U_FPGA_IO
FPGA_IO.SchDoc

U_B2B_Connector
B2B_Connector.SchDoc

U_FPGA_MGT
FPGA_MGT.SchDoc

U_POWER
POWER.SchDoc

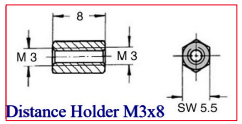
U_FPGA_MISC
FPGA_MISC.SchDoc

U_Revision
Revision Changes.SchDoc

Special notes:

Top of Board


Screw M3x4



Distance Holder M3x8


Screw M3x6

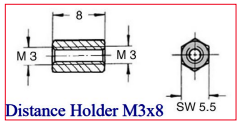
Mount.Hole 3.2mm
GND

Mount.Hole 3.2mm
GND

Mount.Hole 3.2mm
GND

Mount.Hole 3.2mm
GND


Screw M3x4



Distance Holder M3x8


Screw M3x6

Serial
Serial
Serialnumber 6,3 x 6.3mm

S/N
SN 1 0R 2 GND
0R

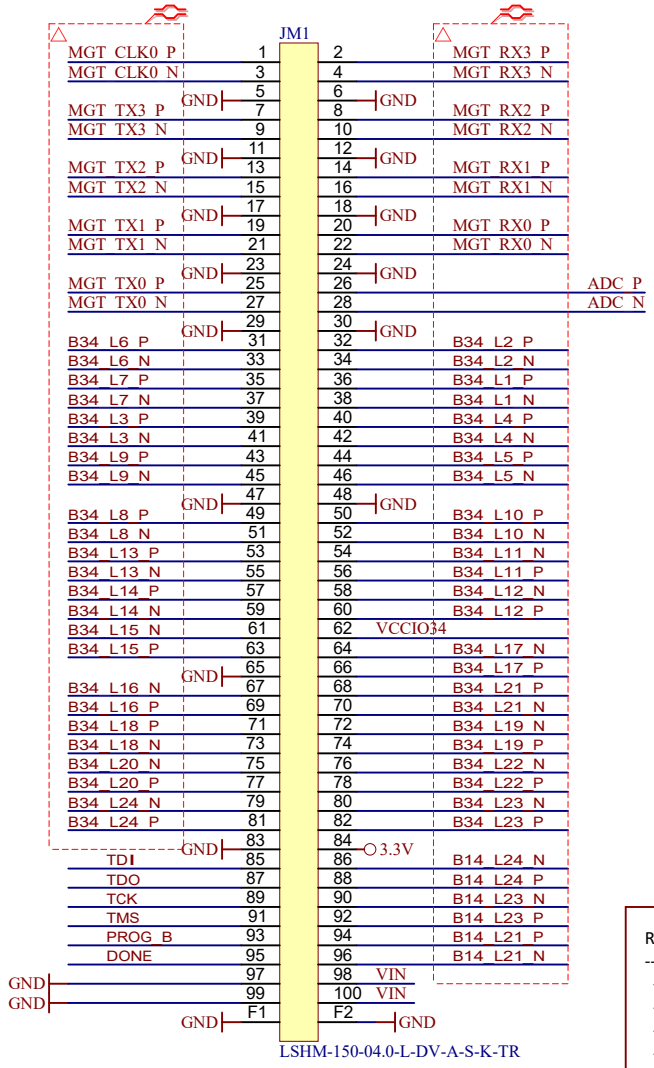
LOGO1
TE Logo PRINT Layer
LOGO PRINT

PM1 FIDU-DOT - mini
PM2 FIDU-DOT - mini
PM3 FIDU-DOT - mini
PM4 FIDU-DOT - mini
PM5 FIDU-DOT - mini
PM6 FIDU-DOT - mini

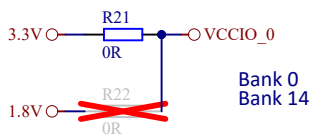
Assembly variant	S001
Created by	
Modified by	
Modified at	
SVN Revision	8634

