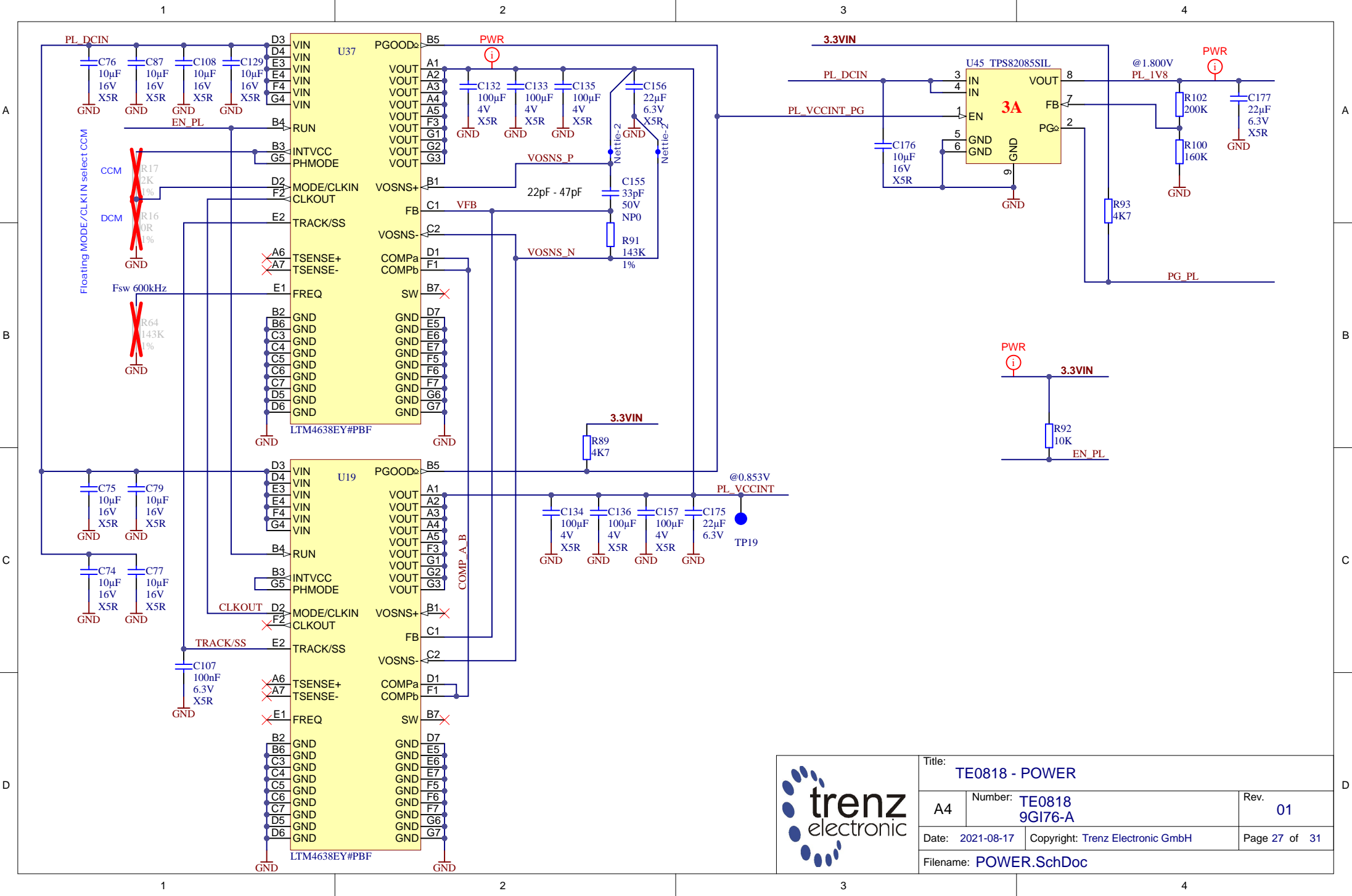
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 24 of 31
Filename: DDR4-RAM_4.SchDoc		




