

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

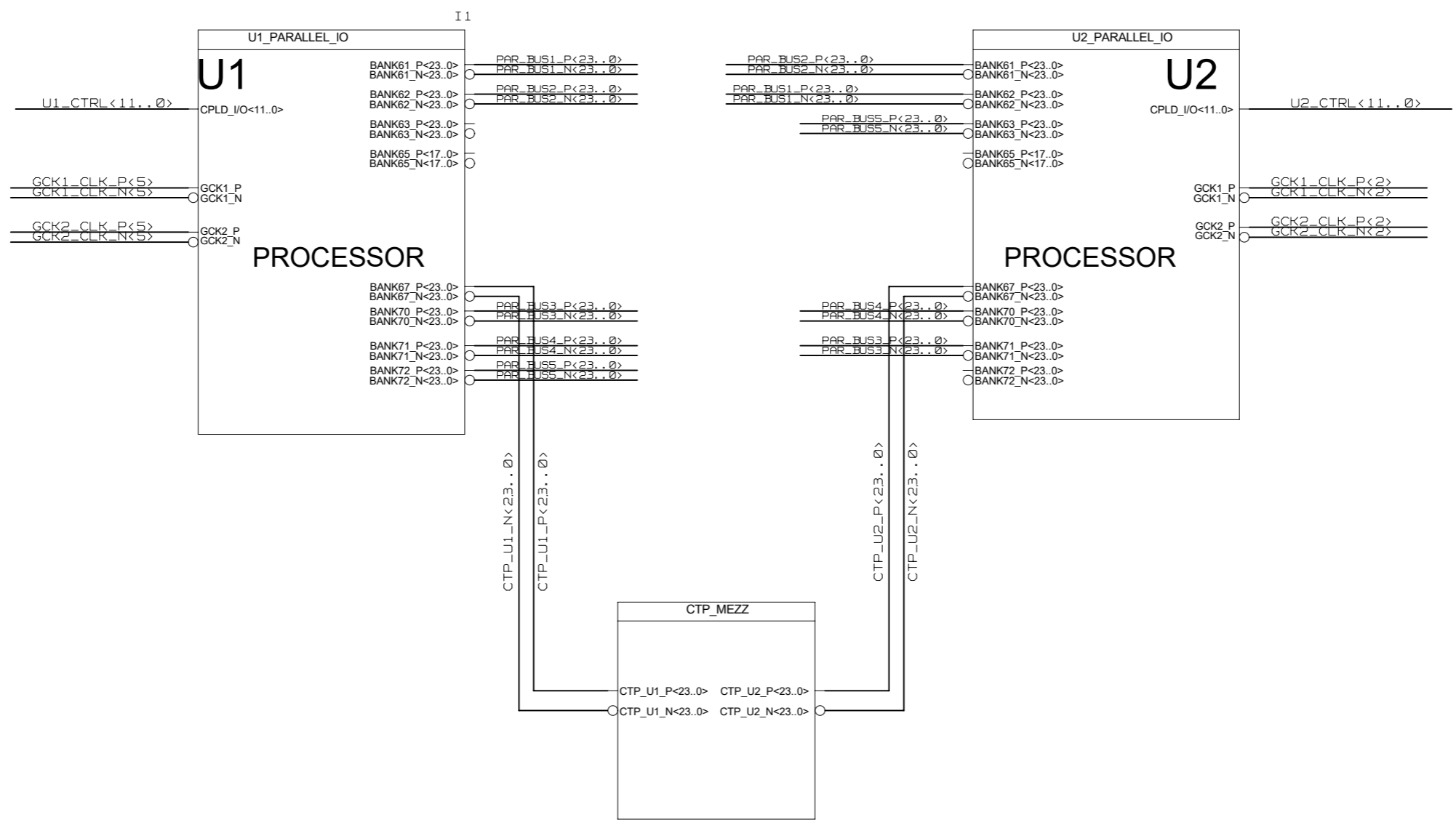
INDEX

PAGE(S)	FUNCTION
2	PARALLEL I/O BLOCK
3	MGT REAL TIME PATH BLOCK
4	IPBUS, JTAG, POWER, CLOCK, CONGIG, IPMC BLOCK
5	MEZZANINE CONNECTOR
6 - 10	U1 PARALLEL I/O
11	CLOCK LVDS LVCMOS MODUL
12 - 16	U2 PARALLEL I/O
17 - 22	U1 MGT REALTIME HIGH SPEED OPTICAL LINKS
23	AVAGO RECEIVER
24	AVAGO TRANSMITTER
25	ATCA POWER IN AND POWER CONTROL
26	POWERSUPPLY PMBUS CONNECTION
27	POWERSEQUENCING CPLD, VOLTAGE MONITOR, SUPERSOR
28	POWERSUPPLY BOARDLEVEL
29	POWERSUPPLY U1
30	POWERSUPPLY U2
31	POWER DECOUPLING MODUL
32	POWERSUPPLY MIC68400 MODUL
33	CLOCK OSC 1KHZ
34 - 39	U2 MGT REALTIME HIGH SPEED OPTICAL LINKS
40	MGT1 CLOCK
41	MGT2 CLOCK
42	MGT3 CLOCK
43	MGT4 CLOCK
44	GLOBAL CLOCK1
45	GLOBAL CLOCK2
46	LNC CLK
47	CLOCK CML FANOUT6 AC
48	CLOCK LVDS FANOUT 8
49	CLOCK LVPECL AC (SI591)
50 - 52	IPMC
53	CONTROL AND CONFIG CPLD
54 - 55	U1 CONFIG, U2 CONFIG
56	IPBUS CONNECTION
57	CTP MEZZANINE CONNECTOR
58	JTAG CHAIN

CHECKED	NAME	DATE	SIGN	DRAWING TITLE <h1>L1TOPO</h1>		
CHECKED	J. V. DE SOUZA					
CHECKED	U. SCHAEFER					
CHECKED	S. RAVE					
DRAWN	BAUSS					
BLOCK TITLE						
UNIVERSITY OF MAINZ				SIZE C	REV.	DRAWING NO.
				SCALE		SHEET OF

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

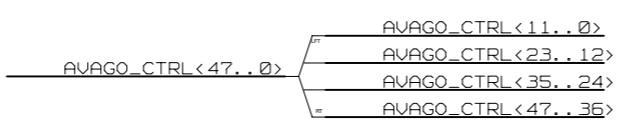
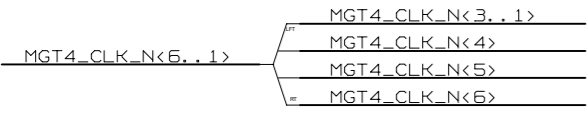
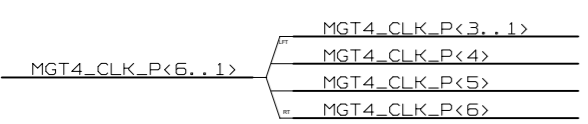
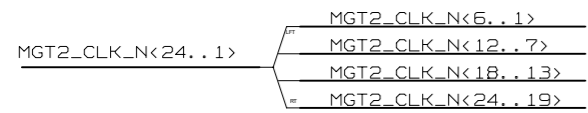
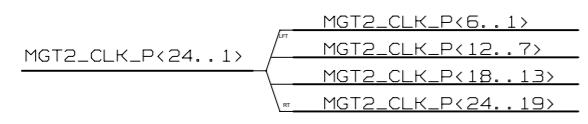
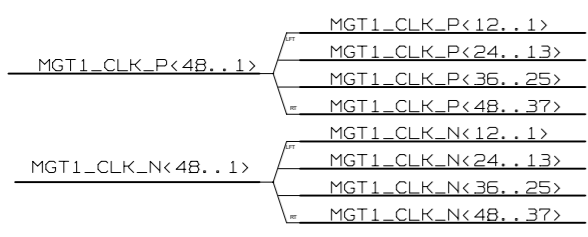
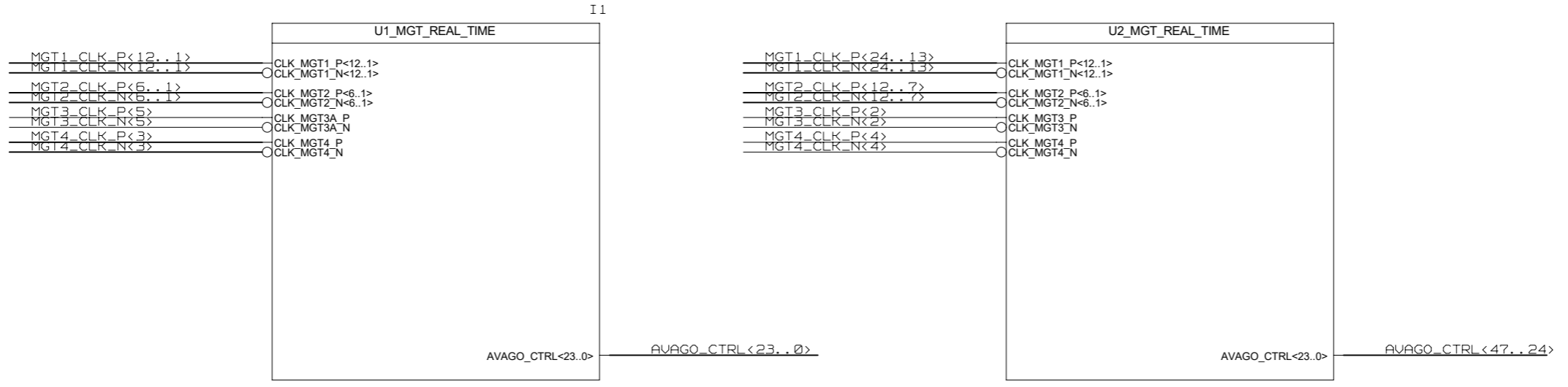
PARALLEL I/O



CHECKED	J. V. DE SOUZA	DATE	SIGN	DRAWING TITLE <h1>L1 TOPO</h1>
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS			
BLOCK TITLE				
UNIVERSITY OF MAINZ				SIZE C
				REV.
				DRAWING NO.
				SHEET OF

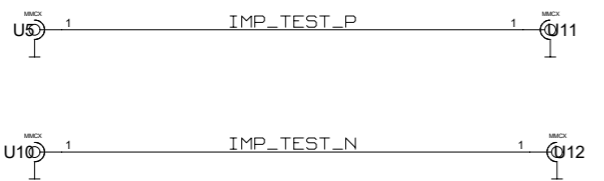
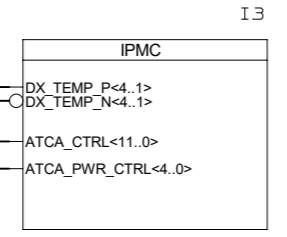
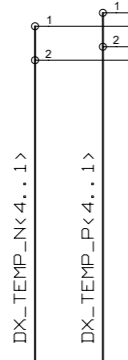
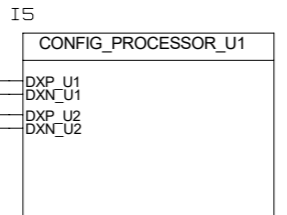
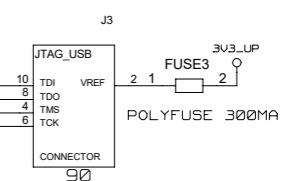
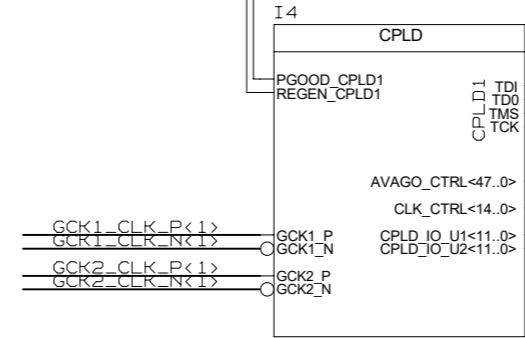
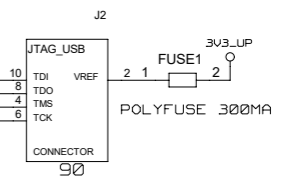
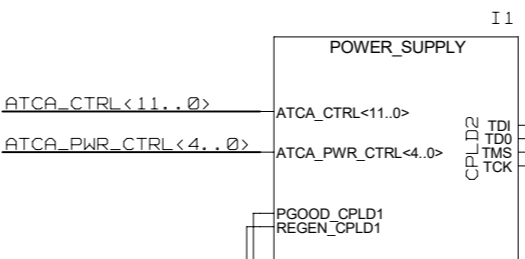
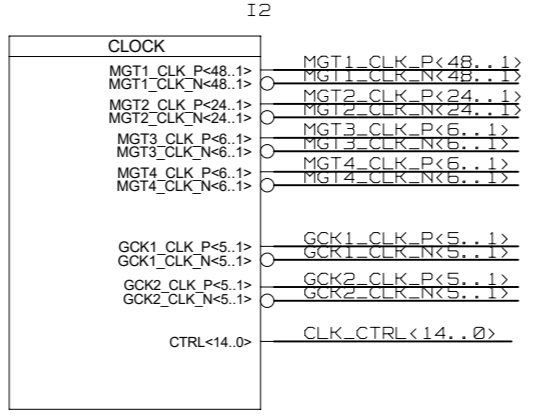
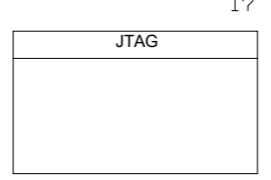
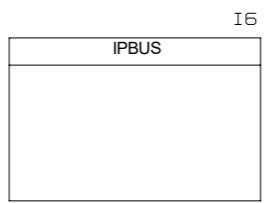
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

MGT REAL TIME



CHECKED	NAME	DATE	SIGN	DRAWING TITLE <h1>L1TOPO</h1>		
	J. V. DE SOUZA					
	U. SCHAEFER					
	S. RAVE					
	BAUSS					
BLOCK TITLE				SIZE	REV.	DRAWING NO.
UNIVERSITY OF MAINZ				C		
				SCALE		SHEET OF

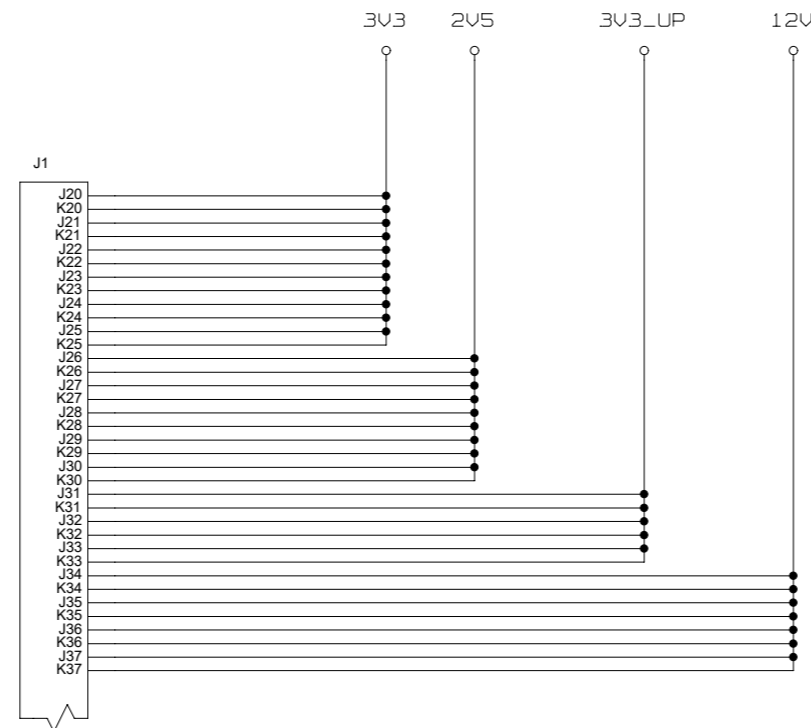
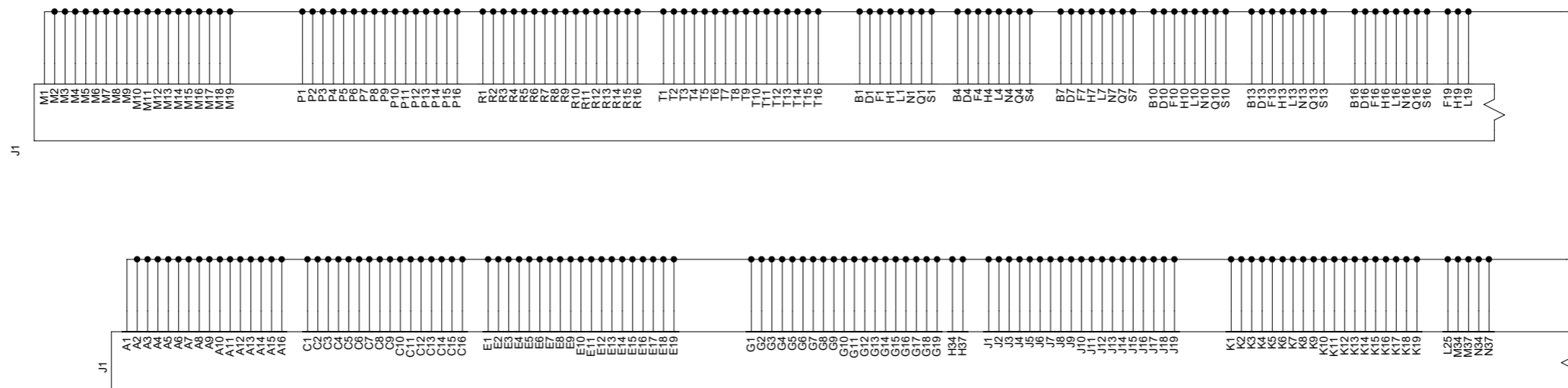
REVISIONS			
ZONE	LTR	DESCRIPTION	DATE



	NAME	DATE	SIGN	DRAWING TITLE <h1>L1 TOPO</h1>		
CHECKED	J. V. DE SOUZA					
CHECKED	U. SCHAEFER					
CHECKED	S. RAVE					
DRAWN	BAUSS					
BLOCK TITLE						
UNIVERSITY OF MAINZ				SIZE C	REV.	DRAWING NO.
				SCALE		SHEET OF

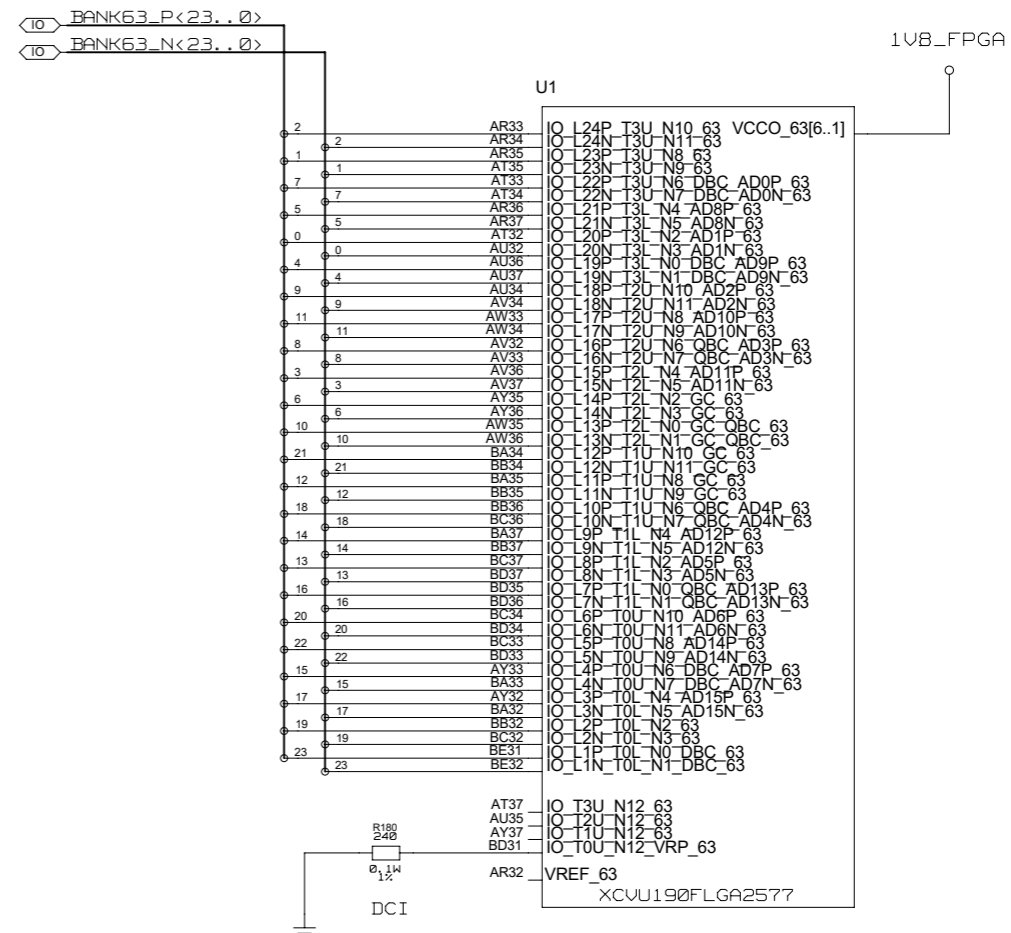
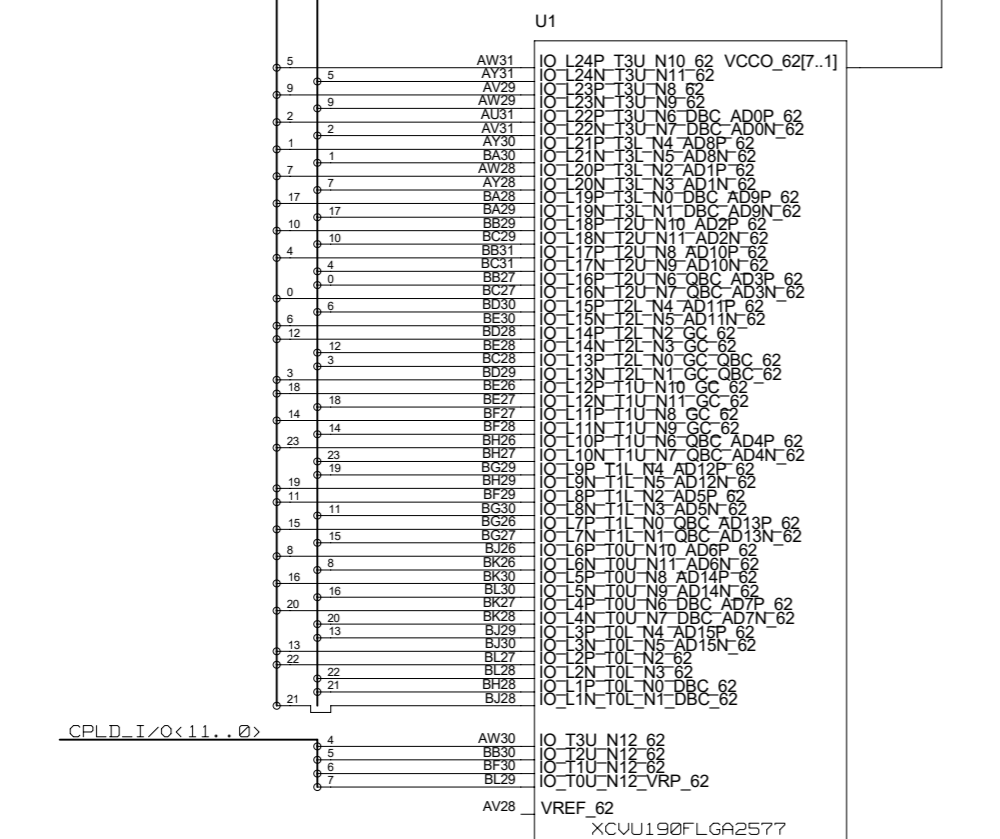
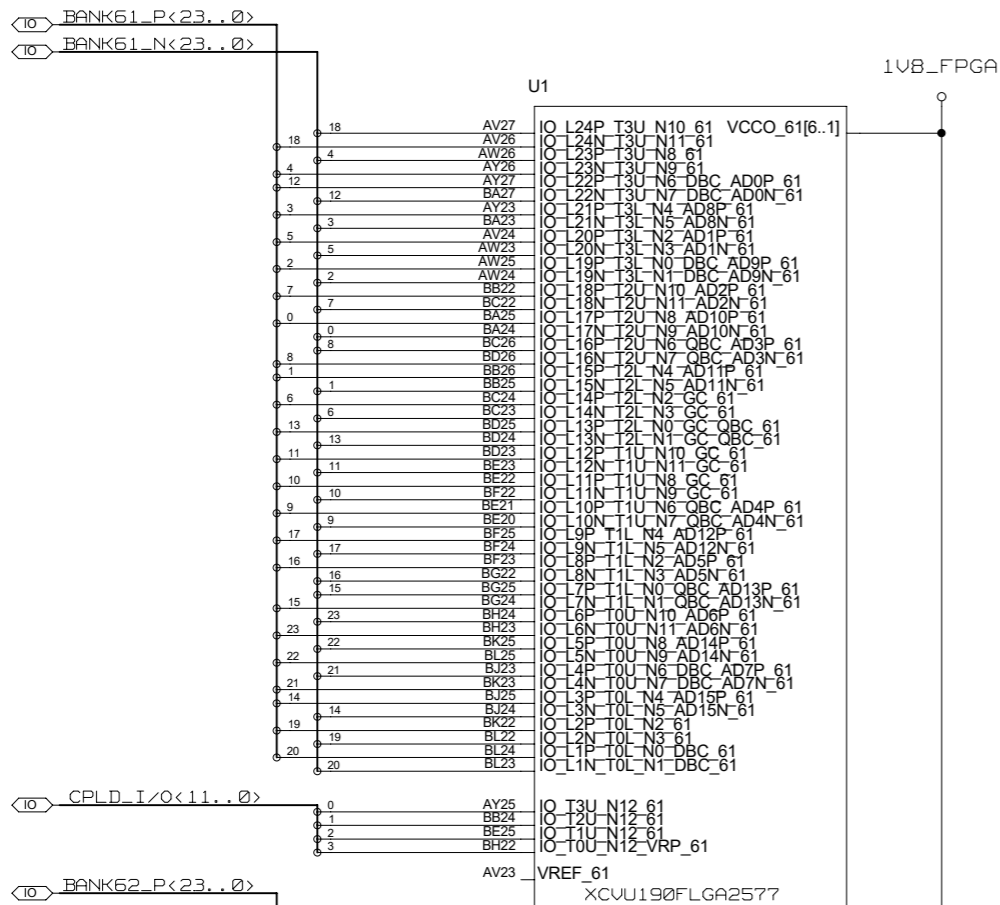
ZONE	LTR	DESCRIPTION	DATE	APPR.

