

1

2

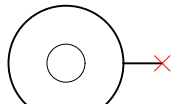
3

4

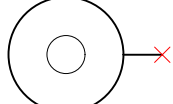
LOGO1
TE Logo PRINT Layer
LOGO PRINT

POWER

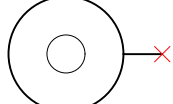
CPLD



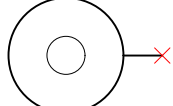
Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe

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



PM1 FIDU-DOT - small PM2 FIDU-DOT - small PM3 FIDU-DOT - small



PM4 PM5 PM6

ETH-PHY1

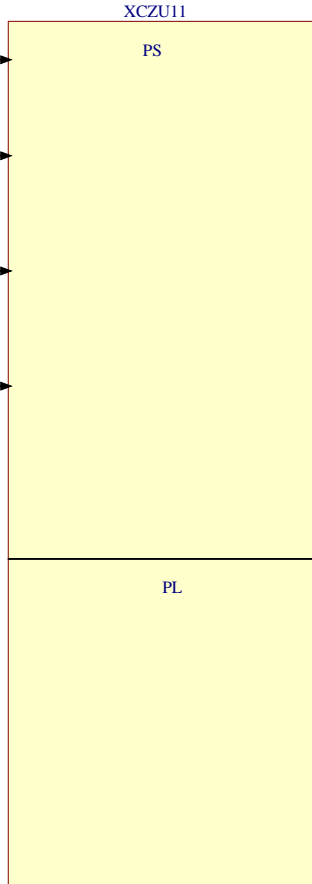
ETH-PHY2

SD

CAN_PHY

CLOCK

MISC



PCIe_Switch

M2_PCIe_key_M

M2_PCIe_key_E

SMBUS

DDR4-PS

FTDI

FireFly

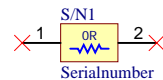
B2B

DDR4-PL

I2C address	Description	Connection
0x40	+12V, Current Monitor	CPLD
0x48	Temperature Sensor of +0.85V_VCCINT DC-DC	CPLD
0x49	Temperature Sensor of MB	CPLD
0x4A	Temperature Sensor of DDR power and +1.8V	CPLD
0x4B	Temperature Sensor of +3.3V	CPLD
0x4C	Temperature Sensor with Integrated Fan Control	CPLD
0x4D	Temperature Sensor of +1.2V_GT_AVTT	CPLD
0x4E	Temperature Sensor of +0.9V_GT_AVCC	CPLD
0x51	EEPROM1	FPGA, I2C0
0x52	EEPROM2	FPGA, I2C0
0x53	EEPROM3	FPGA, I2C0
0x54	EEPROM4	FPGA, I2C0
0x57	SRAM of RTC	FPGA, I2C0
0x68	DSPLL0	FPGA, I2C1
0x69	DSPLL1	FPGA, I2C1
0x6F	RTC	FPGA, I2C0
0x70	I2C Multiplexer	FPGA, I2C1

MISC1
Digilent_Serialnumber
Digilent_SN

Serial1
Serial
Serialnumber 6,3 x 6.3mm



Title: TEB0912		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 1 of 61
Drawn by: IG	Filename: TEB0912.schdoc	

1

2

3

4

1

2

3

4

XCZU11_Config



XCZU11_88_89_90_91_HD



XCZU11_500_501_502_MIO



XCZU11_64_65_HP



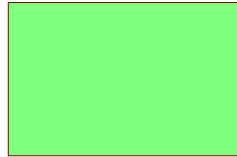
XCZU11_88_89_90_91_HD



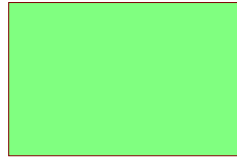
XCZU11_504_PSDDR



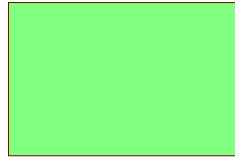
XCZU11_66_67_HP



XCZU11_128_129_130_131_MGT



XCZU11_505_MGT



XCZU11_68_69_HP



XCZU11_224_225_226_227_MGT



XCZU11_POWER



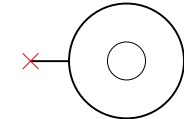
XCZU11_70_71_HP



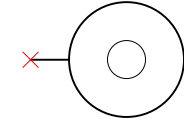
XCZU11_228_229_230_231_MGT



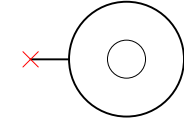
XCZU11_GND



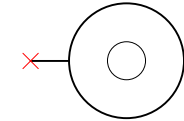
Mount.Hole 3.2mm




Mount.Hole 3.2mm



Mount.Hole 3.2mm



Mount.Hole 3.2mm

		Title: XCZU11	
		A4	Number: TEB0912 ABI21-A
Date: 2019-04-09		Copyright: Trenz Electronic GmbH	
Page 2 of 61		Filename: XCZU11.schdoc	
Drawn by: IG			

1

2

3

4

A

A

B

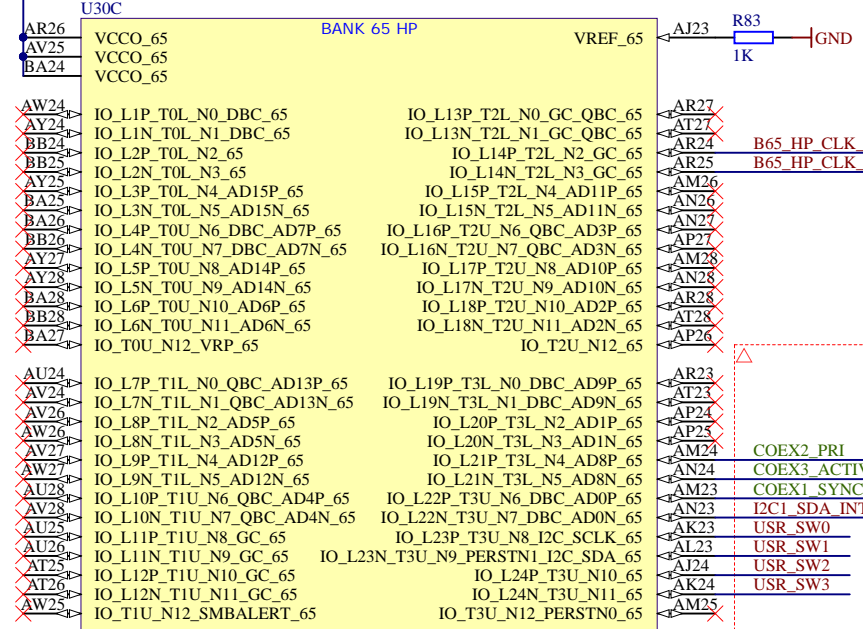
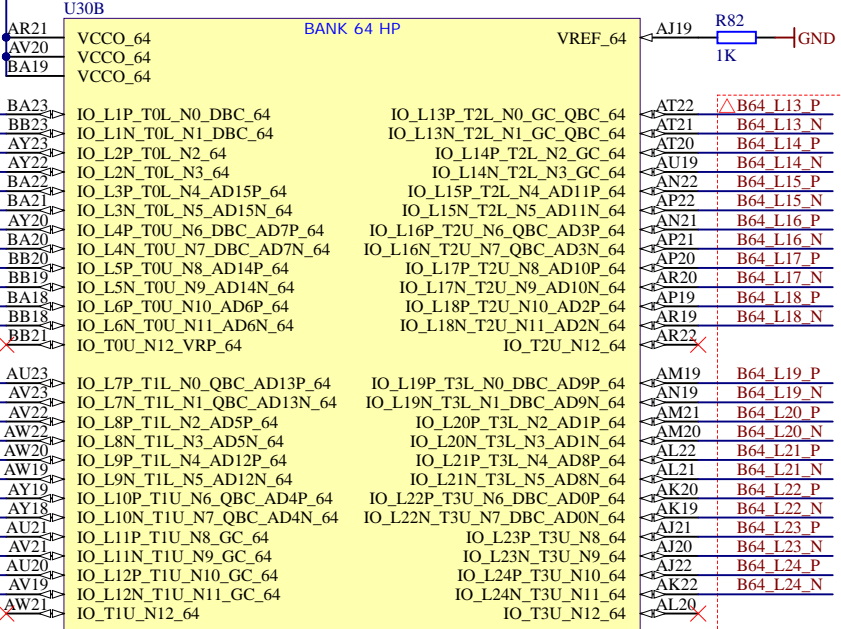
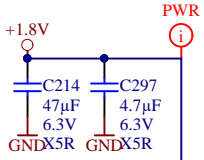
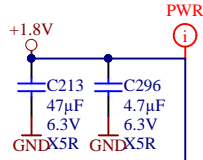
B

C

C

D

D

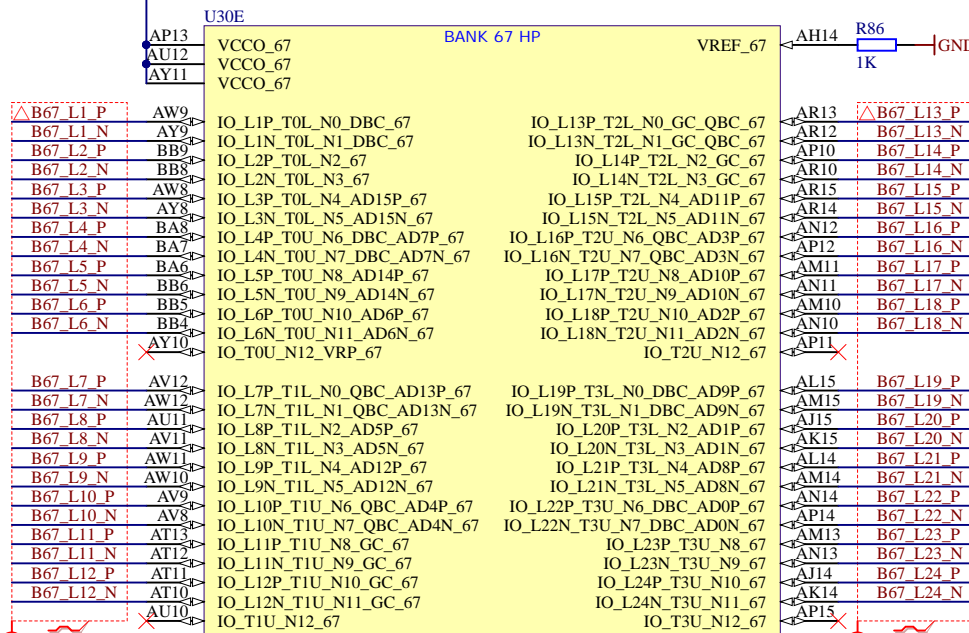
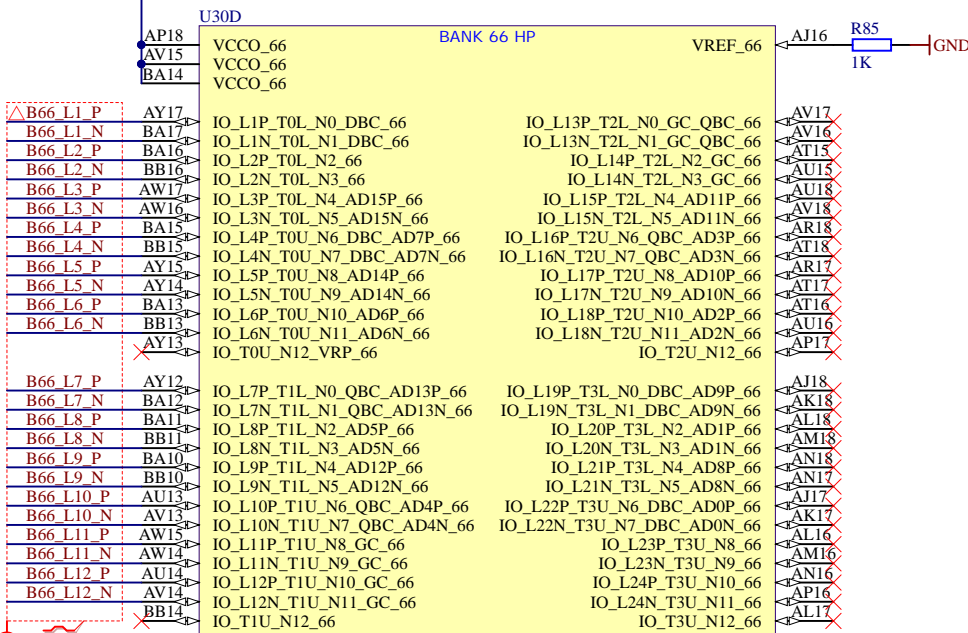
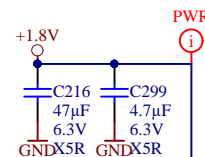
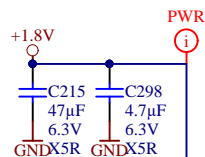


XCZU11EG-1FFVCI7601
B64

XCZU11EG-1FFVCI7601
B64

XCZU11EG-1FFVCI7601
B65

	Title: XCZU11_64_65_HP		
	A4	Number: TEB0912 ABI21-A	Rev. 02
	Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 3 of 61
	Drawn by: IG	Filename: XCZU11_64_65_HP.schdoc	



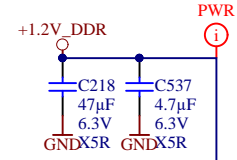
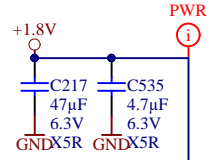
B66

B67

B67

Title: XCZU11_66_67_HP

A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 4 of 61
Drawn by: IG	Filename: XCZU11_66_67_HP.schdoc	



A

A

B

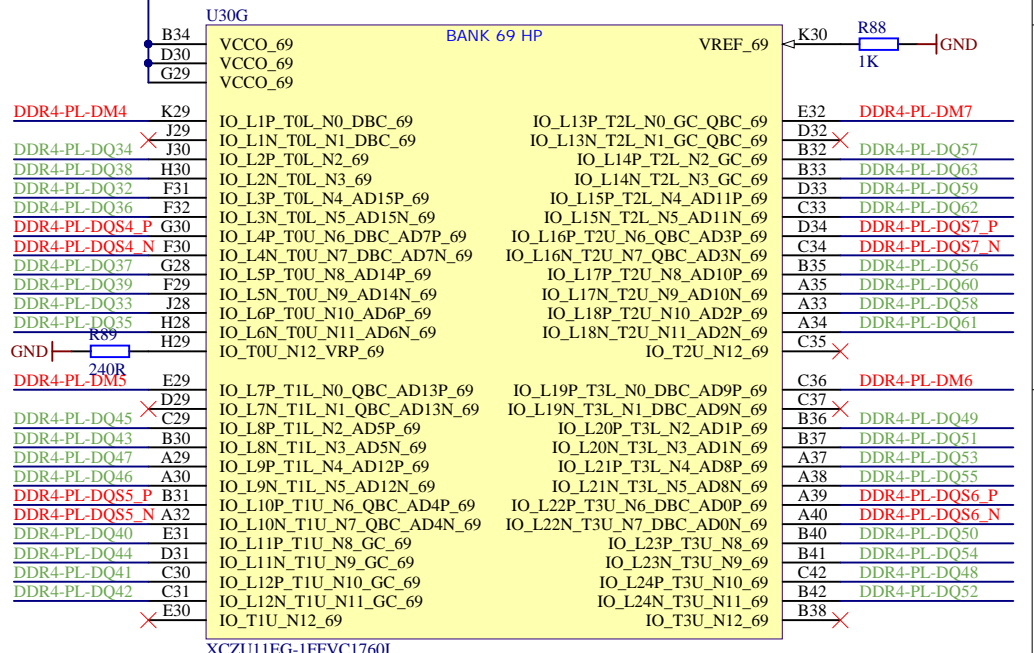
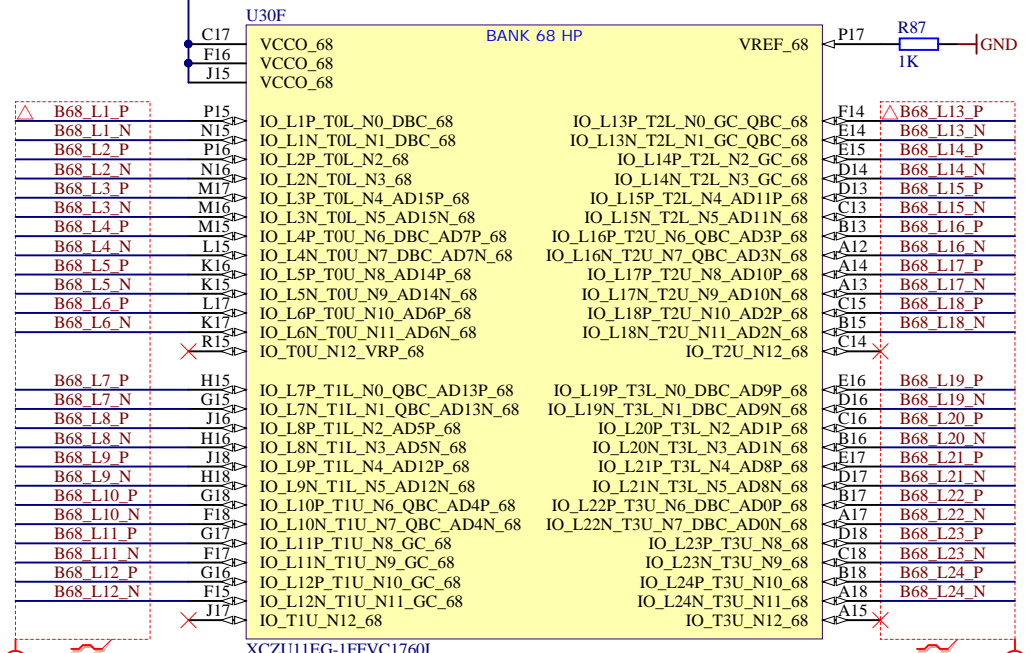
B

C

C

D

D



Title: XCZU11_68_69_HP		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 5 of 61
Drawn by: IG	Filename: XCZU11_68_69_HP.schdoc	

A

A

B

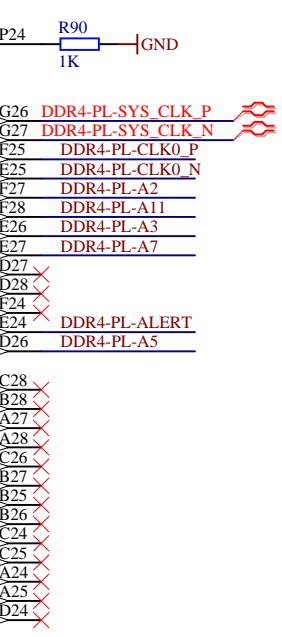
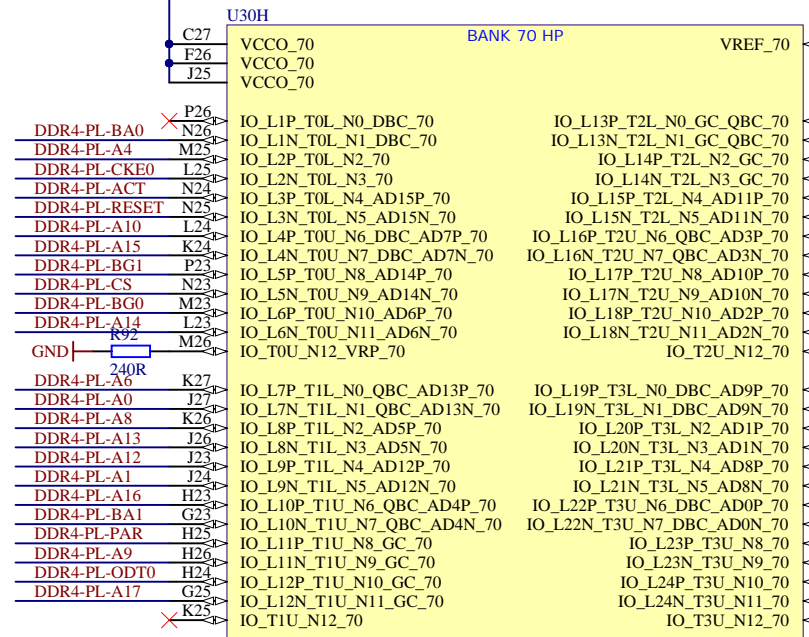
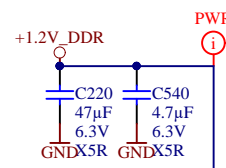
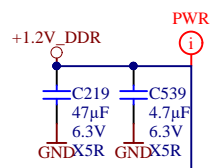
B

C

C

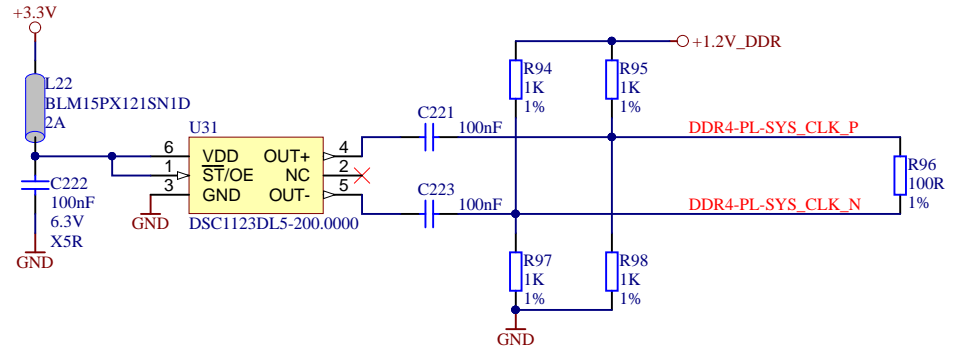
D

D



XCZU11EG-1FFVC1760I

XCZU11EG-1FFVC1760I



Title: XCZU11_70_71_HP		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 6 of 61
Drawn by: IG	Filename: XCZU11_70_71_HP.schdoc	

A

A

B

C

D

A

B

C

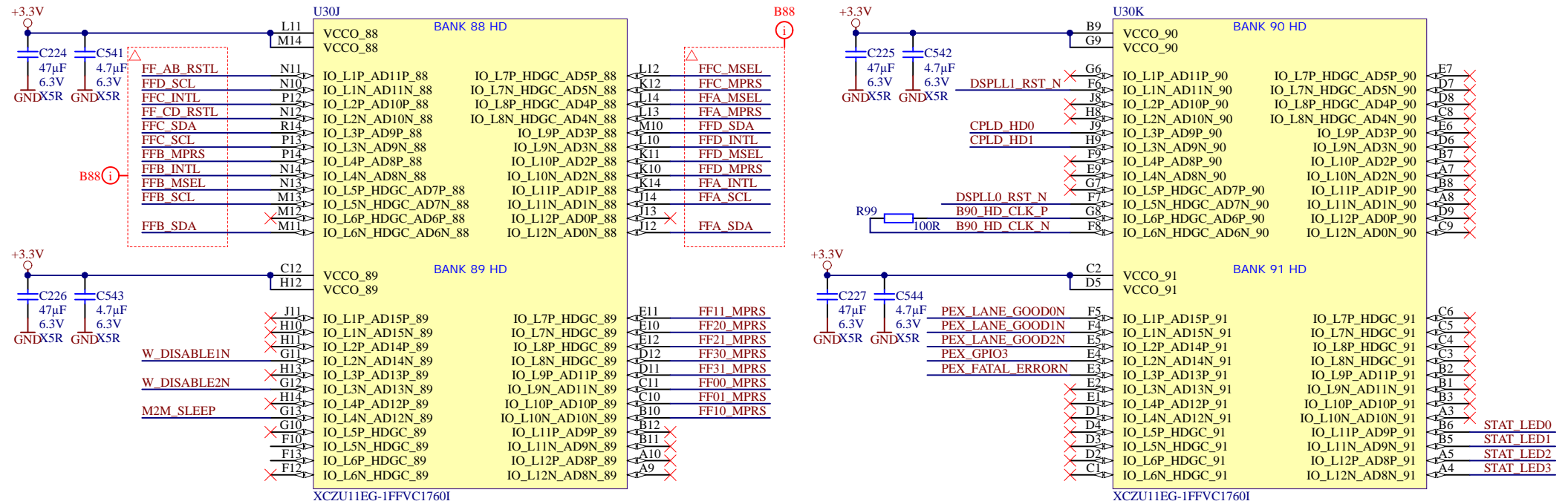

D

1

2

3

4

Title: XCZU11_88_89_90_91_HD		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 7 of 61
Drawn by: IG	Filename: XCZU11_88_89_90_91_HD.schdoc	

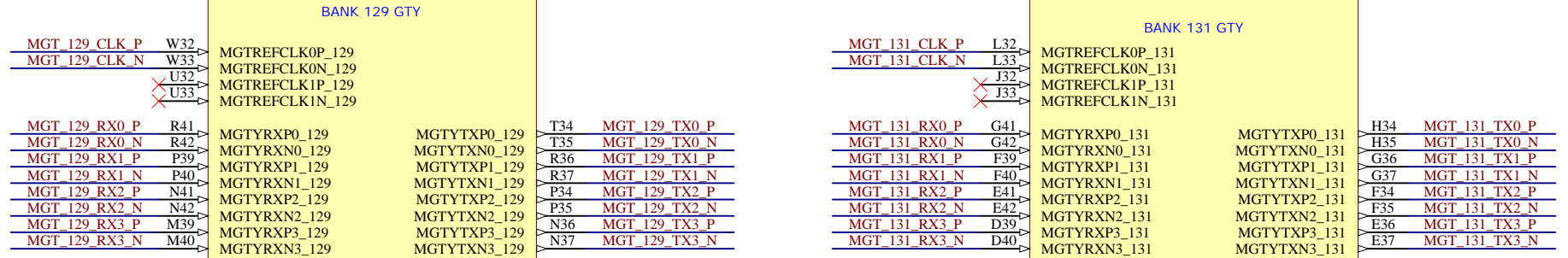
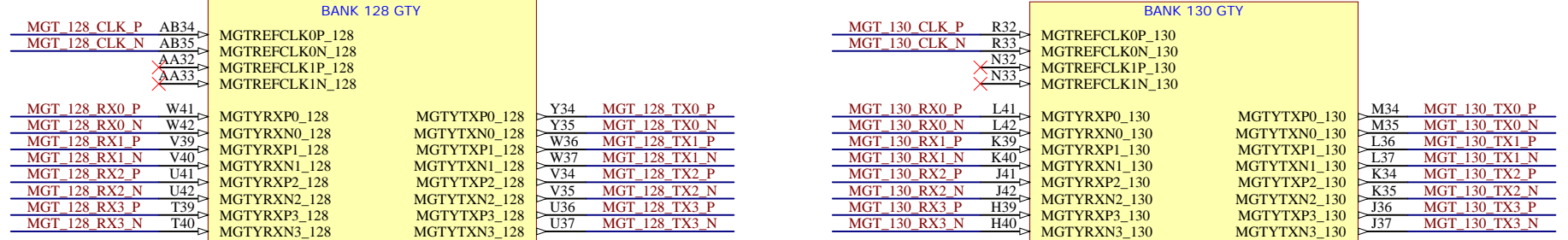
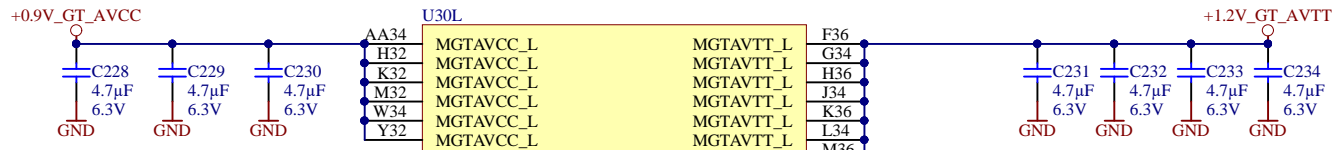
1

2

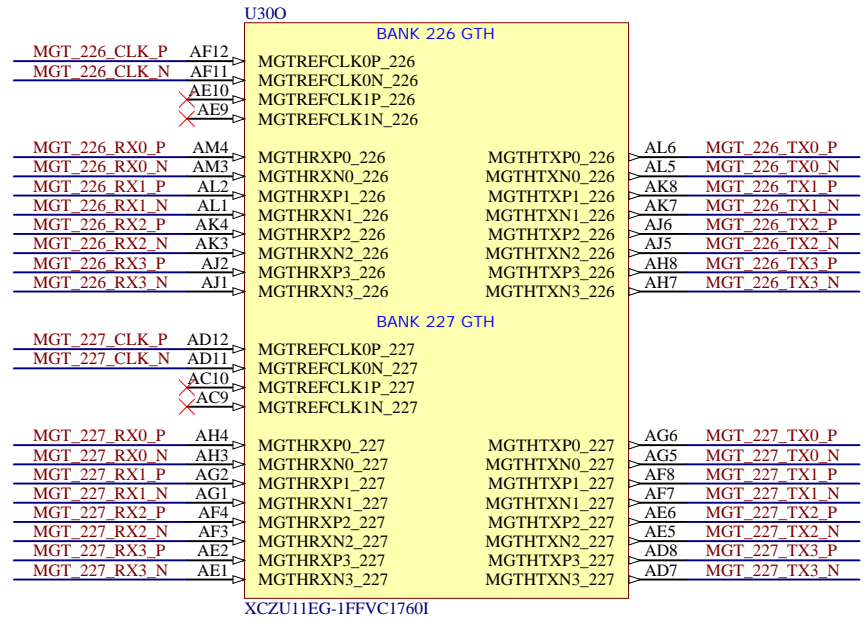
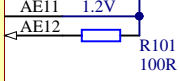
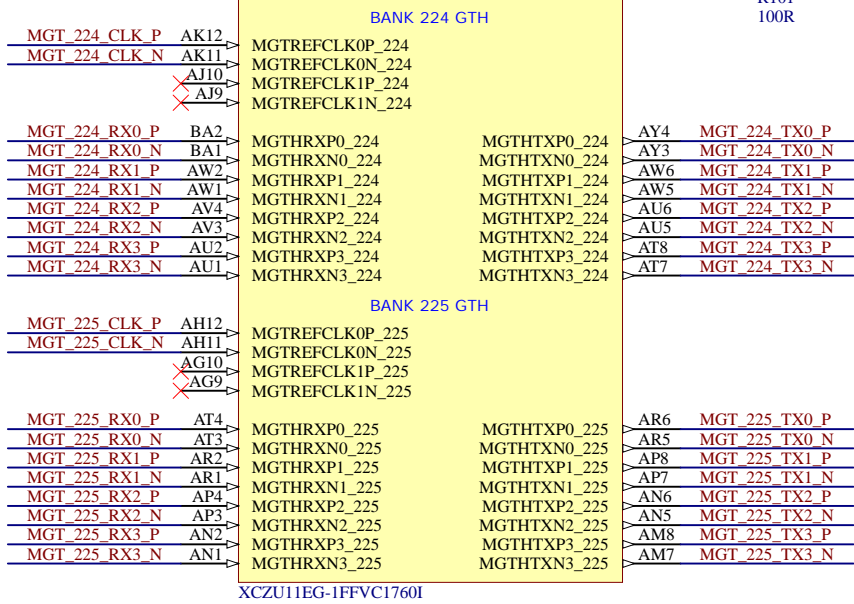
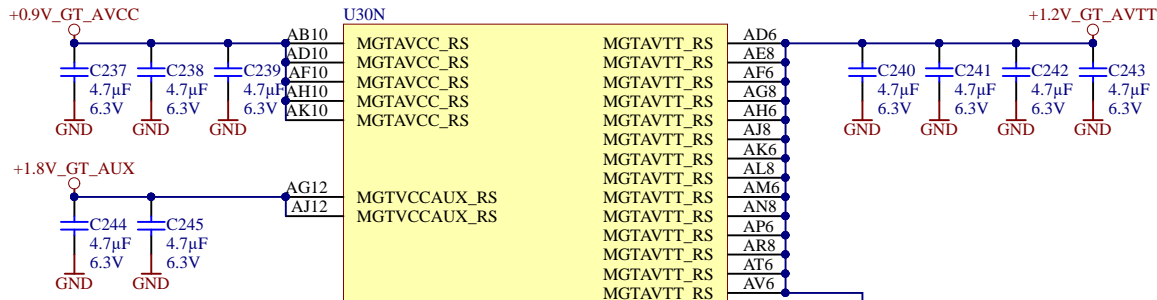
3

