U_FPGA
FPGA.SchDoc

U_SODIMM
SODIMM.SchDoc

U_CLOCK
CLOCK.SchDoc

U_POWER
POWER.SchDoc

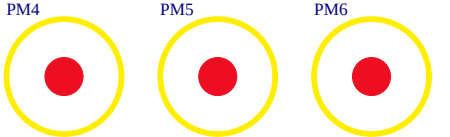
U_CONN
CONN.SchDoc

U_CPLD
CPLD.SchDoc

PM1 PM2 PM3

FIDU-DOT - small FIDU-DOT - small FIDU-DOT - small

PM4 PM5 PM6



FIDU-DOT - small FIDU-DOT - small FIDU-DOT - small

Serial
Serial
Serialnumber 6,3 x 6.3mm

LOGO1
TE Logo PRINT Layer
LOGO PRINT

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Title: TEC0330 - Overview			
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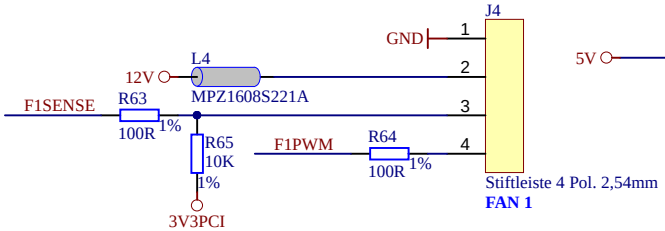
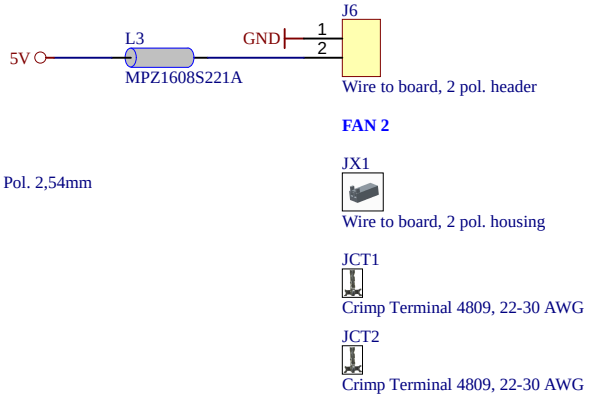
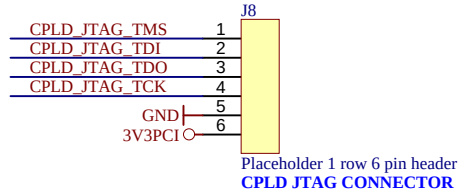
U_FMC
FMC.SchDoc

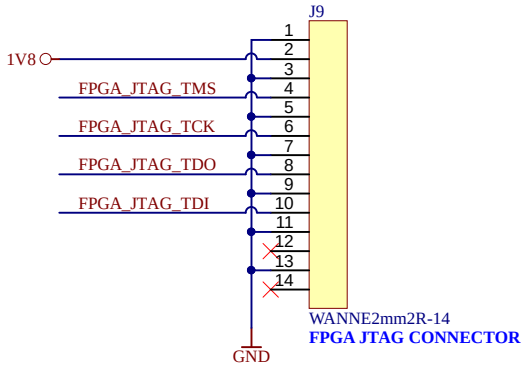
U_PCIE_CONN
PCIE_CONN.SchDoc

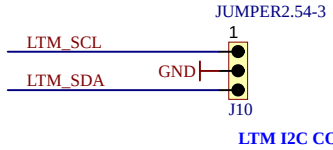
U_MLVDS_CONN
MLVDS_CONN.SchDoc











trenz electronic	Title: TEC0330 - CONNECTORS		
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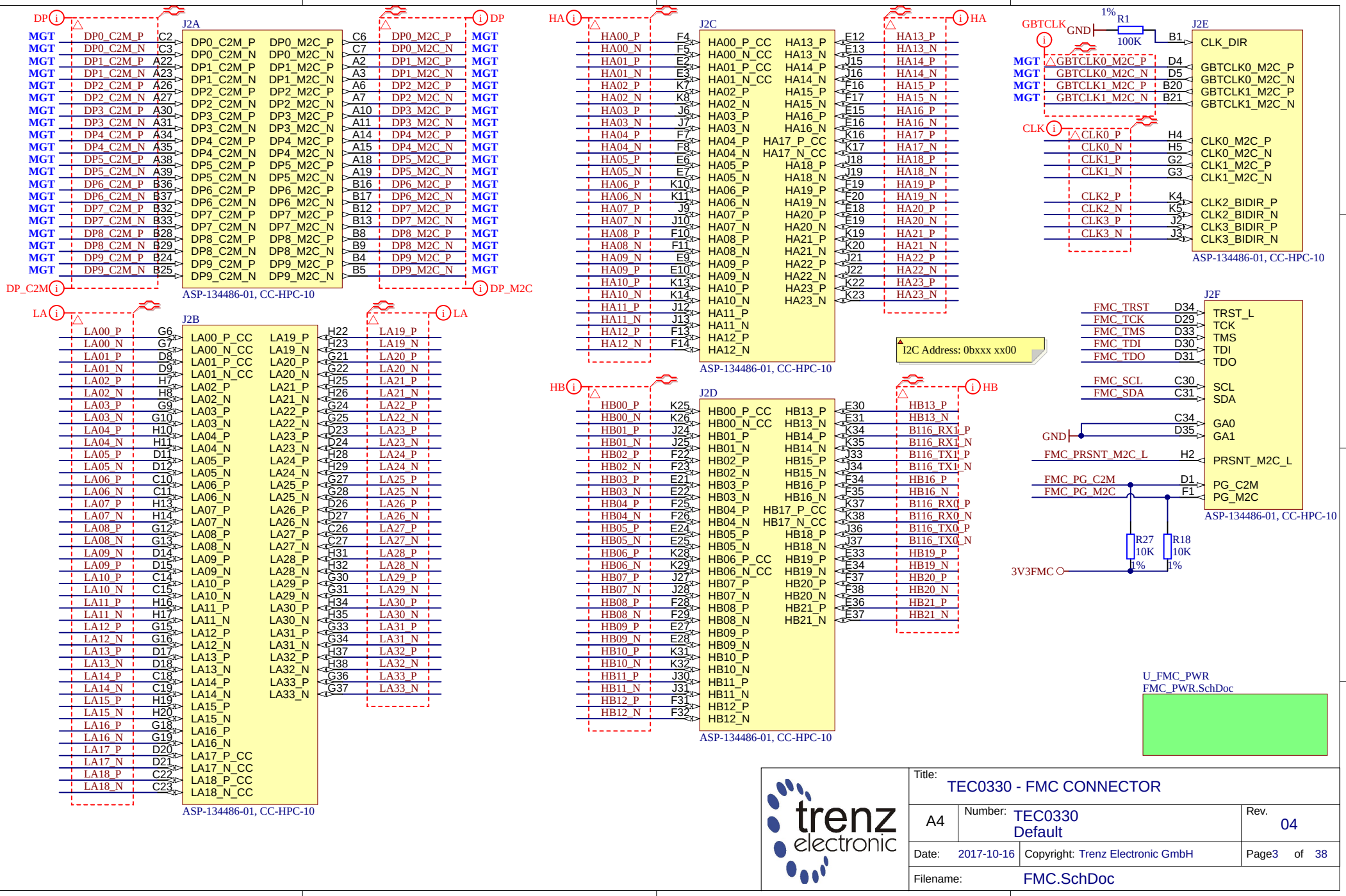
Filename: CONN.SchDoc			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DP0_C2M_N C3
DP1_C2M_P A22
DP1_C2M_N A23
DP2_C2M_P A26
DP2_C2M_N A27
DP3_C2M_P A30
DP3_C2M_N A31
DP4_C2M_P A34
DP4_C2M_N A35
DP5_C2M_P A38
DP5_C2M_N A39
DP6_C2M_P B36
DP6_C2M_N B37
DP7_C2M_P B32
DP7_C2M_N B33
DP8_C2M_P B28
DP8_C2M_N B29
DP9_C2M_P B24
DP9_C2M_N B25
DP_C2M
DP0_C2M_P DP0_M2C_P
DP0_C2M_N DP0_M2C_N
DP1_C2M_P DP1_M2C_P
DP1_C2M_N DP1_M2C_N
DP2_C2M_P DP2_M2C_P
DP2_C2M_N DP2_M2C_N
DP3_C2M_P DP3_M2C_P
DP3_C2M_N DP3_M2C_N
DP4_C2M_P DP4_M2C_P
DP4_C2M_N DP4_M2C_N
DP5_C2M_P DP5_M2C_P
DP5_C2M_N DP5_M2C_N
DP6_C2M_P DP6_M2C_P
DP6_C2M_N DP6_M2C_N
DP7_C2M_P DP7_M2C_P
DP7_C2M_N DP7_M2C_N
DP8_C2M_P DP8_M2C_P
DP8_C2M_N DP8_M2C_N
DP9_C2M_P DP9_M2C_P
DP9_C2M_N DP9_M2C_N
C6 DP0_M2C_P
C7 DP0_M2C_N
A2 DP1_M2C_P
A3 DP1_M2C_N
A6 DP2_M2C_P
A7 DP2_M2C_N
A10 DP3_M2C_P
A11 DP3_M2C_N
A14 DP4_M2C_P
A15 DP4_M2C_N
A18 DP5_M2C_P
A19 DP5_M2C_N
B16 DP6_M2C_P
B17 DP6_M2C_N
B12 DP7_M2C_P
B13 DP7_M2C_N
B8 DP8_M2C_P
B9 DP8_M2C_N
B4 DP9_M2C_P
B5 DP9_M2C_N
DP
DP_M2C
MGT
ASP-134486-01, CC-HPC-10
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LA13_N D18
LA14_P C18
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LA15_N H20
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LA16_N G19
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LA17_N D21
LA18_P C22
LA18_N C23
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LA00_N_CC LA19_N
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C26 LA27_P
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HB05_N HB18_N
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HB08_N HB21_N
HB09_P
HB09_N
HB10_P
HB10_N
HB11_P
HB11_N
HB12_P
HB12_N
E30 HB13_P
E31 HB13_N
K34 B116_RX1_P
K35 B116_RX1_N
J33 B116_TX1_P
J34 B116_TX1_N
F34 HB16_P
F35 HB16_N
K37 B116_RX0_P
K38 B116_RX0_N
J36 B116_TX0_P
J37 B116_TX0_N
E33 HB19_P
E34 HB19_N
F37 HB20_P
F38 HB20_N
E36 HB21_P
E37 HB21_N
I2C Address: 0bxxx xx00
GBTCLK
GND
1%
R1
100K
J2E
B1 CLK_DIR
GBTCLK0_M2C_P D4
GBTCLK0_M2C_N D5
GBTCLK1_M2C_P B20
GBTCLK1_M2C_N B21
CLK
CLK0_P H4
CLK0_N H5
CLK1_P G2
CLK1_N G3
CLK2_P K4
CLK2_N K5
CLK3_P J2
CLK3_N J3
GBTCLK0_M2C_P
GBTCLK0_M2C_N
GBTCLK1_M2C_P
GBTCLK1_M2C_N
CLK0_M2C_P
CLK0_M2C_N
CLK1_M2C_P
CLK1_M2C_N
CLK2_BIDIR_P
CLK2_BIDIR_N
CLK3_BIDIR_P
CLK3_BIDIR_N
J2F
FMC_TRST D34
FMC_TCK D29
FMC_TMS D33
FMC_TDI D30
FMC_TDO D31
FMC_SCL C30
FMC_SDA C31
C34
D35
FMC_PRSNT_M2C_L H2
FMC_PG_C2M D1
FMC_PG_M2C F1
TRST_L
TCK
TMS
TDI
TDO
SCL
SDA
GA0
GA1
PRSNT_M2C_L
PG_C2M
PG_M2C
R27
10K
1%
R18
10K
1%
3V3FMC
U_FMC_PWR
FMC_PWR.SchDoc
trenz electronic
Title: TEC0330 - FMC CONNECTOR
A4
Number: TEC0330 Default
Rev. 04
Date: 2017-10-16
Copyright: Trenz Electronic GmbH
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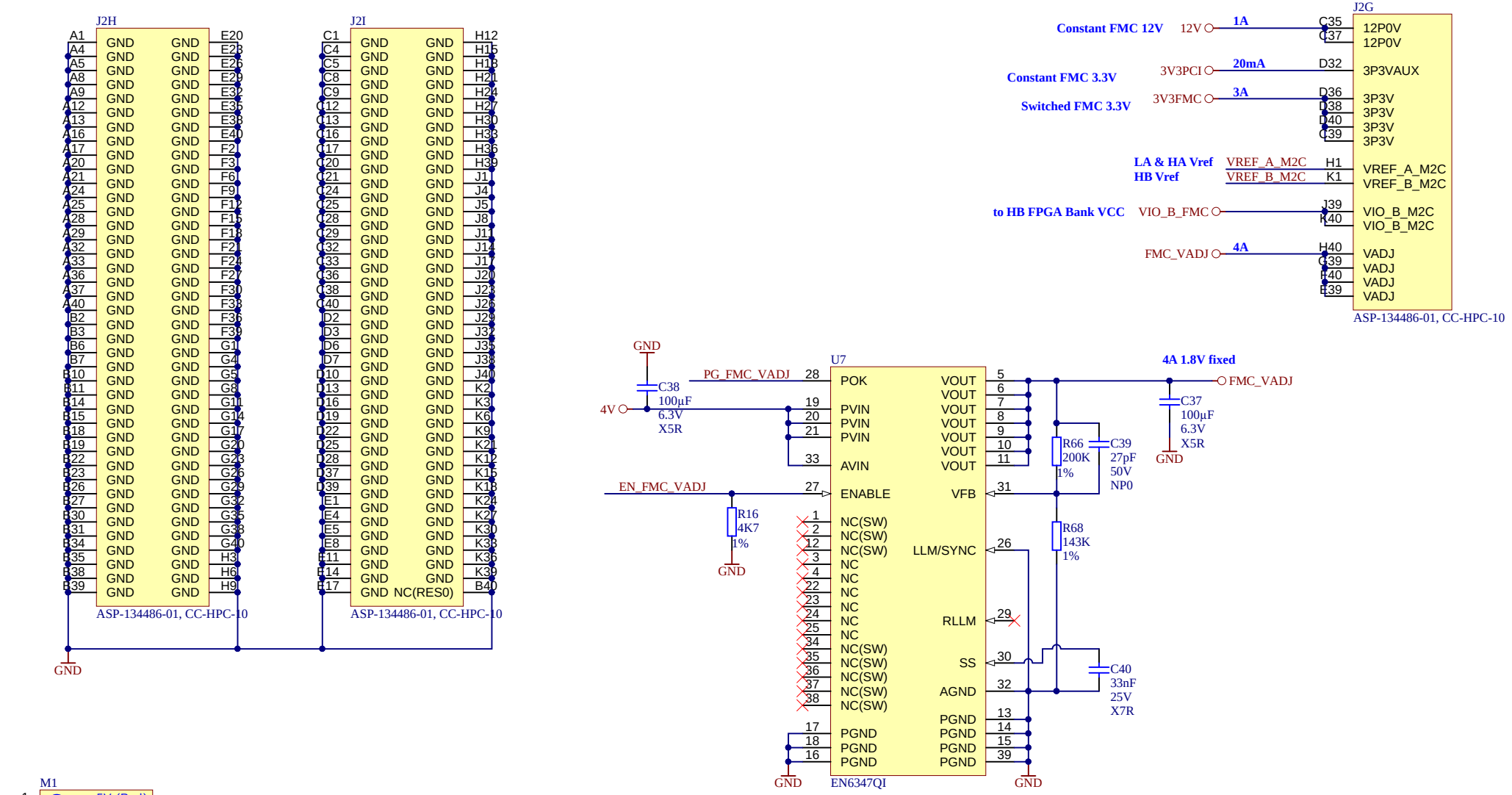
Filename: FMC.SchDoc