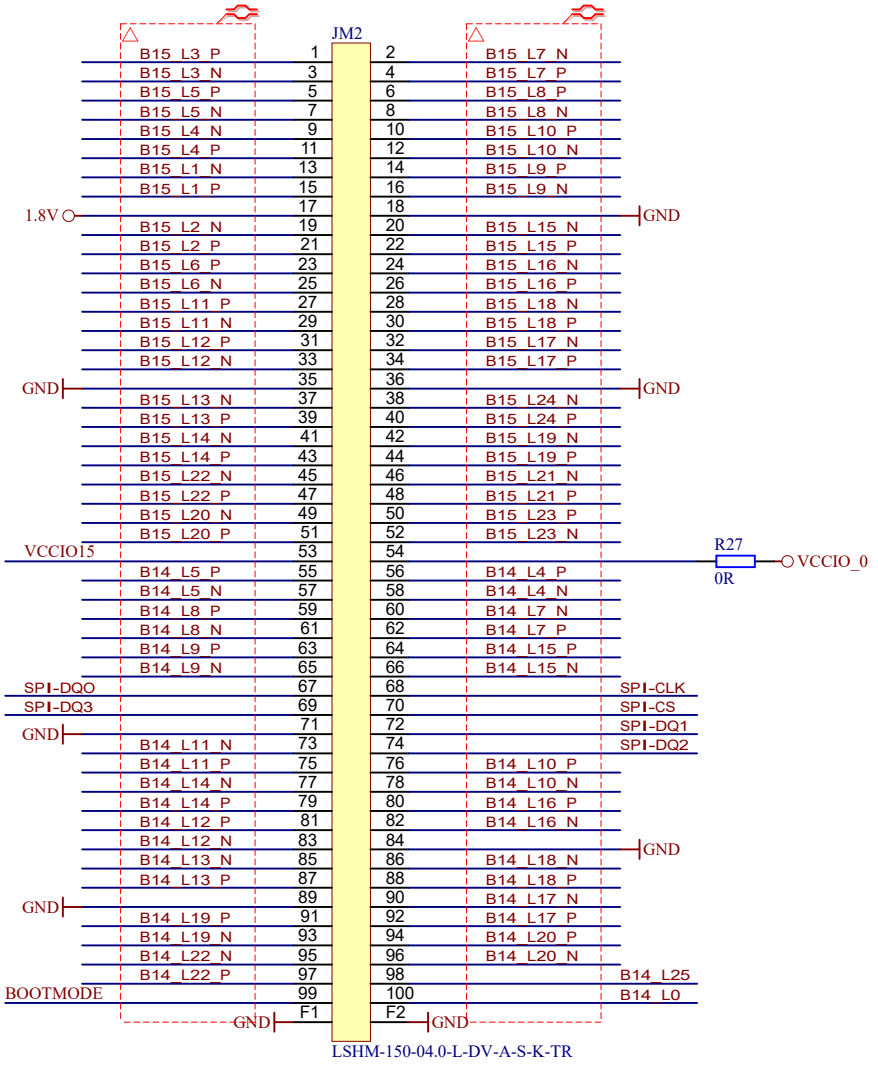
trenz electronic

Title: TE0714		
A4	Number: TE0714 S001	Rev. 03
Date: 2019-02-14	Copyright: Trenz Electronic GmbH / TT	Page1 of 7
Filename: TE0714.SchDoc		



R21	R22	R24	R25	R27	*JM2 pin 54 function
+	-	+	-	+	3.3V Power OUTPUT
-	+	-	+	+	1.8V Power OUTPUT
-	-	+	-	+	2.5V/3.3V Power Input
-	-	-	+	+	1.8V Power Input
?	?	?	?	-	Not connected