0x24

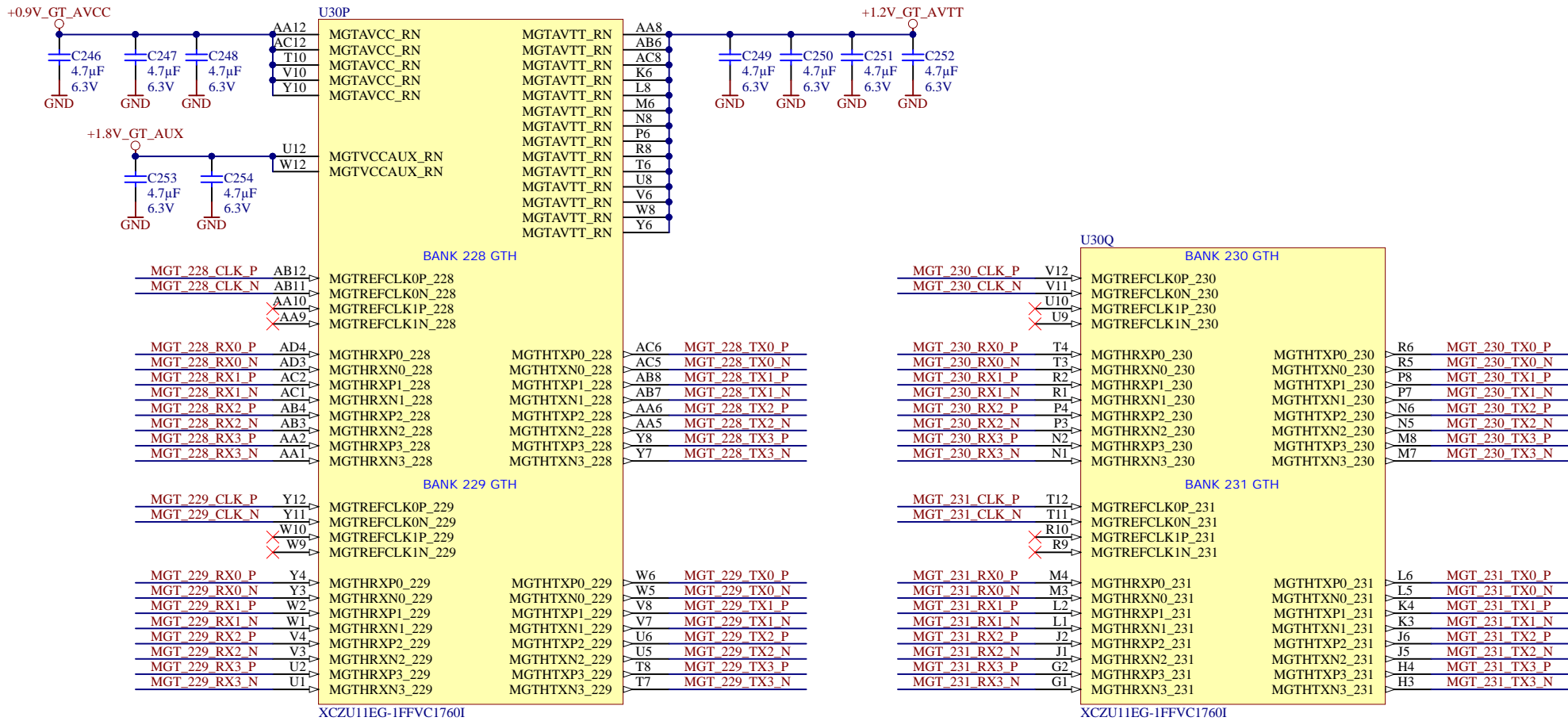
4



	Title: XCZU11_128_129_130_131_MGT		
	A4	Number: TEB0912 ABI21-A	Rev. 02
	Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 8 of 61
	Drawn by: IG	Filename: XCZU11_128_129_130_131_MGT.schdoc	



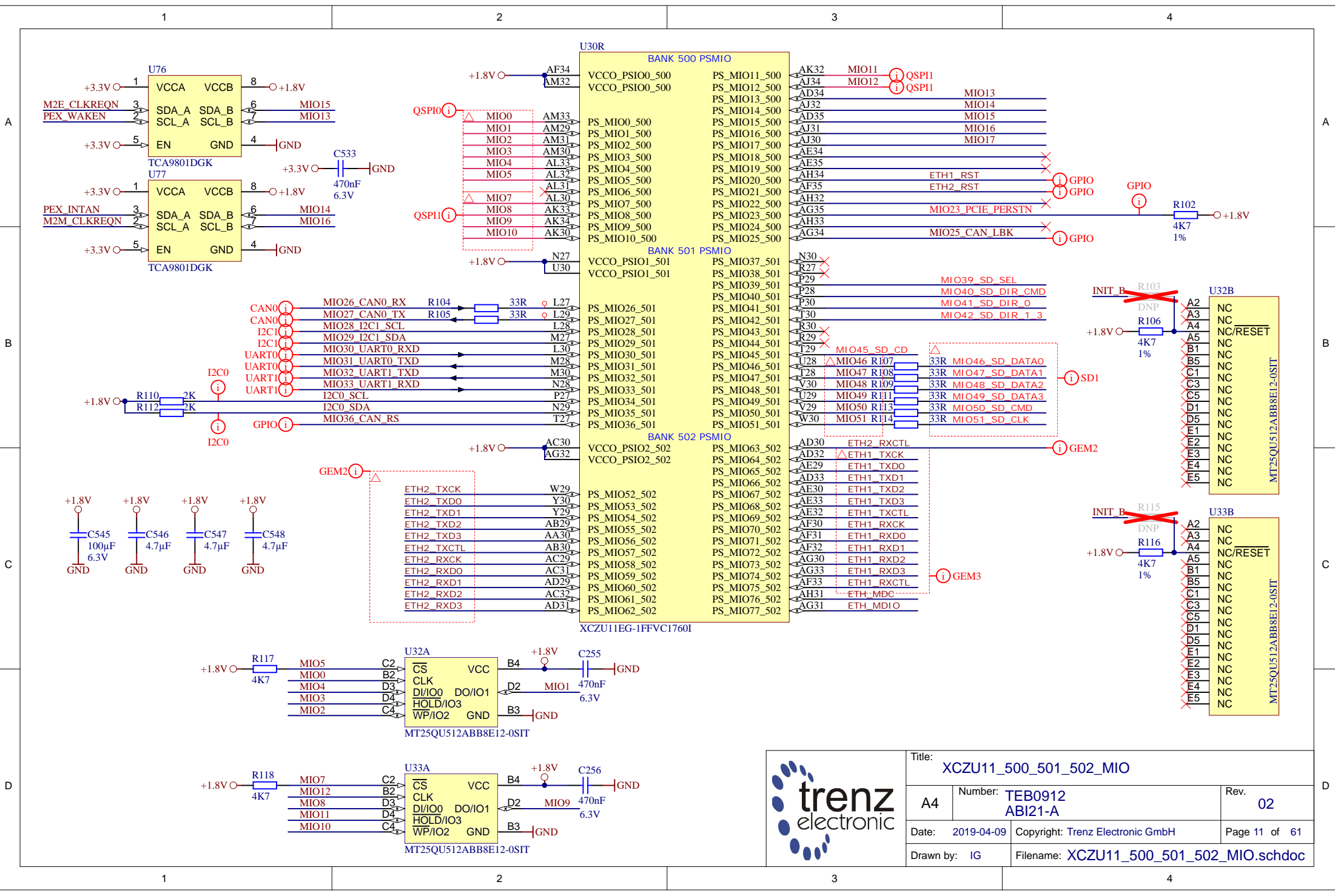
Title: XCZU11_224_225_226_227_MGT		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 9 of 61
Drawn by: IG	Filename: XCZU11_224_225_226_227_MGT.schdoc	




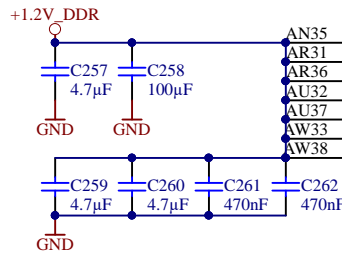
XCZU11EG-1FFVC1760I

XCZU11EG-1FFVC1760I

	Title: XCZU11_228_229_230_231_MGT		
	A4	Number: TEB0912 ABI21-A	Rev. 02
	Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 10 of 61
	Drawn by: IG	Filename: XCZU11_228_229_230_231_MGT.schdoc	



		Title: XZU11_500_501_502_MIO	
		A4	Number: TEB0912 ABI21-A
Date: 2019-04-09		Copyright: Trenz Electronic GmbH	
Page 11 of 61		Page 11 of 61	
Drawn by: IG		Filename: XZU11_500_501_502_MIO.schdoc	

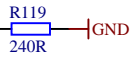


U30T

BANK 504 PSDDR

VCCO_PSDDR_504	PS_DDR_CK0_504	BA36	DDR4-CLK0_P
VCCO_PSDDR_504	PS_DDR_CK_NO_504	BA37	DDR4-CLK0_N
VCCO_PSDDR_504	PS_DDR_CKE0_504	AY38	DDR4-CKE0
VCCO_PSDDR_504	PS_DDR_CK1_504	AV36	
VCCO_PSDDR_504	PS_DDR_CK_N1_504	AV37	
VCCO_PSDDR_504	PS_DDR_CKE1_504	AT38	
PS_DDR_A0_504		BA38	DDR4-A0
PS_DDR_A1_504		BB36	DDR4-A1
PS_DDR_A2_504		BA35	DDR4-A2
PS_DDR_A3_504		BB35	DDR4-A3
PS_DDR_A4_504		BB38	DDR4-A4
PS_DDR_A5_504		AY35	DDR4-A5
PS_DDR_A6_504		AP37	DDR4-A6
PS_DDR_A7_504		AT36	DDR4-A7
PS_DDR_A8_504		AR35	DDR4-A8
PS_DDR_A9_504		AT35	DDR4-A9
PS_DDR_A10_504		AU35	DDR4-A10
PS_DDR_A11_504		AU36	DDR4-A11
PS_DDR_A12_504		AW36	DDR4-A12
PS_DDR_A13_504		AW37	DDR4-A13
PS_DDR_A14_504		AW35	DDR4-A14
PS_DDR_A15_504		AW34	DDR4-A15
PS_DDR_A16_504		AR34	DDR4-A16
PS_DDR_A17_504		AP34	DDR4-A17
PS_DDR_CS_N0_504		AY37	DDR4-CS
PS_DDR_CS_N1_504		AU38	
PS_DDR_BA0_504		AN37	DDR4-BA0
PS_DDR_BA1_504		AN36	DDR4-BA1
PS_DDR_BG0_504		AP36	DDR4-BG0
PS_DDR_BG1_504		AP35	DDR4-BG1
PS_DDR_PARITY_504		AM35	DDR4-PAR
PS_DDR_RAM_RST_N_504		AM34	DDR4-RESET
PS_DDR_ACT_N_504		AR37	DDR4-ACT
PS_DDR_ALERT_N_504		AM36	DDR4-ALERT
PS_DDR_ZQ_504		AN34	
PS_DDR_ODT0_504		BB39	DDR4-ODT0
PS_DDR_ODT1_504		AT37	

XCZU11EG-1FFVC1760I



U30U

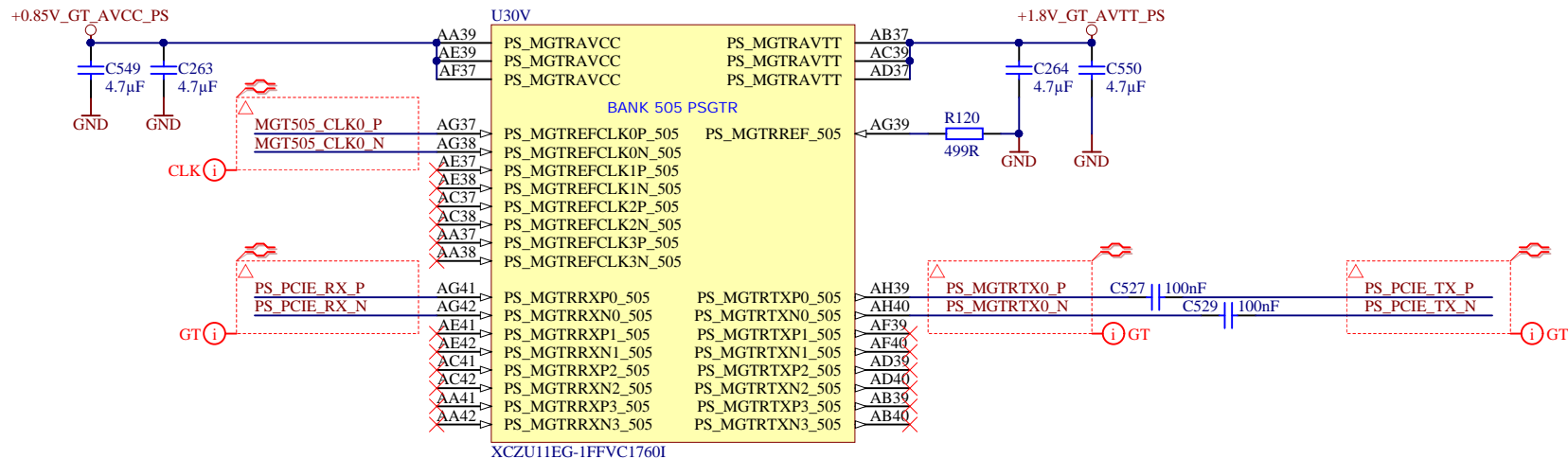
BANK 504 PSDDR


DQ0	AV29	PS_DDR_DQ0_504	PS_DDR_DQ32_504	AN41	DQ32
DQ1	AW30	PS_DDR_DQ1_504	PS_DDR_DQ33_504	AN42	DQ33
DQ2	AW29	PS_DDR_DQ2_504	PS_DDR_DQ34_504	AP42	DQ34
DQ3	AW31	PS_DDR_DQ3_504	PS_DDR_DQ35_504	AP41	DQ35
DQ4	BB31	PS_DDR_DQ4_504	PS_DDR_DQ36_504	AN39	DQ36
DQ5	BB30	PS_DDR_DQ5_504	PS_DDR_DQ37_504	AR38	DQ37
DQ6	BB29	PS_DDR_DQ6_504	PS_DDR_DQ38_504	AP39	DQ38
DQ7	BA31	PS_DDR_DQ7_504	PS_DDR_DQ39_504	AN38	DQ39
DQ8	BB33	PS_DDR_DQ8_504	PS_DDR_DQ40_504	AL37	DQ40
DQ9	BA32	PS_DDR_DQ9_504	PS_DDR_DQ41_504	AL38	DQ41
DQ10	BA33	PS_DDR_DQ10_504	PS_DDR_DQ42_504	AK38	DQ42
DQ11	BB34	PS_DDR_DQ11_504	PS_DDR_DQ43_504	AK39	DQ43
DQ12	AV31	PS_DDR_DQ12_504	PS_DDR_DQ44_504	AJ36	DQ44
DQ13	AW32	PS_DDR_DQ13_504	PS_DDR_DQ45_504	AL35	DQ45
DQ14	AV32	PS_DDR_DQ14_504	PS_DDR_DQ46_504	AJ35	DQ46
DQ15	AV33	PS_DDR_DQ15_504	PS_DDR_DQ47_504	AK35	DQ47
DQ16	AN29	PS_DDR_DQ16_504	PS_DDR_DQ48_504	AR42	DQ48
DQ17	AP29	PS_DDR_DQ17_504	PS_DDR_DQ49_504	AT41	DQ49
DQ18	AP30	PS_DDR_DQ18_504	PS_DDR_DQ50_504	AT42	DQ50
DQ19	AP31	PS_DDR_DQ19_504	PS_DDR_DQ51_504	AT40	DQ51
DQ20	AT31	PS_DDR_DQ20_504	PS_DDR_DQ52_504	AV42	DQ52
DQ21	AU30	PS_DDR_DQ21_504	PS_DDR_DQ53_504	AV41	DQ53
DQ22	AU31	PS_DDR_DQ22_504	PS_DDR_DQ54_504	AV39	DQ54
DQ23	AU29	PS_DDR_DQ23_504	PS_DDR_DQ55_504	AV38	DQ55
DQ24	AV34	PS_DDR_DQ24_504	PS_DDR_DQ56_504	AM39	DQ56
DQ25	AU33	PS_DDR_DQ25_504	PS_DDR_DQ57_504	AM38	DQ57
DQ26	AT33	PS_DDR_DQ26_504	PS_DDR_DQ58_504	AM40	DQ58
DQ27	AU34	PS_DDR_DQ27_504	PS_DDR_DQ59_504	AM41	DQ59
DQ28	AN33	PS_DDR_DQ28_504	PS_DDR_DQ60_504	AJ42	DQ60
DQ29	AP32	PS_DDR_DQ29_504	PS_DDR_DQ61_504	AK42	DQ61
DQ30	AN32	PS_DDR_DQ30_504	PS_DDR_DQ62_504	AK40	DQ62
DQ31	AN31	PS_DDR_DQ31_504	PS_DDR_DQ63_504	AK41	DQ63
DDR4-DQS0_P	AY30	PS_DDR_DQS_P0_504	PS_DDR_DQ64_504	BB40	
DDR4-DQS0_N	BA30	PS_DDR_DQS_N0_504	PS_DDR_DQ65_504	BA41	
DDR4-DQS1_P	AY32	PS_DDR_DQS_P1_504	PS_DDR_DQ66_504	BA42	
DDR4-DQS1_N	AY33	PS_DDR_DQS_N1_504	PS_DDR_DQ67_504	BA40	
DDR4-DQS2_P	AR30	PS_DDR_DQS_P2_504	PS_DDR_DQ68_504	AW40	
DDR4-DQS2_N	AT30	PS_DDR_DQS_N2_504	PS_DDR_DQ69_504	AW41	
DDR4-DQS3_P	AR32	PS_DDR_DQS_P3_504	PS_DDR_DQ70_504	AW41	
DDR4-DQS3_N	AT32	PS_DDR_DQS_N3_504	PS_DDR_DQ71_504	AW39	
DDR4-DQS4_P	AP40	PS_DDR_DQS_P4_504	PS_DDR_DM0_504	AY29	DDR4-DM0
DDR4-DQS4_N	AR40	PS_DDR_DQS_N4_504	PS_DDR_DM1_504	AY34	DDR4-DM1
DDR4-DQS5_P	AJ37	PS_DDR_DQS_P5_504	PS_DDR_DM2_504	AR29	DDR4-DM2
DDR4-DQS5_N	AK37	PS_DDR_DQS_N5_504	PS_DDR_DM3_504	AR33	DDR4-DM3
DDR4-DQS6_P	AU40	PS_DDR_DQS_P6_504	PS_DDR_DM4_504	AR39	DDR4-DM4
DDR4-DQS6_N	AU41	PS_DDR_DQS_N6_504	PS_DDR_DM5_504	AL36	DDR4-DM5
DDR4-DQS7_P	AL40	PS_DDR_DQS_P7_504	PS_DDR_DM6_504	AU39	DDR4-DM6
DDR4-DQS7_N	AL41	PS_DDR_DQS_N7_504	PS_DDR_DM7_504	AL42	DDR4-DM7
	AY39	PS_DDR_DQS_P8_504	PS_DDR_DM8_504	AY42	
	AY40	PS_DDR_DQS_N8_504			

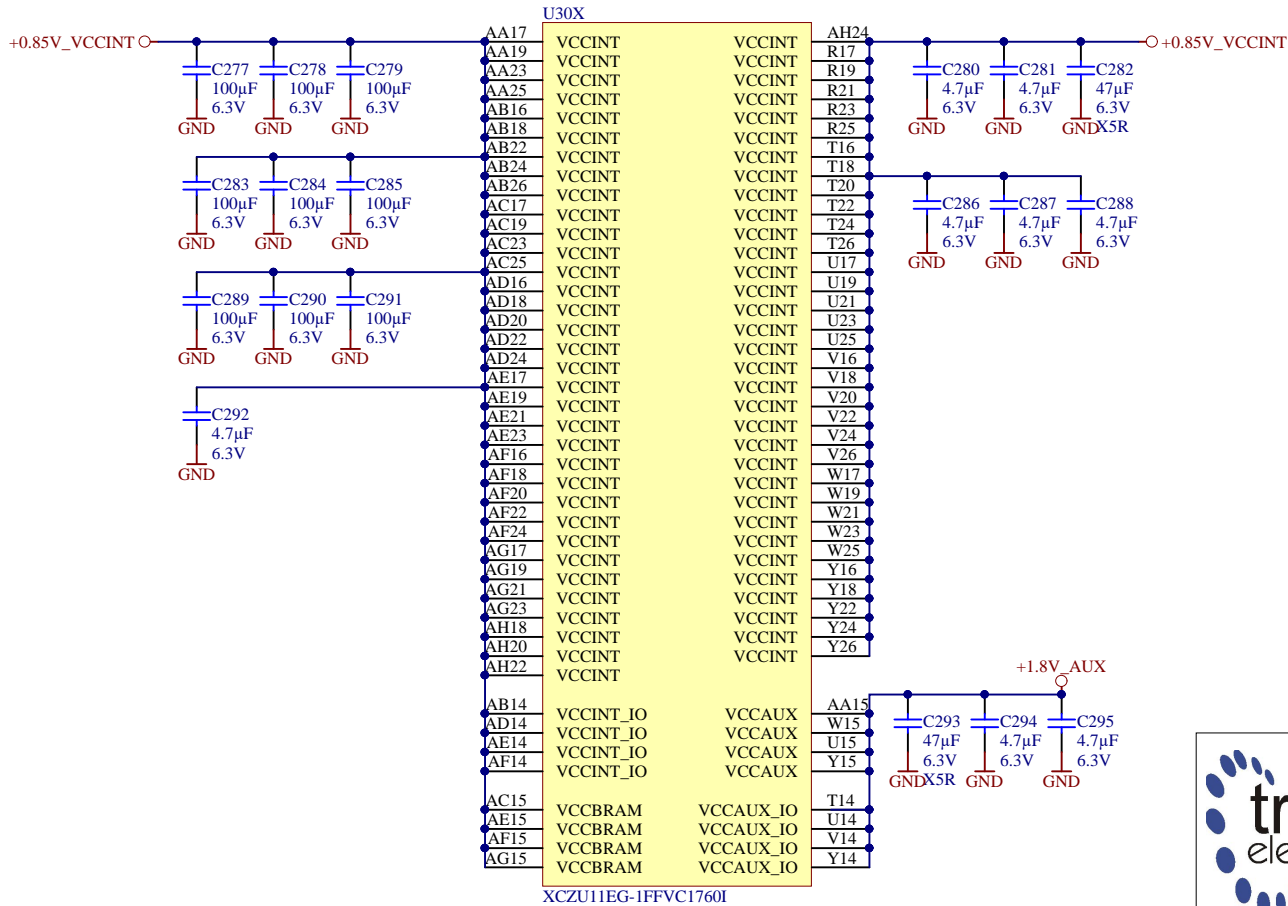
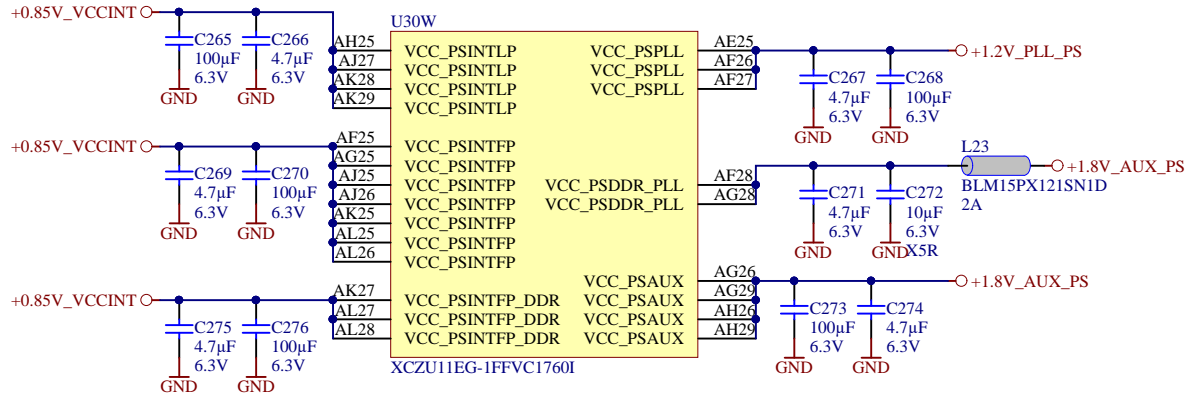
XCZU11EG-1FFVC1760I



Title: XCZU11_504_PSDDR		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 12 of 61
Drawn by: IG	Filename: XCZU11_504_PSDDR.schdoc	



		Title: XCU11_505_MGT	
		A4	Number: TEB0912 ABI21-A
Date: 2019-04-09		Copyright: Trenz Electronic GmbH	
Page 13 of 61		Page 13 of 61	
Drawn by: IG		Filename: XCU11_505_MGT.schdoc	



Title: XCZU11_POWER		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 14 of 61
Drawn by: IG	Filename: XCZU11_POWER.schdoc	

1

2

3
U30Y

4

U30AA

B14	GND	GND	G33
B19	GND	GND	G35
B24	GND	GND	G38
B29	GND	GND	G39
B39	GND	GND	G40
BA3	GND	GND	H1
BA4	GND	GND	H2
BA5	GND	GND	H5
BA9	GND	GND	H6
BA29	GND	GND	H7
BA34	GND	GND	H17
BA39	GND	GND	H22
BB2	GND	GND	H27
BB3	GND	GND	H31
BB7	GND	GND	H33
BB12	GND	GND	H37
BB17	GND	GND	H38
BB22	GND	GND	H41
BB27	GND	GND	H42
BB32	GND	GND	J3
BB37	GND	GND	J4
BB41	GND	GND	J7
C7	GND	GND	J10
C32	GND	GND	J31
C38	GND	GND	J35
C39	GND	GND	J38
C40	GND	GND	J39
C41	GND	GND	J40
D10	GND	GND	K1
D15	GND	GND	K2
D20	GND	GND	K5
D25	GND	GND	K7
D35	GND	GND	K8
D36	GND	GND	K9
D37	GND	GND	K13
D38	GND	GND	K18
D41	GND	GND	K23
D42	GND	GND	K28
E8	GND	GND	K31
E13	GND	GND	K33
E18	GND	GND	K37
E23	GND	GND	K38
E28	GND	GND	K41
E33	GND	GND	K42
E34	GND	GND	L3
E35	GND	GND	L4
E38	GND	GND	L7
E39	GND	GND	L9
E40	GND	GND	L16
F1	GND	GND	L21
F2	GND	GND	L26
F3	GND	GND	L31
F11	GND	GND	L35
F33	GND	GND	L38
F37	GND	GND	L39
F38	GND	GND	L40
F41	GND	GND	M1
F42	GND	GND	M2
G3	GND	GND	M5
G4	GND	GND	M9
G5	GND	GND	M19
G14	GND	GND	M24
G19	GND	GND	M29
G24	GND	GND	M31
G31	GND	GND	M33
G32	GND	GND	M37

GND XCZU11EG-1FFVC1760I GND

U30AB

M38	GND	GND	U11
M41	GND	GND	U13
M42	GND	GND	U16
N3	GND	GND	U18
N4	GND	GND	U20
N7	GND	GND	U22
N9	GND	GND	U24
N17	GND	GND	U26
N22	GND	GND	U31
N31	GND	GND	U35
N35	GND	GND	U38
N38	GND	GND	U39
N39	GND	GND	U40
N40	GND	GND	V1
P1	GND	GND	V2
P2	GND	GND	V5
P5	GND	GND	V9
P9	GND	GND	V13
P10	GND	GND	V15
P11	GND	GND	V17
P20	GND	GND	V19
P25	GND	GND	V21
P31	GND	GND	V23
P33	GND	GND	V25
P37	GND	GND	V31
P38	GND	GND	V33
P41	GND	GND	V37
P42	GND	GND	V38
R3	GND	GND	V41
R4	GND	GND	V42
R7	GND	GND	W3
R11	GND	GND	W4
R12	GND	GND	W7
R13	GND	GND	W11
R16	GND	GND	W13
R18	GND	GND	W14
R20	GND	GND	W16
R22	GND	GND	W18
R24	GND	GND	W20
R26	GND	GND	W22
R28	GND	GND	W24
R31	GND	GND	W26
R35	GND	GND	W31
R38	GND	GND	W35
R39	GND	GND	W38
R40	GND	GND	W39
T1	GND	GND	W40
T2	GND	GND	Y1
T5	GND	GND	Y2
T9	GND	GND	Y5
T13	GND	GND	Y9
T15	GND	GND	Y13
T17	GND	GND	Y17
T19	GND	GND	Y19
T21	GND	GND	Y23
T23	GND	GND	Y25
T25	GND	GND	Y31
T31	GND	GND	Y33
T37	GND	GND	Y36
T38	GND	GND	Y37
T41	GND	GND	Y38
T42	GND	GND	Y39
U3	GND	GND	Y40
U4	GND	GND	Y41
U7	GND	GND	Y42

