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

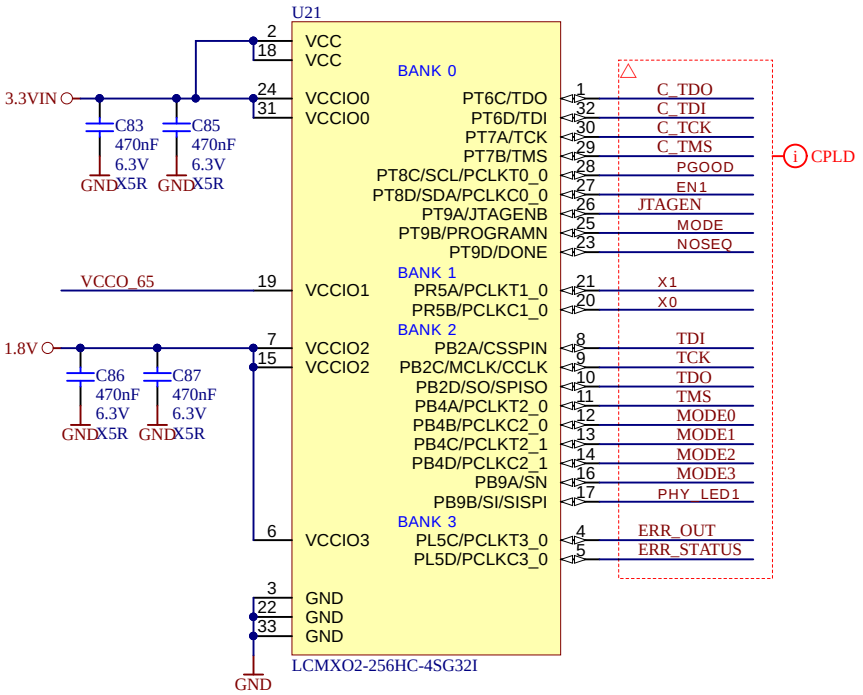
U_ZU_PS_POWER
ZU_PS_POWER.SchDoc

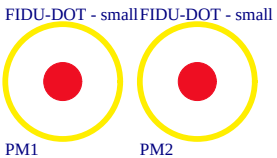
U_DDR4-RAM_2
DDR4-RAM_2.SchDoc

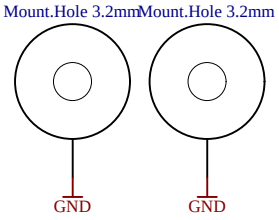
U_DDR4-RAM
DDR4-RAM.SchDoc

U_POWER
POWER.SchDoc

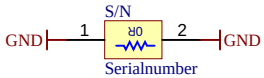
U_POWER_1
POWER_1.SchDoc







Serial
Serial
Serialnumber 6,3 x 6.3mm



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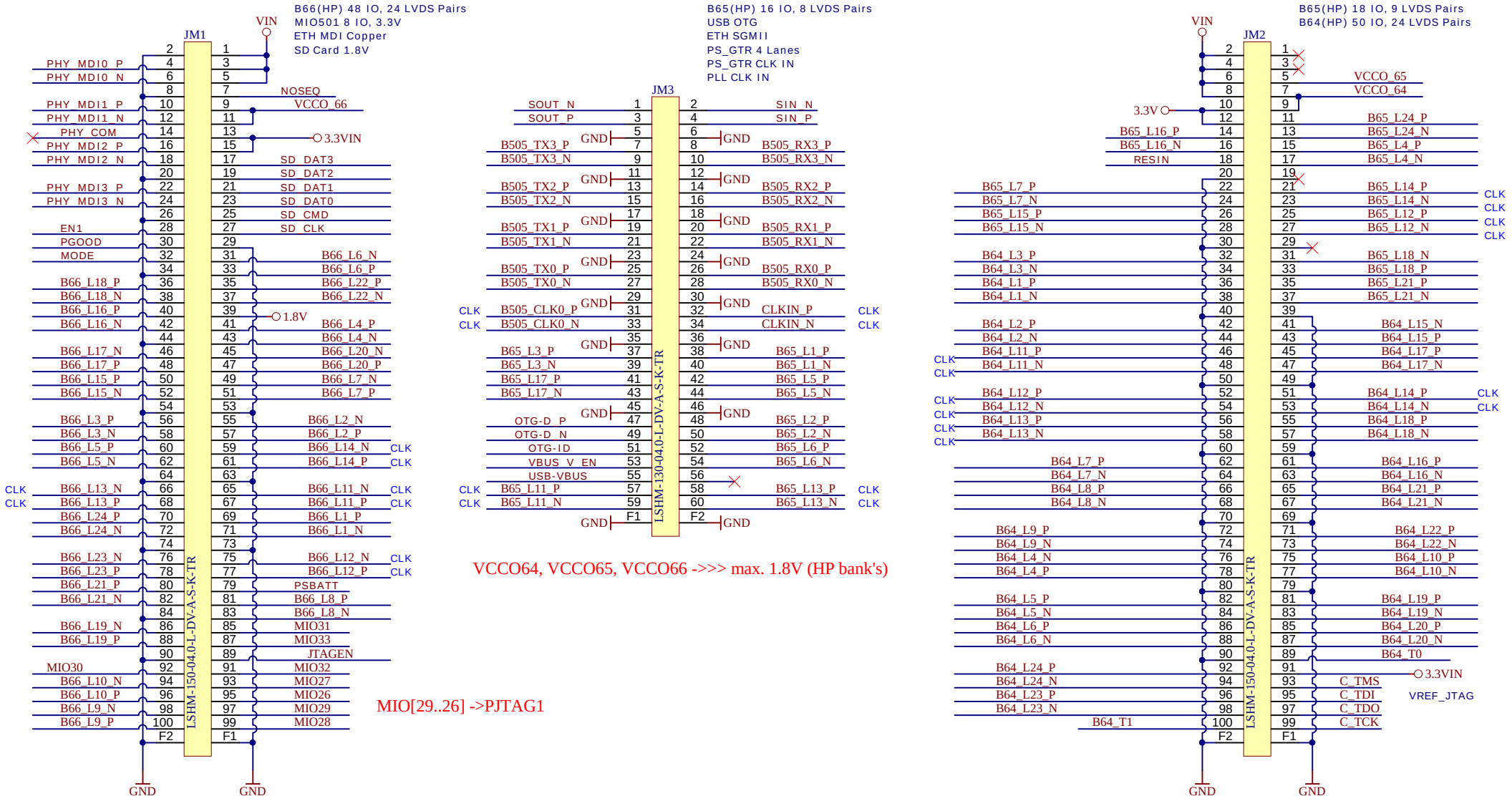
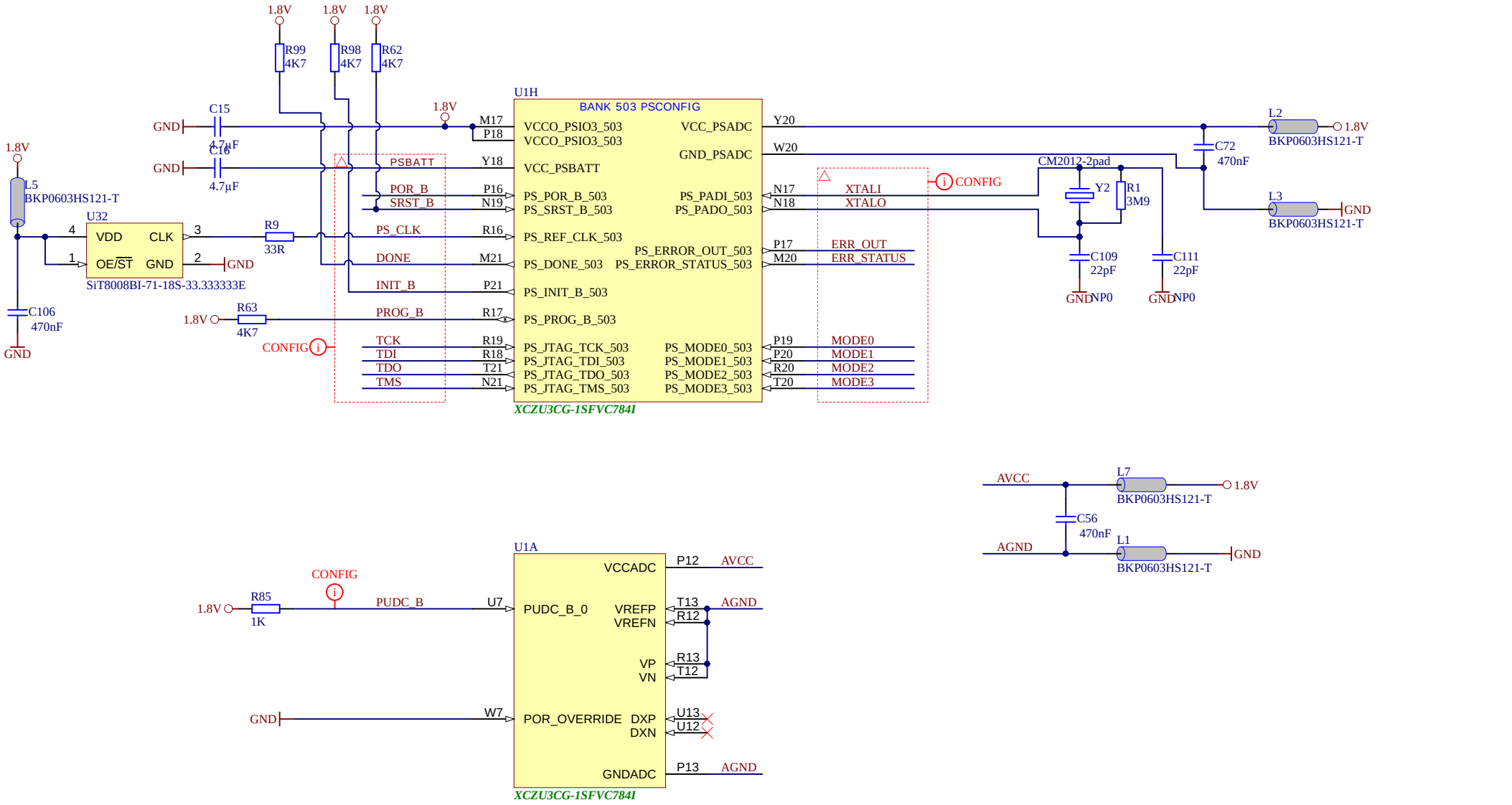
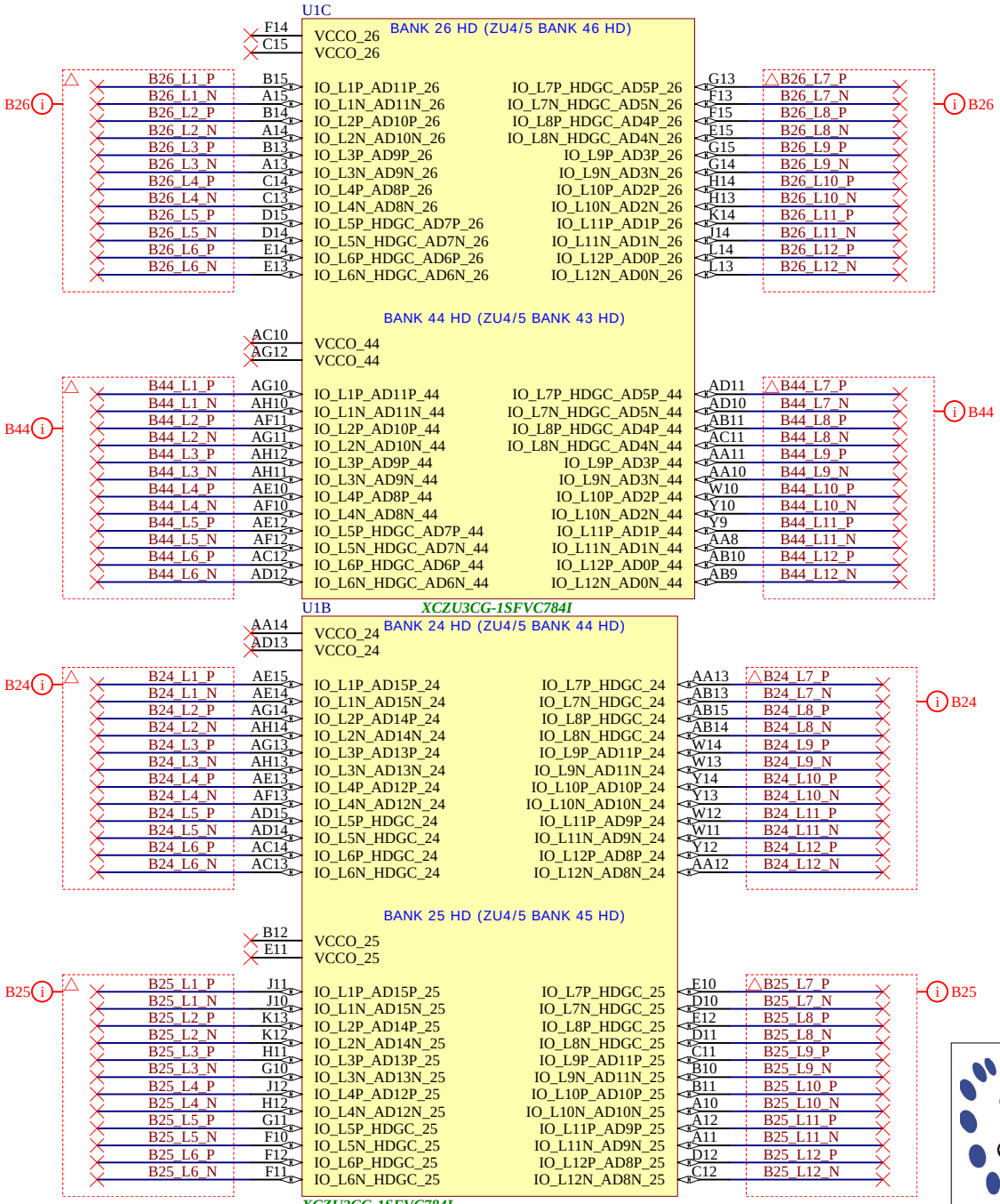
Title: TE0820			
A4	Number: TE0820 03CG-1IA		Rev. 02
Date: 2017-05-02	Copyright: 2015 Trenz Electronic GmbH		Page1 of 21
Filename: TE0820.SchDoc			