MEZZANINE CONNECTOR GND AND VCC



CHECKED	NAME	DATE	SIGN	DRAWING TITLE	
CHECKED	J. V. DE SOUZA				L1 TOPO
CHECKED	U. SCHAEFER				
CHECKED	S. RAVE				
DRAWN	BAUSS				
BLOCK TITLE				UNIVERSITY OF MAINZ	
SIZE	REV.	DRAWING NO.		SHEET OF	
SCALE					

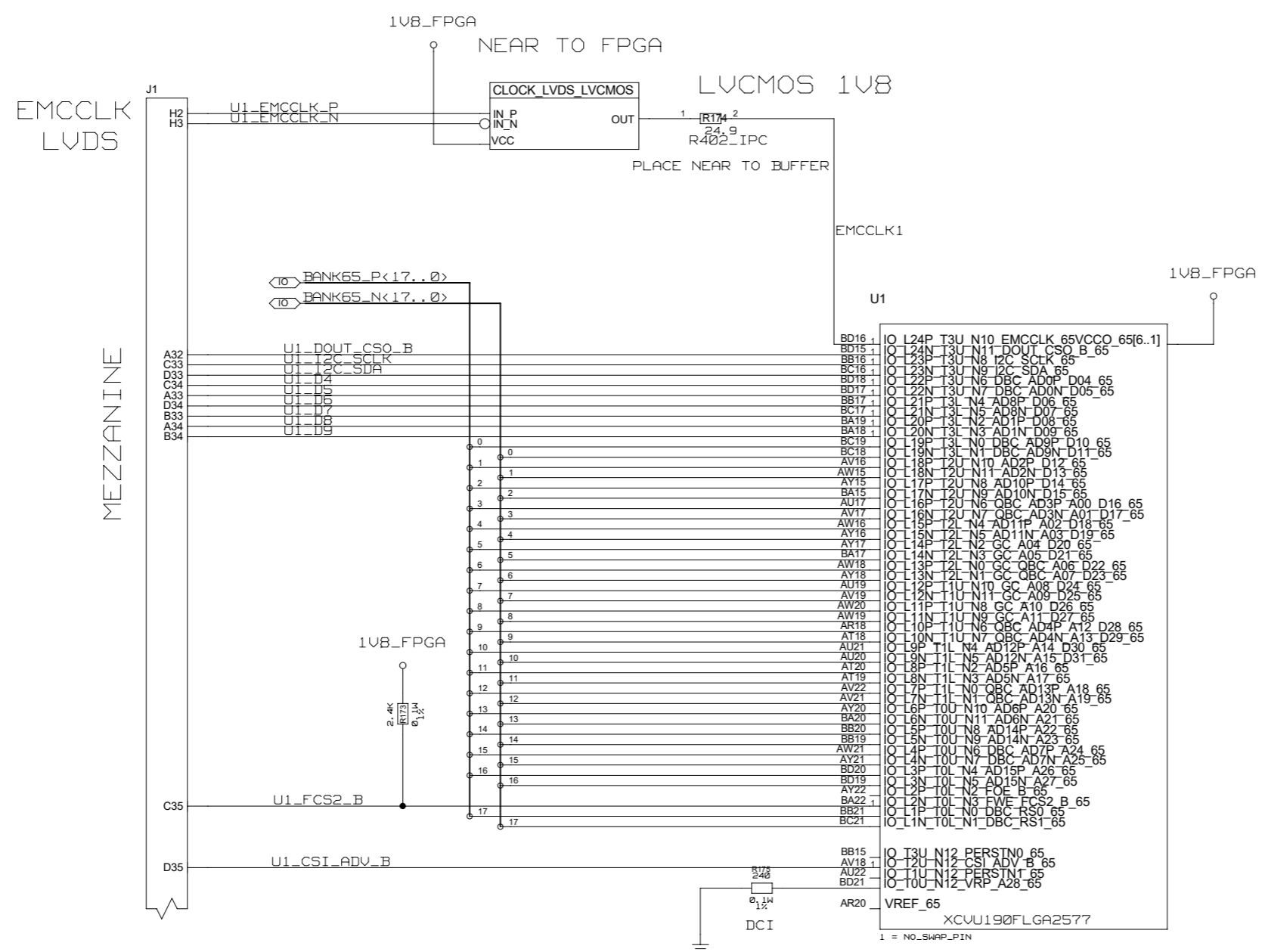
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



BANK
61
62
63

NAME	DATE	SIGN	DRAWING TITLE	
CHECKED	J. V. DE SOUZA		L1 TOPO	
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	25.08.2015		
BLOCK TITLE			DRAWING NO.	
UNIVERSITY OF MAINZ			SCALE	SHEET 1 of 5

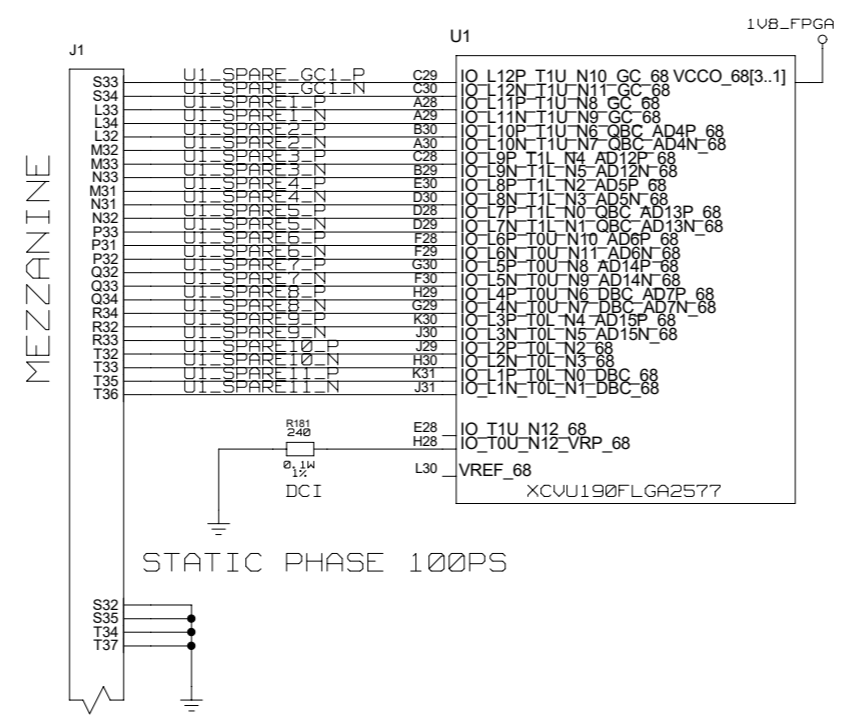
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



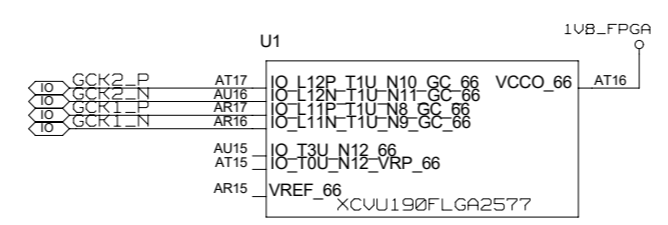
BANK
65

NAME	DATE	SIGN	DRAWING TITLE	
CHECKED J. V. DE SOUZA			L1 TOPO	
CHECKED U. SCHAEFER				
CHECKED S. RAVE				
DRAWN BAUSS	25.08.2015			
BLOCK TITLE			SIZE	DRAWING NO.
U1_PARALLEL_I/O			C	
UNIVERSITY OF MAINZ			SCALE	SHEET 2 OF 5

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



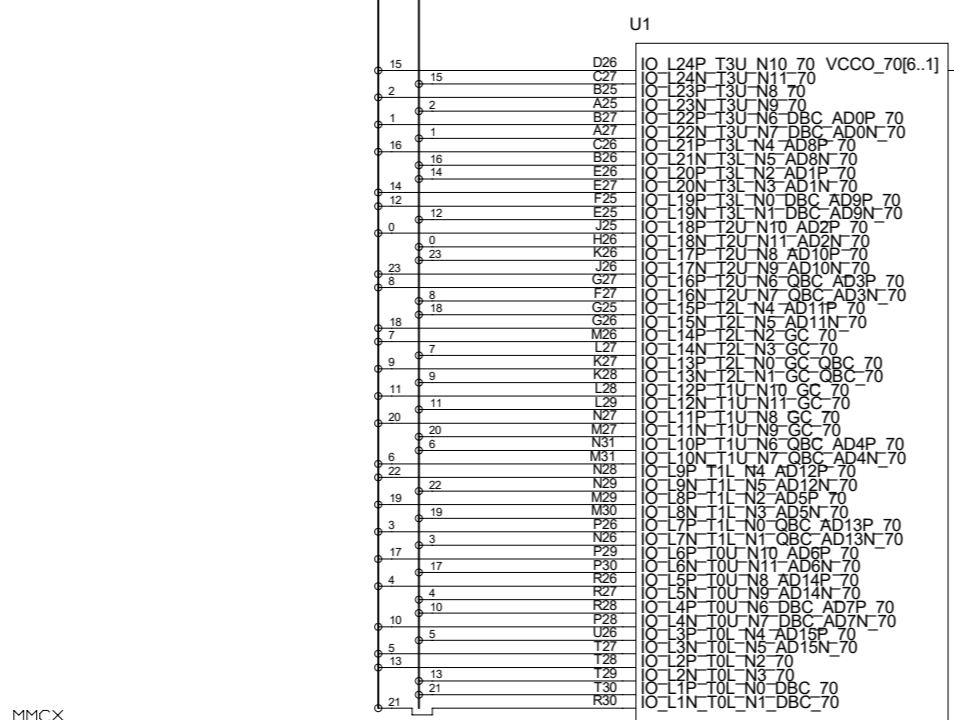
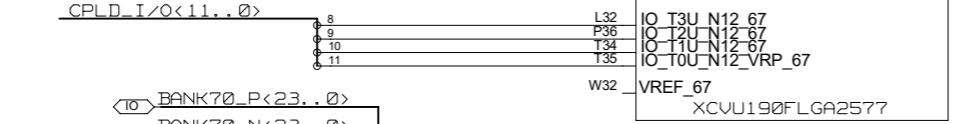
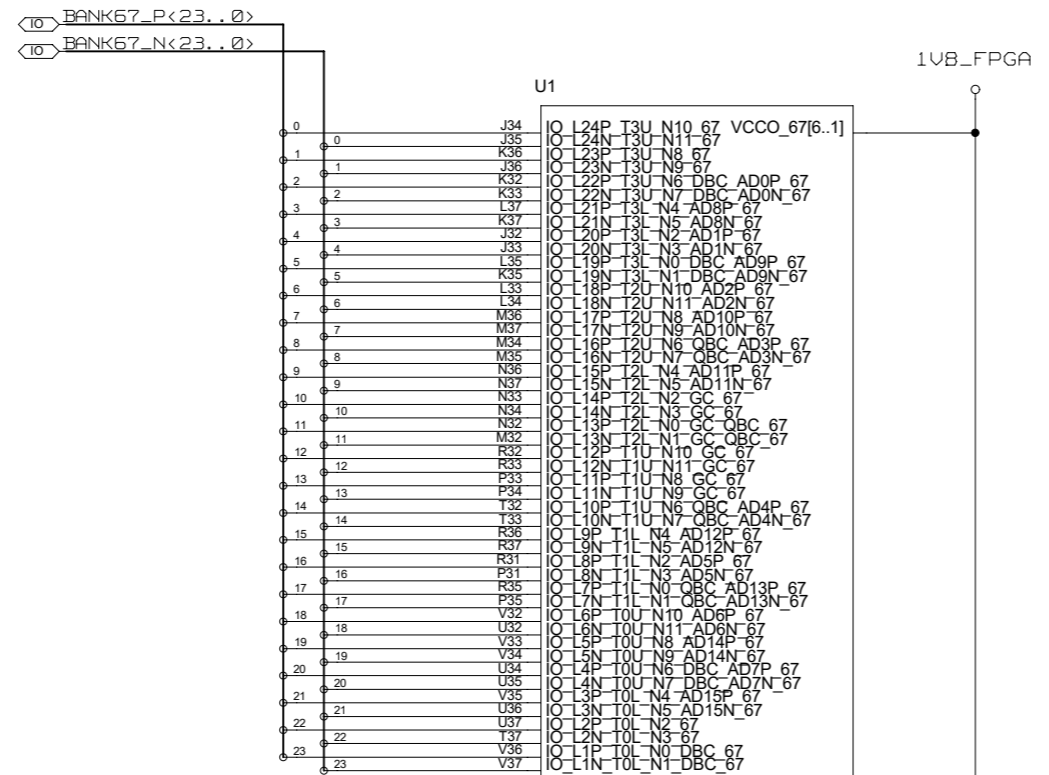
TO PAGE 43
(PRINTED VERSION)



BANK
66
68

CHECKED	NAME	DATE	SIGN	DRAWING TITLE	
CHECKED	J. V. DE SOUZA				
CHECKED	U. SCHAEFER				
CHECKED	S. RAVE				
DRAWN	BAUSS	25. 08. 2015		L1 TOPO	
BLOCK TITLE					
UNIVERSITY OF MAINZ				SIZE C	DRAWING NO.
				SCALE	SHEET 3 OF 5

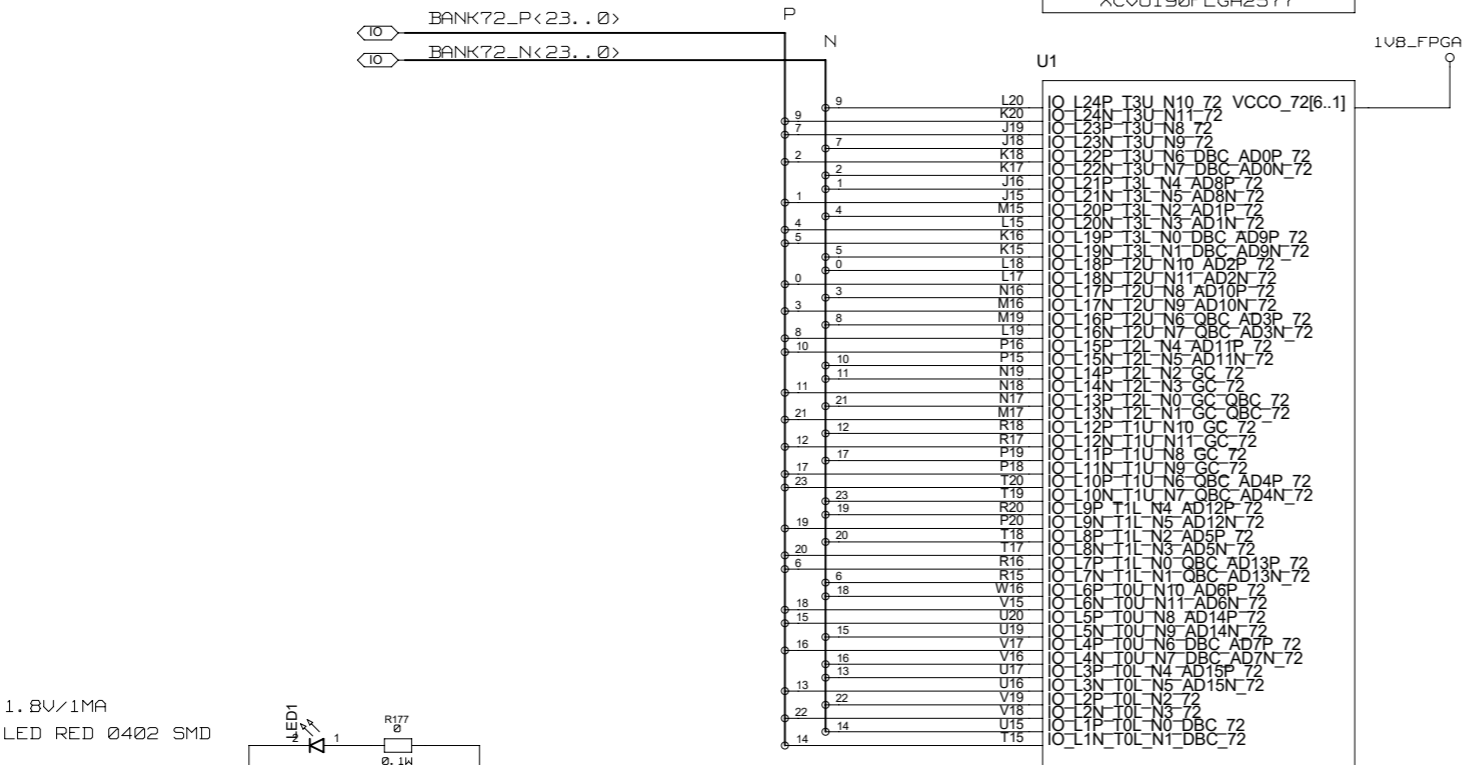
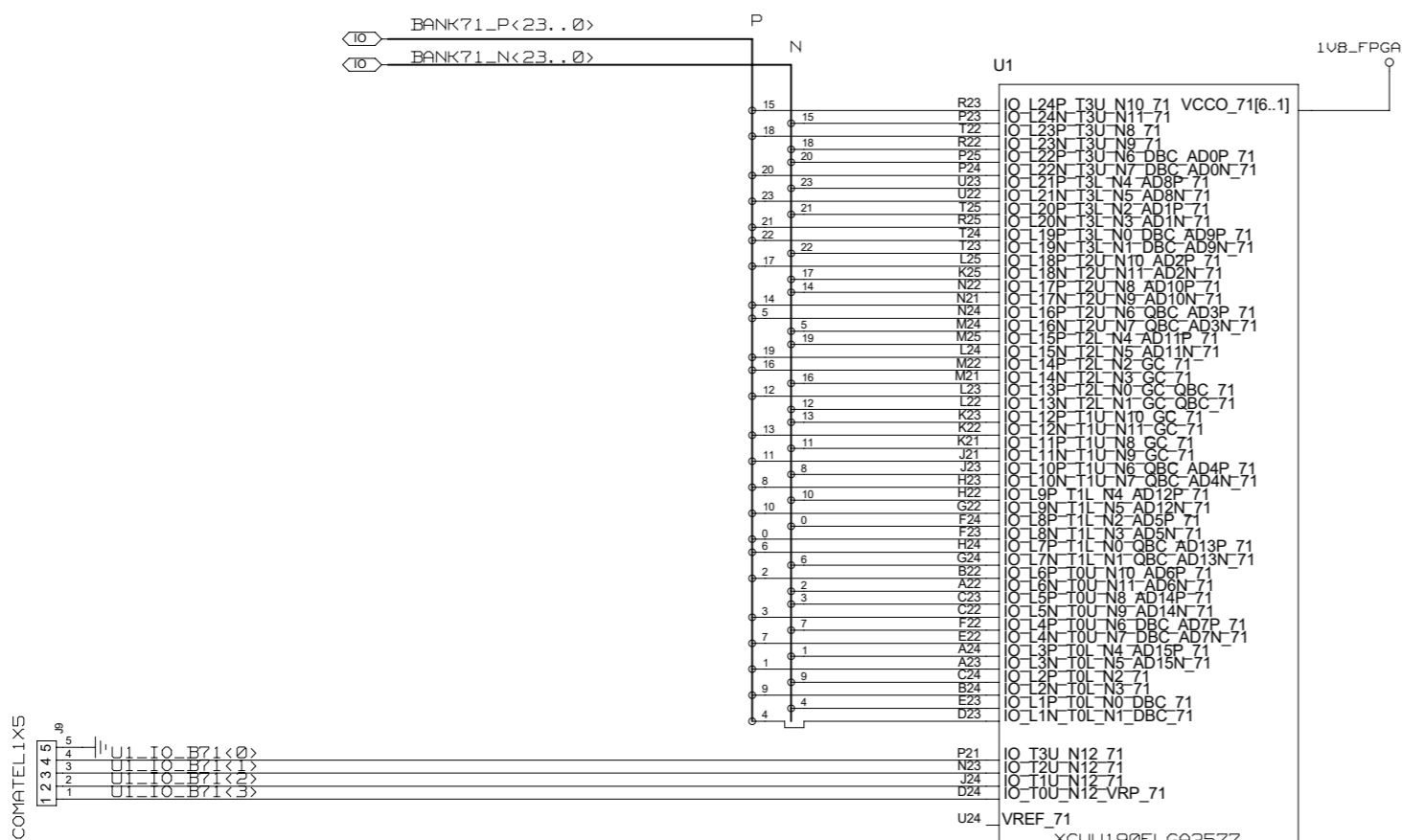
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



BANK
67
70

CHECKED	NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA			L1TOPO
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	25.08.2015		
BLOCK TITLE				UNIVERSITY OF MAINZ
SIZE		REV.	DRAWING NO.	
SCALE				SHEET 4 of 5

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



1. BU/1MA
LED RED Ø402 SMD

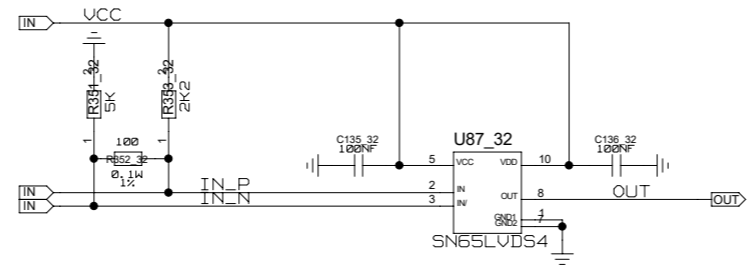
1. BU/1MA
LED RED Ø402 SMD

BANK
71
72

NAME	DATE	SIGN	DRAWING TITLE
CHECKED J. V.DE SOUZA			L1TOPO
CHECKED U.SCHAEFER			
CHECKED S.RAVE			
DRAWN BAUSS	25.08.2015		
BLOCK TITLE			UNIVERSITY OF MAINZ
SIZE	REV.	DRAWING NO.	
SCALE		SHEET 5 OF 5	

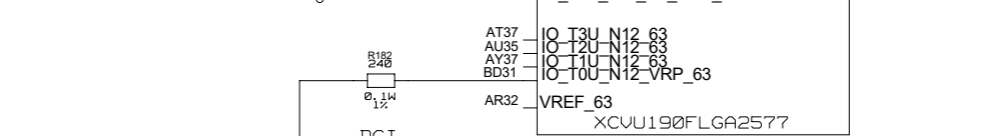
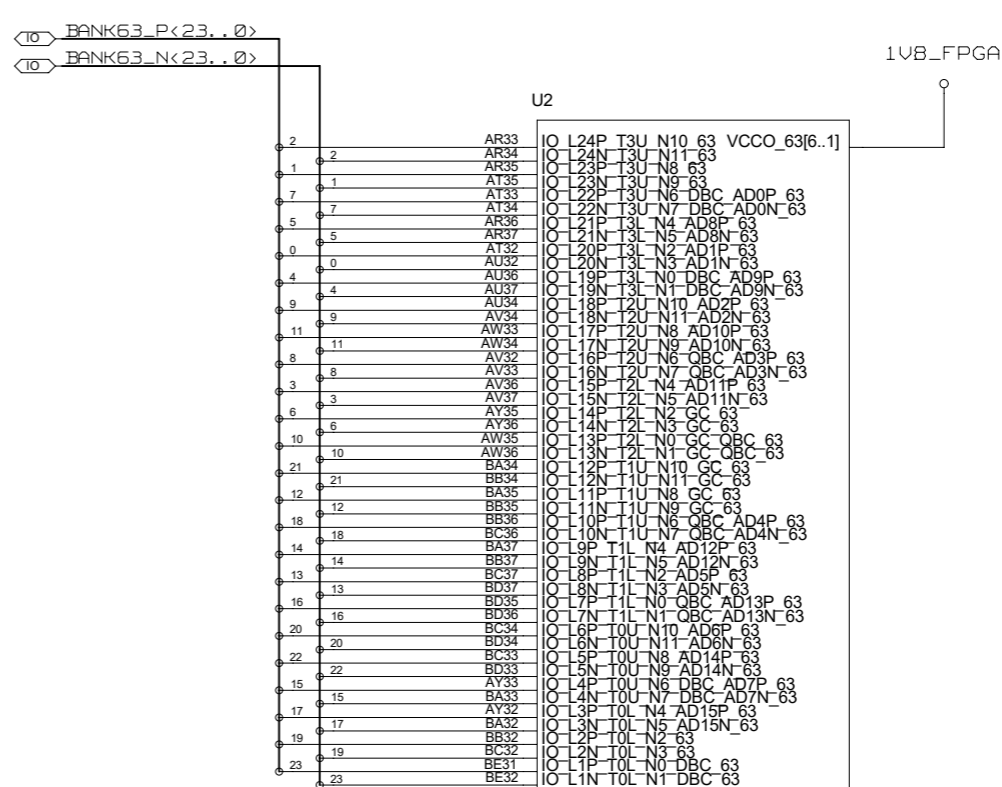
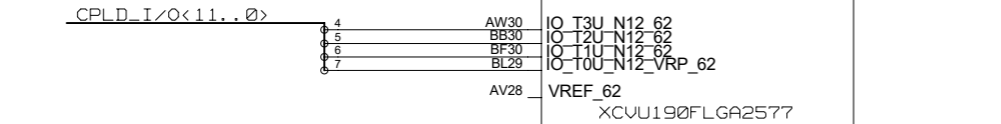
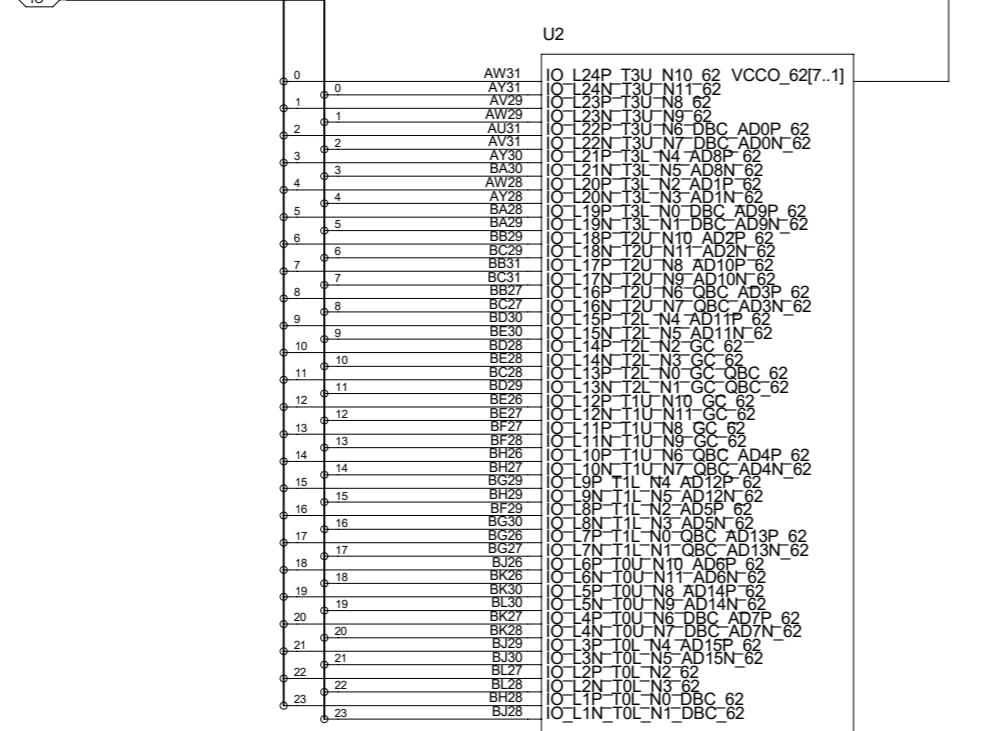
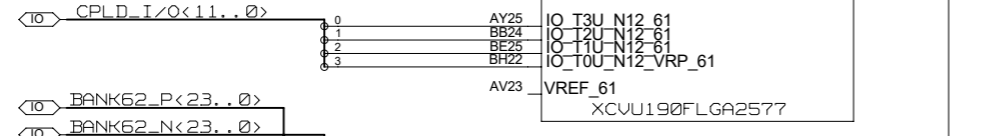
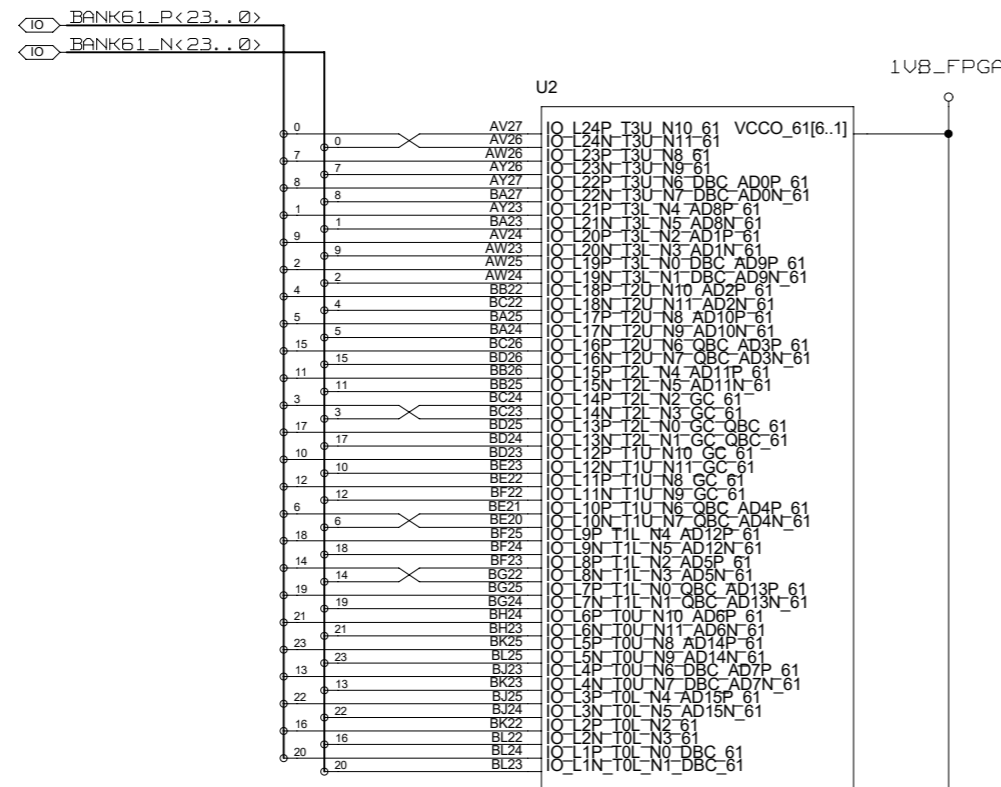
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

CLOCK_LVDS_LVCMOS



CHECKED	J. V. DE SOUZA			DRAWING TITLE <h1>L1 TOPO</h1>
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS			
BLOCK TITLE CLOCK_LVDS_LVCMOS				
UNIVERSITY OF MAINZ				SIZE C
				REV.
				DRAWING NO.
SCALE				SHEET OF

