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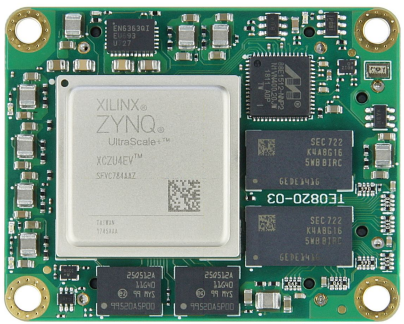


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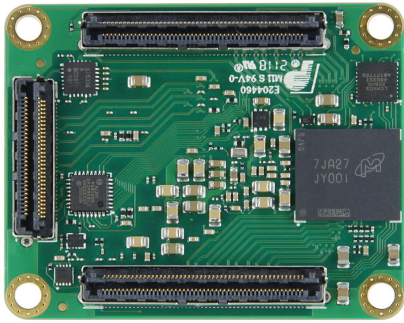


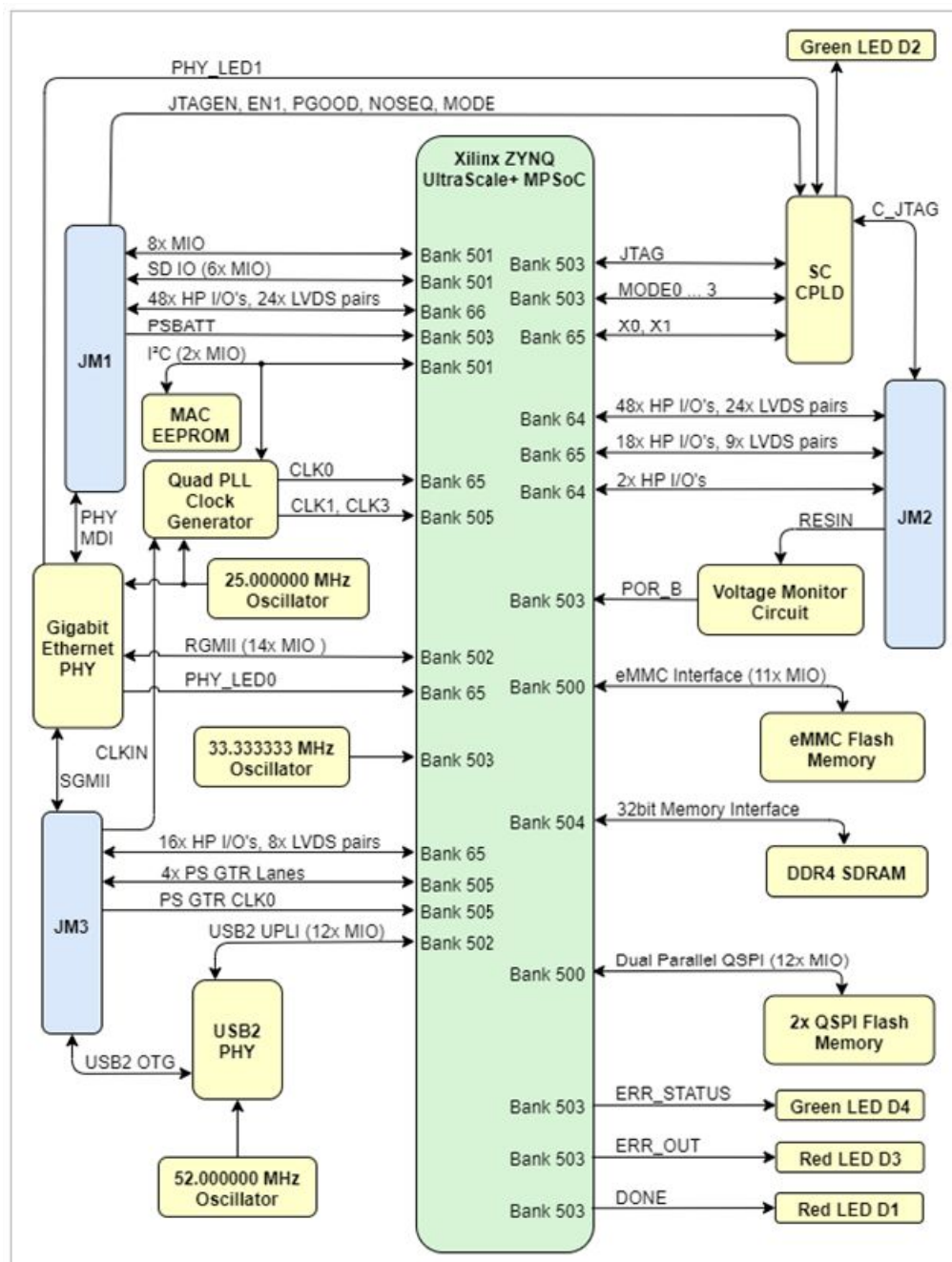
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Schematics and other handouts serve for informational purposes only!

	Title: TE0820 - Legal Notices		
	A4	Number: TE0820 2BE21MA	Rev. 04
	Date: 2020-07-16	Copyright: Trenz Electronic GmbH / TT	Page 1 of 23
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Title: TE0820 - System Overview		
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POWER.SchDoc

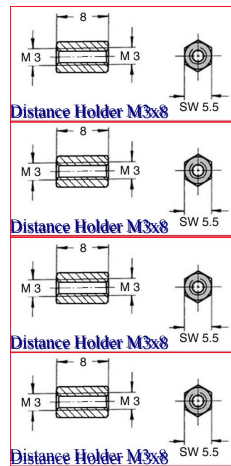
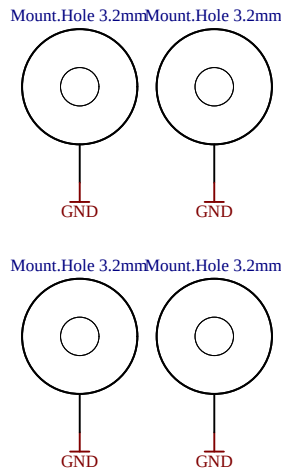
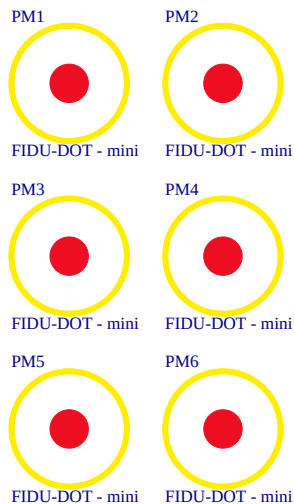
U_POWER_1
POWER_1.SchDoc