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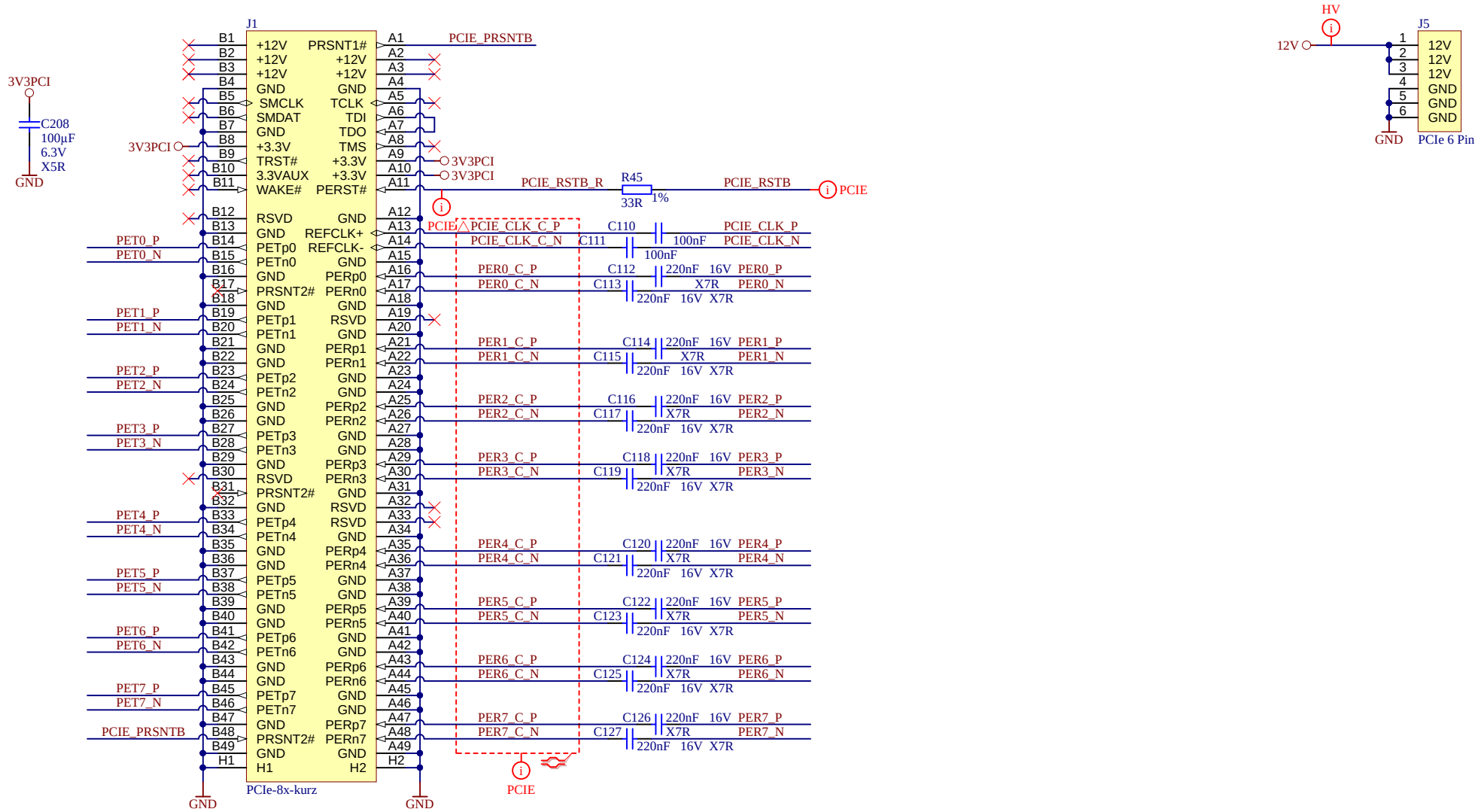
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page4 of 38
Filename:	FMC_PWR.SchDoc		



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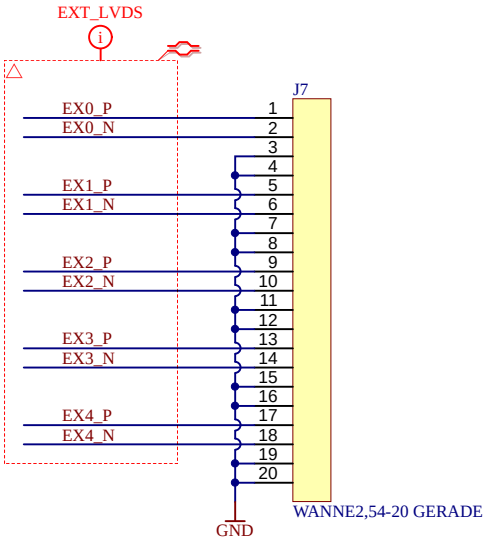
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page5 of 38
Filename: PCIE_CONN.SchDoc			



trenz electronic	Title: TEC0330 - MLVDS CONNECTOR		
	A4	Number: TEC0330 Default	Rev. 04
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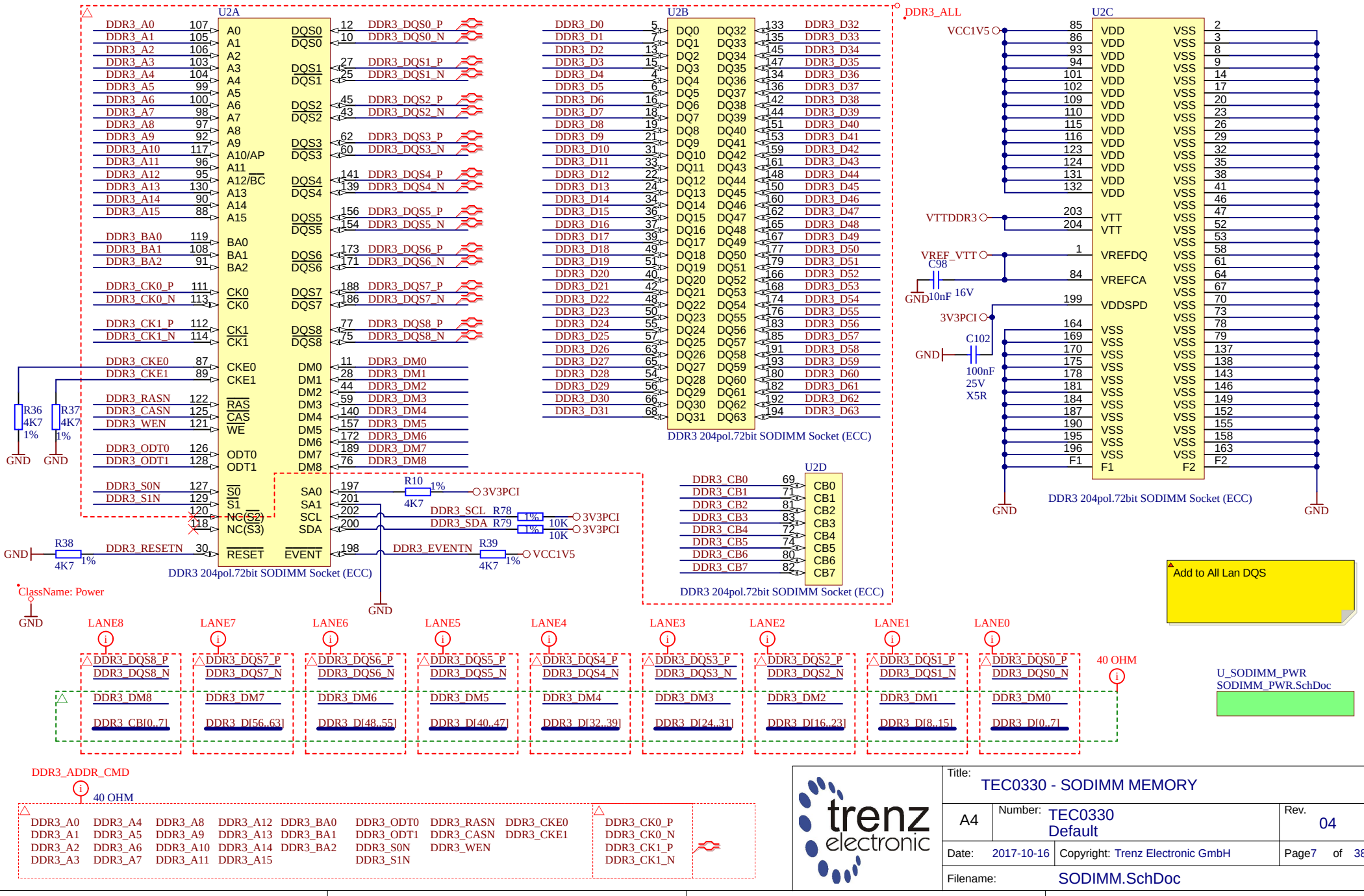
	Filename: MLVDS_CONN.SchDoc		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DDR3_BA0 DDR3_BA1 DDR3_BA2
DDR3_CK0_P DDR3_CK0_N DDR3_CK1_P DDR3_CK1_N
DDR3_CKE0 DDR3_CKE1
DDR3_RASN DDR3_CASN DDR3_WEN
DDR3_ODT0 DDR3_ODT1
DDR3_S0N DDR3_S1N
DDR3_RESETN
DDR3_DQS0_P DDR3_DQS0_N DDR3_DQS1_P DDR3_DQS1_N DDR3_DQS2_P DDR3_DQS2_N DDR3_DQS3_P DDR3_DQS3_N DDR3_DQS4_P DDR3_DQS4_N DDR3_DQS5_P DDR3_DQS5_N DDR3_DQS6_P DDR3_DQS6_N DDR3_DQS7_P DDR3_DQS7_N DDR3_DQS8_P DDR3_DQS8_N
DDR3_DM0 DDR3_DM1 DDR3_DM2 DDR3_DM3 DDR3_DM4 DDR3_DM5 DDR3_DM6 DDR3_DM7 DDR3_DM8
DDR3 204pol.72bit SODIMM Socket (ECC)
U2B
DDR3_D0 DDR3_D1 DDR3_D2 DDR3_D3 DDR3_D4 DDR3_D5 DDR3_D6 DDR3_D7 DDR3_D8 DDR3_D9 DDR3_D10 DDR3_D11 DDR3_D12 DDR3_D13 DDR3_D14 DDR3_D15 DDR3_D16 DDR3_D17 DDR3_D18 DDR3_D19 DDR3_D20 DDR3_D21 DDR3_D22 DDR3_D23 DDR3_D24 DDR3_D25 DDR3_D26 DDR3_D27 DDR3_D28 DDR3_D29 DDR3_D30 DDR3_D31
DDR3_D32 DDR3_D33 DDR3_D34 DDR3_D35 DDR3_D36 DDR3_D37 DDR3_D38 DDR3_D39 DDR3_D40 DDR3_D41 DDR3_D42 DDR3_D43 DDR3_D44 DDR3_D45 DDR3_D46 DDR3_D47 DDR3_D48 DDR3_D49 DDR3_D50 DDR3_D51 DDR3_D52 DDR3_D53 DDR3_D54 DDR3_D55 DDR3_D56 DDR3_D57 DDR3_D58 DDR3_D59 DDR3_D60 DDR3_D61 DDR3_D62 DDR3_D63
DDR3 204pol.72bit SODIMM Socket (ECC)
U2C
DDR3_ALL
VCC1V5 VTTDDR3 VREF_VTT 3V3PCI GND
C98 10nF 16V
C102 100nF 25V X5R
VDD VSS VTT VREFDQ VREFCA VDDSPD F1 F2
DDR3 204pol.72bit SODIMM Socket (ECC)
U2D
DDR3_CB0 DDR3_CB1 DDR3_CB2 DDR3_CB3 DDR3_CB4 DDR3_CB5 DDR3_CB6 DDR3_CB7
CB0 CB1 CB2 CB3 CB4 CB5 CB6 CB7
DDR3 204pol.72bit SODIMM Socket (ECC)
R36 4K7 1%
R37 4K7 1%
R38 4K7 1%
R10 4K7 1%
R39 4K7 1%
R78 10K 1%
R79 10K 1%
DDR3_SCL
DDR3_SDA
3V3PCI
VCC1V5
GND
ClassName: Power
Add to All Lan DQS
LANE8 LANE7 LANE6 LANE5 LANE4 LANE3 LANE2 LANE1 LANE0
40 OHM
U_SODIMM_PWR
SODIMM_PWR.SchDoc
DDR3_ADDR_CMD
40 OHM
DDR3_A0 DDR3_A1 DDR3_A2 DDR3_A3 DDR3_A4 DDR3_A5 DDR3_A6 DDR3_A7 DDR3_A8 DDR3_A9 DDR3_A10 DDR3_A11 DDR3_A12 DDR3_A13 DDR3_A14 DDR3_A15 DDR3_BA0 DDR3_BA1 DDR3_BA2 DDR3_ODT0 DDR3_ODT1 DDR3_S0N DDR3_S1N DDR3_RASN DDR3_CASN DDR3_WEN DDR3_CKE0 DDR3_CKE1
DDR3_CK0_P DDR3_CK0_N DDR3_CK1_P DDR3_CK1_N
trenz electronic
Title: TEC0330 - SODIMM MEMORY
A4
Number: TEC0330 Default
Rev. 04
Date: 2017-10-16
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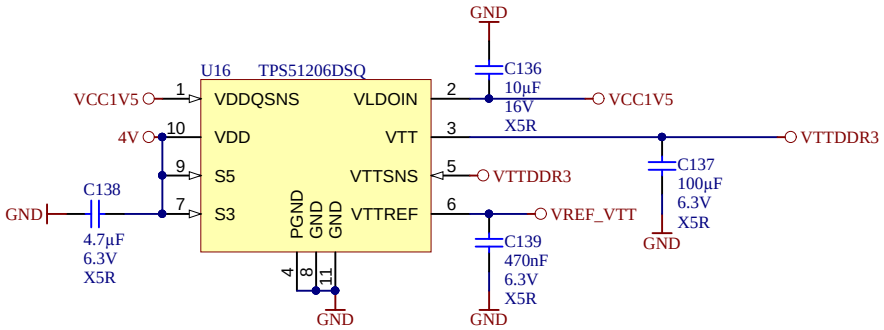
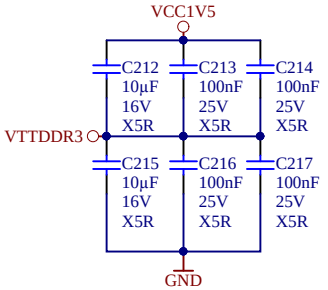
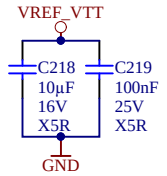
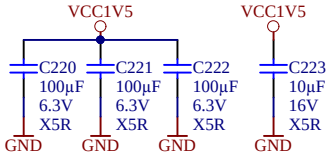
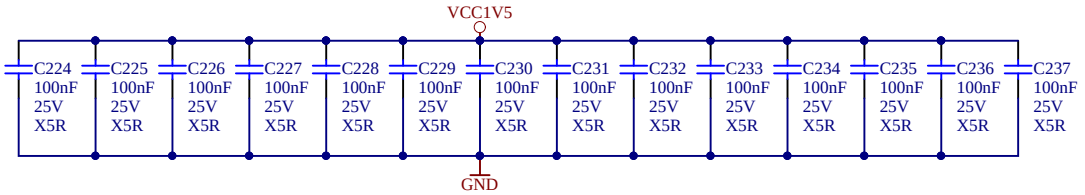
Filename: SODIMM.SchDoc



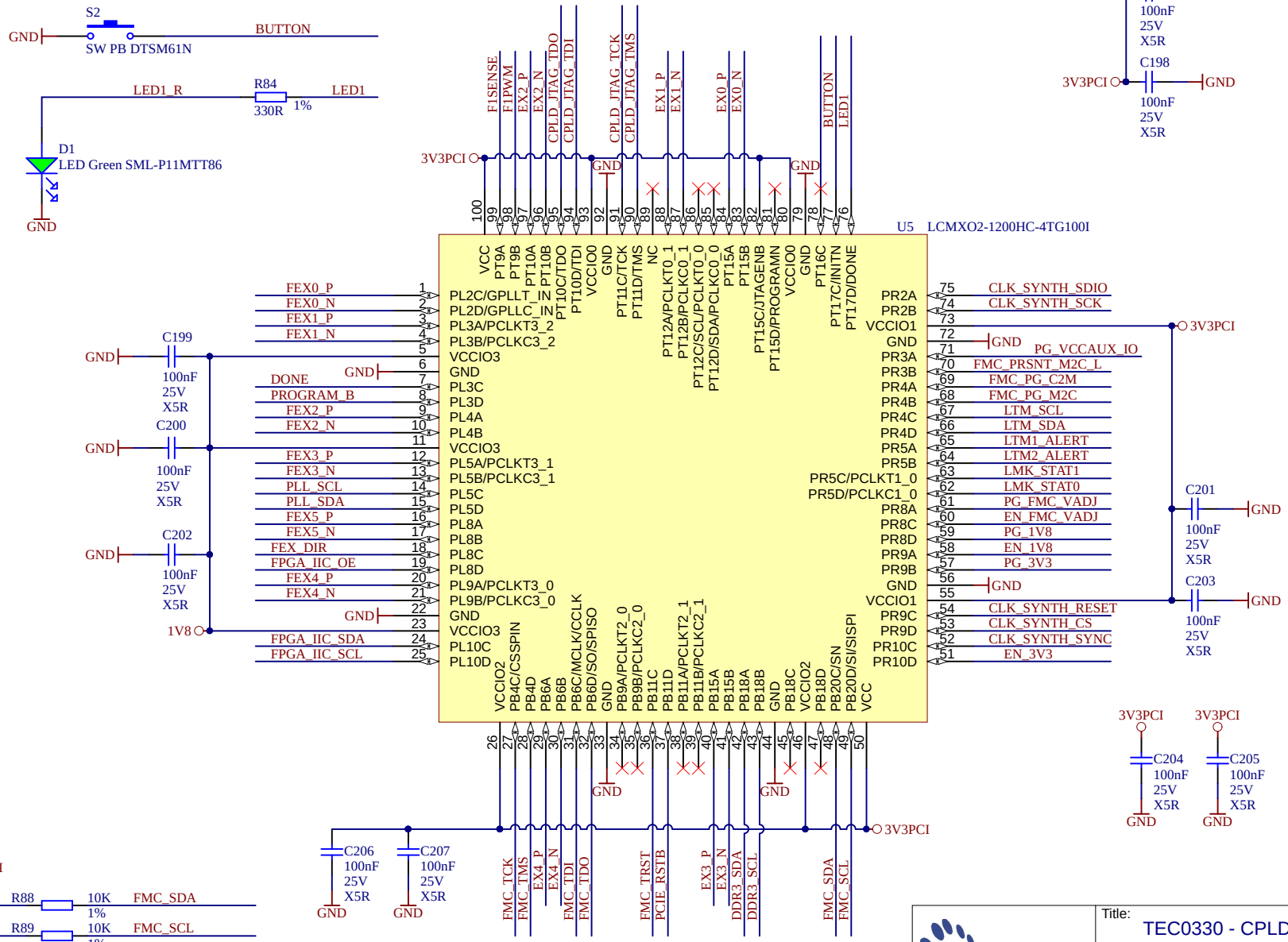






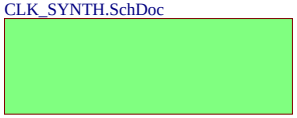


trenz electronic	Title: TEC0330 - SODIMM MEMORY		
	A4	Number: TEC0330 Default	Rev. 04
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page 8 of 38
	Filename: SODIMM_PWR.SchDoc		