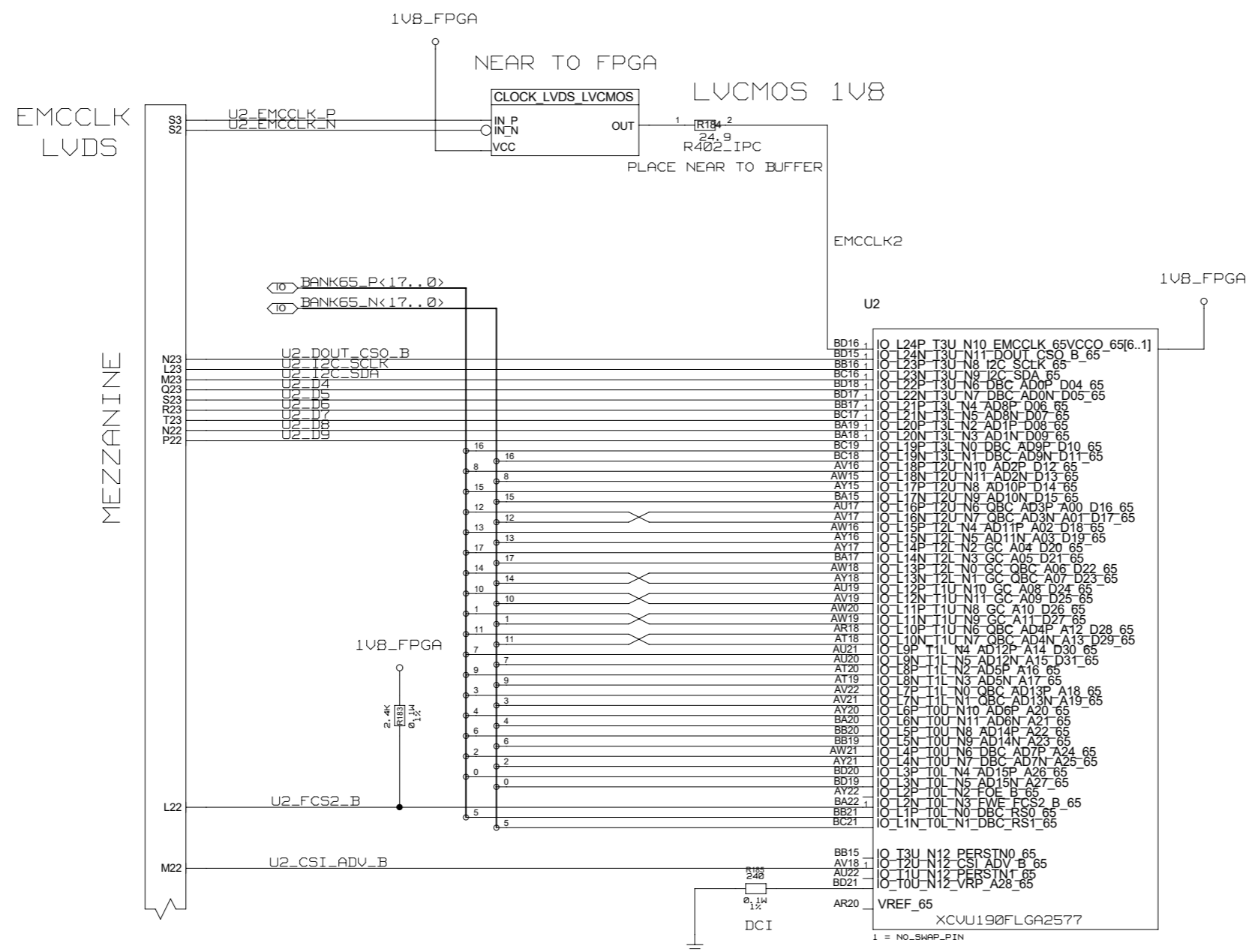
REVISIONS			
ZONE	LTR	DESCRIPTION	DATE



BANK
61
62
63

NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA		L1TOPO
CHECKED	U. SCHAEFER		
CHECKED	S. RAVE		
DRAWN	BAUSS	25.08.2015	
BLOCK TITLE			
UNIVERSITY OF MAINZ			
SIZE	REV.	DRAWING NO.	
C			
SCALE		SHEET 1 OF 5	

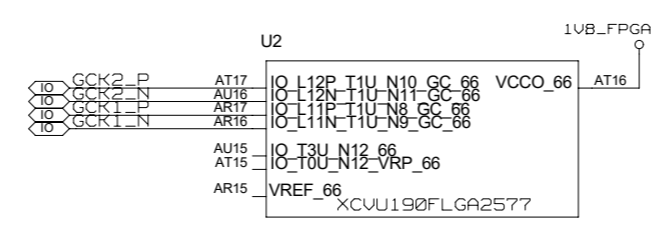
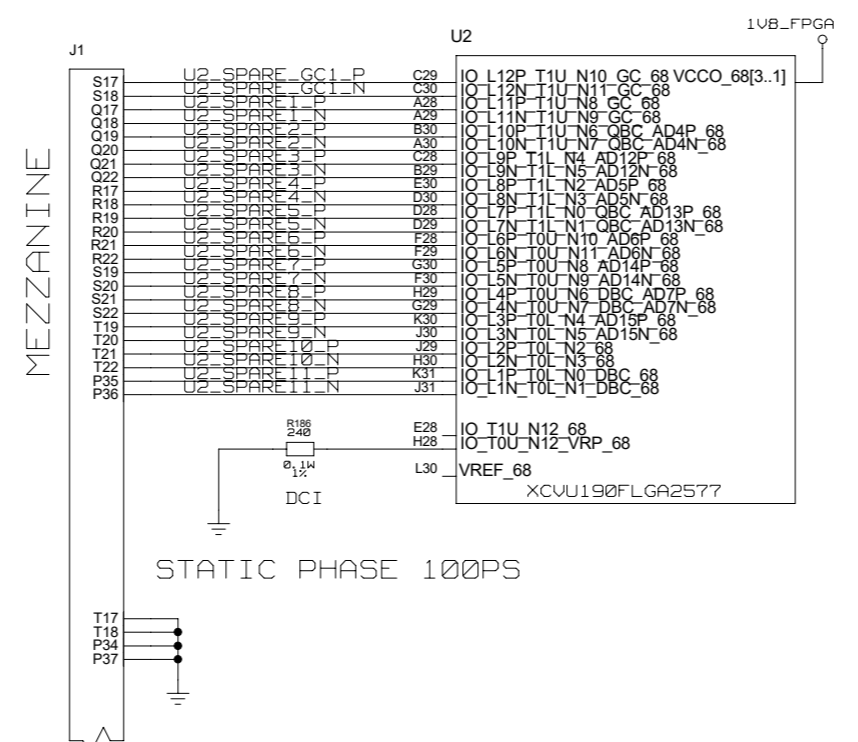
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



BANK
65

NAME	DATE	SIGN	DRAWING TITLE
CHECKED J. V. DE SOUZA			L1 TOPO
CHECKED U. SCHAEFER			
CHECKED S. RAVE			
DRAWN BAUSS	25.08.2015		
BLOCK TITLE			DRAWING NO.
UNIVERSITY OF MAINZ			
SIZE	REV.	DRAWING NO.	
C			
SCALE		SHEET 2 OF 5	

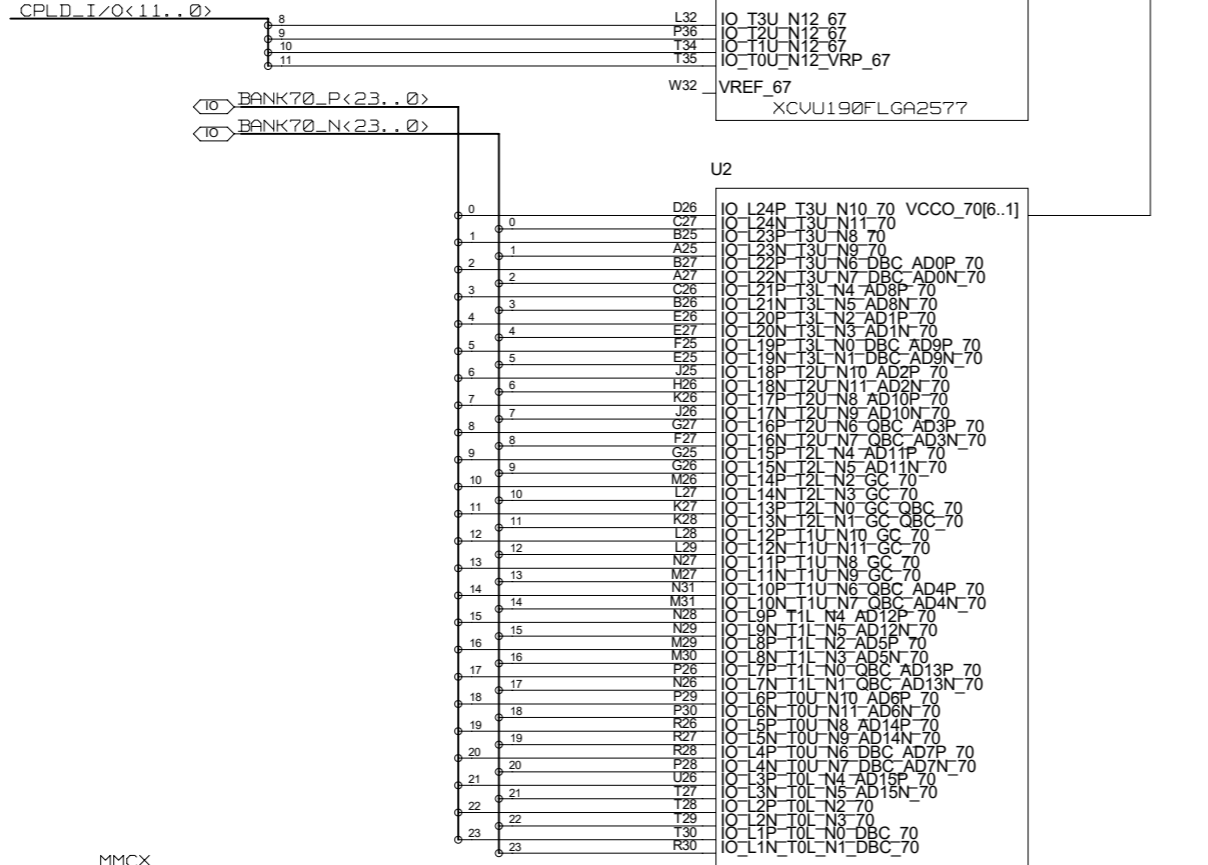
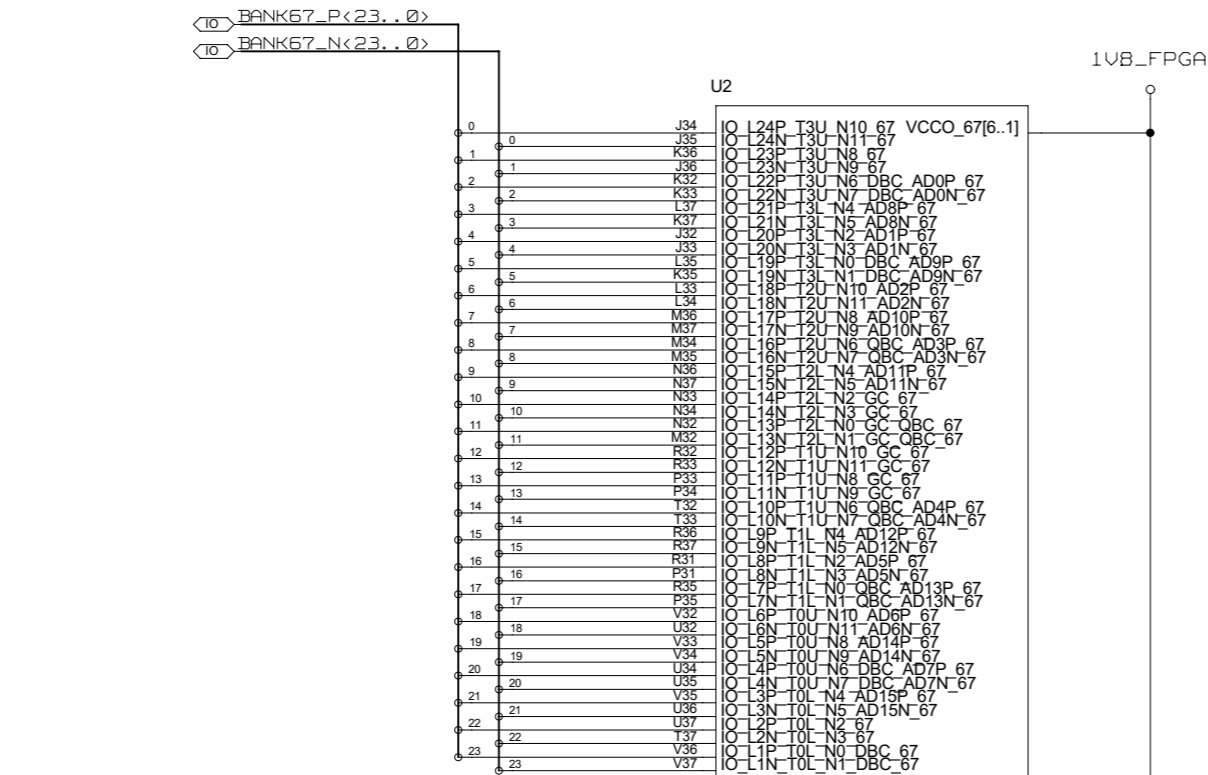
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



BANK
66
68

CHECKED	NAME	DATE	SIGN	DRAWING TITLE L1 TOPO
CHECKED	J. V. DE SOUZA			
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	25.08.2015		
BLOCK TITLE U2_PARALLEL_I/O				
UNIVERSITY OF MAINZ				SIZE C
				REV.
				DRAWING NO.
SCALE				SHEET 3 OF 5

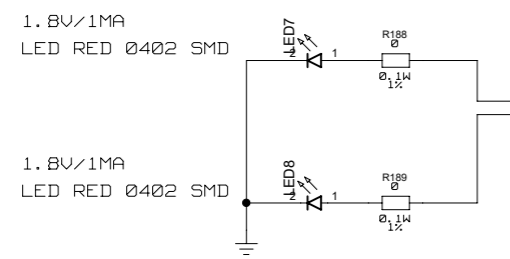
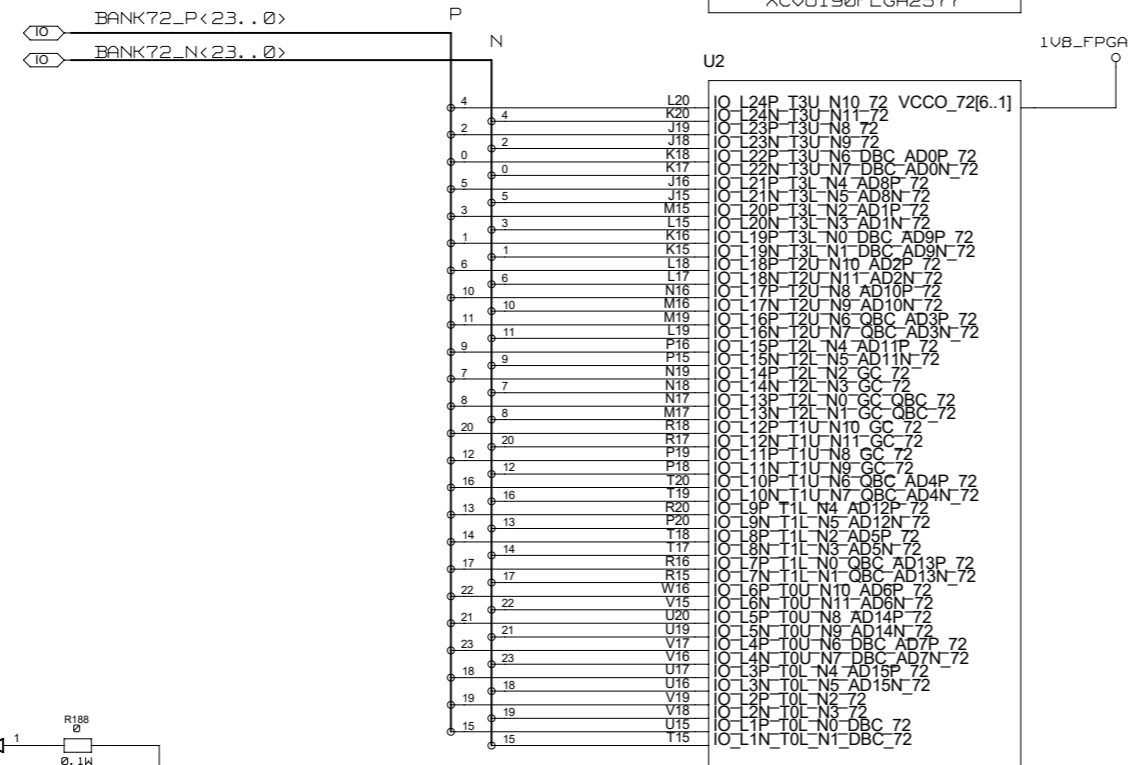
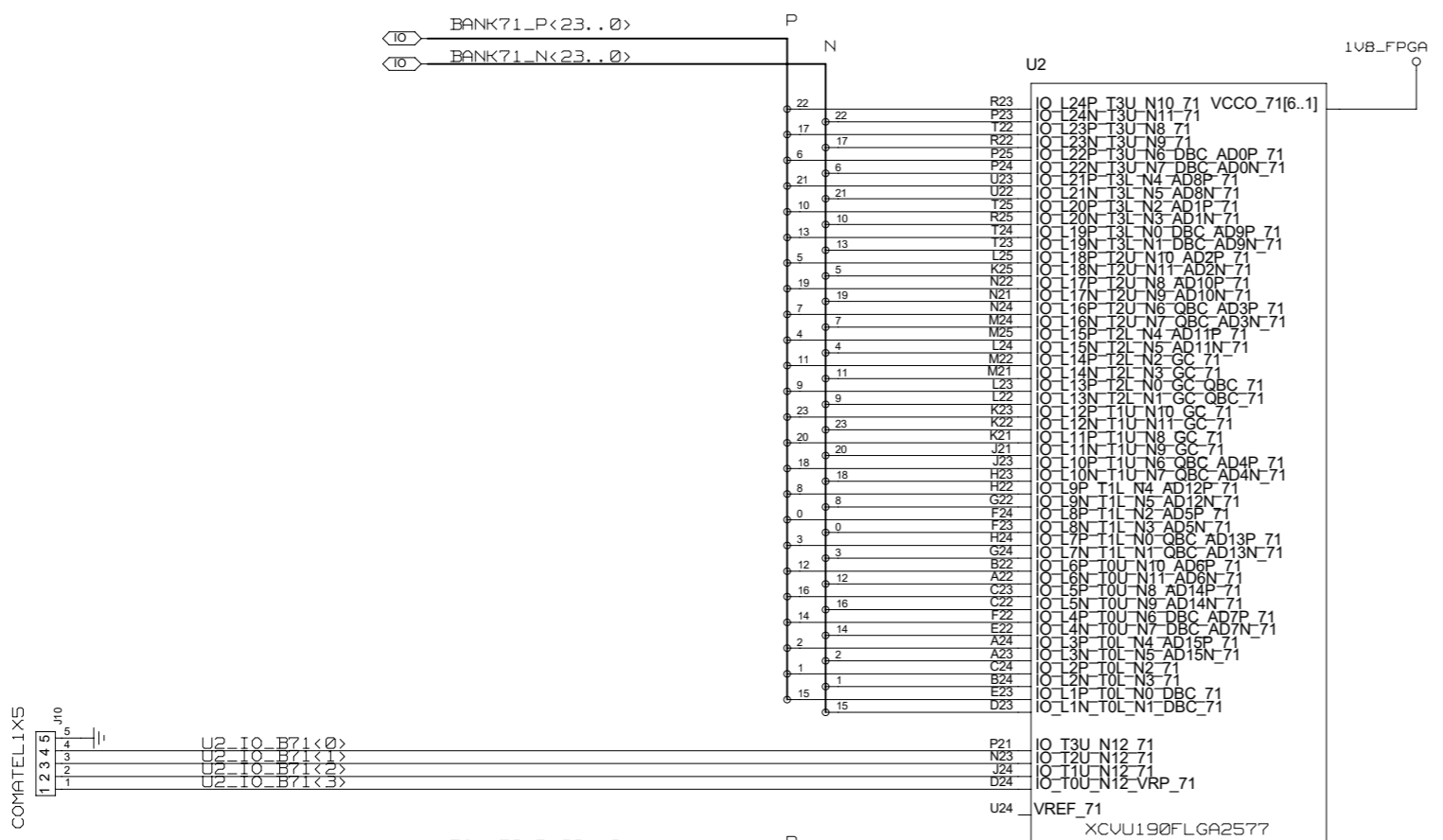
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



BANK
67
70

NAME	DATE	SIGN	DRAWING TITLE
CHECKED J. V. DE SOUZA			L1 TOPO
CHECKED U. SCHAEFER			
CHECKED S. RAVE			
DRAWN BAUSS	25.08.2015		
BLOCK TITLE			
U2_PARALLEL_I/O			
UNIVERSITY OF MAINZ		SIZE C	DRAWING NO.
SCALE		REV.	SHEET 4 of 5

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

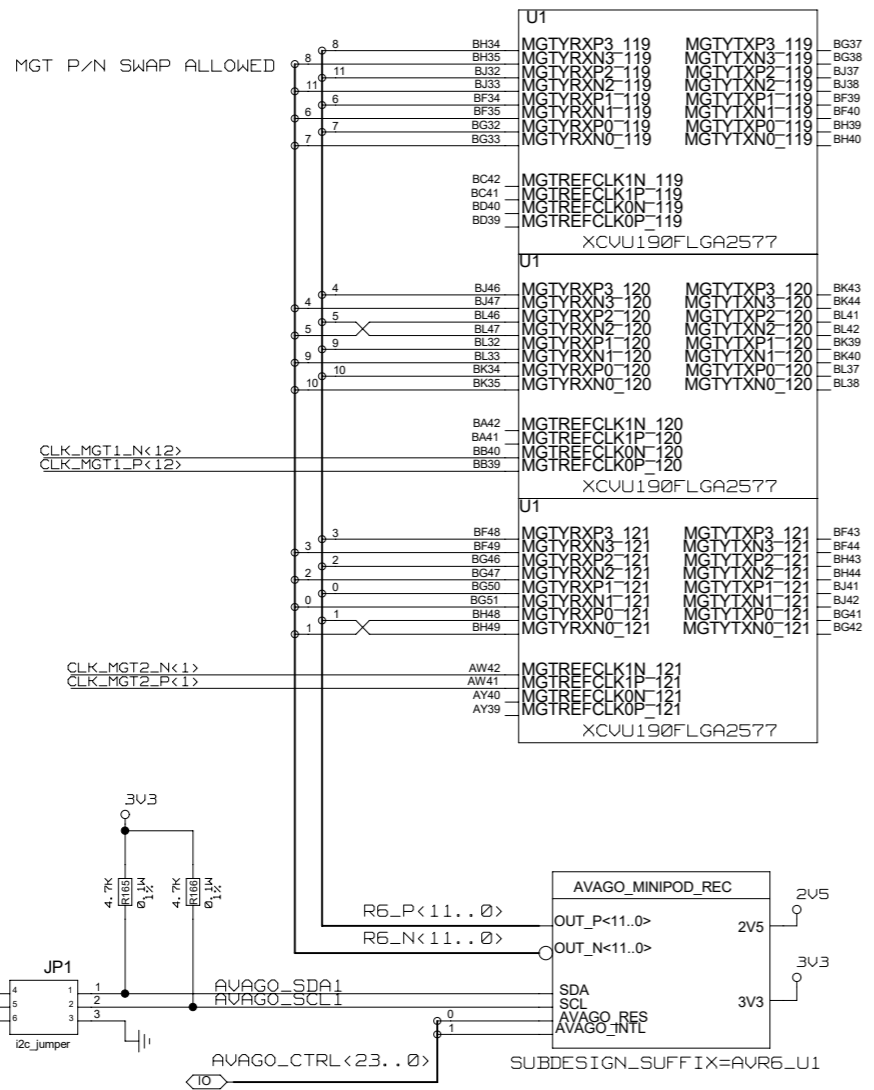


BANK
71
72

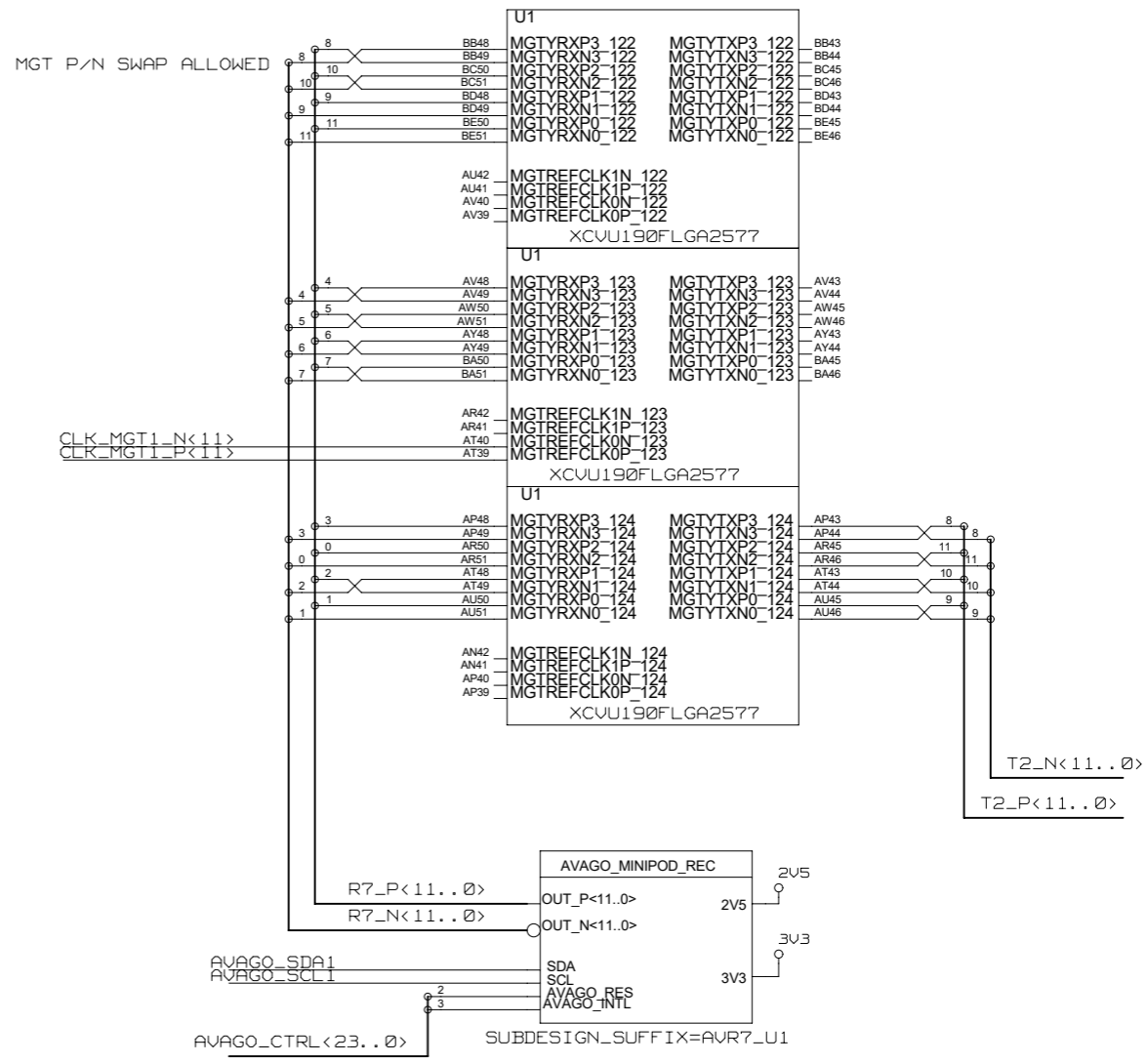
NAME	DATE	SIGN	DRAWING TITLE
CHECKED J. V. DE SOUZA			L1 TOPO
CHECKED U. SCHAEFER			
CHECKED S. RAVE			
DRAWN BAUSS	25.08.2015		
BLOCK TITLE			UNIVERSITY OF MAINZ
SIZE	REV.	DRAWING NO.	
C			
SCALE		SHEET 5 OF 5	

HIGH SPEED OPTICAL LINKS

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



AVR6 I2C ADDRESS:
 R3=NA R4=4K7
 R5=NA R6=4K7
 R7=4K7 R8=NA



AVR7 I2C ADDRESS:
 R3=NA R4=4K7
 R5=4K7 R6=NA
 R7=NA R8=4K7

IN CLK_MGT1_P<12..1>
 IN CLK_MGT1_N<12..1>
 IN CLK_MGT2_P<6..1>
 IN CLK_MGT2_N<6..1>

BANK
119
120
121
122
123
124

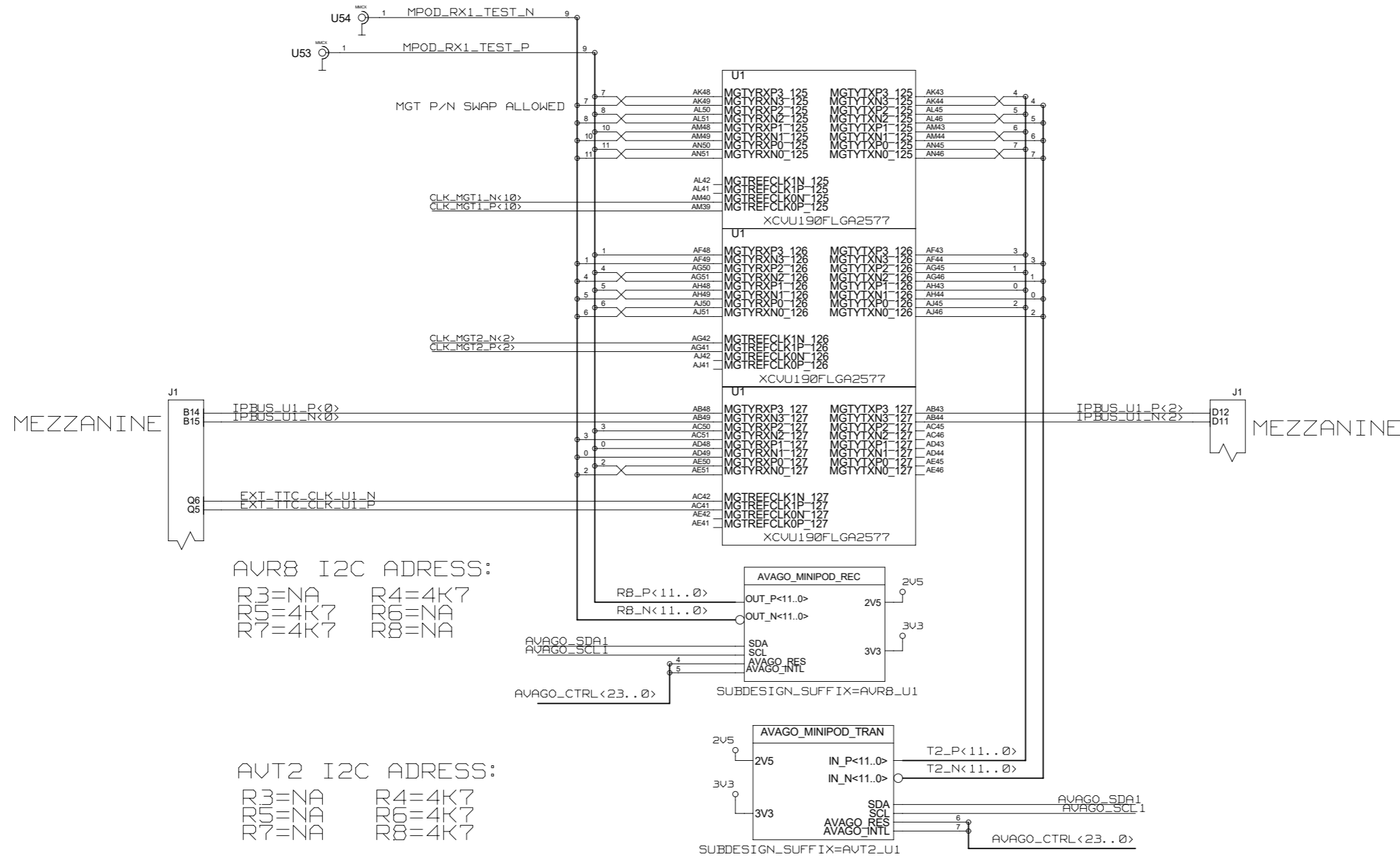
NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA		
CHECKED	U. SCHAEFER		
CHECKED	S. RAVE		
DRAWN	BAUSS	07.08.2015	
BLOCK TITLE			
U1_MGT_REAL_TIME			
UNIVERSITY OF MAINZ			
SIZE	REV.	DRAWING NO.	
C			
SCALE		SHEET 1 OF 6	