GND XCZU11EG-1FFVC1760I GND

U30Y

A2	GND	GND	AD9
A6	GND	GND	AD13
A11	GND	GND	AD15
A16	GND	GND	AD17
A21	GND	GND	AD19
A26	GND	GND	AD21
A31	GND	GND	AD23
A36	GND	GND	AD36
A41	GND	GND	AD38
AA3	GND	GND	AD41
AA4	GND	GND	AD42
AA7	GND	GND	AE3
AA11	GND	GND	AE4
AA13	GND	GND	AE7
AA14	GND	GND	AE13
AA16	GND	GND	AE16
AA18	GND	GND	AE18
AA22	GND	GND	AE20
AA24	GND	GND	AE22
AA26	GND	GND	AE24
AA29	GND	GND	AE26
AA31	GND	GND	AE31
AA35	GND	GND	AE36
AA36	GND	GND	AE40
AA40	GND	GND	AF1
AB1	GND	GND	AF2
AB2	GND	GND	AF5
AB5	GND	GND	AF9
AB9	GND	GND	AF13
AB13	GND	GND	AF17
AB15	GND	GND	AF19
AB17	GND	GND	AF21
AB19	GND	GND	AF23
AB23	GND	GND	AF29
AB25	GND	GND	AF36
AB31	GND	GND	AF38
AB32	GND	GND	AF41
AB33	GND	GND	AF42
AB36	GND	GND	AG3
AB38	GND	GND	AG4
AB41	GND	GND	AG7
AB42	GND	GND	AG11
AC3	GND	GND	AG13
AC4	GND	GND	AG14
AC7	GND	GND	AG16
AC11	GND	GND	AG18
AC13	GND	GND	AG20
AC14	GND	GND	AG22
AC16	GND	GND	AG24
AC18	GND	GND	AG36
AC22	GND	GND	AG40
AC24	GND	GND	AH1
AC33	GND	GND	AH2
AC34	GND	GND	AH5
AC35	GND	GND	AH9
AC36	GND	GND	AH13
AC40	GND	GND	AH15
AD1	GND	GND	AH19
AD2	GND	GND	AH21
AD5	GND	GND	AH23

GND XCZU11EG-1FFVC1760I GND

U30Z

AH30	GND	GND	AP2
AH35	GND	GND	AP5
AH36	GND	GND	AP9
AH37	GND	GND	AP23
AH38	GND	GND	AP28
AH41	GND	GND	AP33
AH42	GND	GND	AP38
AJ3	GND	GND	AR3
AJ4	GND	GND	AR4
AJ7	GND	GND	AR7
AJ11	GND	GND	AR9
AJ13	GND	GND	AR11
AJ33	GND	GND	AR16
AJ38	GND	GND	AR41
AJ39	GND	GND	AT1
AJ40	GND	GND	AT2
AJ41	GND	GND	AT5
AK1	GND	GND	AT9
AK2	GND	GND	AT14
AK5	GND	GND	AT19
AK9	GND	GND	AT24
AK13	GND	GND	AT29
AK16	GND	GND	AT34
AK21	GND	GND	AT39
AK26	GND	GND	AU3
AK31	GND	GND	AU4
AK36	GND	GND	AU7
AL3	GND	GND	AU8
AL4	GND	GND	AU9
AL7	GND	GND	AU17
AL9	GND	GND	AU22
AL10	GND	GND	AU27
AL11	GND	GND	AU42
AL12	GND	GND	AV1
AL13	GND	GND	AV2
AL19	GND	GND	AV5
AL24	GND	GND	AV7
AL29	GND	GND	AV10
AL34	GND	GND	AV30
AL39	GND	GND	AV35
AM1	GND	GND	AV40
AM2	GND	GND	AW3
AM5	GND	GND	AW4
AM9	GND	GND	AW7
AM12	GND	GND	AW13
AM17	GND	GND	AW18
AM22	GND	GND	AW22
AM27	GND	GND	AW28
AM37	GND	GND	AY1
AM42	GND	GND	AY2
AN3	GND	GND	AY5
AN4	GND	GND	AY6
AN7	GND	GND	AY7
AN9	GND	GND	AY16
AN15	GND	GND	AY21
AN20	GND	GND	AY26
AN25	GND	GND	AY31
AN30	GND	GND	AY36
AN40	GND	GND	AY41
API	GND	GND	B4

GND XCZU11EG-1FFVC1760I GND



Title: XCZU11_GND		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 15 of 61
Drawn by: IG	Filename: XCZU11_GND.schdoc	

1

2

3

4

1

2

3

4

A

A

Designator
FireFly0.SchDoc



Designator
FireFly1.SchDoc



Designator
FireFly2.SchDoc



Designator
FireFly3.SchDoc



FireFly_AB



FireFly_CD



B


B

C

C

D

D

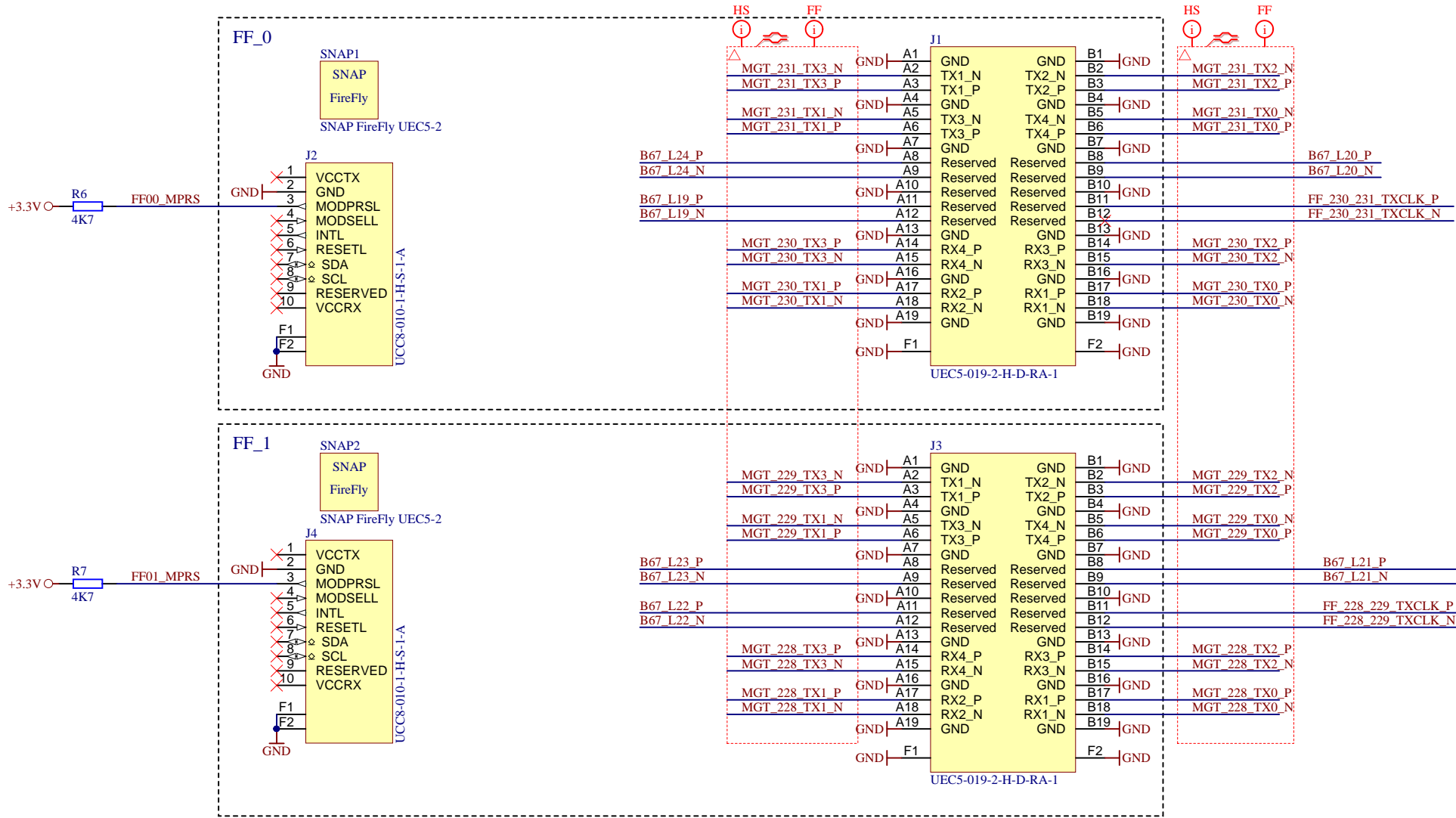
			Title: FireFly		
			A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09		Copyright: Trenz Electronic GmbH		Page 17 of 61	
Drawn by: IG			Filename: FireFly.SchDoc		

1

2

3

4



	Title: FireFly0		
	A4	Number: TEB0912 ABI21-A	Rev. 02
	Date: 2019-04-09	Copyright: Trenz Electronic GmbH	
	Drawn by: IG	Filename: FireFly0.SchDoc	

1

2

3

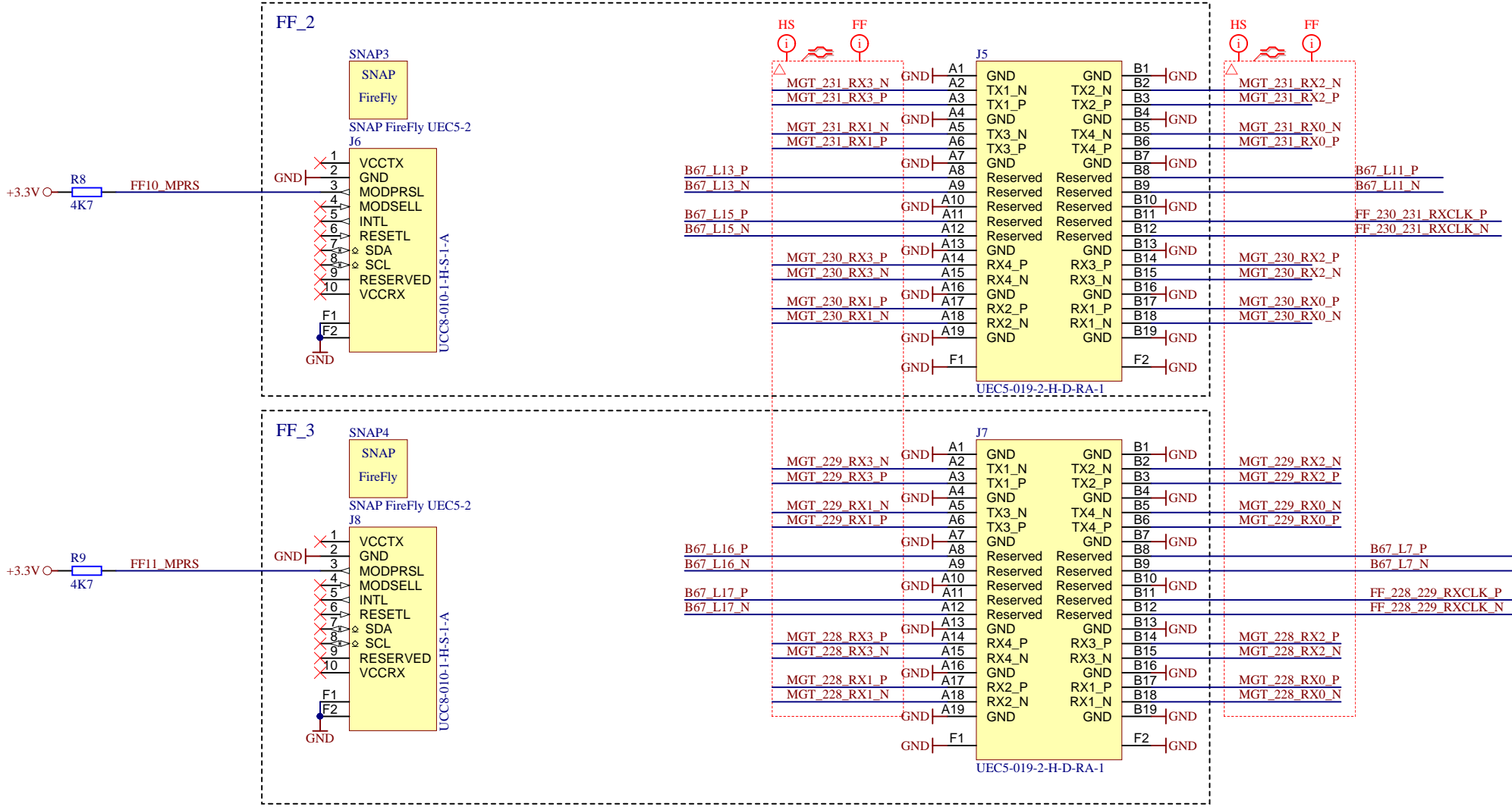
4

1

2

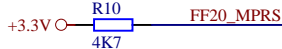
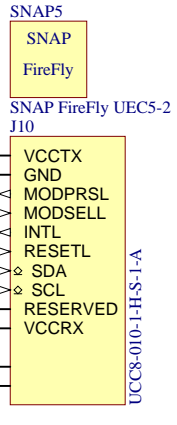
3

4

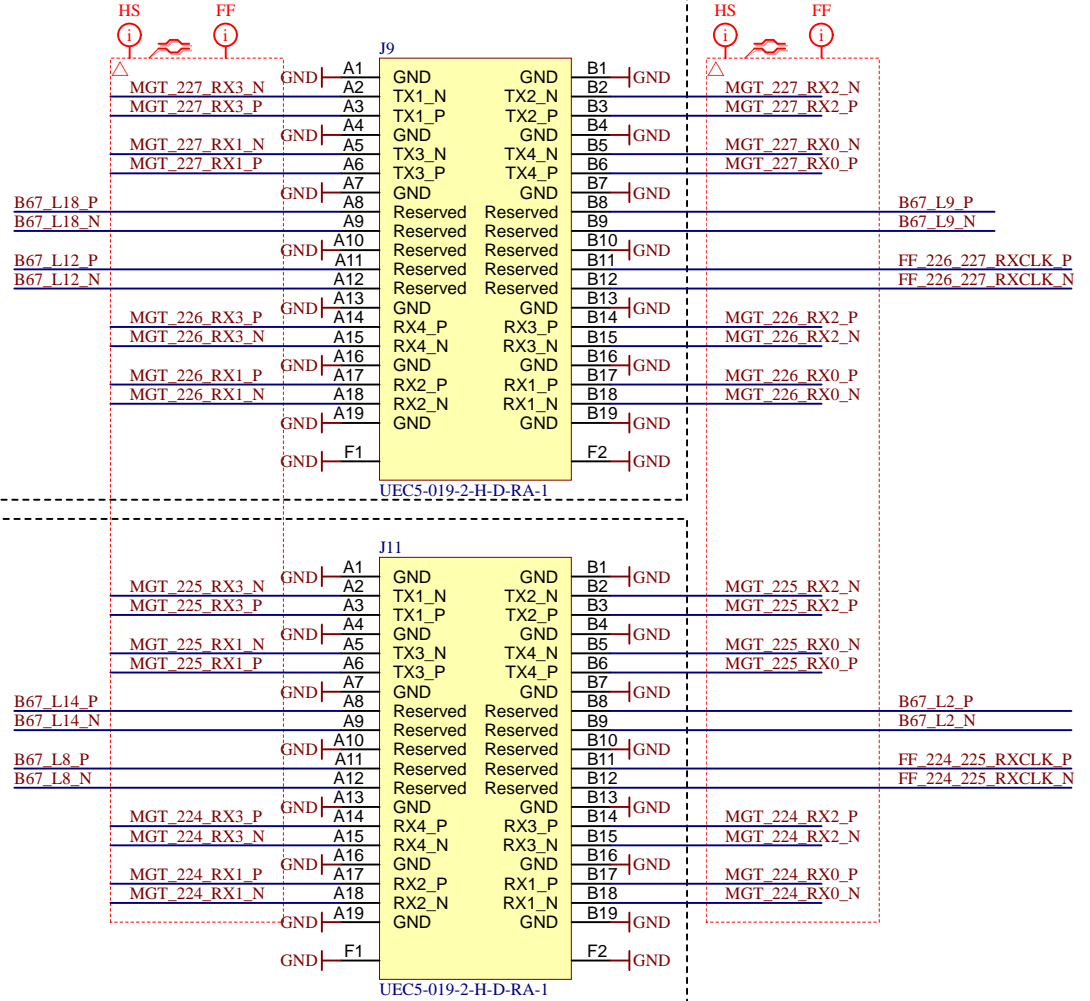
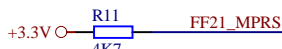
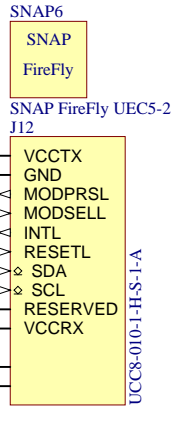


			Title: FireFly1	
			A4	Number: TEB0912 ABI21-A
Date: 2019-04-09		Copyright: Trenz Electronic GmbH		Page 19 of 61
Drawn by: IG		Filename: FireFly1.SchDoc		

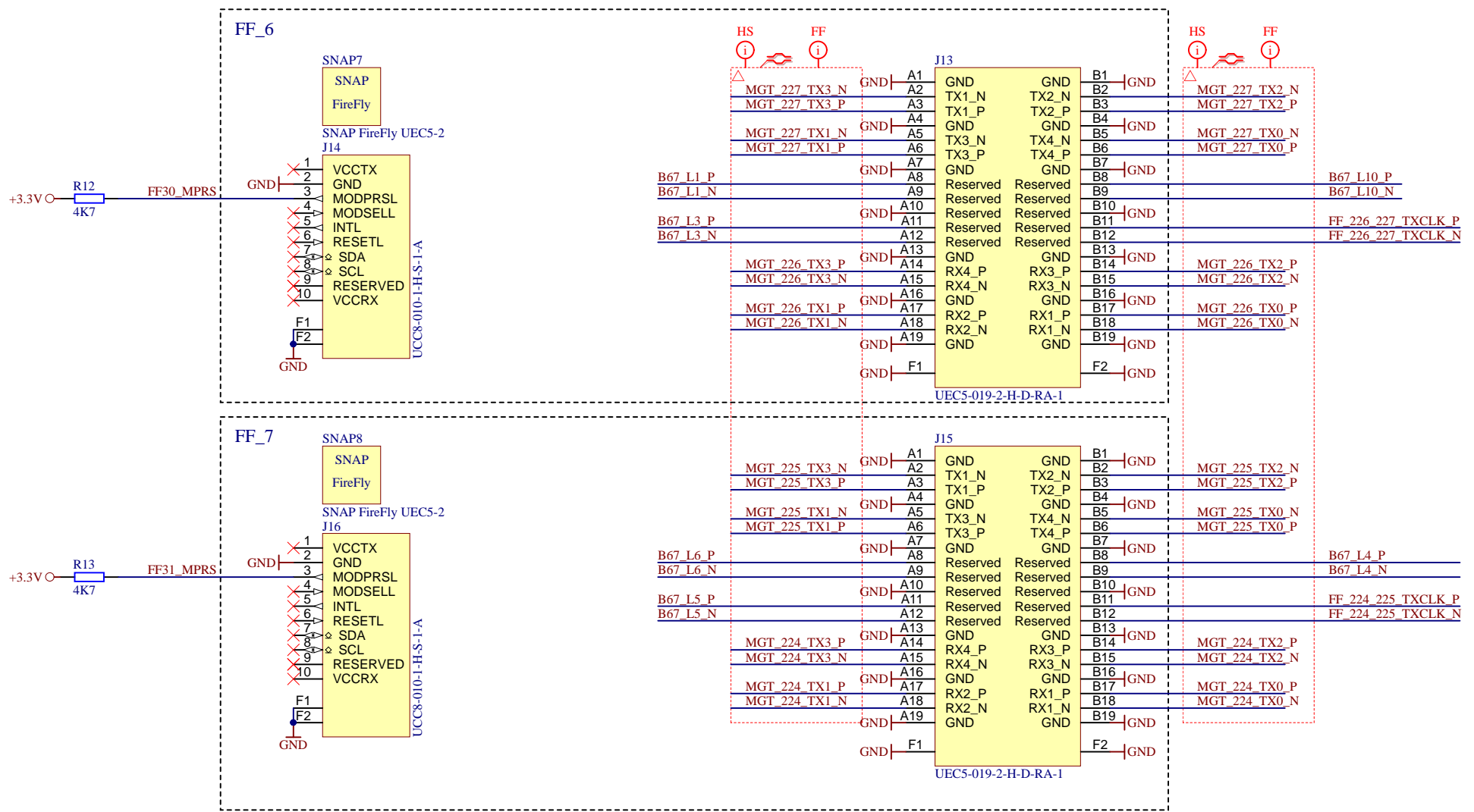
FF_4



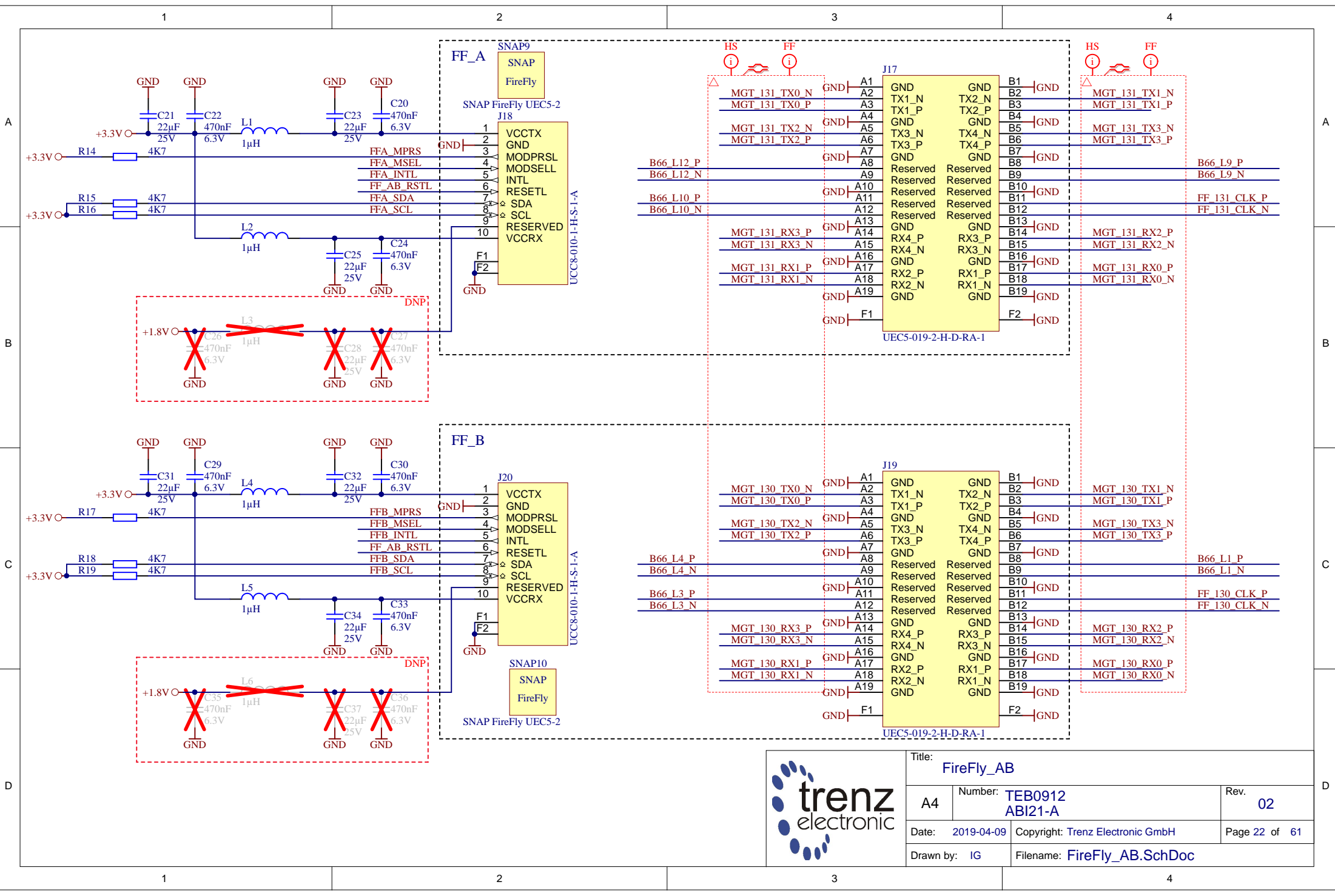
FF_5




Title: FireFly2		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 20 of 61
Drawn by: IG	Filename: FireFly2.SchDoc	



	Title: FireFly3	
	A4	Number: TEB0912 ABI21-A
	Date: 2019-04-09	Copyright: Trenz Electronic GmbH
	Drawn by: IG	Filename: FireFly3.SchDoc
	Rev. 02	Page 21 of 61



Title: FireFly_AB		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 22 of 61
Drawn by: IG	Filename: FireFly_AB.SchDoc	

A

B

C

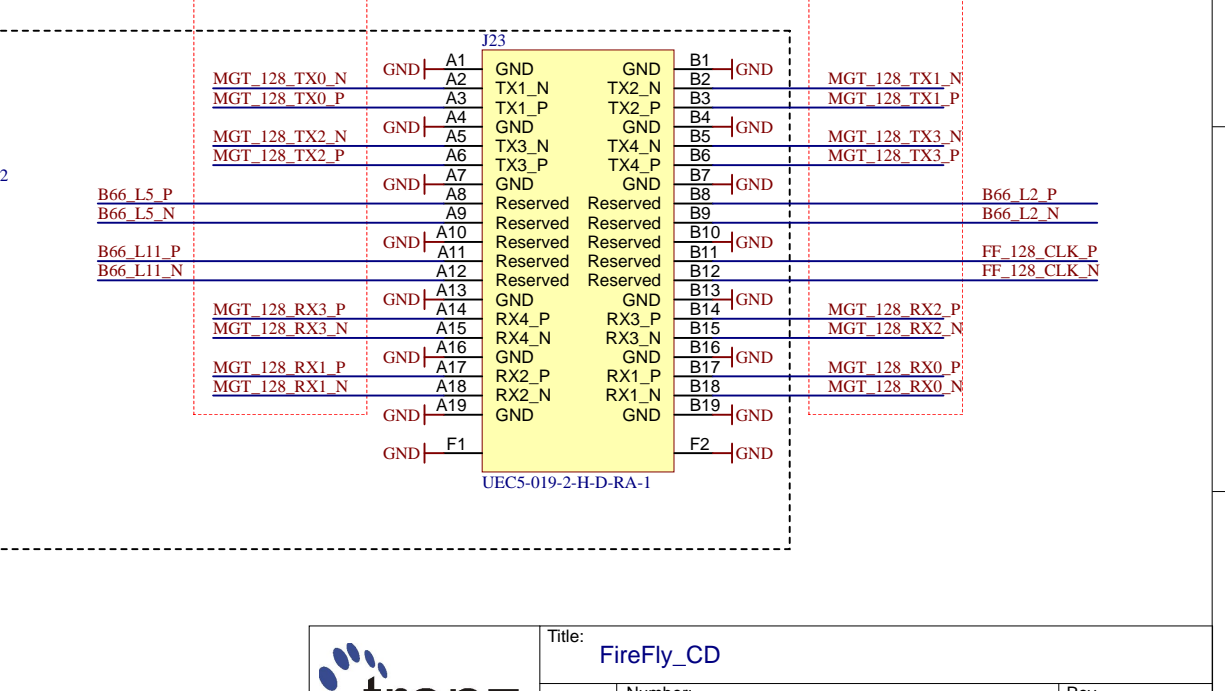
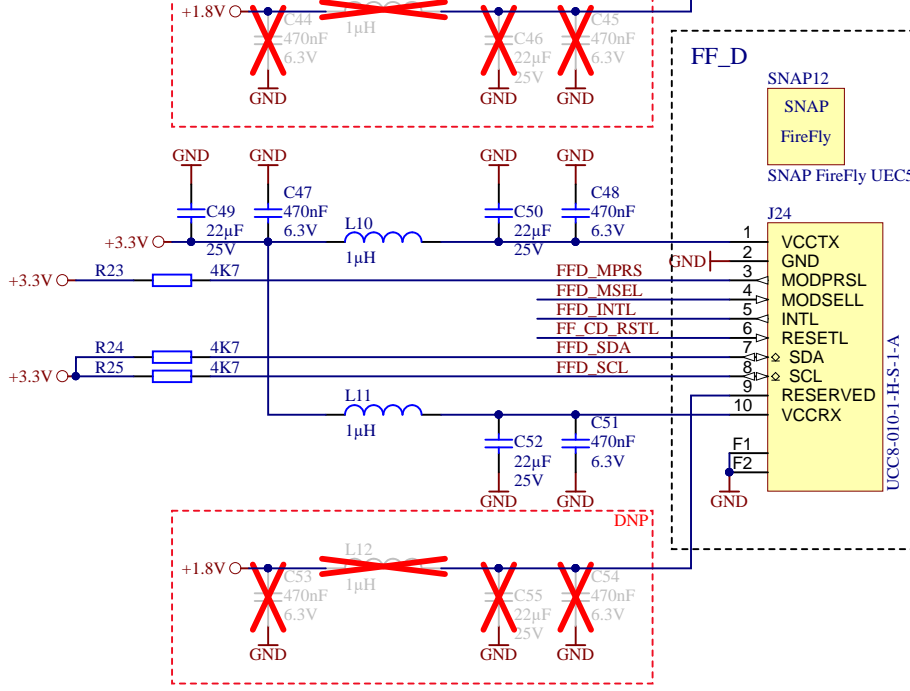
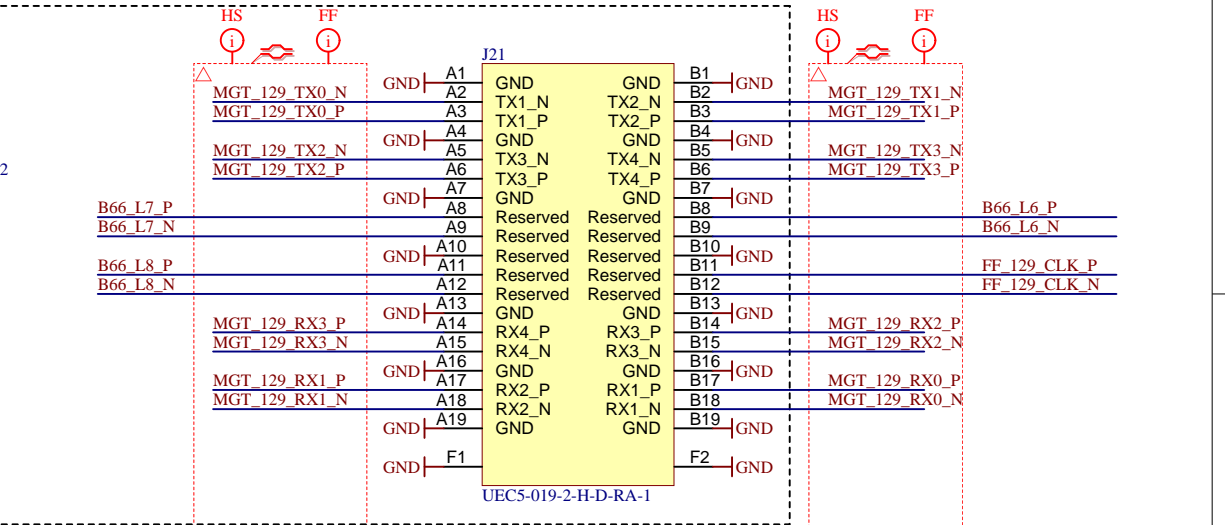
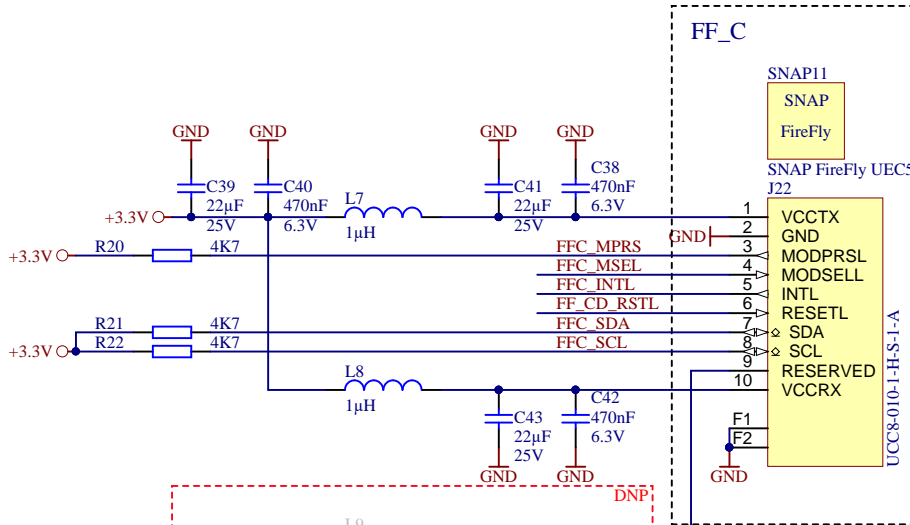
D