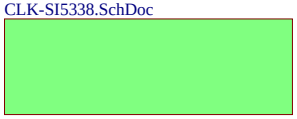


Title: TEC0330 - CPLD			
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page9 of 38
Filename: CPLD.SchDoc			

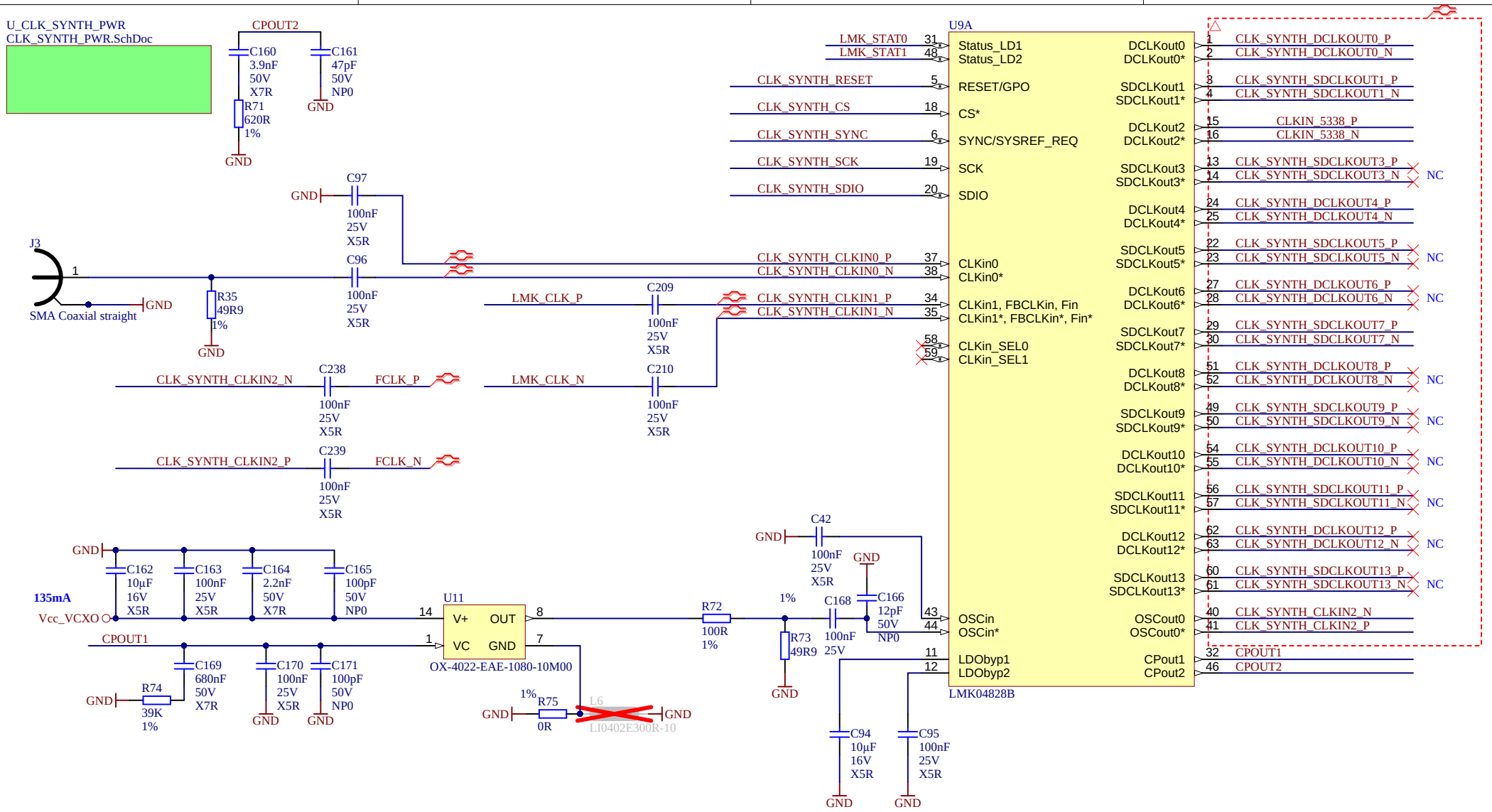
U_CLK_SYNTH
CLK_SYNTH.SchDoc

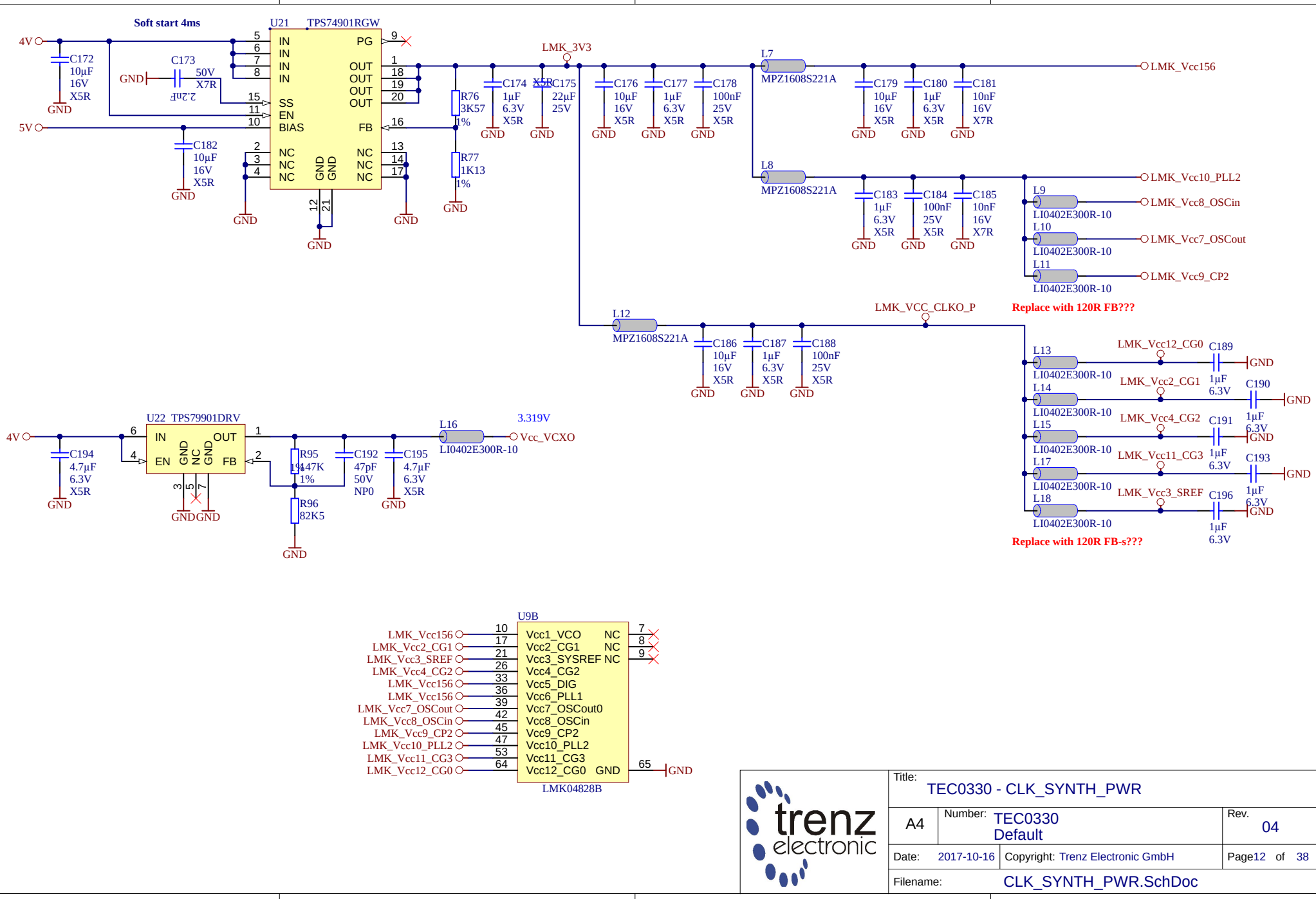


U_CLK-SI5338
CLK-SI5338.SchDoc



	Title: TEC0330 - CLOCKS		
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page10 of 38
Filename: CLOCK.SchDoc			


U_CLK_SYNTH_PWR
CLK_SYNTH_PWR.SchDoc
CPOUT2
C160 3.9nF 50V X7R
C161 47pF 50V NP0
R71 620R 1%
GND
C97 100nF 25V X5R
J3
SMA Coaxial straight
R35 49R9 1%
C96 100nF 25V X5R
C209 100nF 25V X5R
C238 100nF 25V X5R
C239 100nF 25V X5R
C210 100nF 25V X5R
CLK_SYNTH_CLKIN2_N
CLK_SYNTH_CLKIN2_P
FCLK_P
FCLK_N
LMK_CLK_P
LMK_CLK_N
135mA
Vcc_VCXO
C162 10µF 16V X5R
C163 100nF 25V X5R
C164 2.2nF 50V X7R
C165 100pF 50V NP0
U11
V+ OUT VC GND
OX-4022-EAE-1080-10M00
CPOUT1
C169 680nF 50V X7R
C170 100nF 25V X5R
C171 100pF 50V NP0
R74 39K 1%
R75 0R 1%
L6
LI0402E300R-10
R72 100R 1%
C42 100nF 25V X5R
C166 12pF 50V NP0
R73 49R9 1%
C168 100nF 25V
C94 10µF 16V X5R
C95 100nF 25V X5R
U9A
LMK_STAT0
LMK_STAT1
CLK_SYNTH_RESET
CLK_SYNTH_CS
CLK_SYNTH_SYNC
CLK_SYNTH_SCK
CLK_SYNTH_SDIO
Status_LD1
Status_LD2
RESET/GPO
CS*
SYNC/SYSREF_REQ
SCK
SDIO
CLKin0
CLKin0*
CLKin1, FBCLKin, Fin
CLKin1*, FBCLKin*, Fin*
CLKin_SEL0
CLKin_SEL1
OSCin
OSCin*
LDObyp1
LDObyp2
DCLKout0
DCLKout0*
SDCLKout1
SDCLKout1*
DCLKout2
DCLKout2*
SDCLKout3
SDCLKout3*
DCLKout4
DCLKout4*
SDCLKout5
SDCLKout5*
DCLKout6
DCLKout6*
SDCLKout7
SDCLKout7*
DCLKout8
DCLKout8*
SDCLKout9
SDCLKout9*
DCLKout10
DCLKout10*
SDCLKout11
SDCLKout11*
DCLKout12
DCLKout12*
SDCLKout13
SDCLKout13*
OSCout0
OSCout0*
CPout1
CPout2
LMK04828B
CLK_SYNTH_DCLKOUT0_P
CLK_SYNTH_DCLKOUT0_N
CLK_SYNTH_SDCLKOUT1_P
CLK_SYNTH_SDCLKOUT1_N
CLKIN_5338_P
CLKIN_5338_N
CLK_SYNTH_SDCLKOUT3_P
CLK_SYNTH_SDCLKOUT3_N
CLK_SYNTH_DCLKOUT4_P
CLK_SYNTH_DCLKOUT4_N
CLK_SYNTH_SDCLKOUT5_P
CLK_SYNTH_SDCLKOUT5_N
CLK_SYNTH_DCLKOUT6_P
CLK_SYNTH_DCLKOUT6_N
CLK_SYNTH_SDCLKOUT7_P
CLK_SYNTH_SDCLKOUT7_N
CLK_SYNTH_DCLKOUT8_P
CLK_SYNTH_DCLKOUT8_N
CLK_SYNTH_SDCLKOUT9_P
CLK_SYNTH_SDCLKOUT9_N
CLK_SYNTH_DCLKOUT10_P
CLK_SYNTH_DCLKOUT10_N
CLK_SYNTH_SDCLKOUT11_P
CLK_SYNTH_SDCLKOUT11_N
CLK_SYNTH_DCLKOUT12_P
CLK_SYNTH_DCLKOUT12_N
CLK_SYNTH_SDCLKOUT13_P
CLK_SYNTH_SDCLKOUT13_N
CLK_SYNTH_CLKIN2_N
CLK_SYNTH_CLKIN2_P
CPOUT1
CPOUT2
NC
CLK2_P
CLK2_N
CLK3_P
CLK3_N
Title: TEC0330 - CLK_SYNTH
A4
Number: TEC0330 Default
Rev. 04
Date: 2017-10-16
Copyright: Trenz Electronic GmbH
Page11 of 38
Filename: CLK_SYNTH.SchDoc