L1 TOPO

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

HIGH SPEED OPTICAL LINKS

HIGH SPEED IPBUS

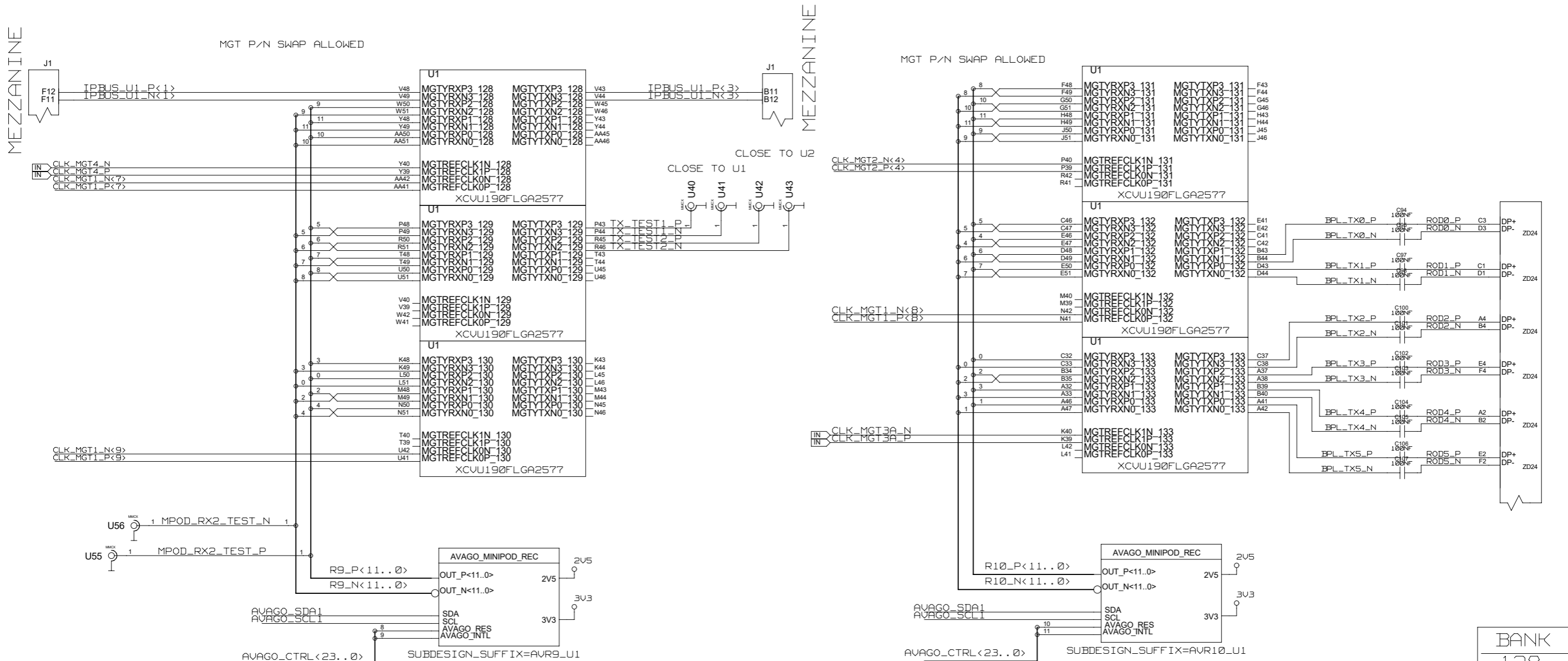


BANK
125
126
127

NAME	DATE	SIGN	DRAWING TITLE
CHECKED J. V. DE SOUZA			L1 TOPO
CHECKED U. SCHAEFER			
CHECKED S. RAVE			
DRAWN BAUSS	07.08.2015		
BLOCK TITLE			
U1_MGT_REAL_TIME			
UNIVERSITY OF MAINZ		SIZE C	DRAWING NO.
SCALE		REV.	SHEET 2 OF 6

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

HIGH SPEED OPTICAL LINKS HIGH SPEED IPBUS



AVR9 I2C ADDRESS:
R3=4K7 R4=NA
R5=NA R6=4K7
R7=NA R8=4K7

AVR10 I2C ADDRESS:
R3=4K7 R4=NA
R5=NA R6=4K7
R7=4K7 R8=NA

BANK
128
129
130
131
132
133
134
135

NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA		L1 TOPO
CHECKED	U. SCHAEFER		
CHECKED	S. RAVE		
DRAWN	BAUSS	07.08.2015	
BLOCK TITLE			UNIVERSITY OF MAINZ
SIZE	REV.	DRAWING NO.	
SCALE		SHEET 3 OF 6	

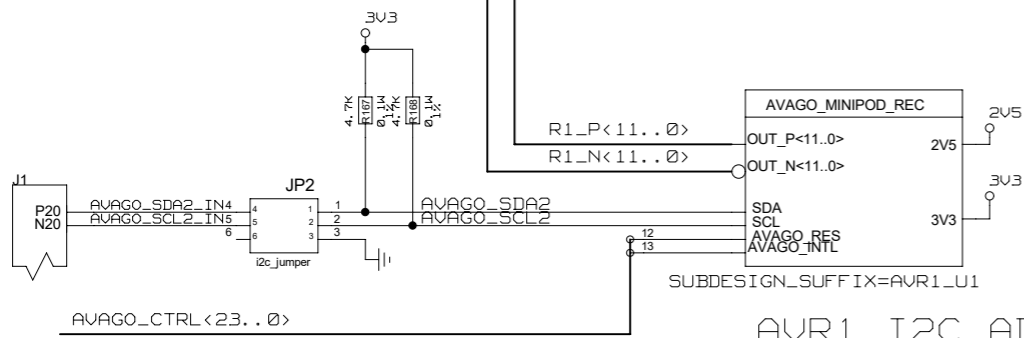
HIGH SPEED OPTICAL LINKS

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

MGT P/N SWAP ALLOWED

CLK_MGT1_P<1>
CLK_MGT1_N<1>

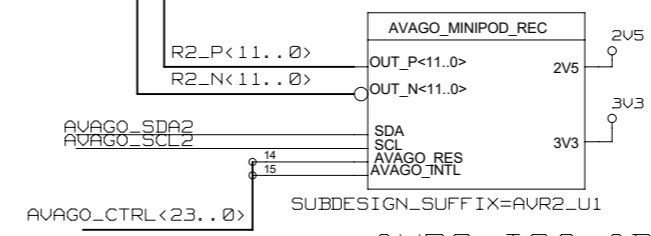
CLK_MGT2_P<5>
CLK_MGT2_N<5>



AVAGO_CTRL <23..0>
AVAGO_CTRL 0, 2, 4, 6, 8, 10 = AVAGO_RES_XX
AVAGO_CTRL 1, 3, 5, 7, 9, 11 = AVAGO_INTL_XX

AVR1 I2C ADDRESS:
R3=NA R4=4K7
R5=NA R6=4K7
R7=4K7 R8=NA

CLK_MGT1_P<2>
CLK_MGT1_N<2>



AVR2 I2C ADDRESS:
R3=NA R4=4K7
R5=4K7 R6=NA
R7=NA R8=4K7

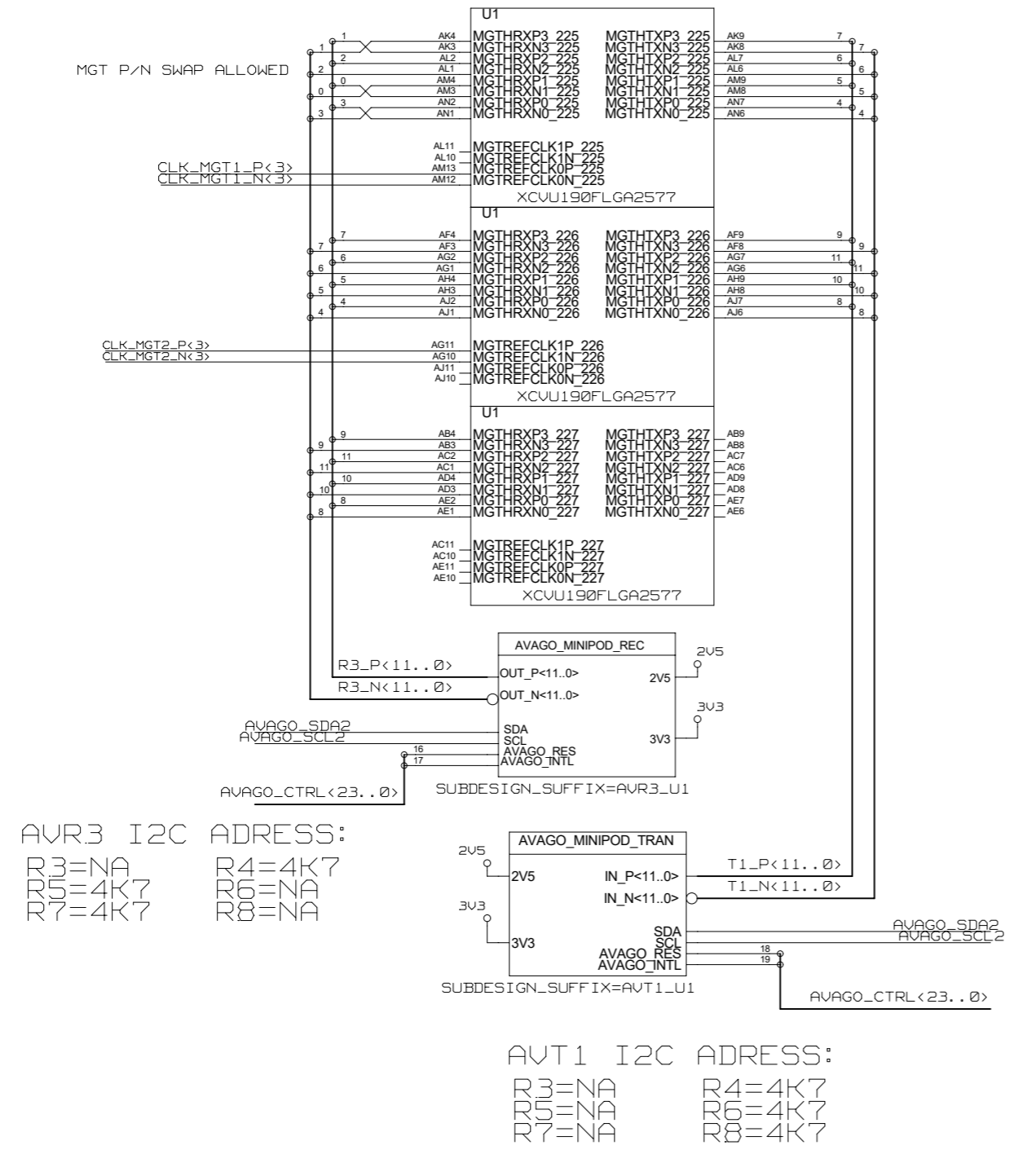
T1_N<11..0>
T1_P<11..0>

BANK
219
220
221
222
223
224

NAME	DATE	SIGN	DRAWING TITLE
CHECKED J. V. DE SOUZA			L1 TOPO
CHECKED U. SCHAEFER			
CHECKED S. RAVE			
DRAWN BAUSS	07.08.2015		
BLOCK TITLE			DRAWING NO.
U1_MGT_REAL_TIME			
UNIVERSITY OF MAINZ		SIZE	
		REV.	
		SCALE	
			SHEET 4 OF 6

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

HIGH SPEED OPTICAL LINKS

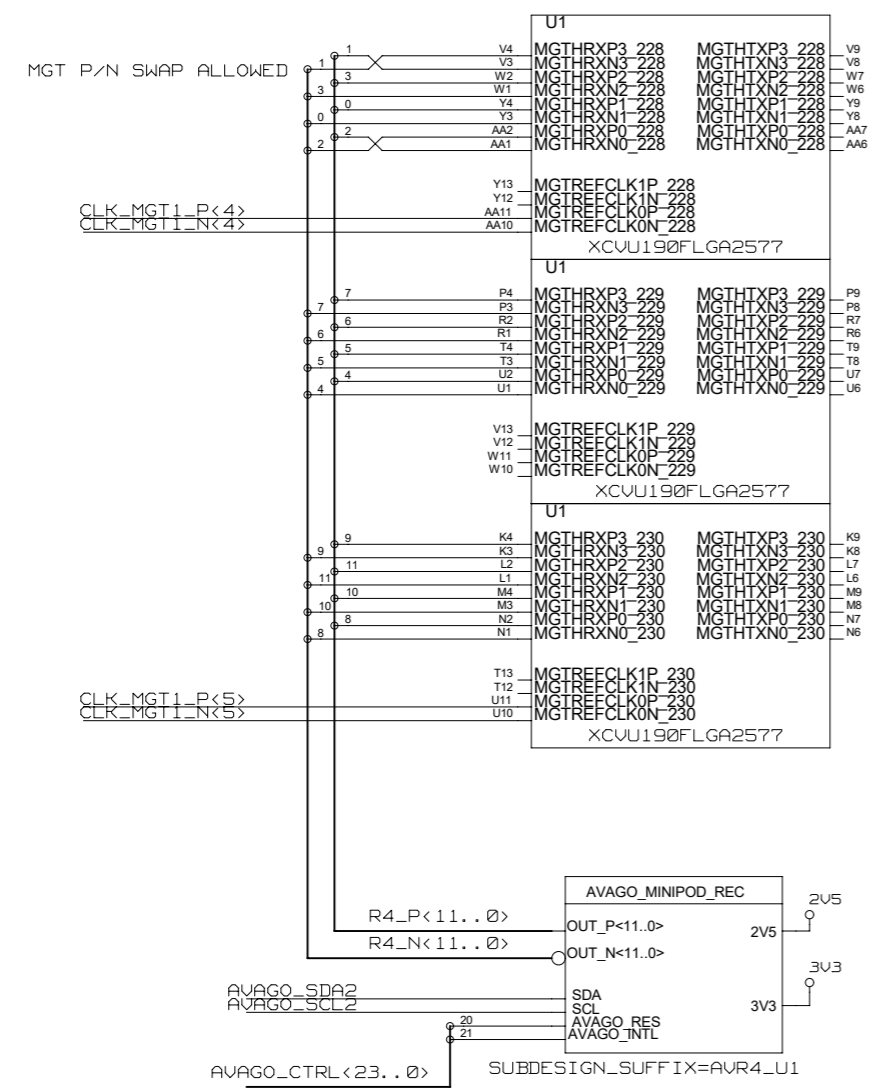


BANK
225
226
227

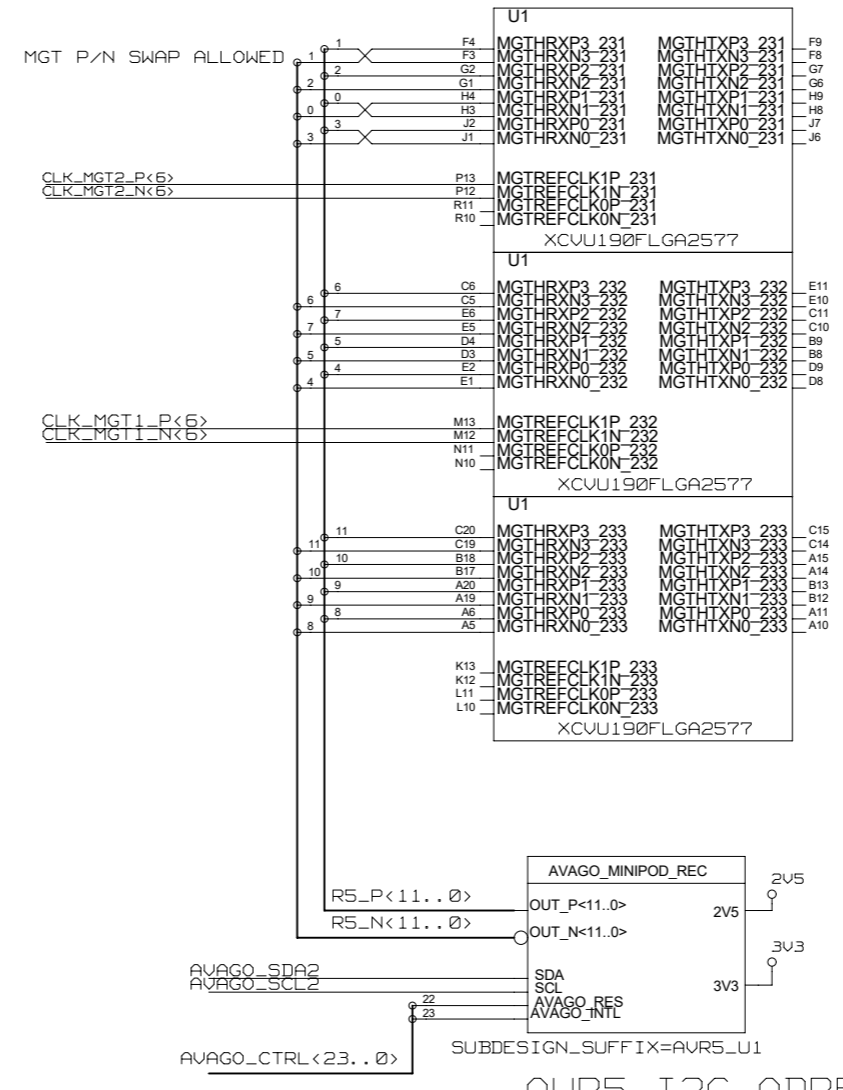
CHECKED	NAME	DATE	SIGN	DRAWING TITLE <h1>L1TOPO</h1>
CHECKED	J. V. DE SOUZA			
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	07.08.2015		
BLOCK TITLE U1_MGT_REAL_TIME				SIZE C
UNIVERSITY OF MAINZ				REV.
SCALE				DRAWING NO.
SHEET 5 OF 6				

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

HIGH SPEED OPTICAL LINKS



AVR4 I2C ADDRESS:
 R3=4K7 R4=NA
 R5=NA R6=4K7
 R7=NA R8=4K7



AVR5 I2C ADDRESS:
 R3=4K7 R4=NA
 R5=NA R6=4K7
 R7=4K7 R8=NA

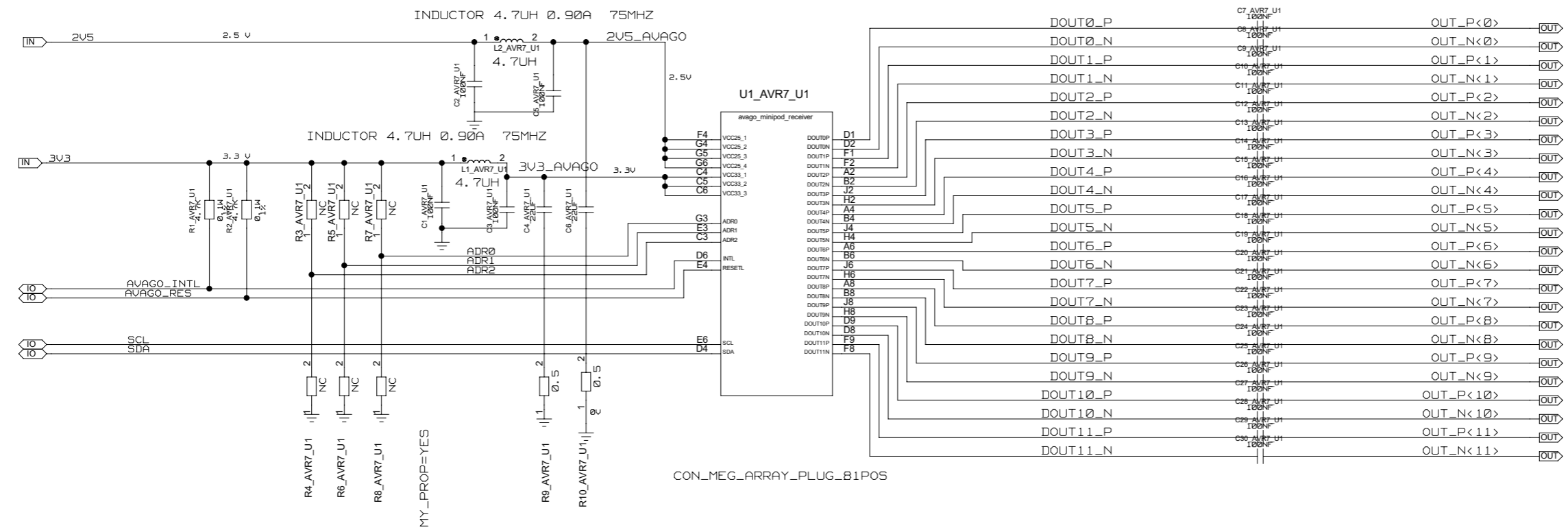
BANK
2208
2209
2210
2211
2212
2213
2214
2215
2216
2217
2218
2219
2220

CHECKED	J. V. DE SOUZA	DATE	SIGN	DRAWING TITLE		
CHECKED	U. SCHAEFER					
CHECKED	S. RAVE					
DRAWN	BAUSS	07.08.2015				
BLOCK TITLE				DRAWING NO.		
U1_MGT_REAL_TIME						
UNIVERSITY OF MAINZ				SIZE	REV.	DRAWING NO.
				C		
				SCALE	SHEET 6 OF 6	

L1 TOPO

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

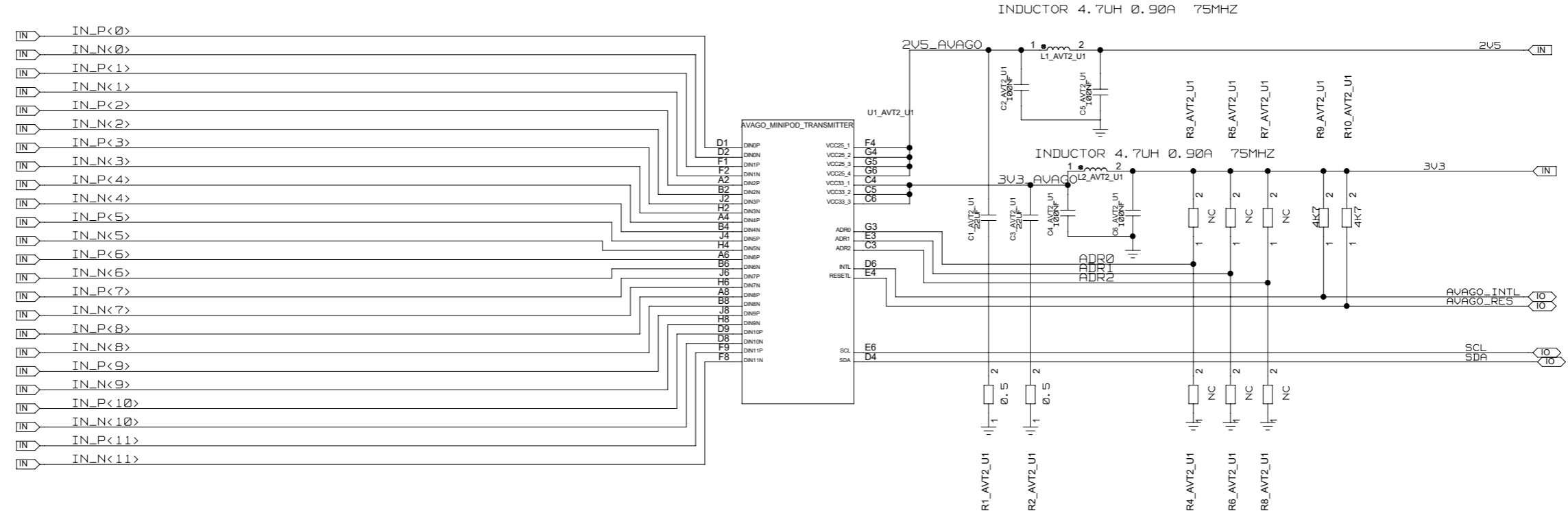
AVAGO RECEIVER



UNIVERSITY OF MAINZ	DRAWING TITLE		
	L1TOPO		
SIZE	REV.	DRAWING NO.	
C			
SCALE		SHEET	OF

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

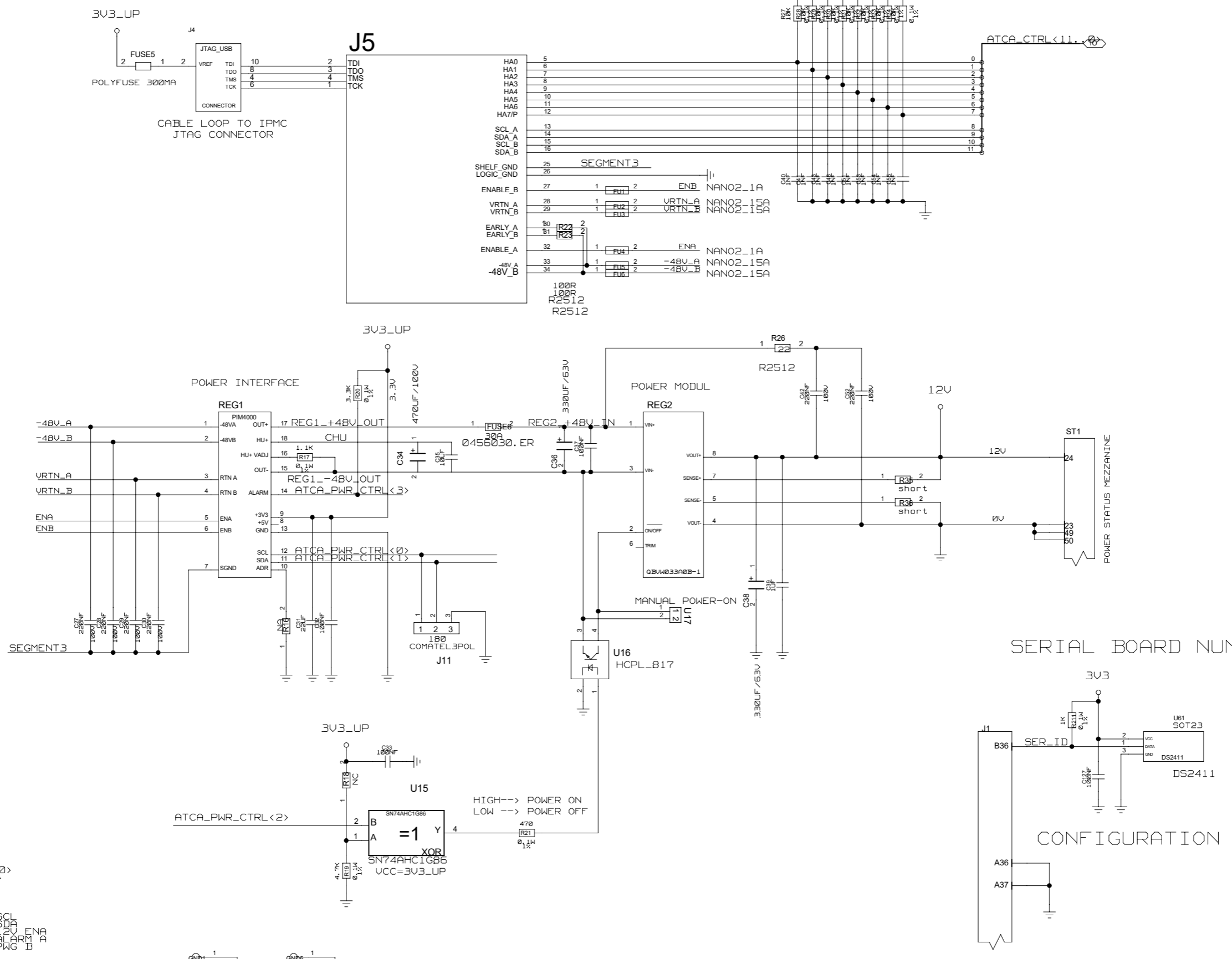
AVAGO TRANSMITTER



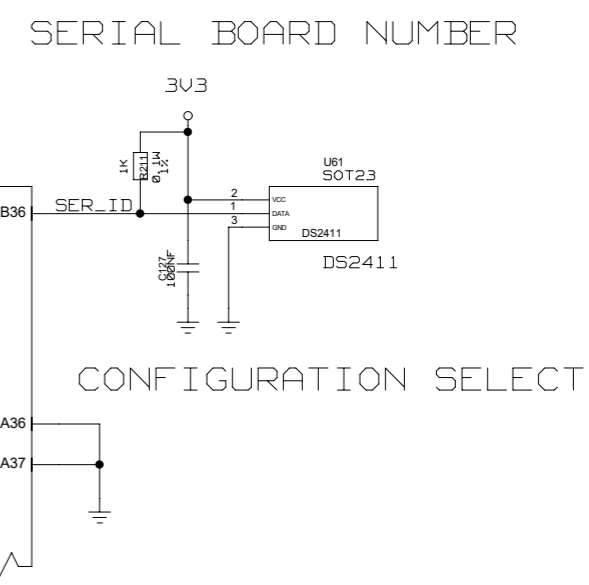
UNIVERSITY OF MAINZ		DRAWING TITLE	
		L1 TOPO	
SIZE	REV.	DRAWING NO.	
C			
SCALE		SHEET	OF