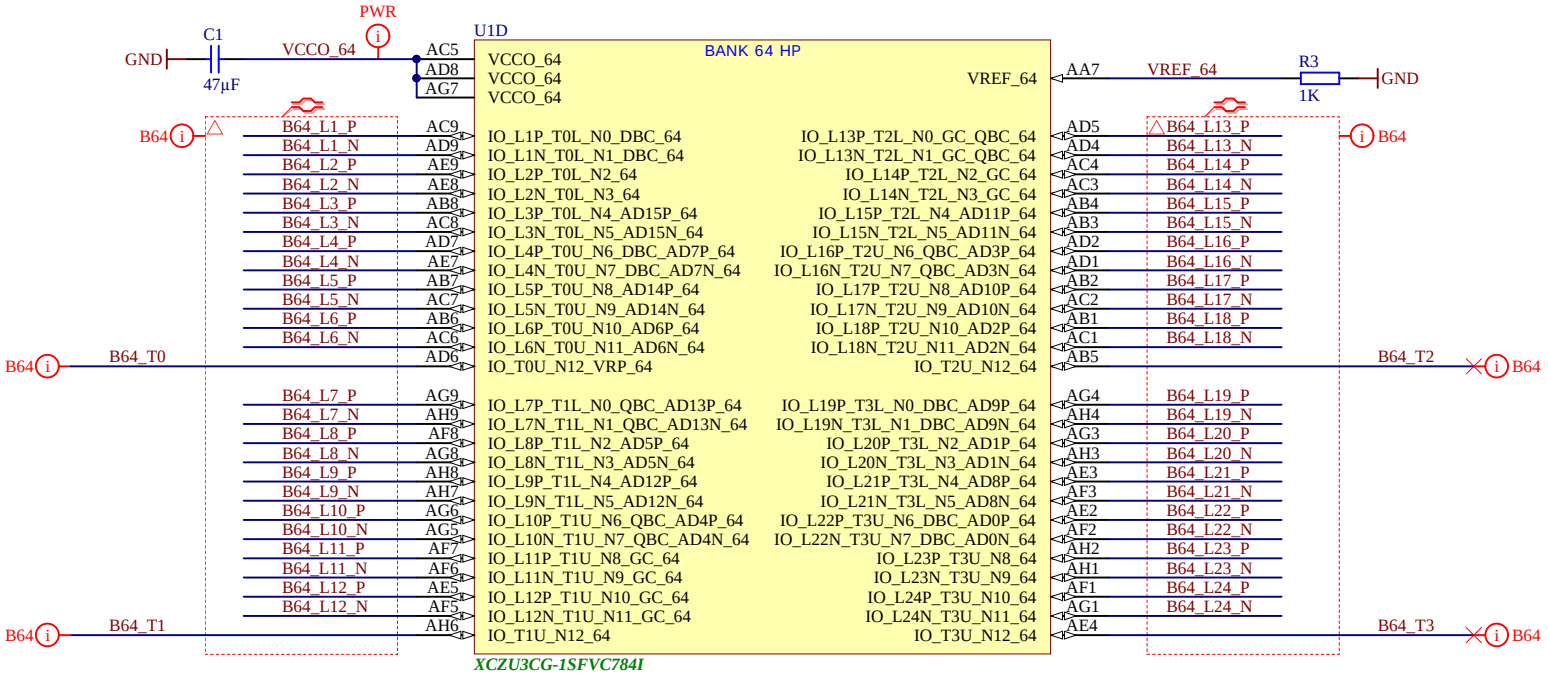


Title: TE0820 - B2B Connectors			
A4	Number: TE0820 03CG-1IA		Rev. 02
Date: 2017-05-02	Copyright: 2015 Trenz Electronic GmbH		Page2 of 21
Filename: B2B-Connectors.SchDoc			

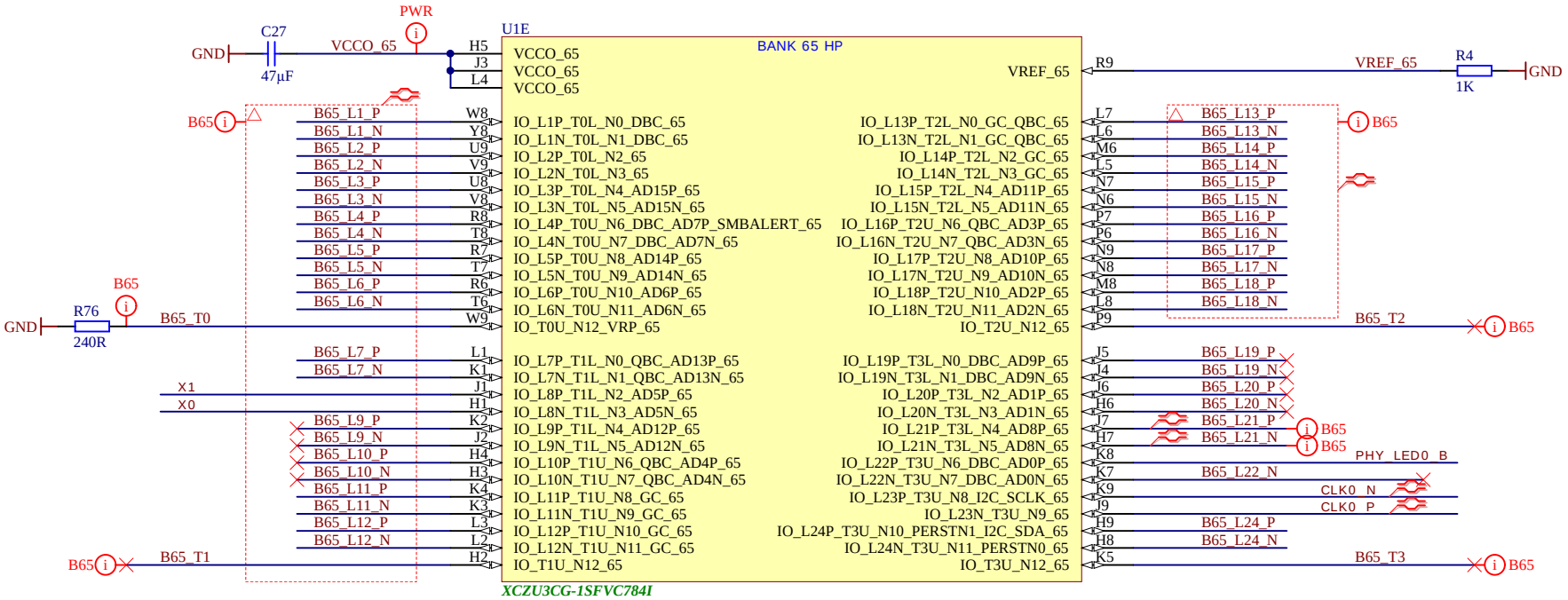


Title: TE0820 - Config			
A4	Number: TE0820 03CG-1IA		Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT		Page3 of 21
Filename: CONFIG.SchDoc			

