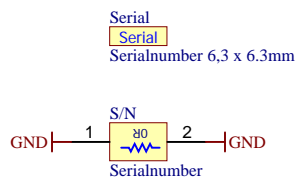
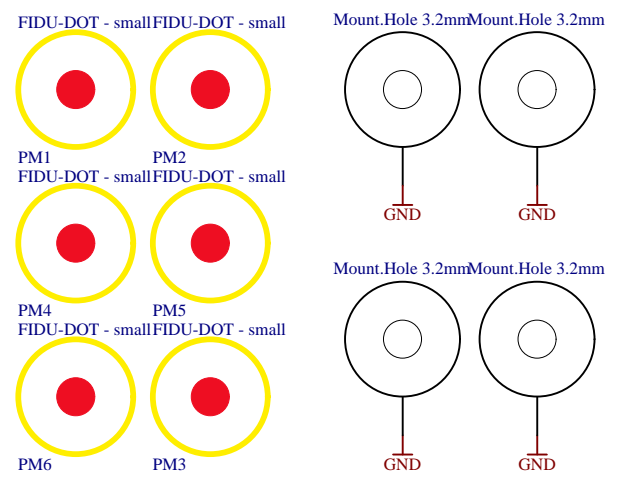
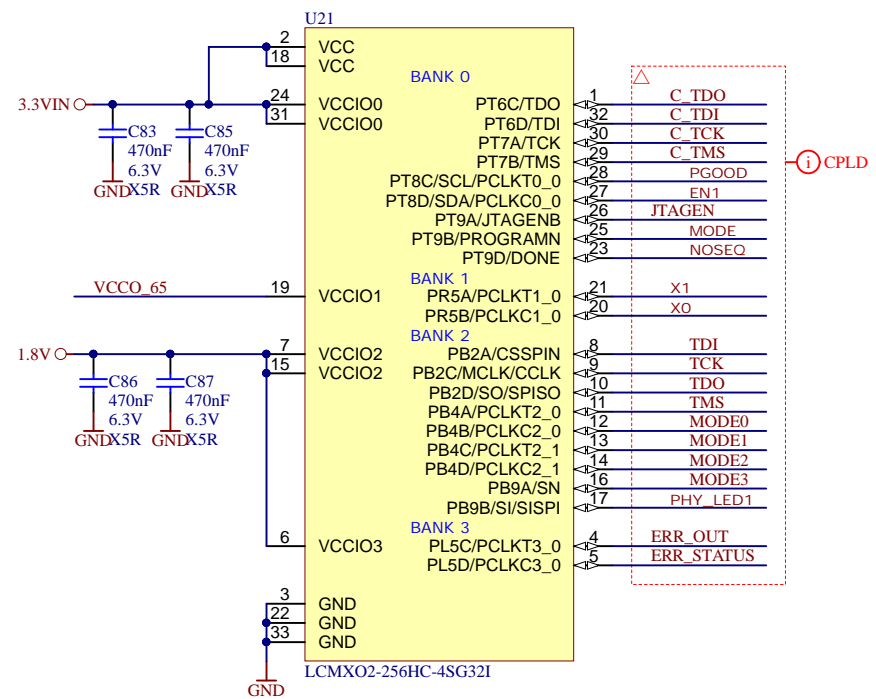


U_USB-PHY	USB-PHY.SchDoc
U_ETH-PHY	ETH-PHY.SchDoc
U_B_HD	B_HD.SchDoc
U_B64	B64.SchDoc
U_B65	B65.SchDoc
U_B66	B66.SchDoc
U_CONFIG	CONFIG.SchDoc
U_B_MIO	B_MIO.SchDoc
U_B_PS_GT	B_PS_GT.SchDoc
U_CLK	CLK.SchDoc

U_B2B-Connectors	B2B-Connectors.SchDoc
U_eMMC	eMMC.SchDoc
U_PS_DDR	PS_DDR.SchDoc
U_ZU_POWER	ZU_POWER.SchDoc
U_ZU_PS_POWER	ZU_PS_POWER.SchDoc
U_DDR4-RAM_2	DDR4-RAM_2.SchDoc
U_DDR4-RAM	DDR4-RAM.SchDoc
U_POWER	POWER.SchDoc
U_POWER_1	POWER_1.SchDoc



Title: TE0820		
A4	Number: TE0820 03EG-1Q	Rev. 02
Date: 2017-05-02	Copyright: 2015 Trenz Electronic GmbH	Page 1 of 21
Filename: TE0820.SchDoc		

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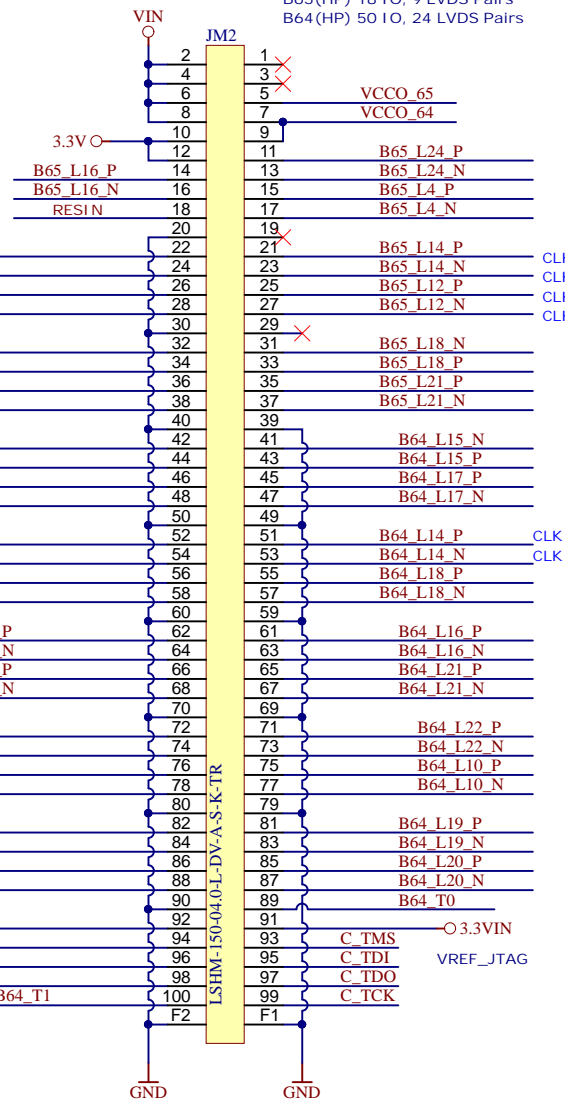
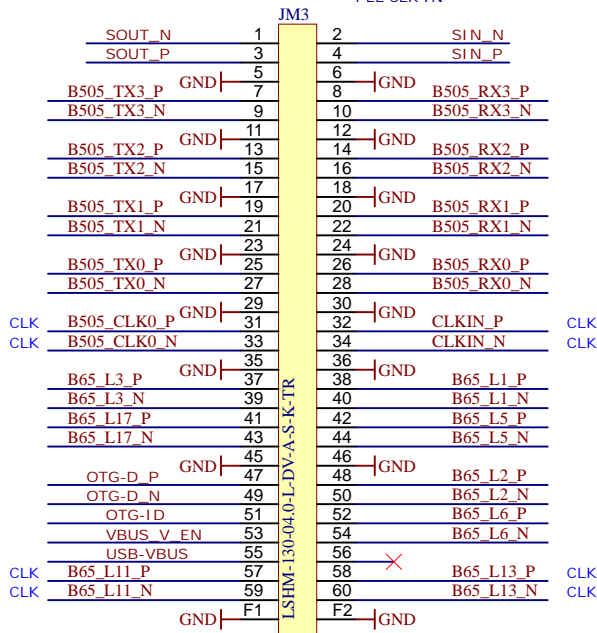
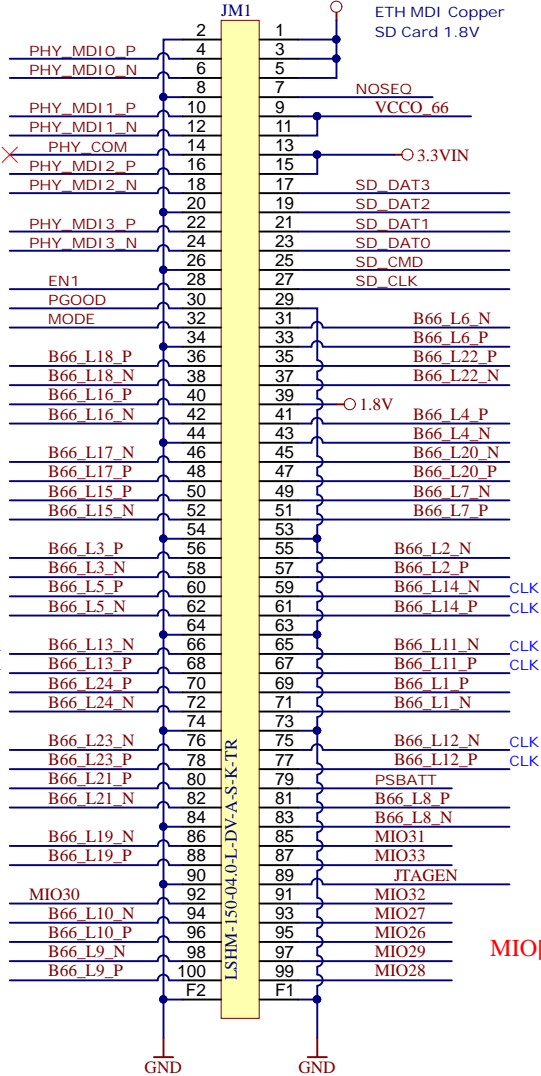
D