Soft start 4ms
U21 TPS74901RGW
4V
5V
GND
C172 10µF 16V X5R
C173 2.2nF 50V X7R
C182 10µF 16V X5R
IN
IN
IN
IN
SS
EN
BIAS
NC
NC
NC
GND
GND
PG
OUT
OUT
OUT
OUT
FB
NC
NC
NC
R76 3K57 1%
R77 1K13 1%
C174 1µF 6.3V X5R
C175 22µF 25V X5R
LMK_3V3
C176 10µF 16V X5R
C177 1µF 6.3V X5R
C178 100nF 25V X5R
L7 MPZ1608S221A
C179 10µF 16V X5R
C180 1µF 6.3V X5R
C181 10nF 16V X7R
LMK_Vcc156
L8 MPZ1608S221A
C183 1µF 6.3V X5R
C184 100nF 25V X5R
C185 10nF 16V X7R
L9 LI0402E300R-10
L10 LI0402E300R-10
L11 LI0402E300R-10
LMK_Vcc10_PLL2
LMK_Vcc8_OSCin
LMK_Vcc7_OSCout
LMK_Vcc9_CP2
L12 MPZ1608S221A
C186 10µF 16V X5R
C187 1µF 6.3V X5R
C188 100nF 25V X5R
LMK_VCC_CLKO_P
Replace with 120R FB???
L13 LI0402E300R-10
L14 LI0402E300R-10
L15 LI0402E300R-10
L17 LI0402E300R-10
L18 LI0402E300R-10
LMK_Vcc12_CG0
LMK_Vcc2_CG1
LMK_Vcc4_CG2
LMK_Vcc11_CG3
LMK_Vcc3_SREF
C189 1µF 6.3V
C190 1µF 6.3V
C191 1µF 6.3V
C193 1µF 6.3V
C196 1µF 6.3V
Replace with 120R FB-s???
U22 TPS79901DRV
4V
C194 4.7µF 6.3V X5R
IN
EN
GND
NC
GND
OUT
FB
R95 147K 1%
R96 82K5
C192 47pF 50V NP0
C195 4.7µF 6.3V X5R
L16 LI0402E300R-10
3.319V
Vcc_VCXO
U9B
LMK_Vcc156
LMK_Vcc2_CG1
LMK_Vcc3_SREF
LMK_Vcc4_CG2
LMK_Vcc156
LMK_Vcc156
LMK_Vcc7_OSCout
LMK_Vcc8_OSCin
LMK_Vcc9_CP2
LMK_Vcc10_PLL2
LMK_Vcc11_CG3
LMK_Vcc12_CG0
Vcc1_VCO
Vcc2_CG1
Vcc3_SYSREF
Vcc4_CG2
Vcc5_DIG
Vcc6_PLL1
Vcc7_OSCout0
Vcc8_OSCin
Vcc9_CP2
Vcc10_PLL2
Vcc11_CG3
Vcc12_CG0
NC
NC
NC
GND
LMK04828B
trenz electronic
Title: TEC0330 - CLK_SYNTH_PWR
A4
Number: TEC0330 Default
Rev. 04
Date: 2017-10-16
Copyright: Trenz Electronic GmbH
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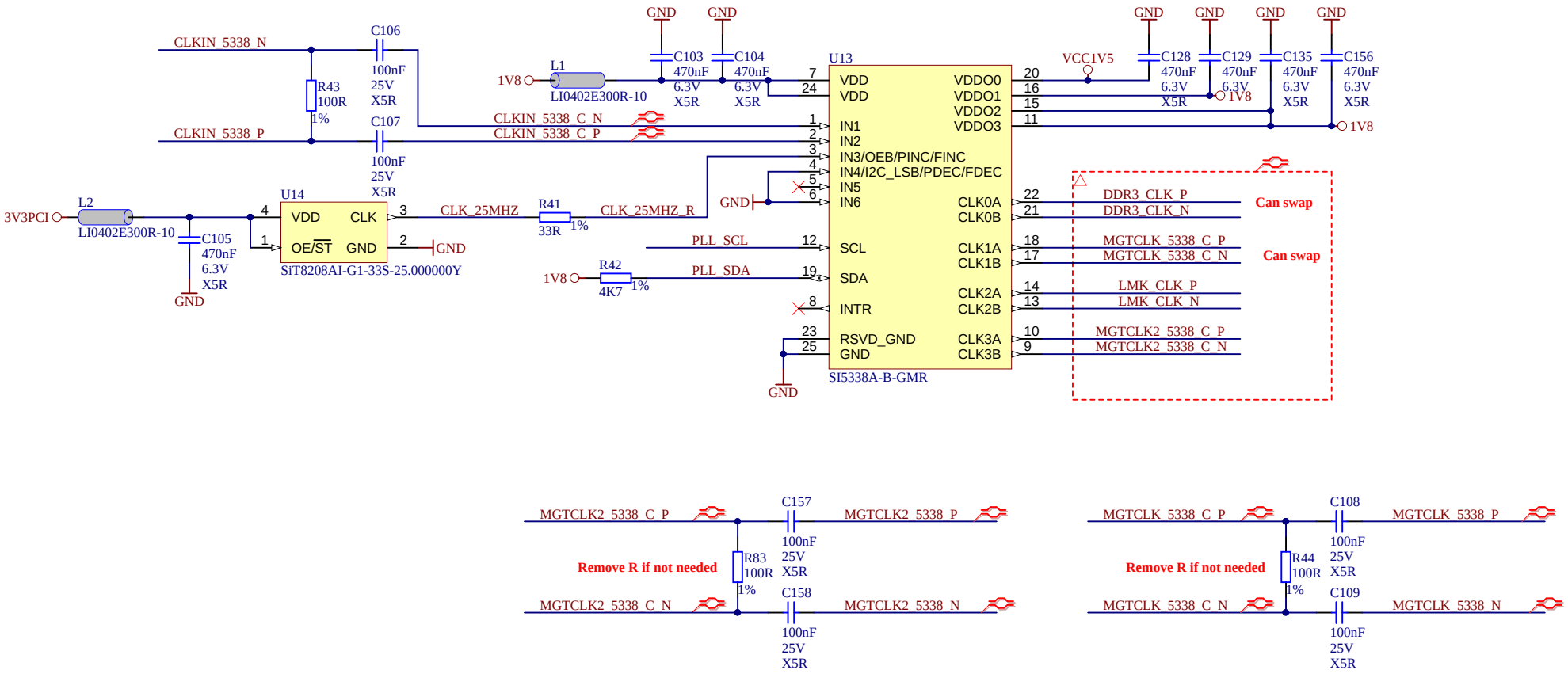
Filename: CLK_SYNTH_PWR.SchDoc



trenz electronic	Title: TEC0330 - CLK_SI5338	
A4	Number: TEC0330 Default	Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page13 of 38
	Filename: CLK-SI5338.SchDoc	

U_FPGA_BANK_14
FPGA_BANK_14.SchDoc

U_FPGA_BANK_15
FPGA_BANK_15.SchDoc

U_FPGA_BANK_16
FPGA_BANK_16.SchDoc

U_FPGA_BANK_17
FPGA_BANK_17.SchDoc

U_FPGA_BANK_18
FPGA_BANK_18.SchDoc

U_DDR_Banks
DDR_Banks.SchDoc

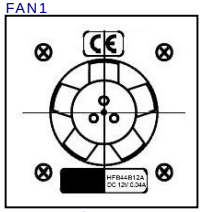
U_FMC_Banks
FMC_Banks.SchDoc

U_FPGA_MGT_BANKS
FPGA_MGT_BANKS.SchDoc

U_FPGA_CFG
FPGA_CFG.SchDoc

U_FPGA_POWER
FPGA_POWER.SchDoc

FAN1



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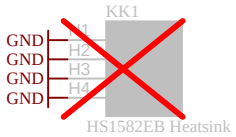
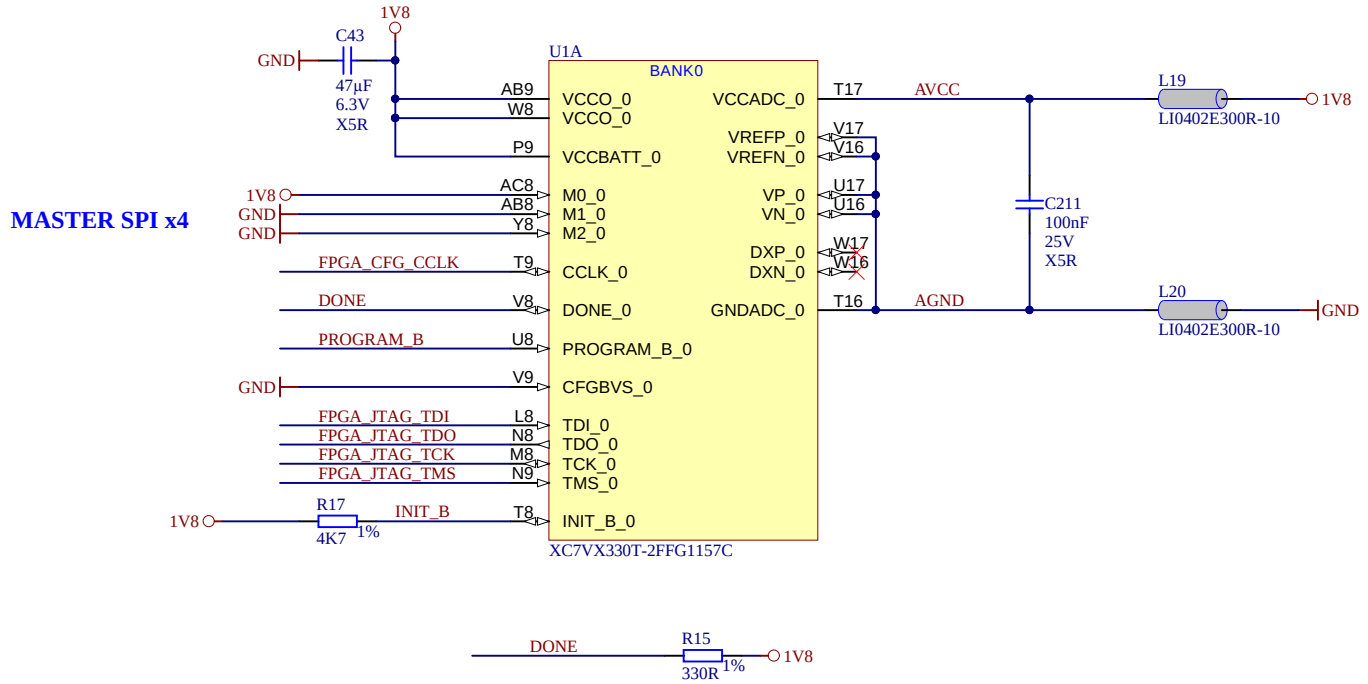
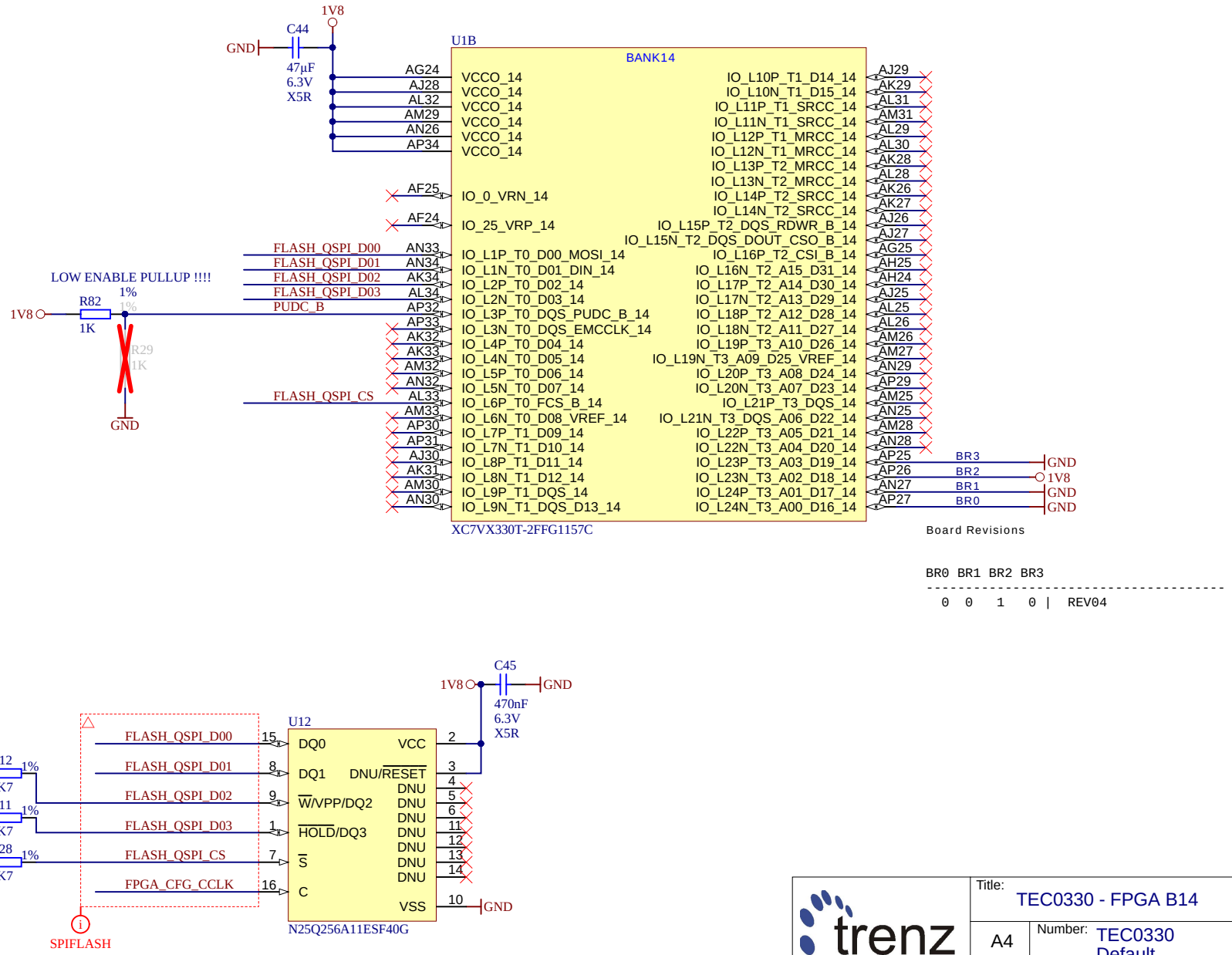


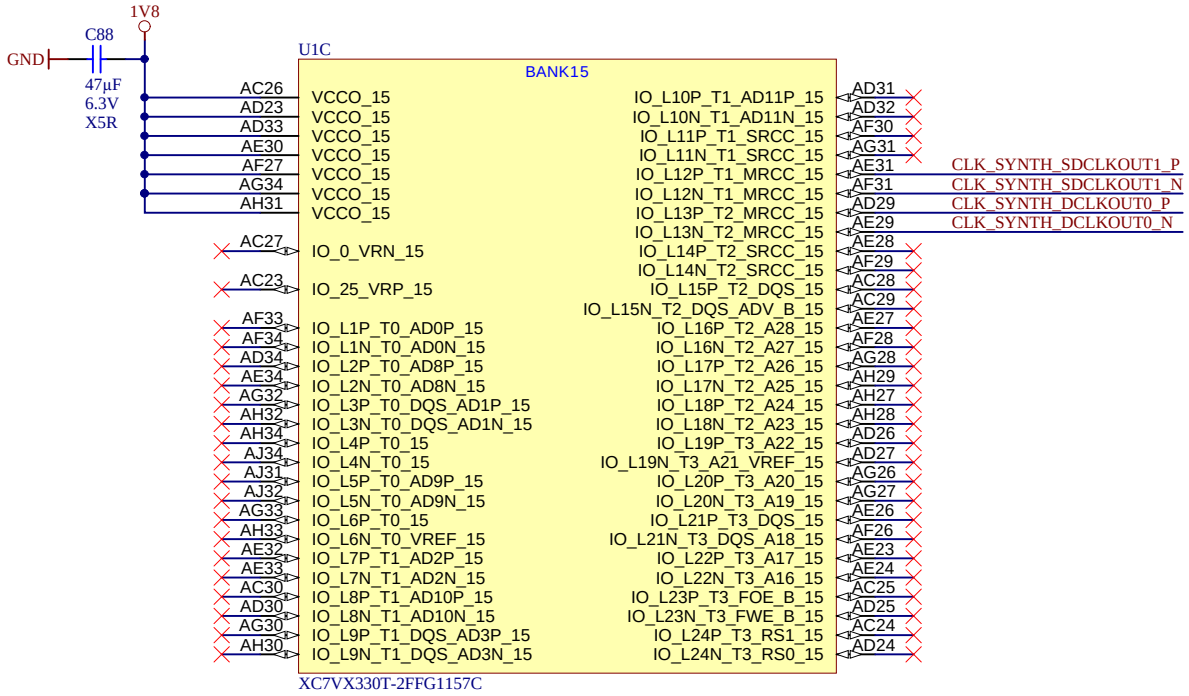
trenz electronic	Title: TEC0330 - FPGA		
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page14 of 38
Filename: FPGA.SchDoc			



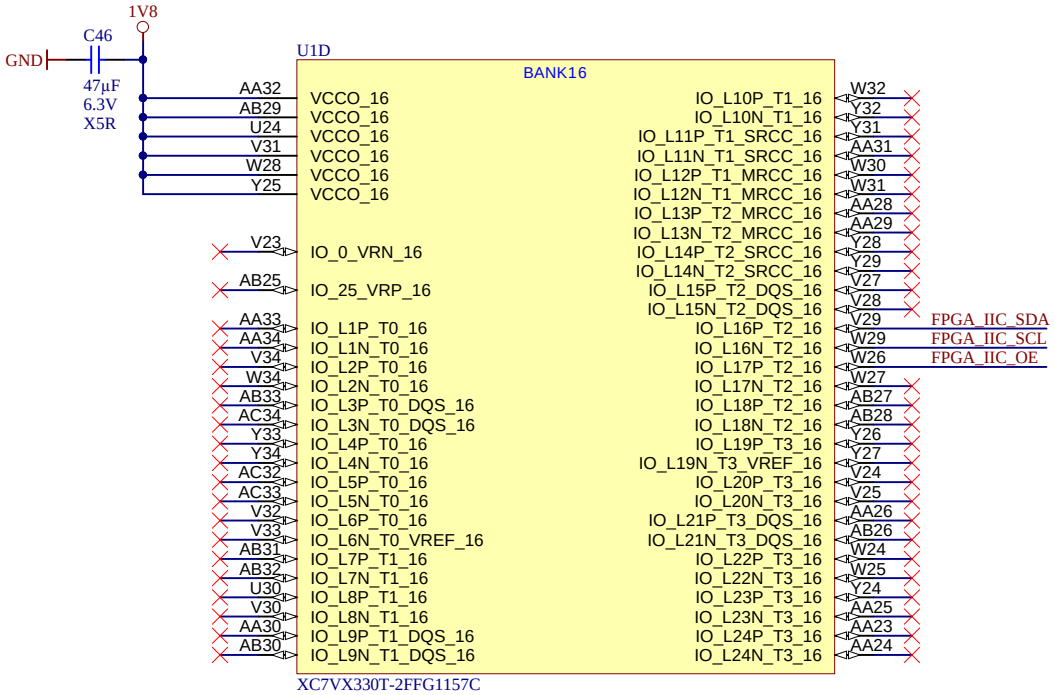
Title: TEC0330 - FPGA CONFIGURATION			
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page15 of 38
Filename: FPGA_CFG.SchDoc			