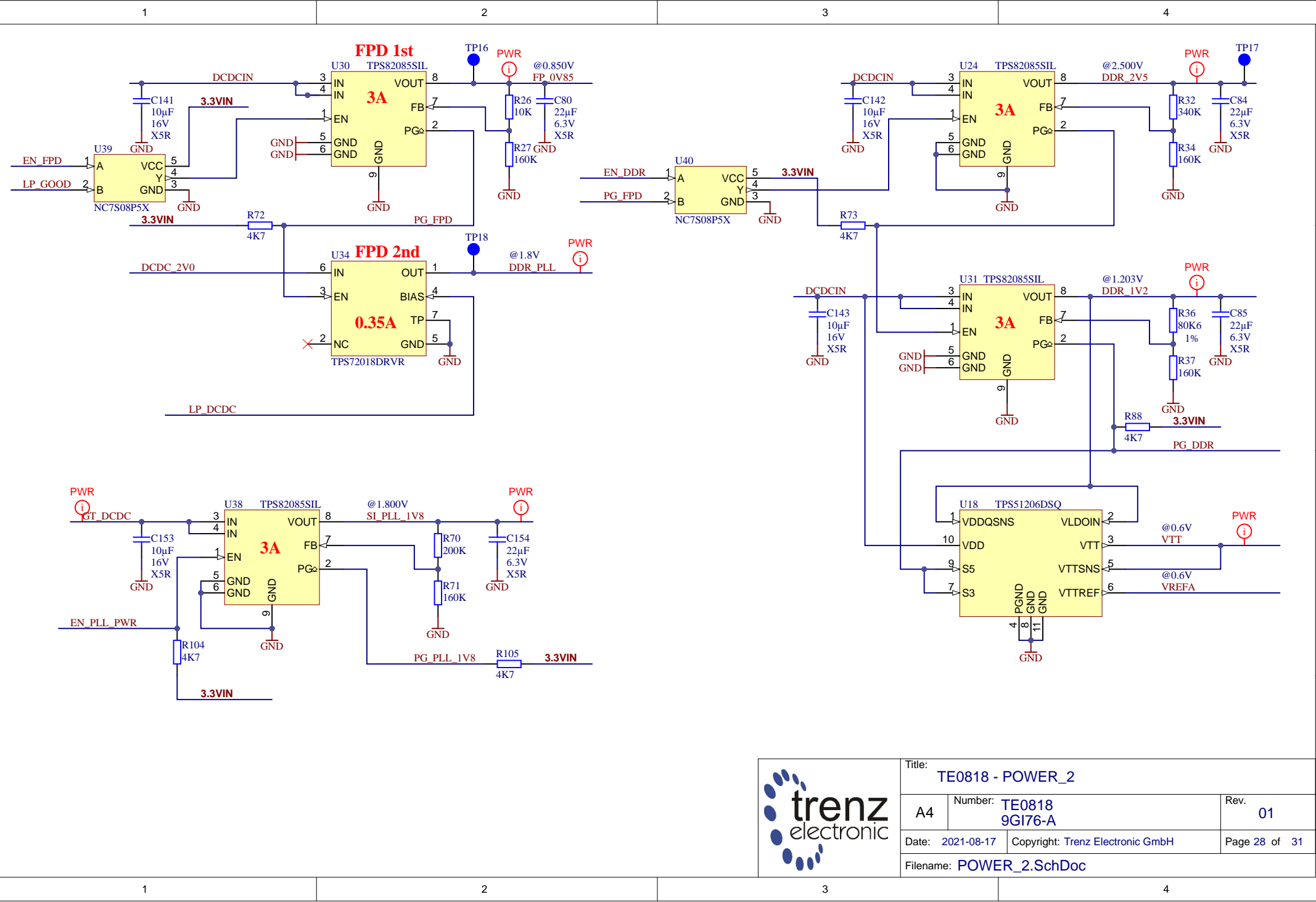
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	Page 25 of 31
Filename: DDR4-TERM.SchDoc		