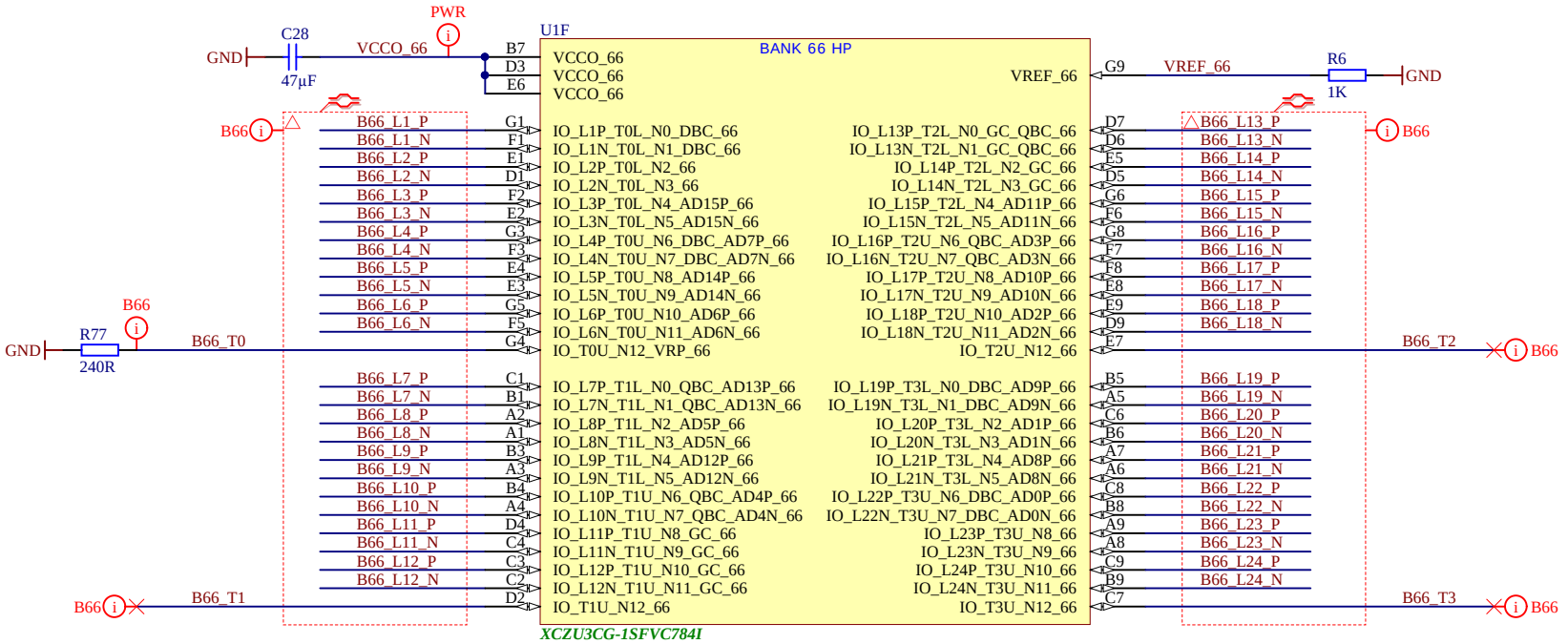

U1C
BANK 26 HD (ZU4/5 BANK 46 HD)
VCCO_26 F14
VCCO_26 C15
IO_L1P_AD11P_26 B15
IO_L1N_AD11N_26 A15
IO_L2P_AD10P_26 B14
IO_L2N_AD10N_26 A14
IO_L3P_AD9P_26 B13
IO_L3N_AD9N_26 A13
IO_L4P_AD8P_26 C14
IO_L4N_AD8N_26 C13
IO_L5P_HDGC_AD7P_26 D15
IO_L5N_HDGC_AD7N_26 D14
IO_L6P_HDGC_AD6P_26 E14
IO_L6N_HDGC_AD6N_26 E13
IO_L7P_HDGC_AD5P_26 G13
IO_L7N_HDGC_AD5N_26 F13
IO_L8P_HDGC_AD4P_26 F15
IO_L8N_HDGC_AD4N_26 E15
IO_L9P_AD3P_26 G15
IO_L9N_AD3N_26 G14
IO_L10P_AD2P_26 H14
IO_L10N_AD2N_26 H13
IO_L11P_AD1P_26 K14
IO_L11N_AD1N_26 J14
IO_L12P_AD0P_26 L14
IO_L12N_AD0N_26 L13
B26_L1_P B26_L1_N B26_L2_P B26_L2_N B26_L3_P B26_L3_N B26_L4_P B26_L4_N B26_L5_P B26_L5_N B26_L6_P B26_L6_N
B26_L7_P B26_L7_N B26_L8_P B26_L8_N B26_L9_P B26_L9_N B26_L10_P B26_L10_N B26_L11_P B26_L11_N B26_L12_P B26_L12_N
B26
B26
BANK 44 HD (ZU4/5 BANK 43 HD)
VCCO_44 AC10
VCCO_44 AG12
IO_L1P_AD11P_44 AG10
IO_L1N_AD11N_44 AH10
IO_L2P_AD10P_44 AF11
IO_L2N_AD10N_44 AG11
IO_L3P_AD9P_44 AH12
IO_L3N_AD9N_44 AH11
IO_L4P_AD8P_44 AE10
IO_L4N_AD8N_44 AF10
IO_L5P_HDGC_AD7P_44 AE12
IO_L5N_HDGC_AD7N_44 AF12
IO_L6P_HDGC_AD6P_44 AC12
IO_L6N_HDGC_AD6N_44 AD12
IO_L7P_HDGC_AD5P_44 AD11
IO_L7N_HDGC_AD5N_44 AD10
IO_L8P_HDGC_AD4P_44 AB11
IO_L8N_HDGC_AD4N_44 AC11
IO_L9P_AD3P_44 AA11
IO_L9N_AD3N_44 AA10
IO_L10P_AD2P_44 W10
IO_L10N_AD2N_44 Y10
IO_L11P_AD1P_44 Y9
IO_L11N_AD1N_44 AA8
IO_L12P_AD0P_44 AB10
IO_L12N_AD0N_44 AB9
B44_L1_P B44_L1_N B44_L2_P B44_L2_N B44_L3_P B44_L3_N B44_L4_P B44_L4_N B44_L5_P B44_L5_N B44_L6_P B44_L6_N
B44_L7_P B44_L7_N B44_L8_P B44_L8_N B44_L9_P B44_L9_N B44_L10_P B44_L10_N B44_L11_P B44_L11_N B44_L12_P B44_L12_N
B44
B44
U1B
XCZU3CG-1SFVC784I
BANK 24 HD (ZU4/5 BANK 44 HD)
VCCO_24 AA14
VCCO_24 AD13
IO_L1P_AD15P_24 AE15
IO_L1N_AD15N_24 AE14
IO_L2P_AD14P_24 AG14
IO_L2N_AD14N_24 AH14
IO_L3P_AD13P_24 AG13
IO_L3N_AD13N_24 AH13
IO_L4P_AD12P_24 AE13
IO_L4N_AD12N_24 AF13
IO_L5P_HDGC_24 AD15
IO_L5N_HDGC_24 AD14
IO_L6P_HDGC_24 AC14
IO_L6N_HDGC_24 AC13
IO_L7P_HDGC_24 AA13
IO_L7N_HDGC_24 AB13
IO_L8P_HDGC_24 AB15
IO_L8N_HDGC_24 AB14
IO_L9P_AD11P_24 W14
IO_L9N_AD11N_24 W13
IO_L10P_AD10P_24 Y14
IO_L10N_AD10N_24 Y13
IO_L11P_AD9P_24 W12
IO_L11N_AD9N_24 W11
IO_L12P_AD8P_24 Y12
IO_L12N_AD8N_24 AA12
B24_L1_P B24_L1_N B24_L2_P B24_L2_N B24_L3_P B24_L3_N B24_L4_P B24_L4_N B24_L5_P B24_L5_N B24_L6_P B24_L6_N
B24_L7_P B24_L7_N B24_L8_P B24_L8_N B24_L9_P B24_L9_N B24_L10_P B24_L10_N B24_L11_P B24_L11_N B24_L12_P B24_L12_N
B24
B24
BANK 25 HD (ZU4/5 BANK 45 HD)
VCCO_25 B12
VCCO_25 E11
IO_L1P_AD15P_25 J11
IO_L1N_AD15N_25 J10
IO_L2P_AD14P_25 K13
IO_L2N_AD14N_25 K12
IO_L3P_AD13P_25 H11
IO_L3N_AD13N_25 G10
IO_L4P_AD12P_25 J12
IO_L4N_AD12N_25 H12
IO_L5P_HDGC_25 G11
IO_L5N_HDGC_25 F10
IO_L6P_HDGC_25 F12
IO_L6N_HDGC_25 F11
IO_L7P_HDGC_25 E10
IO_L7N_HDGC_25 D10
IO_L8P_HDGC_25 E12
IO_L8N_HDGC_25 D11
IO_L9P_AD11P_25 C11
IO_L9N_AD11N_25 B10
IO_L10P_AD10P_25 B11
IO_L10N_AD10N_25 A10
IO_L11P_AD9P_25 A12
IO_L11N_AD9N_25 A11
IO_L12P_AD8P_25 D12
IO_L12N_AD8N_25 C12
B25_L1_P B25_L1_N B25_L2_P B25_L2_N B25_L3_P B25_L3_N B25_L4_P B25_L4_N B25_L5_P B25_L5_N B25_L6_P B25_L6_N
B25_L7_P B25_L7_N B25_L8_P B25_L8_N B25_L9_P B25_L9_N B25_L10_P B25_L10_N B25_L11_P B25_L11_N B25_L12_P B25_L12_N
B25
B25
XCZU3CG-1SFVC784I
trenz electronic
Title: TE0820 - HD Banks
A4
Number: TE0820 03CG-1IA
Rev. 02
Date: 2017-05-02
Copyright: Trenz Electronic GmbH / TT
Page4 of 21
Filename: B_HD.SchDoc