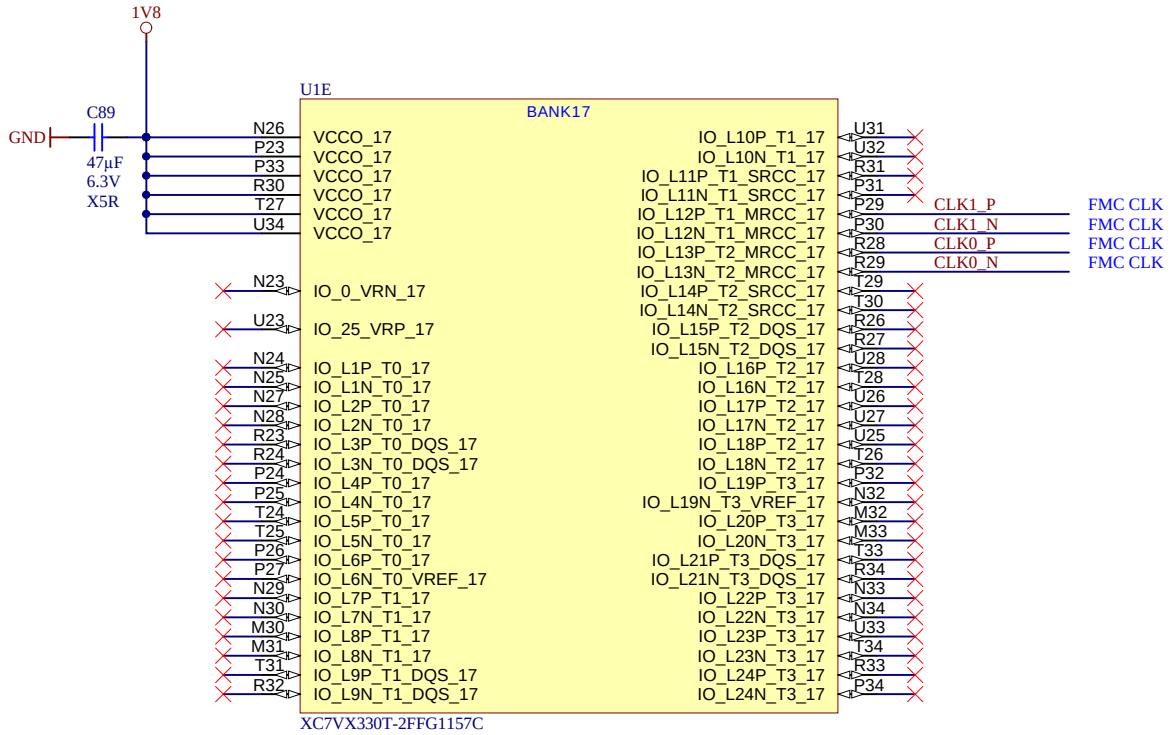
trenz electronic	Title: TEC0330 - FPGA B14		
	A4	Number: TEC0330 Default	Rev. 04
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page16 of 38
	Filename: FPGA_BANK_14.SchDoc		



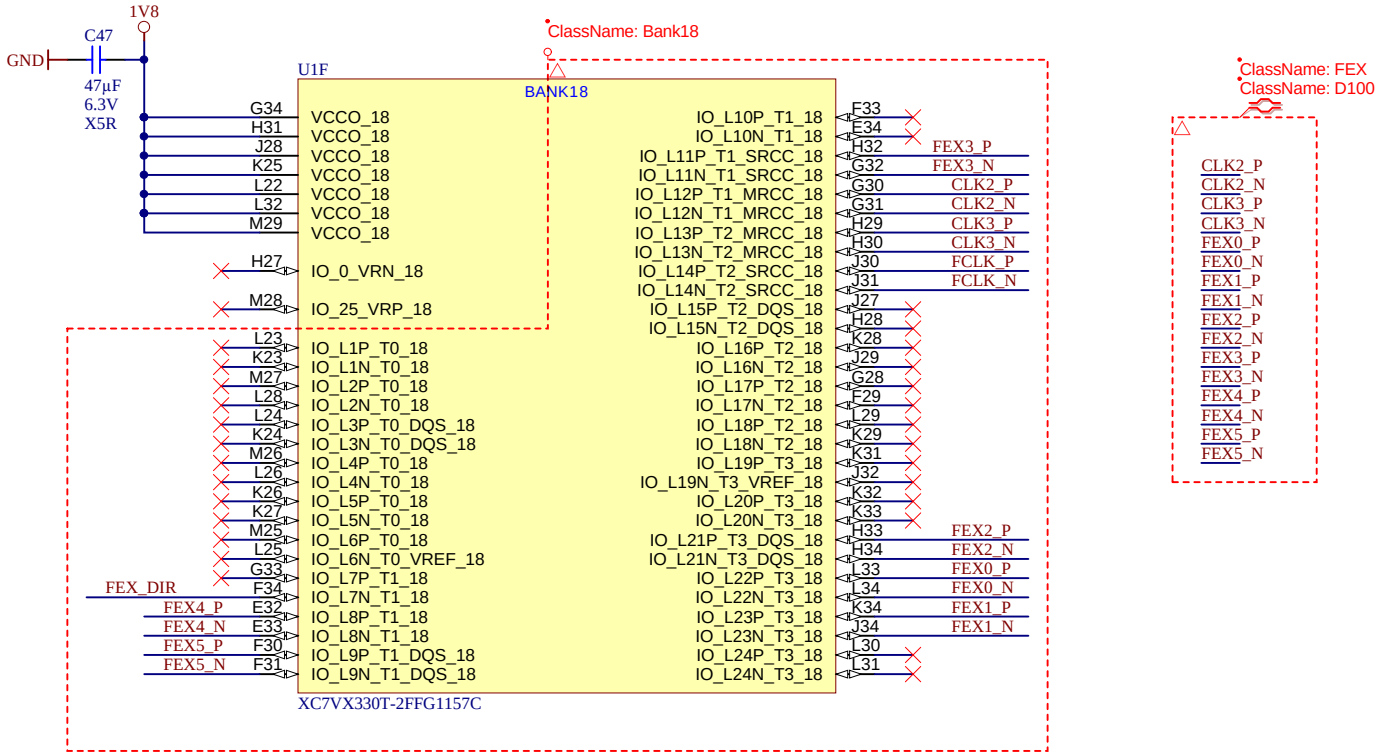
trenz electronic	Title: TEC0330 - FPGA B15		
	A4	Number: TEC0330 Default	Rev. 04
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page17 of 38
	Filename: FPGA_BANK_15.SchDoc		



trenz electronic	Title: TEC0330 - FPGA B16		
	A4	Number: TEC0330 Default	Rev. 04
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page18 of 38
	Filename: FPGA_BANK_16.SchDoc		



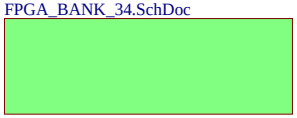
trenz electronic	Title: TEC0330 - FPGA B17		
	A4	Number: TEC0330 Default	Rev. 04
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page19 of 38
	Filename: FPGA_BANK_17.SchDoc		



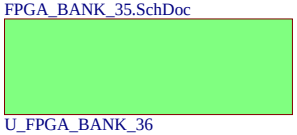
trenz electronic

Title: TEC0330 - FPGA B18			
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page20 of 38
Filename: FPGA_BANK_18.SchDoc			

U_FPGA_BANK_34
FPGA_BANK_34.SchDoc



U_FPGA_BANK_35
FPGA_BANK_35.SchDoc



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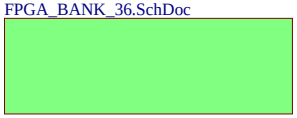
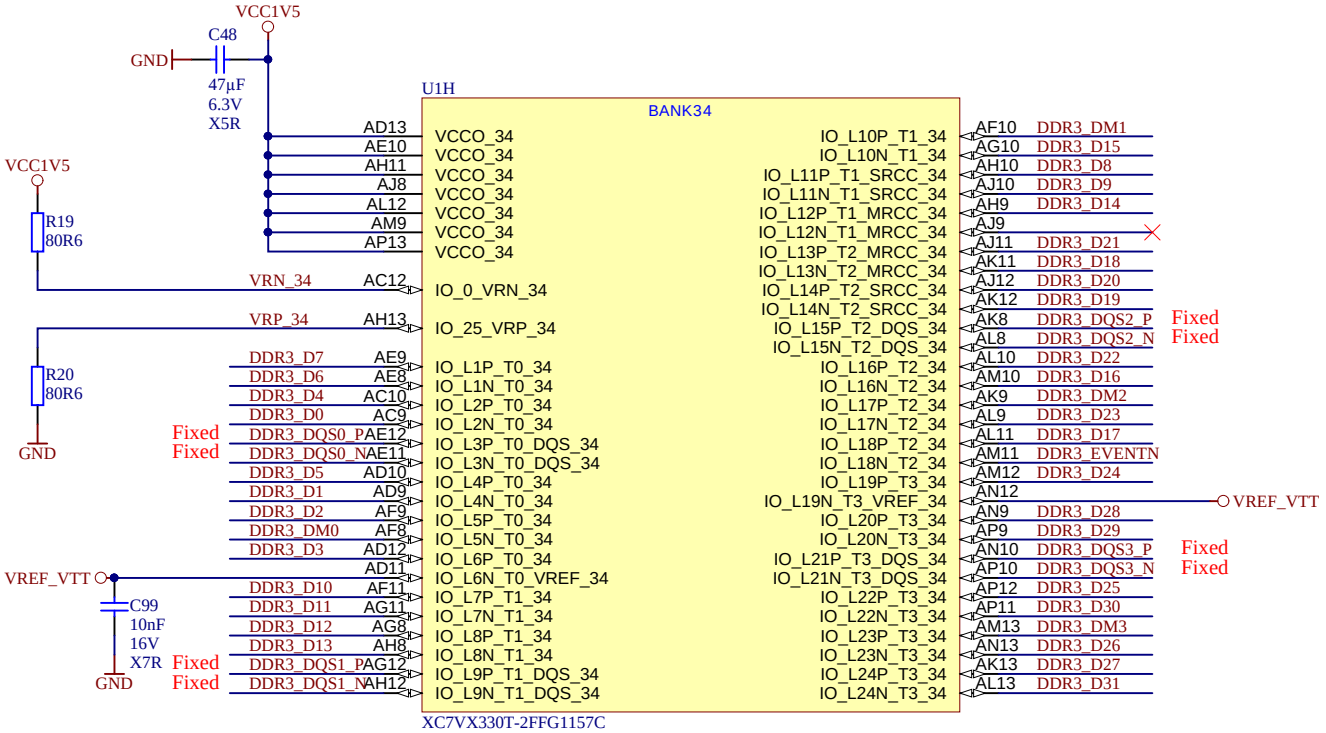
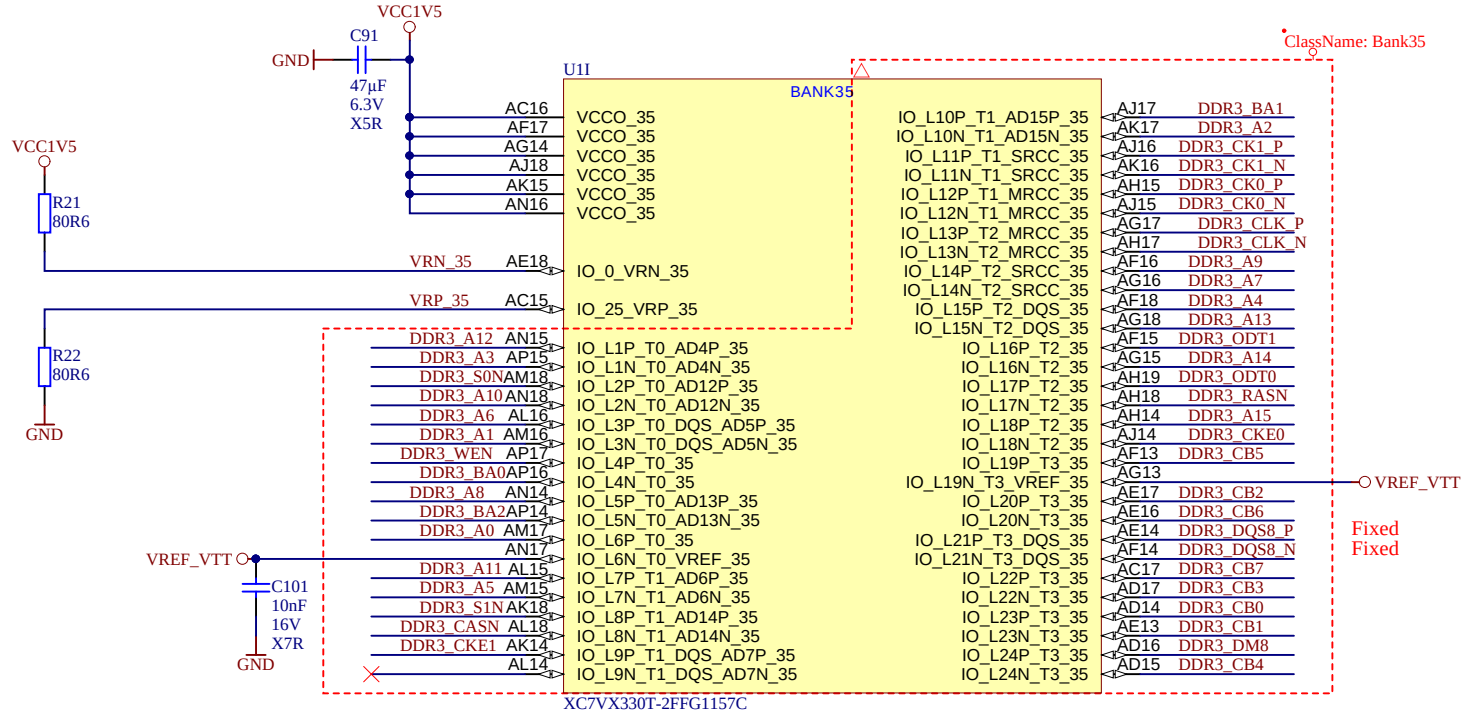
FPGA_BANK_36.SchDoc



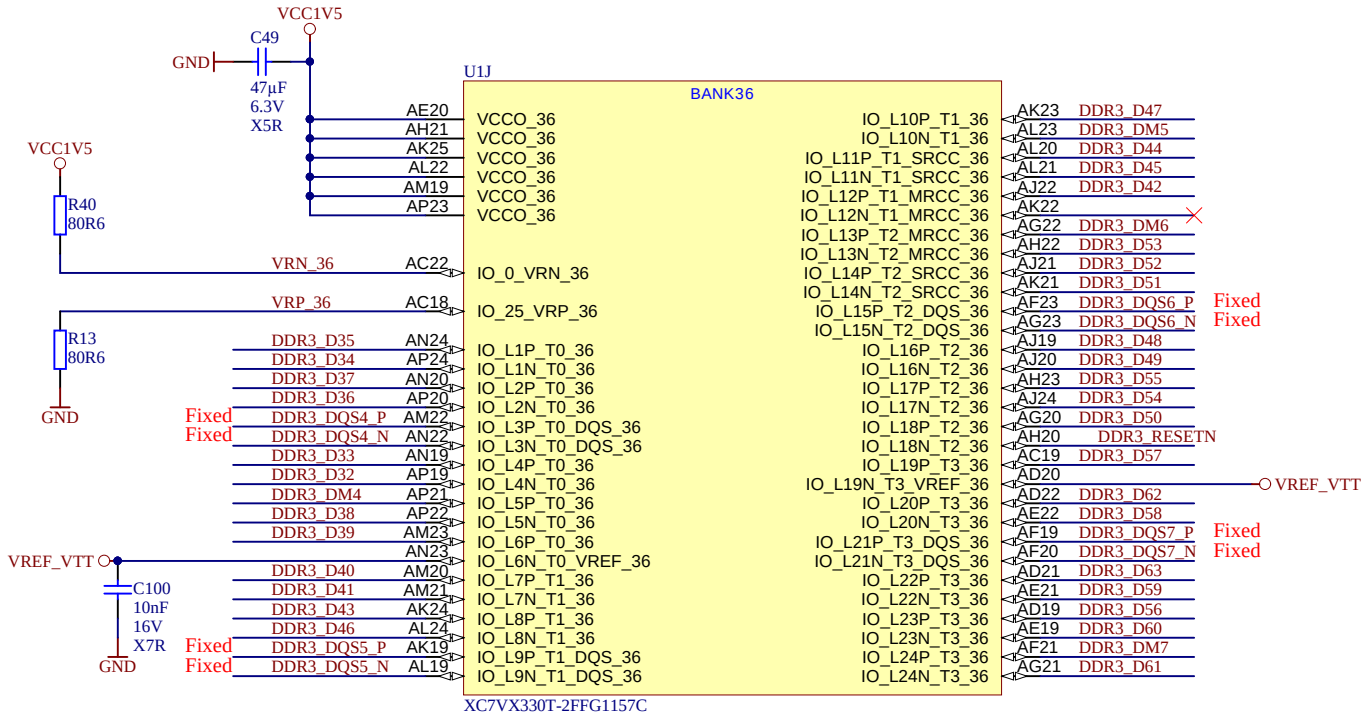
	Title: TEC0330 - FPGA_DDR_BANKS		
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page 21 of 38
Filename: DDR_Banks.SchDoc			