A

B

C

D



Title: FireFly_CD		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 23 of 61
Drawn by: IG	Filename: FireFly_CD.SchDoc	

1

2

3

4

A

A

B

B

C

C

D

D

DDR4-PS-RAM_1

DDR4-PS-RAM_2

DDR4-PS-RAM_3

DDR4-PS-RAM_4

DDR4-PS-TERM



Title: DDR4-PS		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 24 of 61
Drawn by: IG	Filename: DDR4-PS.SchDoc	

1

2

3

4

1

2

3

4

A

A

B

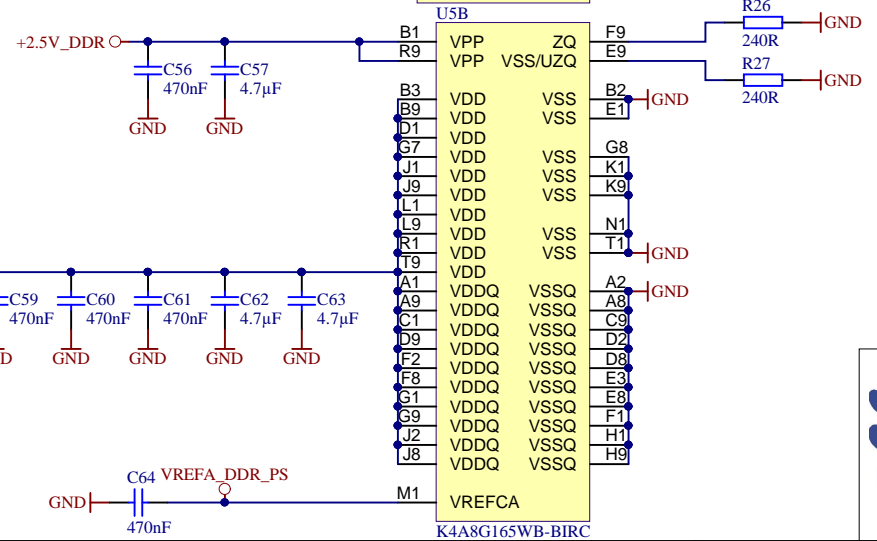
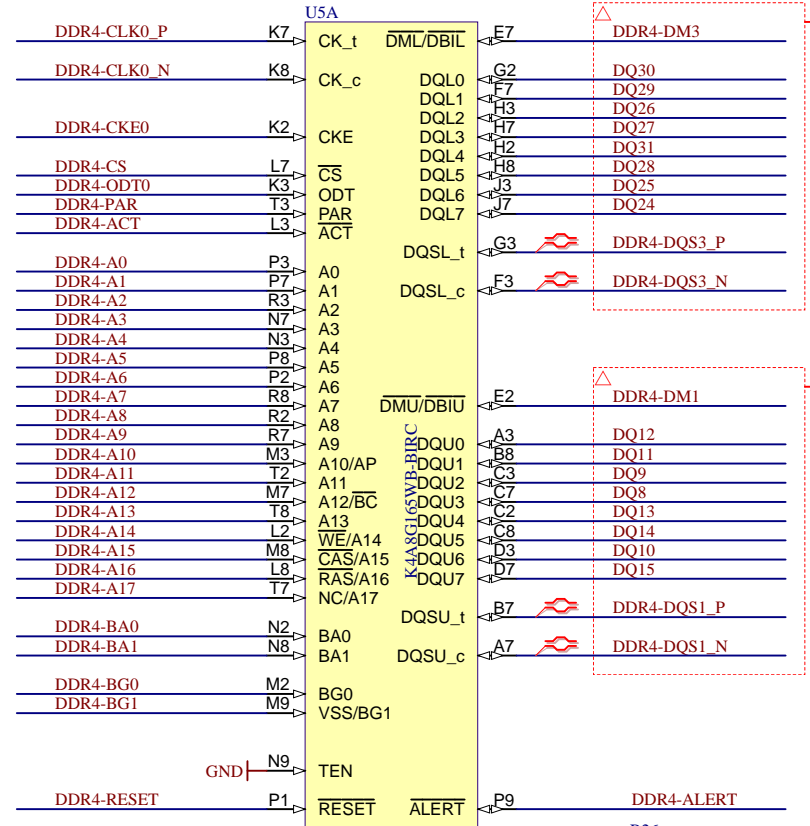
B

C

C

D

D



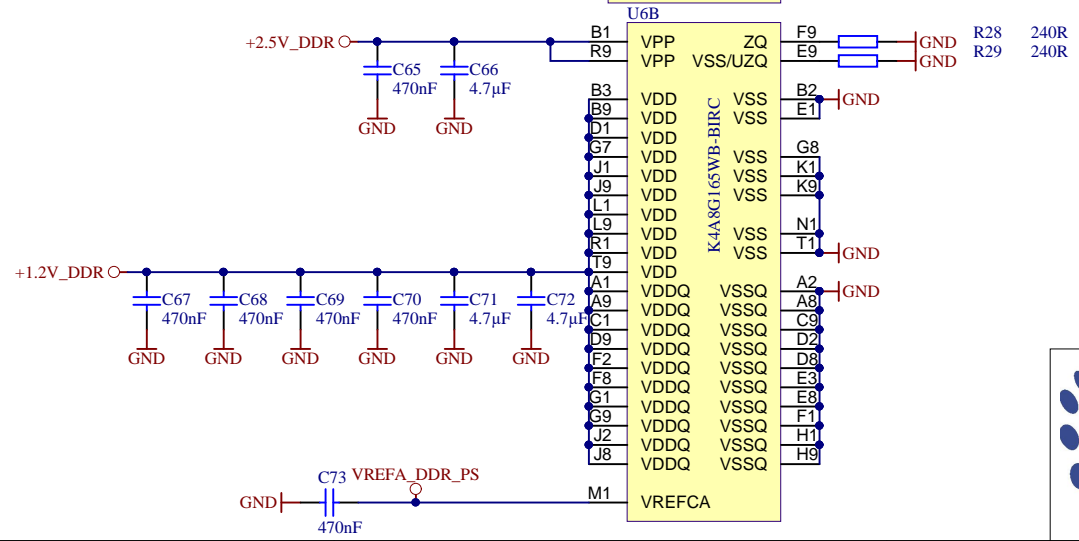
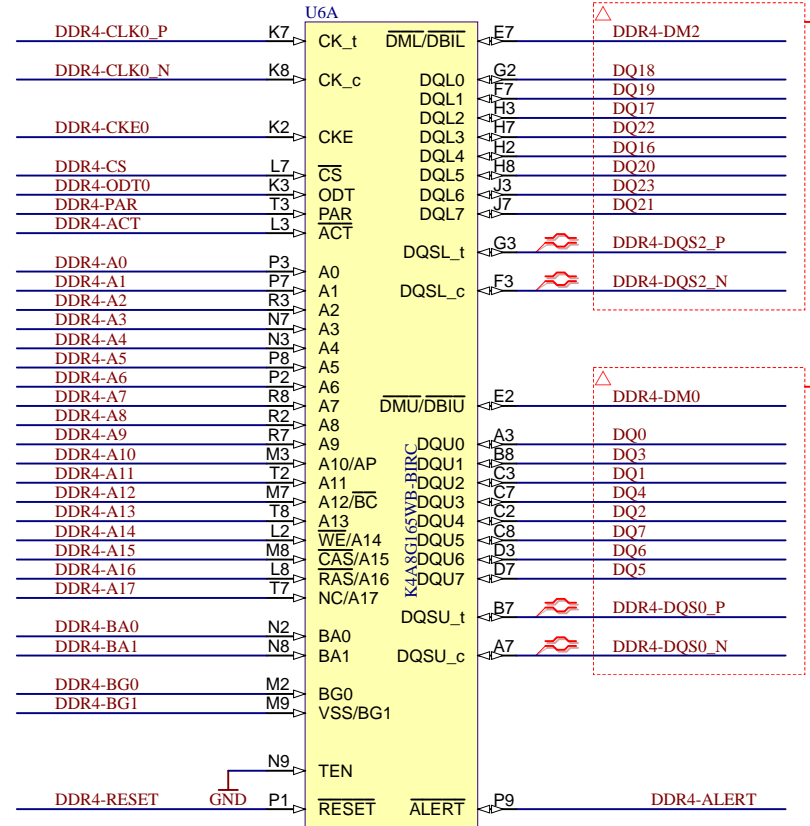
Title: DDR4-RAM_1		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 25 of 61
Drawn by: IG	Filename: DDR4-RAM_1.SchDoc	

1

2

3

4



Title: DDR4-RAM_2			
A4	Number: TEB0912 ABI21-A	Rev. 02	
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 26 of 61	
Drawn by: IG	Filename: DDR4-RAM_2.SchDoc		

1

2

3

4

A

A

B

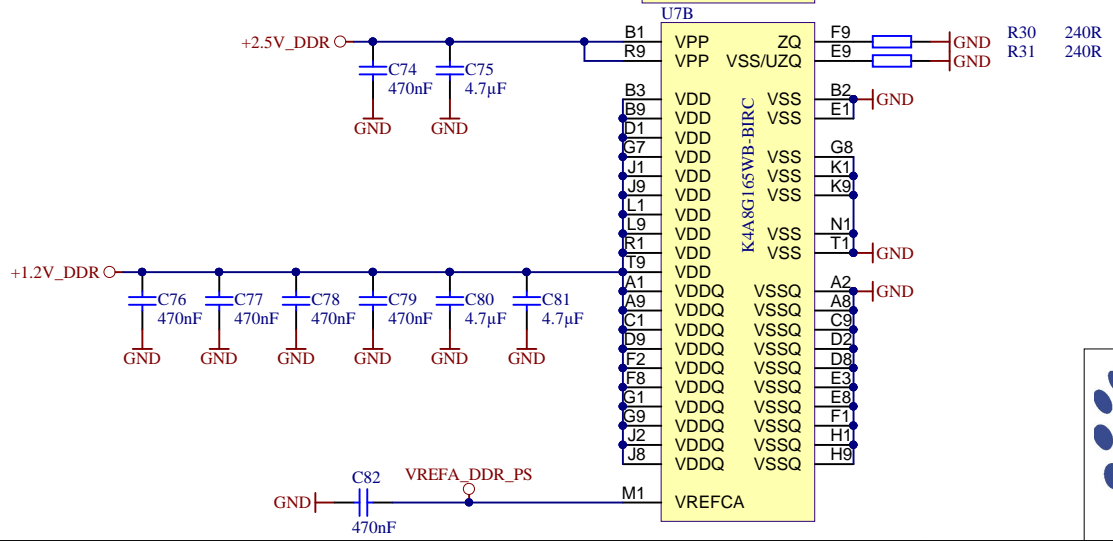
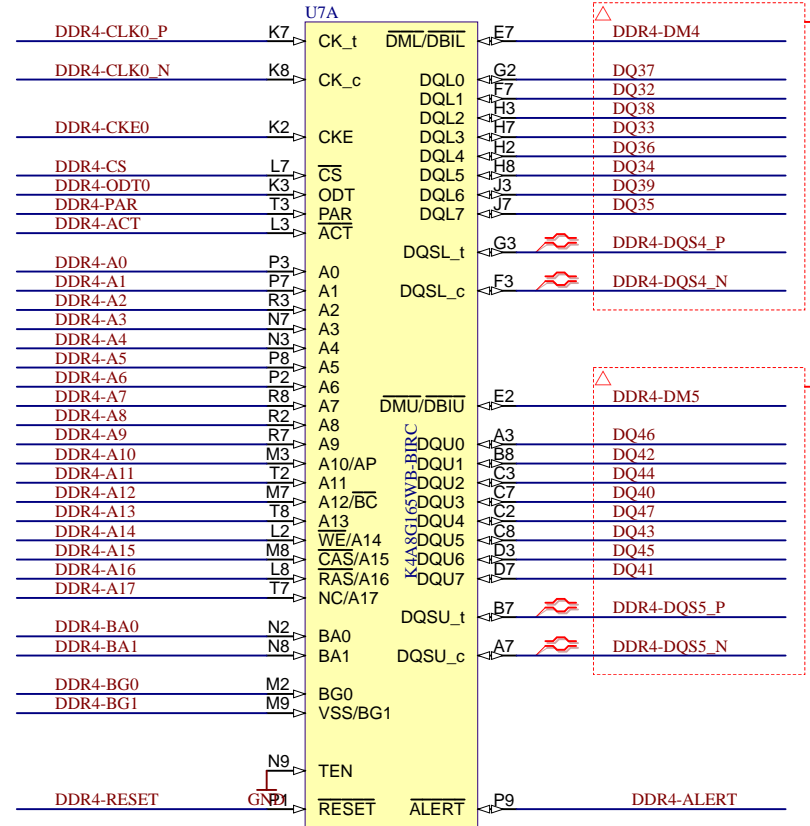
B

C

C

D

D



Title: DDR4-RAM_3		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 27 of 61
Drawn by: IG	Filename: DDR4-RAM_3.SchDoc	

1

2

3

4

1

2

3

4

A

A

B

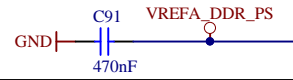
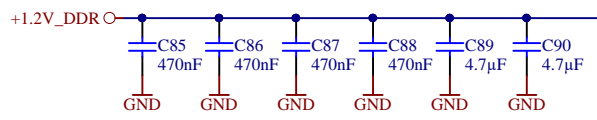
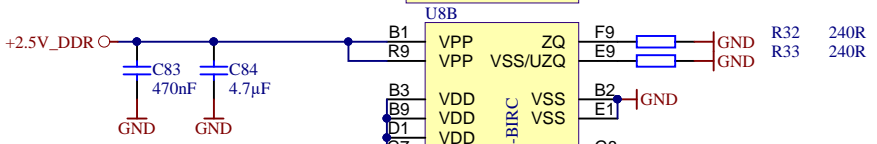
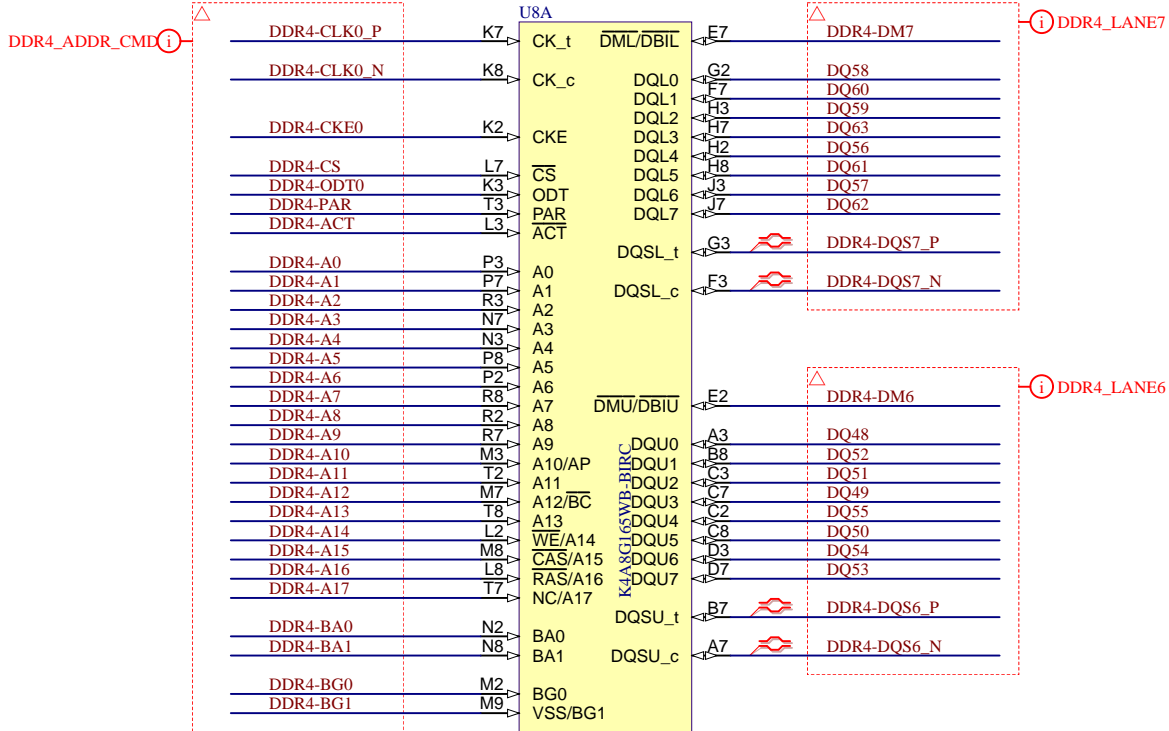
B

C

C

D

D



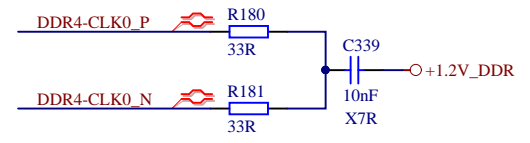
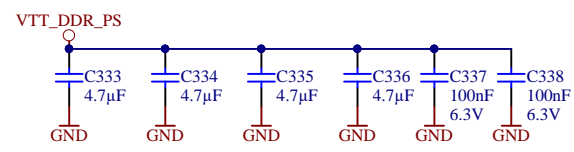
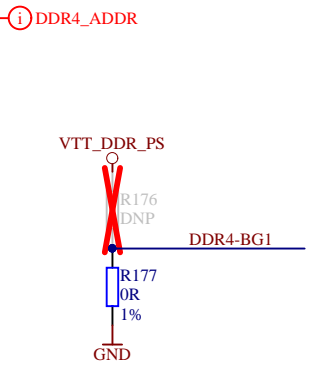
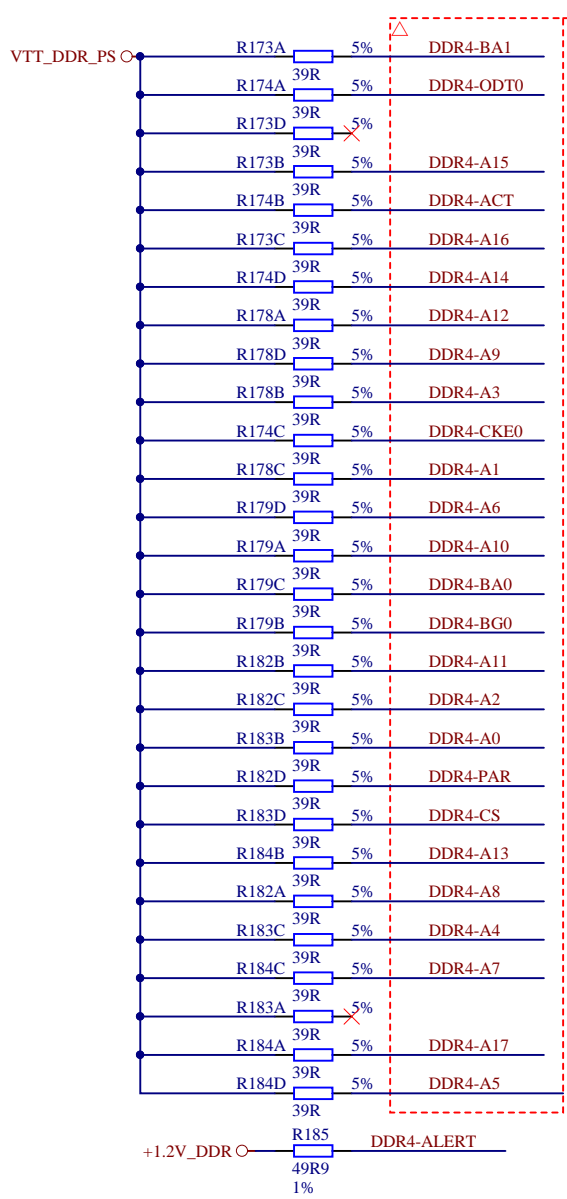
Title: DDR4-RAM_4		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 28 of 61
Drawn by: IG	Filename: DDR4-RAM_4.SchDoc	

1

2

3

4



Title: DDR4-TERM		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 29 of 61
Drawn by: IG	Filename: DDR4-TERM.SchDoc	

1

2

3

4

A

A

B

B

C

C

D

D


DDR4-PL-RAM_1

DDR4-PL-RAM_2

DDR4-PL-RAM_3

DDR4-PL-RAM_4

DDR4-PL-TERM

	Title: DDR4-PL		
	A4	Number: TEB0912 ABI21-A	Rev. 02
	Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 30 of 61
	Drawn by: IG	Filename: DDR4-PL.SchDoc	

1

2

3

4

1

2

3

4

A

A

B

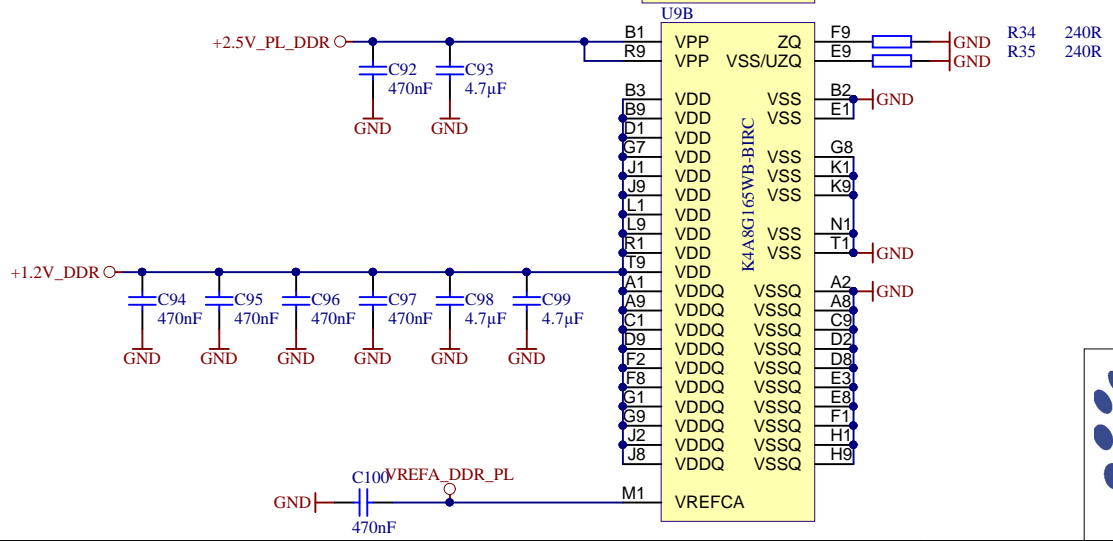
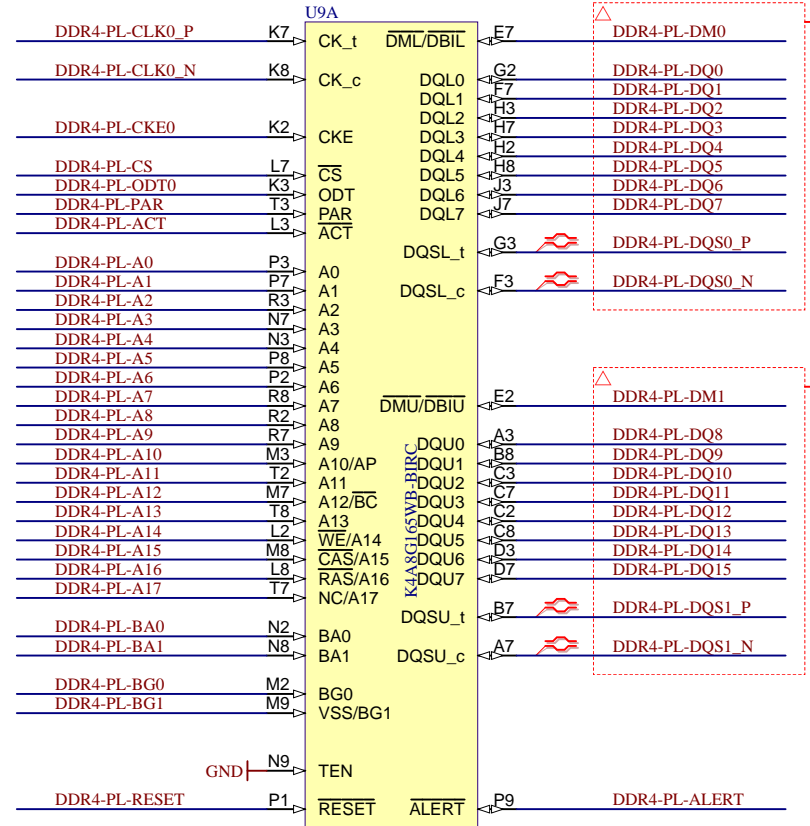
B

C

C

D

D



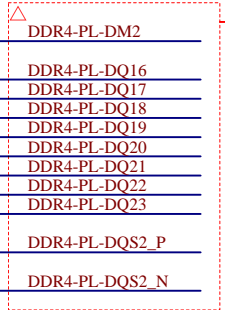
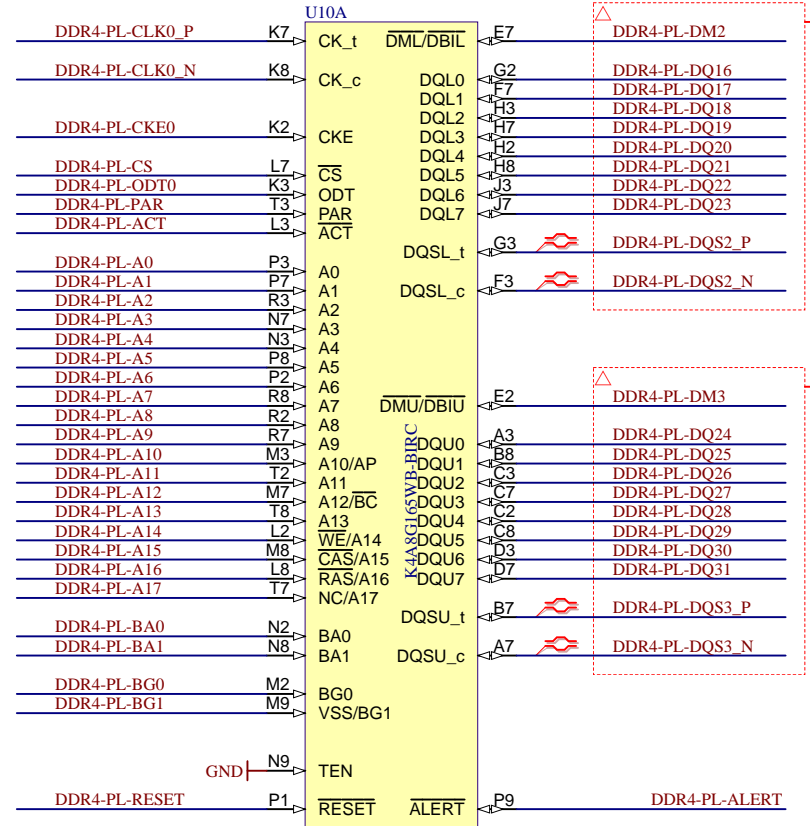
Title: DDR4-PL-RAM_1		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 31 of 61
Drawn by: IG	Filename: DDR4-PL-RAM_1.SchDoc	