ATCA POWER IN & CTRL

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



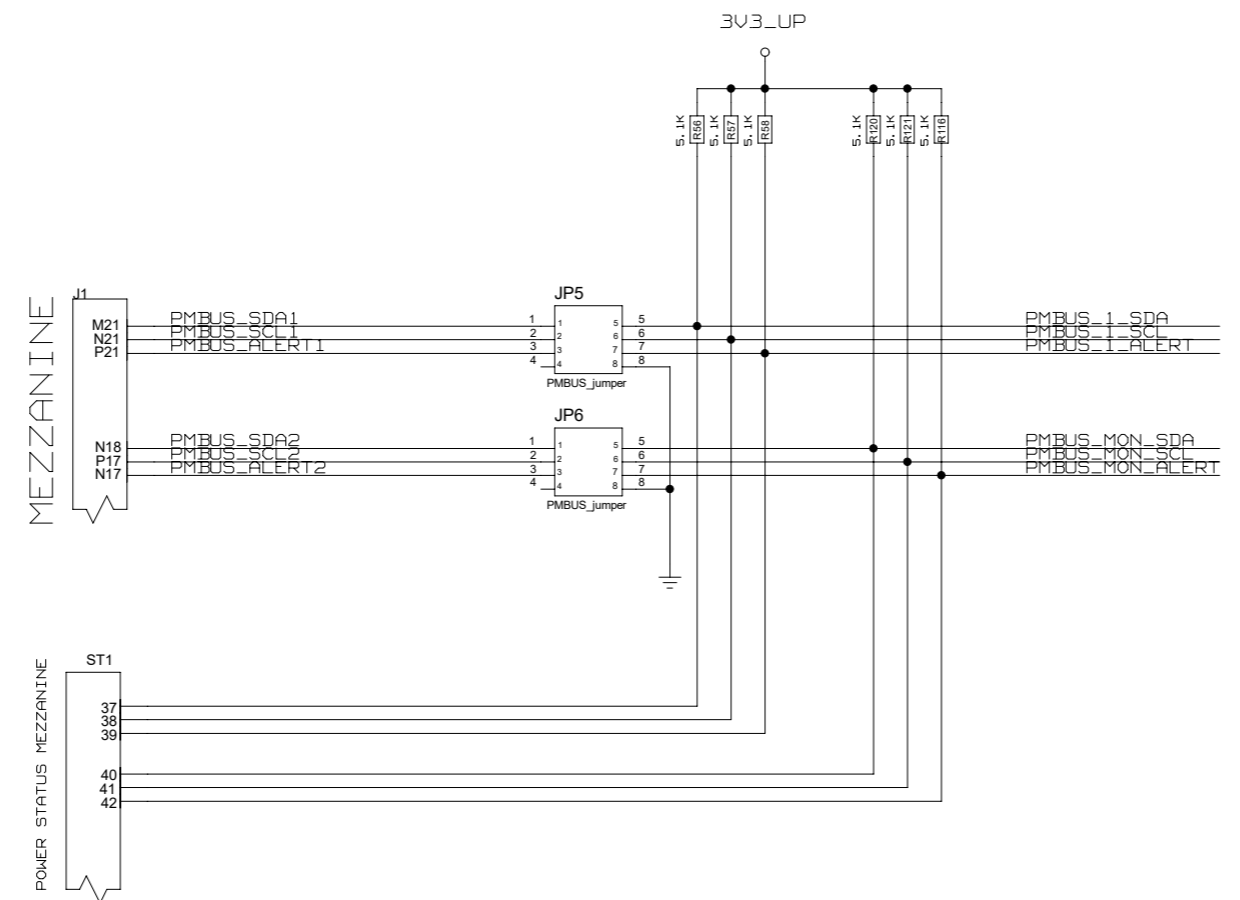
ATCA_PWR_CTRL<4..0>
 ATCA_PWR_CTRL<0> = SCL
 ATCA_PWR_CTRL<1> = I2C
 ATCA_PWR_CTRL<2> = PDL
 ATCA_PWR_CTRL<3> = PDL
 ATCA_PWR_CTRL<4> = PDL



NAME	DATE	SIGN	DRAWING TITLE
CHECKED J. V. DE SOUZA			L1 TOPO
CHECKED U. SCHAEFER			
CHECKED S. RAVE			
DRAWN BAUSS	03. 11. 2015		
BLOCK TITLE			
POWERSUPPLY			SIZE
UNIVERSITY OF MAINZ			REV.
			DRAWING NO.
			SCALE
			SHEET OF

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

PMBUS CONNECTORS

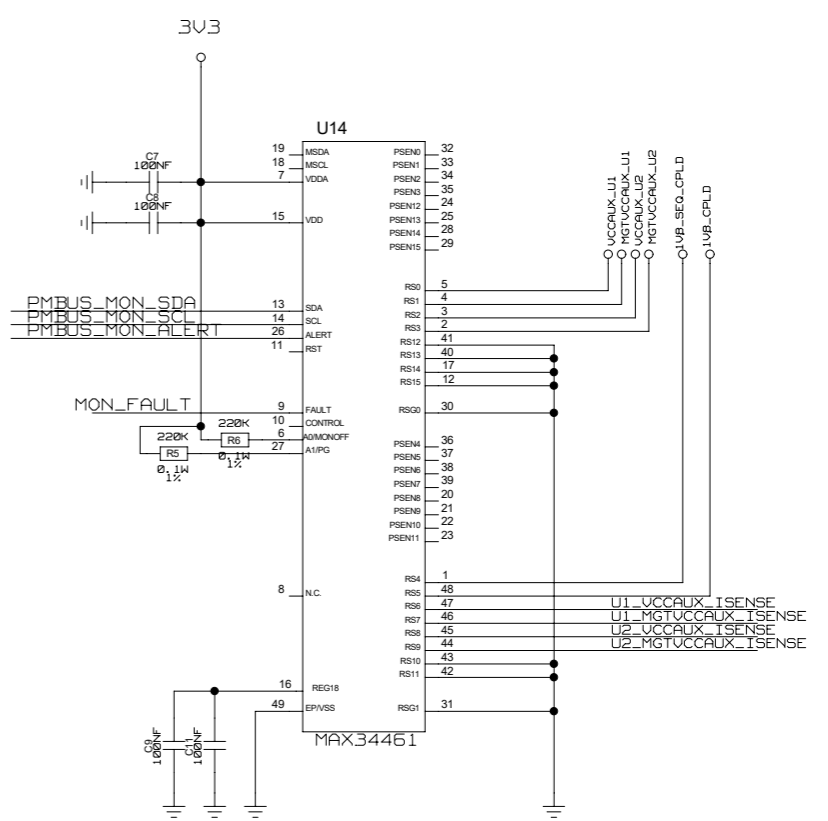
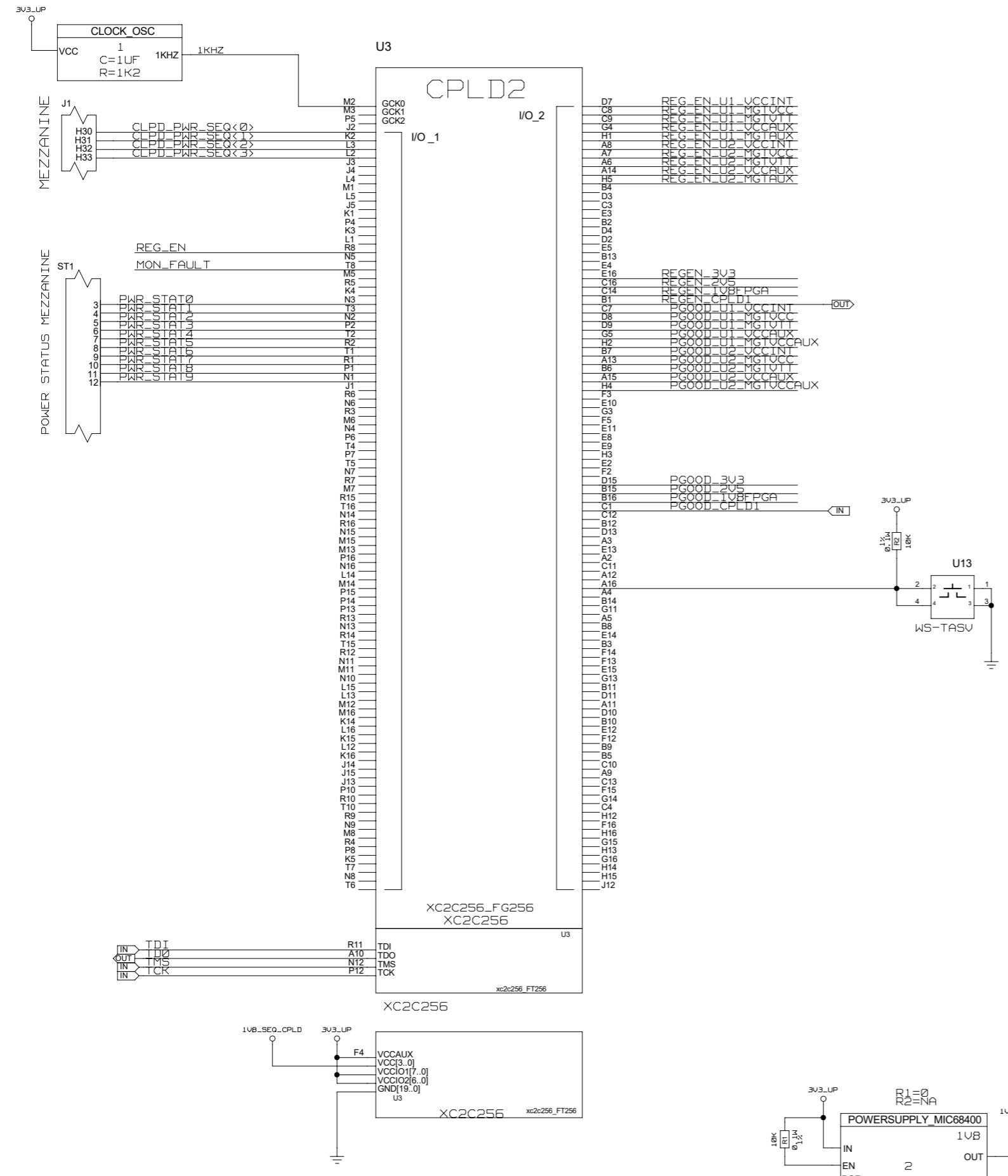


CHECKED	NAME	DATE	SIGN	DRAWING TITLE <h1>L1TOPO</h1>
CHECKED	J. V. DE SOUZA			
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS			
BLOCK TITLE <h2>POWERSUPPLY</h2>				
UNIVERSITY OF MAINZ			SIZE C	REV.
			SCALE	DRAWING NO.
				SHEET OF

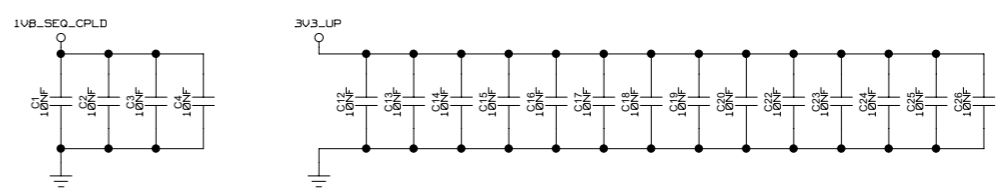
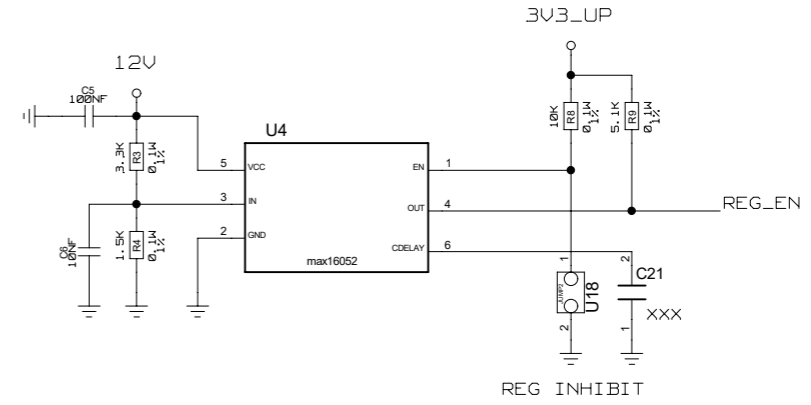
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

POWERSEQUENCING

VOLTAGE MONITORING



12V SUPERVISORY

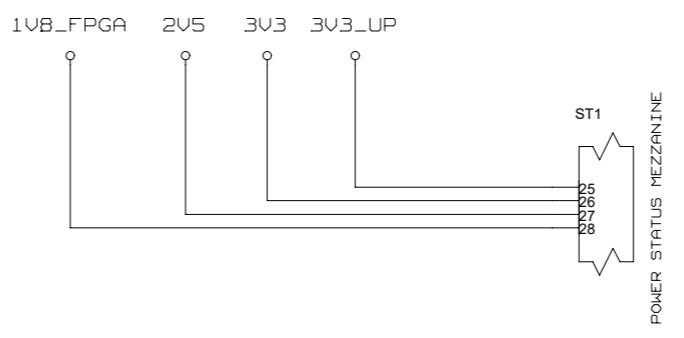
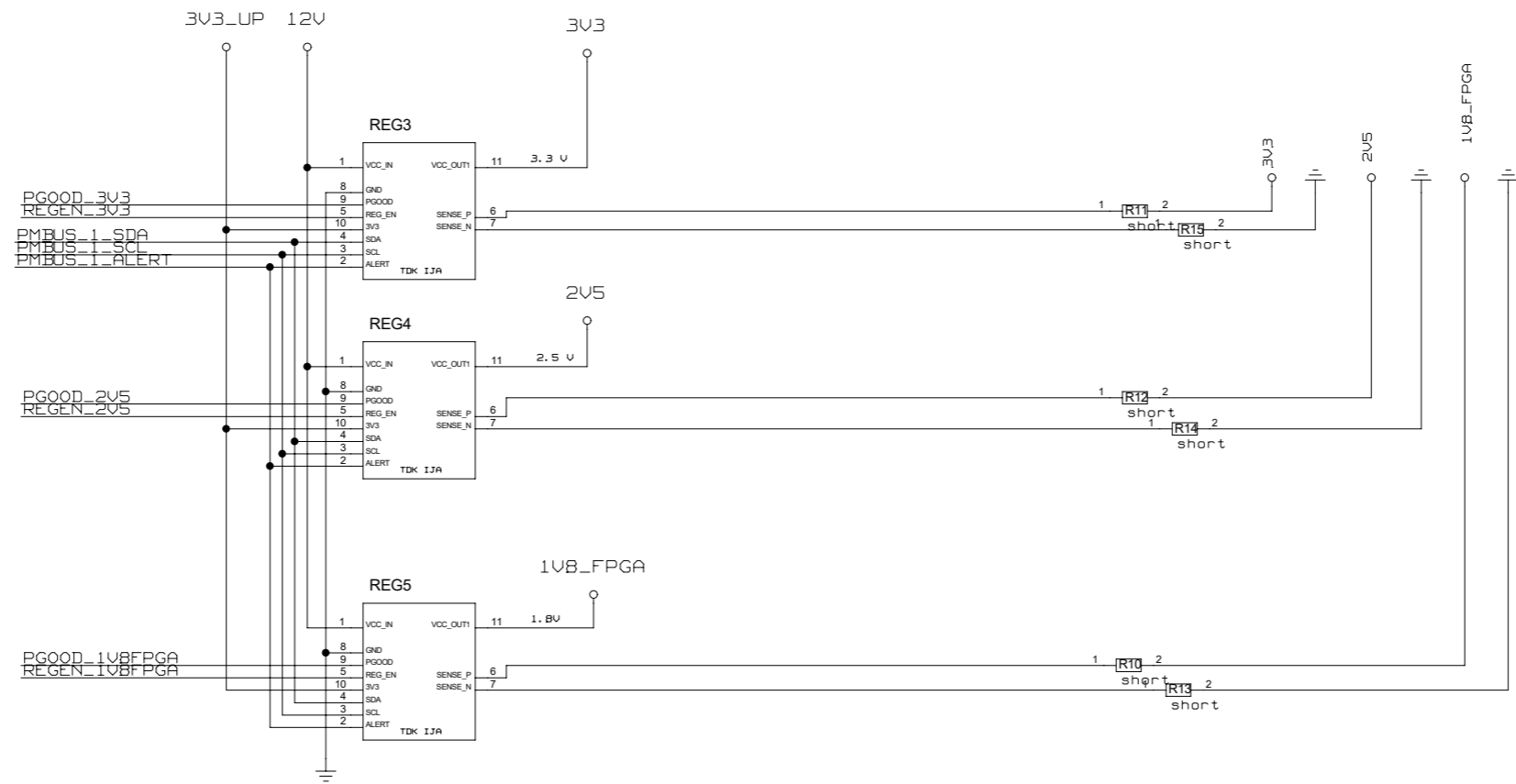


NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA		
CHECKED	U. SCHAEFER		
CHECKED	S. RAVE		
DRAWN	BAUSS		

BLOCK TITLE		DRAWING NO.	
POWERSUPPLY		L1 TOPO	
UNIVERSITY OF MAINZ	SCALE	REV.	SHEET OF

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

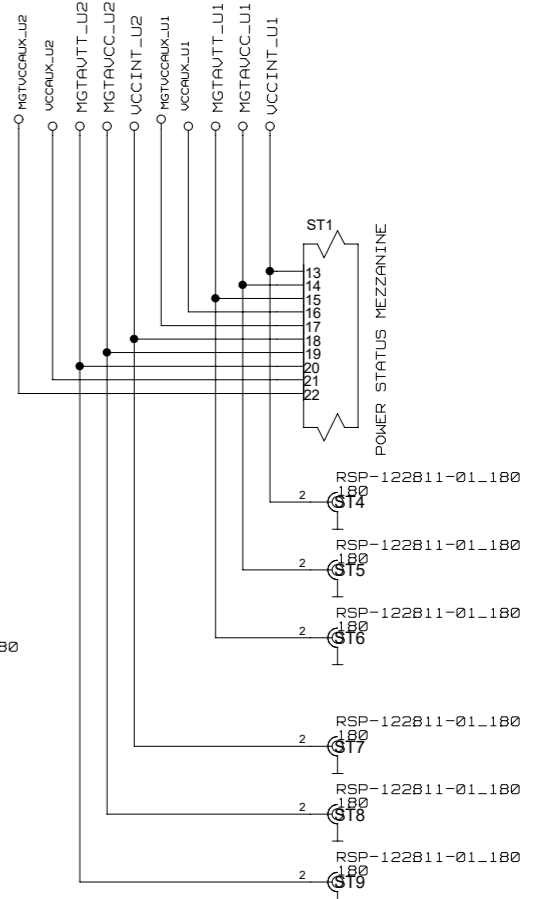
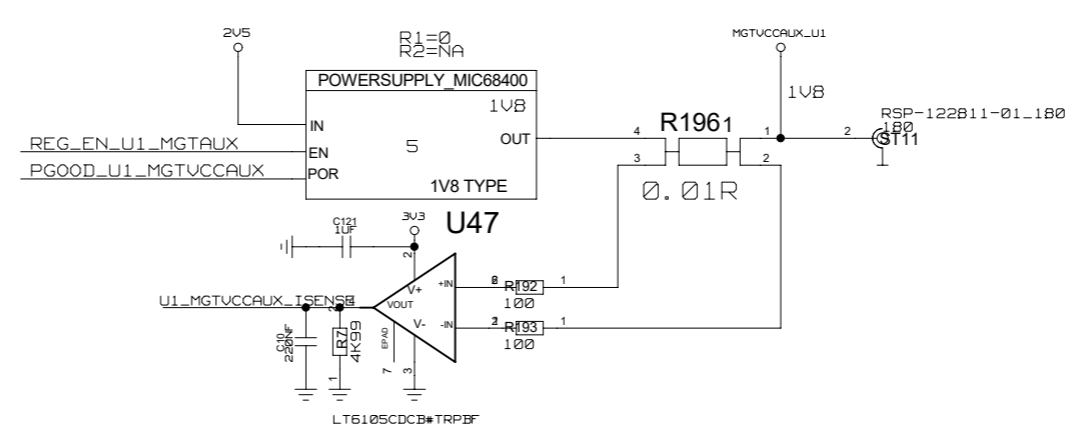
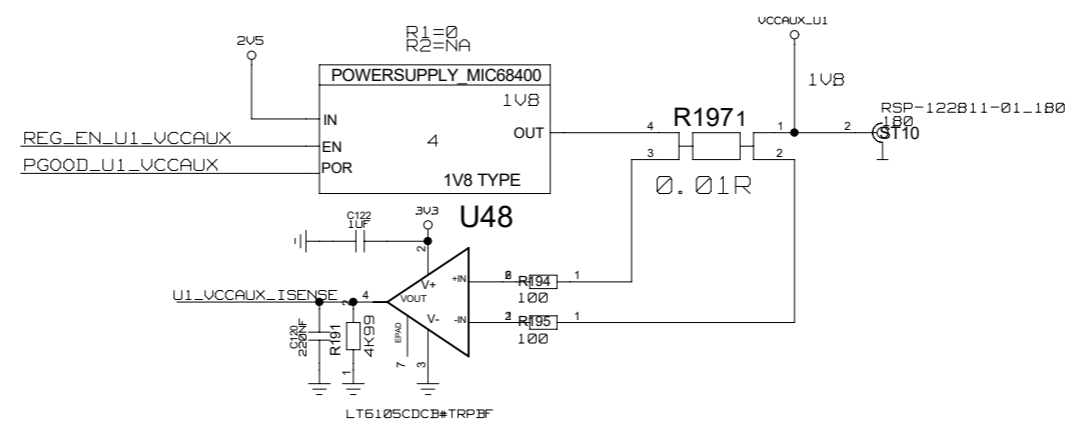
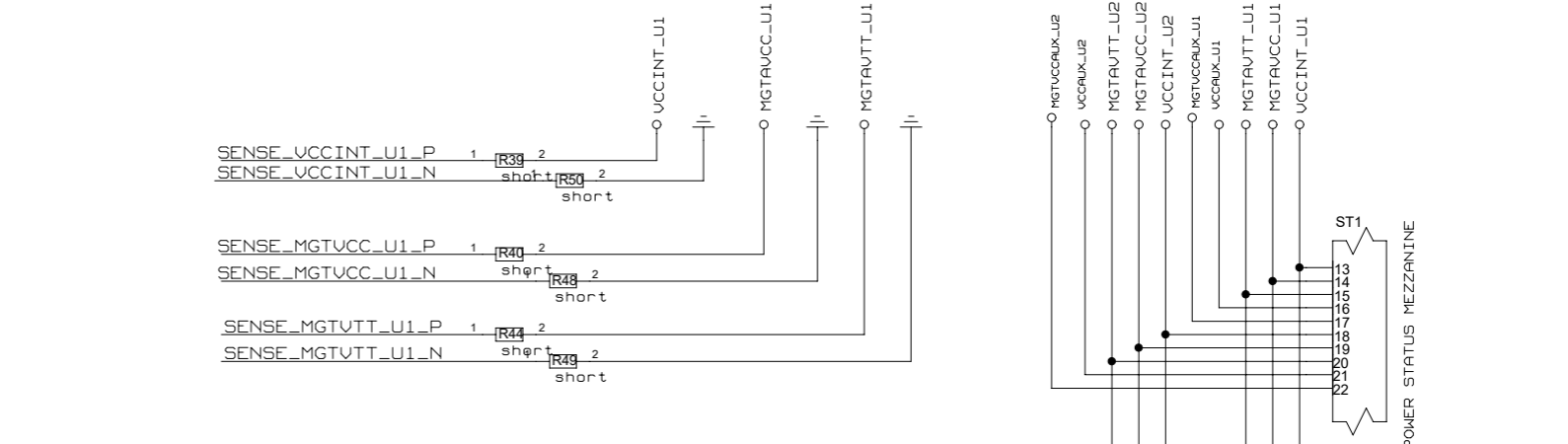
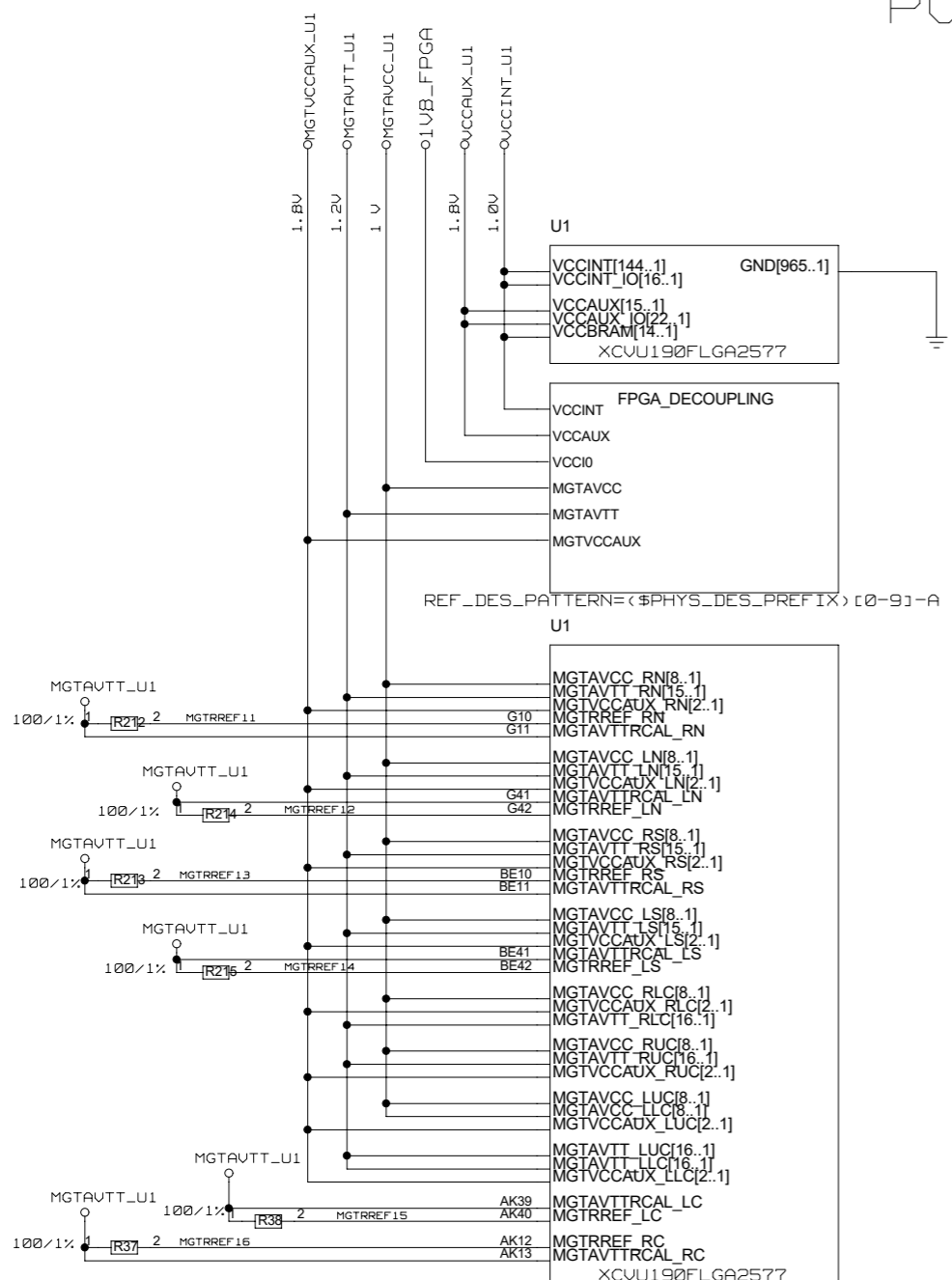
BOARDLEVEL 1V8, 2V5, 3V3



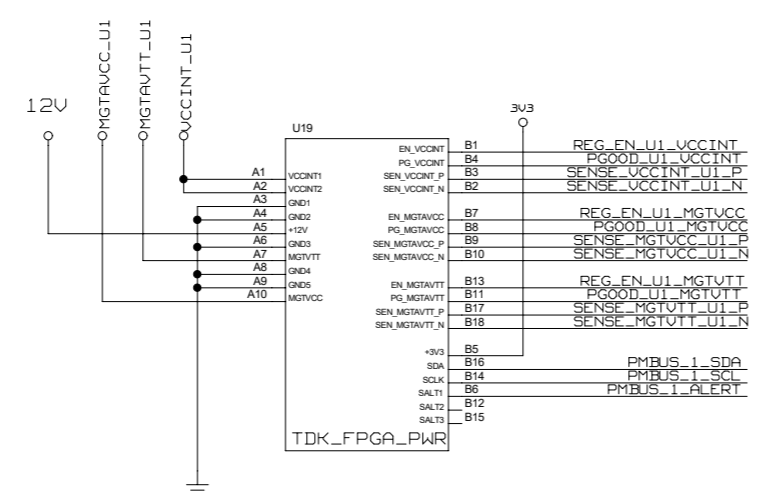
CHECKED	NAME	DATE	SIGN	DRAWING TITLE <h1>L1 TOPO</h1>
CHECKED	J. V. DE SOUZA			
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS			
BLOCK TITLE <h2>POWERSUPPLY</h2>				
UNIVERSITY OF MAINZ				
SIZE C	REV.	DRAWING NO.		
SCALE			SHEET OF	