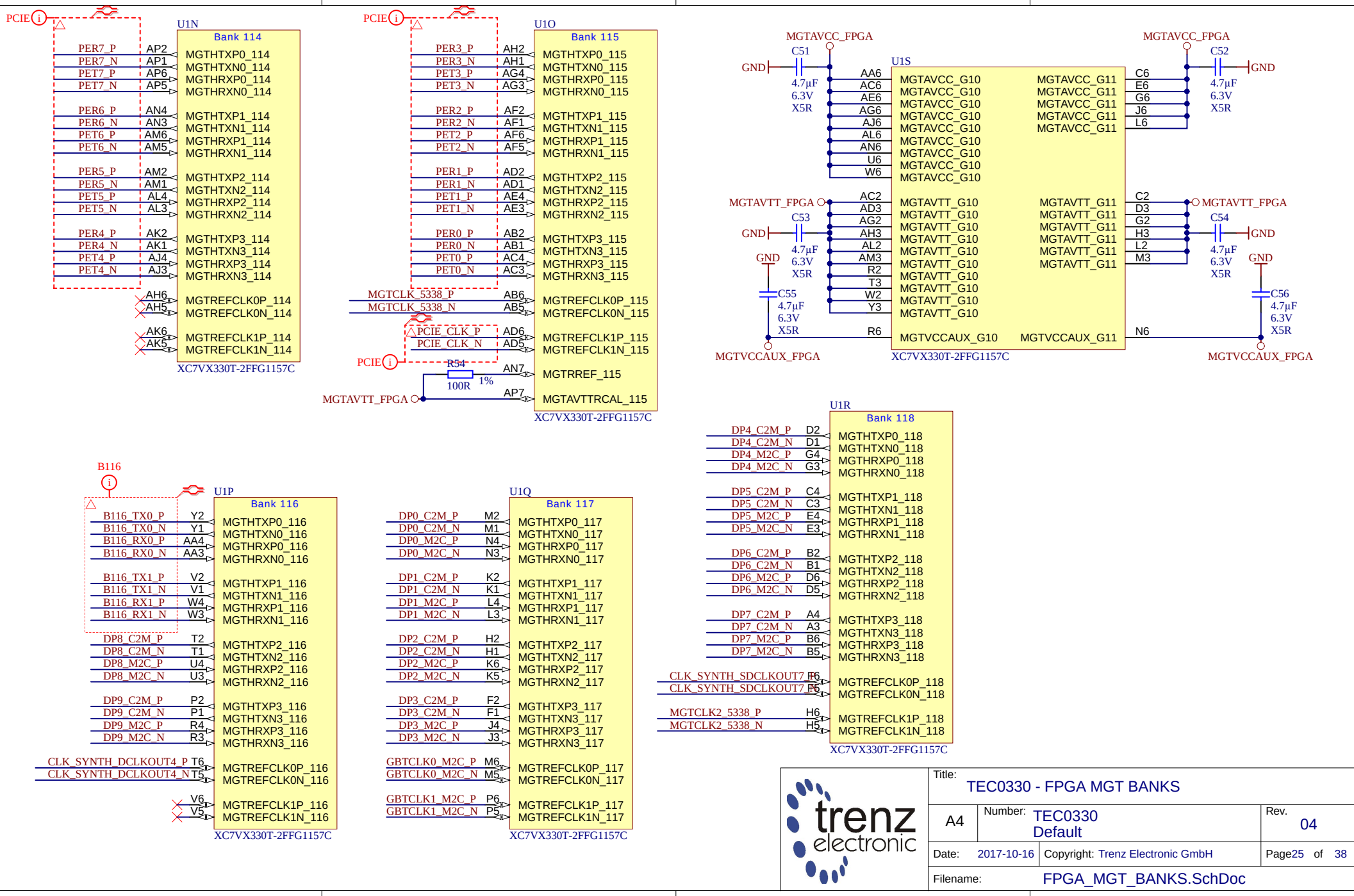
trenz electronic	Title: TEC0330 - FPGA B34		
	A4	Number: TEC0330 Default	Rev. 04
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page22 of 38
	Filename: FPGA_BANK_34.SchDoc		



trenz electronic	Title: TEC0330 - FPGA B35		
	A4	Number: TEC0330 Default	Rev. 04
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page23 of 38
	Filename: FPGA_BANK_35.SchDoc		



trenz electronic	Title: TEC0330 - FPGA B36		
	A4	Number: TEC0330 Default	Rev. 04
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page24 of 38
	Filename: FPGA_BANK_36.SchDoc		


U1N
Bank 114
PCIE
PER7_P AP2
PER7_N AP1
PET7_P AP6
PET7_N AP5
PER6_P AN4
PER6_N AN3
PET6_P AM6
PET6_N AM5
PER5_P AM2
PER5_N AM1
PET5_P AL4
PET5_N AL3
PER4_P AK2
PER4_N AK1
PET4_P AJ4
PET4_N AJ3
AH6 AH5 AK6 AK5
MGTHTXP0_114
MGTHTXN0_114
MGTHRXP0_114
MGTHRXN0_114
MGTHTXP1_114
MGTHTXN1_114
MGTHRXP1_114
MGTHRXN1_114
MGTHTXP2_114
MGTHTXN2_114
MGTHRXP2_114
MGTHRXN2_114
MGTHTXP3_114
MGTHTXN3_114
MGTHRXP3_114
MGTHRXN3_114
MGTREFCLK0P_114
MGTREFCLK0N_114
MGTREFCLK1P_114
MGTREFCLK1N_114
XC7VX330T-2FFG1157C
U1O
Bank 115
PCIE
PER3_P AH2
PER3_N AH1
PET3_P AG4
PET3_N AG3
PER2_P AF2
PER2_N AF1
PET2_P AF6
PET2_N AF5
PER1_P AD2
PER1_N AD1
PET1_P AE4
PET1_N AE3
PER0_P AB2
PER0_N AB1
PET0_P AC4
PET0_N AC3
MGTCLK_5338_P AB6
MGTCLK_5338_N AB5
PCIE_CLK_P AD6
PCIE_CLK_N AD5
PCIE
R54 100R 1%
AN7
AP7
MGTAVTT_FPGA
MGTHTXP0_115
MGTHTXN0_115
MGTHRXP0_115
MGTHRXN0_115
MGTHTXP1_115
MGTHTXN1_115
MGTHRXP1_115
MGTHRXN1_115
MGTHTXP2_115
MGTHTXN2_115
MGTHRXP2_115
MGTHRXN2_115
MGTHTXP3_115
MGTHTXN3_115
MGTHRXP3_115
MGTHRXN3_115
MGTREFCLK0P_115
MGTREFCLK0N_115
MGTREFCLK1P_115
MGTREFCLK1N_115
MGTRREF_115
MGTAVTTRCAL_115
XC7VX330T-2FFG1157C
MGTAVCC_FPGA
C51 4.7µF 6.3V X5R
GND
U1S
AA6 AC6 AE6 AG6 AJ6 AL6 AN6 U6 W6
MGTAVCC_G10
MGTAVCC_G11
C6 E6 G6 J6 L6
C52 4.7µF 6.3V X5R
MGTAVTT_FPGA
C53 4.7µF 6.3V X5R
AC2 AD3 AG2 AH3 AL2 AM3 R2 T3 W2 Y3
MGTAVTT_G10
MGTAVTT_G11
C2 D3 G2 H3 L2 M3
C54 4.7µF 6.3V X5R
C55 4.7µF 6.3V X5R
R6
MGTVCCAUX_G10
MGTVCCAUX_G11
N6
C56 4.7µF 6.3V X5R
MGTVCCAUX_FPGA
U1R
Bank 118
DP4_C2M_P D2
DP4_C2M_N D1
DP4_M2C_P G4
DP4_M2C_N G3
DP5_C2M_P C4
DP5_C2M_N C3
DP5_M2C_P E4
DP5_M2C_N E3
DP6_C2M_P B2
DP6_C2M_N B1
DP6_M2C_P D6
DP6_M2C_N D5
DP7_C2M_P A4
DP7_C2M_N A3
DP7_M2C_P B6
DP7_M2C_N B5
CLK_SYNTH_SDCLKOUT7_P H6
CLK_SYNTH_SDCLKOUT7_N H5
MGTCLK2_5338_P H6
MGTCLK2_5338_N H5
MGTHTXP0_118
MGTHTXN0_118
MGTHRXP0_118
MGTHRXN0_118
MGTHTXP1_118
MGTHTXN1_118
MGTHRXP1_118
MGTHRXN1_118
MGTHTXP2_118
MGTHTXN2_118
MGTHRXP2_118
MGTHRXN2_118
MGTHTXP3_118
MGTHTXN3_118
MGTHRXP3_118
MGTHRXN3_118
MGTREFCLK0P_118
MGTREFCLK0N_118
MGTREFCLK1P_118
MGTREFCLK1N_118
XC7VX330T-2FFG1157C
B116
U1P
Bank 116
B116_TX0_P Y2
B116_TX0_N Y1
B116_RX0_P AA4
B116_RX0_N AA3
B116_TX1_P V2
B116_TX1_N V1
B116_RX1_P W4
B116_RX1_N W3
DP8_C2M_P T2
DP8_C2M_N T1
DP8_M2C_P U4
DP8_M2C_N U3
DP9_C2M_P P2
DP9_C2M_N P1
DP9_M2C_P R4
DP9_M2C_N R3
CLK_SYNTH_DCLKOUT4_P T6
CLK_SYNTH_DCLKOUT4_N T5
V6 V5
MGTHTXP0_116
MGTHTXN0_116
MGTHRXP0_116
MGTHRXN0_116
MGTHTXP1_116
MGTHTXN1_116
MGTHRXP1_116
MGTHRXN1_116
MGTHTXP2_116
MGTHTXN2_116
MGTHRXP2_116
MGTHRXN2_116
MGTHTXP3_116
MGTHTXN3_116
MGTHRXP3_116
MGTHRXN3_116
MGTREFCLK0P_116
MGTREFCLK0N_116
MGTREFCLK1P_116
MGTREFCLK1N_116
XC7VX330T-2FFG1157C
U1Q
Bank 117
DP0_C2M_P M2
DP0_C2M_N M1
DP0_M2C_P N4
DP0_M2C_N N3
DP1_C2M_P K2
DP1_C2M_N K1
DP1_M2C_P L4
DP1_M2C_N L3
DP2_C2M_P H2
DP2_C2M_N H1
DP2_M2C_P K6
DP2_M2C_N K5
DP3_C2M_P F2
DP3_C2M_N F1
DP3_M2C_P J4
DP3_M2C_N J3
GBTCLK0_M2C_P M6
GBTCLK0_M2C_N M5
GBTCLK1_M2C_P P6
GBTCLK1_M2C_N P5
MGTHTXP0_117
MGTHTXN0_117
MGTHRXP0_117
MGTHRXN0_117
MGTHTXP1_117
MGTHTXN1_117
MGTHRXP1_117
MGTHRXN1_117
MGTHTXP2_117
MGTHTXN2_117
MGTHRXP2_117
MGTHRXN2_117
MGTHTXP3_117
MGTHTXN3_117
MGTHRXP3_117
MGTHRXN3_117
MGTREFCLK0P_117
MGTREFCLK0N_117
MGTREFCLK1P_117
MGTREFCLK1N_117
XC7VX330T-2FFG1157C
trenz electronic
Title: TEC0330 - FPGA MGT BANKS
A4
Number: TEC0330 Default
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Date: 2017-10-16
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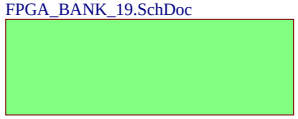
Filename: FPGA_MGT_BANKS.SchDoc

U_FPGA_BANK_19
FPGA_BANK_19.SchDoc



U_FPGA_BANK_37
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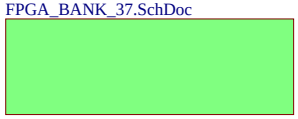

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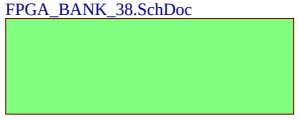
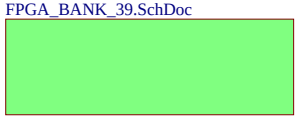
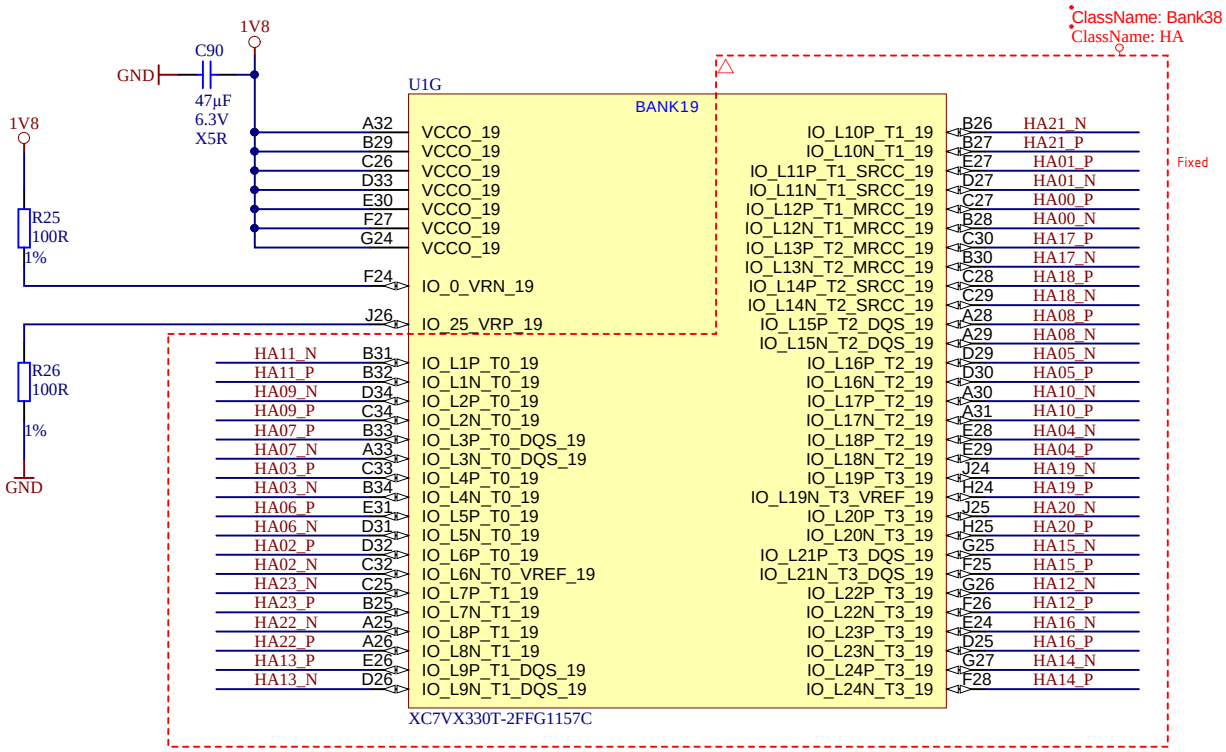