1

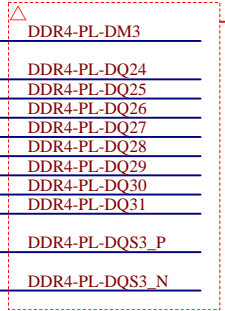
2

3

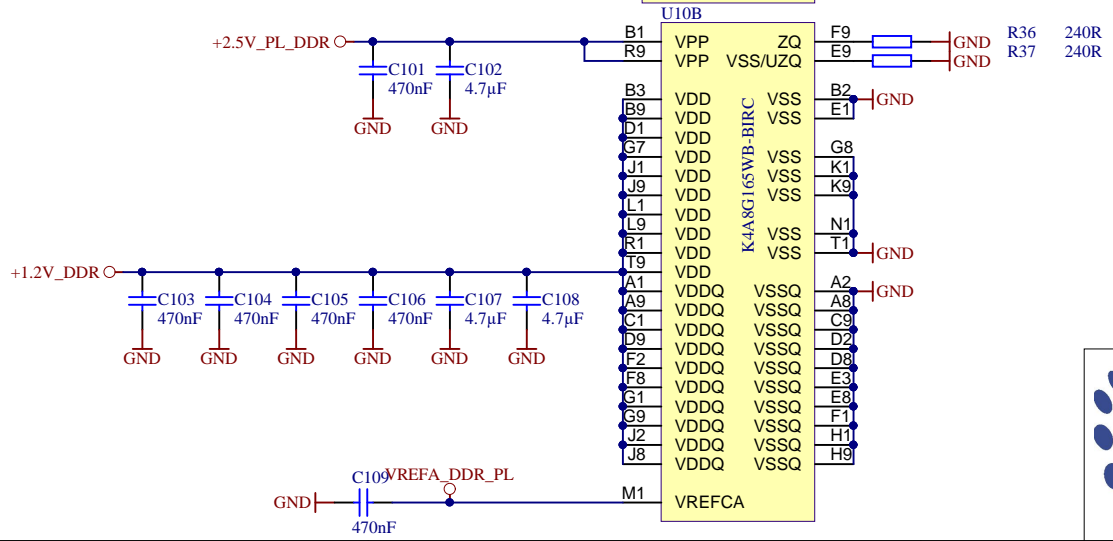
4



DDR4_PL_LANE2



DDR4_PL_LANE3



Title: DDR4-PL-RAM_2		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 32 of 61
Drawn by: IG	Filename: DDR4-PL-RAM_2.SchDoc	

1

2

3

4

A

A

B

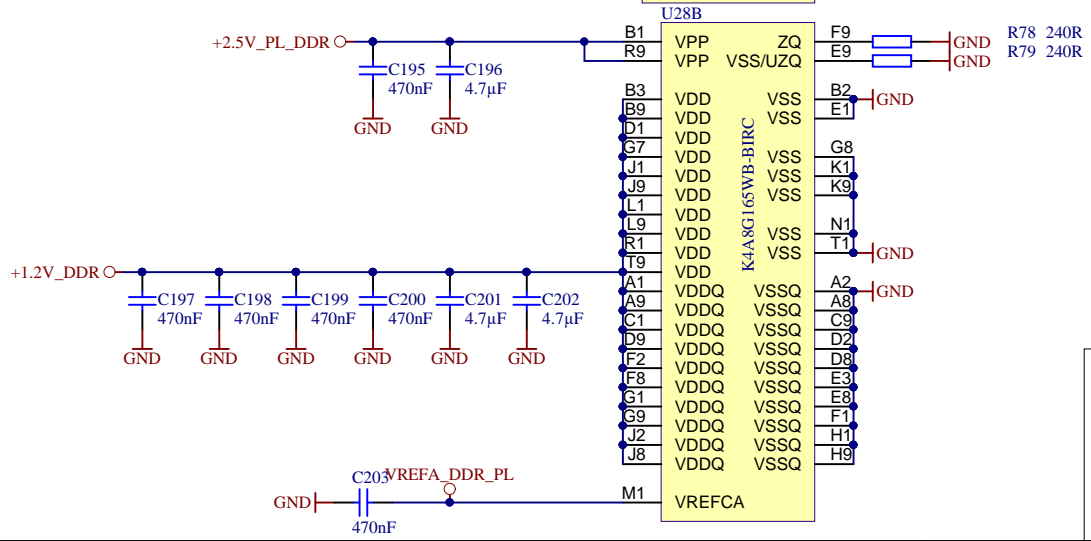
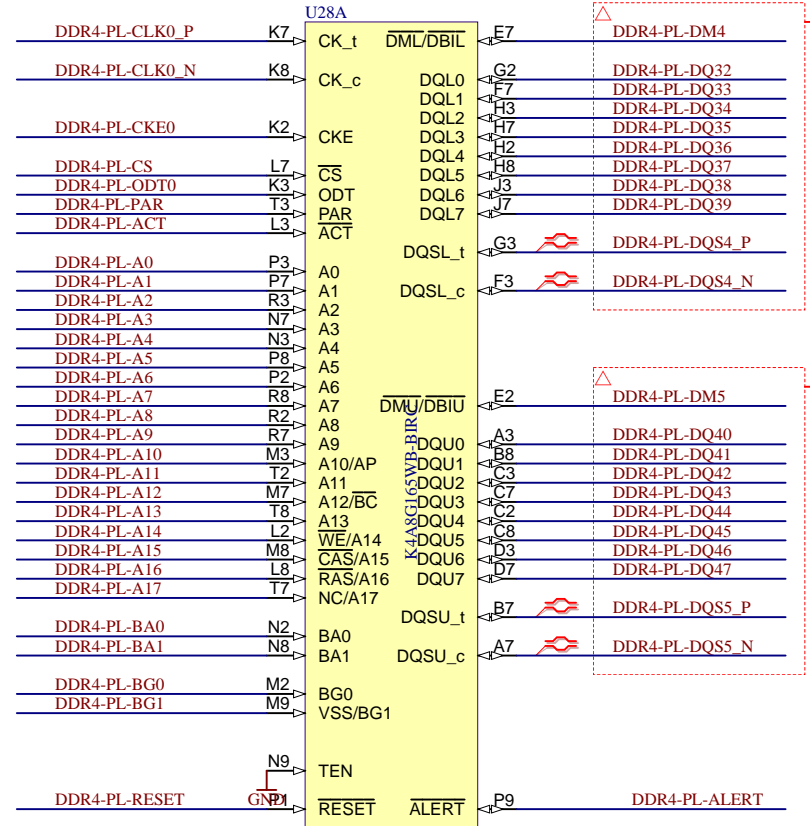
B

C

C

D

D



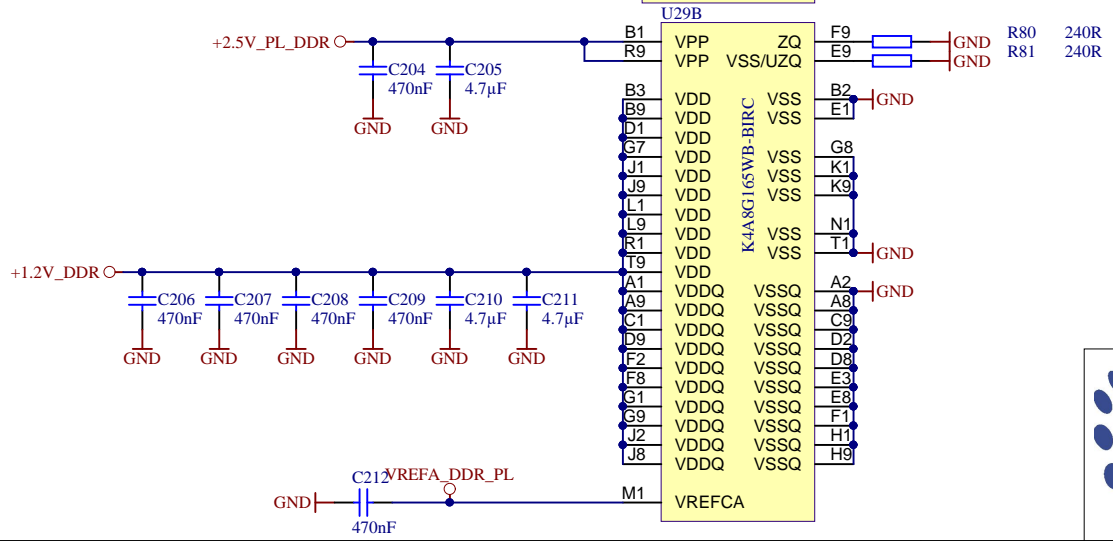
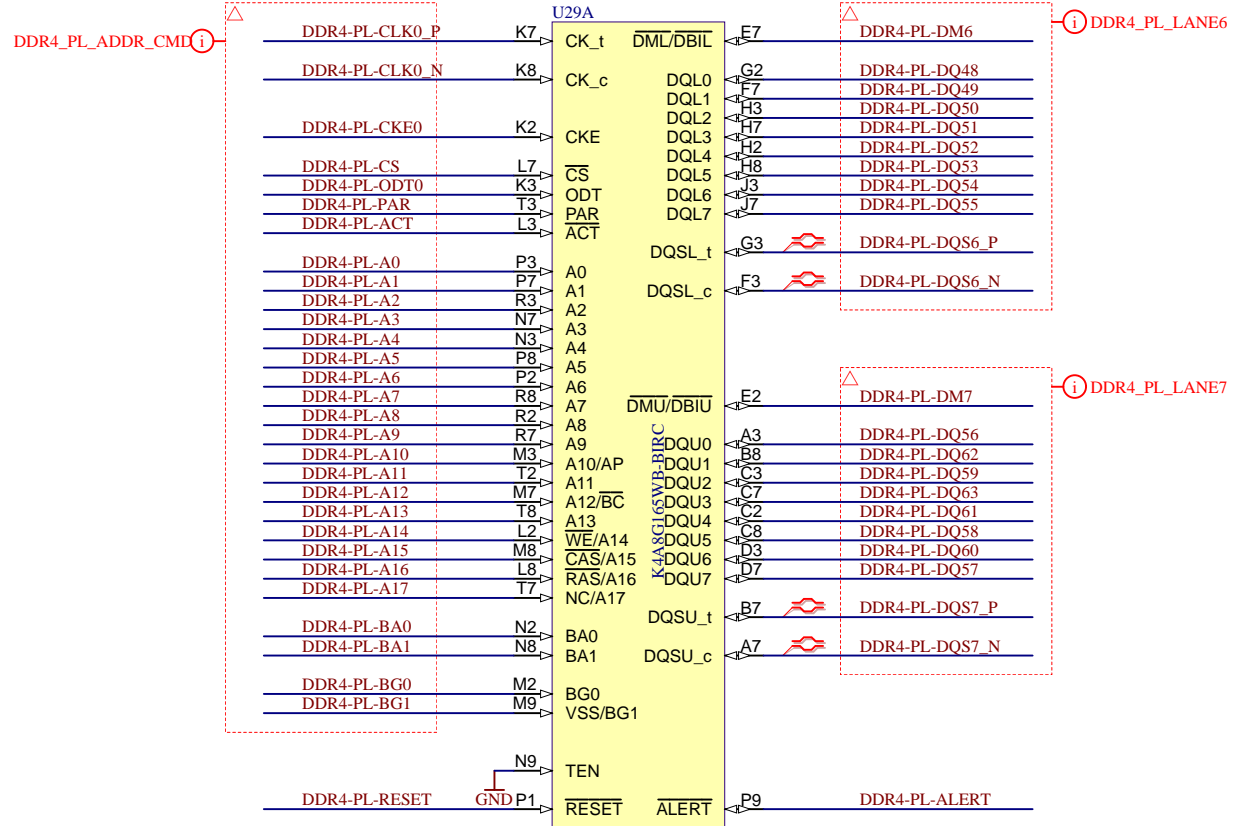
Title: DDR4-PL-RAM_3		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 33 of 61
Drawn by: IG	Filename: DDR4-PL-RAM_3.SchDoc	

1

2

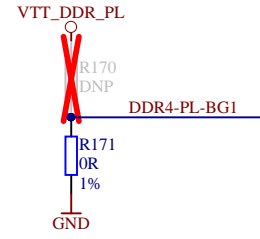
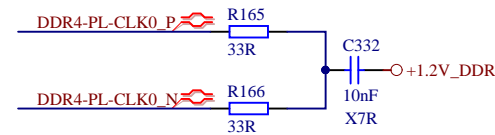
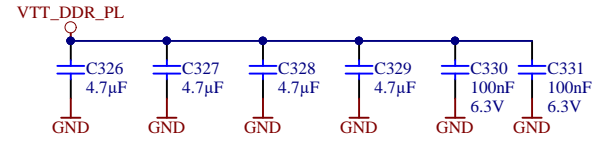
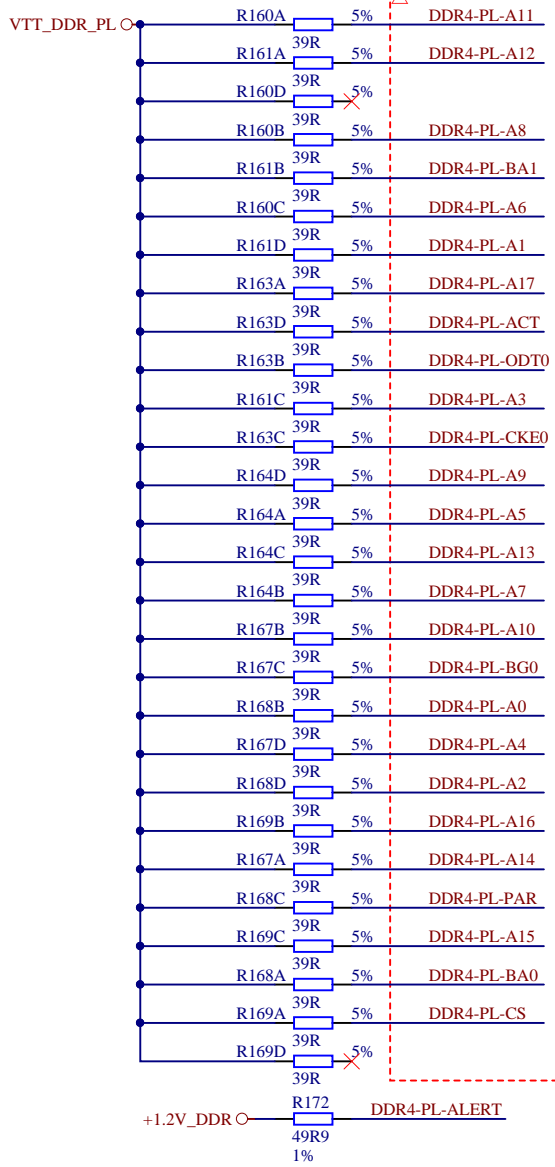
3

4



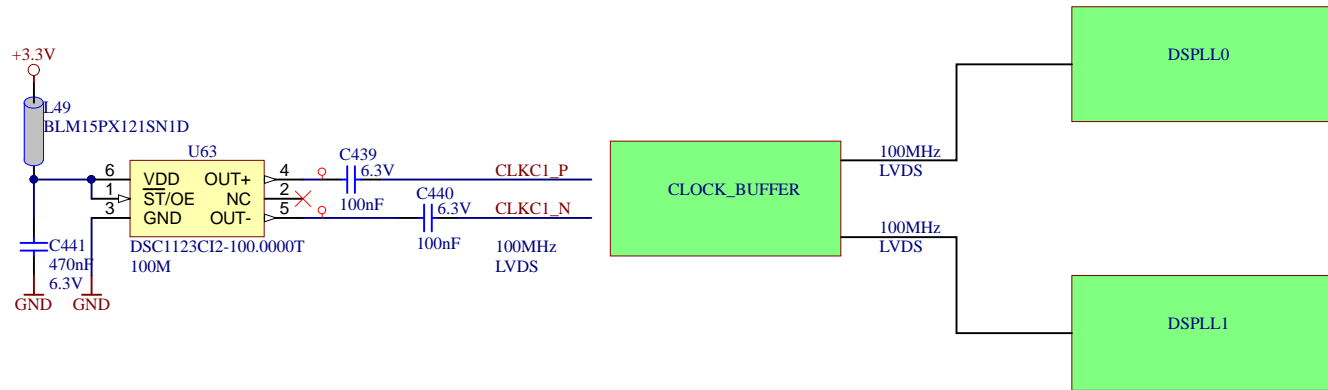
Title: DDR4-PL-RAM_4		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 34 of 61
Drawn by: IG	Filename: DDR4-PL-RAM_4.SchDoc	


DDR4_PL_ADDR_CMD

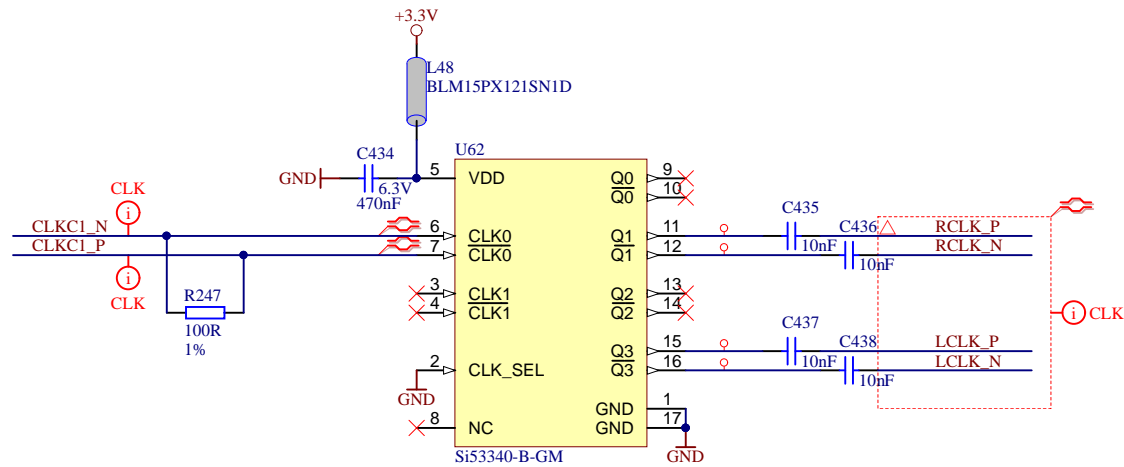



Title: DDR4-PL-TERM		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 35 of 61
Drawn by: IG	Filename: DDR4-PL-TERM.SchDoc	

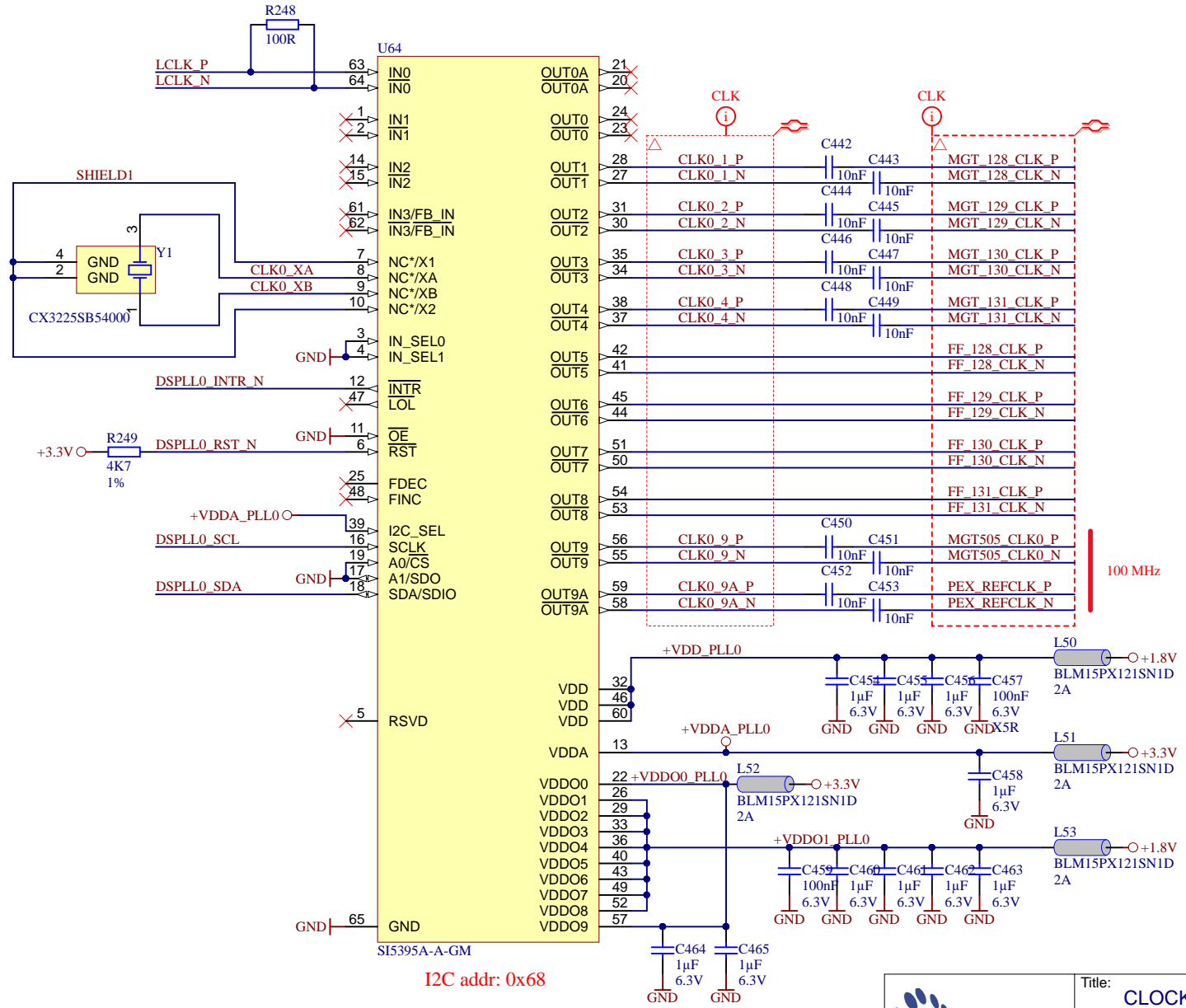
CLOCK DIAGRAM



		Title: CLOCK	
		A4	Number: TEB0912 ABI21-A
Date: 2019-04-09		Copyright: Trenz Electronic GmbH	
Page 36 of 61		Filename: CLOCK.schdoc	
Drawn by: IG			



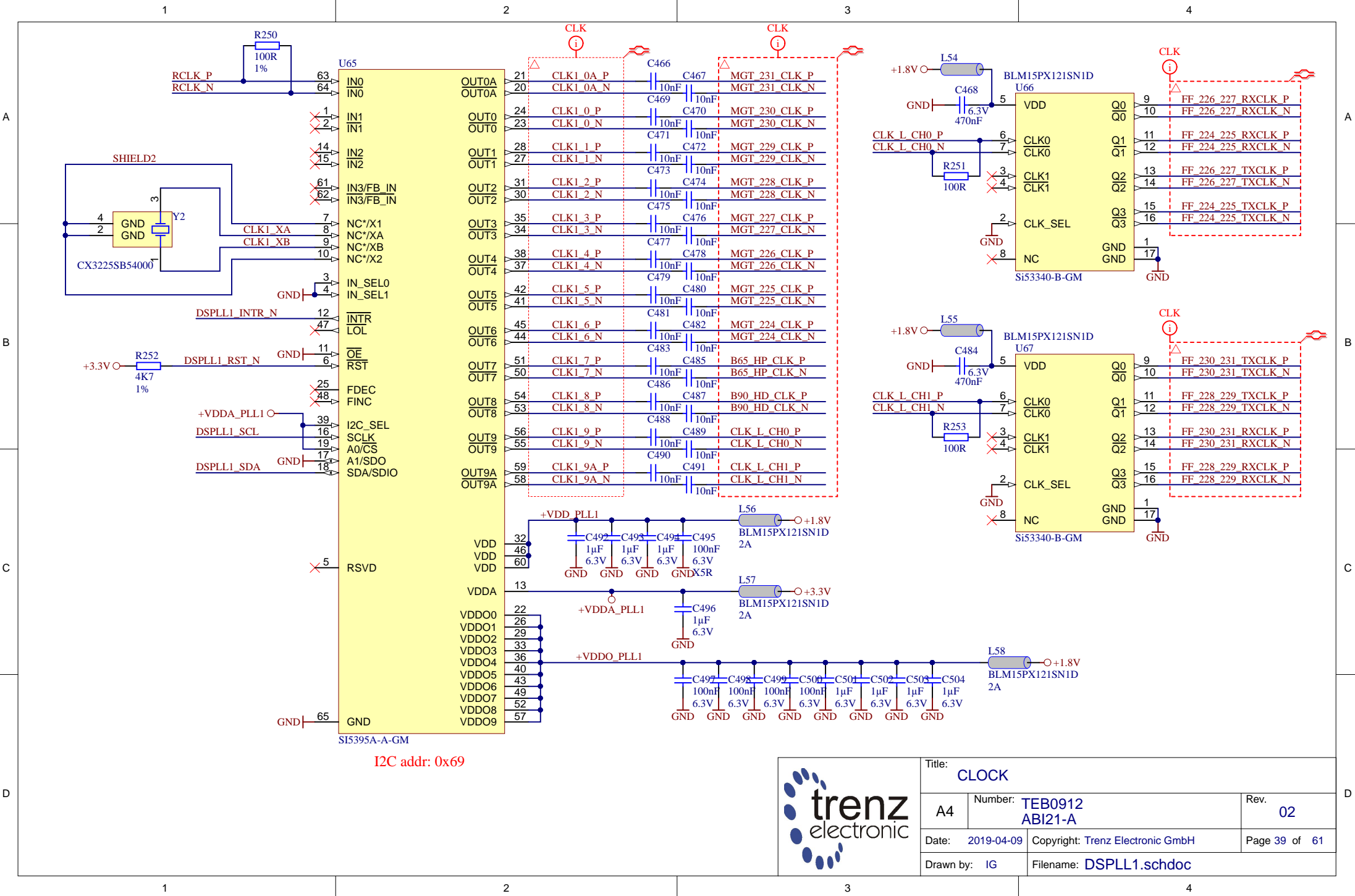
		Title: CLOCK	
		A4	Number: TEB0912 ABI21-A
Date: 2019-04-09		Copyright: Trenz Electronic GmbH	
Page 37 of 61		Filename: CLOCK_BUFFER.schdoc	
Drawn by: IG			



I2C addr: 0x68



Title: CLOCK		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	
Page 38 of 61	Page 38 of 61	
Drawn by: IG	Filename: DSPLL0.schdoc	



Title: CLOCK		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	
Page 39 of 61	Page 39 of 61	
Drawn by: IG	Filename: DSPLL1.schdoc	

1

2

3

4

A

A

B

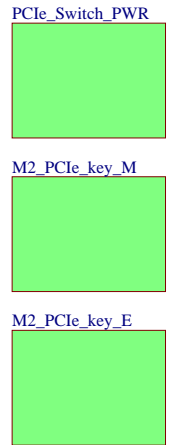
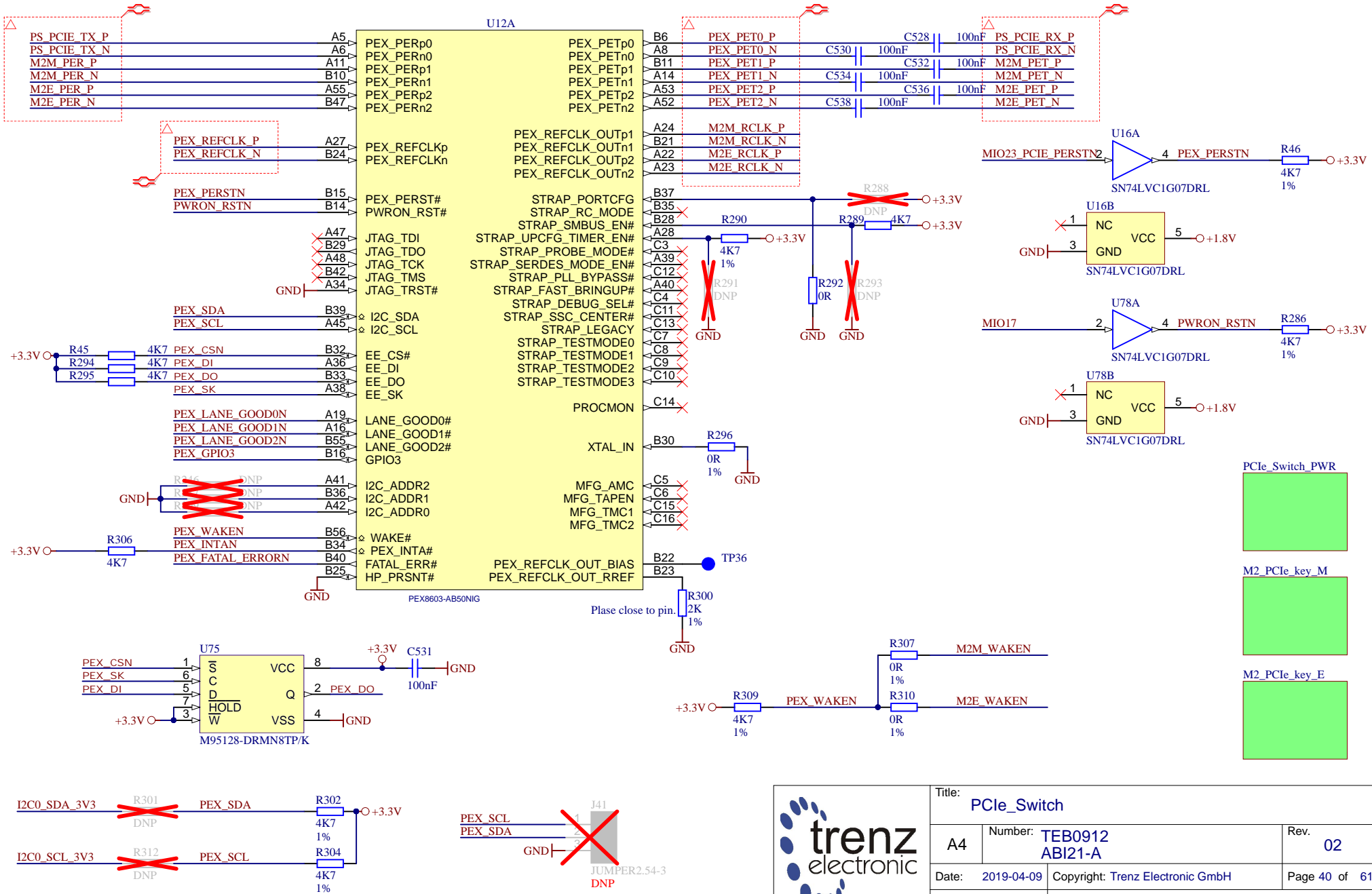
B