D

B66(HP) 48 IO, 24 LVDS Pairs
 MIO501 8 IO, 3.3V
 ETH MDI Copper
 SD Card 1.8V

B65(HP) 16 IO, 8 LVDS Pairs
 USB OTG
 ETH SGMII
 PS_GTR 4 Lanes
 PS_GTR CLK IN
 PLL CLK IN

B65(HP) 18 IO, 9 LVDS Pairs
 B64(HP) 50 IO, 24 LVDS Pairs



VCCO64, VCCO65, VCCO66 ->>> max. 1.8V (HP bank's)

MIO[29..26] ->PJTAG1



Title: TE0820 - B2B Connectors		
A4	Number: TE0820 03EG-1Q	Rev. 02
Date: 2017-05-02	Copyright: 2015 Trenz Electronic GmbH	Page2 of 21
Filename: B2B-Connectors.SchDoc		

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UIC

BANK 26 HD (ZU4/5 BANK 46 HD)

F14	VCCO_26
C15	VCCO_26
B15	IO_L1P_AD11P_26
A15	IO_L1N_AD11N_26
B14	IO_L2P_AD10P_26
A14	IO_L2N_AD10N_26
B13	IO_L3P_AD9P_26
A13	IO_L3N_AD9N_26
C14	IO_L4P_AD8P_26
C13	IO_L4N_AD8N_26
D15	IO_L5P_HDGC_AD7P_26
D14	IO_L5N_HDGC_AD7N_26
E14	IO_L6P_HDGC_AD6P_26
E13	IO_L6N_HDGC_AD6N_26
	IO_L7P_HDGC_AD5P_26
	IO_L7N_HDGC_AD5N_26
	IO_L8P_HDGC_AD4P_26
	IO_L8N_HDGC_AD4N_26
	IO_L9P_AD3P_26
	IO_L9N_AD3N_26
	IO_L10P_AD2P_26
	IO_L10N_AD2N_26
	IO_L11P_AD1P_26
	IO_L11N_AD1N_26
	IO_L12P_AD0P_26
	IO_L12N_AD0N_26

BANK 44 HD (ZU4/5 BANK 43 HD)

AC10	VCCO_44
AG12	VCCO_44
AG10	IO_L1P_AD11P_44
AH10	IO_L1N_AD11N_44
AF11	IO_L2P_AD10P_44
AG11	IO_L2N_AD10N_44
AH12	IO_L3P_AD9P_44
AH11	IO_L3N_AD9N_44
AE10	IO_L4P_AD8P_44
AF10	IO_L4N_AD8N_44
AE12	IO_L5P_HDGC_AD7P_44
AF12	IO_L5N_HDGC_AD7N_44
AC12	IO_L6P_HDGC_AD6P_44
AD12	IO_L6N_HDGC_AD6N_44
	IO_L7P_HDGC_AD5P_44
	IO_L7N_HDGC_AD5N_44
	IO_L8P_HDGC_AD4P_44
	IO_L8N_HDGC_AD4N_44
	IO_L9P_AD3P_44
	IO_L9N_AD3N_44
	IO_L10P_AD2P_44
	IO_L10N_AD2N_44
	IO_L11P_AD1P_44
	IO_L11N_AD1N_44
	IO_L12P_AD0P_44
	IO_L12N_AD0N_44

UIB

XAZU3EG-1SFVC784Q

BANK 24 HD (ZU4/5 BANK 44 HD)

AA14	VCCO_24
AD13	VCCO_24
AE15	IO_L1P_AD15P_24
AE14	IO_L1N_AD15N_24
AG14	IO_L2P_AD14P_24
AH14	IO_L2N_AD14N_24
AG13	IO_L3P_AD13P_24
AH13	IO_L3N_AD13N_24
AE13	IO_L4P_AD12P_24
AF13	IO_L4N_AD12N_24
AD15	IO_L5P_HDGC_24
AD14	IO_L5N_HDGC_24
AC14	IO_L6P_HDGC_24
AC13	IO_L6N_HDGC_24
	IO_L7P_HDGC_24
	IO_L7N_HDGC_24
	IO_L8P_HDGC_24
	IO_L8N_HDGC_24
	IO_L9P_AD11P_24
	IO_L9N_AD11N_24
	IO_L10P_AD10P_24
	IO_L10N_AD10N_24
	IO_L11P_AD9P_24
	IO_L11N_AD9N_24
	IO_L12P_AD8P_24
	IO_L12N_AD8N_24

BANK 25 HD (ZU4/5 BANK 45 HD)

B12	VCCO_25
E11	VCCO_25
J11	IO_L1P_AD15P_25
J10	IO_L1N_AD15N_25
K13	IO_L2P_AD14P_25
K12	IO_L2N_AD14N_25
H11	IO_L3P_AD13P_25
G10	IO_L3N_AD13N_25
J12	IO_L4P_AD12P_25
H12	IO_L4N_AD12N_25
G11	IO_L5P_HDGC_25
F11	IO_L5N_HDGC_25
F12	IO_L6P_HDGC_25
F11	IO_L6N_HDGC_25
	IO_L7P_HDGC_25
	IO_L7N_HDGC_25
	IO_L8P_HDGC_25
	IO_L8N_HDGC_25
	IO_L9P_AD11P_25
	IO_L9N_AD11N_25
	IO_L10P_AD10P_25
	IO_L10N_AD10N_25
	IO_L11P_AD9P_25
	IO_L11N_AD9N_25
	IO_L12P_AD8P_25
	IO_L12N_AD8N_25

XAZU3EG-1SFVC784Q

B26 (i)

B26 (i)

B44 (i)

B44 (i)

B24 (i)

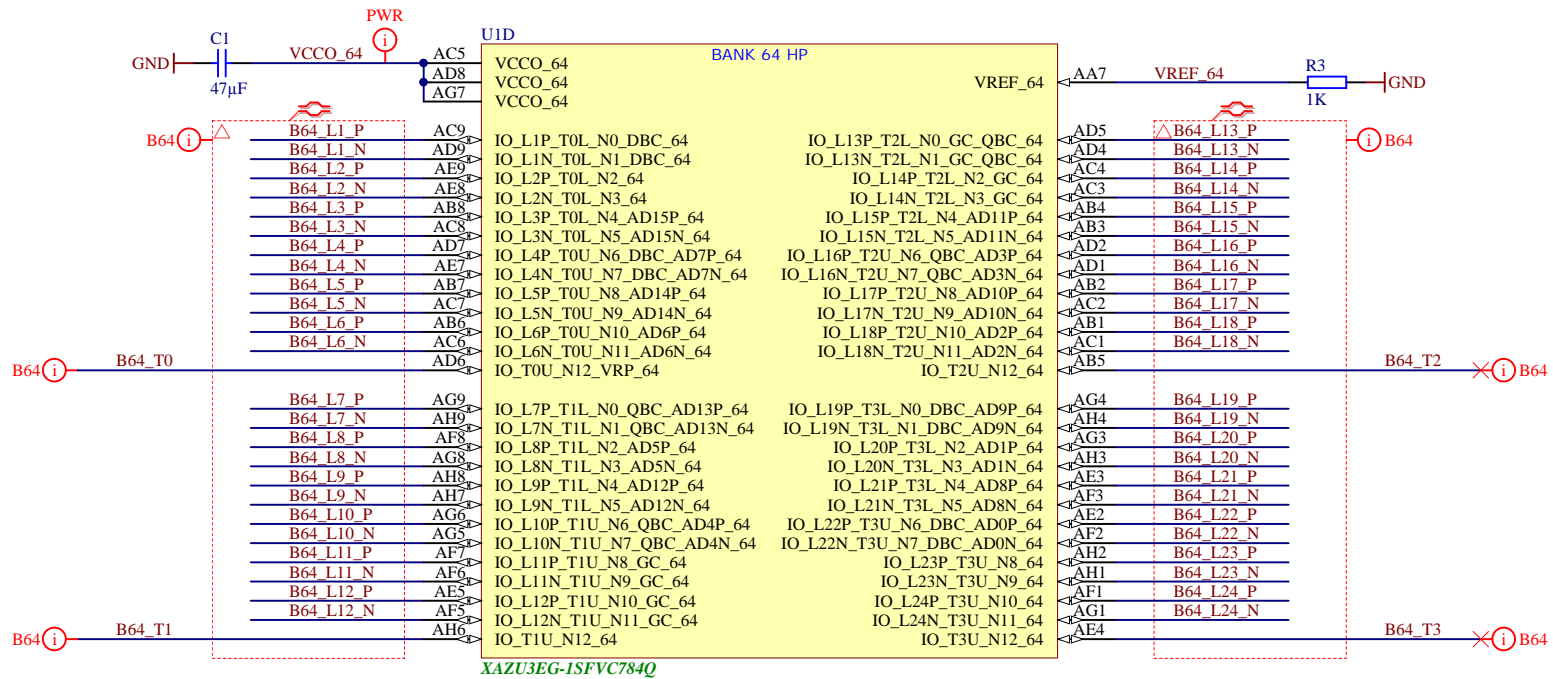
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B25 (i)