U_REV_CH
Revision Changes.SchDoc

U_LN
Legal Notices Modules.SchDoc

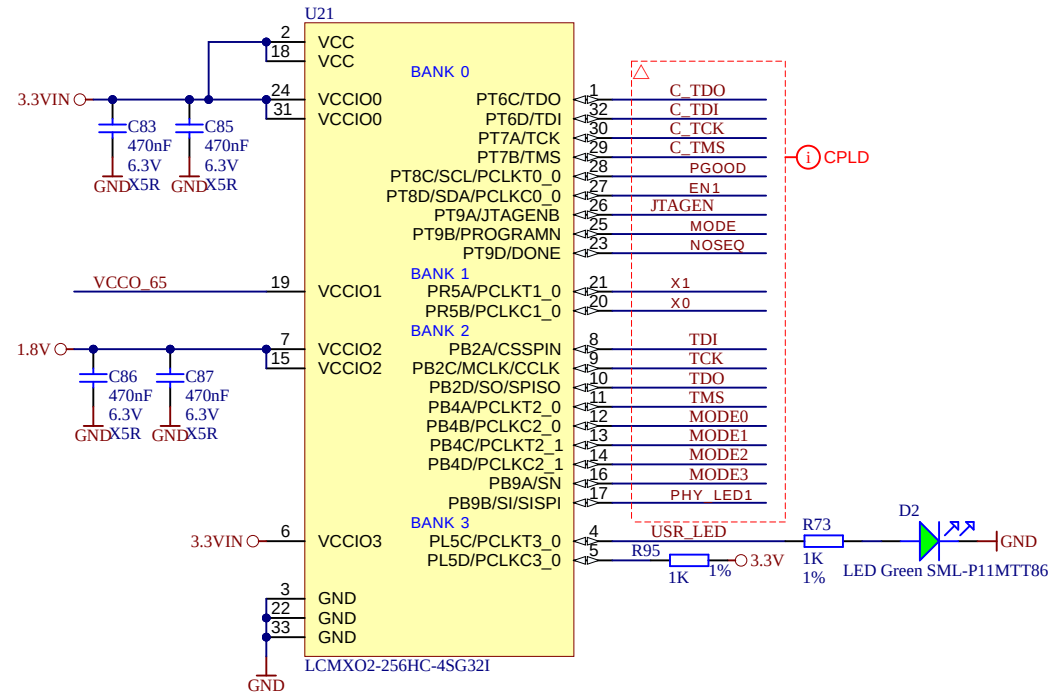
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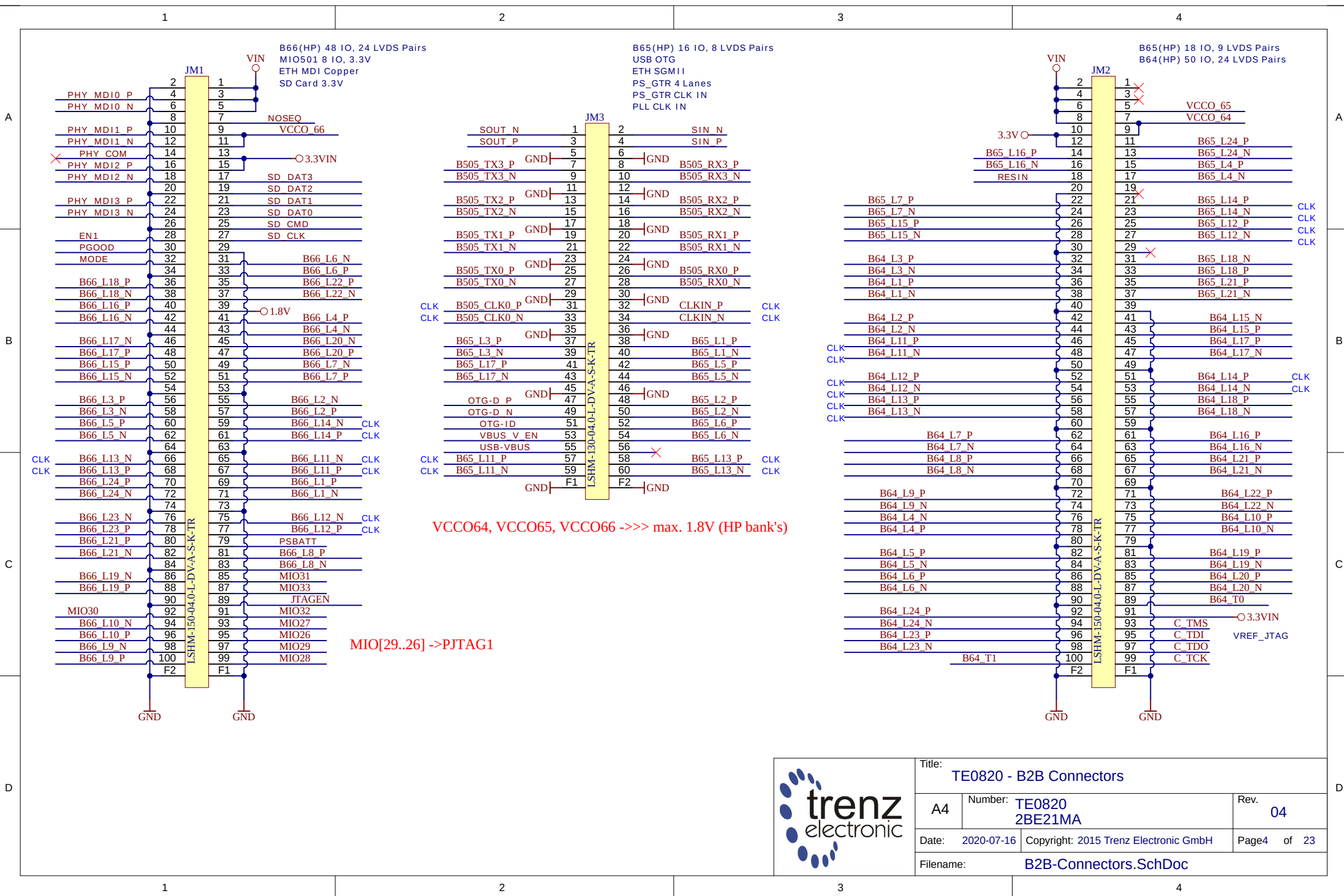
Serial
Serial
Serialnumber 6,3 x 6.3mm



Title: TE0820		
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Assembly variant	2BE21MA
Created by	RM
Modified by	RM
Modified at	2021-07-22
SVN Revision	12571





U1C

F14	VCCO_26	BANK 26 HD (ZU4/5 BANK 46 HD)	
C15	VCCO_26		
B15	IO_L1P_AD11P_26	IO_L7P_HDGC_AD5P_26	G13
A15	IO_L1N_AD11N_26	IO_L7N_HDGC_AD5N_26	F13
B14	IO_L2P_AD10P_26	IO_L8P_HDGC_AD4P_26	F15
A14	IO_L2N_AD10N_26	IO_L8N_HDGC_AD4N_26	E15
B13	IO_L3P_AD9P_26	IO_L9P_AD3P_26	G15
A13	IO_L3N_AD9N_26	IO_L9N_AD3N_26	G14
C14	IO_L4P_AD8P_26	IO_L10P_AD2P_26	H14
C13	IO_L4N_AD8N_26	IO_L10N_AD2N_26	H13
D15	IO_L5P_HDGC_AD7P_26	IO_L11P_AD1P_26	K14
D14	IO_L5N_HDGC_AD7N_26	IO_L11N_AD1N_26	J14
E14	IO_L6P_HDGC_AD6P_26	IO_L12P_AD0P_26	L14
E13	IO_L6N_HDGC_AD6N_26	IO_L12N_AD0N_26	L13

BANK 44 HD (ZU4/5 BANK 43 HD)

AC10	VCCO_44		
AG12	VCCO_44		
AG10	IO_L1P_AD11P_44	IO_L7P_HDGC_AD5P_44	AD11
AH10	IO_L1N_AD11N_44	IO_L7N_HDGC_AD5N_44	AD10
AF11	IO_L2P_AD10P_44	IO_L8P_HDGC_AD4P_44	AB11
AG11	IO_L2N_AD10N_44	IO_L8N_HDGC_AD4N_44	AC11
AH12	IO_L3P_AD9P_44	IO_L9P_AD3P_44	AA11
AH11	IO_L3N_AD9N_44	IO_L9N_AD3N_44	AA10
AE10	IO_L4P_AD8P_44	IO_L10P_AD2P_44	W10
AF10	IO_L4N_AD8N_44	IO_L10N_AD2N_44	Y10
AE12	IO_L5P_HDGC_AD7P_44	IO_L11P_AD1P_44	Y9
AF12	IO_L5N_HDGC_AD7N_44	IO_L11N_AD1N_44	AA8
AC12	IO_L6P_HDGC_AD6P_44	IO_L12P_AD0P_44	AB10
AD12	IO_L6N_HDGC_AD6N_44	IO_L12N_AD0N_44	AB9