POWERSUPPLIES U1

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



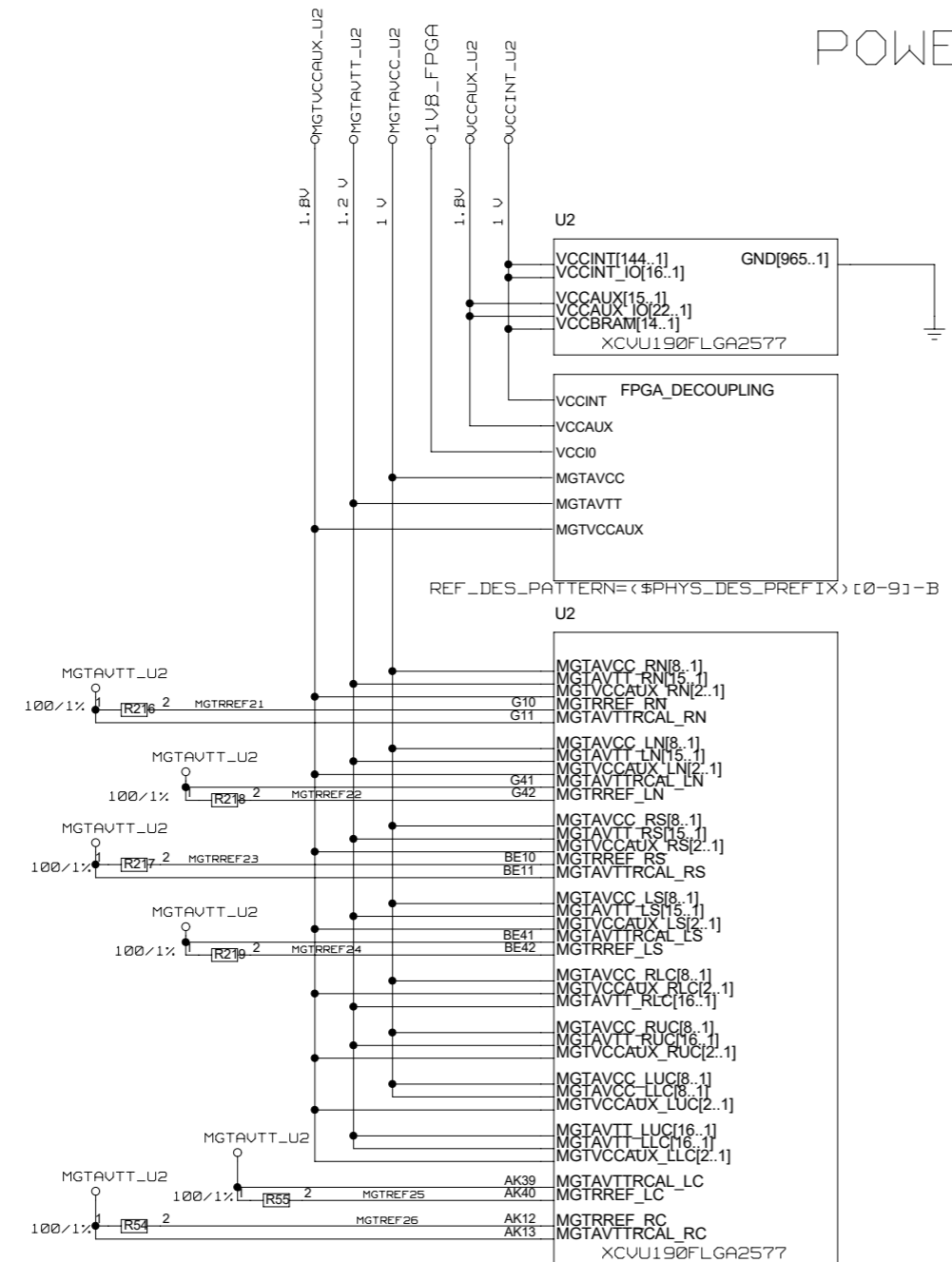
TRACE LENGTH FROM RESISTOR PINS
TO PIN SAME LENGTH
UG576 SHEET 297



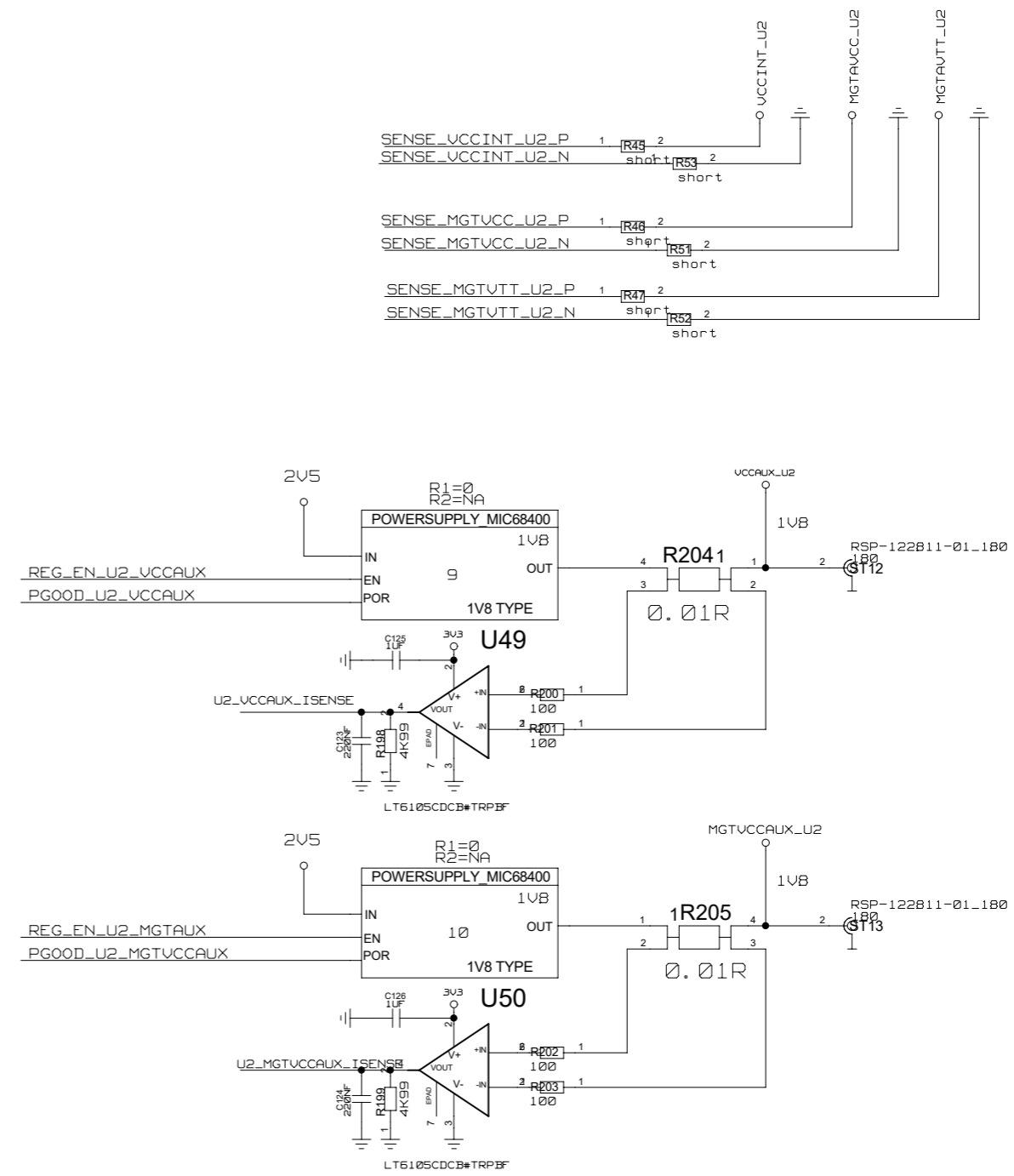
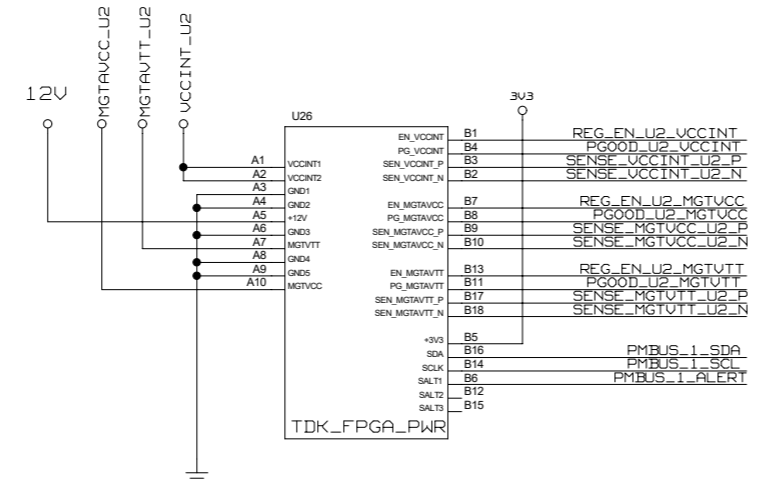
NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA		L1TOPO
CHECKED	U. SCHAEFER		
CHECKED	S. RAVE		
DRAWN	BAUSS		
BLOCK TITLE	POWERSUPPLY		
UNIVERSITY OF MAINZ			SIZE C
SCALE			REV.
SHEET			DRAWING NO.
OF			

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

POWERSUPPLIES U2



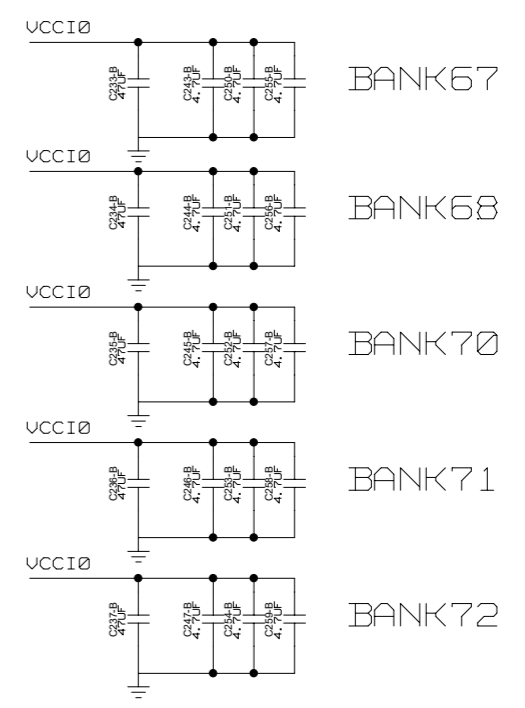
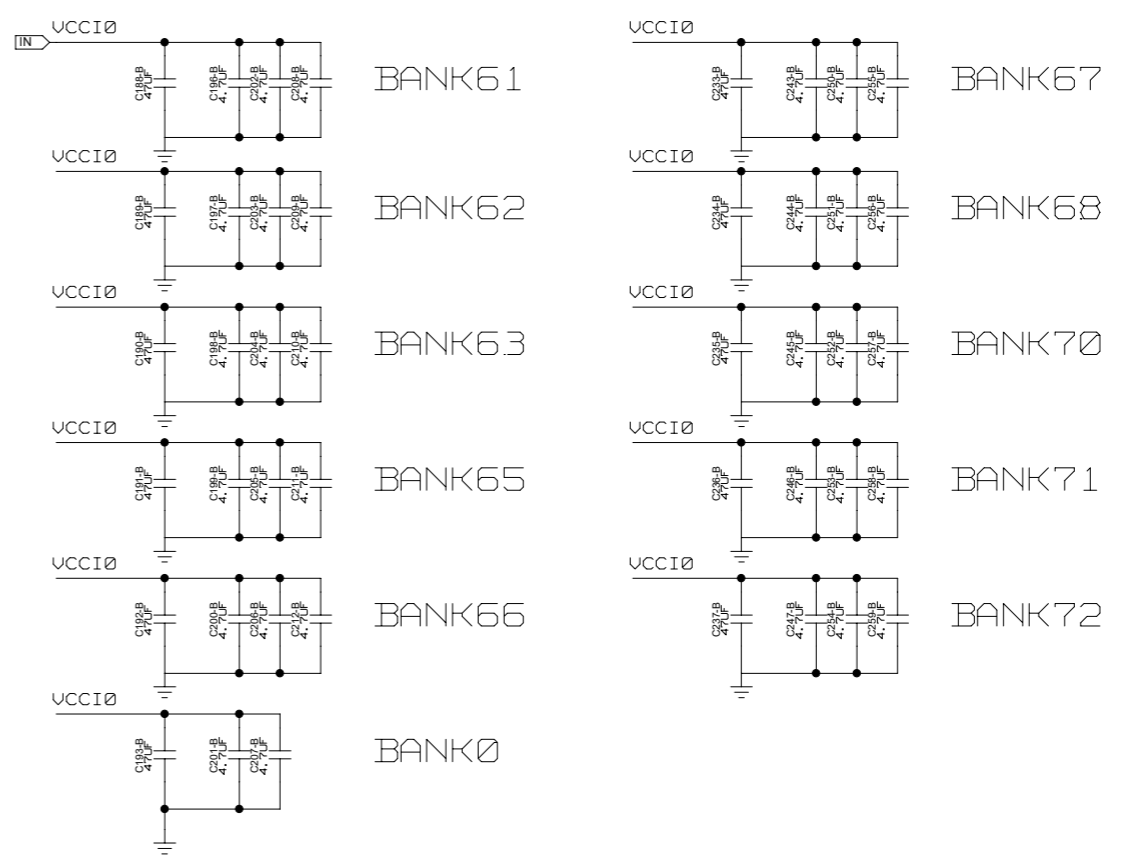
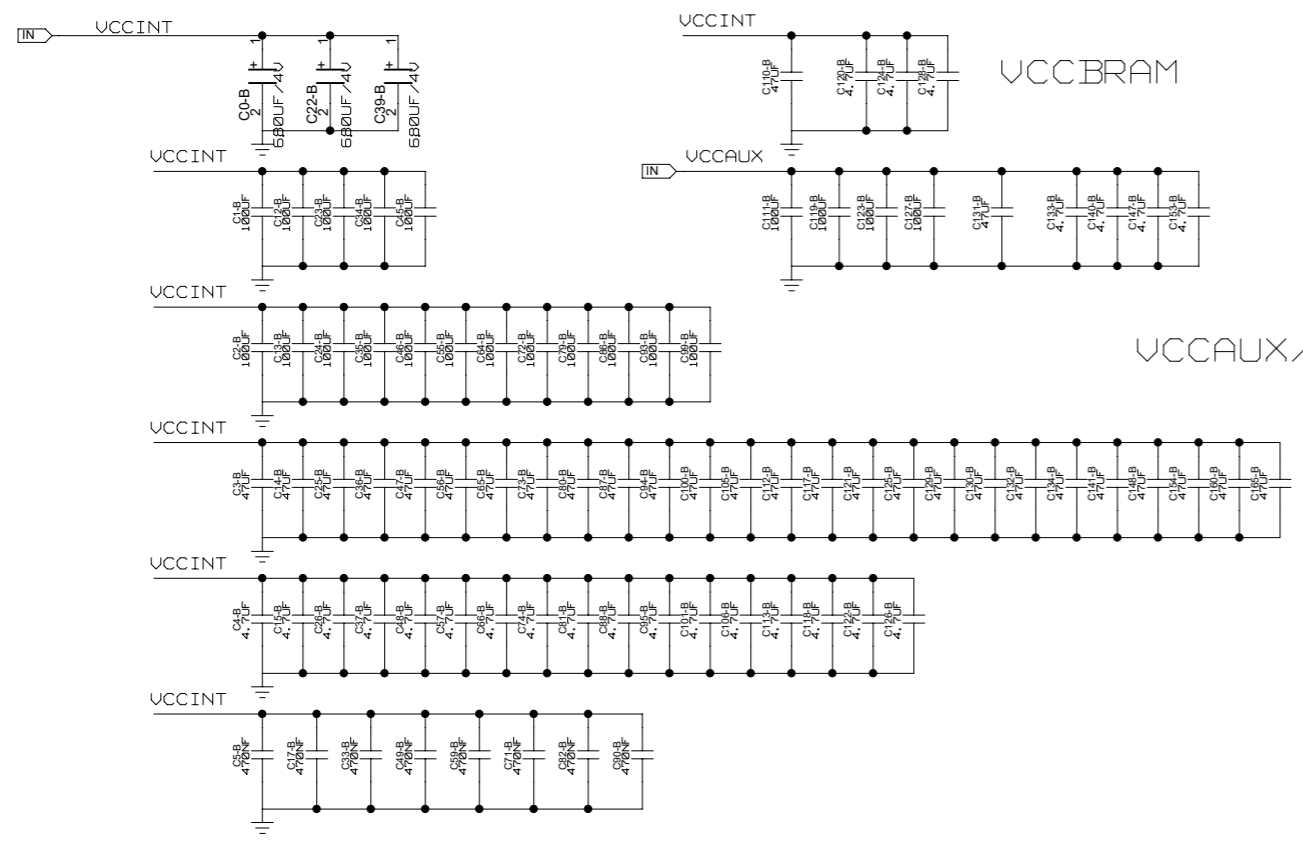
TRACE LENGTH FROM RESISTOR PINS
TO PIN SAME LENGTH
UG576 SHEET 297



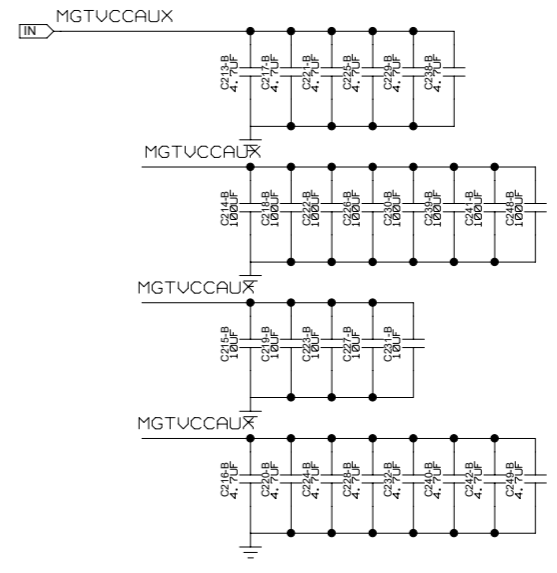
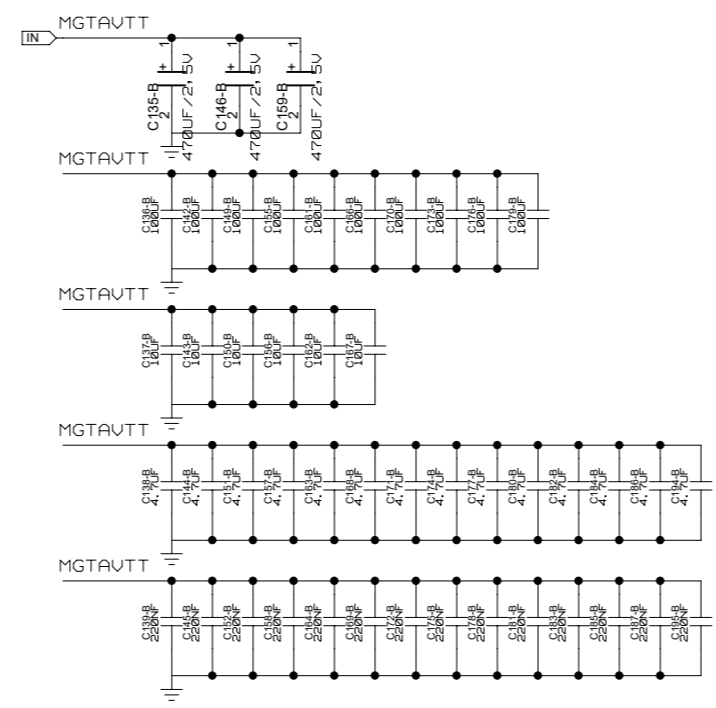
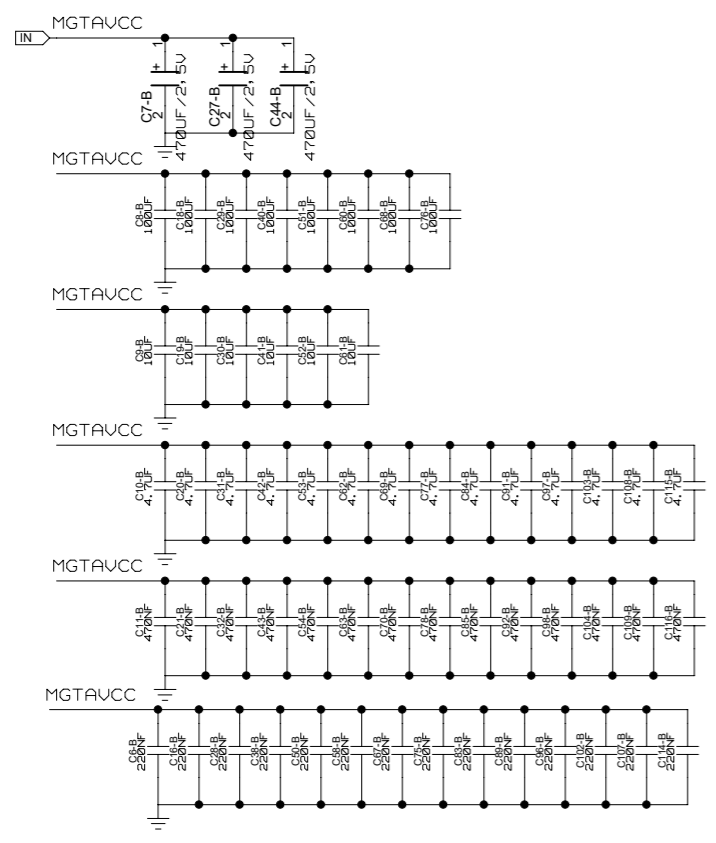
NAME	DATE	SIGN	DRAWING TITLE
CHECKED J. V. DE SOUZA			L1 TOPO
CHECKED U. SCHAEFER			
CHECKED S. RAVE			
DRAWN BAUSS			
BLOCK TITLE			
UNIVERSITY OF MAINZ			SIZE C
			REV.
			DRAWING NO.
			SHEET OF

VCCINT VCCAUX VCCIO DECOUPLING

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



MGT DECOUPLING

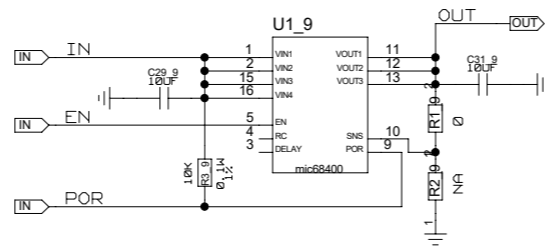


	NAME	DATE	SIGN
CHECKED	J. V. DE SOUZA		
CHECKED	U. SCHAEFER		
CHECKED	S. RAVE		
DRAWN	BAUSS		

DRAWING TITLE		DRAWING NO.
L1 TOPO		
SIZE	REV.	DRAWING NO.
SCALE		

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

POWERSUPPLY_MIC68400

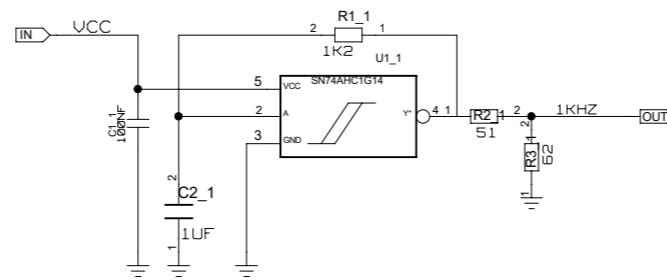


CHECKED	NAME	DATE	SIGN	DRAWING TITLE	
CHECKED	J. V. DE SOUZA			L1 TOPO	
CHECKED	U. SCHAEFER				
CHECKED	S. RAVE				
DRAWN	BAUSS				
BLOCK TITLE				DRAWING NO.	
POWERSUPPLY_MIC68400				UNIVERSITY OF MAINZ	
SIZE		REV.	DRAWING NO.		
SCALE			SHEET OF		

REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPR.

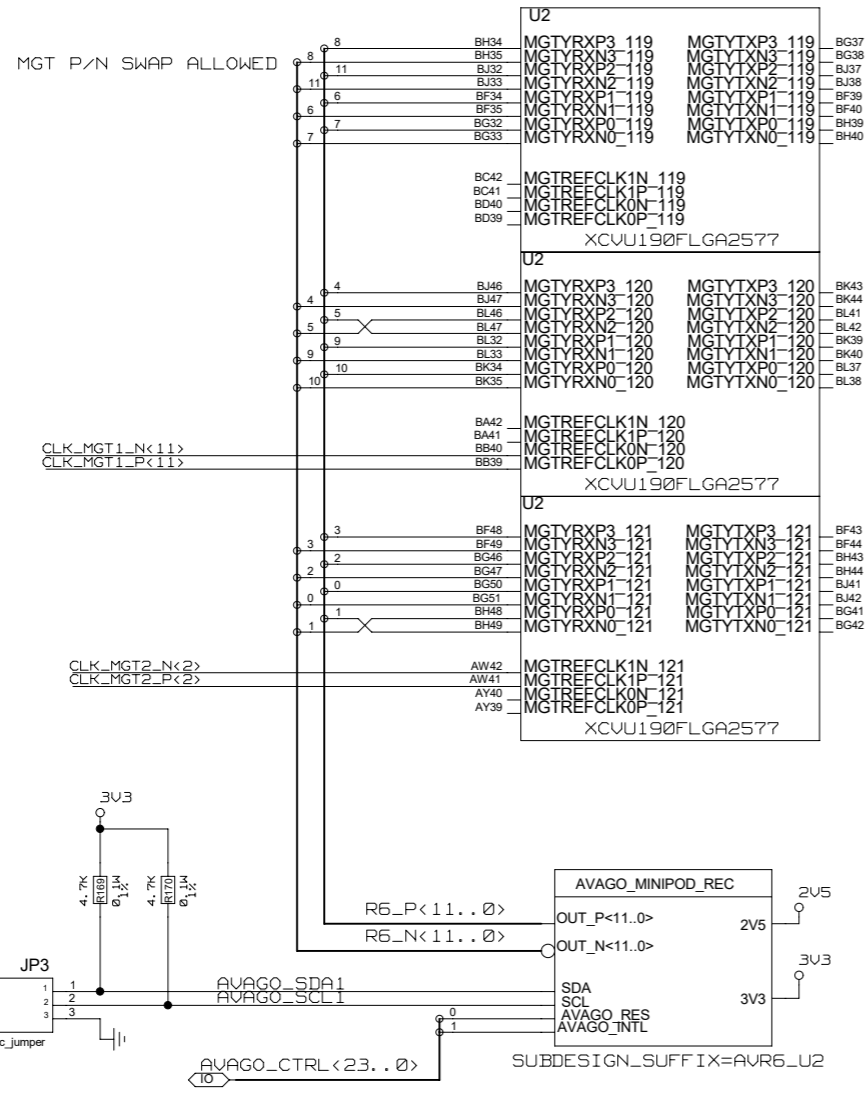
CLOCK_OSC



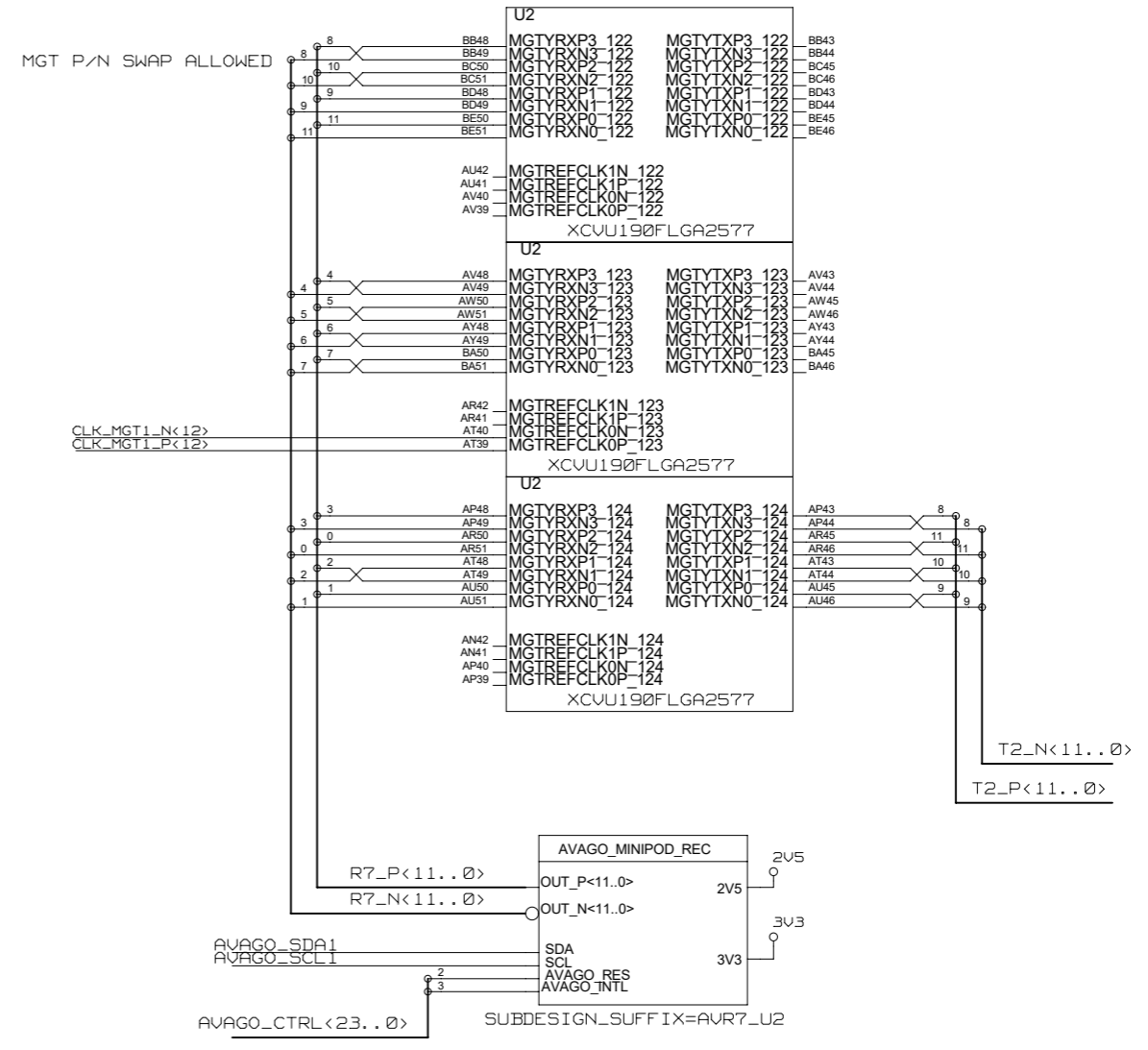
CHECKED	NAME	DATE	SIGN	DRAWING TITLE		
CHECKED	J. V. DE SOUZA			L1TOPO		
CHECKED	U. SCHAEFER					
CHECKED	S. RAVE					
DRAWN	BAUSS					
BLOCK TITLE				SIZE	REV.	DRAWING NO.
UNIVERSITY OF MAINZ				C		
				SCALE		SHEET OF