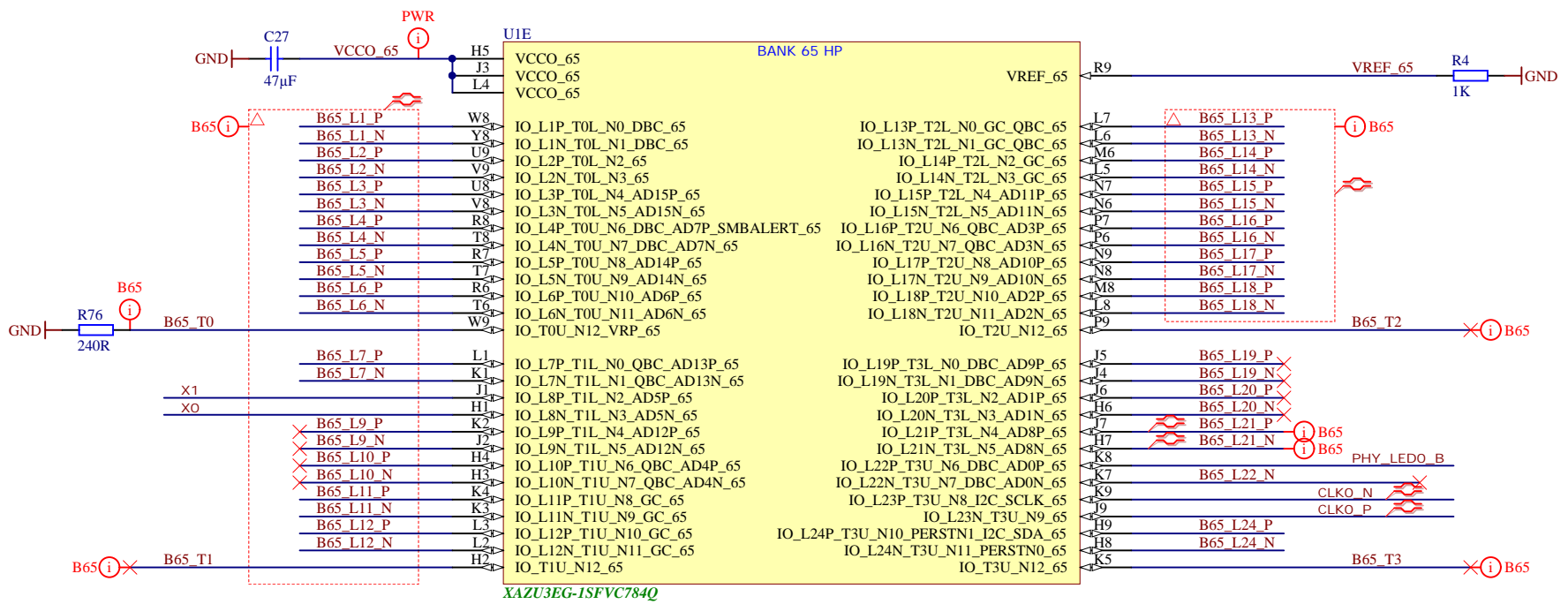
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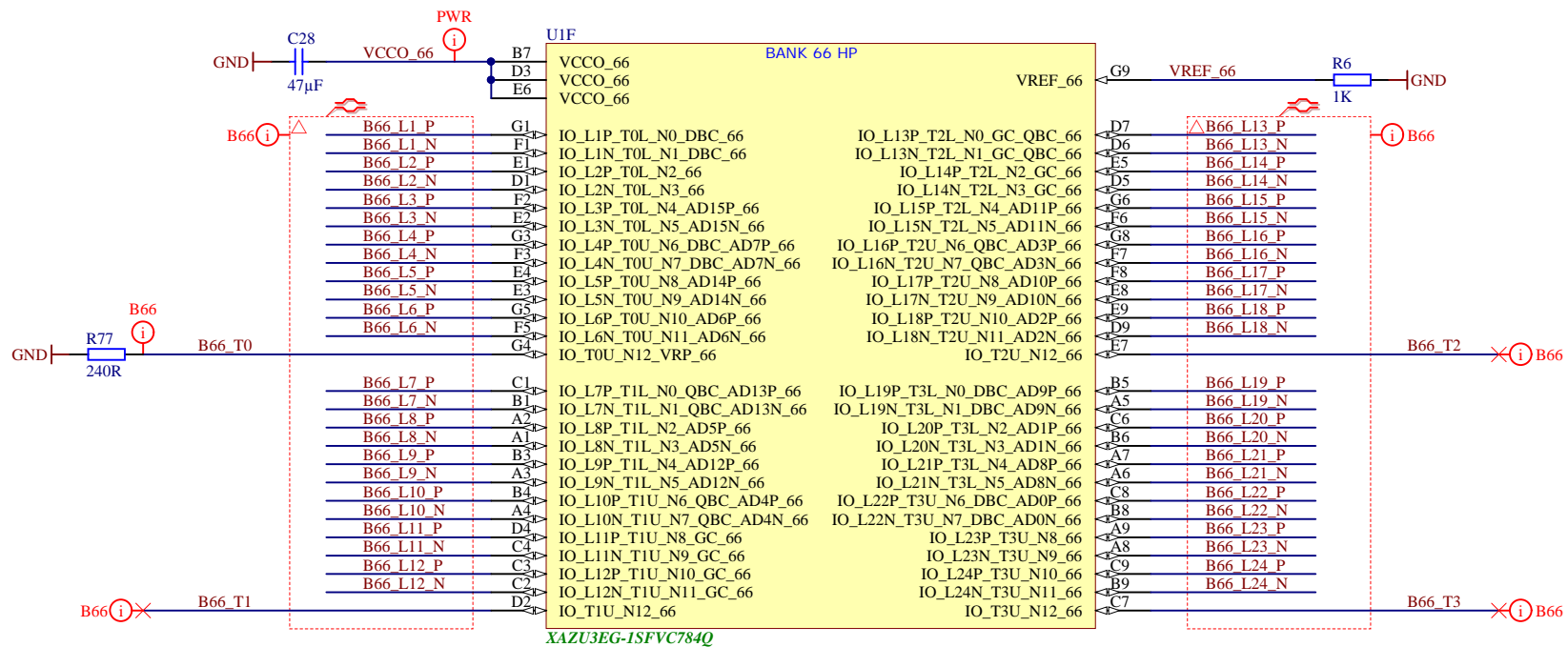
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Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page4 of 21
Filename: B_HD.SchDoc		




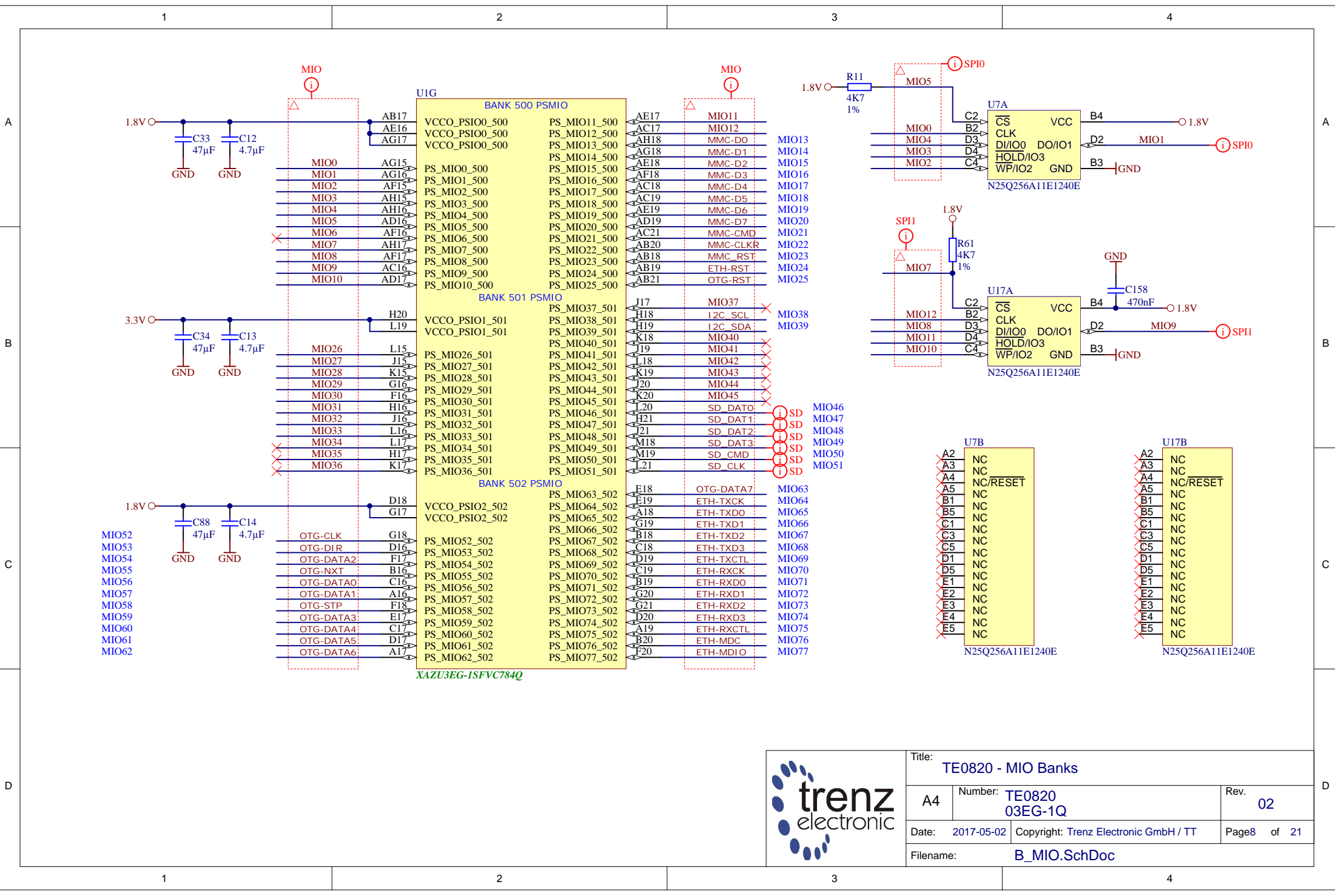
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A4	Number: TE0820 03EG-1Q	Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page 5 of 21
Filename: B64.SchDoc		



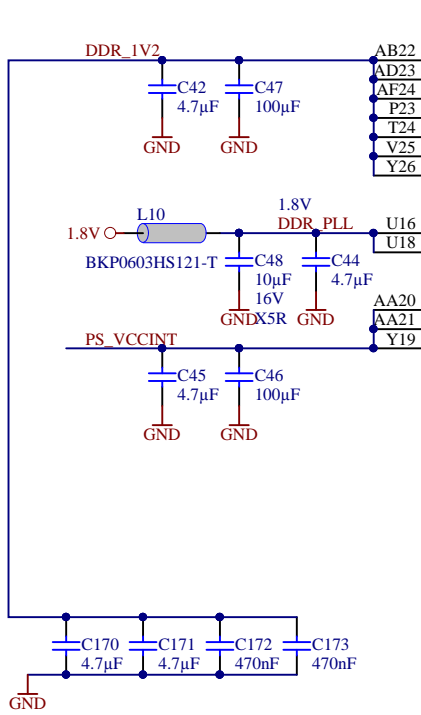
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A4	Number: TE0820 03EG-1Q	Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page6 of 21
Filename: B65.SchDoc		