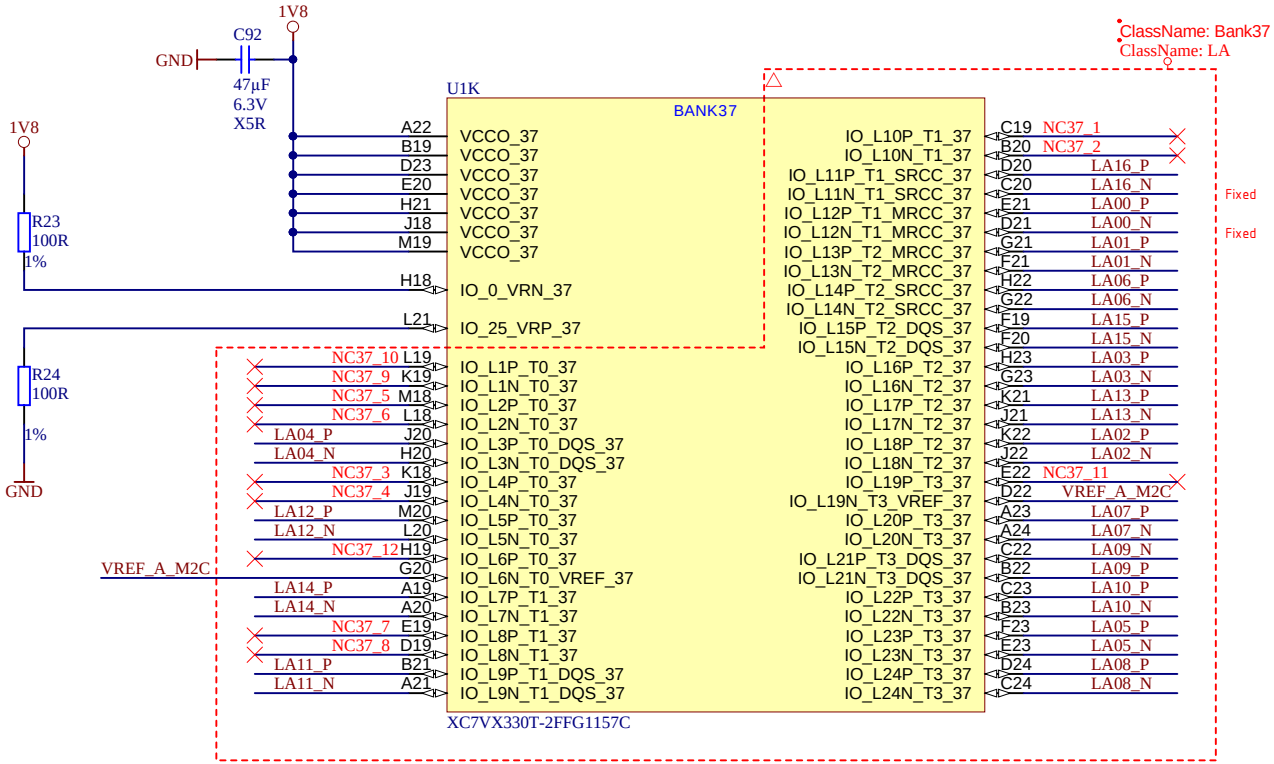
U_FPGA_BANK_39
FPGA_BANK_39.SchDoc



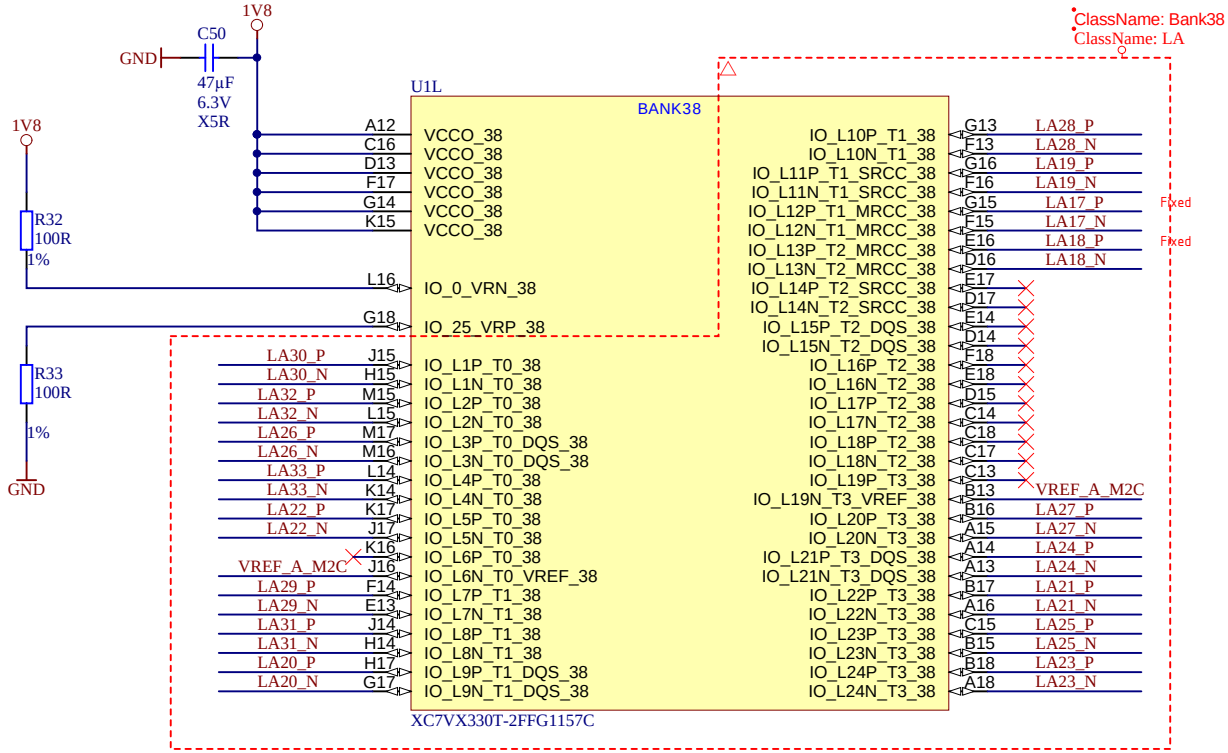
trenz electronic	Title: TEC0330 - FMC_BANKS		
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page 26 of 38
Filename: FMC_Banks.SchDoc			



trenz electronic	Title: TEC0330 - FPGA B19		
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page27 of 38
Filename: FPGA_BANK_19.SchDoc			



trenz electronic	Title: TEC0330 - FPGA B37		
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page28 of 38
Filename: FPGA_BANK_37.SchDoc			



trenz electronic	Title: TEC0330 - FPGA B38		
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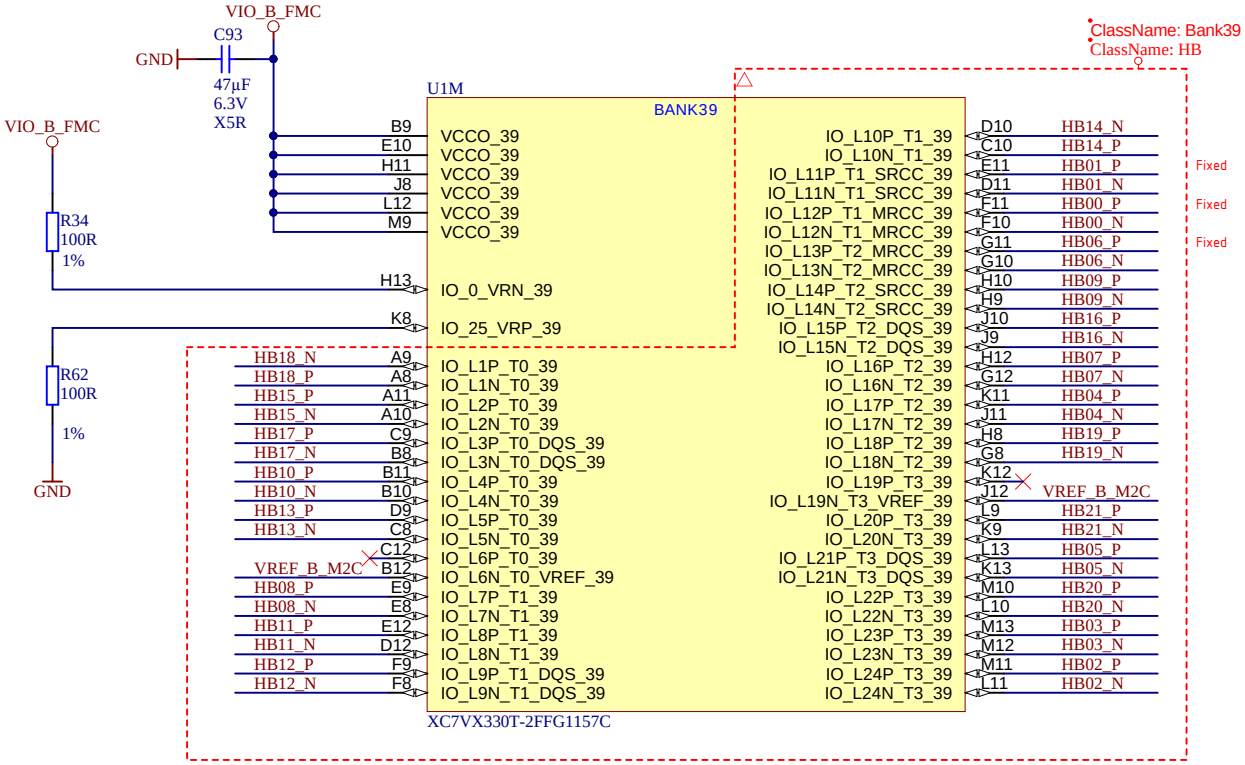
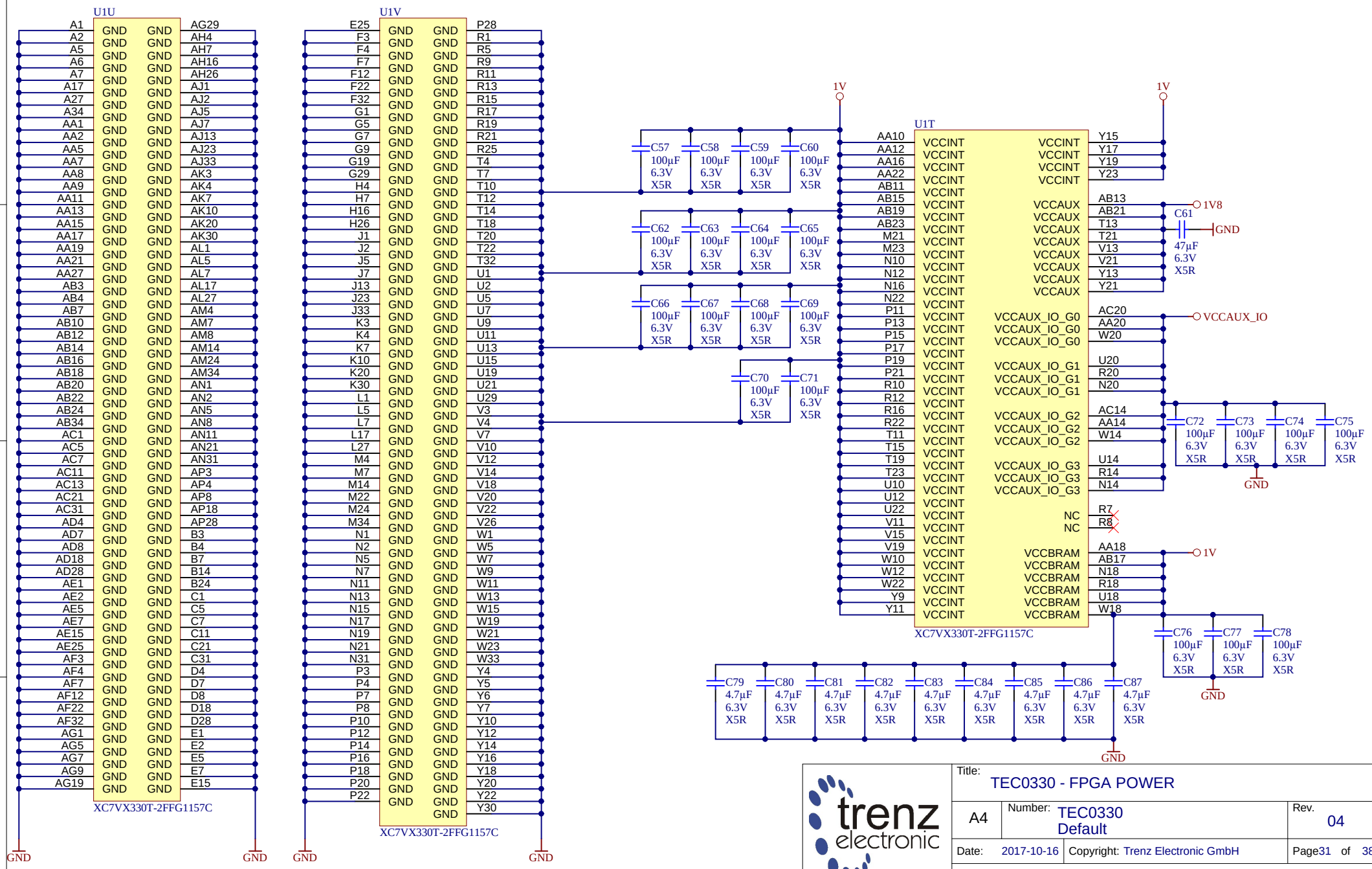
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page29 of 38
	Filename: FPGA_BANK_38.SchDoc		



trenz electronic	Title: TEC0330 - FPGA B39		
	A4	Number: TEC0330 Default	Rev. 04
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page30 of 38
	Filename: FPGA_BANK_39.SchDoc		


U1U
XC7VX330T-2FFG1157C
U1V
XC7VX330T-2FFG1157C
U1T
XC7VX330T-2FFG1157C
1V
1V8
VCCAUX_IO
GND
C57 C58 C59 C60 C62 C63 C64 C65 C66 C67 C68 C69 C70 C71
100µF 6.3V X5R
C61
47µF 6.3V X5R
C72 C73 C74 C75 C76 C77 C78
C79 C80 C81 C82 C83 C84 C85 C86 C87
4.7µF 6.3V X5R
NC
Title: TEC0330 - FPGA POWER
A4
Number: TEC0330 Default
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Filename: FPGA_POWER.SchDoc
trenz electronic

U_PWR_4V_1V5
PWR_4V_1V5.SchDoc

U_PWR_3V3
PWR_3V3.SchDoc

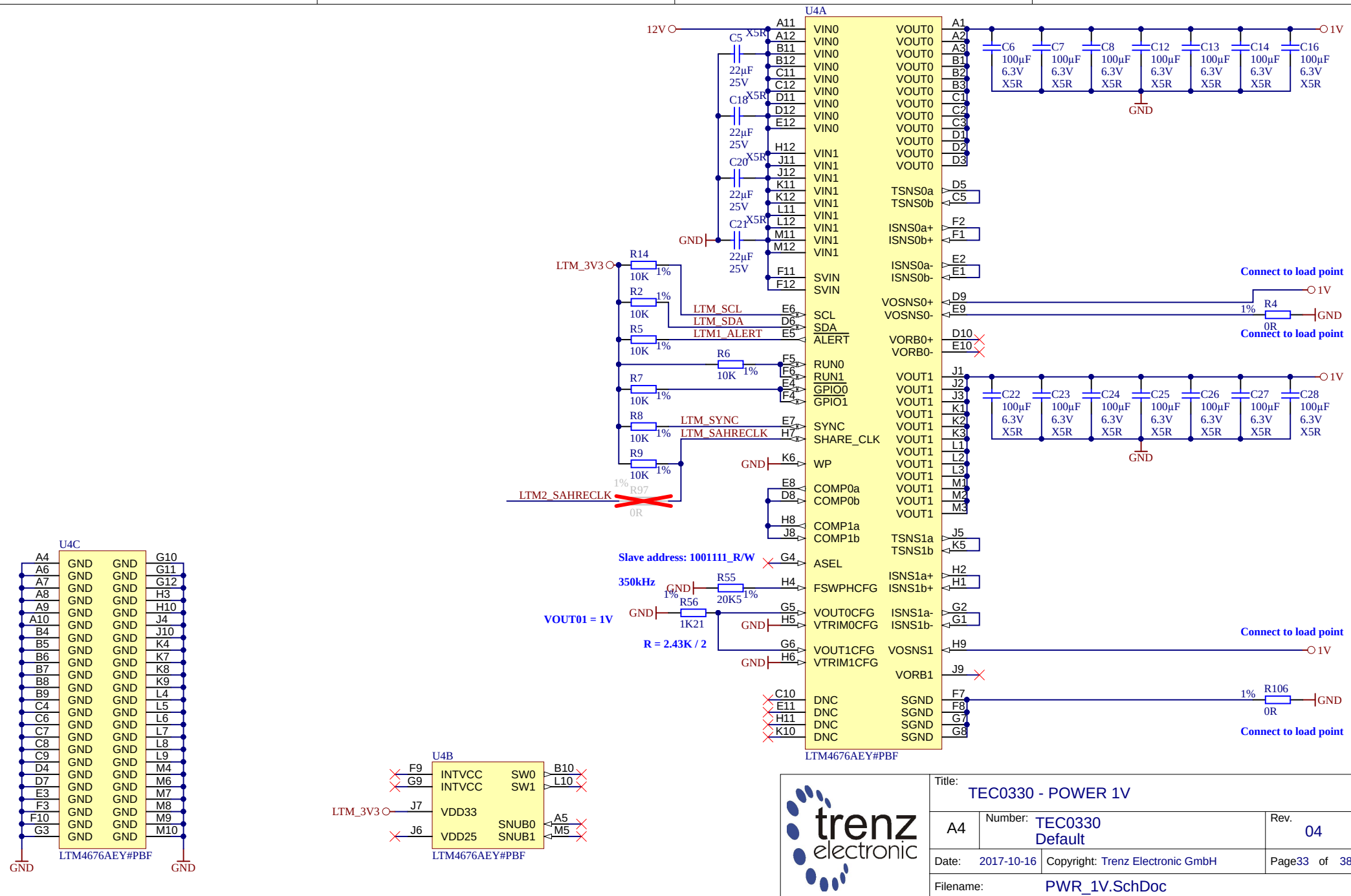
U_PWR_1V
PWR_1V.SchDoc

U_PWR_MGT
PWR_MGT.SchDoc

U_PWR_1V8
PWR_1V8.SchDoc

U_PWR_5V
PWR_5V.SchDoc

trenz electronic	Title: TEC0330 - POWER		
	A4	Number: TEC0330 Default	Rev. 04
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page32 of 38
	Filename: POWER.SchDoc		