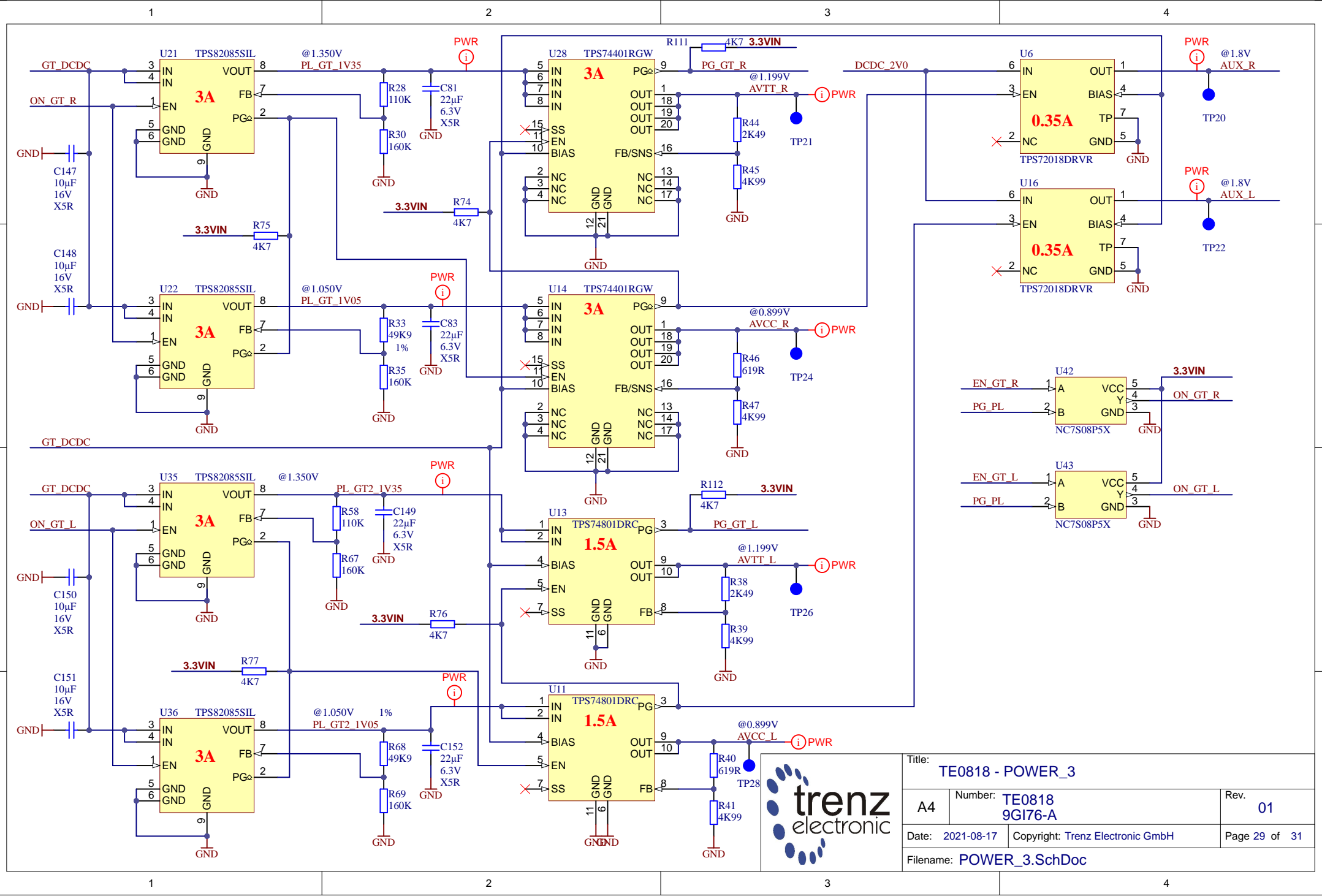
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Date: 2021-08-17	Copyright: Trenz Electronic GmbH	
Filename: Clock.SchDoc		Page 26 of 31