U1B

XCZU2EG-1SFVC784E

AA14	VCCO_24	BANK 24 HD (ZU4/5 BANK 44 HD)	
AD13	VCCO_24		
AE15	IO_L1P_AD15P_24	IO_L7P_HDGC_24	AA13
AE14	IO_L1N_AD15N_24	IO_L7N_HDGC_24	AB13
AG14	IO_L2P_AD14P_24	IO_L8P_HDGC_24	AB15
AH13	IO_L2N_AD14N_24	IO_L8N_HDGC_24	AB14
AG13	IO_L3P_AD13P_24	IO_L9P_AD11P_24	W14
AH13	IO_L3N_AD13N_24	IO_L9N_AD11N_24	W13
AE13	IO_L4P_AD12P_24	IO_L10P_AD10P_24	Y14
AF13	IO_L4N_AD12N_24	IO_L10N_AD10N_24	Y13
AD15	IO_L5P_HDGC_24	IO_L11P_AD9P_24	W12
AD14	IO_L5N_HDGC_24	IO_L11N_AD9N_24	W11
AC14	IO_L6P_HDGC_24	IO_L12P_AD8P_24	Y12
AC13	IO_L6N_HDGC_24	IO_L12N_AD8N_24	AA12

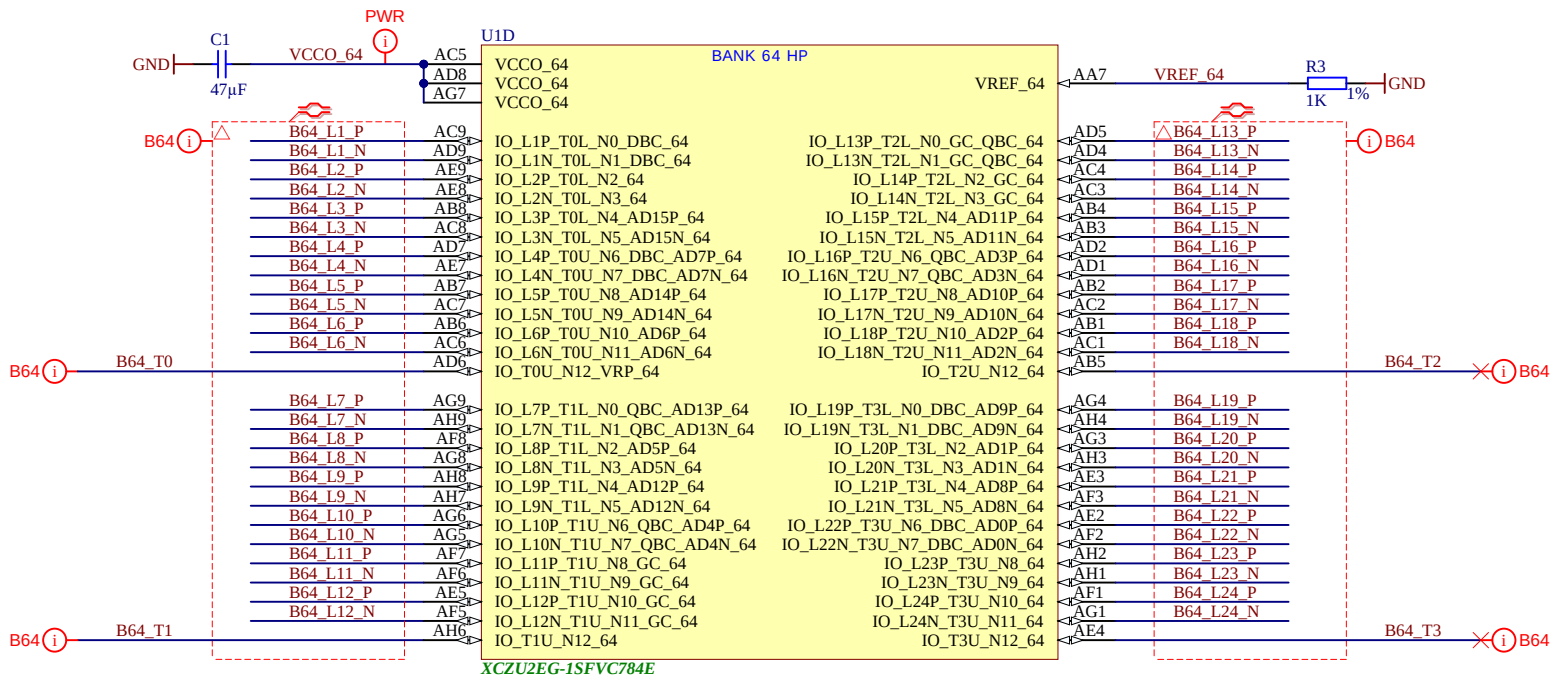
BANK 25 HD (ZU4/5 BANK 45 HD)

B12	VCCO_25		
E11	VCCO_25		
J11	IO_L1P_AD15P_25	IO_L7P_HDGC_25	E10
J10	IO_L1N_AD15N_25	IO_L7N_HDGC_25	D10
K13	IO_L2P_AD14P_25	IO_L8P_HDGC_25	E12
K12	IO_L2N_AD14N_25	IO_L8N_HDGC_25	D11
H11	IO_L3P_AD13P_25	IO_L9P_AD11P_25	C11
G10	IO_L3N_AD13N_25	IO_L9N_AD11N_25	B10
J12	IO_L4P_AD12P_25	IO_L10P_AD10P_25	B11
H12	IO_L4N_AD12N_25	IO_L10N_AD10N_25	A10
G11	IO_L5P_HDGC_25	IO_L11P_AD9P_25	A12
F10	IO_L5N_HDGC_25	IO_L11N_AD9N_25	A11
F12	IO_L6P_HDGC_25	IO_L12P_AD8P_25	D12
F11	IO_L6N_HDGC_25	IO_L12N_AD8N_25	C12

XCZU2EG-1SFVC784E



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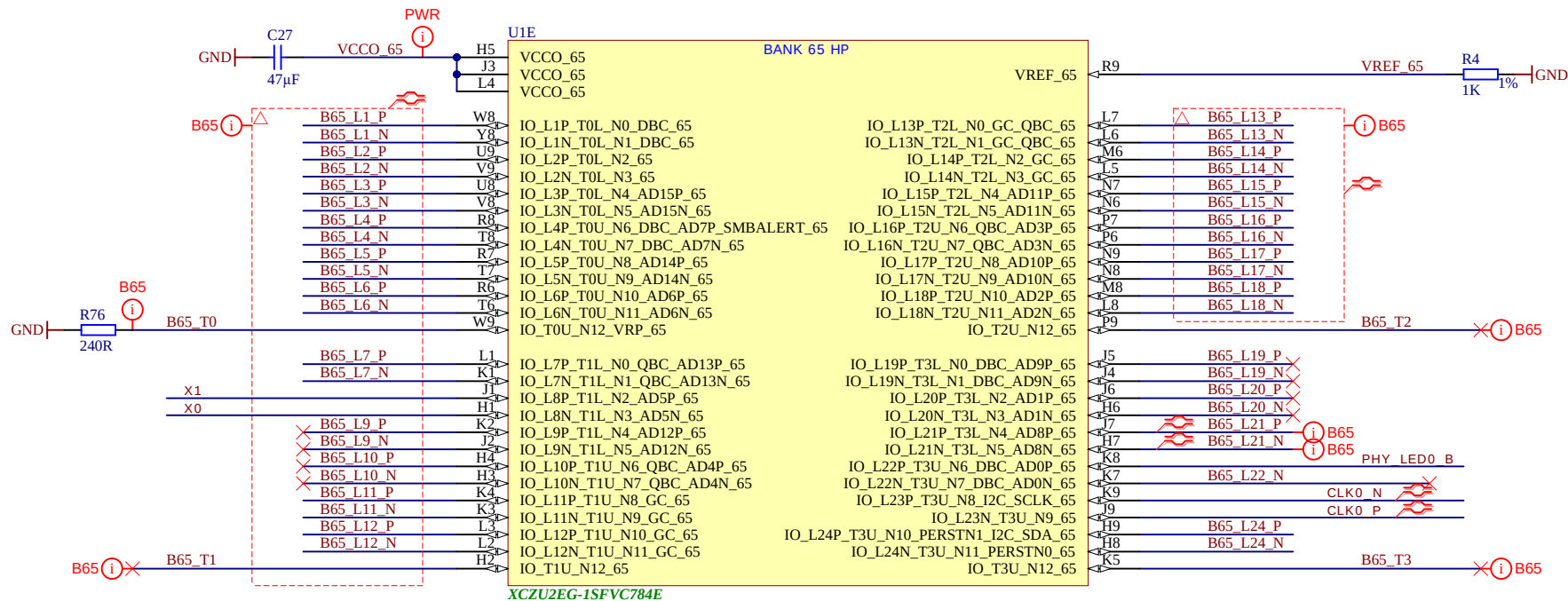
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Title: TE0820 - B65			
A4	Number: TE0820 2BE21MA	Rev. 04	
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Filename: B65.SchDoc			