C

C

D

D



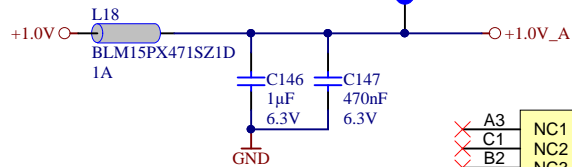
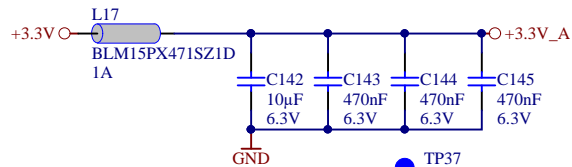
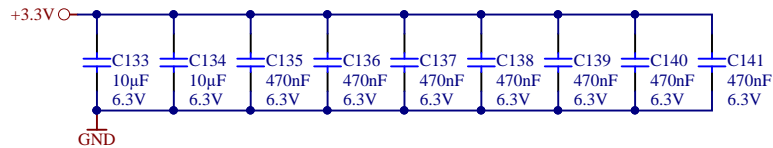
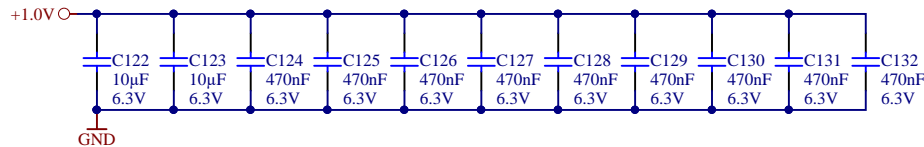
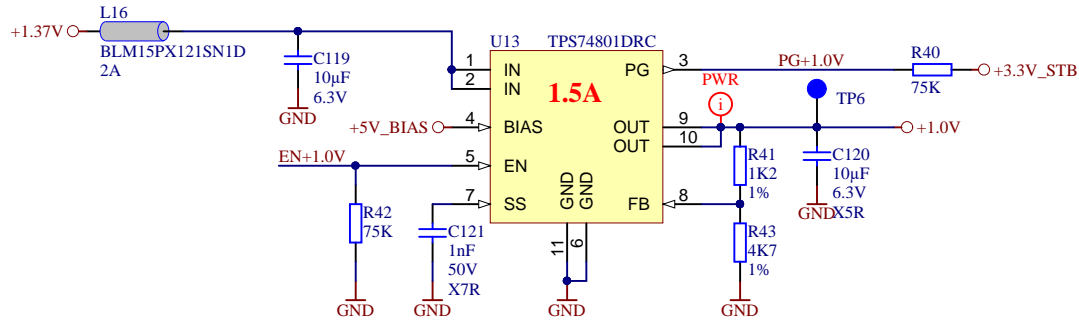
Title: PCIe_Switch		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 40 of 61
Drawn by: IG	Filename: PCIe_Switch.SchDoc	

1

2

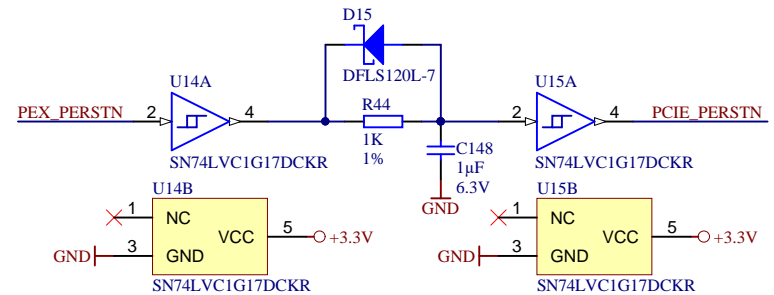
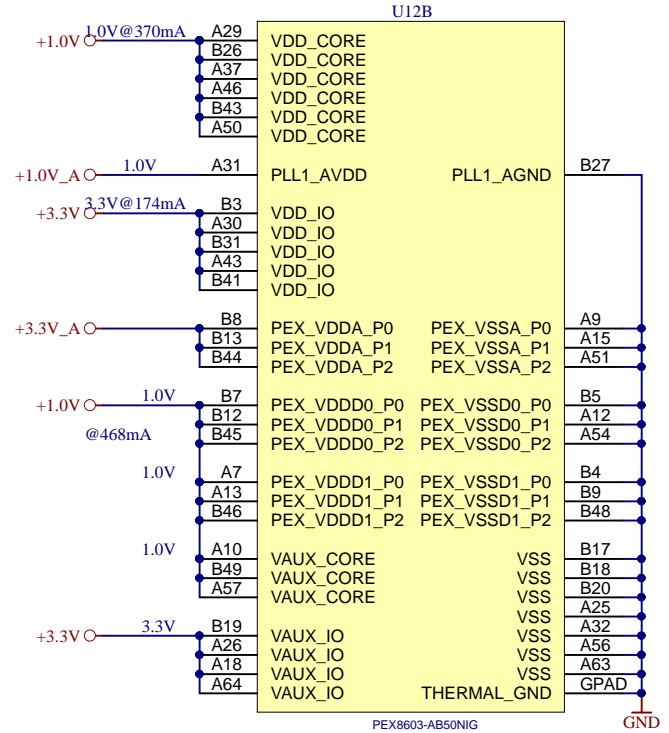
3

4

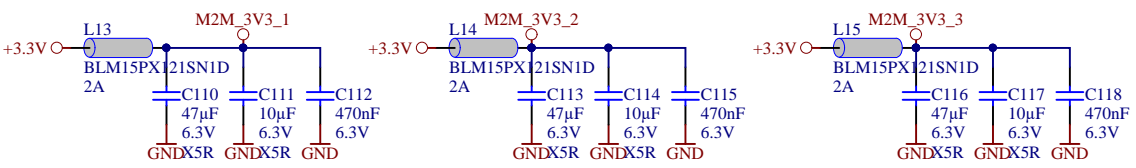
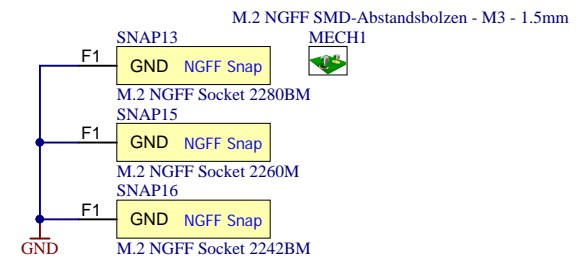
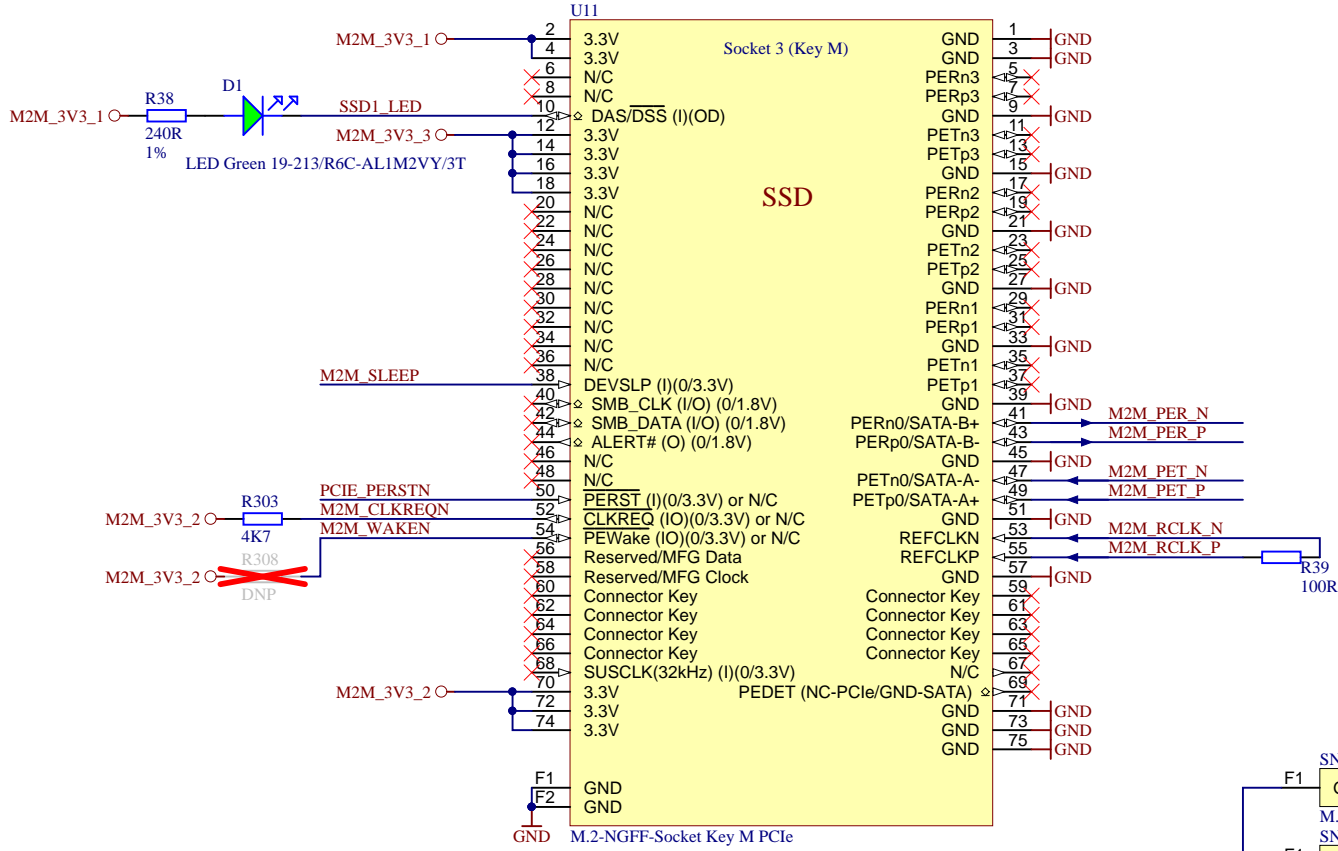


U12C			
A3	NC1	NC13	A44
C1	NC2	NC14	A35
B2	NC3	NC15	A62
A49	NC4	NC16	A61
A1	NC5	NC17	A60
A2	NC6	NC18	A59
C2	NC7	NC19	A58
A17	NC8	NC20	B50
B1	NC9	NC21	B51
A4	NC10	NC22	B52
A33	NC11	NC23	B53
B38	NC12	NC24	B54
A20	RESERVED		
A21	RESERVED		

PEX8603-AB50NIG



	Title: PCIe_Switch_PWR		
	A4	Number: TEB0912 ABI21-A	Rev. 02
	Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 41 of 61
	Drawn by: IG	Filename: PCIe_Switch_PWR.SchDoc	



Title: M2_PClE_key_M		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 42 of 61
Drawn by: IG	Filename: M2_PClE_key_M.SchDoc	

1

2

3

4

A

A

B

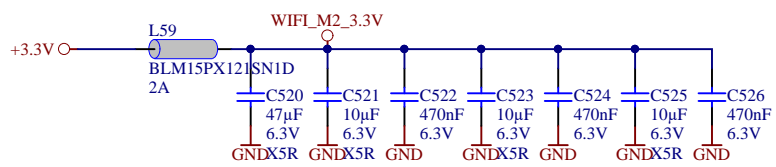
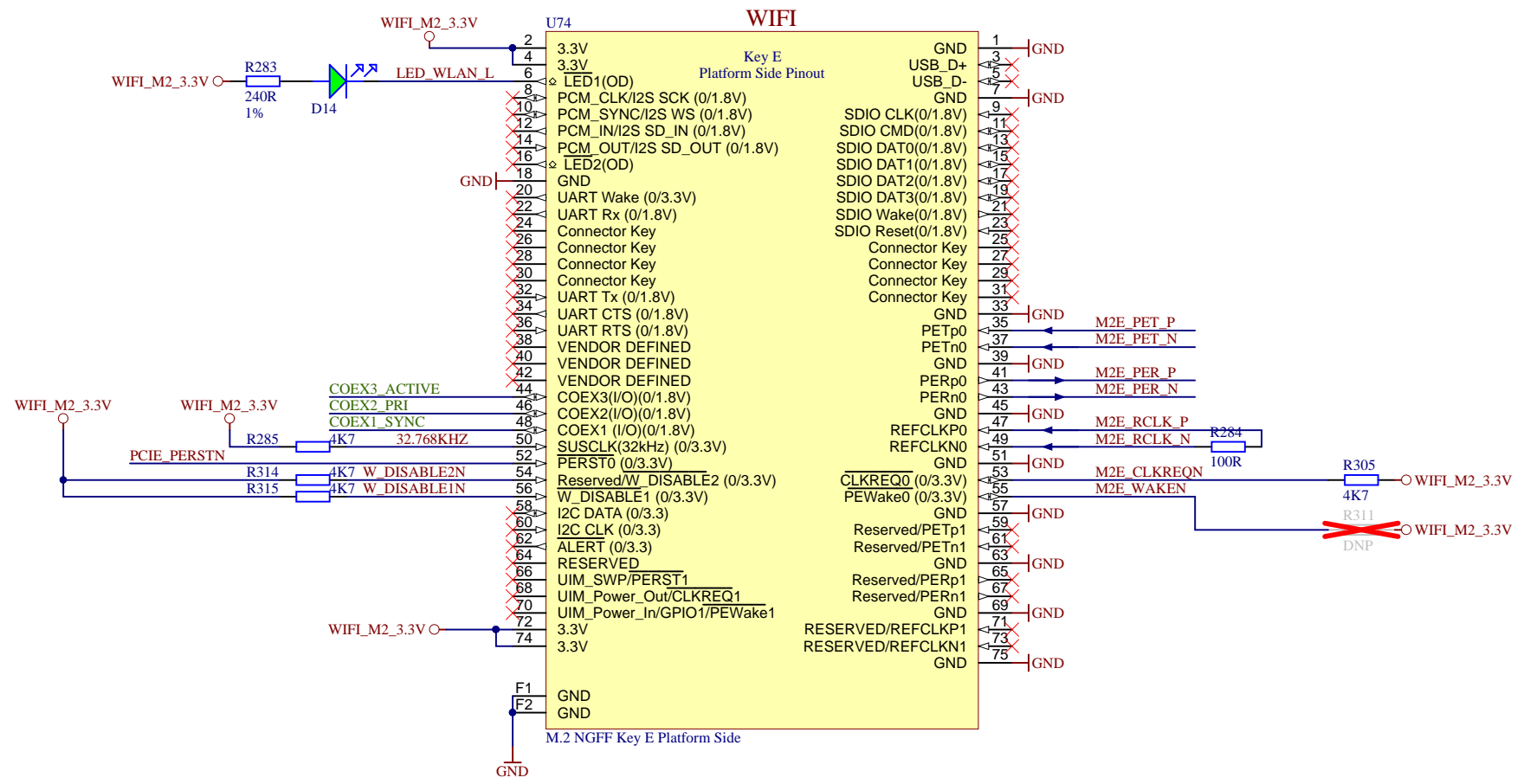
B

C

C

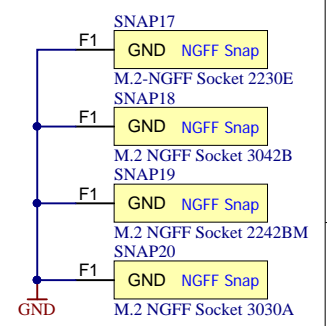
D

D



MECH2

 M.2 NGFF SMD-Abstandsbolzen - M3 - 1mm



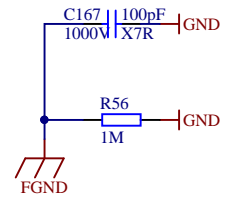
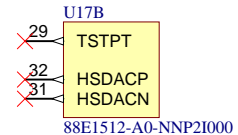
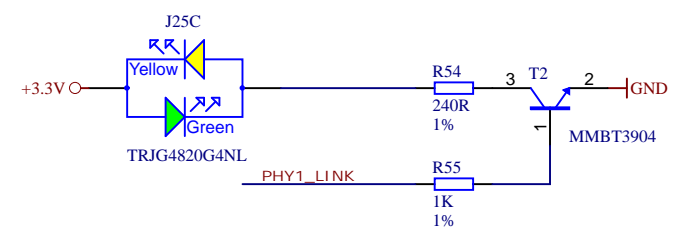
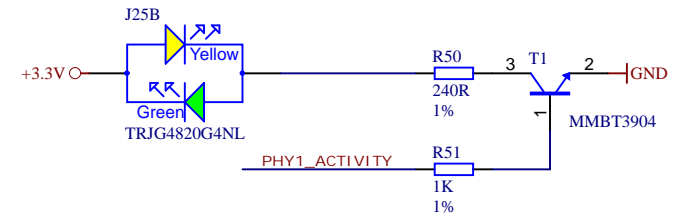
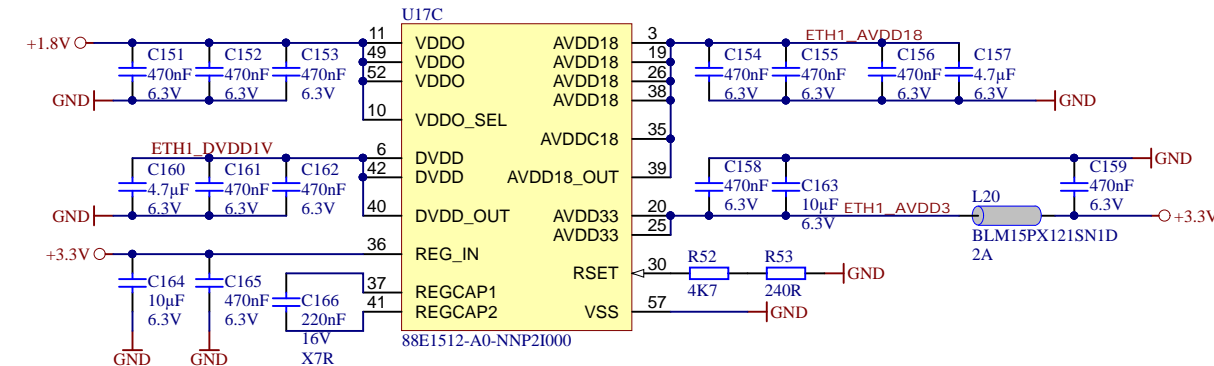
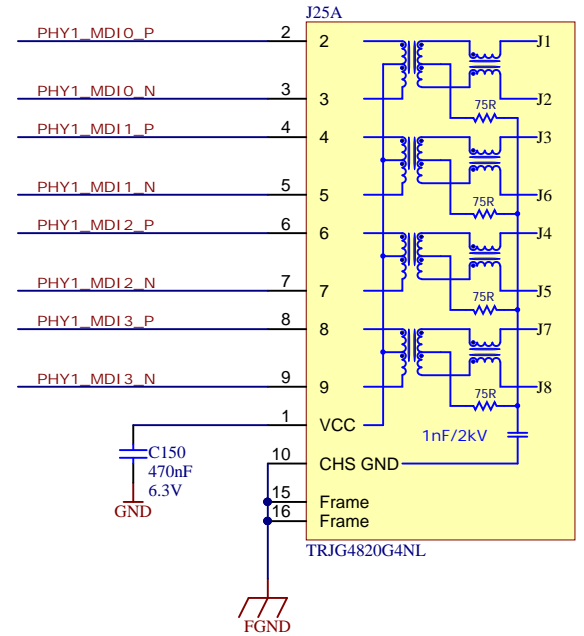
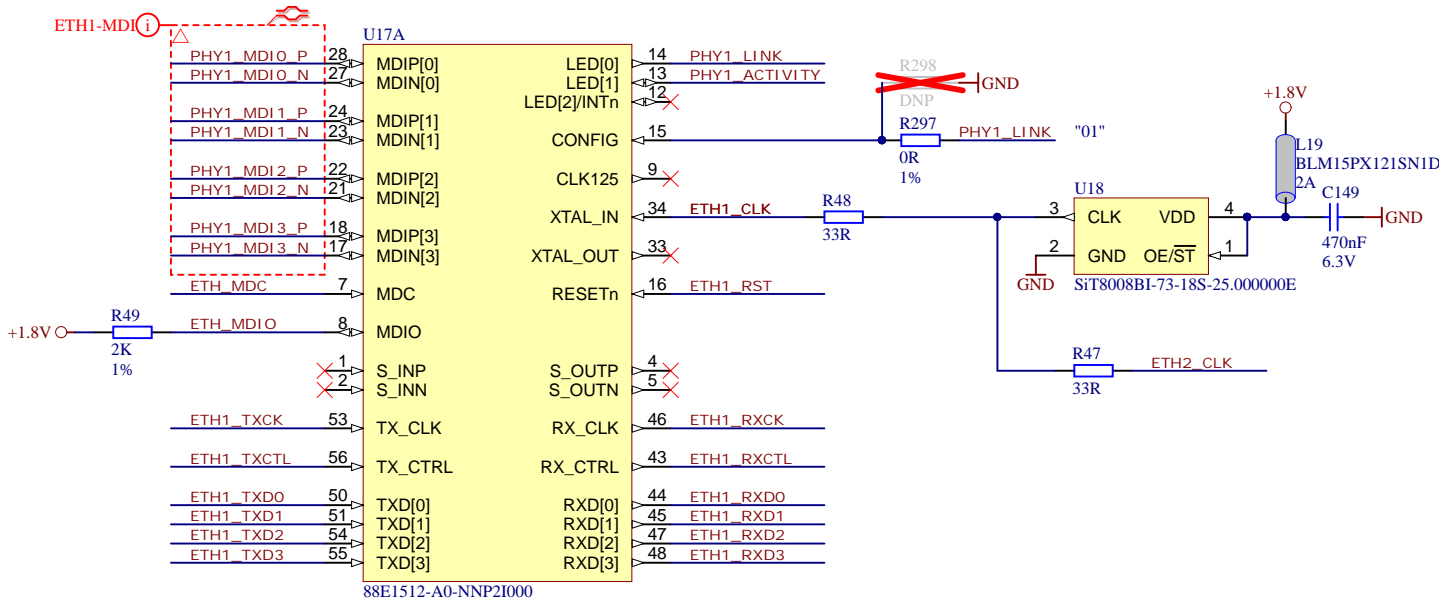
			Title: M2_PCl_e_key_E		
			A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09		Copyright: Trenz Electronic GmbH		Page 43 of 61	
Drawn by: IG		Filename: M2_PCl_e_key_E.SchDoc			

1

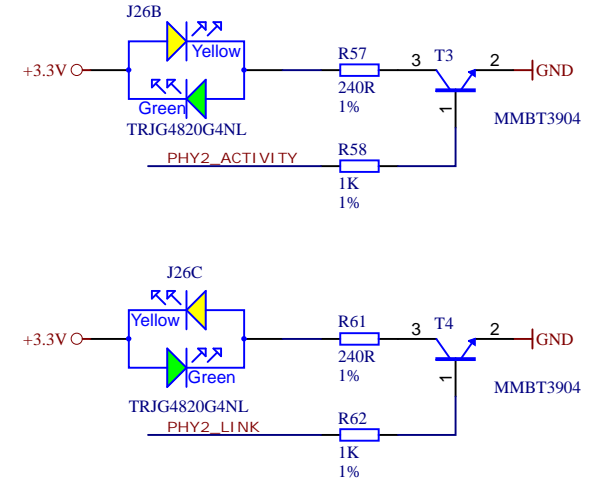
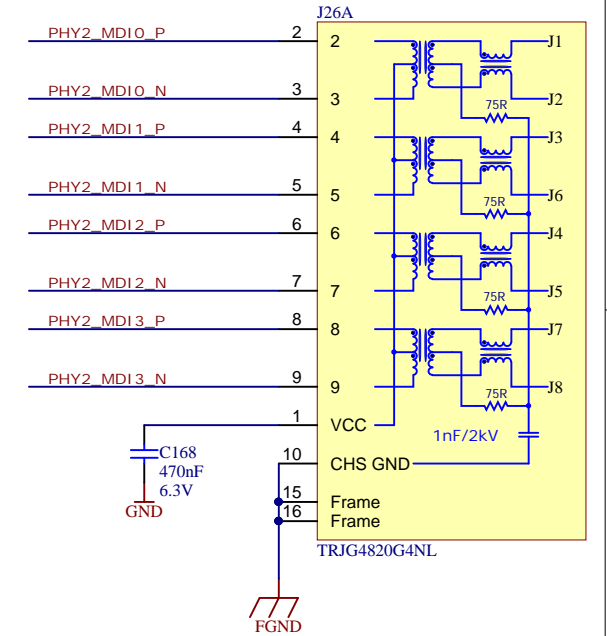
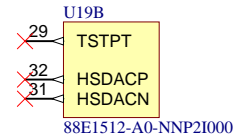
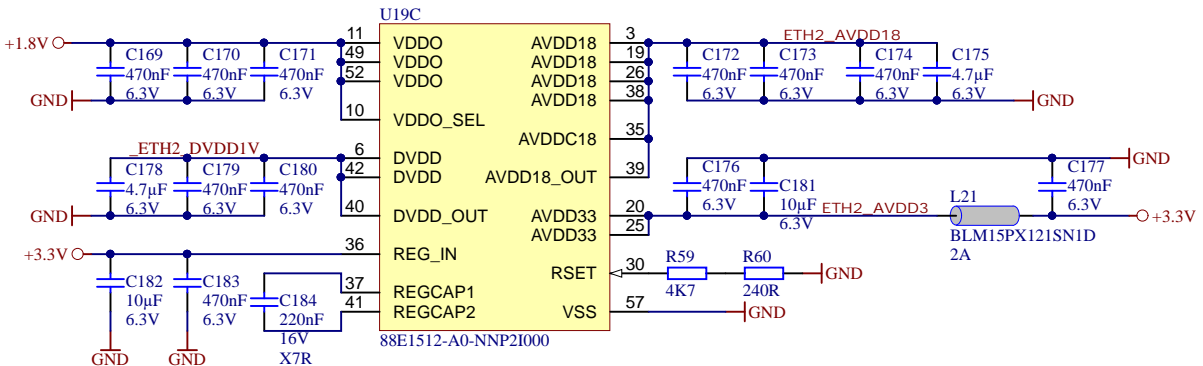
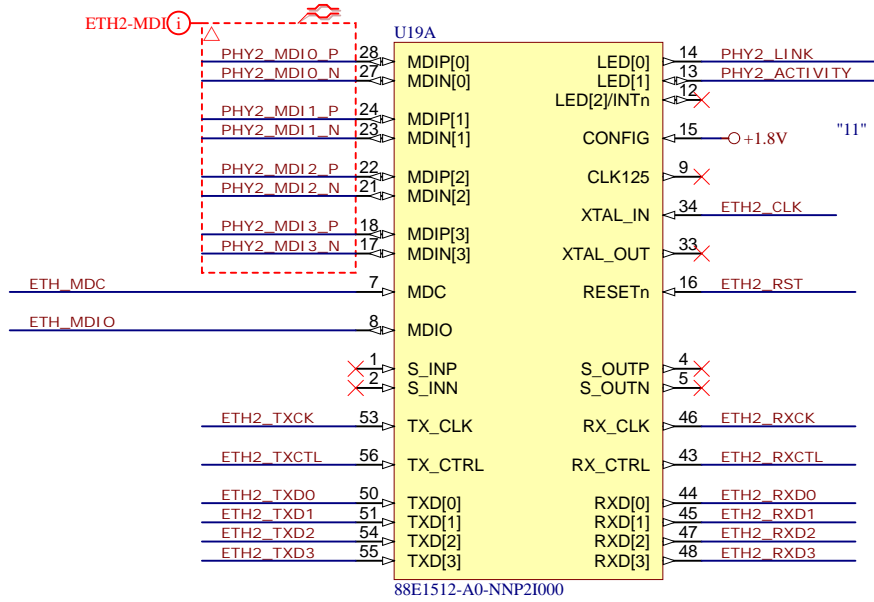
2

3

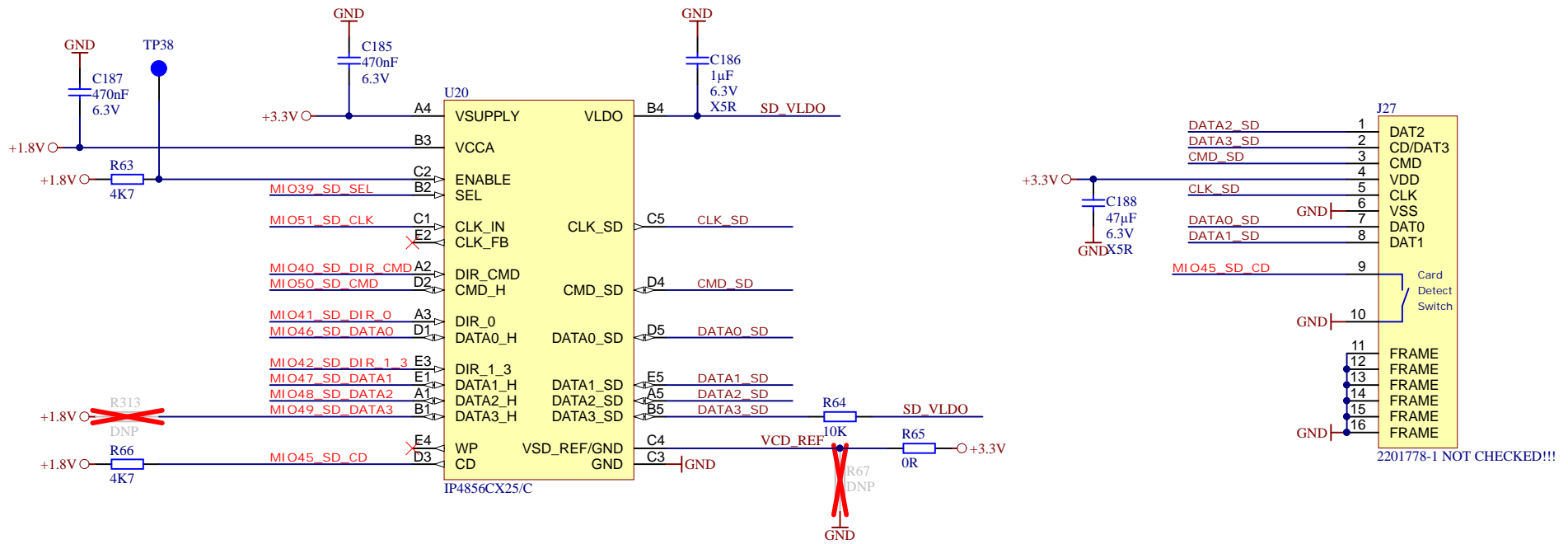
4




Title: ETH-PHY1		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	
Filename: ETH-PHY1.SchDoc		Page 44 of 61