		Title: TE0820 - B66	
		A4	Number: TE0820 03EG-1Q
Date: 2017-05-02		Copyright: Trenz Electronic GmbH / TT	
Filename: B66.SchDoc		Page 7 of 21	



		Title: TE0820 - MIO Banks	
		A4	Number: TE0820 03EG-1Q
Date: 2017-05-02		Copyright: Trenz Electronic GmbH / TT	
Filename: B_MIO.SchDoc		Page 8 of 21	



UII

BANK 504 PSDDR

VCCO_PSDDR_504	PS_DDR_CK0_504	W25	DDR4-CLK0 P
VCCO_PSDDR_504	PS_DDR_CK_N0_504	W26	DDR4-CLK0 N
VCCO_PSDDR_504	PS_DDR_CKE0_504	V28	DDR4-CKE0
VCCO_PSDDR_504	PS_DDR_CK1_504	Y24	
VCCO_PSDDR_504	PS_DDR_CK_N1_504	Y25	
VCCO_PSDDR_504	PS_DDR_CKE1_504	V27	
VCC_PSDDR_PLL	PS_DDR_A0_504	W28	DDR4-A0
VCC_PSDDR_PLL	PS_DDR_A1_504	Y28	DDR4-A1
VCC_PSDDR_PLL	PS_DDR_A2_504	AB28	DDR4-A2
	PS_DDR_A3_504	AA28	DDR4-A3
	PS_DDR_A4_504	Y27	DDR4-A4
	PS_DDR_A5_504	AA27	DDR4-A5
	PS_DDR_A6_504	Y22	DDR4-A6
	PS_DDR_A7_504	AA23	DDR4-A7
	PS_DDR_A8_504	AA22	DDR4-A8
	PS_DDR_A9_504	AB23	DDR4-A9
	PS_DDR_A10_504	AA25	DDR4-A10
	PS_DDR_A11_504	AA26	DDR4-A11
	PS_DDR_A12_504	AB25	DDR4-A12
	PS_DDR_A13_504	AB26	DDR4-A13
	PS_DDR_A14_504	AB24	DDR4-A14
	PS_DDR_A15_504	AC24	DDR4-A15
	PS_DDR_A16_504	AC23	DDR4-A16
	PS_DDR_A17_504	AC22	DDR4-A17
	PS_DDR_CS_N0_504	W27	DDR4-CS
	PS_DDR_CS_N1_504	V26	
	PS_DDR_BA0_504	V23	DDR4-BA0
	PS_DDR_BA1_504	W22	DDR4-BA1
	PS_DDR_BG0_504	W24	DDR4-BG0
	PS_DDR_BG1_504	V22	
	PS_DDR_PARITY_504	V24	DDR4-PAR
	PS_DDR_RAM_RST_N_504	U23	DDR4-RESET
	PS_DDR_ACT_N_504	Y23	DDR4-ACT
	PS_DDR_ALERT_N_504	U25	DDR4-ALERT
	PS_DDR_ZQ_504	U24	
	PS_DDR_ODT0_504	U28	DDR4-ODT0
	PS_DDR_ODT1_504	U26	

R21 240R

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UIJ

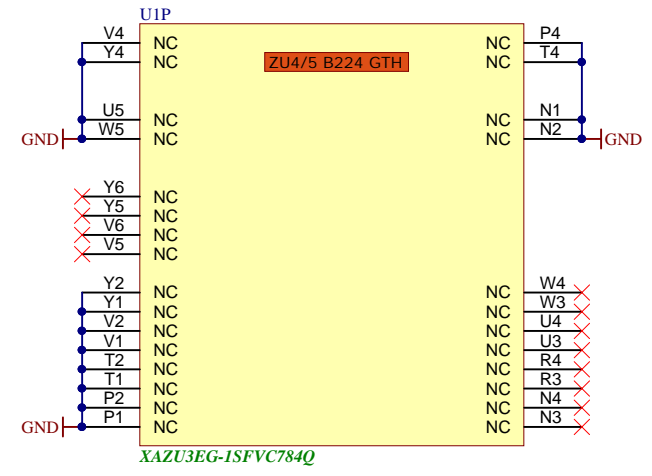
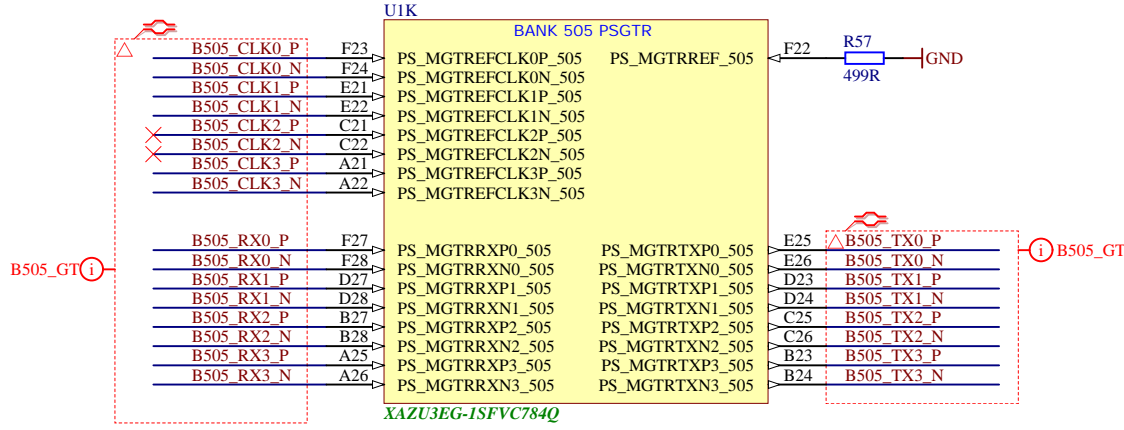

BANK 504 PSDDR

DQ0	AD21	PS_DDR_DQ0_504	PS_DDR_DQ32_504	T22
DQ1	AE20	PS_DDR_DQ1_504	PS_DDR_DQ33_504	R22
DQ2	AD20	PS_DDR_DQ2_504	PS_DDR_DQ34_504	P22
DQ3	AF20	PS_DDR_DQ3_504	PS_DDR_DQ35_504	N22
DQ4	AH21	PS_DDR_DQ4_504	PS_DDR_DQ36_504	T23
DQ5	AH20	PS_DDR_DQ5_504	PS_DDR_DQ37_504	P24
DQ6	AH19	PS_DDR_DQ6_504	PS_DDR_DQ38_504	R24
DQ7	AG19	PS_DDR_DQ7_504	PS_DDR_DQ39_504	N24
DQ8	AF22	PS_DDR_DQ8_504	PS_DDR_DQ40_504	H24
DQ9	AH22	PS_DDR_DQ9_504	PS_DDR_DQ41_504	J24
DQ10	AE22	PS_DDR_DQ10_504	PS_DDR_DQ42_504	M24
DQ11	AD22	PS_DDR_DQ11_504	PS_DDR_DQ43_504	K24
DQ12	AH23	PS_DDR_DQ12_504	PS_DDR_DQ44_504	J22
DQ13	AH24	PS_DDR_DQ13_504	PS_DDR_DQ45_504	H22
DQ14	AE24	PS_DDR_DQ14_504	PS_DDR_DQ46_504	K22
DQ15	AG24	PS_DDR_DQ15_504	PS_DDR_DQ47_504	J22
DQ16	AC26	PS_DDR_DQ16_504	PS_DDR_DQ48_504	M25
DQ17	AD26	PS_DDR_DQ17_504	PS_DDR_DQ49_504	M26
DQ18	AD25	PS_DDR_DQ18_504	PS_DDR_DQ50_504	L25
DQ19	AD24	PS_DDR_DQ19_504	PS_DDR_DQ51_504	L26
DQ20	AG26	PS_DDR_DQ20_504	PS_DDR_DQ52_504	K28
DQ21	AH25	PS_DDR_DQ21_504	PS_DDR_DQ53_504	L28
DQ22	AH26	PS_DDR_DQ22_504	PS_DDR_DQ54_504	M28
DQ23	AG25	PS_DDR_DQ23_504	PS_DDR_DQ55_504	N28
DQ24	AH27	PS_DDR_DQ24_504	PS_DDR_DQ56_504	J28
DQ25	AH28	PS_DDR_DQ25_504	PS_DDR_DQ57_504	K27
DQ26	AF28	PS_DDR_DQ26_504	PS_DDR_DQ58_504	H28
DQ27	AG28	PS_DDR_DQ27_504	PS_DDR_DQ59_504	H27
DQ28	AC27	PS_DDR_DQ28_504	PS_DDR_DQ60_504	G26
DQ29	AD27	PS_DDR_DQ29_504	PS_DDR_DQ61_504	G25
DQ30	AD28	PS_DDR_DQ30_504	PS_DDR_DQ62_504	K25
DQ31	AC28	PS_DDR_DQ31_504	PS_DDR_DQ63_504	J25
		PS_DDR_DQ64_504	PS_DDR_DQ65_504	T28
		PS_DDR_DQ66_504	PS_DDR_DQ67_504	R28
		PS_DDR_DQ68_504	PS_DDR_DQ69_504	P28
		PS_DDR_DQ70_504	PS_DDR_DQ71_504	P27
		PS_DDR_DQ72_504	PS_DDR_DQ73_504	P26
		PS_DDR_DQ74_504	PS_DDR_DQ75_504	R25
		PS_DDR_DQ76_504	PS_DDR_DQ77_504	P25
		PS_DDR_DQ78_504	PS_DDR_DQ79_504	T25
		PS_DDR_DQ80_504	PS_DDR_DQ81_504	
		PS_DDR_DQ82_504	PS_DDR_DQ83_504	
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		PS_DDR_DQ90_504	PS_DDR_DQ91_504	
		PS_DDR_DQ92_504	PS_DDR_DQ93_504	
		PS_DDR_DQ94_504	PS_DDR_DQ95_504	
		PS_DDR_DQ96_504	PS_DDR_DQ97_504	
		PS_DDR_DQ98_504	PS_DDR_DQ99_504	
		PS_DDR_DM0_504	PS_DDR_DM1_504	AG20
		PS_DDR_DM2_504	PS_DDR_DM3_504	AE23
		PS_DDR_DM4_504	PS_DDR_DM5_504	AE25
		PS_DDR_DM6_504	PS_DDR_DM7_504	AE28
		PS_DDR_DM8_504		R23
				H23
				L27
				H26
				T26