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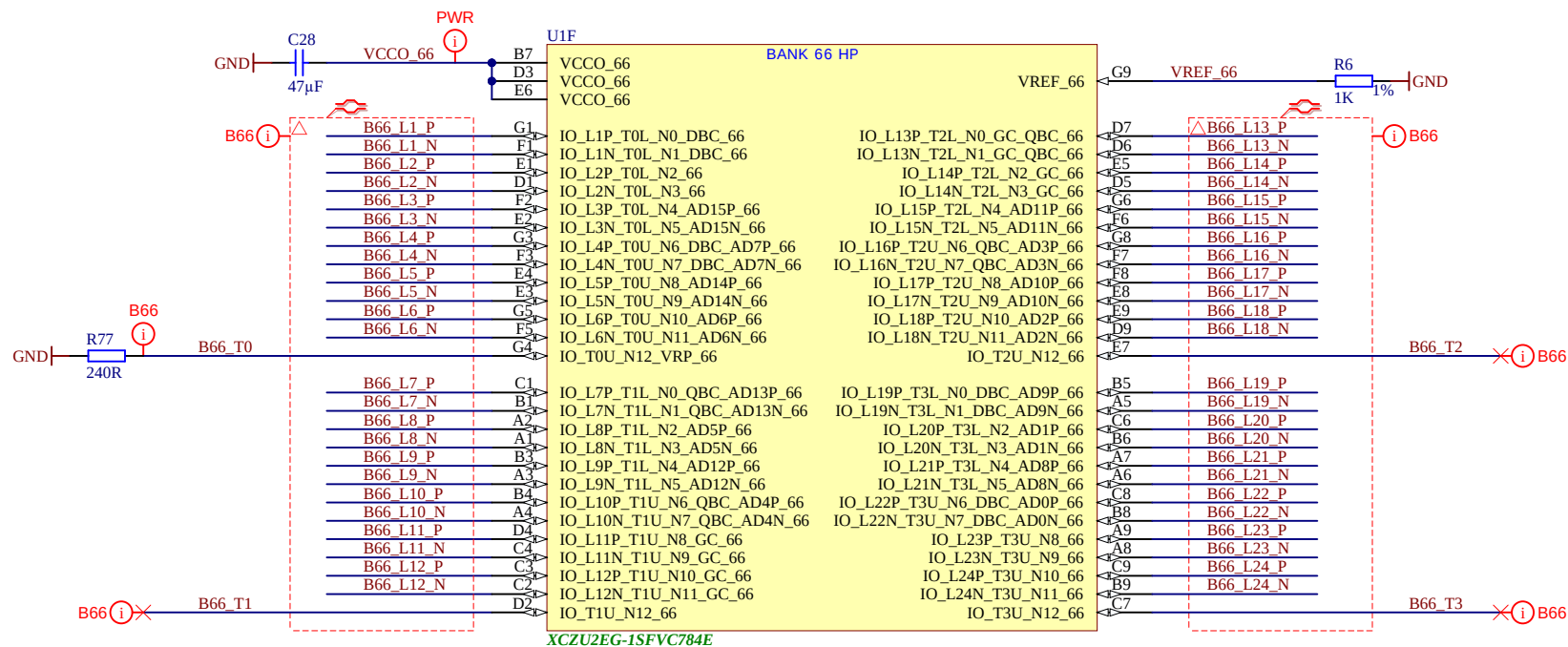
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Title: TE0820 - B66			
A4	Number: TE0820 2BE21MA	Rev. 04	
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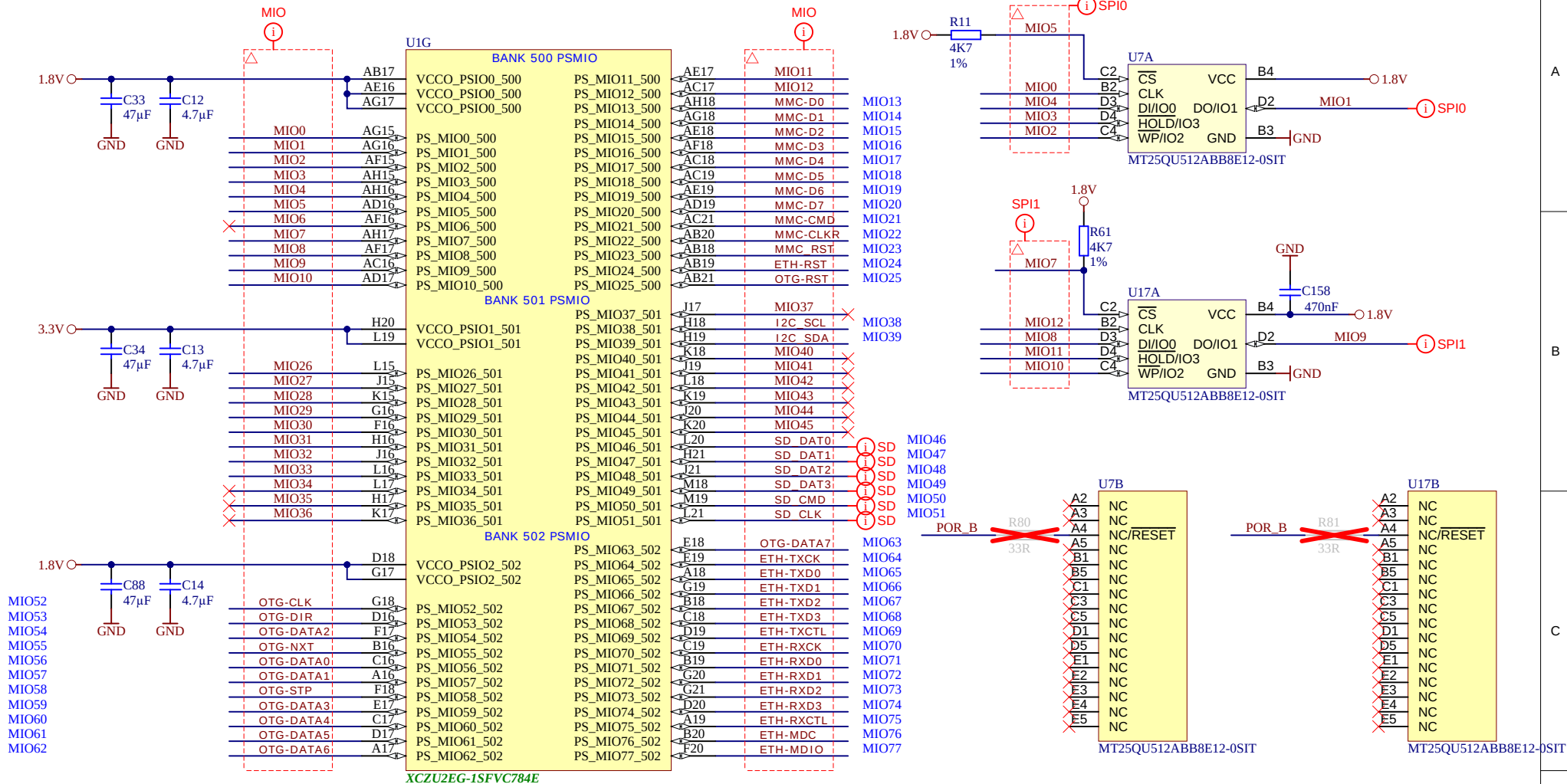
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Title: TE0820 - MIO Banks			
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Filename: B_MIO.SchDoc			