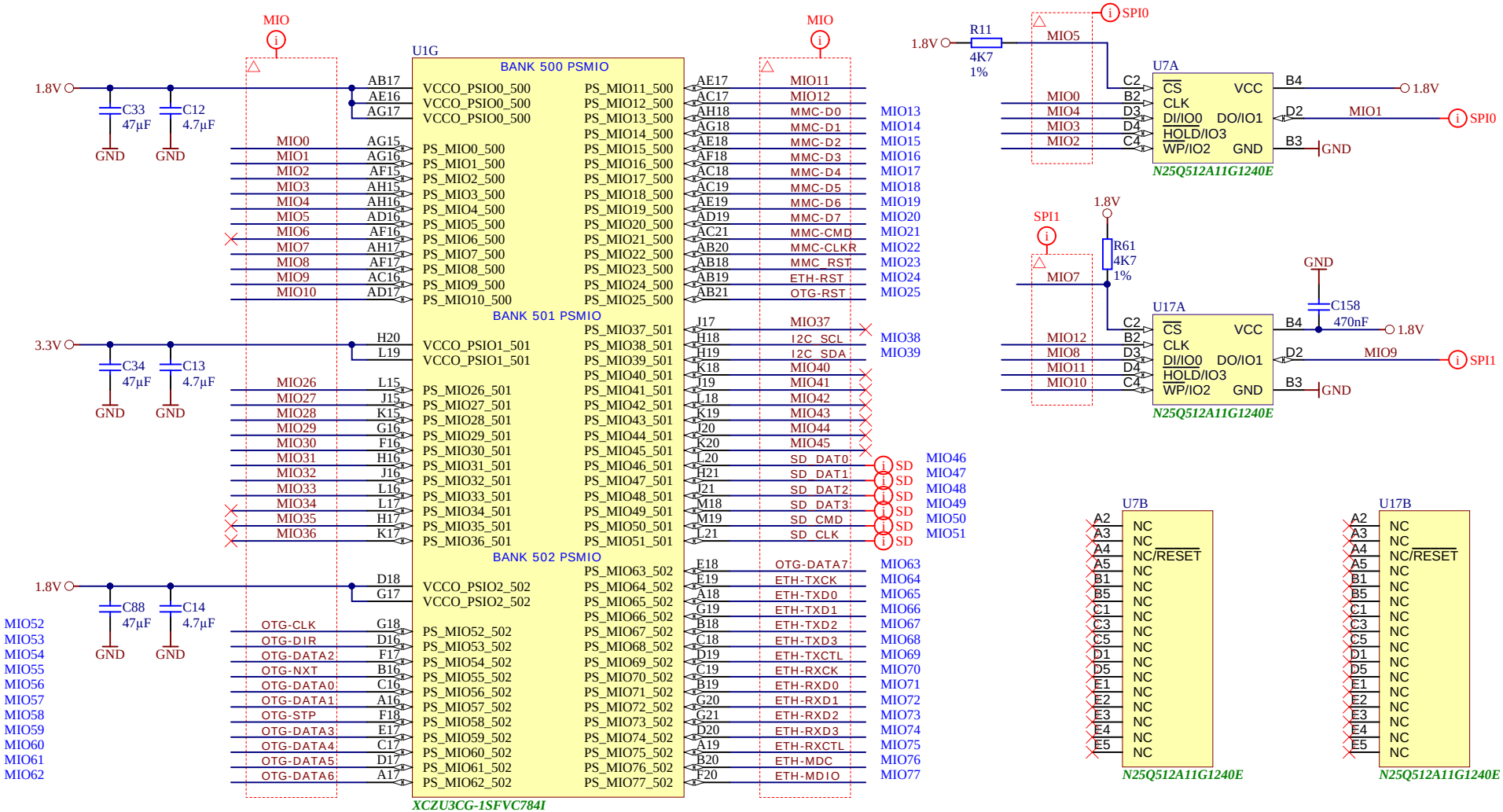
trenz electronic	Title: TE0820 - B64		
A4	Number: TE0820 03CG-1IA		Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT		Page5 of 21
Filename: B64.SchDoc			



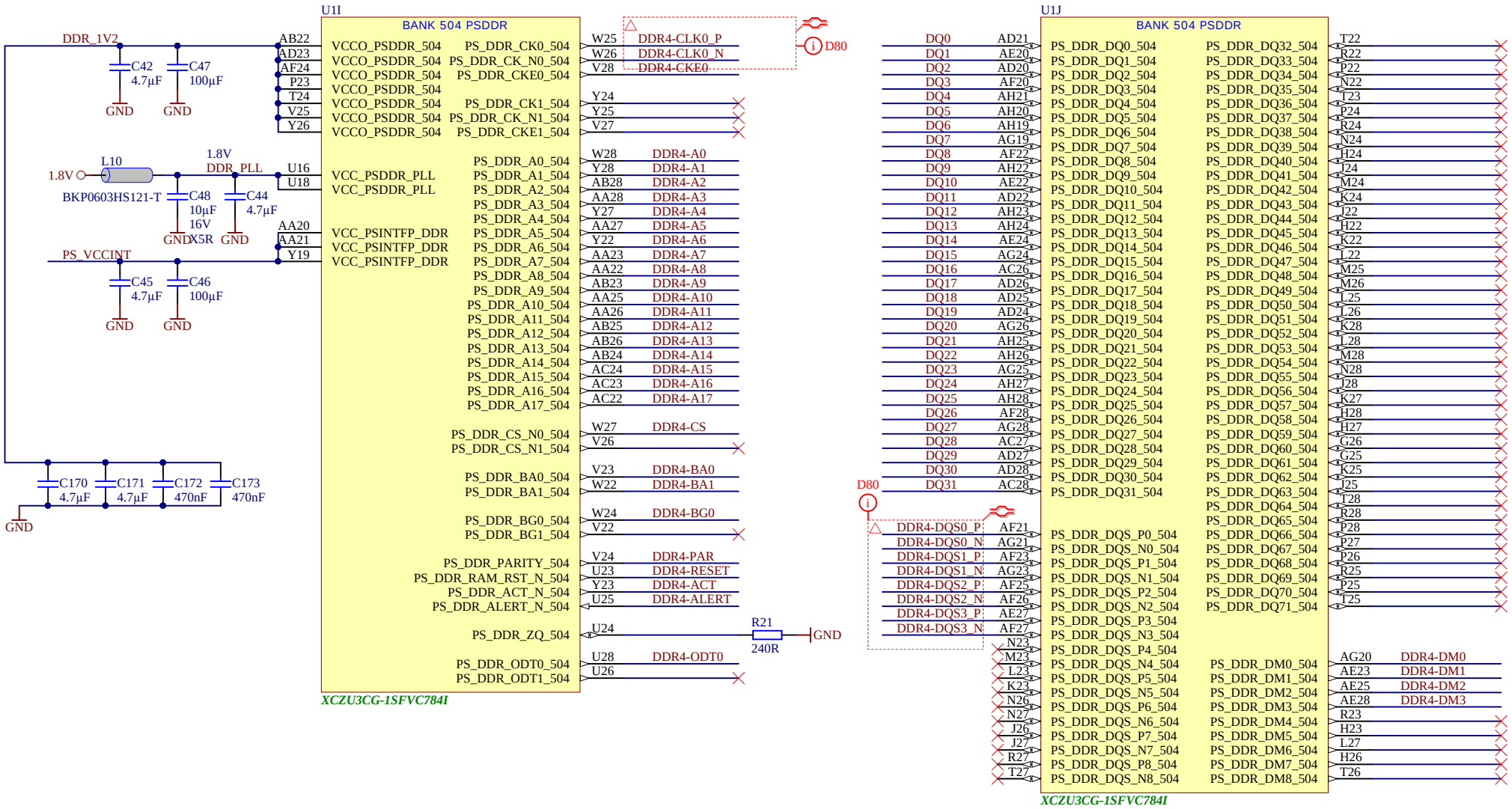
	Title: TE0820 - B65		
A4	Number: TE0820 03CG-1IA		Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT		Page6 of 21
Filename: B65.SchDoc			



trenz electronic	Title: TE0820 - B66		
	A4	Number: TE0820 03CG-1IA	Rev. 02
	Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page7 of 21
	Filename: B66.SchDoc		



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



Title: TE0820 - PS_DDR			
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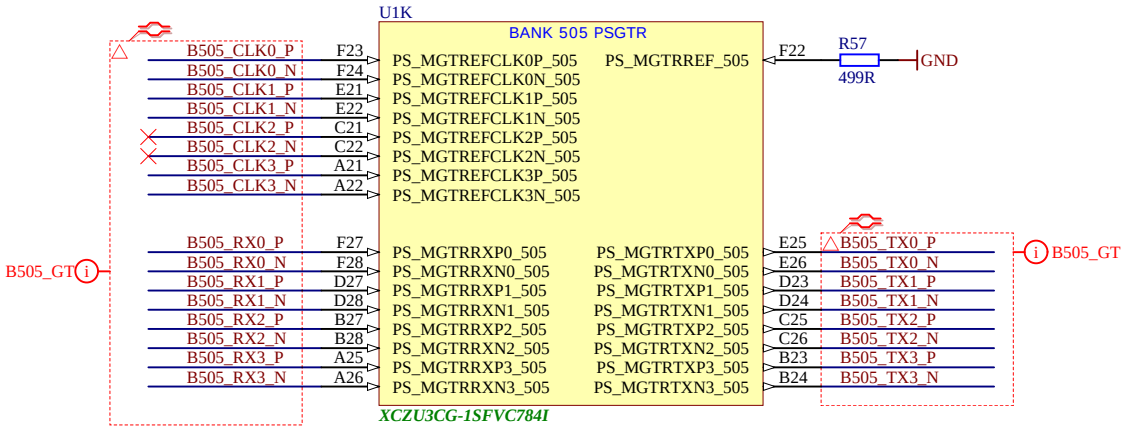
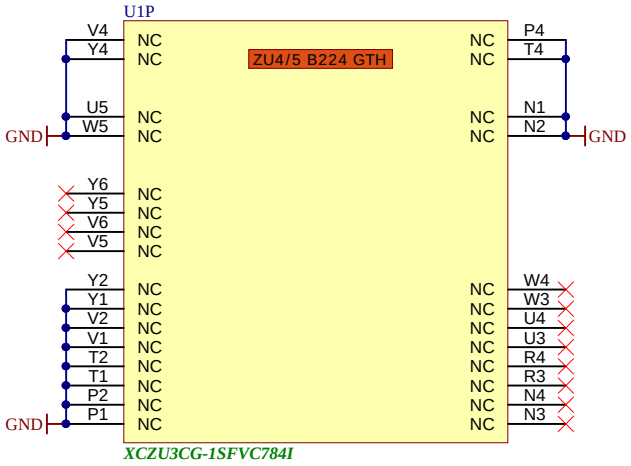
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT		Page9 of 21
Filename: PS_DDR.SchDoc			