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Title: TE0820 - PS_DDR		
A4	Number: TE0820 03EG-1Q	Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page9 of 21
Filename: PS_DDR.SchDoc		

Title: TE0820 - PS_GT		
A4	Number: TE0820 03EG-1Q	Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page 10 of 21
Filename: B_PS_GT.SchDoc		

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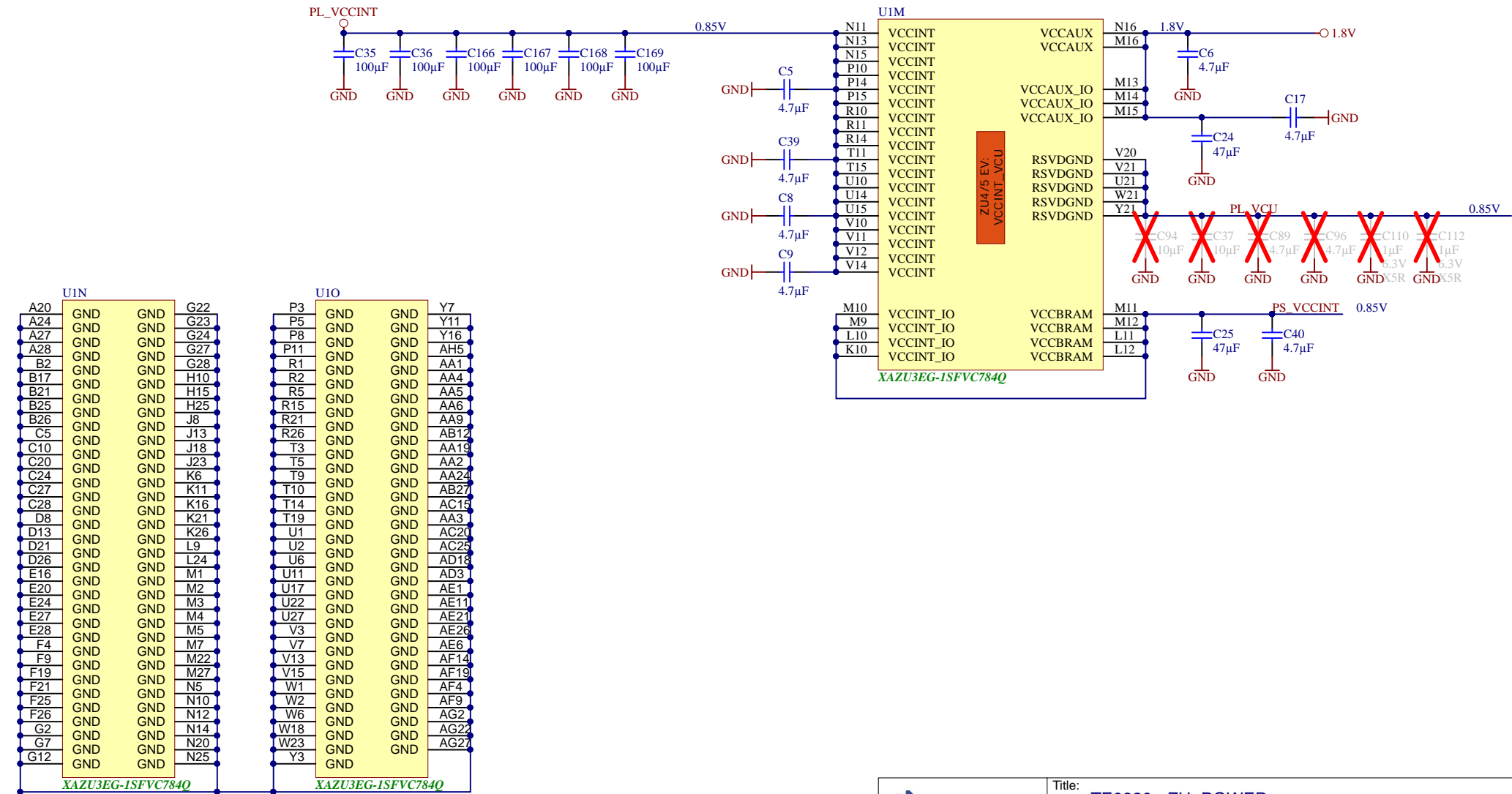
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Title: TE0820 - ZU_POWER		
A4	Number: TE0820 03EG-1Q	Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page 11 of 21
Filename: ZU_POWER.SchDoc		

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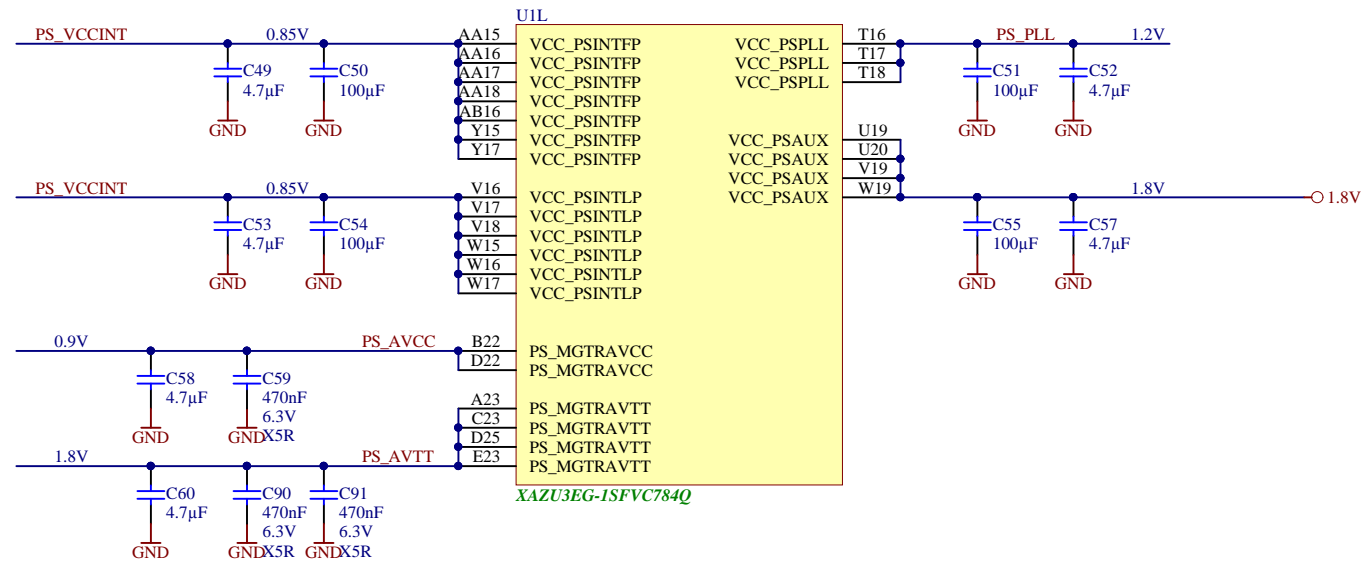
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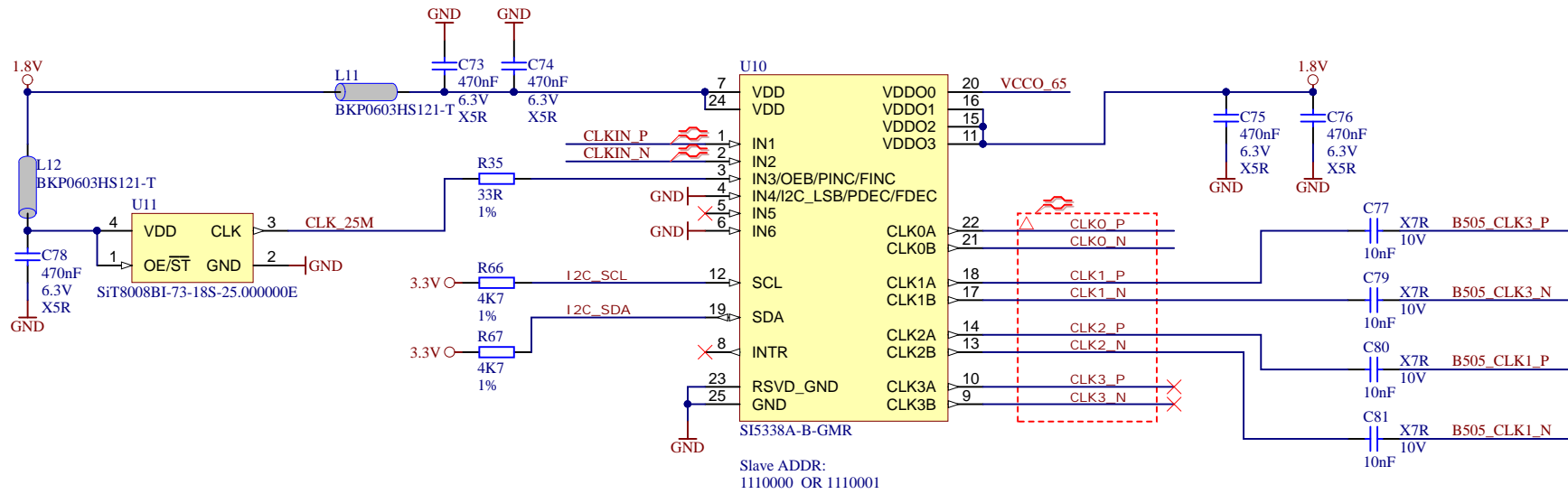
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		A4	Number: TE0820 03EG-1Q
Date: 2017-05-02		Copyright: Trenz Electronic GmbH / TT	
Filename: ZU_PS_POWER.SchDoc		Page 12 of 21	