HIGH SPEED OPTICAL LINKS

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



AVR6 I2C ADDRESS:
 R3=NA R4=4K7
 R5=NA R6=4K7
 R7=4K7 R8=NA



AVR7 I2C ADDRESS:
 R3=NA R4=4K7
 R5=4K7 R6=NA
 R7=NA R8=4K7

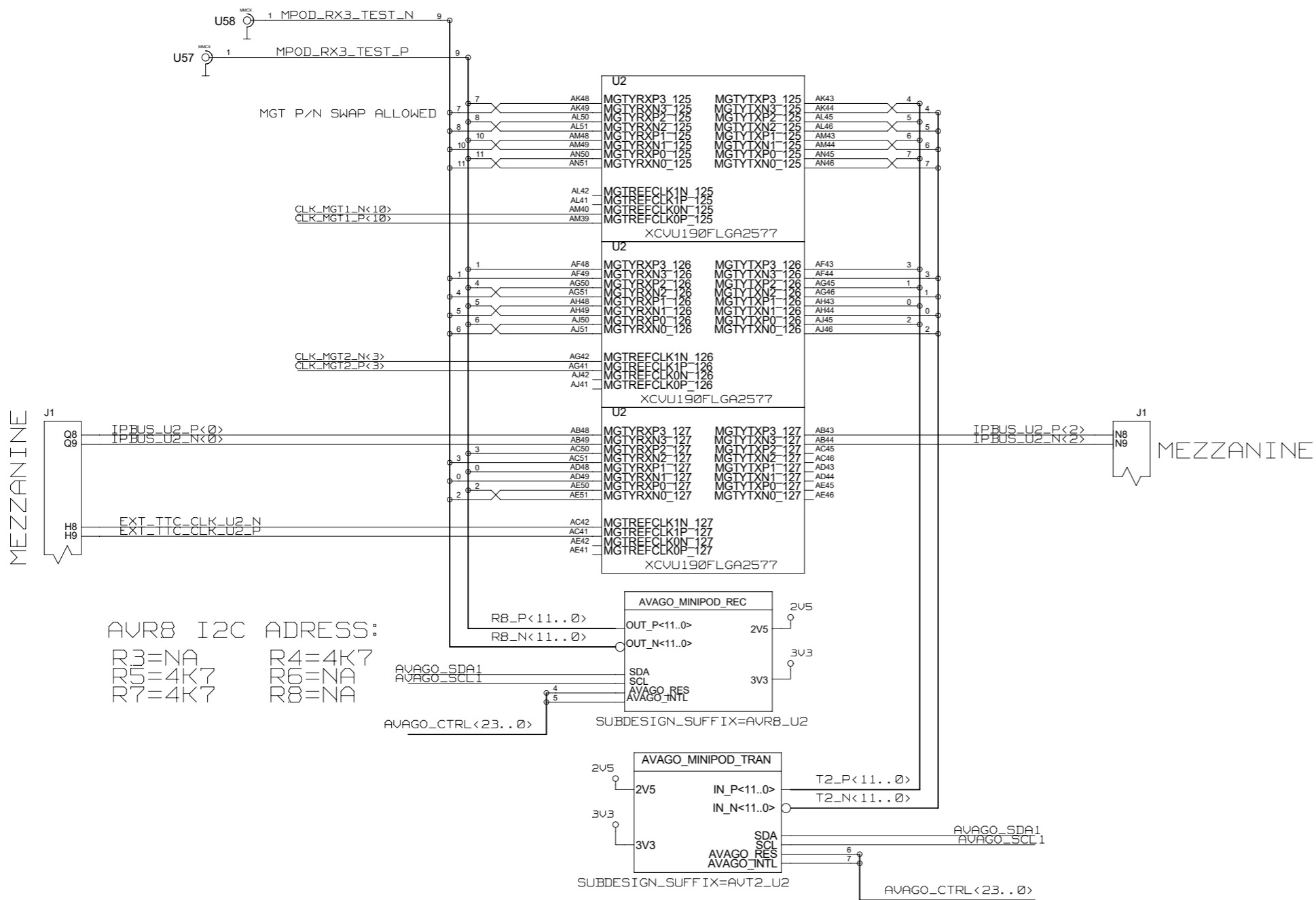
IN CLK_MGT1_P<12..1>
 IN CLK_MGT1_N<12..1>
 IN CLK_MGT2_P<6..1>
 IN CLK_MGT2_N<6..1>

BANK
119
120
121
122
123
124

NAME	DATE	SIGN	DRAWING TITLE	
CHECKED	J. V. DE SOUZA		L1 TOPO	
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	07.08.2015		
BLOCK TITLE			U2_MGT_REAL_TIME	
UNIVERSITY OF MAINZ			SIZE	DRAWING NO.
			C	
			SCALE	SHEET 1 OF 6

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

HIGH SPEED OPTICAL LINKS HIGH SPEED IPBUS



AVR8 I2C ADDRESS:
R3=NA R4=4K7
R5=4K7 R6=NA
R7=4K7 R8=NA

AVT2 I2C ADDRESS:
R3=NA R4=4K7
R5=NA R6=4K7
R7=NA R8=4K7

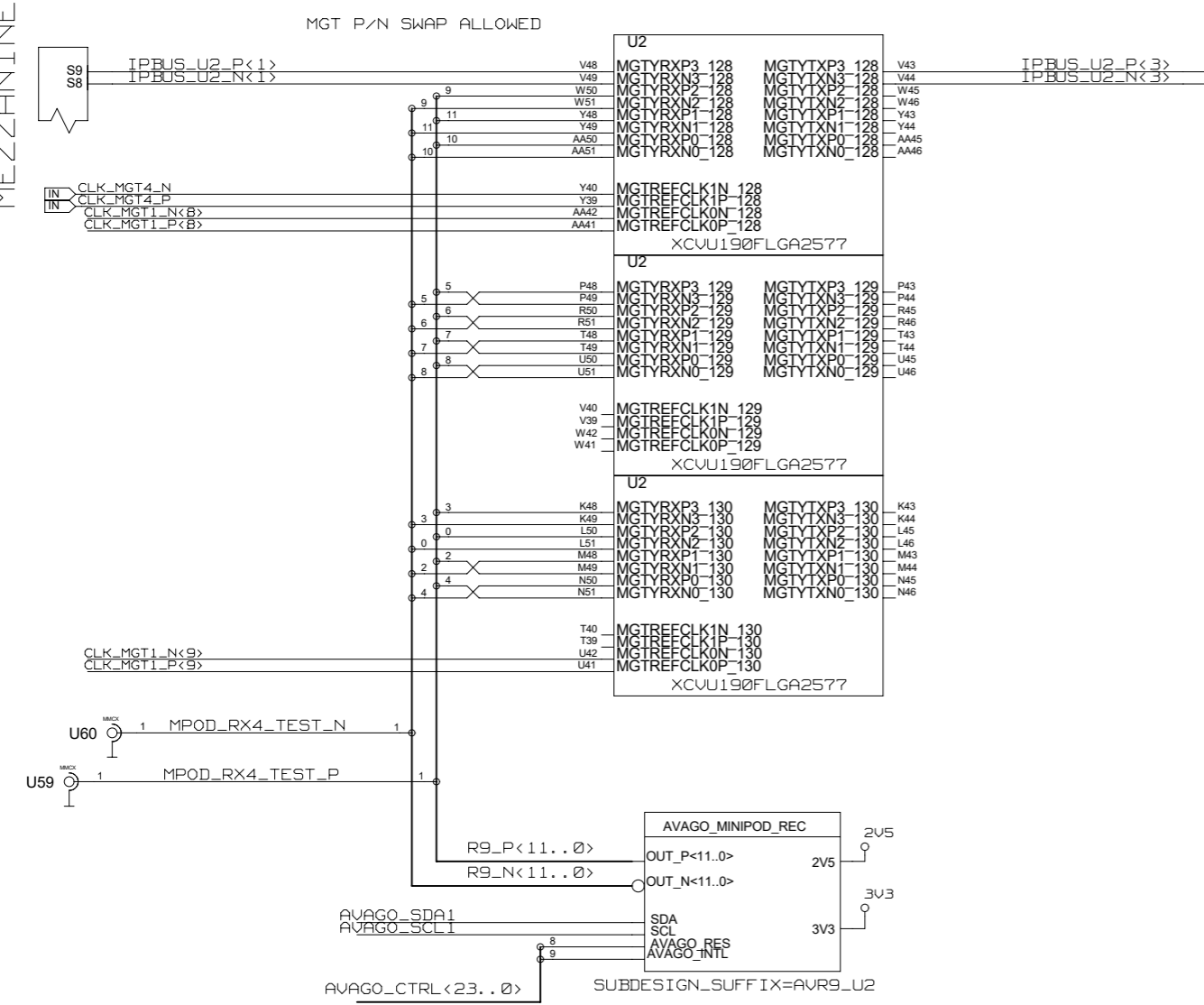
BANK
125
126
127

NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA		L1 TOPO
CHECKED	U. SCHAEFER		
CHECKED	S. RAVE		
DRAWN	BAUSS	07.08.2015	
BLOCK TITLE			UNIVERSITY OF MAINZ
SIZE	REV.	DRAWING NO.	
C			
SCALE		SHEET 2 OF 6	

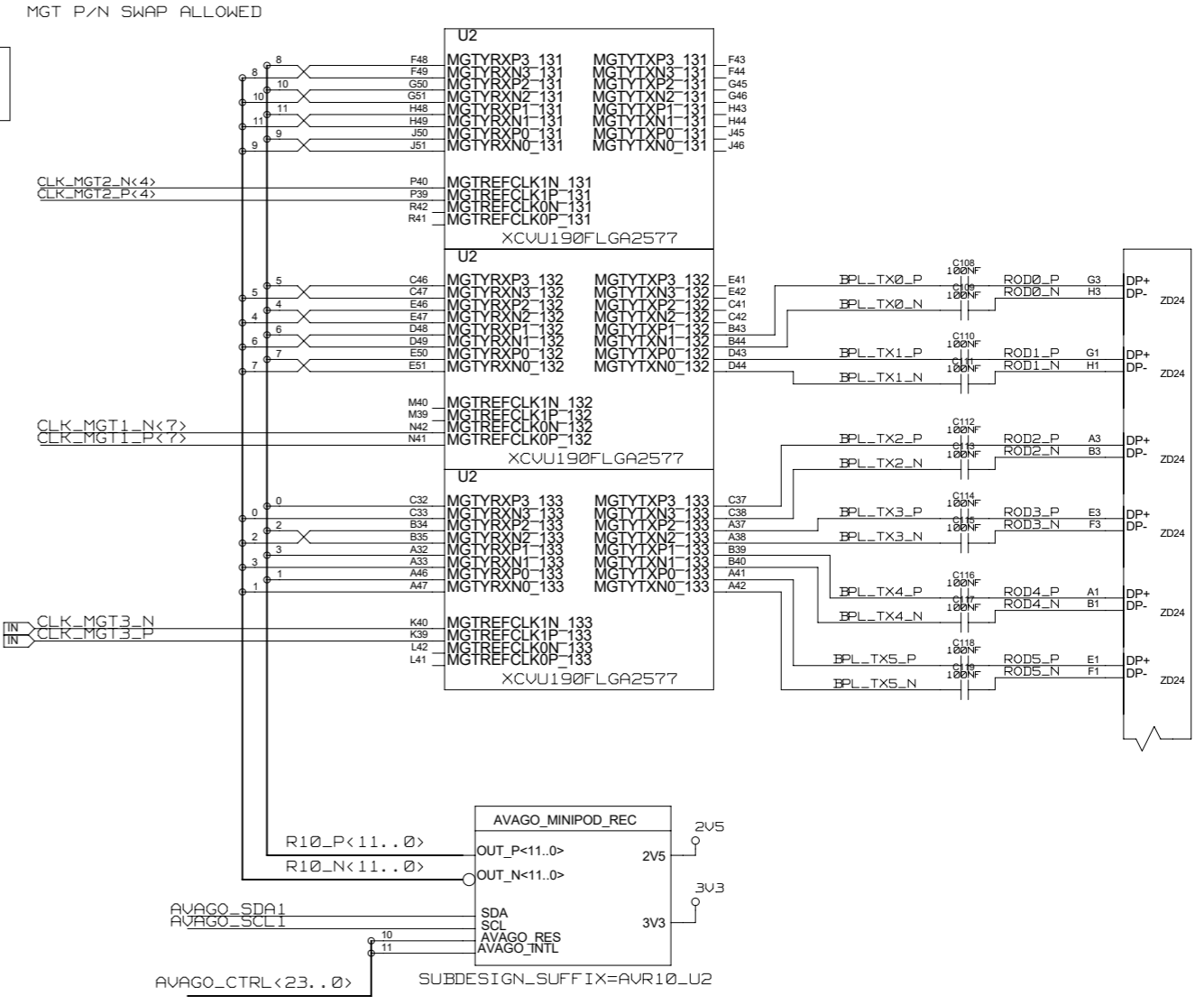
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

HIGH SPEED OPTICAL LINKS

MEZZANINE



AVR9 I2C ADDRESS:
 R3=4K7 R4=NA
 R5=NA R6=4K7
 R7=NA R8=4K7



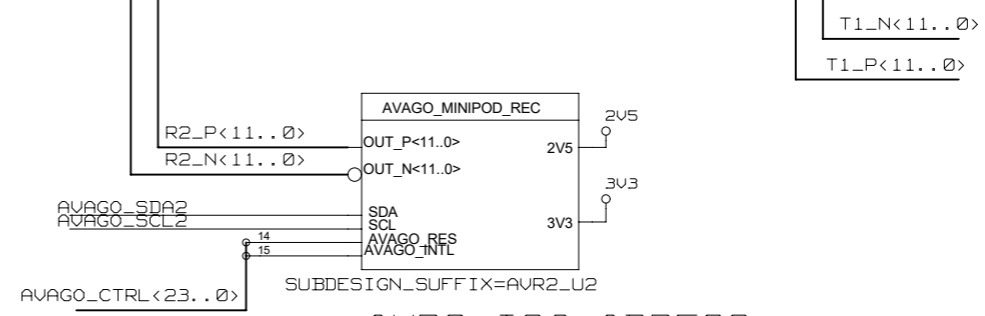
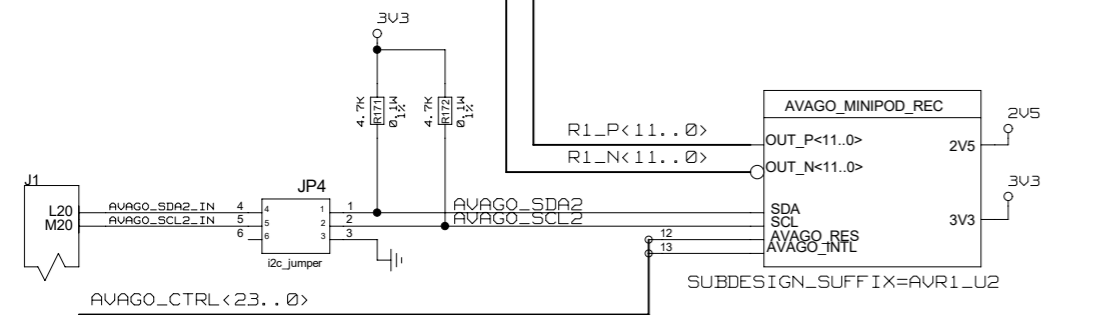
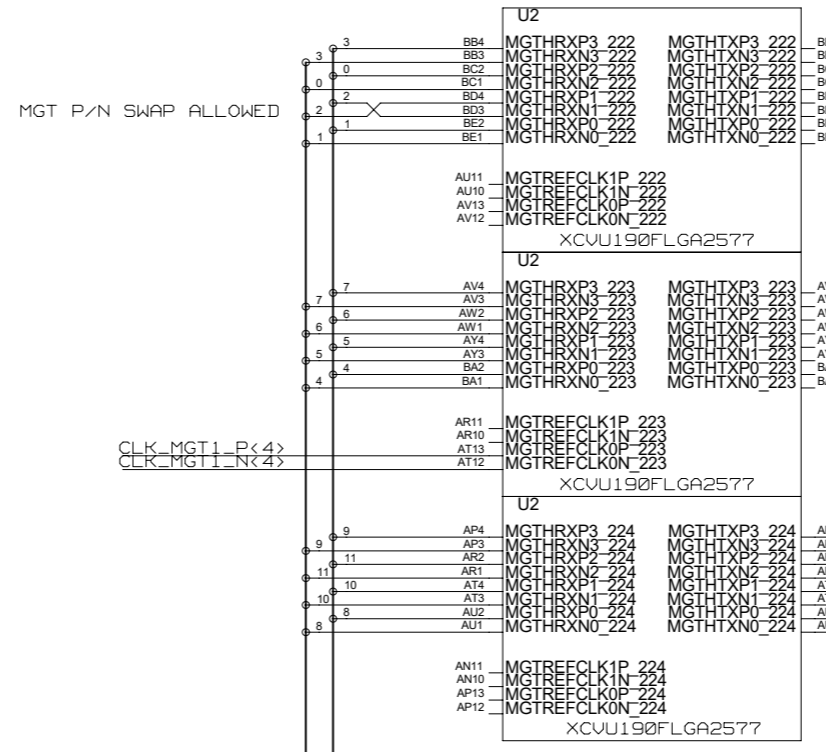
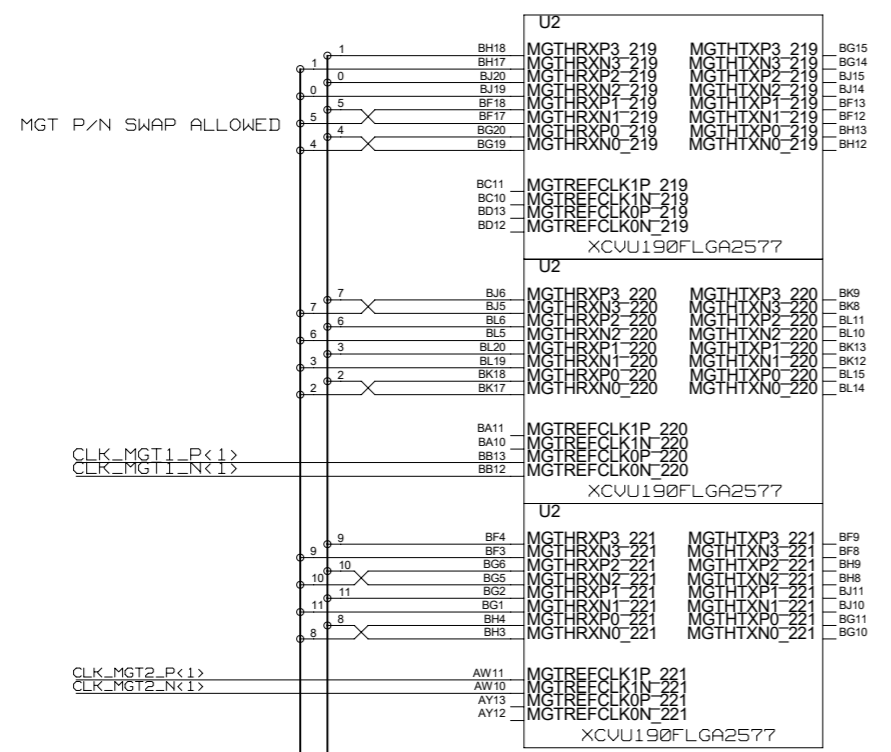
AVR10 I2C ADDRESS:
 R3=4K7 R4=NA
 R5=NA R6=4K7
 R7=4K7 R8=NA

BANK
1288
1289
1300
1301
1311
1312
1333
1334

NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA		L1 TOPO
CHECKED	U. SCHAEFER		
CHECKED	S. RAVE		
DRAWN	BAUSS	07.08.2015	
BLOCK TITLE			UNIVERSITY OF MAINZ
SIZE	REV.	DRAWING NO.	
C			
SCALE		SHEET 3 OF 6	

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

HIGH SPEED OPTICAL LINKS



AVAGO_CTRL<11..0>
 AVAGO_CTRL 0, 2, 4, 6, 8, 10 = AVAGO_RES_XX
 AVAGO_CTRL 1, 3, 5, 7, 9, 11 = AVAGO_INTL_XX

AVR1 I2C ADDRESS:
 R3=NA R4=4K7
 R5=NA R6=4K7
 R7=4K7 R8=NA

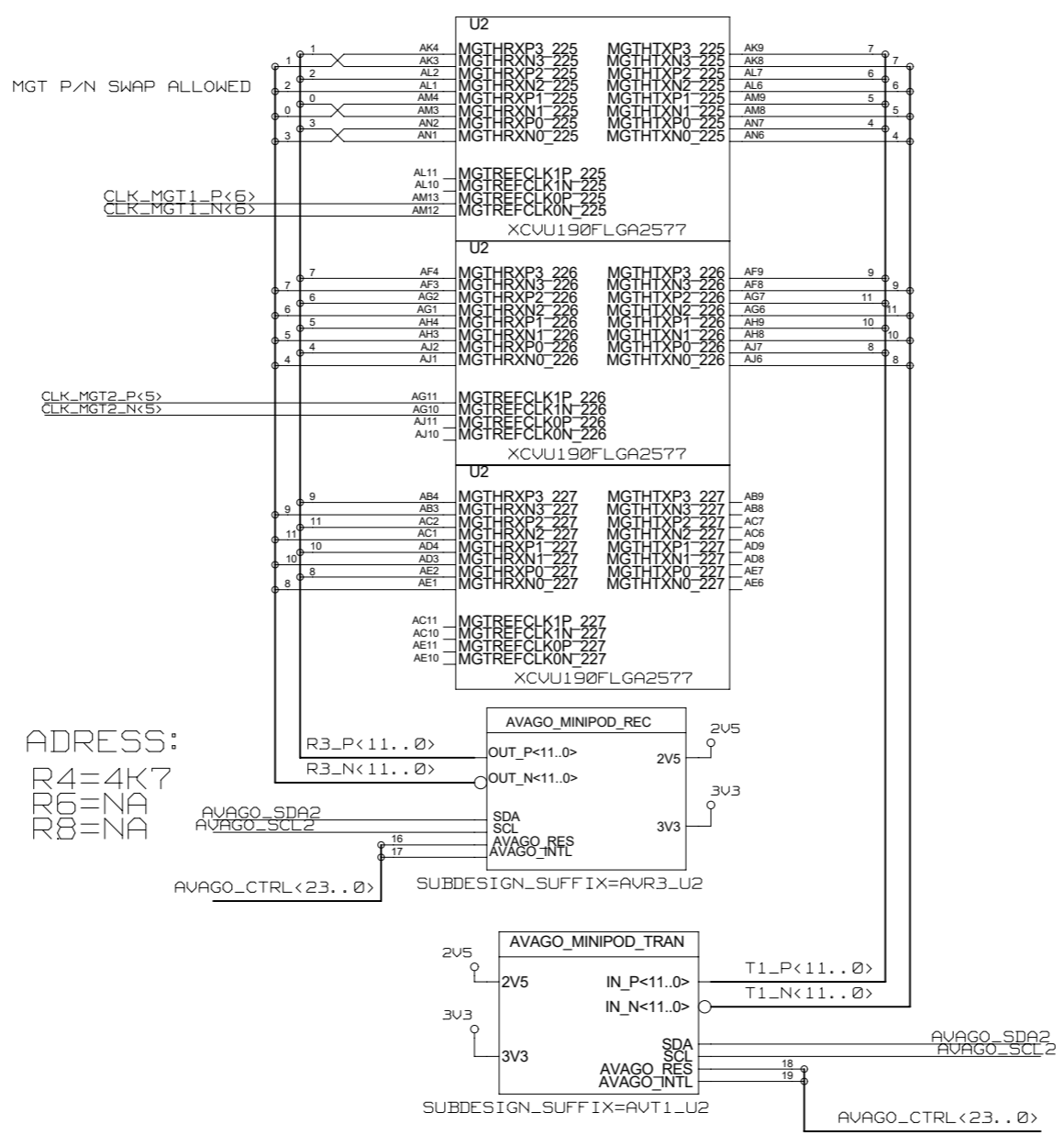
AVR2 I2C ADDRESS:
 R3=NA R4=4K7
 R5=4K7 R6=NA
 R7=NA R8=4K7

BANK
210
209
208
207
206
205
204
203
202
201
200
199
198
197
196
195
194

NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA		L1 TOPO
CHECKED	U. SCHAEFER		
CHECKED	S. RAVE		
DRAWN	BAUSS	07.08.2015	
BLOCK TITLE			UNIVERSITY OF MAINZ
SIZE	REV.	DRAWING NO.	
C			
SCALE		SHEET 4 OF 6	

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

HIGH SPEED OPTICAL LINKS



AVR3 I2C ADDRESS:
R3=NA R4=4K7
R5=4K7 R6=NA
R7=4K7 R8=NA

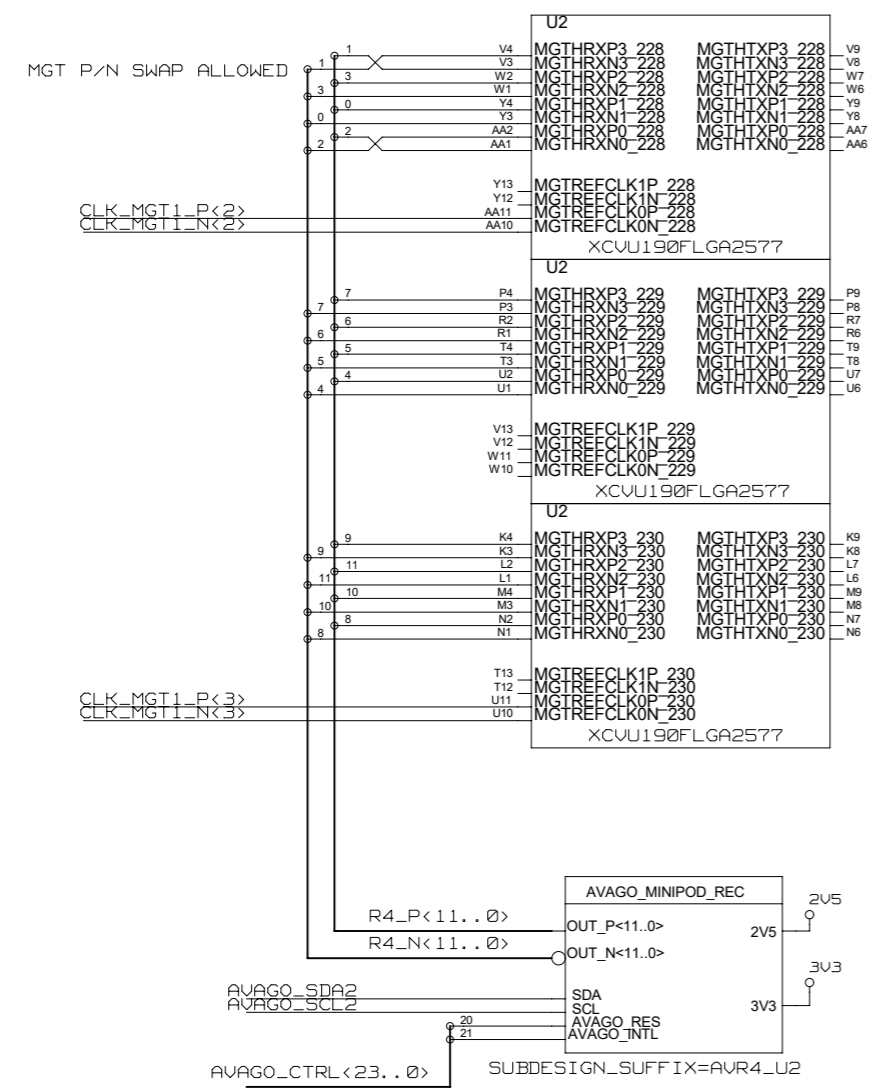
AVT1 I2C ADDRESS:
R3=NA R4=4K7
R5=NA R6=4K7
R7=NA R8=4K7