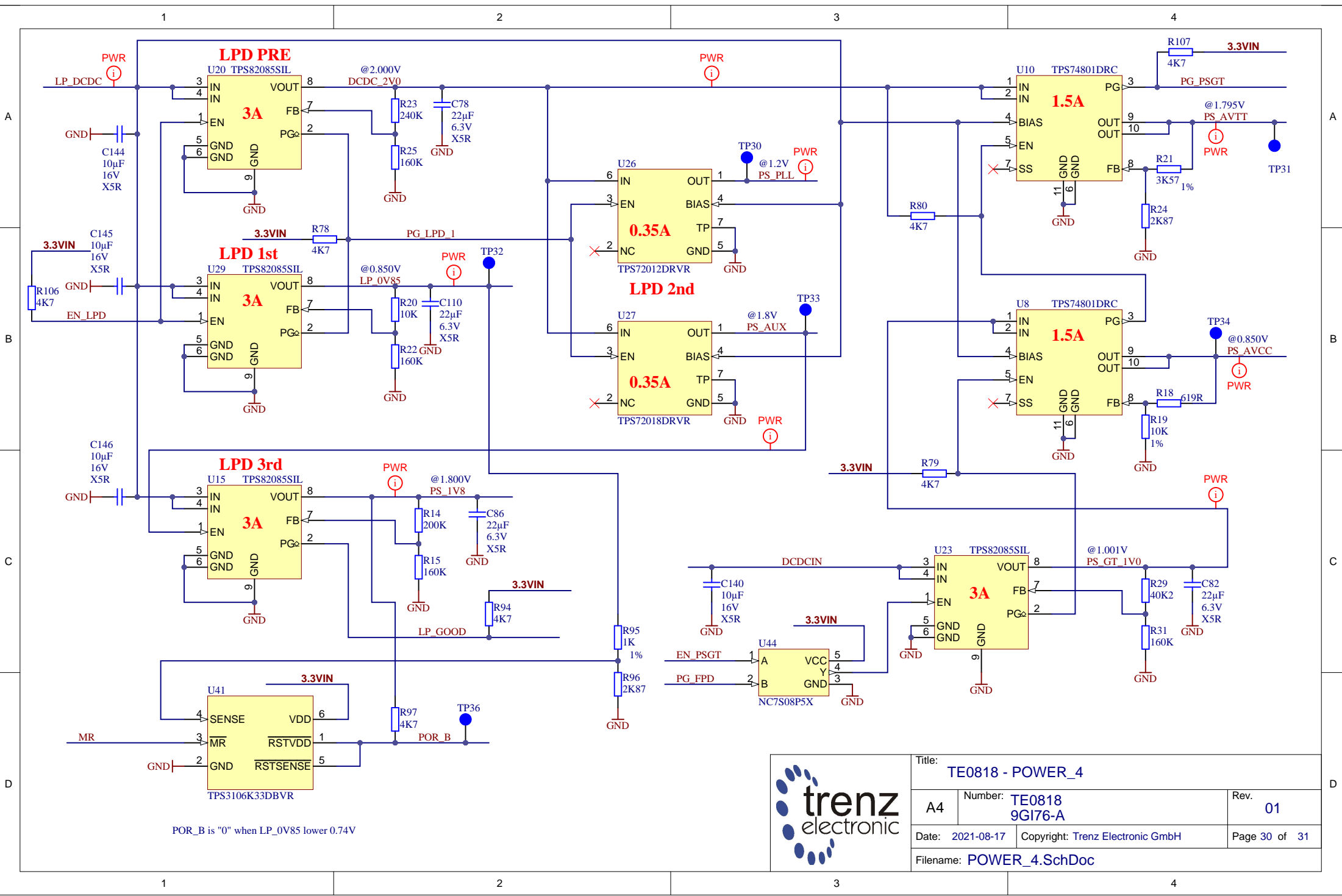
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			A4	Number: TE0818 9GI76-A
Date: 2021-08-17		Copyright: Trenz Electronic GmbH		Page 27 of 31
Filename: POWER.SchDoc				



	Title: TE0818 - POWER_2	
	A4	Number: TE0818 9GI76-A
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Title: TE0818 - POWER_3		
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POR_B is "0" when LP_OV85 lower 0.74V



Title: TE0818 - POWER_4		
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A

A

B

B


C

C

D

D

REV	DATE	Description	
-01	2021-05	Initial revision	VT

	Title: TE0818 - Changes list		
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