A

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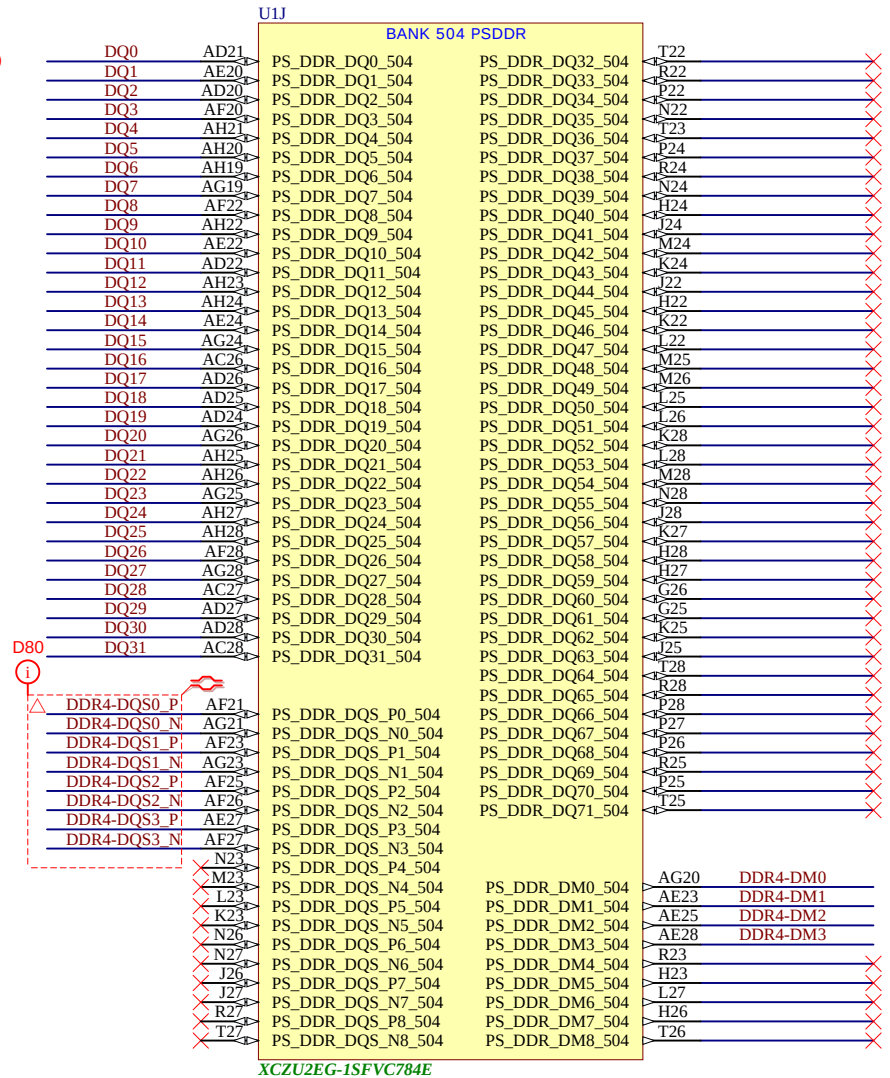
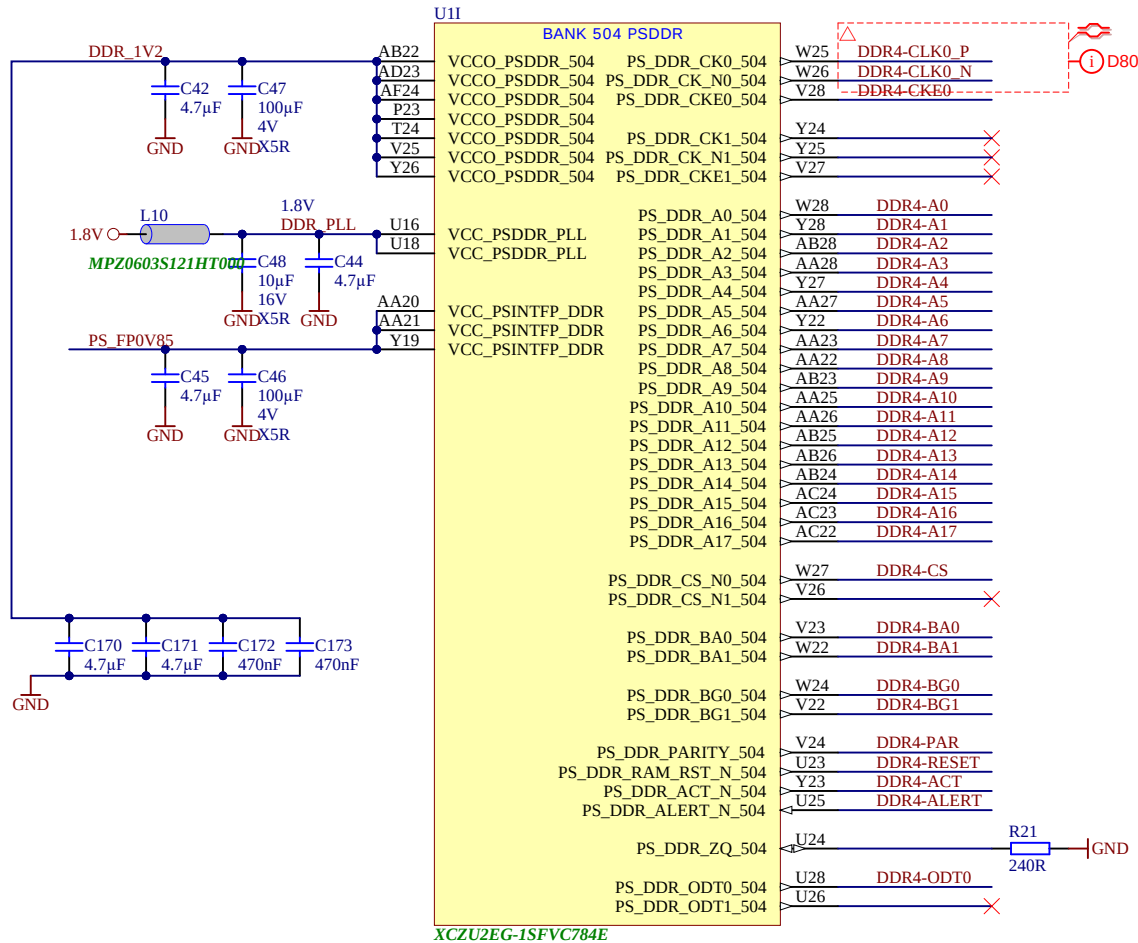
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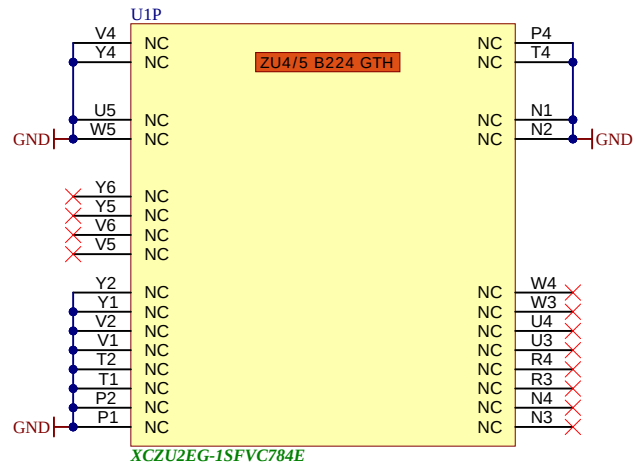
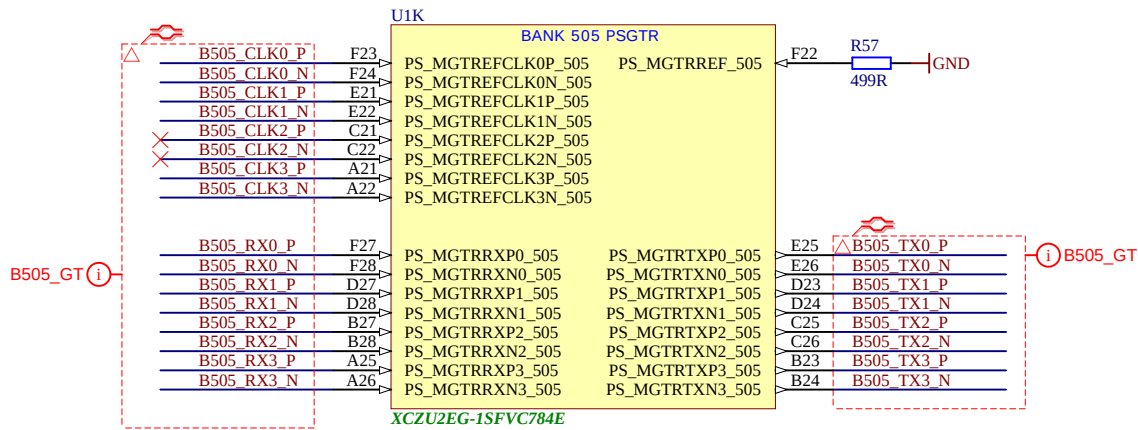
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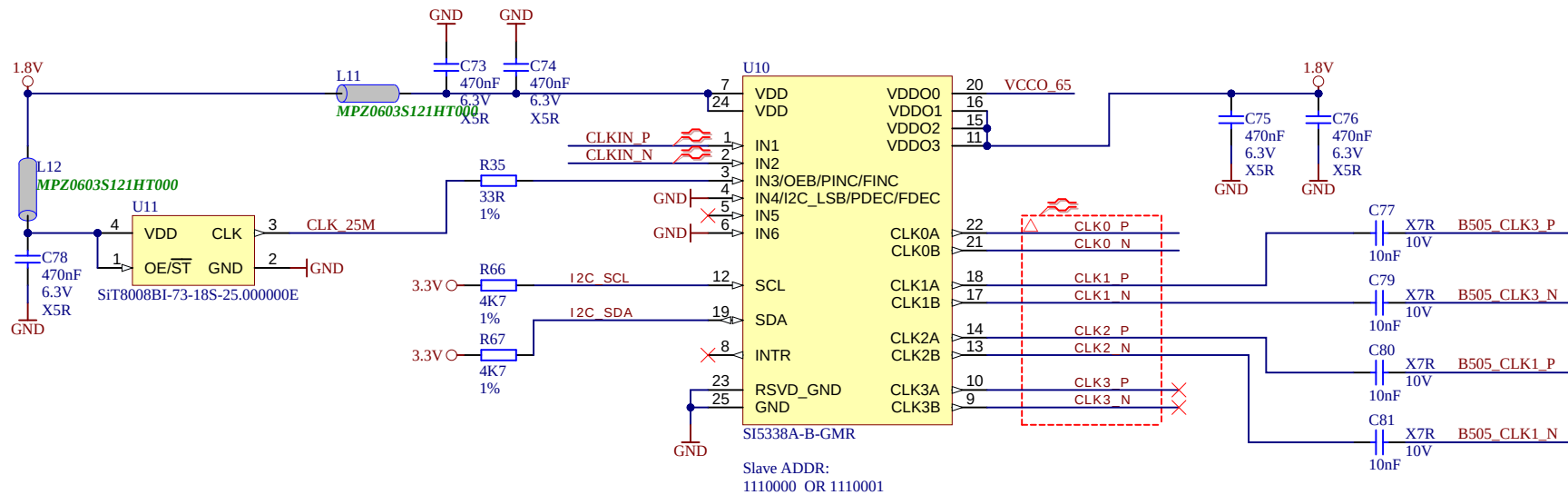