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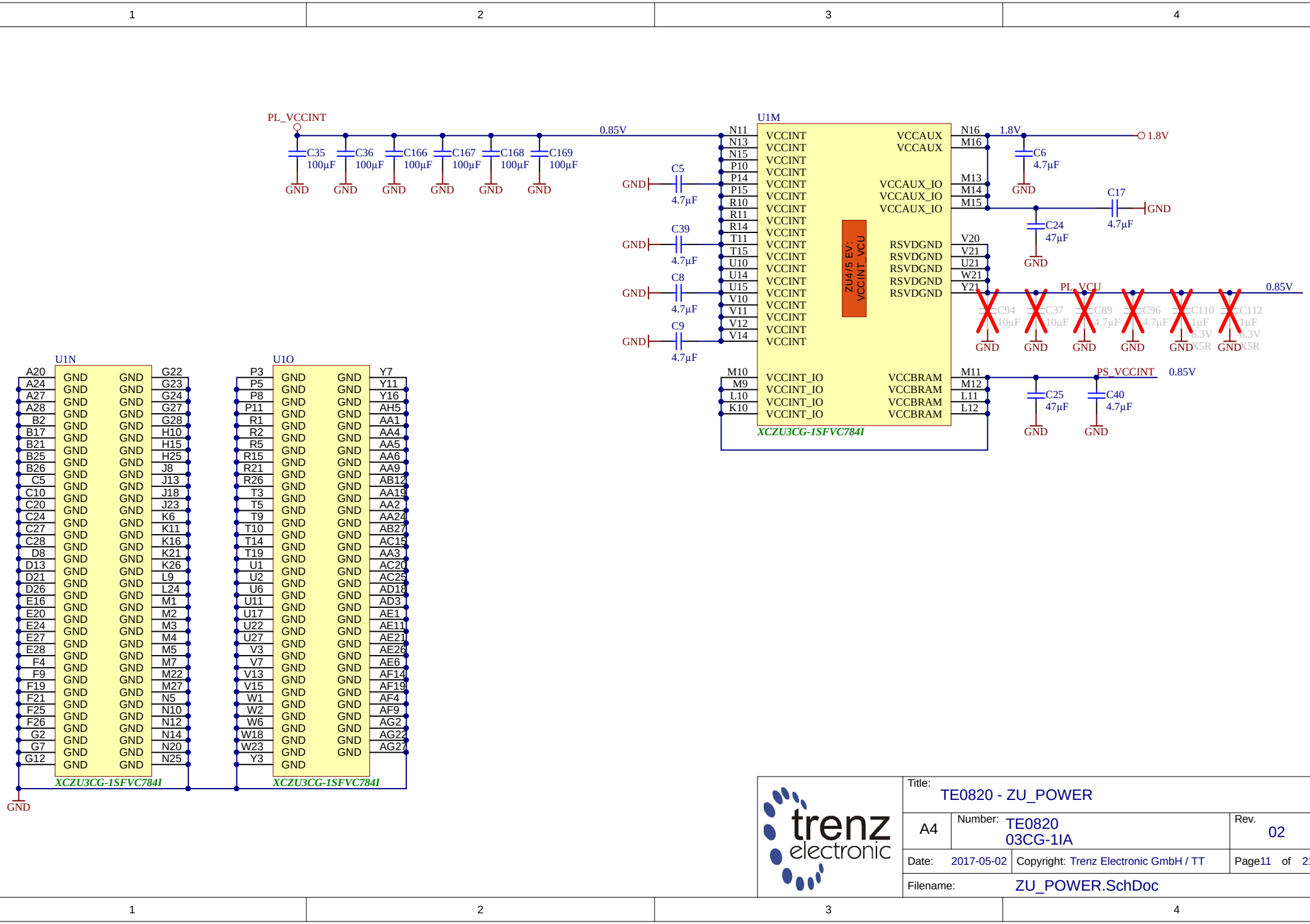
Title: TE0820 - PS_GT		
A4	Number: TE0820 03CG-1IA	Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page10 of 21
Filename: B_PS_GT.SchDoc		


PL_VCCINT
0.85V
C35 100µF
C36 100µF
C166 100µF
C167 100µF
C168 100µF
C169 100µF
GND
U1M
VCCINT
VCCAUX
VCCAUX_IO
RSVDGND
VCCINT_IO
VCCBRAM
ZU4/5 EV: VCCINT_VCU
XCZU3CG-1SFVC784I
C5 4.7µF
C39 4.7µF
C8 4.7µF
C9 4.7µF
1.8V
C6 4.7µF
C17 4.7µF
C24 47µF
PL_VCU
C94 10µF
C37 10µF
C89 4.7µF
C96 4.7µF
C110 1µF 6.3V X5R
C112 1µF 6.3V X5R
PS_VCCINT
C25 47µF
C40 4.7µF
U1N
U1O
Title: TE0820 - ZU_POWER
A4
Number: TE0820 03CG-1IA
Rev. 02
Date: 2017-05-02
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Filename: ZU_POWER.SchDoc
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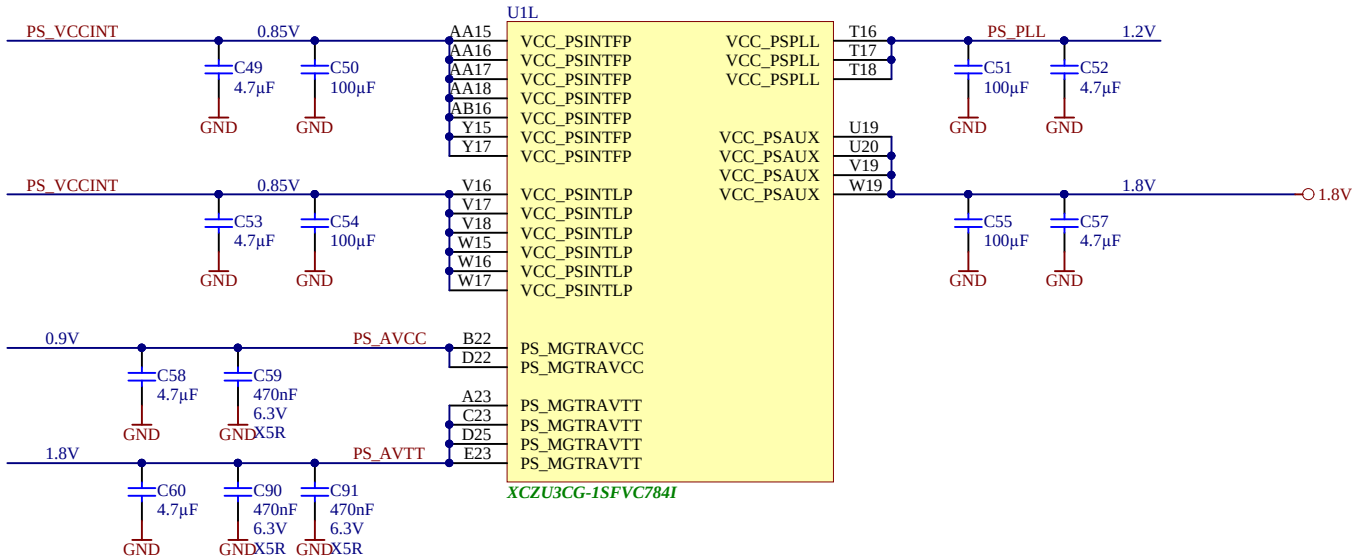
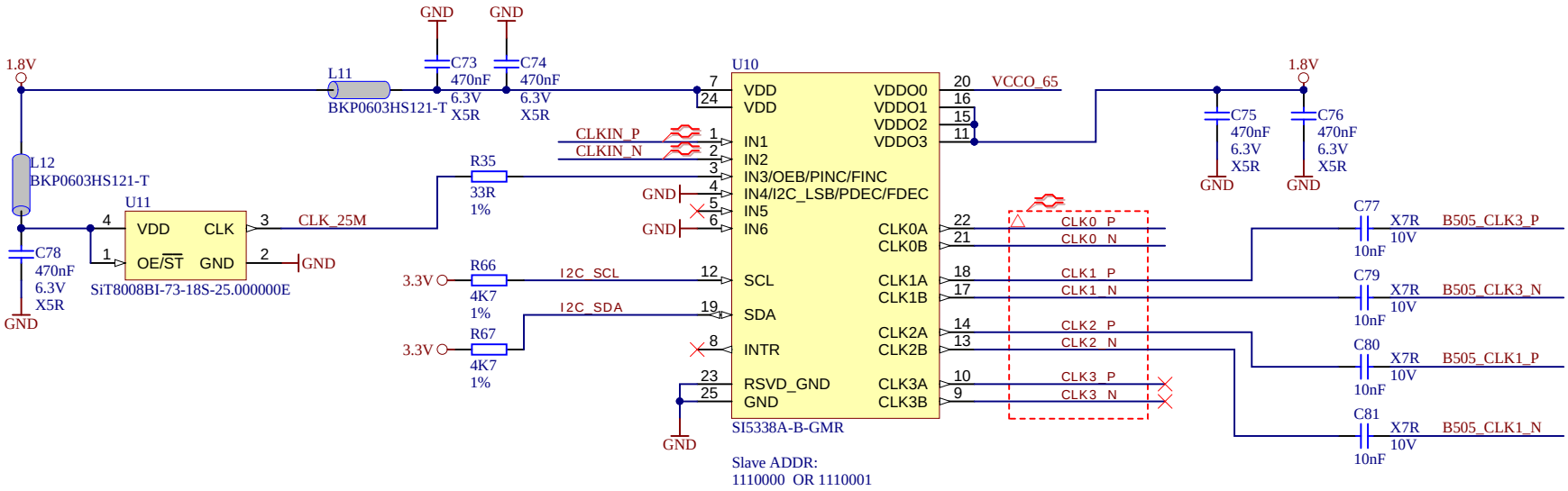
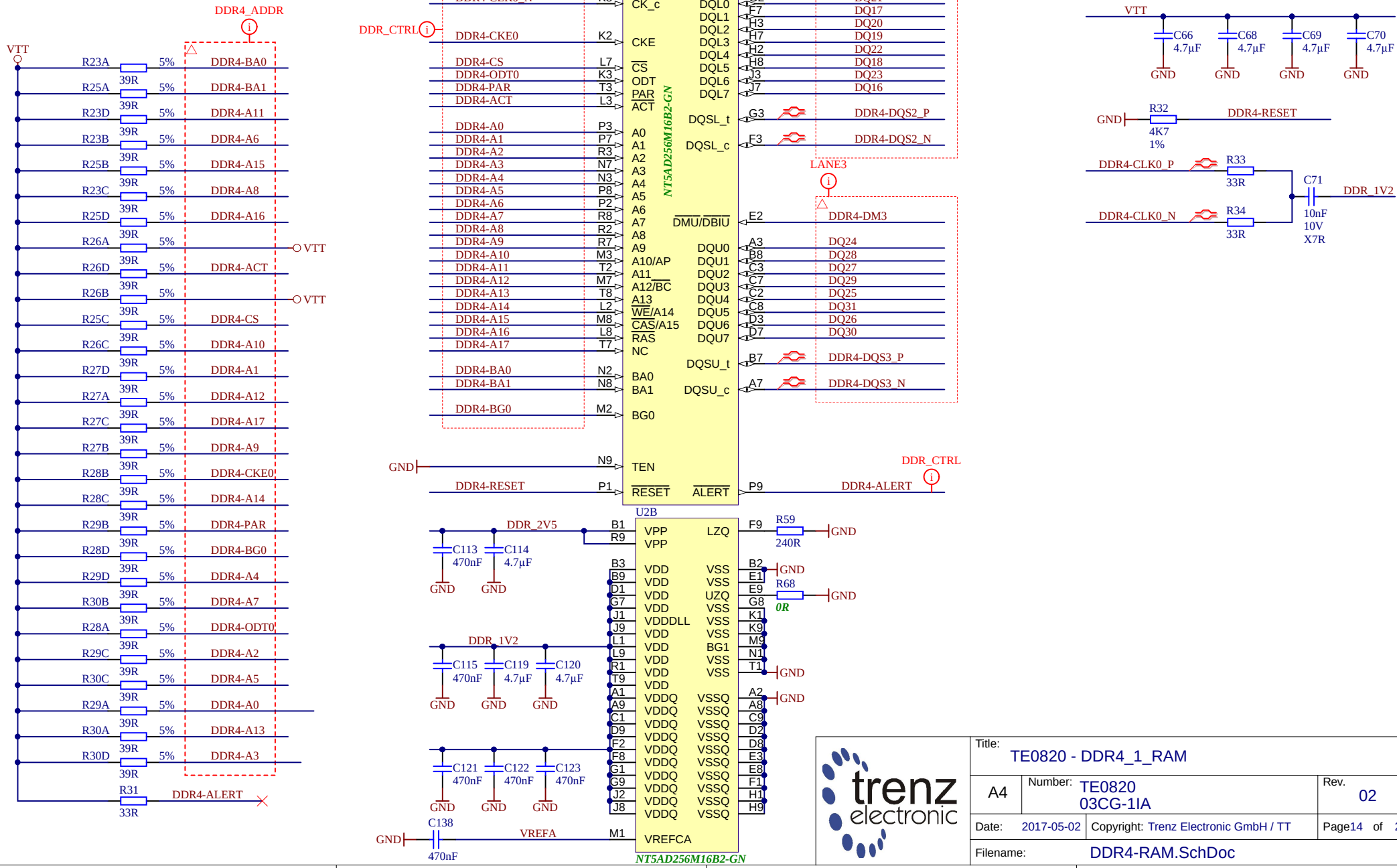