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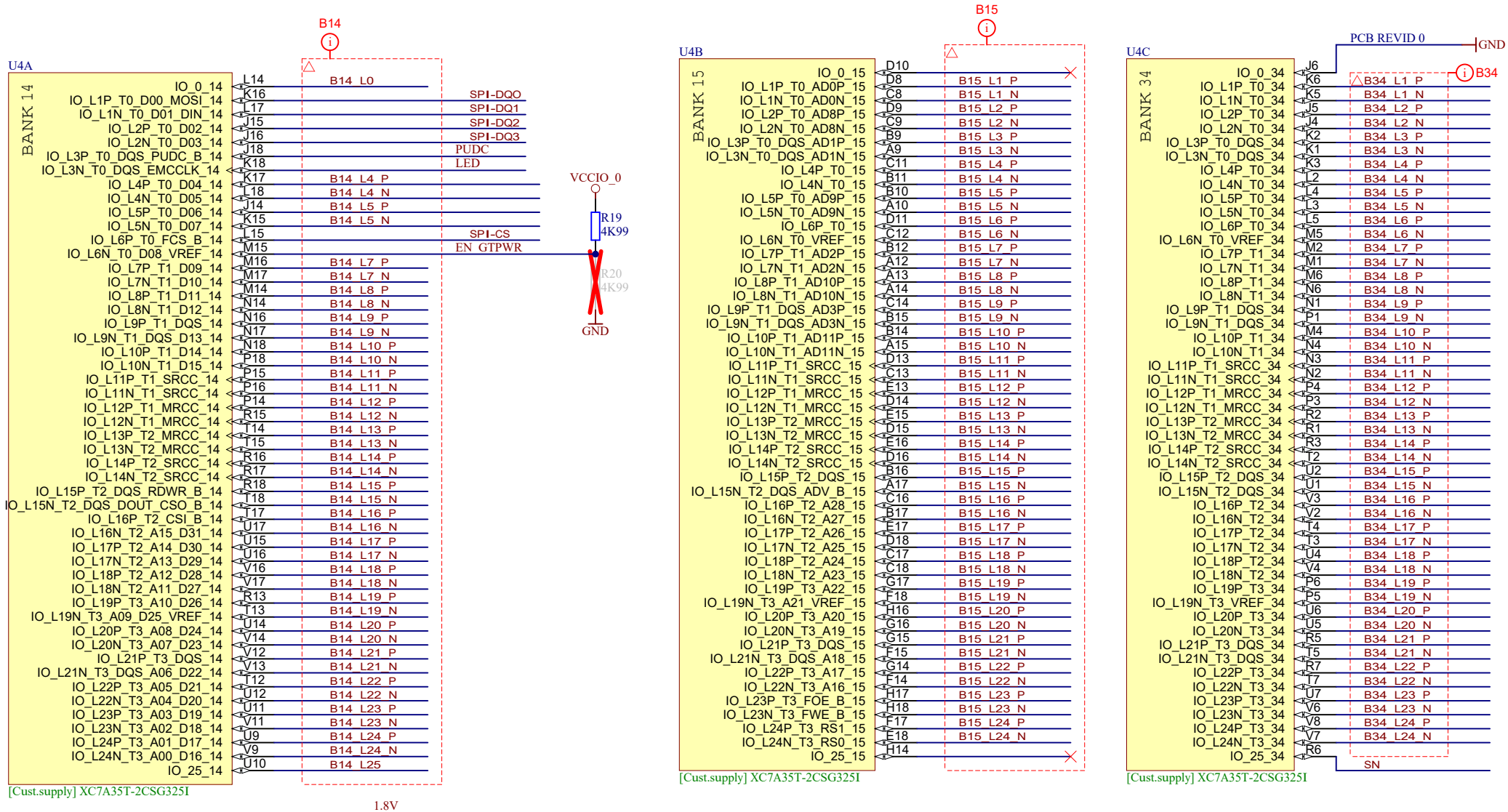
Date: 2019-02-14	Copyright: Trenz Electronic GmbH / TT		Page2 of 7
Filename: B2B_Connector.SchDoc			