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Title: TE0820 - PS_DDR			
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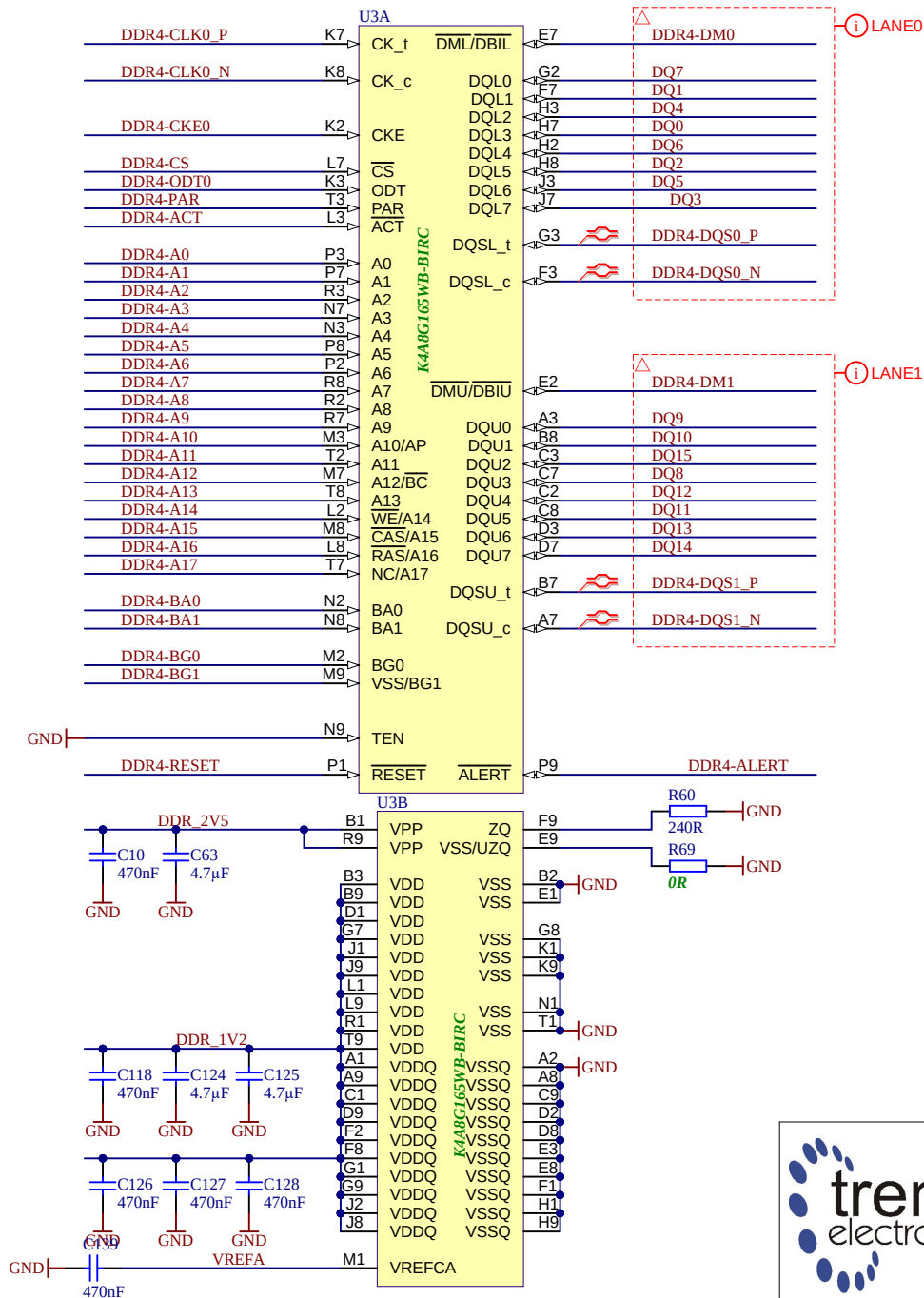
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Title: TE0820 - DDR4_2_RAM			
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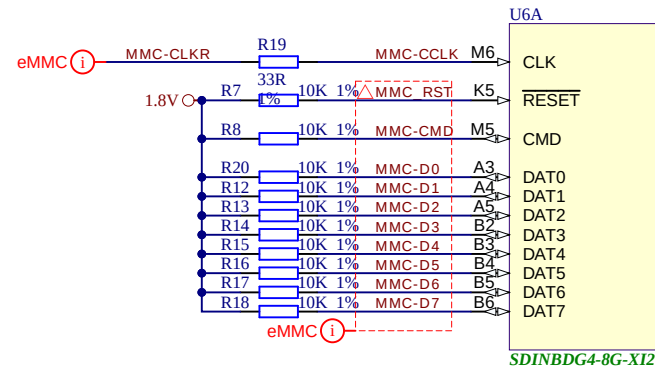
3