trenz electronic	Title: TE0820 - ZU_PS_POWER		
A4	Number: TE0820 03CG-1IA		Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT		Page12 of 21
Filename: ZU_PS_POWER.SchDoc			



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


DDR4_ADDR
VTT
R23A 39R 5% DDR4-BA0
R25A 39R 5% DDR4-BA1
R23D 39R 5% DDR4-A11
R23B 39R 5% DDR4-A6
R25B 39R 5% DDR4-A15
R23C 39R 5% DDR4-A8
R25D 39R 5% DDR4-A16
R26A 39R 5% VTT
R26D 39R 5% DDR4-ACT
R26B 39R 5% VTT
R25C 39R 5% DDR4-CS
R26C 39R 5% DDR4-A10
R27D 39R 5% DDR4-A1
R27A 39R 5% DDR4-A12
R27C 39R 5% DDR4-A17
R27B 39R 5% DDR4-A9
R28B 39R 5% DDR4-CKE0
R28C 39R 5% DDR4-A14
R29B 39R 5% DDR4-PAR
R28D 39R 5% DDR4-BG0
R29D 39R 5% DDR4-A4
R30B 39R 5% DDR4-A7
R28A 39R 5% DDR4-ODT0
R29C 39R 5% DDR4-A2
R30C 39R 5% DDR4-A5
R29A 39R 5% DDR4-A0
R30A 39R 5% DDR4-A13
R30D 39R 5% DDR4-A3
R31 33R DDR4-ALERT
U2A
DDR4-CLK0_P K7 CK_t
DDR4-CLK0_N K8 CK_c
DDR_CTRL
DDR4-CKE0 K2 CKE
DDR4-CS L7 CS
DDR4-ODT0 K3 ODT
DDR4-PAR T3 PAR
DDR4-ACT L3 ACT
DDR4-A0 P3 A0
DDR4-A1 P7 A1
DDR4-A2 R3 A2
DDR4-A3 N7 A3
DDR4-A4 N3 A4
DDR4-A5 P8 A5
DDR4-A6 P2 A6
DDR4-A7 R8 A7
DDR4-A8 R2 A8
DDR4-A9 R7 A9
DDR4-A10 M3 A10/AP
DDR4-A11 T2 A11
DDR4-A12 M7 A12/BC
DDR4-A13 T8 A13
DDR4-A14 L2 WE/A14
DDR4-A15 M8 CAS/A15
DDR4-A16 L8 RAS
DDR4-A17 T7 NC
DDR4-BA0 N2 BA0