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		Title: TE0820 - CLK	
		A4	Number: TE0820 03EG-1Q
Date: 2017-05-02		Copyright: 2015 Trenz Electronic GmbH	
Filename: CLK.SchDoc		Page13 of 21	

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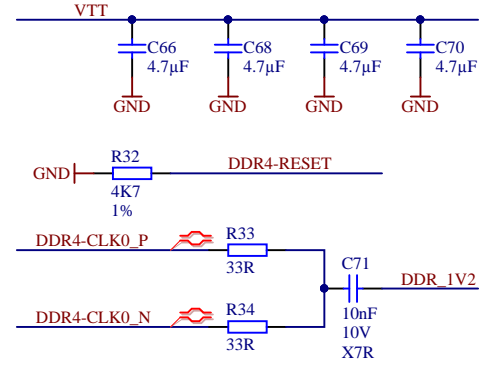
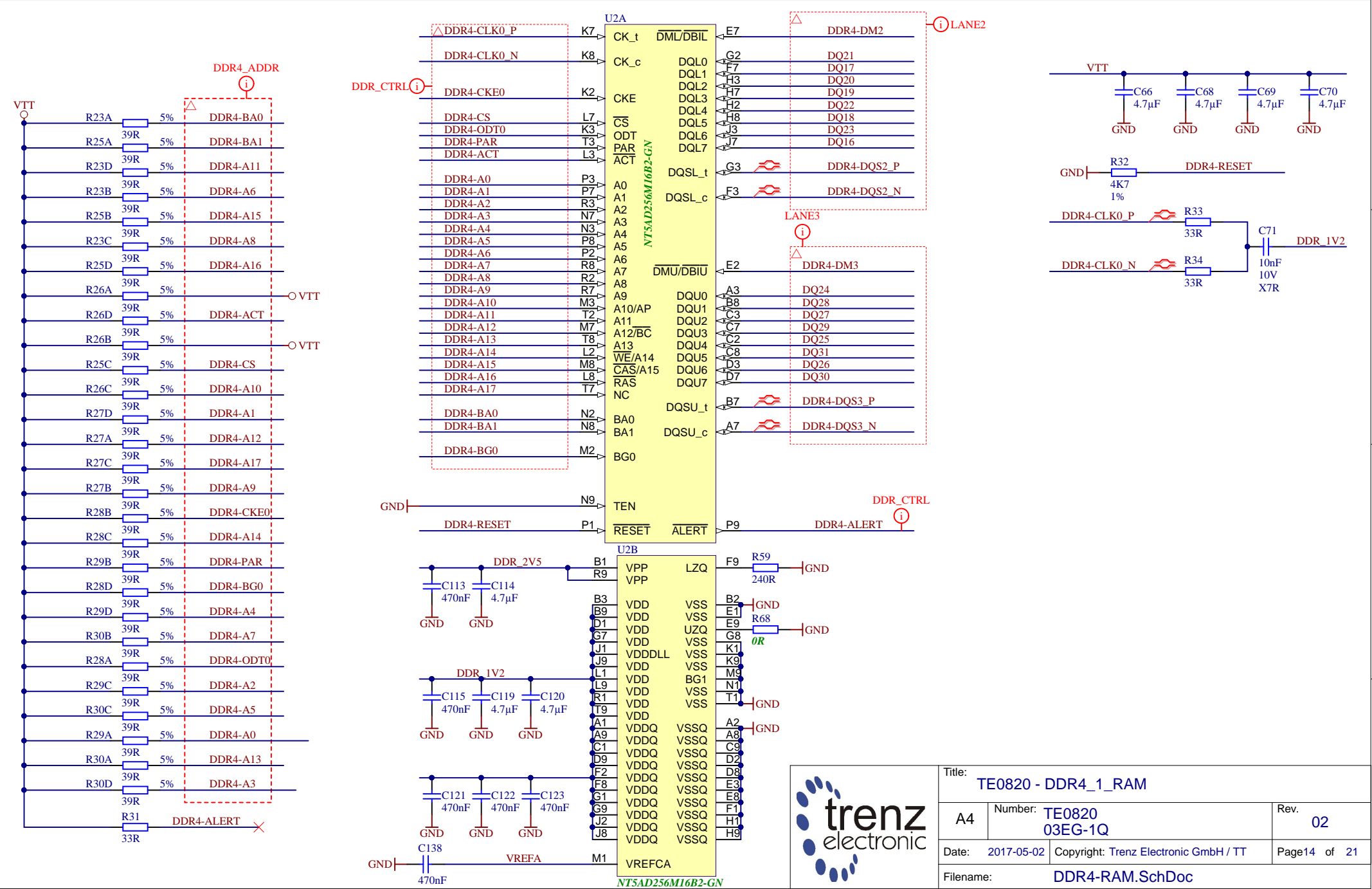
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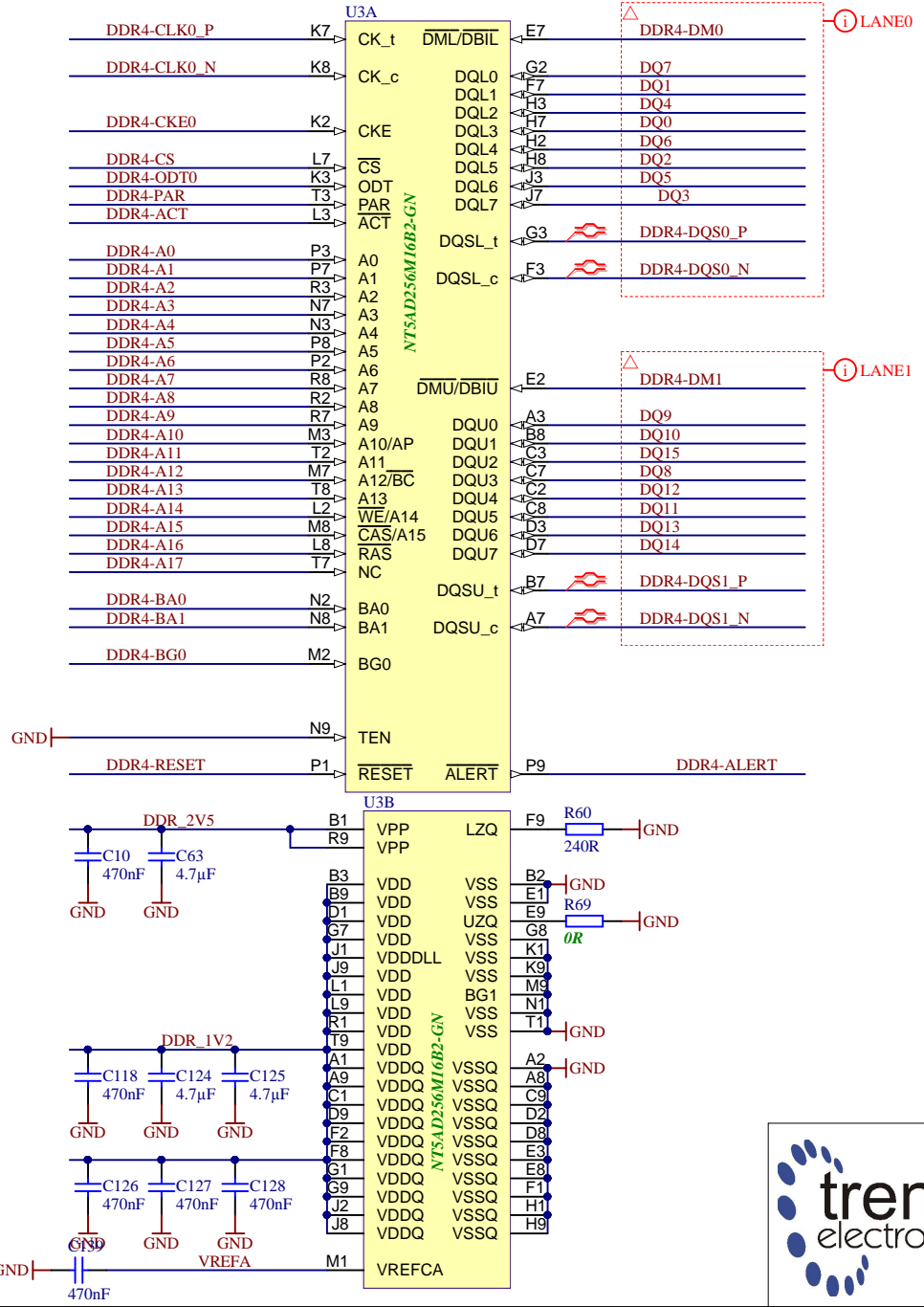
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Title: TE0820 - DDR4_1_RAM		
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Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page 14 of 21
Filename: DDR4-RAM.SchDoc		