4

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	M1
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	P8
G1	NC	NC	P9
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G12	NC	NC	P12
G13	NC	NC	P13
G14	NC	NC	P14
H1	NC	NC	

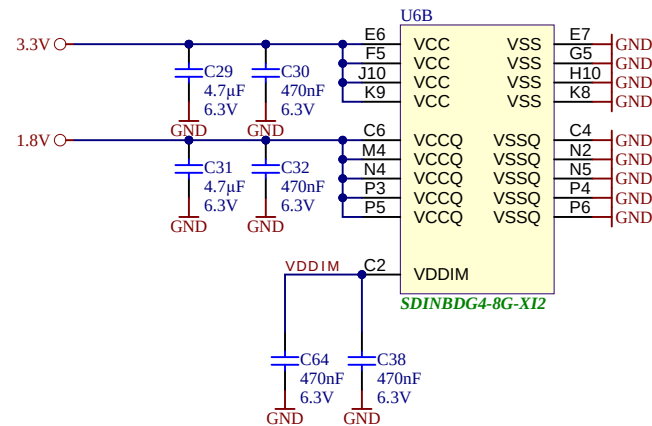
SDINBDG4-8G-X12



U6C

A6	RFU/VSS
A7	RFU
C5	RFU/NC
E5	RFU
E8	RFU
E9	RFU
F10	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

SDINBDG4-8G-X12



Title: TE0820 - eMMC		
A4	Number: TE0820 2BE21MA	Rev. 04
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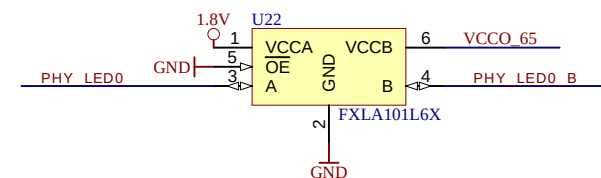
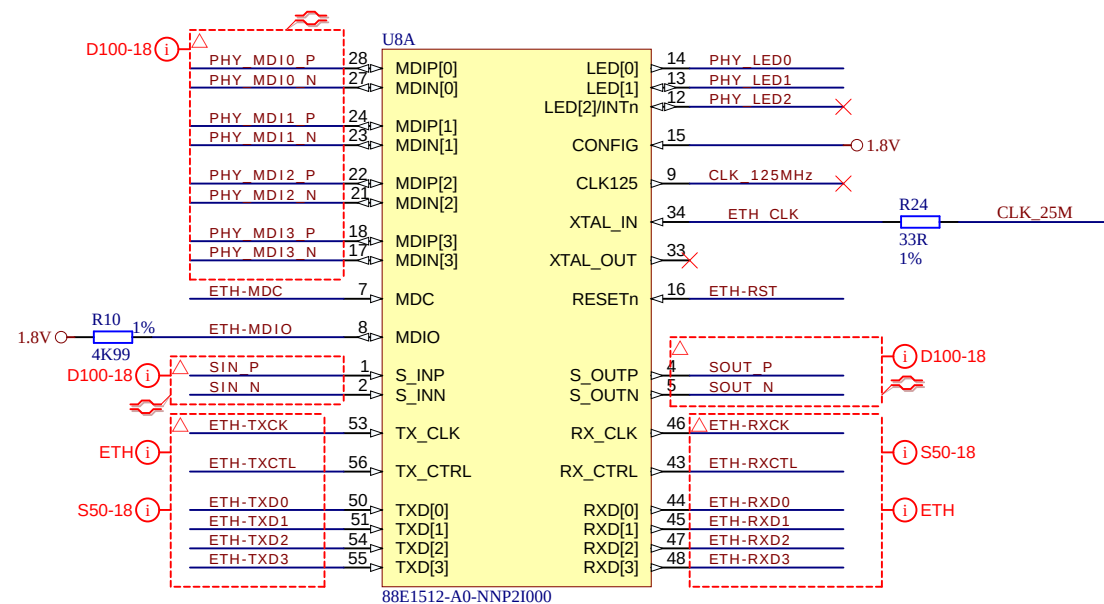
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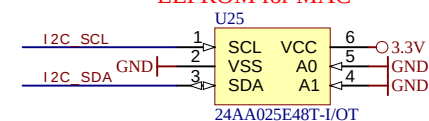
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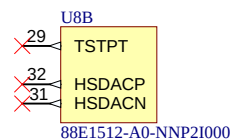
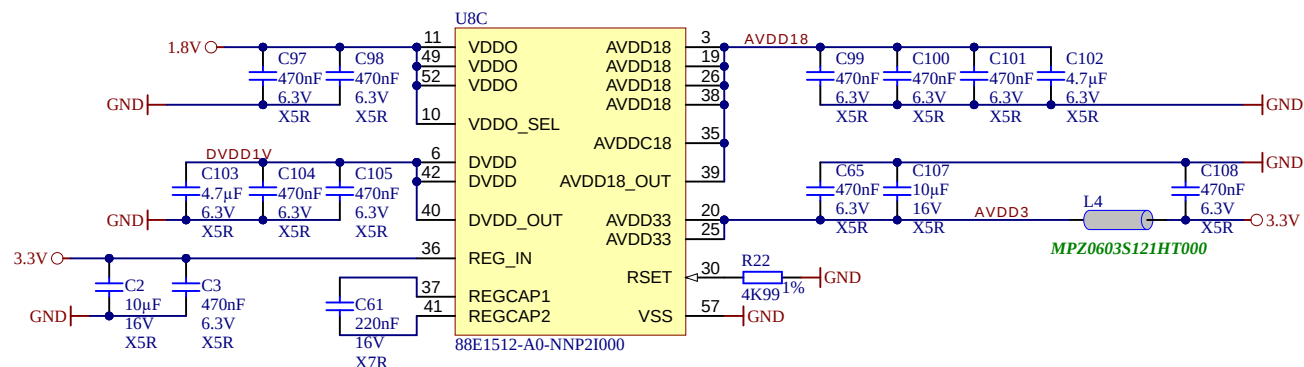
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EEPROM for MAC