DDR4-BA1 N8 BA1
DDR4-BG0 M2 BG0
GND N9 TEN
DDR4-RESET P1 RESET
DML/DBIL E7 DDR4-DM2
DQL0 G2 DQ21
DQL1 E7 DQ17
DQL2 H3 DQ20
DQL3 H7 DQ19
DQL4 H2 DQ22
DQL5 H8 DQ18
DQL6 J3 DQ23
DQL7 J7 DQ16
DQSL_t G3 DDR4-DQS2_P
DQSL_c F3 DDR4-DQS2_N
DMU/DBIU E2 DDR4-DM3
DQU0 A3 DQ24
DQU1 B8 DQ28
DQU2 C3 DQ27
DQU3 C7 DQ29
DQU4 C2 DQ25
DQU5 C8 DQ31
DQU6 D3 DQ26
DQU7 D7 DQ30
DQSU_t B7 DDR4-DQS3_P
DQSU_c A7 DDR4-DQS3_N
ALERT P9 DDR4-ALERT
NT5AD256M16B2-GN
LANE2
LANE3
DDR_CTRL
U2B
DDR_2V5
B1 R9 VPP
C113 470nF
C114 4.7µF
GND
B3 B9 D1 G7 J1 J9 L1 L9 R1 T9 VDD
VDDLL
VDDQ A1 A9 C1 D9 F2 F8 G1 G9 J2 J8
VSS B2 E1 E9 G8 K1 K9 M9 N1 T1 A2 A8 C9 D2 D8 E3 E8 F1 H1 H9
VSSQ
LZQ F9 R59 240R
UZQ G8 R68 0R
BG1
DDR_1V2
C115 470nF
C119 4.7µF
C120 4.7µF
C121 470nF
C122 470nF
C123 470nF
C138 470nF
VREFA M1 VREFCA
NT5AD256M16B2-GN
VTT
C66 4.7µF
C68 4.7µF
C69 4.7µF
C70 4.7µF
R32 4K7 1%
DDR4-RESET
DDR4-CLK0_P
DDR4-CLK0_N
R33 33R
R34 33R
C71 10nF 10V X7R
DDR_1V2
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Title: TE0820 - DDR4_1_RAM
A4
Number: TE0820 03CG-1IA
Rev. 02
Date: 2017-05-02
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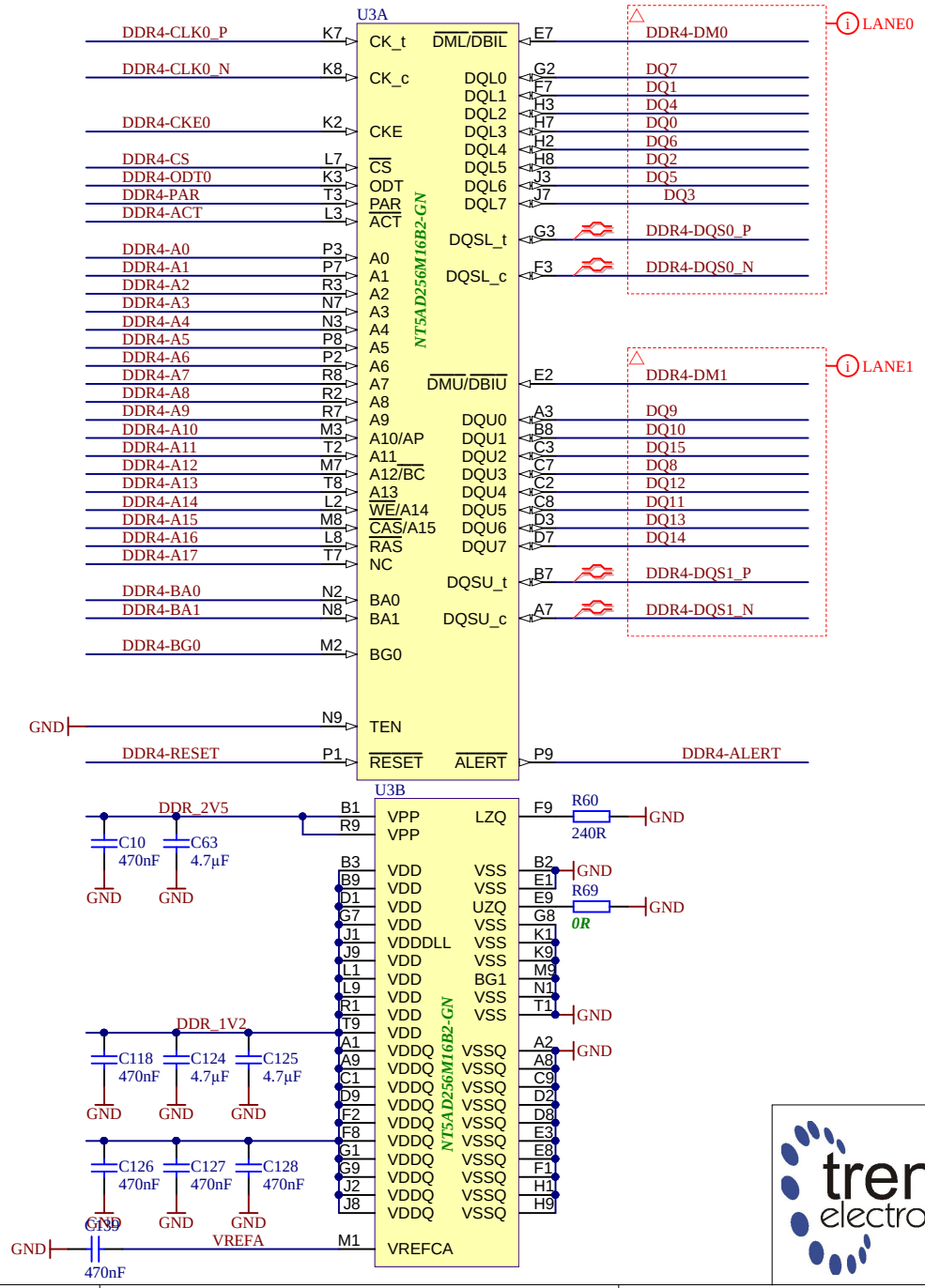
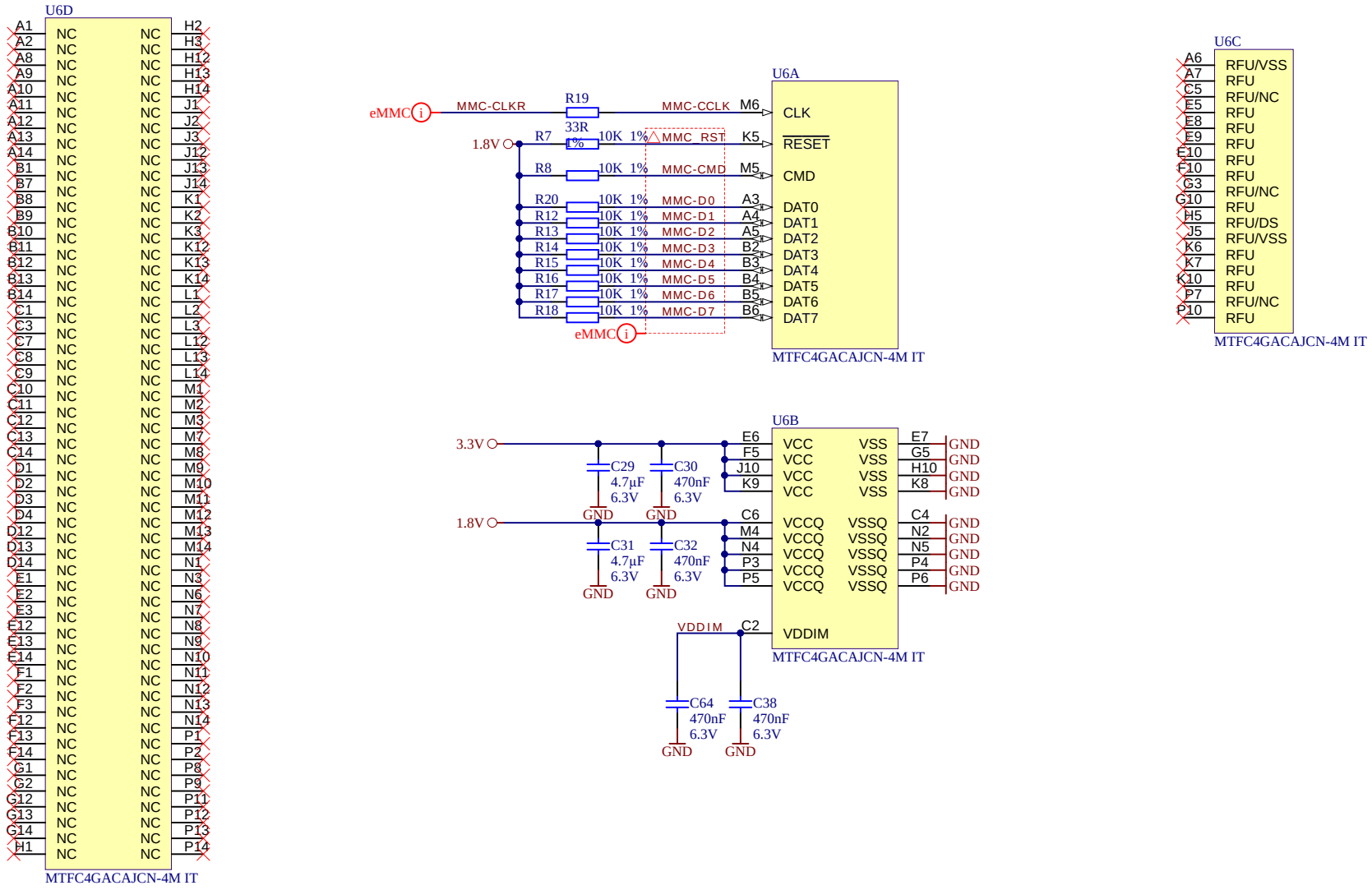
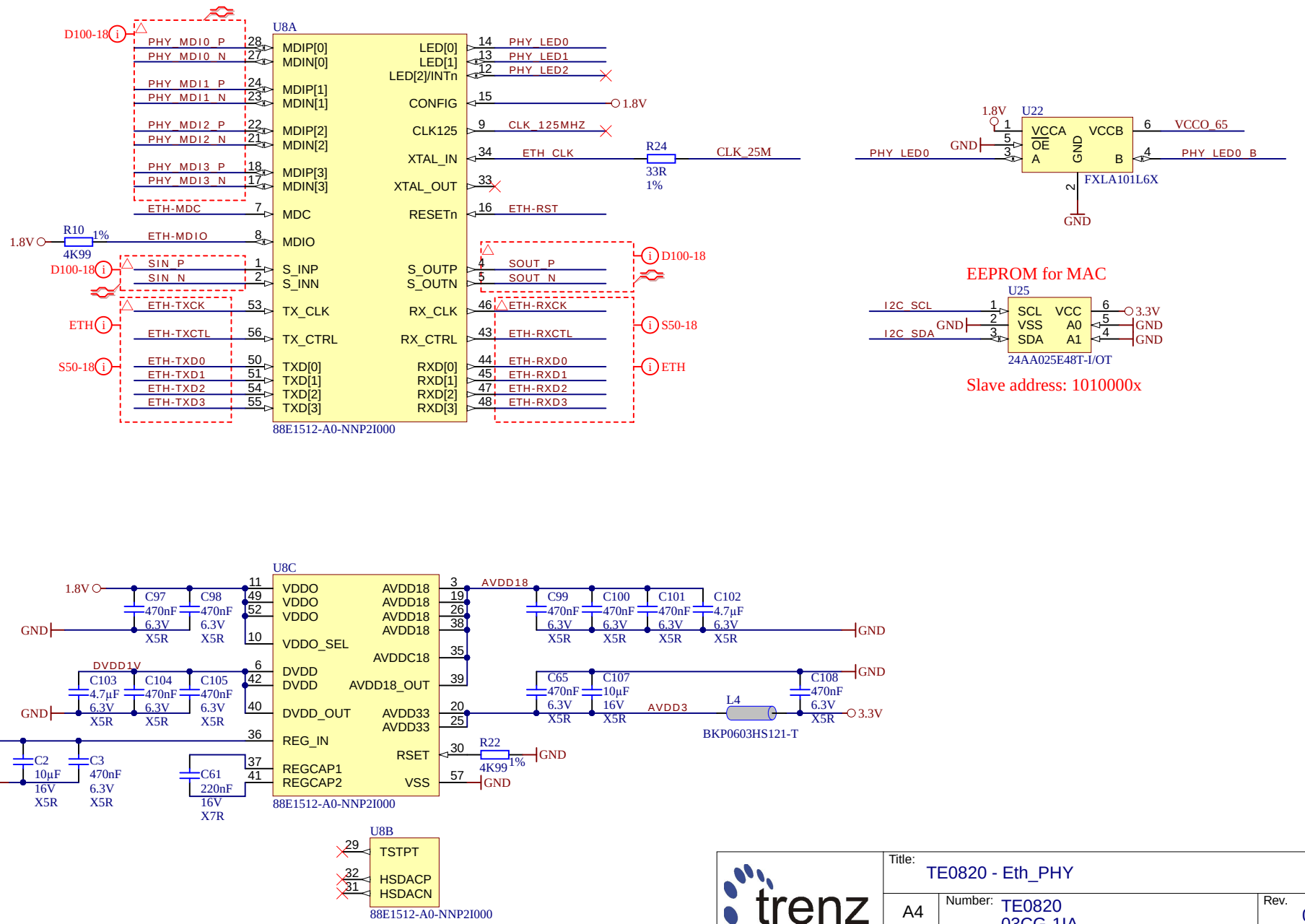
Filename: DDR4-RAM.SchDoc