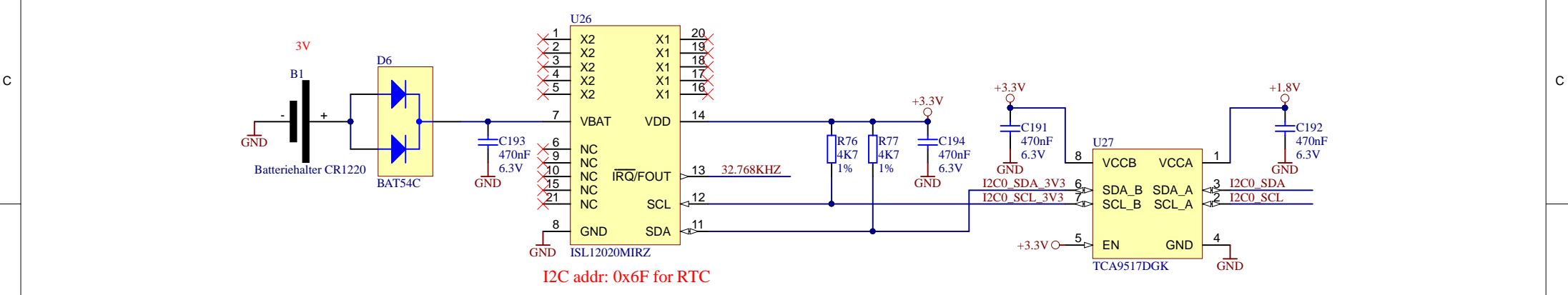
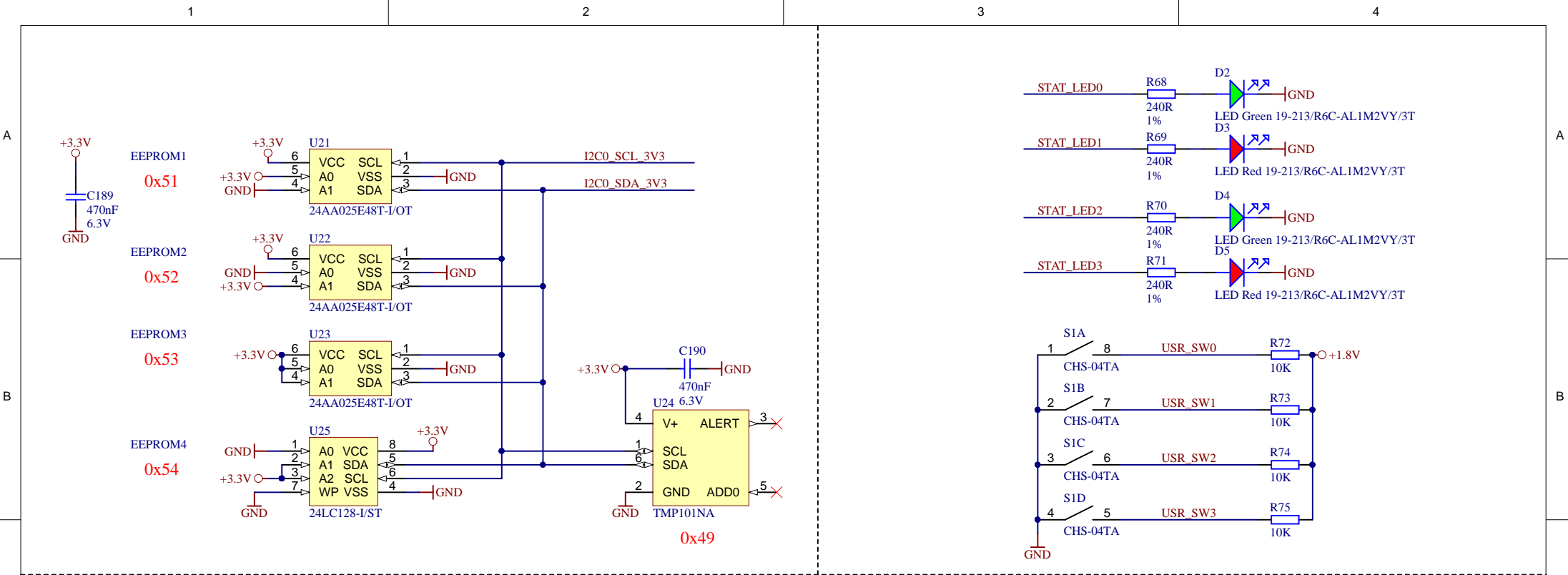


Title: ETH-PHY2		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 45 of 61
Filename: ETH-PHY2.SchDoc		

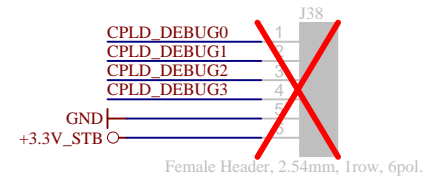
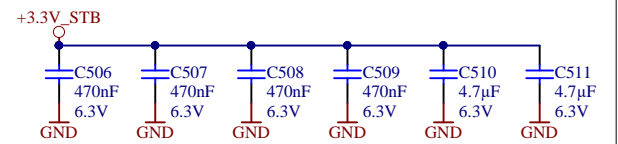
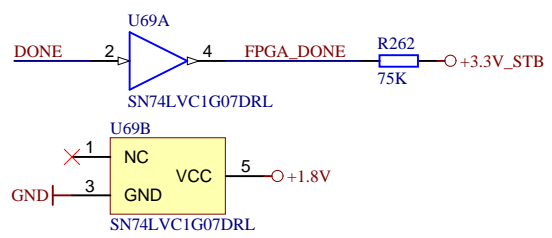
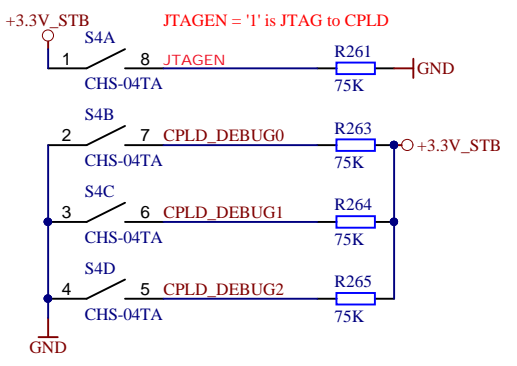
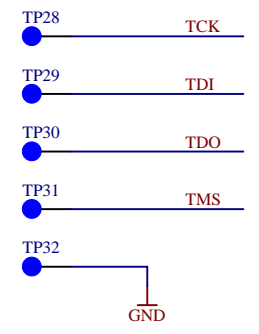
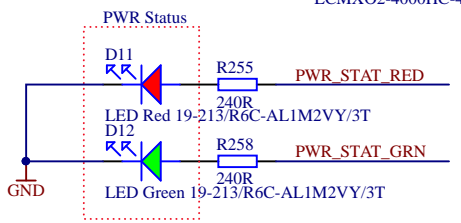
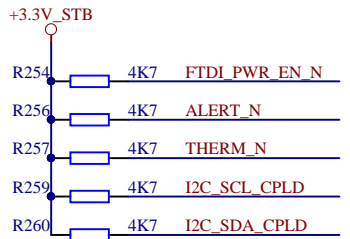
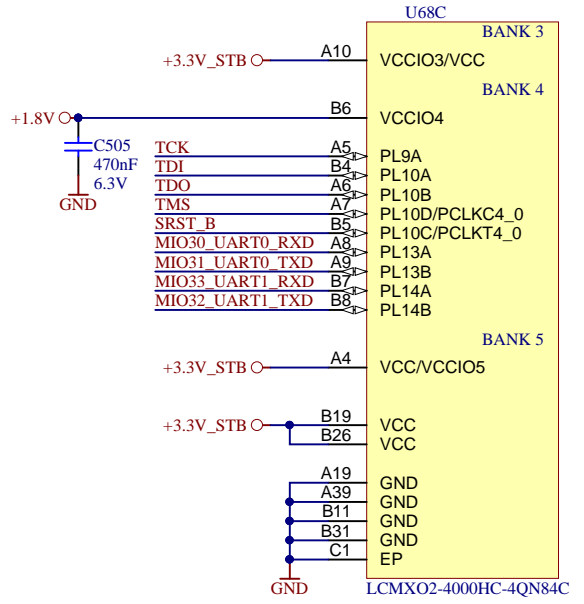
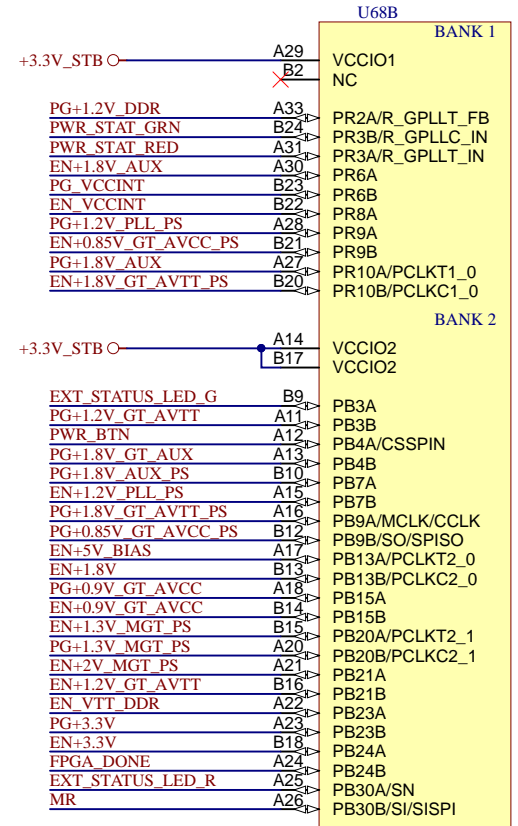
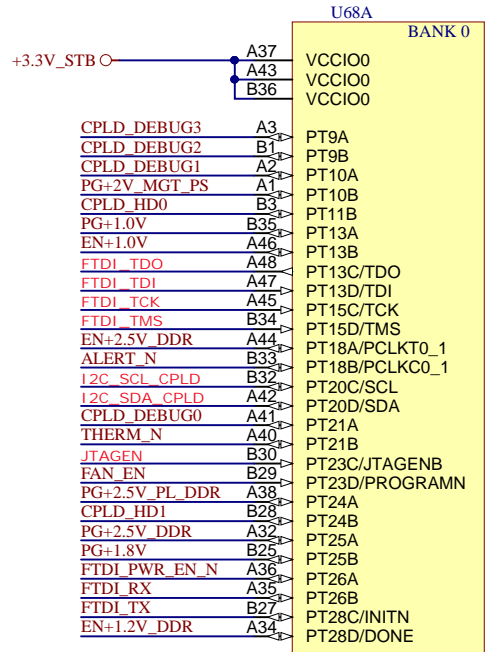


2201778-1 NOT CHECKED!!!

			Title: SD	
			A4	Number: TEB0912 ABI21-A
Date: 2019-04-09		Copyright: Trenz Electronic GmbH		Page 46 of 61
Drawn by: IG		Filename: SD.schdoc		



		Title: MISC	
		A4	Number: TEB0912 ABI21-A
Date: 2019-04-09		Copyright: Trenz Electronic GmbH	
Drawn by: IG		Filename: MISC.schdoc	
		Rev. 02	Page 47 of 61



Title: CPLD		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 48 of 61
Drawn by: IG	Filename: CPLD.SchDoc	

A

A

B

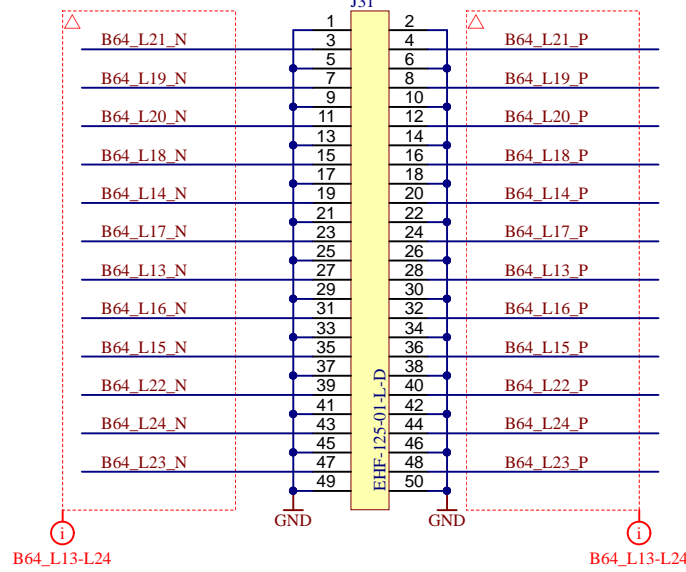
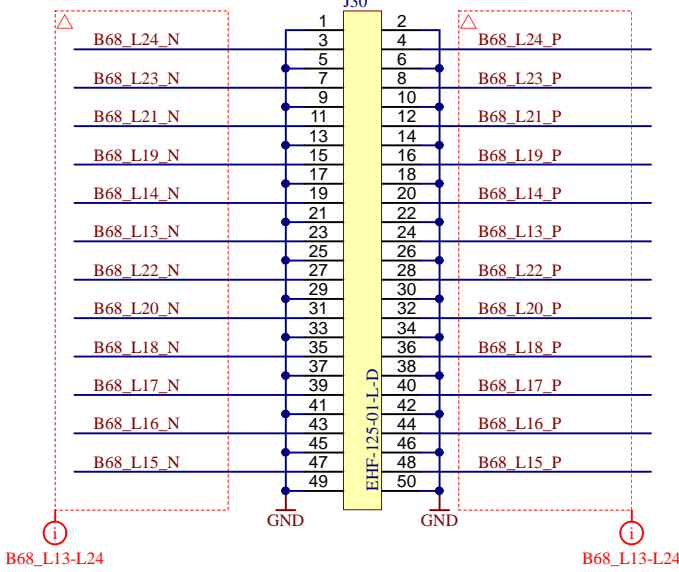
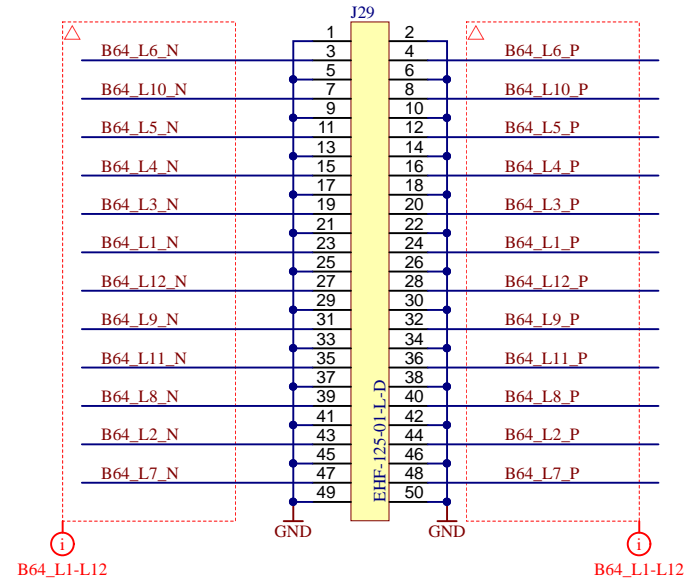
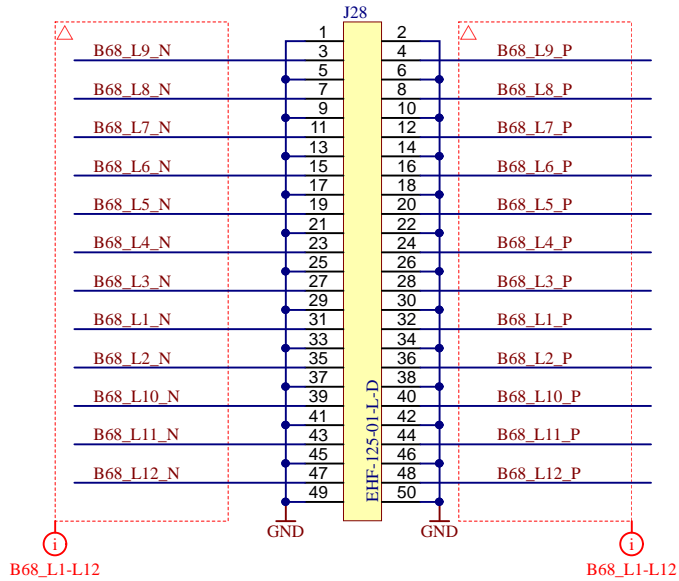
B

C

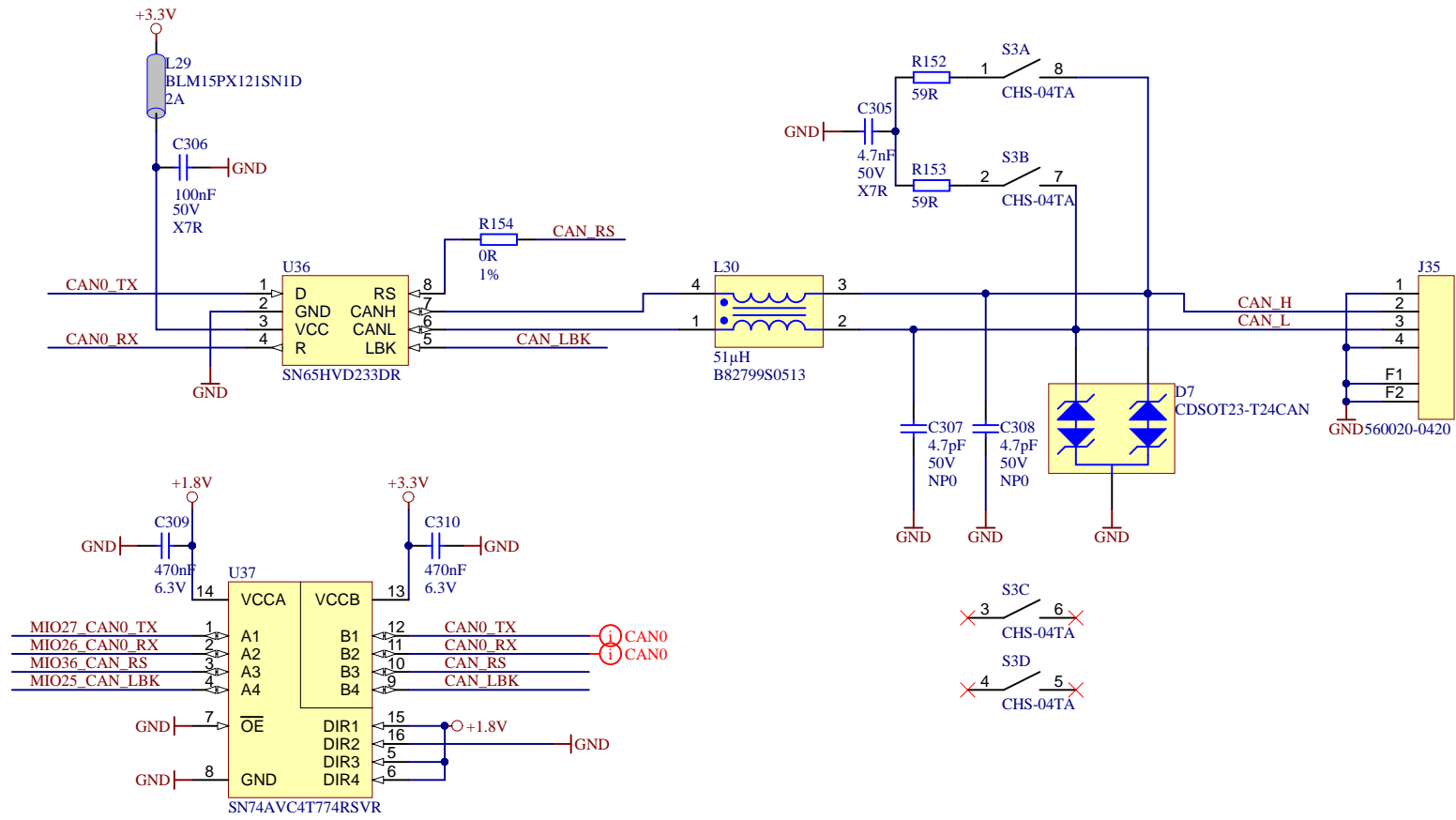
C


D

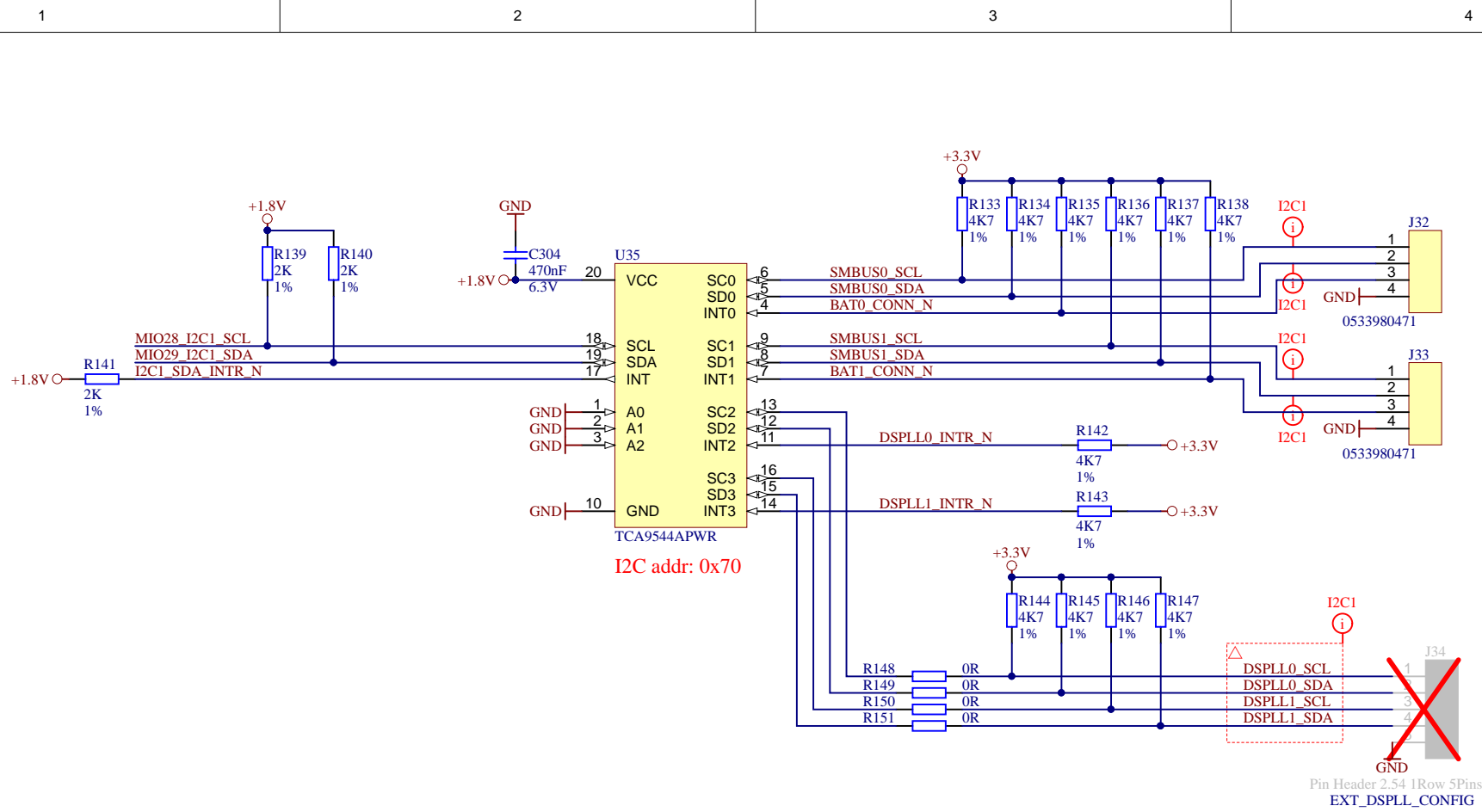
D




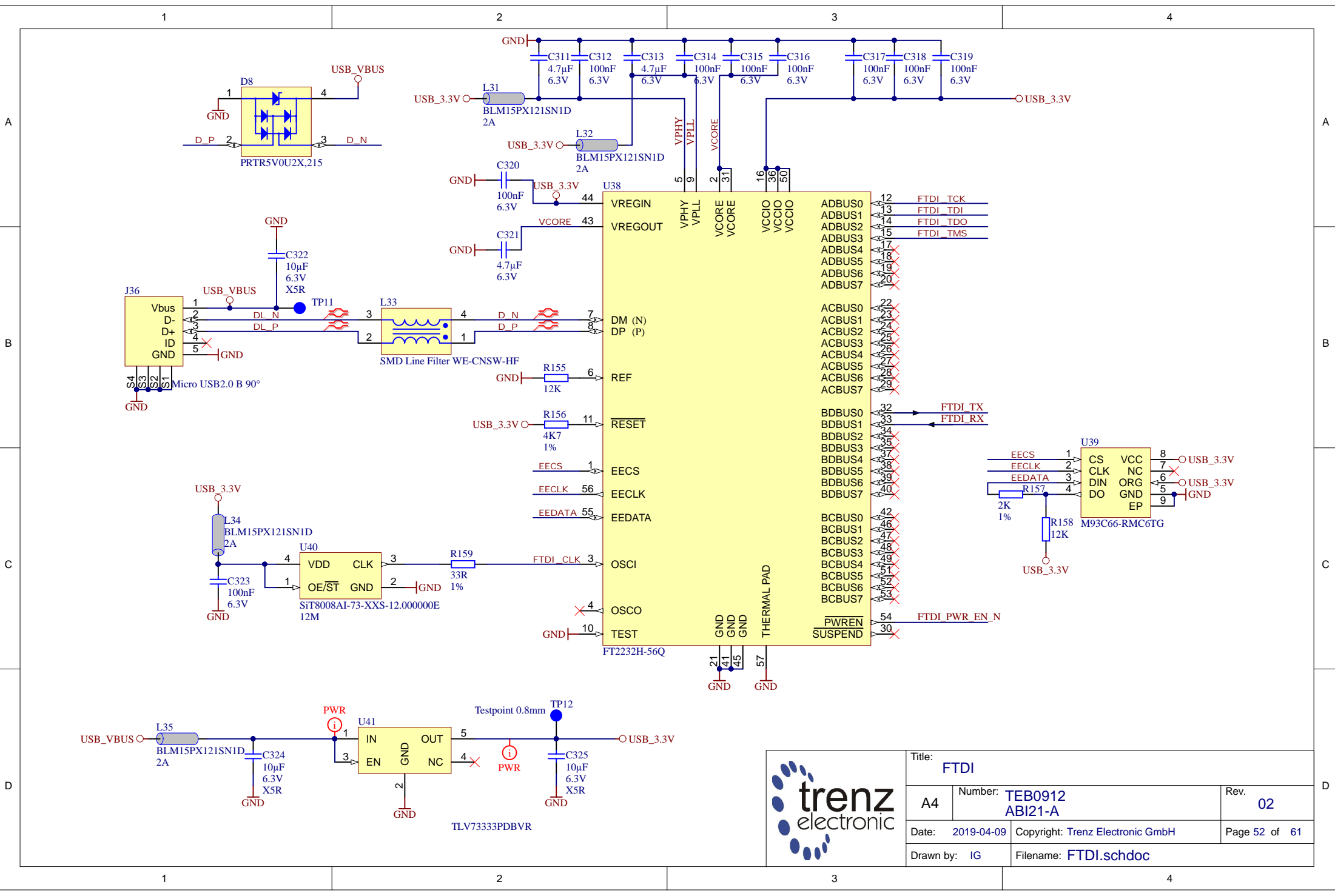
Title: B2B		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 49 of 61
Drawn by: IG	Filename: B2B.schdoc	




			Title: CAN_PHY	
			A4	Number: TEB0912 ABI21-A
Date: 2019-04-09		Copyright: Trenz Electronic GmbH		Page 50 of 61
Drawn by: IG		Filename: CAN_PHY.schdoc		

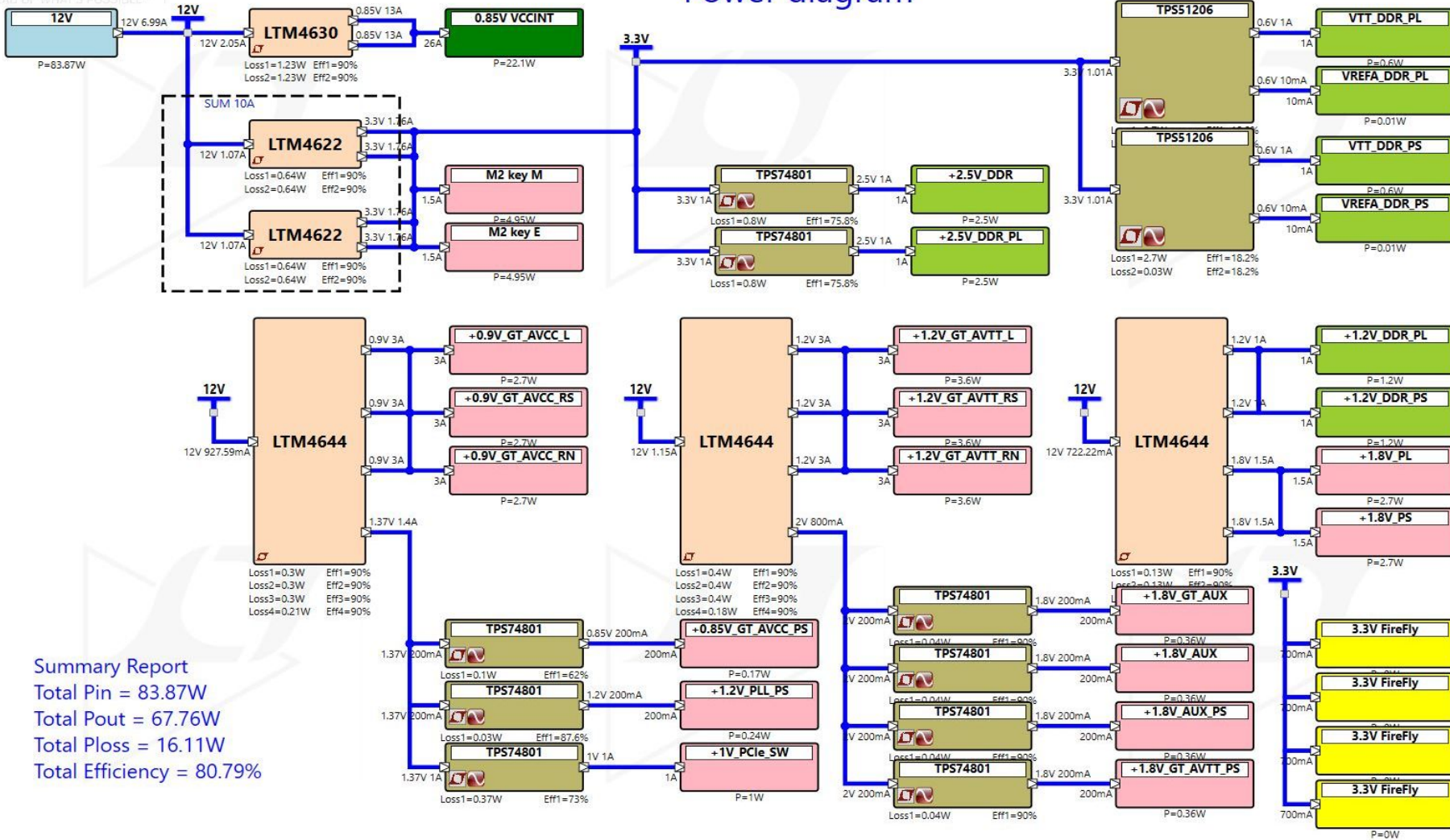


		Title: SMBUS	
		A4	Number: TEB0912 ABI21-A
Date: 2019-04-09		Copyright: Trenz Electronic GmbH	
Page 51 of 61		Date: 2019-04-09	
Drawn by: IG		Filename: SMBUS.schdoc	