B14
U4A
BANK 14
IO_0_14
IO_L1P_T0_D00_MOSI_14
IO_L1N_T0_D01_DIN_14
IO_L2P_T0_D02_14
IO_L2N_T0_D03_14
IO_L3P_T0_DQS_PUDC_B_14
IO_L3N_T0_DQS_EMCCLK_14
IO_L4P_T0_D04_14
IO_L4N_T0_D05_14
IO_L5P_T0_D06_14
IO_L5N_T0_D07_14
IO_L6P_T0_FCS_B_14
IO_L6N_T0_D08_VREF_14
IO_L7P_T1_D09_14
IO_L7N_T1_D10_14
IO_L8P_T1_D11_14
IO_L8N_T1_D12_14
IO_L9P_T1_DQS_14
IO_L9N_T1_DQS_D13_14
IO_L10P_T1_D14_14
IO_L10N_T1_D15_14
IO_L11P_T1_SRCC_14
IO_L11N_T1_SRCC_14
IO_L12P_T1_MRCC_14
IO_L12N_T1_MRCC_14
IO_L13P_T2_MRCC_14
IO_L13N_T2_MRCC_14
IO_L14P_T2_SRCC_14
IO_L14N_T2_SRCC_14
IO_L15P_T2_DQS_RDWR_B_14
IO_L15N_T2_DQS_DOUT_CSO_B_14
IO_L16P_T2_CSI_B_14
IO_L16N_T2_A15_D31_14
IO_L17P_T2_A14_D30_14
IO_L17N_T2_A13_D29_14
IO_L18P_T2_A12_D28_14
IO_L18N_T2_A11_D27_14
IO_L19P_T3_A10_D26_14
IO_L19N_T3_A09_D25_VREF_14
IO_L20P_T3_A08_D24_14
IO_L20N_T3_A07_D23_14
IO_L21P_T3_DQS_14
IO_L21N_T3_DQS_A06_D22_14
IO_L22P_T3_A05_D21_14
IO_L22N_T3_A04_D20_14
IO_L23P_T3_A03_D19_14
IO_L23N_T3_A02_D18_14
IO_L24P_T3_A01_D17_14
IO_L24N_T3_A00_D16_14
IO_25_14
B14_L0
SPI-DQ0
SPI-DQ1
SPI-DQ2
SPI-DQ3
PUDC
LED
B14_L4_P
B14_L4_N
B14_L5_P
B14_L5_N
SPI-CS
EN_GTPWR
B14_L7_P
B14_L7_N
B14_L8_P
B14_L8_N
B14_L9_P
B14_L9_N
B14_L10_P
B14_L10_N
B14_L11_P
B14_L11_N
B14_L12_P
B14_L12_N
B14_L13_P
B14_L13_N
B14_L14_P
B14_L14_N
B14_L15_P
B14_L15_N
B14_L16_P
B14_L16_N
B14_L17_P
B14_L17_N
B14_L18_P
B14_L18_N
B14_L19_P
B14_L19_N
B14_L20_P
B14_L20_N
B14_L21_P
B14_L21_N
B14_L22_P
B14_L22_N
B14_L23_P
B14_L23_N
B14_L24_P
B14_L24_N
B14_L25
VCCIO_0
R19
4K99
R20
4K99
GND
[Cust.supply] XC7A35T-2CSG325I
B15