trenz electronic	Title: TE0820 - DDR4_2_RAM		
	A4	Number: TE0820 03CG-1IA	Rev. 02
	Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page15 of 21
	Filename: DDR4-RAM_2.SchDoc		



Title: TE0820 - eMMC			
A4	Number: TE0820 03CG-1IA		Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT		Page16 of 21
Filename: eMMC.SchDoc			


U8A
D100-18
PHY_MDI0_P
PHY_MDI0_N
PHY_MDI1_P
PHY_MDI1_N
PHY_MDI2_P
PHY_MDI2_N
PHY_MDI3_P
PHY_MDI3_N
MDIP[0]
MDIN[0]
MDIP[1]
MDIN[1]
MDIP[2]
MDIN[2]
MDIP[3]
MDIN[3]
ETH-MDC
MDC
1.8V
R10
1%
4K99
ETH-MDIO
MDIO
D100-18
SIN_P
SIN_N
S_INP
S_INN
ETH
ETH-TXCK
ETH-TXCTL
TX_CLK
TX_CTRL
S50-18
ETH-TXD0
ETH-TXD1
ETH-TXD2
ETH-TXD3
TXD[0]
TXD[1]
TXD[2]
TXD[3]
LED[0]
LED[1]
LED[2]/INTn
CONFIG
CLK125
XTAL_IN
XTAL_OUT
RESETn
S_OUTP
S_OUTN
RX_CLK
RX_CTRL
RXD[0]
RXD[1]
RXD[2]
RXD[3]
PHY_LED0
PHY_LED1
PHY_LED2
1.8V
CLK_125MHZ
ETH_CLK
R24
33R
1%
CLK_25M
ETH-RST
SOUT_P
SOUT_N
D100-18
ETH-RXCK
S50-18
ETH-RXCTL
ETH-RXD0
ETH-RXD1
ETH-RXD2
ETH-RXD3
ETH
88E1512-A0-NNP2I000
U22
1.8V
GND
PHY_LED0
VCCA
OE
A
GND
VCCB
B
VCCO_65
PHY_LED0_B
FXLA101L6X
GND
EEPROM for MAC
U25
I2C_SCL
GND
I2C_SDA
SCL
VSS
SDA
VCC
A0
A1
3.3V
GND
GND
24AA025E48T-I/OT
Slave address: 1010000x
U8C
1.8V
GND
C97
470nF
6.3V
X5R
C98
470nF
6.3V
X5R
VDDO
VDDO
VDDO
VDDO_SEL
DVDD1V
C103
4.7µF
6.3V
X5R
C104
470nF
6.3V
X5R
C105
470nF
6.3V
X5R
DVDD
DVDD
DVDD_OUT
3.3V
C2
10µF
16V
X5R
C3
470nF
6.3V
X5R
GND
C61
220nF
16V
X7R
REG_IN
REGCAP1
REGCAP2
AVDD18
AVDD18
AVDD18
AVDD18
AVDDC18
AVDD18_OUT
AVDD33
AVDD33
RSET
VSS
AVDD18
C99
470nF
6.3V
X5R
C100
470nF
6.3V
X5R
C101
470nF
6.3V
X5R
C102
4.7µF
6.3V
X5R
GND
C65
470nF
6.3V
X5R
C107
10µF
16V
X5R
AVDD3
L4
BKP0603HS121-T
C108
470nF
6.3V
X5R
3.3V
GND
R22
4K99
1%
GND
GND
88E1512-A0-NNP2I000
U8B
TSTPT
HSDACP
HSDACN
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trenz electronic
Title: TE0820 - Eth_PHY
A4
Number: TE0820 03CG-1IA
Rev. 02
Date: 2017-05-02
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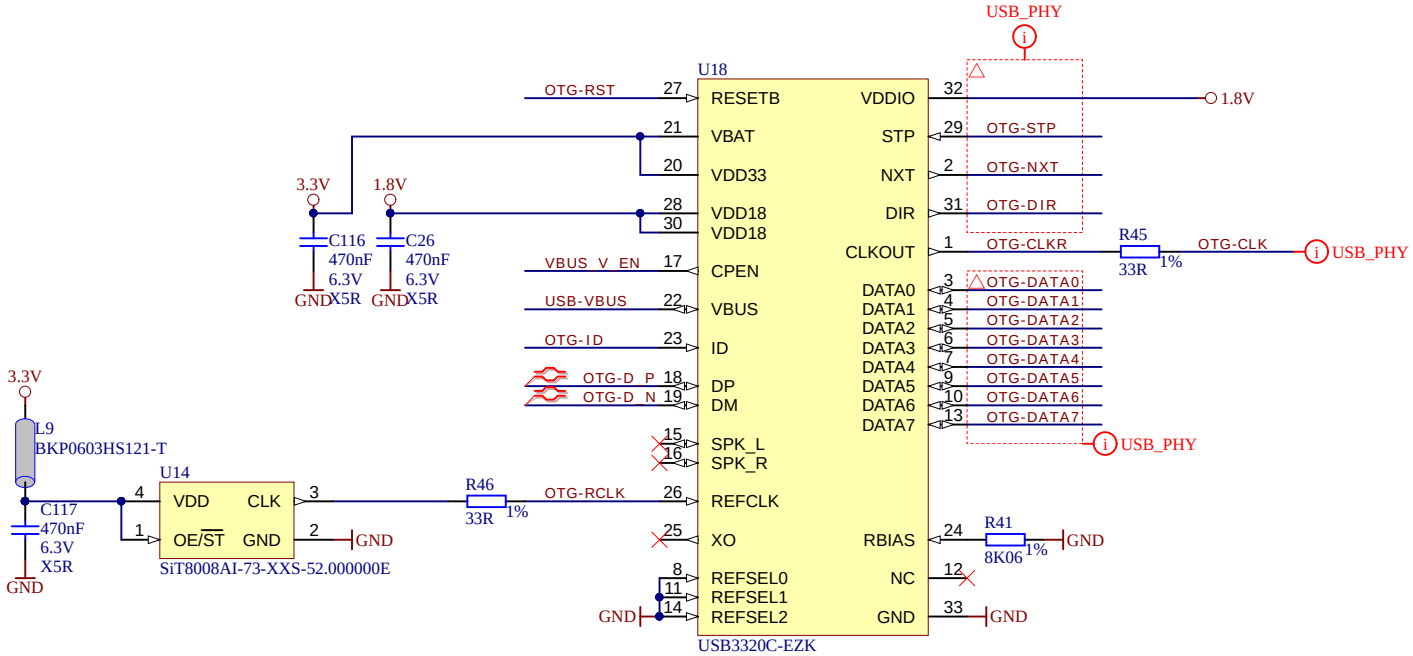
Filename: ETH-PHY.SchDoc



trenz electronic	Title: TE0820 - USB_PHY		
A4	Number: TE0820 03CG-1IA		Rev. 02
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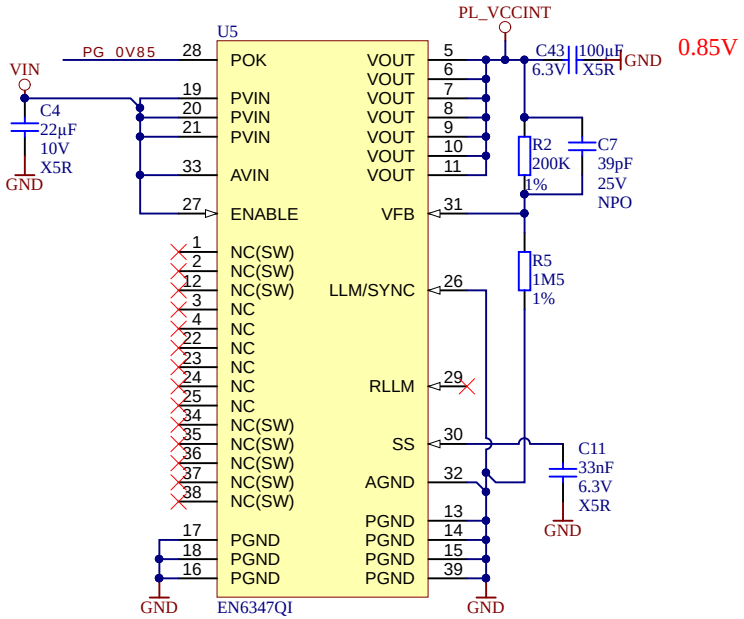
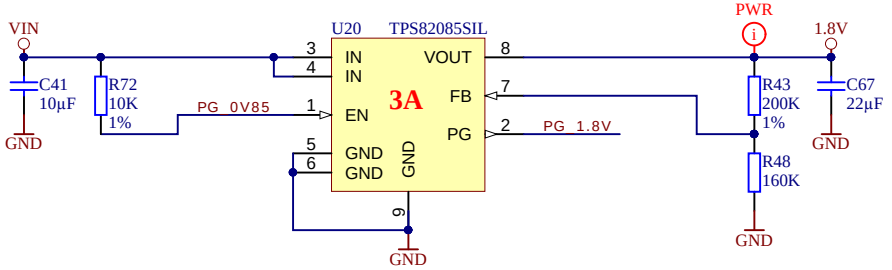
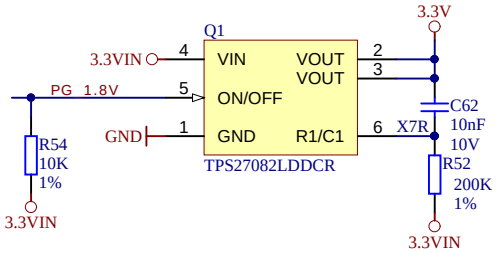
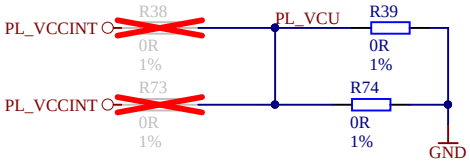
Filename: USB-PHY.SchDoc			

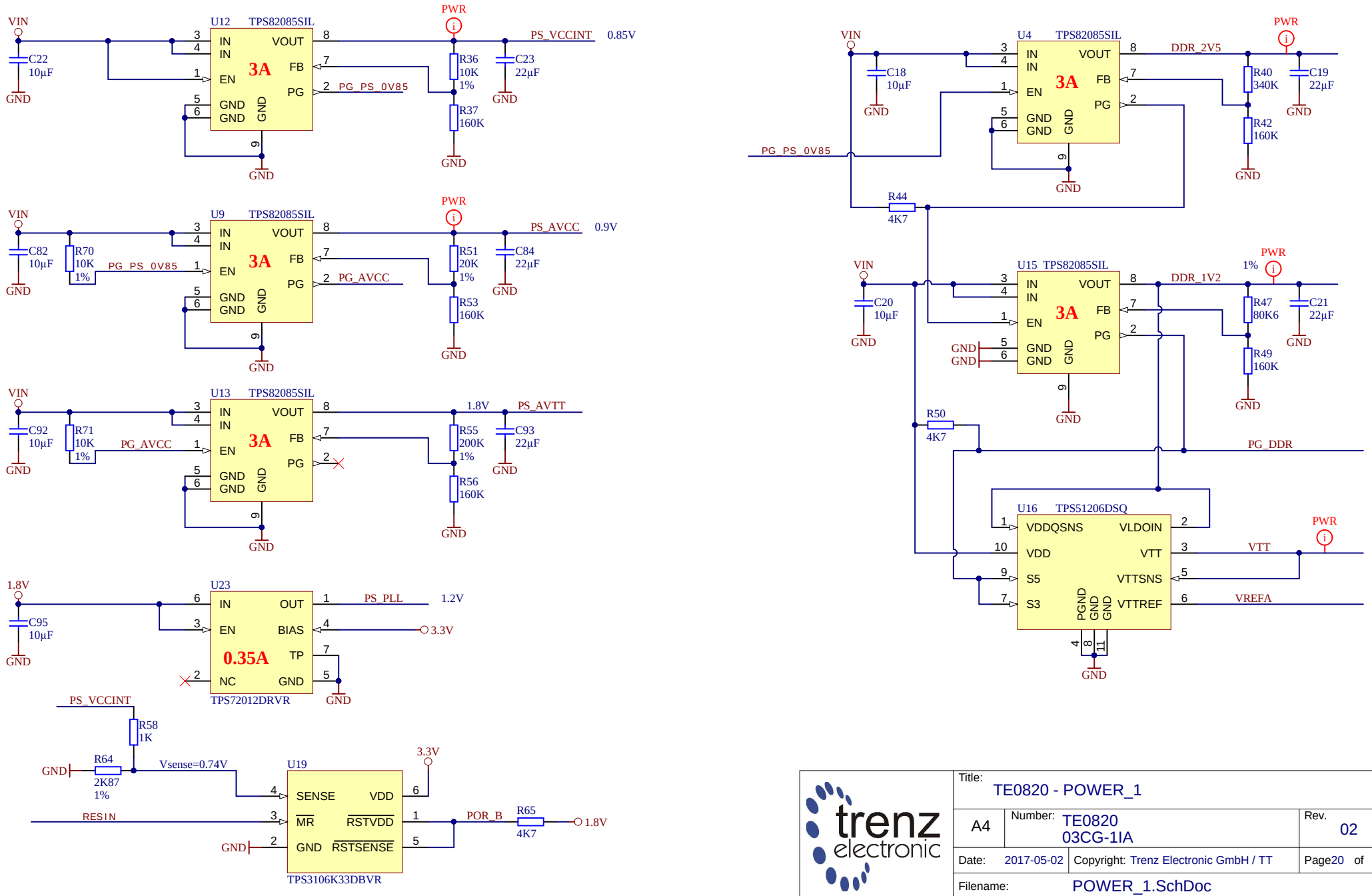








trenz electronic	Title: TE0820 - POWER		
	A4	Number: TE0820 03CG-1IA	Rev. 02
	Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT	Page19 of 21
	Filename: POWER.SchDoc		



Title: TE0820 - POWER_1			
A4	Number: TE0820 03CG-1IA		Rev. 02
Date: 2017-05-02	Copyright: Trenz Electronic GmbH / TT		Page20 of 21
Filename: POWER_1.SchDoc			

CHANGES REV01 to REV02

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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

Title: TE0820 - Revision Changes		
A4	Number: TE0820 03CG-1IA	Rev. 02
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