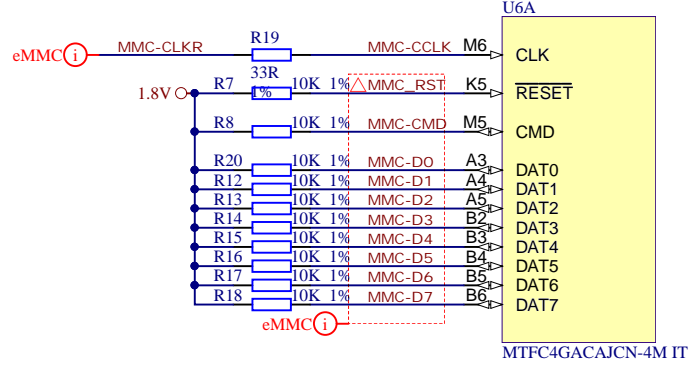


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			A4	Number: TE0820 03EG-1Q
Date: 2017-05-02		Copyright: Trenz Electronic GmbH / TT		Page 15 of 21
Filename: DDR4-RAM_2.SchDoc				

U6D

A1	NC	NC	H2
A2	NC	NC	H3
A8	NC	NC	H12
A9	NC	NC	H13
A10	NC	NC	H14
A11	NC	NC	J1
A12	NC	NC	J2
A13	NC	NC	J3
A14	NC	NC	J12
B1	NC	NC	J13
B7	NC	NC	J14
B8	NC	NC	K1
B9	NC	NC	K2
B10	NC	NC	K3
B11	NC	NC	K12
B12	NC	NC	K13
B13	NC	NC	K14
B14	NC	NC	L1
C1	NC	NC	L2
C3	NC	NC	L3
C7	NC	NC	L12
C8	NC	NC	L13
C9	NC	NC	L14
C10	NC	NC	M4
C11	NC	NC	M2
C12	NC	NC	M3
C13	NC	NC	M7
C14	NC	NC	M8
D1	NC	NC	M9
D2	NC	NC	M10
D3	NC	NC	M11
D4	NC	NC	M12
D12	NC	NC	M13
D13	NC	NC	M14
D14	NC	NC	N1
E1	NC	NC	N3
E2	NC	NC	N6
E3	NC	NC	N7
E12	NC	NC	N8
E13	NC	NC	N9
E14	NC	NC	N10
F1	NC	NC	N11
F2	NC	NC	N12
F3	NC	NC	N13
F12	NC	NC	N14
F13	NC	NC	P1
F14	NC	NC	P2
G1	NC	NC	P8
G2	NC	NC	P9
G12	NC	NC	P11
G13	NC	NC	P12
G14	NC	NC	P13
H1	NC	NC	P14

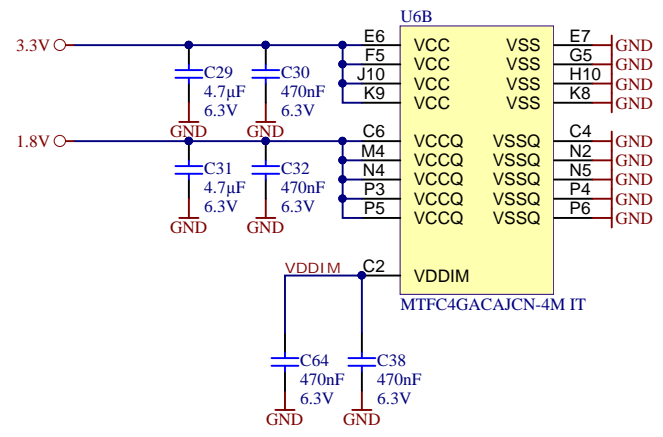
MTFC4GACAJCN-4M IT



U6C

A6	RFU/VSS
A7	RFU
C5	RFU/NC
E5	RFU
E8	RFU
E9	RFU
E10	RFU
F10	RFU
G3	RFU/NC
G10	RFU
H5	RFU/DS
J5	RFU/VSS
K6	RFU
K7	RFU
K10	RFU
P7	RFU/NC
P10	RFU

MTFC4GACAJCN-4M IT



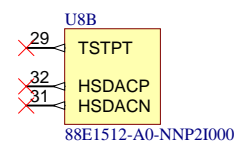
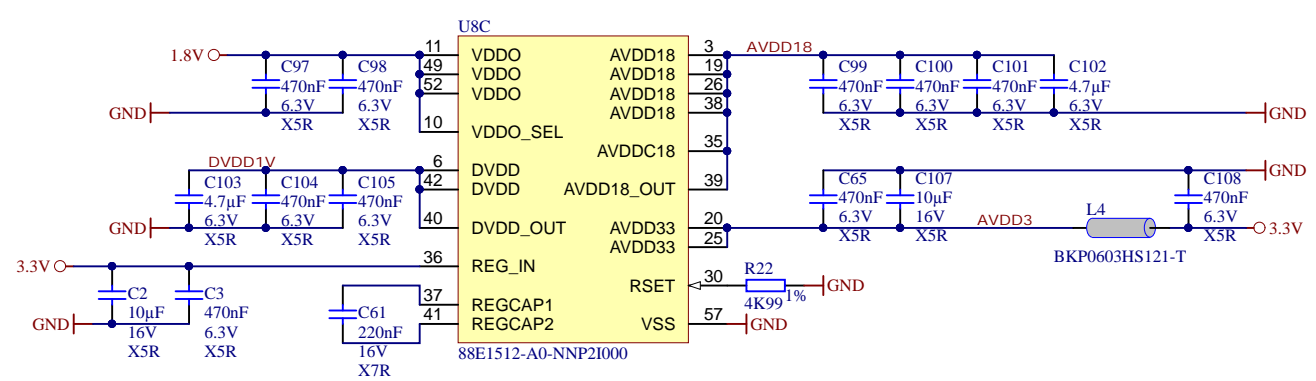
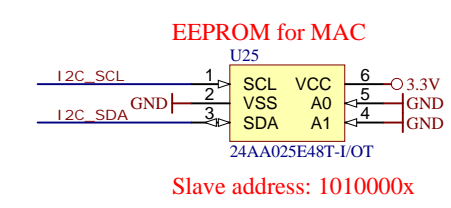
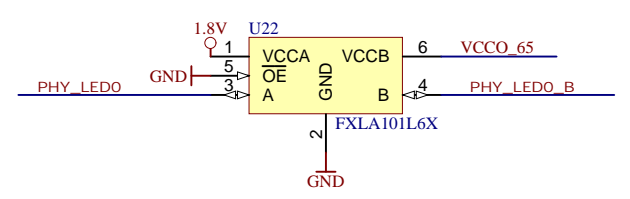
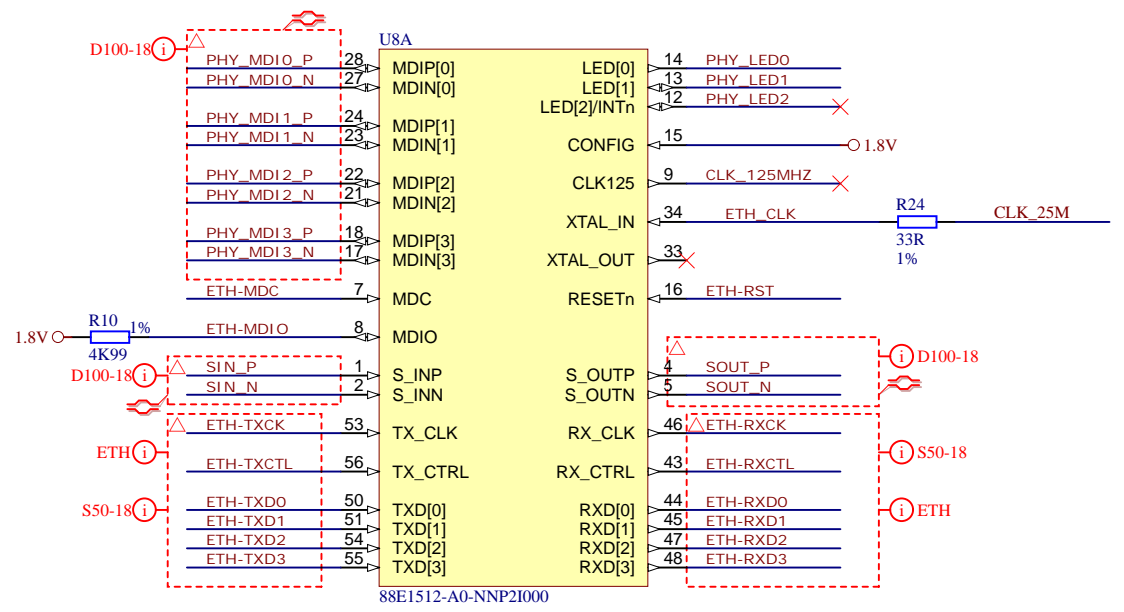
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A4	Number: TE0820 03EG-1Q	Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page 16 of 21
Filename: eMMC.SchDoc		