U4B
BANK 15
IO_0_15
IO_L1P_T0_AD0P_15
IO_L1N_T0_AD0N_15
IO_L2P_T0_AD8P_15
IO_L2N_T0_AD8N_15
IO_L3P_T0_DQS_AD1P_15
IO_L3N_T0_DQS_AD1N_15
IO_L4P_T0_15
IO_L4N_T0_15
IO_L5P_T0_AD9P_15
IO_L5N_T0_AD9N_15
IO_L6P_T0_15
IO_L6N_T0_VREF_15
IO_L7P_T1_AD2P_15
IO_L7N_T1_AD2N_15
IO_L8P_T1_AD10P_15
IO_L8N_T1_AD10N_15
IO_L9P_T1_DQS_AD3P_15
IO_L9N_T1_DQS_AD3N_15
IO_L10P_T1_AD11P_15
IO_L10N_T1_AD11N_15
IO_L11P_T1_SRCC_15
IO_L11N_T1_SRCC_15
IO_L12P_T1_MRCC_15
IO_L12N_T1_MRCC_15
IO_L13P_T2_MRCC_15
IO_L13N_T2_MRCC_15
IO_L14P_T2_SRCC_15
IO_L14N_T2_SRCC_15
IO_L15P_T2_DQS_15
IO_L15N_T2_DQS_ADV_B_15
IO_L16P_T2_A28_15
IO_L16N_T2_A27_15
IO_L17P_T2_A26_15
IO_L17N_T2_A25_15
IO_L18P_T2_A24_15
IO_L18N_T2_A23_15
IO_L19P_T3_A22_15
IO_L19N_T3_A21_VREF_15
IO_L20P_T3_A20_15
IO_L20N_T3_A19_15
IO_L21P_T3_DQS_15
IO_L21N_T3_DQS_A18_15
IO_L22P_T3_A17_15
IO_L22N_T3_A16_15
IO_L23P_T3_FOE_B_15
IO_L23N_T3_FWE_B_15
IO_L24P_T3_RS1_15
IO_L24N_T3_RS0_15
IO_25_15
B15_L1_P
B15_L1_N
B15_L2_P
B15_L2_N
B15_L3_P
B15_L3_N
B15_L4_P
B15_L4_N
B15_L5_P
B15_L5_N
B15_L6_P
B15_L6_N
B15_L7_P
B15_L7_N
B15_L8_P
B15_L8_N
B15_L9_P
B15_L9_N
B15_L10_P
B15_L10_N
B15_L11_P
B15_L11_N
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B15_L22_P
B15_L22_N
B15_L23_P
B15_L23_N
B15_L24_P
B15_L24_N
[Cust.supply] XC7A35T-2CSG325I
U4C
BANK 34
IO_0_34
IO_L1P_T0_34
IO_L1N_T0_34
IO_L2P_T0_34
IO_L2N_T0_34
IO_L3P_T0_DQS_34
IO_L3N_T0_DQS_34
IO_L4P_T0_34
IO_L4N_T0_34
IO_L5P_T0_34
IO_L5N_T0_34
IO_L6P_T0_34
IO_L6N_T0_VREF_34
IO_L7P_T1_34
IO_L7N_T1_34
IO_L8P_T1_34
IO_L8N_T1_34
IO_L9P_T1_DQS_34