Slave address: 1010000x



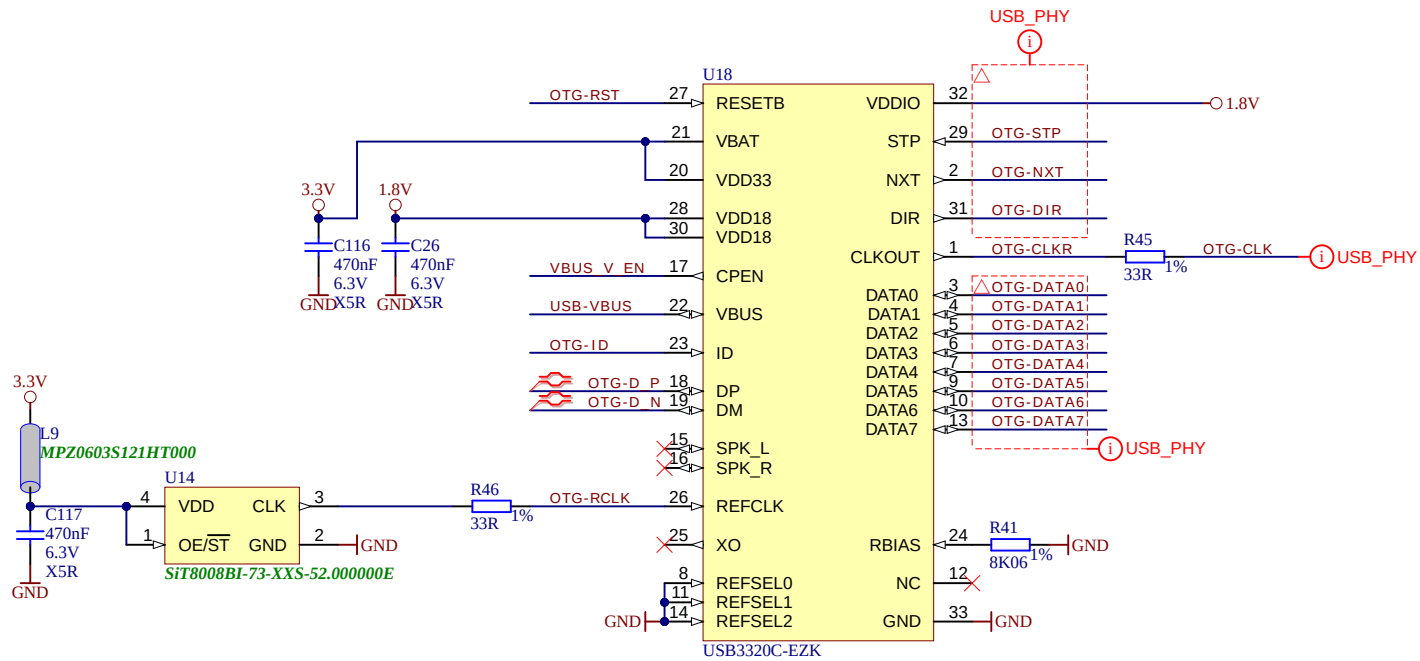
Title: TE0820 - Eth_PHY		
A4	Number: TE0820 2BE21MA	Rev. 04
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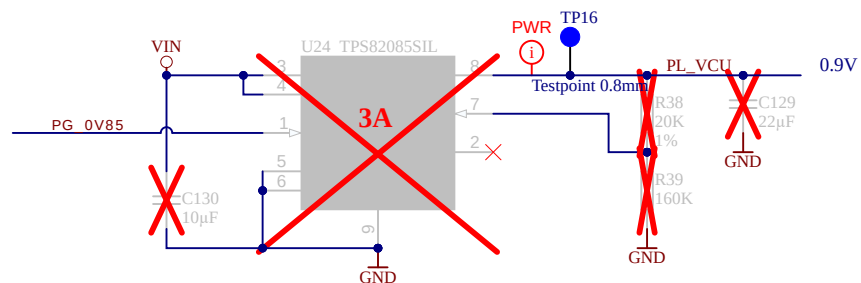
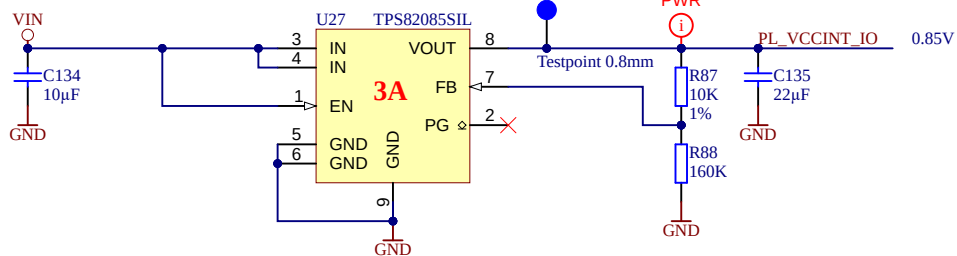
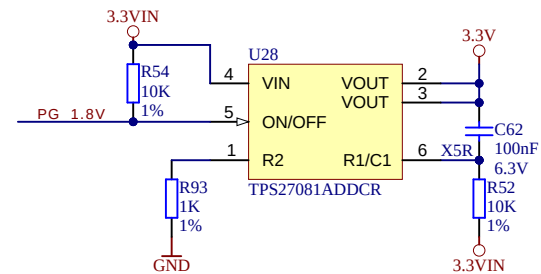
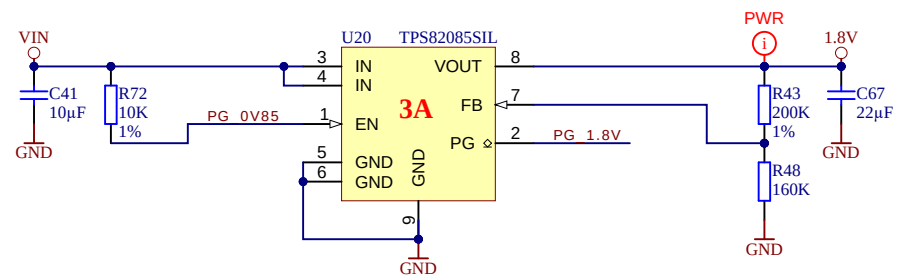
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		Title: TE0820 - USB_PHY	
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1	2	3	4	
A	CHANGES REV01 to REV02 ----- 1) Added MAC EEPROM (slave address:) 2) LIB components update 3) Fixed SD Card connection 4) Fixed sense connection from DCDC 5) 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 CHANGES REV02 to REV03 ----- 1) Fixed VCU connection: add additional DCDC (0.9V) 2) LIB components update 3) Change package 1K resistors (0402 -> 0201) 4) Added LEDs (1x user LED, 1x LED for ERR_STATUS, 1xLED for ERR_OUT) 5) Change obsolete 2xSPI Flash (256MBit) -> 2xSPI Flash (512MBit) 6) Added additional DCDCs (PL_VCCINT_IO, PS_FP0V85) 7) Changed DCDC (U5) 6A (optional 4A) CHANGES REV03 to REV04 ----- VT: 1) Fixed DDR4 connection (BG1), support B-die DDR4 Industrial grade chips VT: 2) Added R93, changed value C62, change obsolete U28 VT: 3) Added R89 (10R) VT: 4) Added additional caps 4.7uF to PS_AVTT/PS_AVCC (Xilinx doc UG583) VT: 5) Changed R51 20k ->10K (PS_AVCC = 0.85V, Xilinx doc DS925 v1.17) VT: 6) Fixed DDR4 connection (Alert) VT: 7) Added 3.3V signal to CPLD VT: 8) Added testpoints VT: 9) LIB components update Revision 04a (29.10.2020): ----- 1. VY: added block diagram, updated module pictures			A
B				B
C				C
D	 Title: TE0820 - Revision Changes A4 Number: TE0820 2BE21MA Rev. 04 Date: 2020-07-16 Copyright: Trenz Electronic GmbH / TT Page23 of 23 Filename: Revision Changes.SchDoc			D
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