			Title: FTDI	
			A4	Number: TEB0912 ABI21-A Rev. 02
Date: 2019-04-09		Copyright: Trenz Electronic GmbH		Page 52 of 61
Drawn by: IG		Filename: FTDI.schdoc		

TEB0912-02 Power diagram

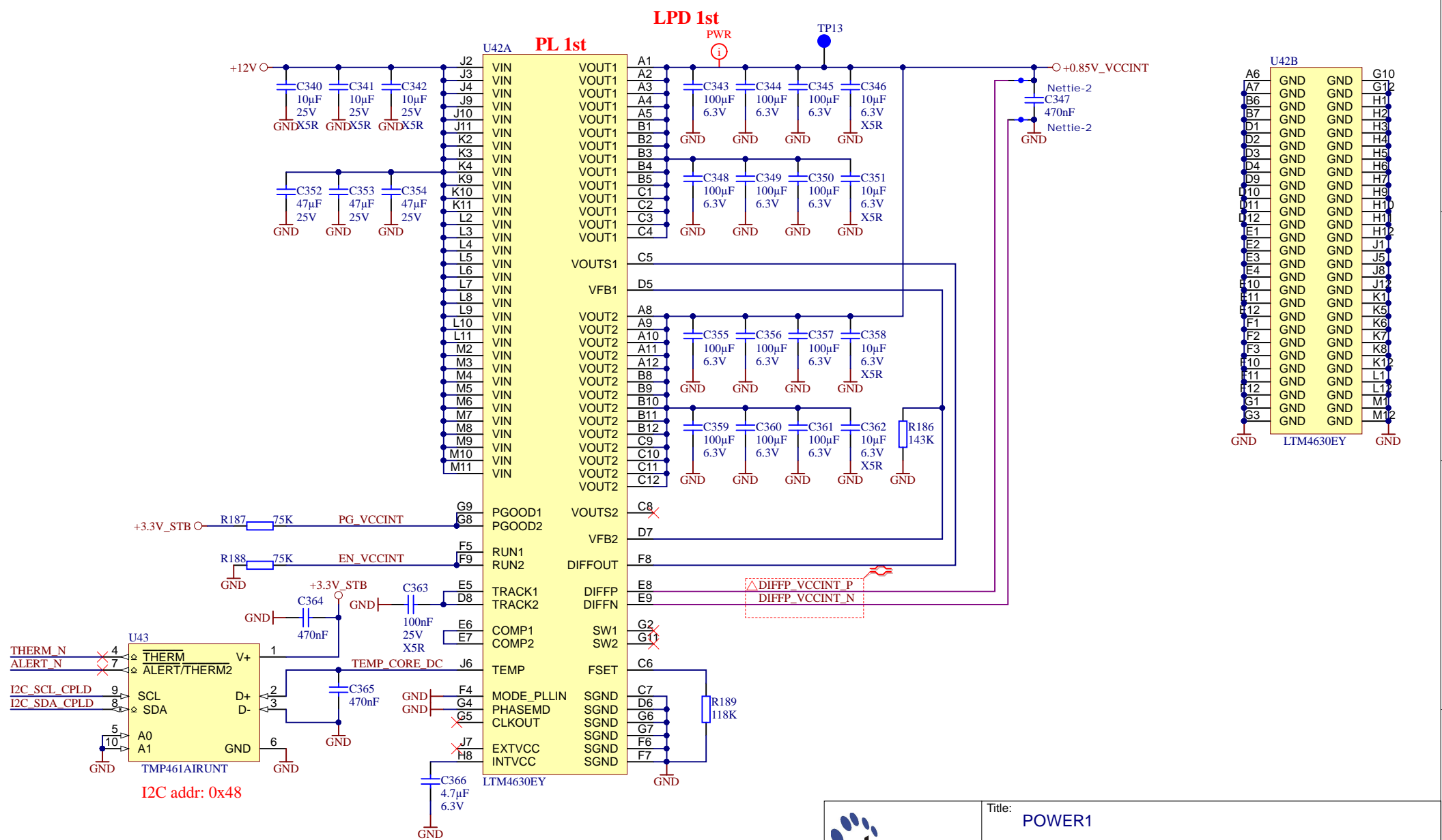


- POWER0
- POWER1
- POWER2
- POWER3
- POWER4
- POWER5
- POWER6

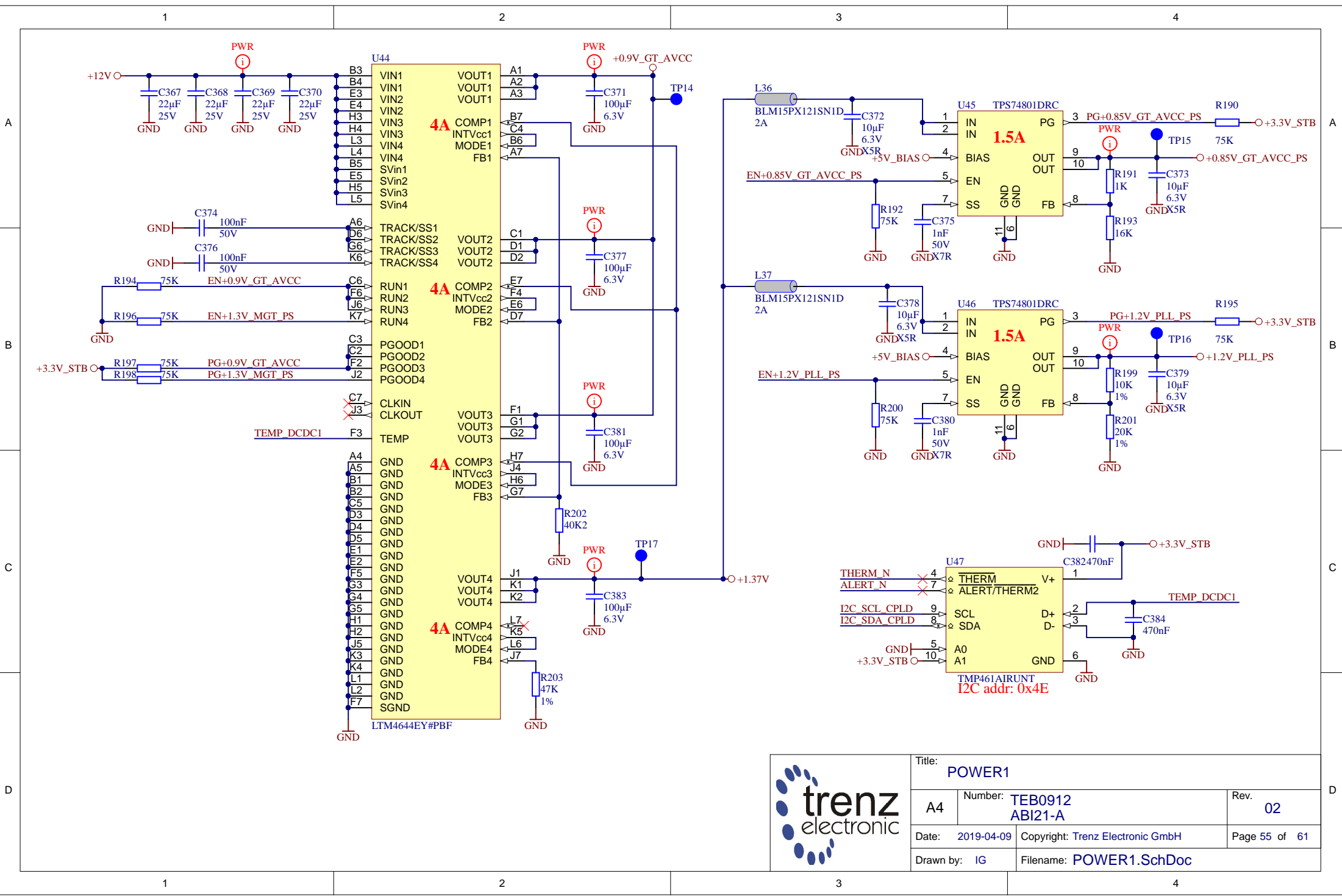
Summary Report
 Total Pin = 83.87W
 Total Pout = 67.76W
 Total Ploss = 16.11W
 Total Efficiency = 80.79%




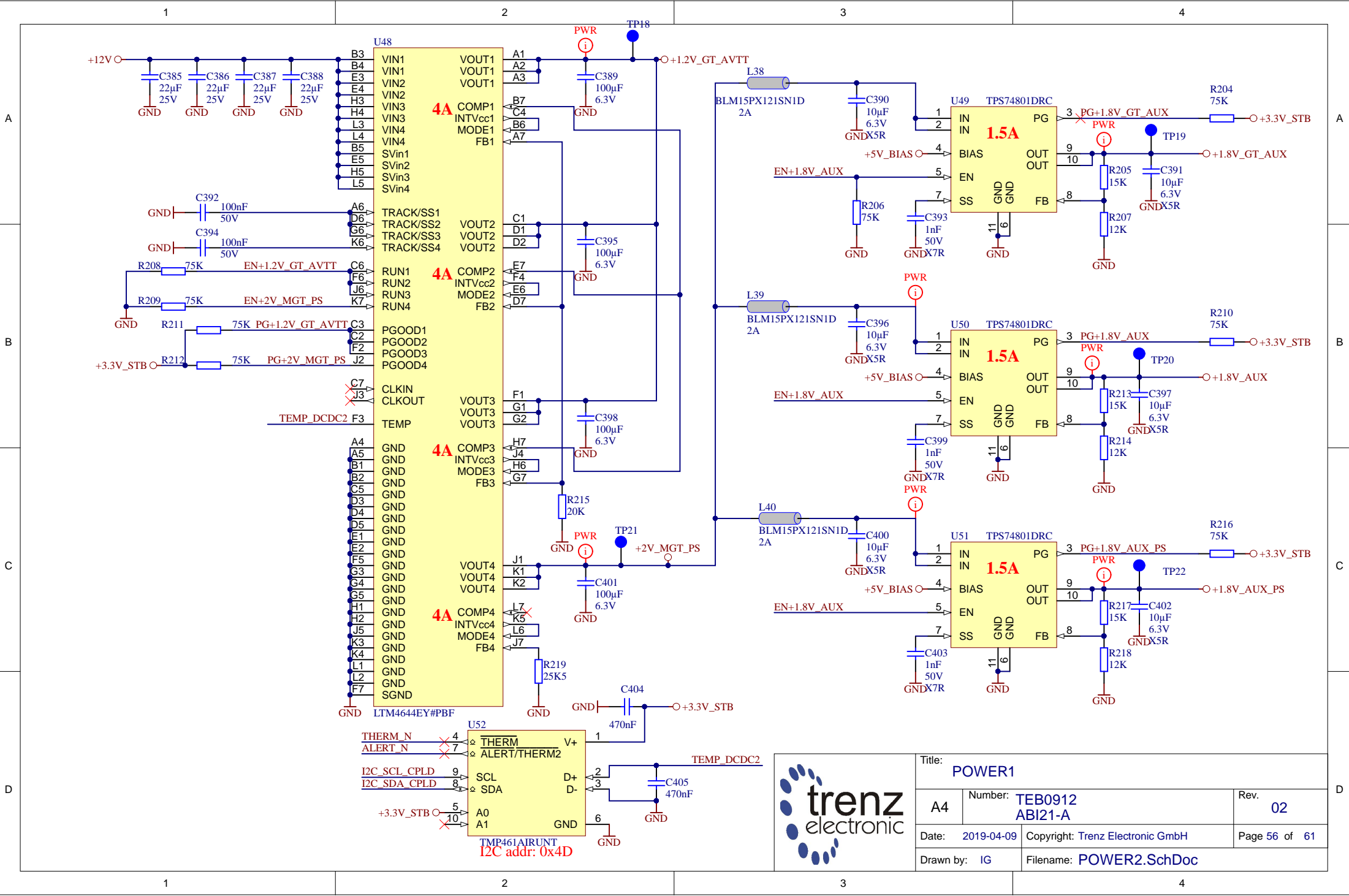
Title: POWER		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 53 of 61
Drawn by: IG	Filename: POWER.SchDoc	



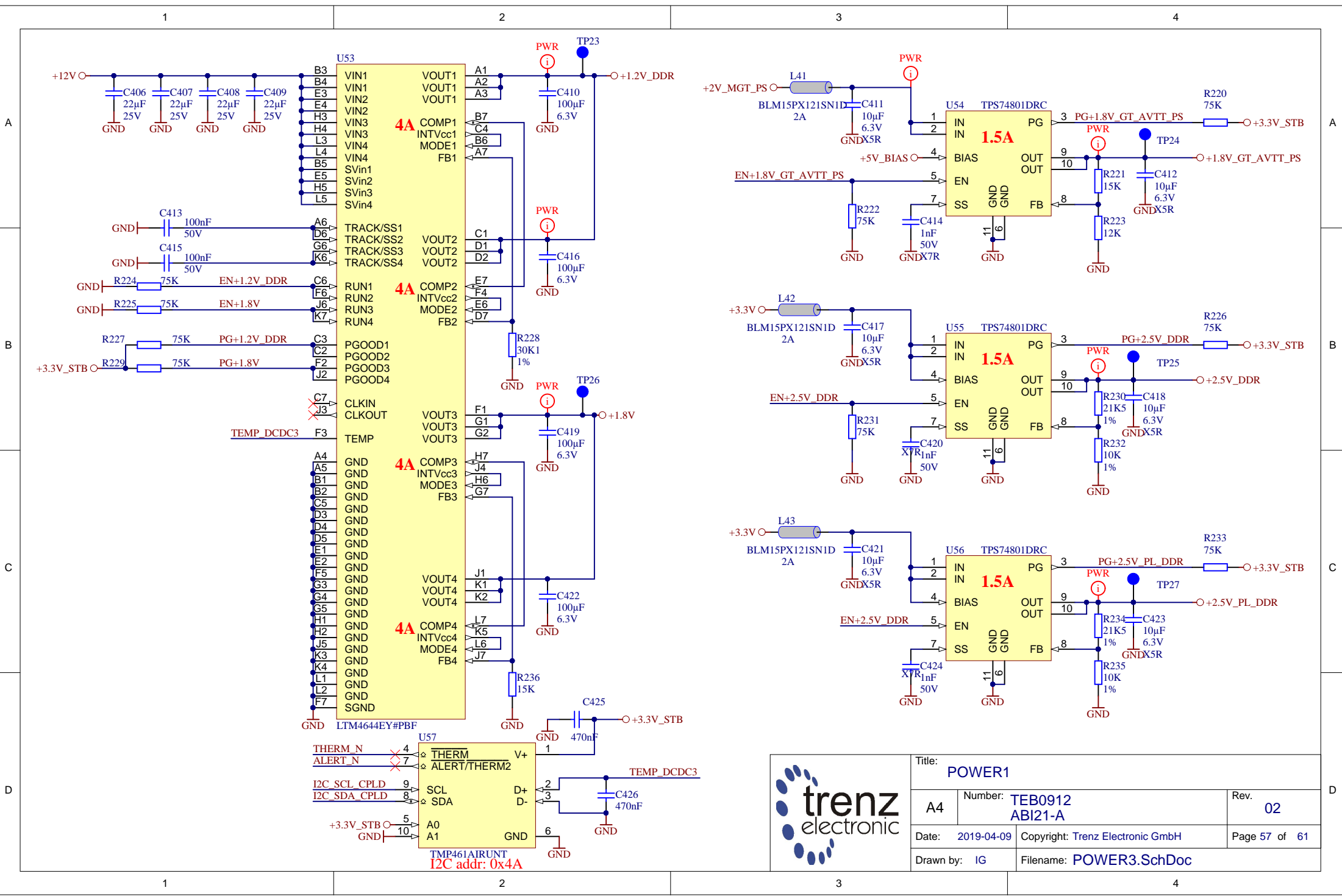
Title: POWER1		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 54 of 61
Drawn by: IG	Filename: POWER0.SchDoc	



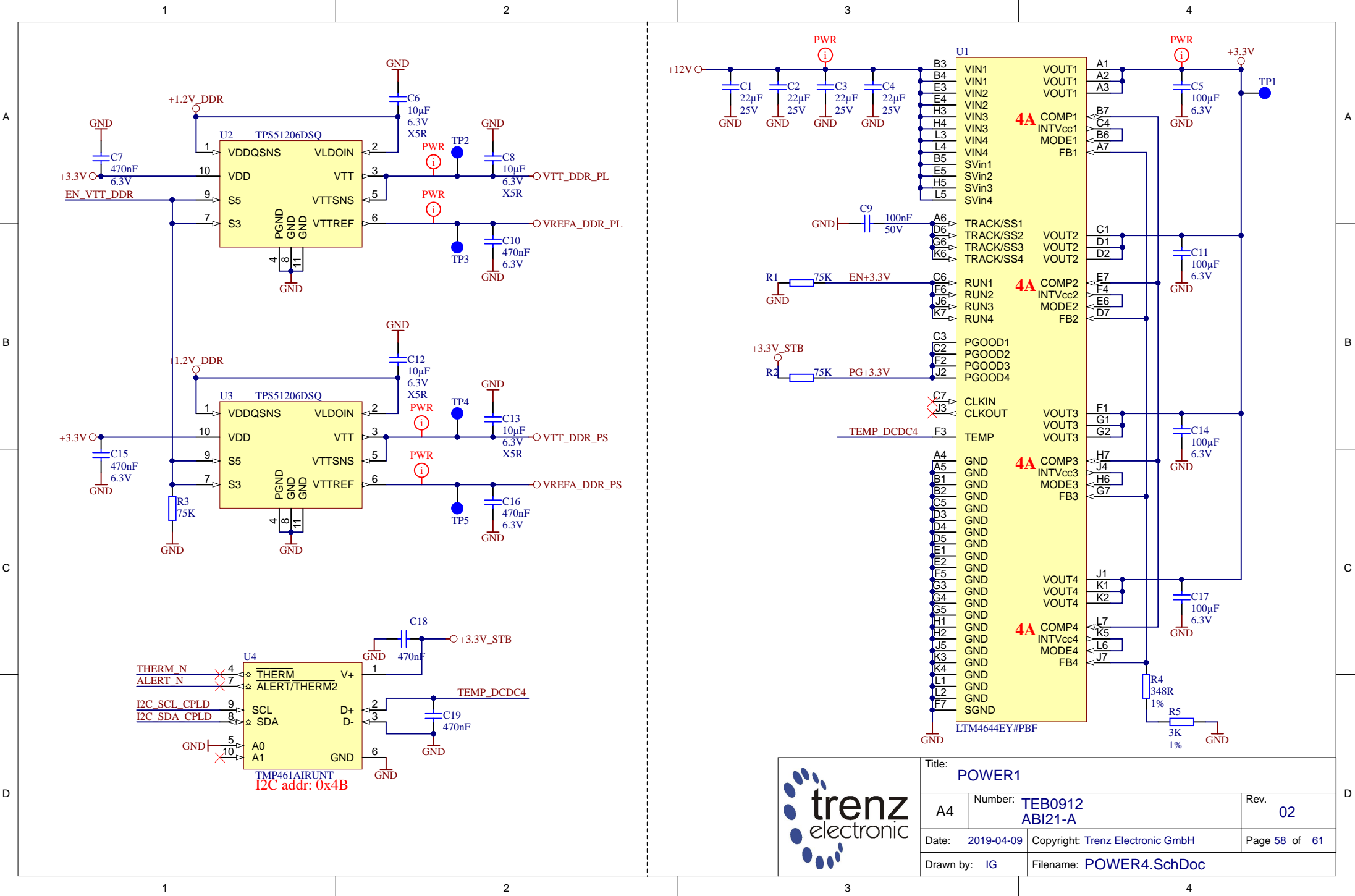
			Title: POWER1	
			A4	Number: TEB0912 ABI21-A
Date: 2019-04-09		Copyright: Trenz Electronic GmbH		Page 55 of 61
Drawn by: IG		Filename: POWER1.SchDoc		



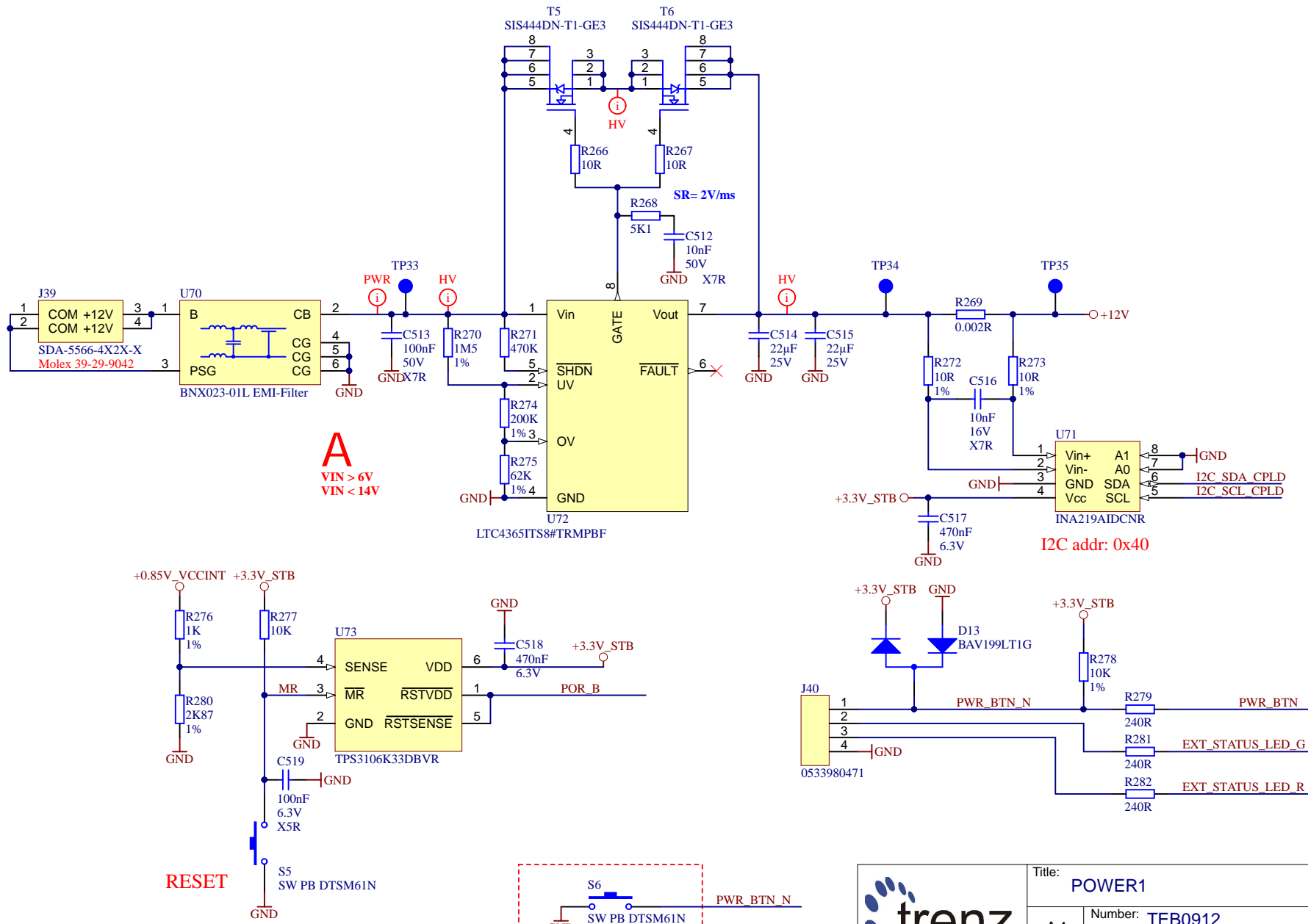
Title: POWER1		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 56 of 61
Drawn by: IG	Filename: POWER2.SchDoc	



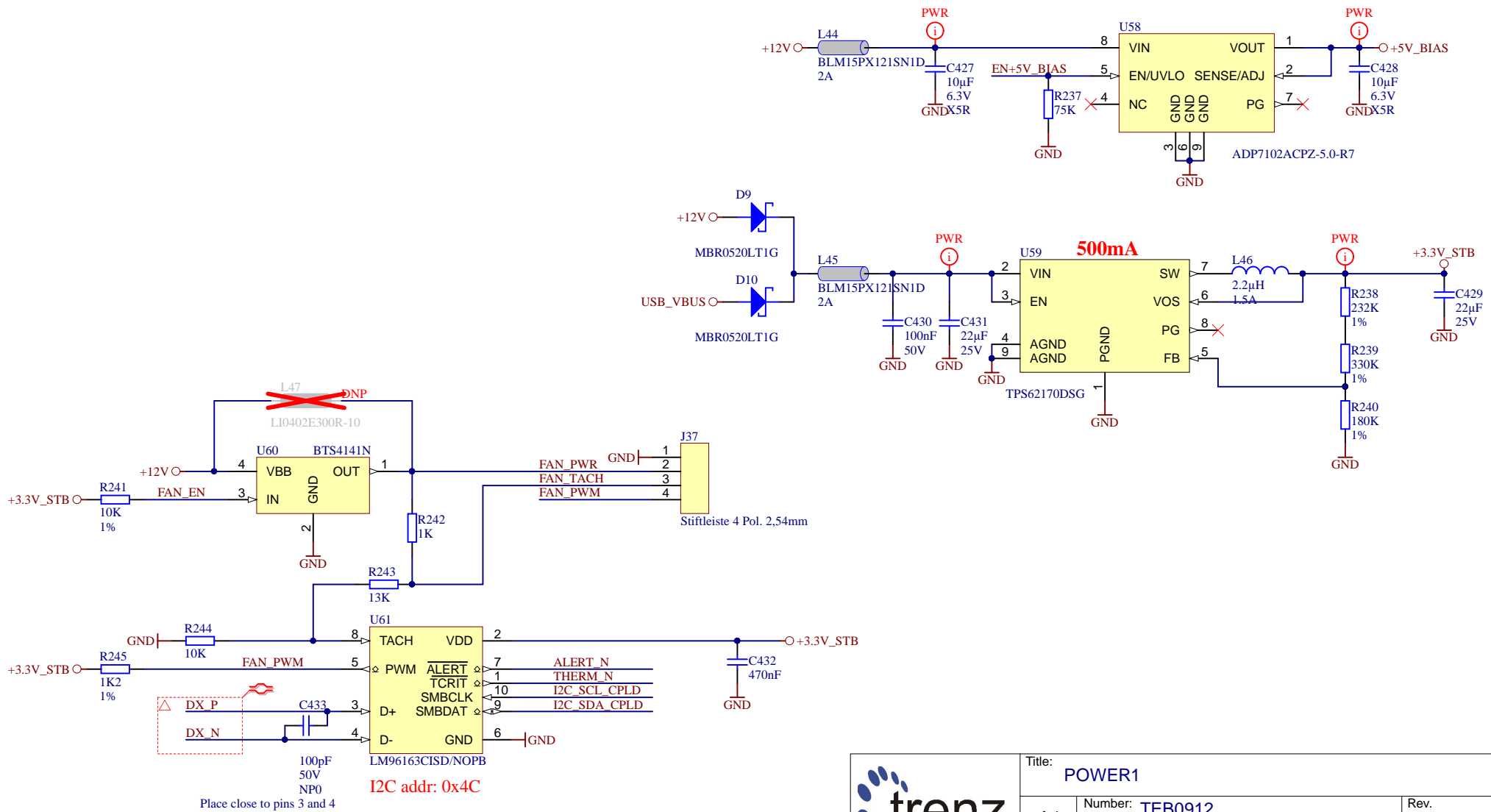
Title: POWER1		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 57 of 61
Drawn by: IG	Filename: POWER3.SchDoc	



Title: POWER1		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 58 of 61
Drawn by: IG	Filename: POWER4.SchDoc	



Title: POWER1		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 59 of 61
Drawn by: IG	Filename: POWER5.SchDoc	



Title: POWER1		
A4	Number: TEB0912 ABI21-A	Rev. 02
Date: 2019-04-09	Copyright: Trenz Electronic GmbH	Page 60 of 61
Drawn by: IG	Filename: POWER6.SchDoc	

1

2

3

4

REVISION HISTORY

REV	Description	
-01	Initial revision	IG/VT
-02	1. SD_Card moved on MIO39-51 2. MIO6 disconnected 3. USB0 has been removed 4. Added Digilent SN MISC1. 5. U17: Two-Bit Mapping configuration was changed on 01. 6. Added PCIe switch. 7. SD card type was changed on 2201778-1. 8. Added FAN controller and FAN connector. 9. Additional capacitors were added to MPSoC according Xilinx document (UG583) 10. Page_POWER6. Switches M2_Key_E and Ethernet_PHY were removed.	IG

A

A

B


B

C

C

D

D

	Title: Revision_Changes		
	A4	Number: TEB0912 ABI21-A	Rev. 02
	Date: 2019-05-20	Copyright: Trenz Electronic GmbH	Page 61 of 61
	Drawn by: IG	Filename: Revision_Changes.SchDoc	

1

2

3

4