IO_L9N_T1_DQS_34
IO_L10P_T1_34
IO_L10N_T1_34
IO_L11P_T1_SRCC_34
IO_L11N_T1_SRCC_34
IO_L12P_T1_MRCC_34
IO_L12N_T1_MRCC_34
IO_L13P_T2_MRCC_34
IO_L13N_T2_MRCC_34
IO_L14P_T2_SRCC_34
IO_L14N_T2_SRCC_34
IO_L15P_T2_DQS_34
IO_L15N_T2_DQS_34
IO_L16P_T2_34
IO_L16N_T2_34
IO_L17P_T2_34
IO_L17N_T2_34
IO_L18P_T2_34
IO_L18N_T2_34
IO_L19P_T3_34
IO_L19N_T3_VREF_34
IO_L20P_T3_34
IO_L20N_T3_34
IO_L21P_T3_DQS_34
IO_L21N_T3_DQS_34
IO_L22P_T3_34
IO_L22N_T3_34
IO_L23P_T3_34
IO_L23N_T3_34
IO_L24P_T3_34
IO_L24N_T3_34
IO_25_34
PCB REVID 0
GND
B34
B34_L1_P
B34_L1_N
B34_L2_P
B34_L2_N
B34_L3_P
B34_L3_N
B34_L4_P
B34_L4_N
B34_L5_P
B34_L5_N
B34_L6_P
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B34_L7_P
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B34_L18_P
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B34_L19_P
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B34_L20_P
B34_L20_N
B34_L21_P
B34_L21_N
B34_L22_P
B34_L22_N
B34_L23_P
B34_L23_N
B34_L24_P
B34_L24_N
SN
[Cust.supply] XC7A35T-2CSG325I
VCCIO_0
R17
470R
1%
PUDC
R18
470R
1%
GND
PUDC Assembly OPTION
1.8V
L2
BKP0603HS121-T
C24
470nF
GND
U8
VDD
CLK
OE/ST
GND
SiT8008BI-73-18S-25.000000E
CLK25M
R23
33R
B14_L13_P
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Title: TE0714
A4
Number: TE0714 S001
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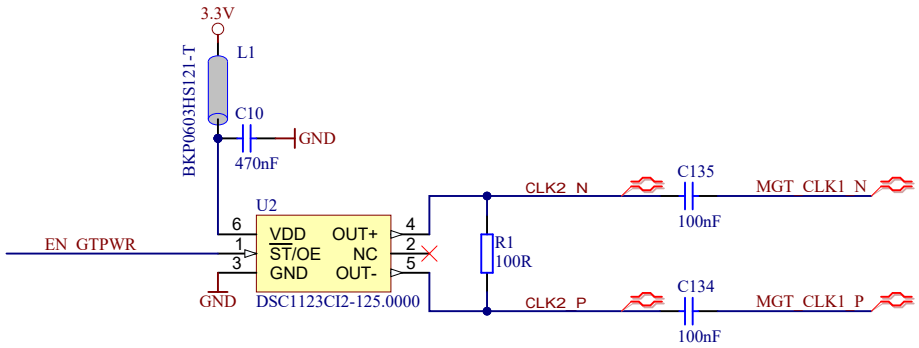
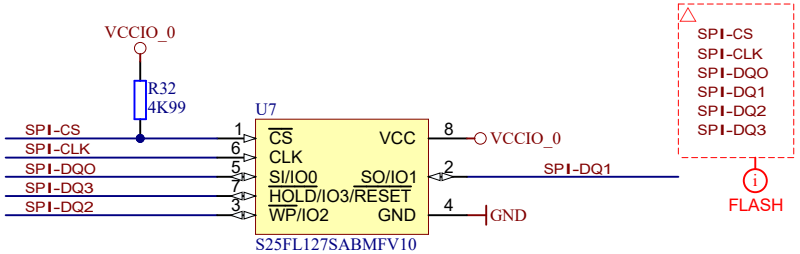
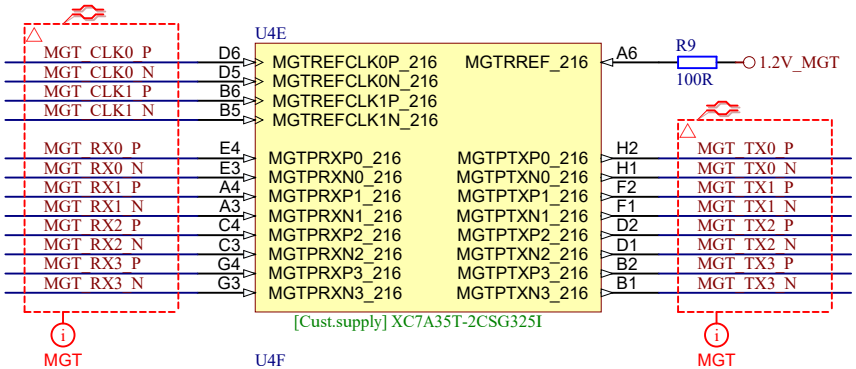
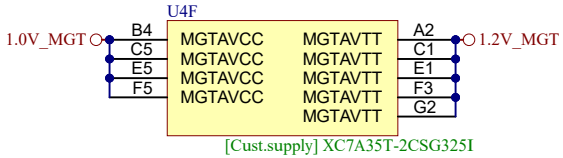
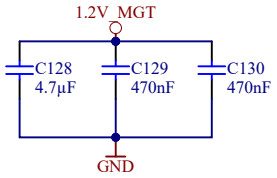
Filename: FPGA_IO.SchDoc