U4A
LTM4676AEY#PBF
12V
1V
GND
LTM_3V3
LTM_SCL
LTM_SDA
LTM1_ALERT
LTM_SYNC
LTM_SAHRECLK
LTM2_SAHRECLK
Slave address: 1001111_R/W
350kHz
VOUT01 = 1V
R = 2.43K / 2
Connect to load point
U4C
U4B
Title: TEC0330 - POWER 1V
A4
Number: TEC0330 Default
Rev. 04
Date: 2017-10-16
Copyright: Trenz Electronic GmbH
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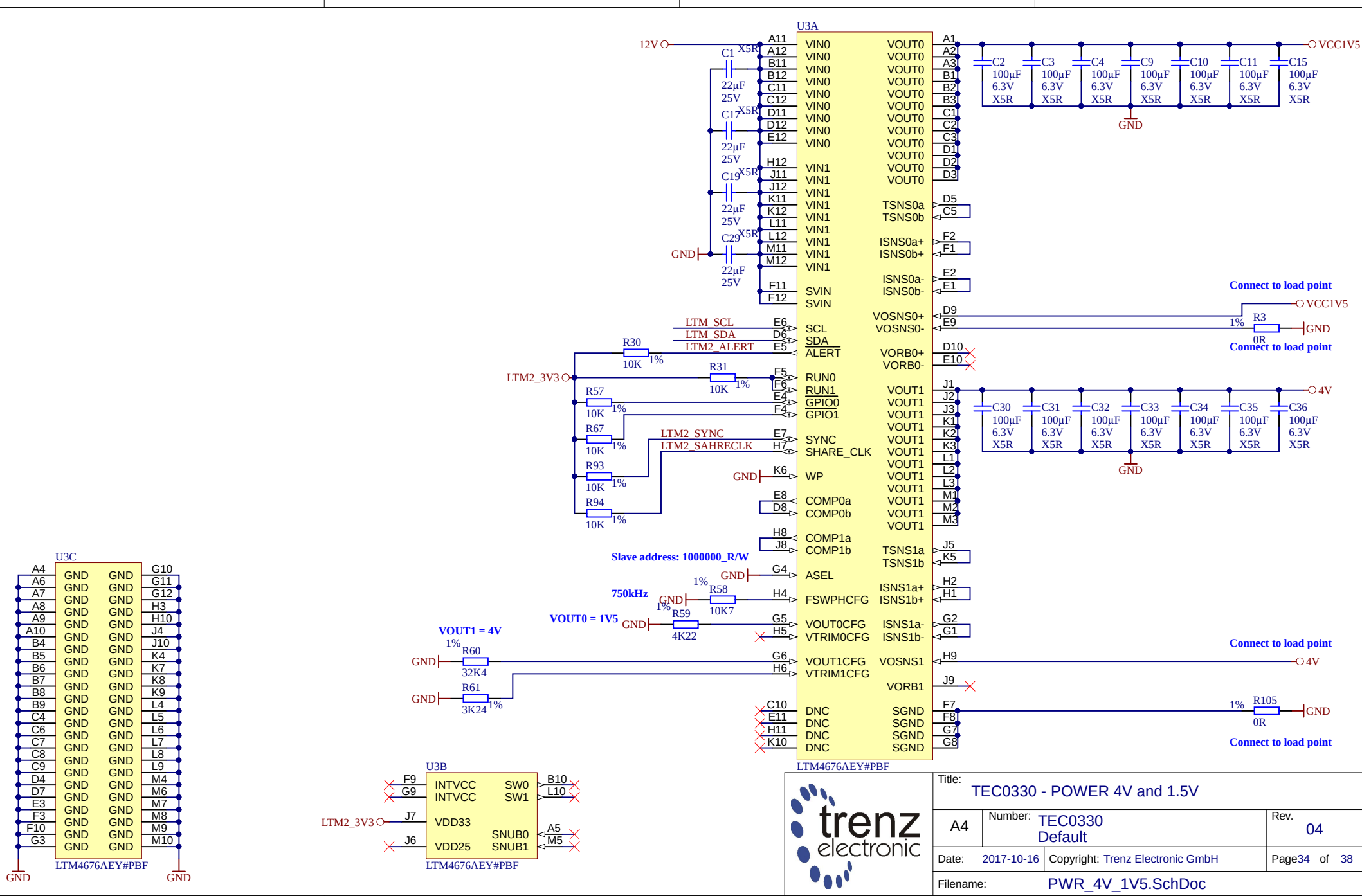
Filename: PWR_1V.SchDoc


U3A
LTM4676AEY#PBF
12V
VCC1V5
GND
C1 22µF 25V X5R
C17 22µF 25V X5R
C19 22µF 25V X5R
C29 22µF 25V X5R
C2 100µF 6.3V X5R
C3 100µF 6.3V X5R
C4 100µF 6.3V X5R
C9 100µF 6.3V X5R
C10 100µF 6.3V X5R
C11 100µF 6.3V X5R
C15 100µF 6.3V X5R
Connect to load point
R3 0R 1%
LTM_SCL
LTM_SDA
LTM2_ALERT
LTM2_3V3
R30 10K 1%
R31 10K 1%
R57 10K 1%
R67 10K 1%
R93 10K 1%
R94 10K 1%
LTM2_SYNC
LTM2_SAHRECLK
4V
C30 100µF 6.3V X5R
C31 100µF 6.3V X5R
C32 100µF 6.3V X5R
C33 100µF 6.3V X5R
C34 100µF 6.3V X5R
C35 100µF 6.3V X5R
C36 100µF 6.3V X5R
Slave address: 1000000_R/W
750kHz
R58 10K7 1%
R59 4K22 1%
VOUT0 = 1V5
VOUT1 = 4V
R60 32K4 1%
R61 3K24 1%
R105 0R 1%
U3C
U3B
LTM4676AEY#PBF
Title: TEC0330 - POWER 4V and 1.5V
A4
Number: TEC0330 Default
Rev. 04
Date: 2017-10-16
Copyright: Trenz Electronic GmbH
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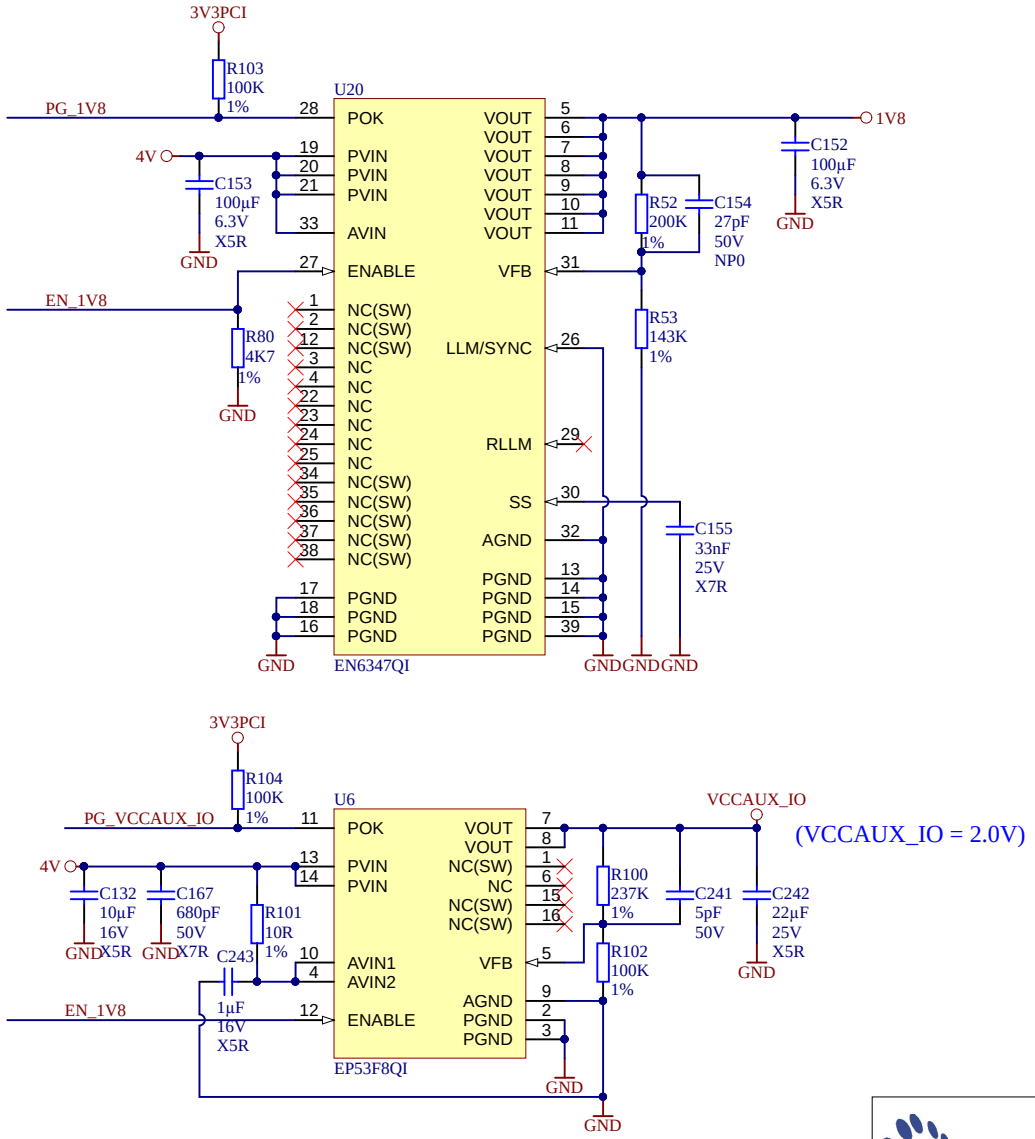
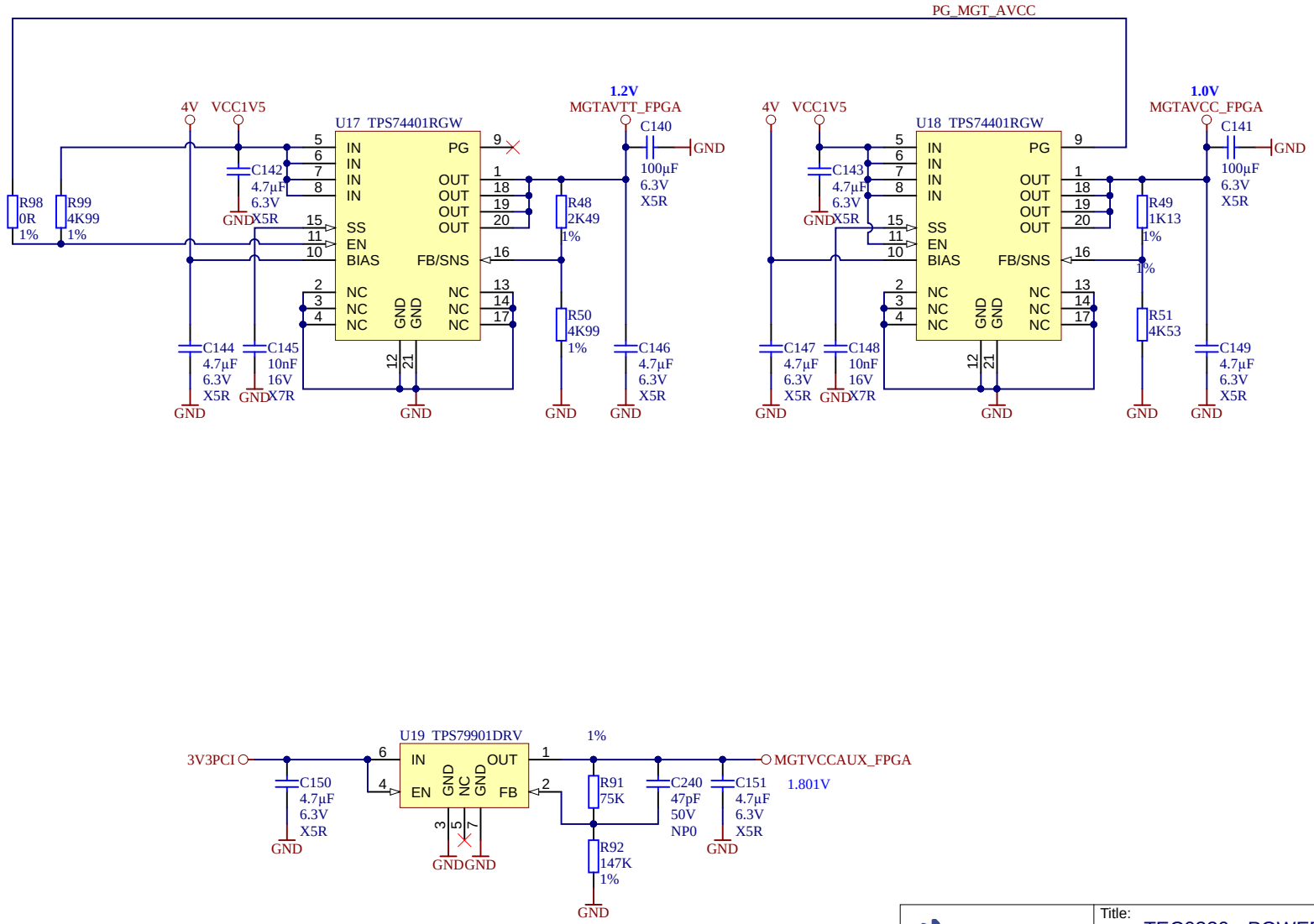
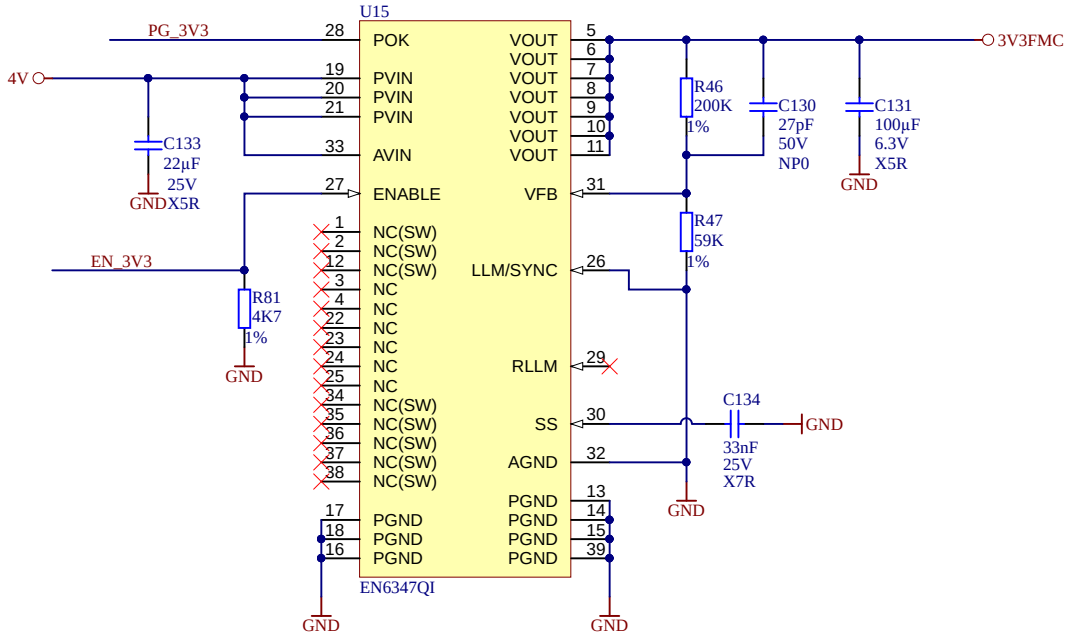
Filename: PWR_4V_1V5.SchDoc



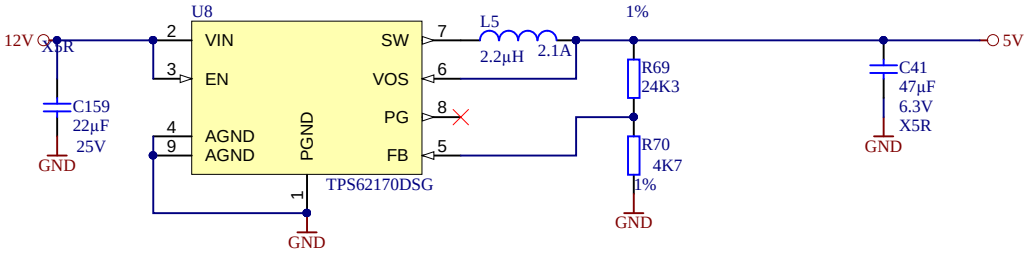
trenz electronic	Title: TEC0330 - POWER 1V8		
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page35 of 38
Filename: PWR_1V8.SchDoc			



trenz electronic	Title: TEC0330 - POWER MGT		
	A4	Number: TEC0330 Default	Rev. 04
	Date: 2017-10-16	Copyright: Trenz Electronic GmbH	Page 36 of 38
	Filename: PWR_MGT.SchDoc		



trenz electronic	Title: TEC0330 - POWER 3V3FMC		
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page 37 of 38
Filename: PWR_3V3.SchDoc			



Title: TEC0330 - POWER 5V			
A4	Number: TEC0330 Default		Rev. 04
Date: 2017-10-16	Copyright: Trenz Electronic GmbH		Page 38 of 38
Filename: PWR_5V.SchDoc			