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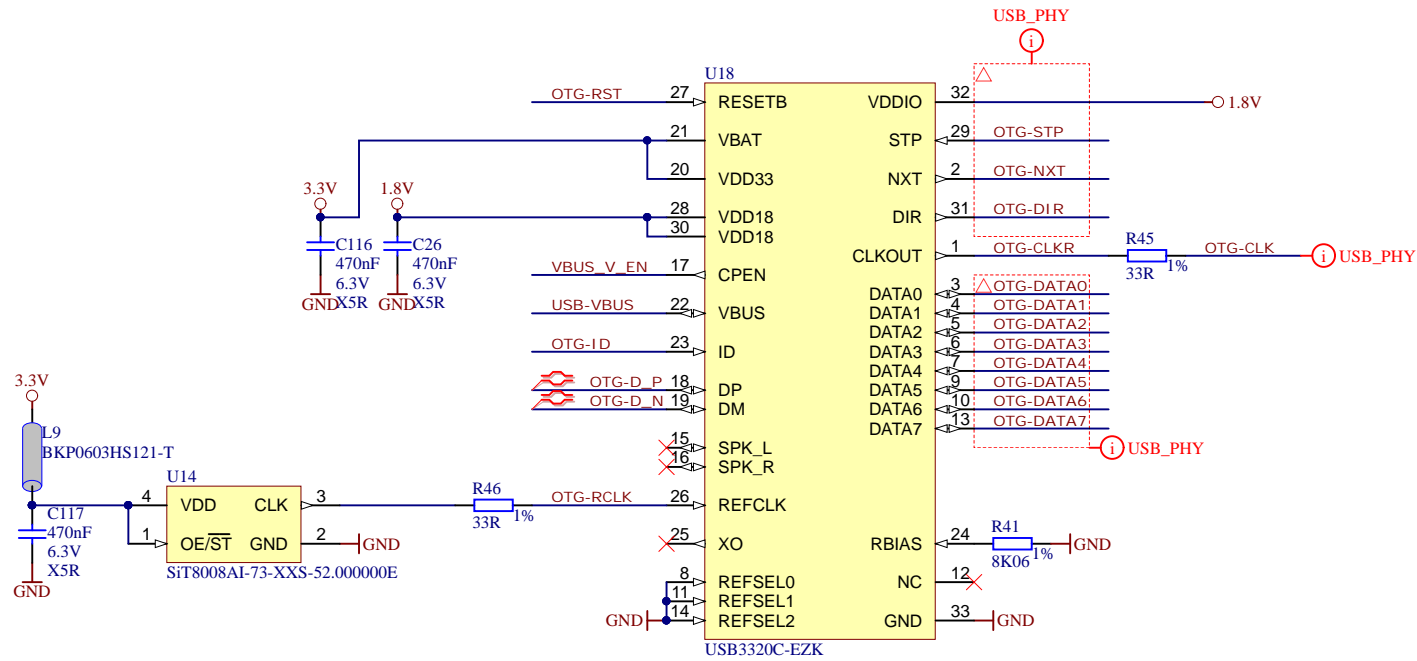
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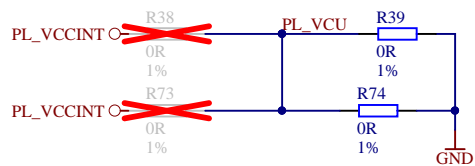
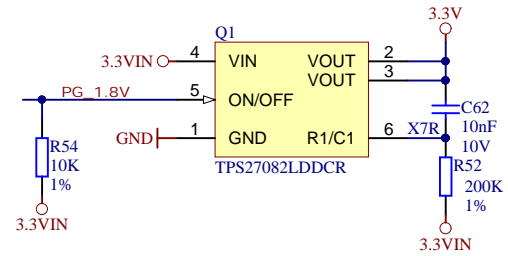
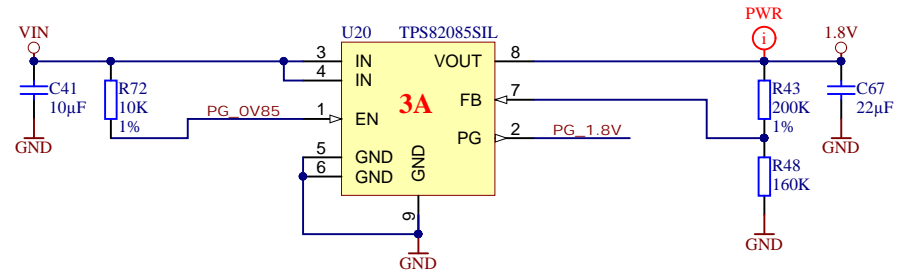
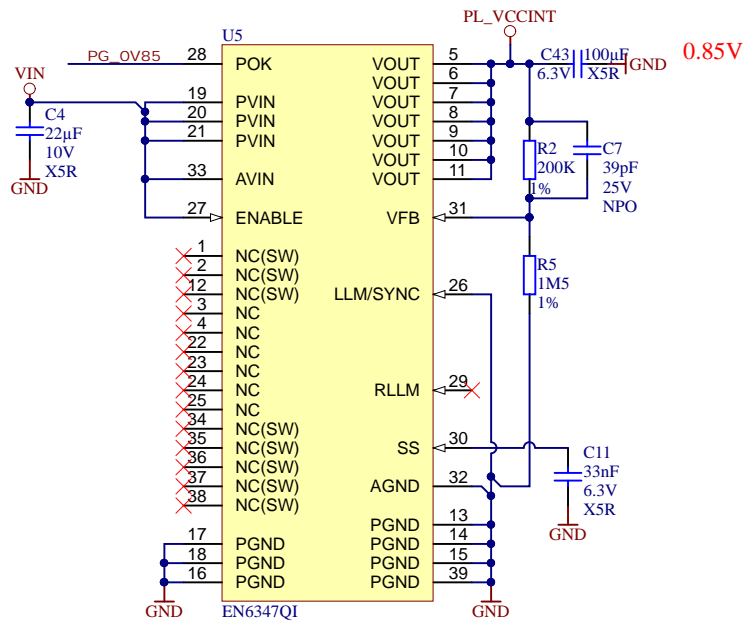
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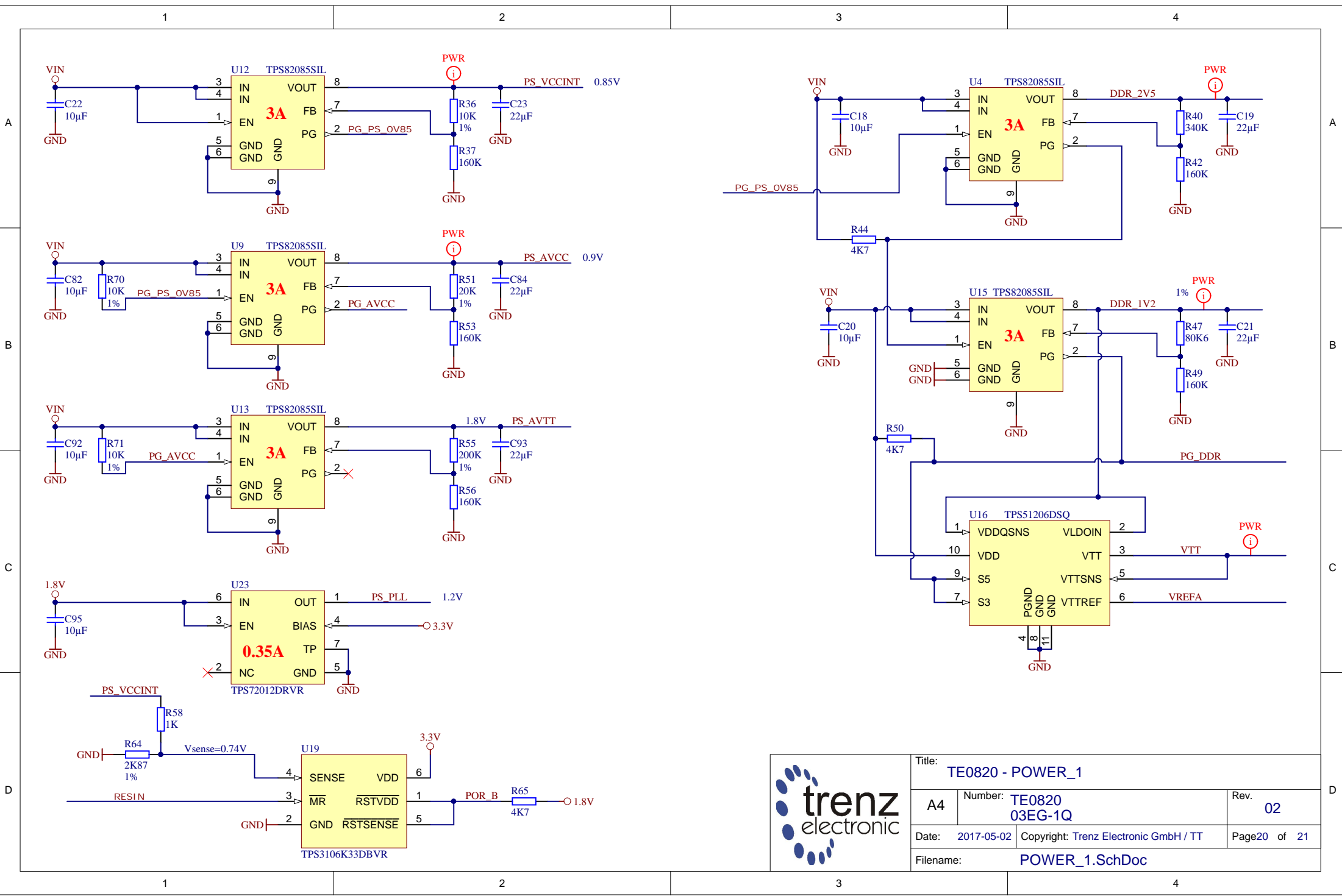
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A4	Number: TE0820 03EG-1Q	Rev. 02
Date: 2017-05-02	Copyright: 2015 Trenz Electronic GmbH	Page 17 of 21
Filename: ETH-PHY.SchDoc		



	Title: TE0820 - USB_PHY		
	A4	Number: TE0820 03EG-1Q	Rev. 02
	Date: 2017-05-02	Copyright: 2015 Trenz Electronic GmbH	
	Page 18 of 21		
Filename: USB-PHY.SchDoc			



	Title: TE0820 - POWER		
	A4	Number: TE0820 03EG-1Q	Rev. 02
	Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page 19 of 21
	Filename: POWER.SchDoc		



Title: TE0820 - POWER_1		
A4	Number: TE0820 03EG-1Q	Rev. 02
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Filename: POWER_1.SchDoc		

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CHANGES REV01 to REV02

- 1) Added MAC EEPROM (slave address:)
- 2) LIB components update
- 3) Fixed SD Card connection
- 4) Fixed sense connection from DCDC
- 5) Made correct power connection for VCU (removed DCDC, added resistors and caps like as Xilinx recommended)
- 6) Added resistors for variants (ZU+ with/without VCU)
- 7) Added termination resistors (240R) to VRP pins fro all HP-banks

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	Title: TE0820 - Revision Changes		
	A4	Number: TE0820 03EG-1Q	Rev. 02
	Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page21 of 21
	Filename: Revision Changes.SchDoc		

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