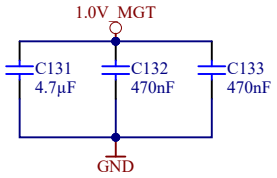












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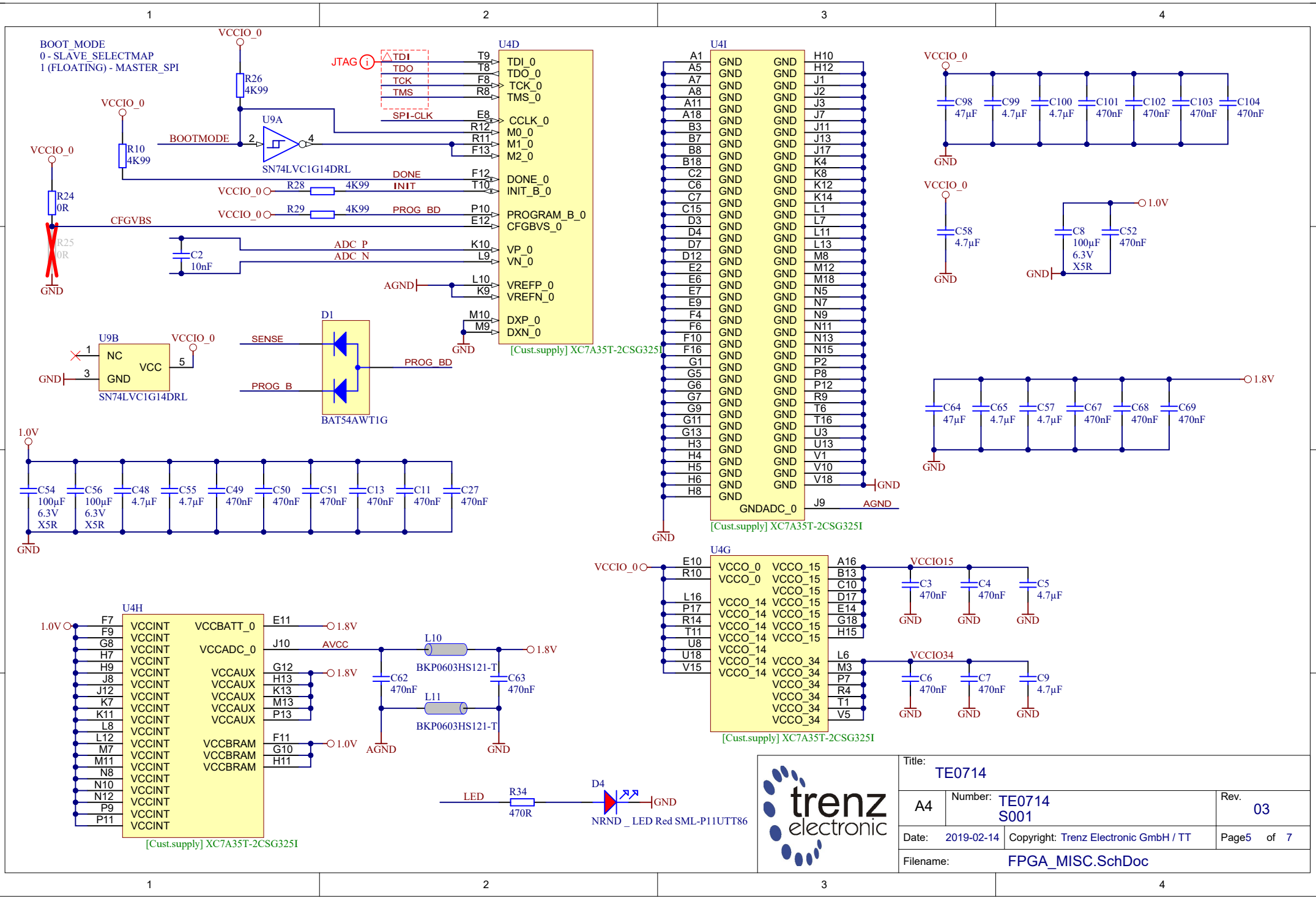
Filename: FPGA_MGT.SchDoc			


BOOT_MODE
0 - SLAVE_SELECTMAP
1 (FLOATING) - MASTER_SPI
VCCIO_0
R26 4K99
R10 4K99
R24 0R
R25 0R
GND
CFGVBS
BOOTMODE
U9A
SN74LVC1G14DRL
JTAG
TDI
TDO
TCK
TMS
SPI-CLK
U4D
TDI_0
TDO_0
TCK_0
TMS_0
CCLK_0
M0_0
M1_0
M2_0
DONE_0
INIT_B_0
PROGRAM_B_0
CFGBVS_0
VP_0
VN_0
VREFP_0
VREFN_0
DXP_0
DXN_0
DONE
INIT
R28 4K99
PROG_BD
R29 4K99
C2 10nF
ADC_P
ADC_N
AGND
[Cust.supply] XC7A35T-2CSG325I
U9B
NC
VCC
GND
SN74LVC1G14DRL
D1
SENSE
PROG_B
PROG_BD
BAT54AWT1G
1.0V
C54 100µF 6.3V X5R
C56 100µF 6.3V X5R
C48 4.7µF
C55 4.7µF
C49 470nF
C50 470nF
C51 470nF
C13 470nF
C11 470nF
C27 470nF
U4I
GNDADC_0
J9
AGND
C98 47µF
C99 4.7µF
C100 4.7µF
C101 470nF
C102 470nF
C103 470nF
C104 470nF
C58 4.7µF
C8 100µF 6.3V X5R
C52 470nF
1.0V
C64 47µF
C65 4.7µF
C57 4.7µF
C67 470nF
C68 470nF
C69 470nF
1.8V
U4G
VCCIO15
VCCIO34
C3 470nF
C4 470nF
C5 4.7µF
C6 470nF
C7 470nF
C9 4.7µF
U4H
VCCBATT_0
VCCADC_0
VCCAUX
VCCBRAM
AVCC
L10 BKP0603HS121-T
L11 BKP0603HS121-T
C62 470nF
C63 470nF
LED
R34 470R
D4
NRND _ LED Red SML-P11UTT86
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A4
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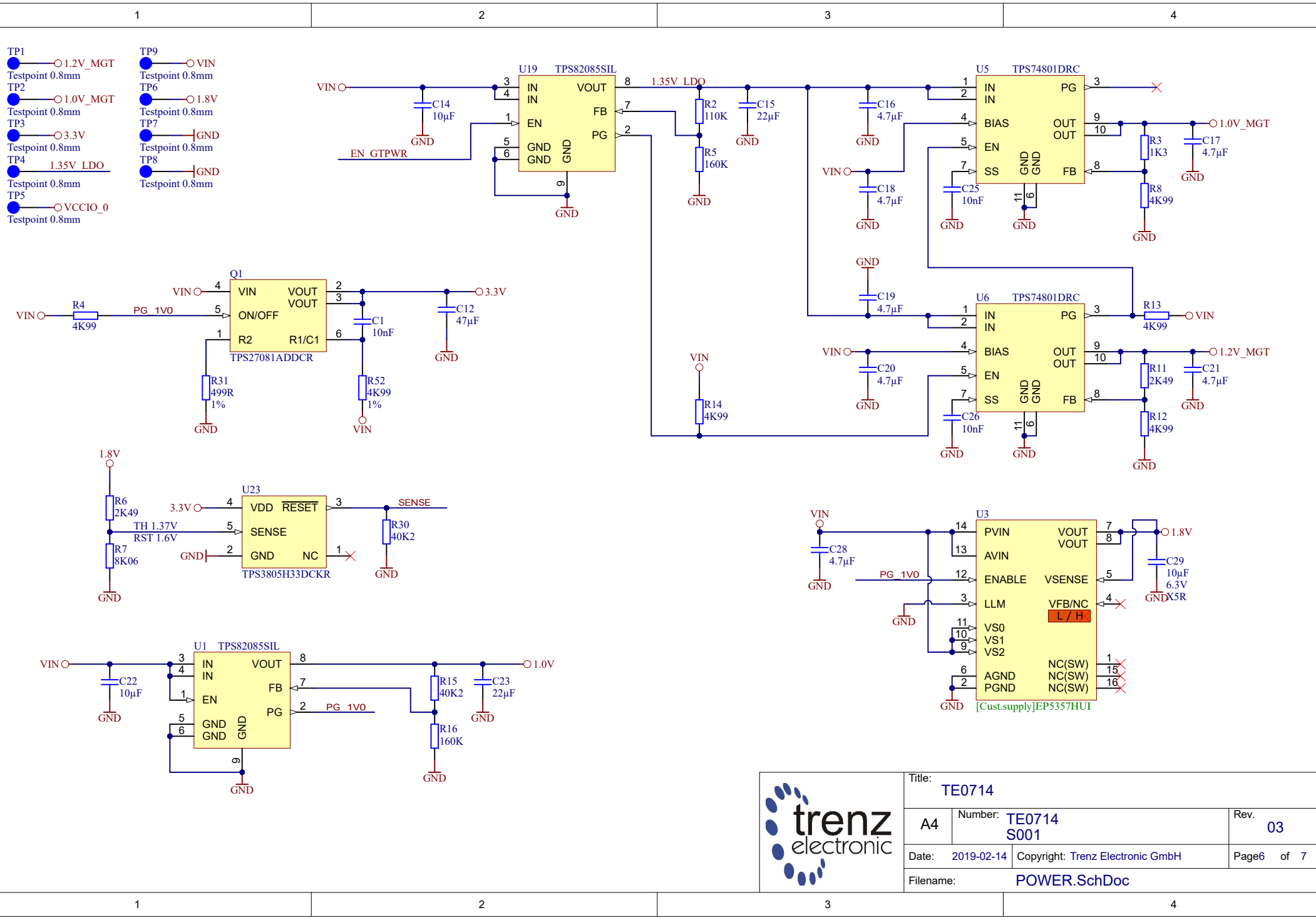

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Changes REV 02:

1. Added 0 ohm strap option to supply VCCIO0 on B2B connector
2. Added PCB Revision sense support. PCB Revision readout possible from HDL Design
3. Updated FPGA pin PROG_B connection. TPS3805H33 push-pull output RESET_N not affected on baseboard circuit, connected to PROG_B.
4. C8, C54, C56 updated to 100uF for variant 50-2I
5. Added testpoints

Changes REV 02A (12.2018):

1. New FLASH memory U7 S25FL127SABMFV10

Changes REV 03:

1) Changed obsolete component U3 (LXDC2HL18A-052 -> EP5357HUI)
2) DXP/DXN connected to GND (recommendation UG475, p31)
3) Added serial number to silk
4) Changed obsolet component Q1 (TPS27082LDDCR ->TPS27081ADDCR)
5) Full update LIB
6) Optimized testpoints placement

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