BANK
225
226
227

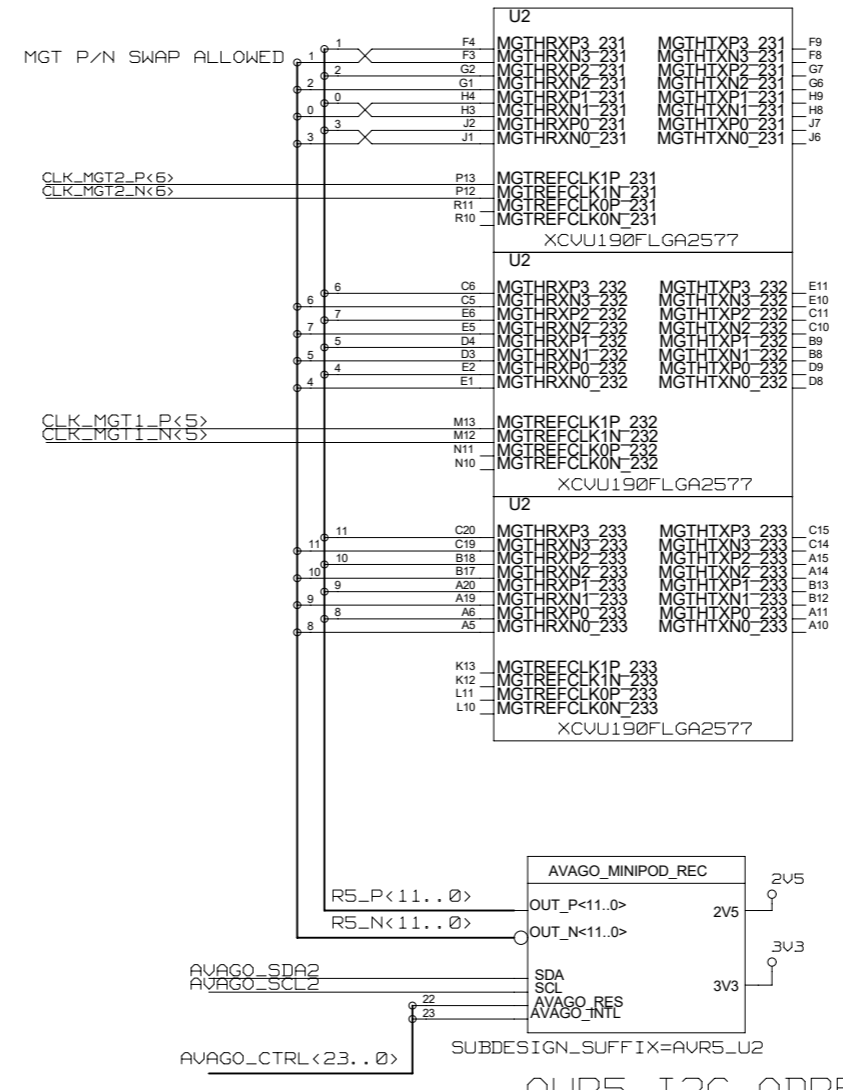
CHECKED	NAME	DATE	SIGN	DRAWING TITLE L1 TOPO	
CHECKED	J. V. DE SOUZA				
CHECKED	U. SCHAEFER				
CHECKED	S. RAVE				
DRAWN	BAUSS	07.08.2015			
BLOCK TITLE U2_MGT_REAL_TIME				SIZE C	DRAWING NO.
UNIVERSITY OF MAINZ				SCALE	SHEET 5 OF 6

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

HIGH SPEED OPTICAL LINKS



AVR4 I2C ADDRESS:
R3=4K7 R4=NA
R5=NA R6=4K7
R7=NA R8=4K7



AVR5 I2C ADDRESS:
R3=4K7 R4=NA
R5=NA R6=4K7
R7=4K7 R8=NA

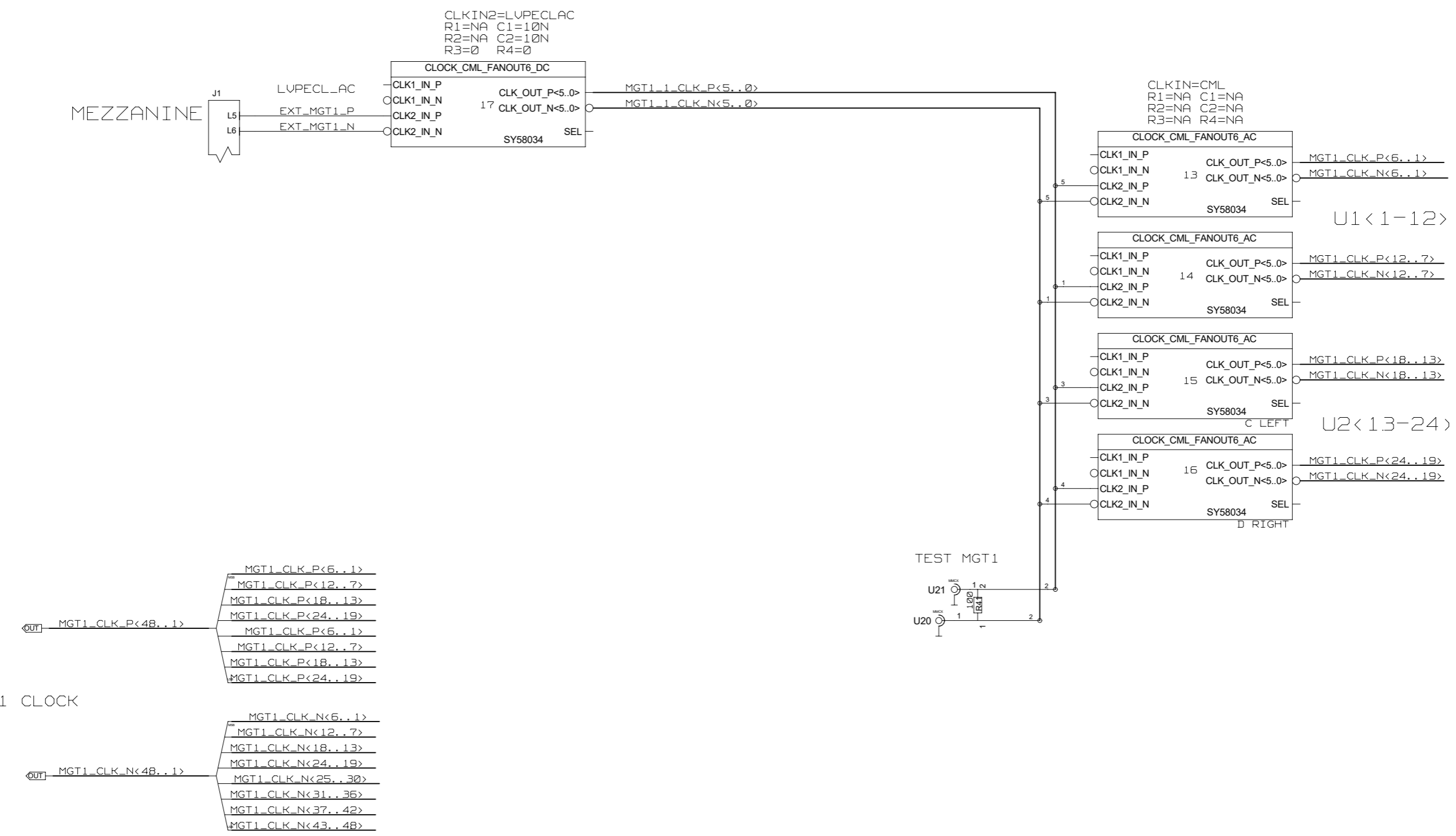
BANK
2200
2201
2202
2203
2204
2205
2206
2207
2208
2209
2210
2211
2212
2213
2214
2215
2216
2217
2218
2219
2220

CHECKED	NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA			
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	07.08.2015		
BLOCK TITLE				DRAWING NO.
U2_MGT_REAL_TIME				
UNIVERSITY OF MAINZ				
SIZE	REV.	DRAWING NO.		SHEET 6 OF 6
SCALE				

L1 TOPO

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

MGT1 CLOCK

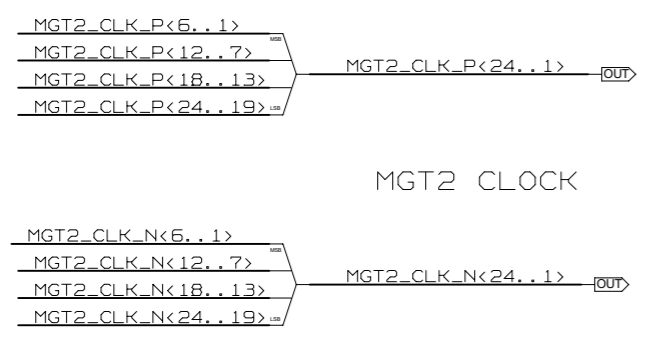
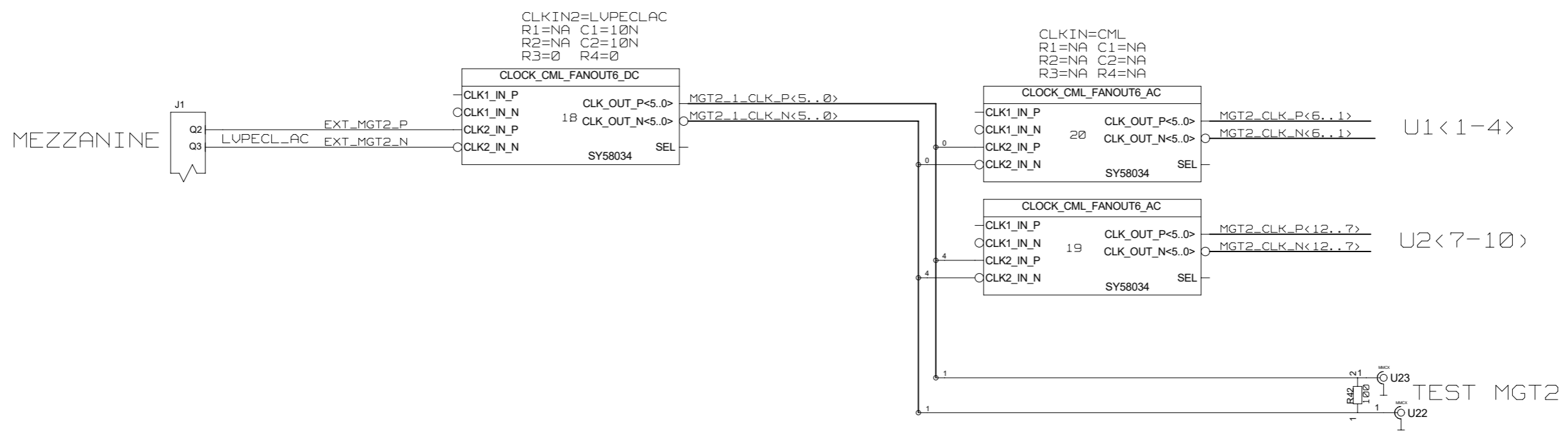


UPDATE PICK & PLACE DATA FOR FANOUT

CHECKED	J. V. DE SOUZA			DRAWING TITLE L1 TOPO
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	08.06.2017		
BLOCK TITLE	CLOCK			
UNIVERSITY OF MAINZ				SIZE C
				REV.
				DRAWING NO.
				SHEET 1 of 5

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

MGT2 CLOCK

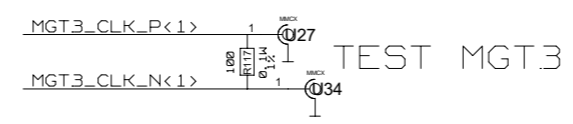
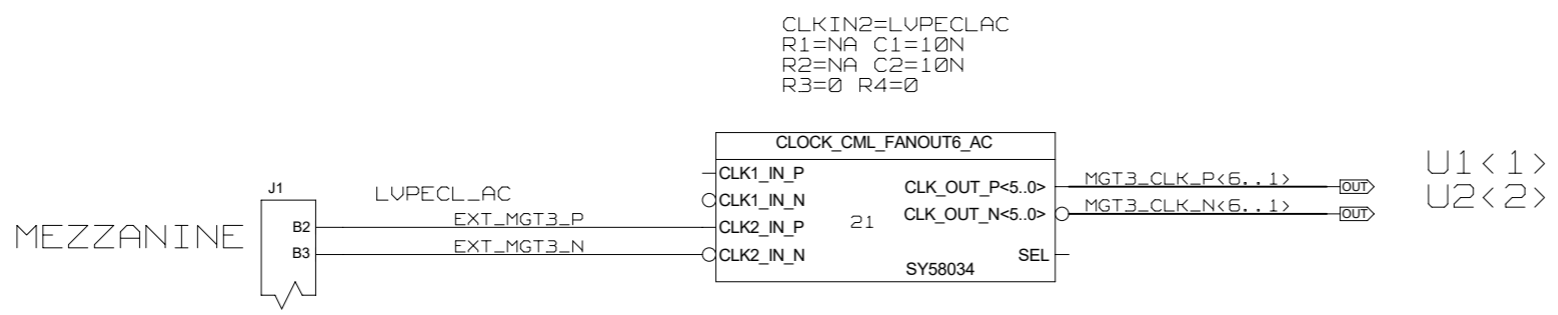


UPDATE PICK & PLACE DATA FOR FANOUT AND MUX

CHECKED	NAME	DATE	SIGN	DRAWING TITLE	
CHECKED	J. V. DE SOUZA			L1 TOPO	
CHECKED	U. SCHAEFER				
CHECKED	S. RAVE				
DRAWN	BAUSS	08.06.2017			
BLOCK TITLE				DRAWING NO.	
CLOCK				SIZE	REV.
UNIVERSITY OF MAINZ				C	
				SCALE	
				SHEET 2 OF 5	

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

MGT.3 CLOCK (ROD REFCLK)

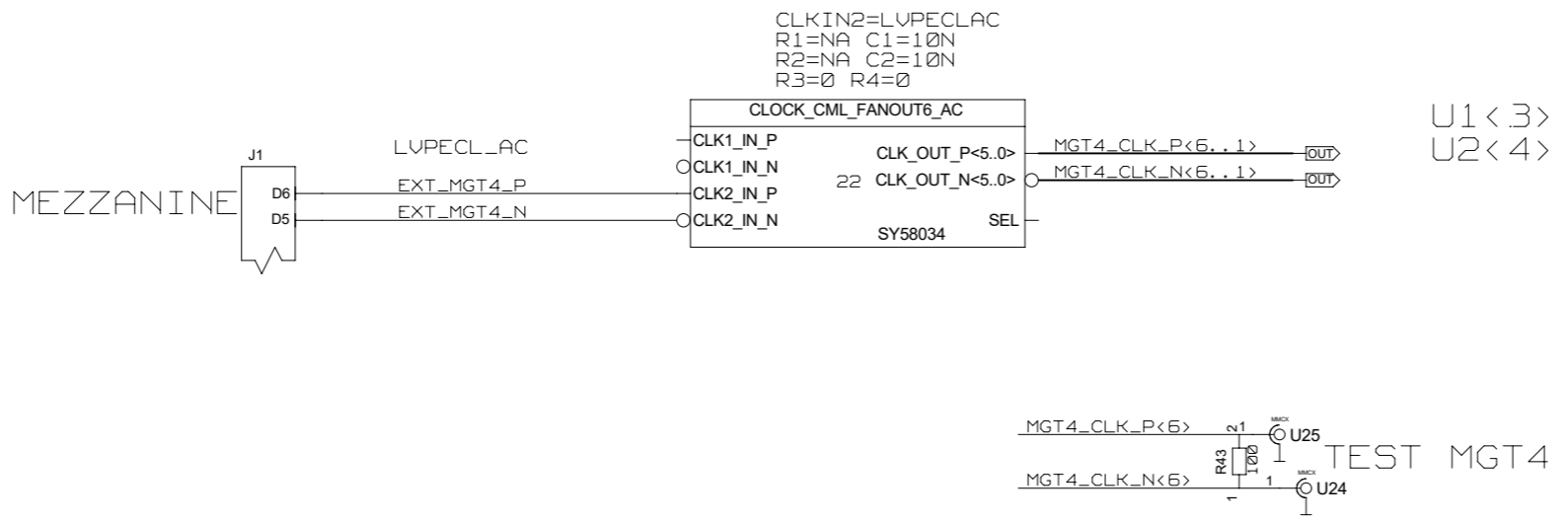


UPDATE PICK & PLACE DATA FOR FANOUT

CHECKED	NAME	DATE	SIGN	DRAWING TITLE		
CHECKED	J. V. DE SOUZA					
CHECKED	U. SCHAEFER					
CHECKED	S. RAVE					
DRAWN	BAUSS	08.06.2017		L1 TOPO		
BLOCK TITLE						
CLOCK				SIZE	REV.	DRAWING NO.
UNIVERSITY OF MAINZ				C		
				SCALE		SHEET 3 OF 5

ZONE	LTR	DESCRIPTION	DATE	APPR.

MGT4 CLOCK (IPBUS REFCLK)

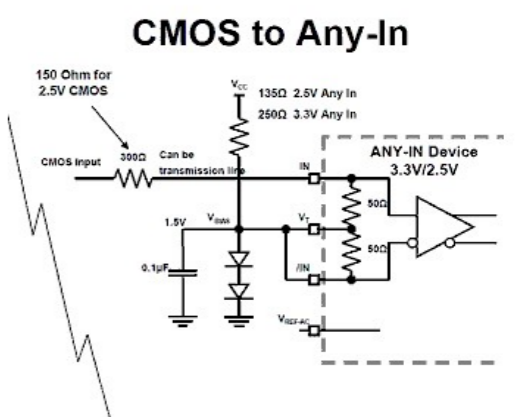
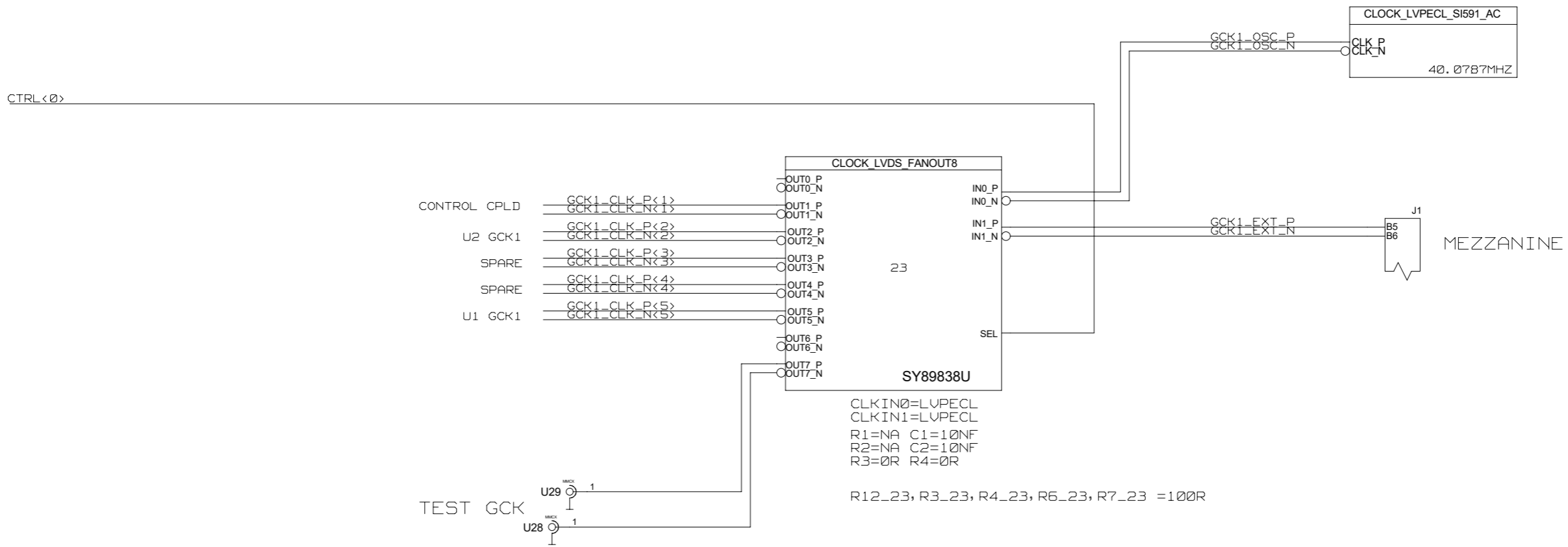


UPDATE PICK & PLACE DATA FOR FANOUT AND MUX

CHECKED	NAME	DATE	SIGN	DRAWING TITLE <h1>L1 TOPO</h1>
	J. V. DE SOUZA			
	U. SCHAEFER			
	S. RAVE			
	BAUSS	08.06.2017		
BLOCK TITLE <h2>CLOCK</h2>				
UNIVERSITY OF MAINZ				SIZE C
				REV.
				DRAWING NO.
				SCALE
				SHEET 4 OF 5

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

GLOBAL CLOCK1



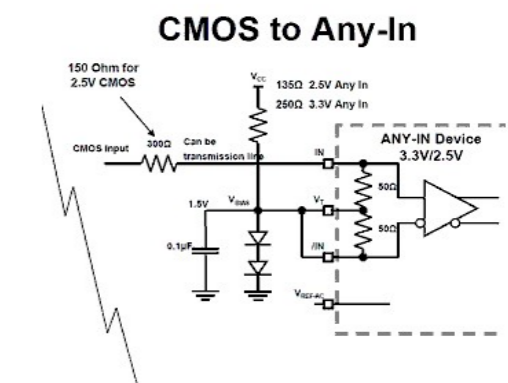
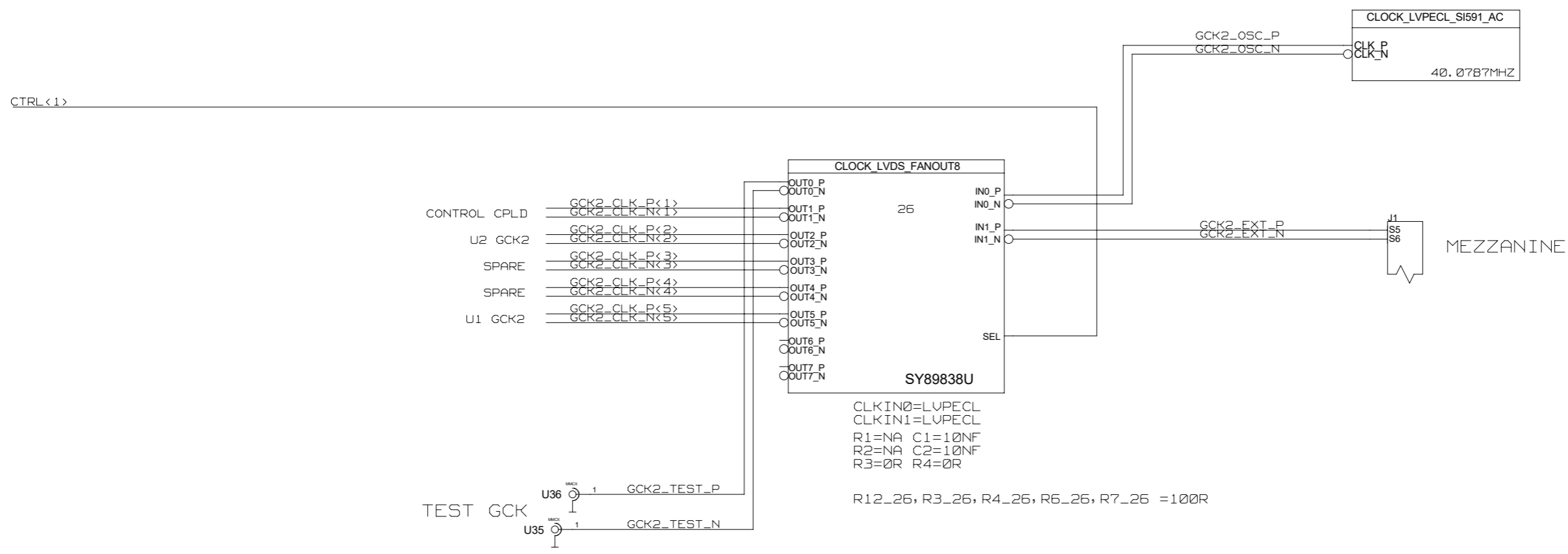
LVDS <OUT> GCK1_CLK_P<5..1>
 <OUT> GCK1_CLK_N<5..1>

GCK1 = CLK U1
 GCK2 = CLK U2
 GCK3 = SPARE
 GCK4 = SPARE
 GCK5 = CLK CPLD

CHECKED	NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA			L1TOPO
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	17. 08. 2015		
BLOCK TITLE				CLOCK
UNIVERSITY OF MAINZ				SIZE C
SCALE		REV.	DRAWING NO.	
SHEET 5 OF 5				

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

GLOBAL CLOCK2



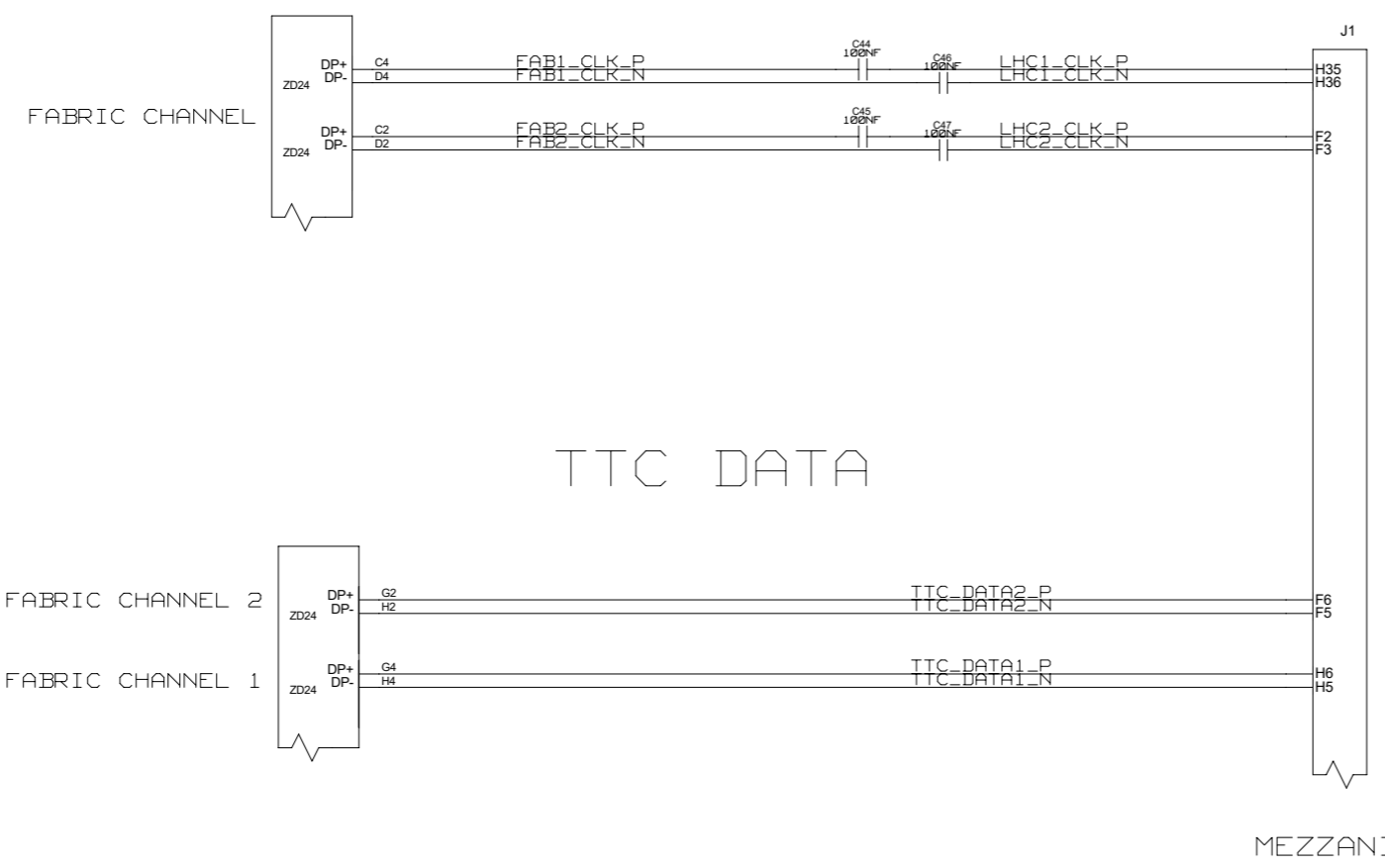
LVDS <OUT> GCK2_CLK_P<5..1>
 <OUT> GCK2_CLK_N<5..1>

GCK1 = CLK U1
 GCK2 = CLK U2
 GCK3 = SPARE
 GCK4 = SPARE
 GCK5 = CLK CPLD

	NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA			L1 TOPO
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	17.08.2015		
BLOCK TITLE				CLOCK
UNIVERSITY OF MAINZ				
SIZE	REV.	DRAWING NO.		
C				
SCALE			SHEET 5 OF 5	

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

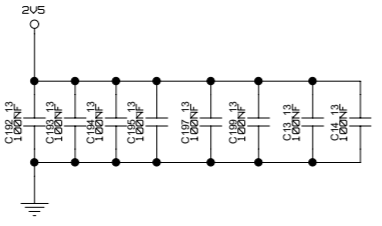
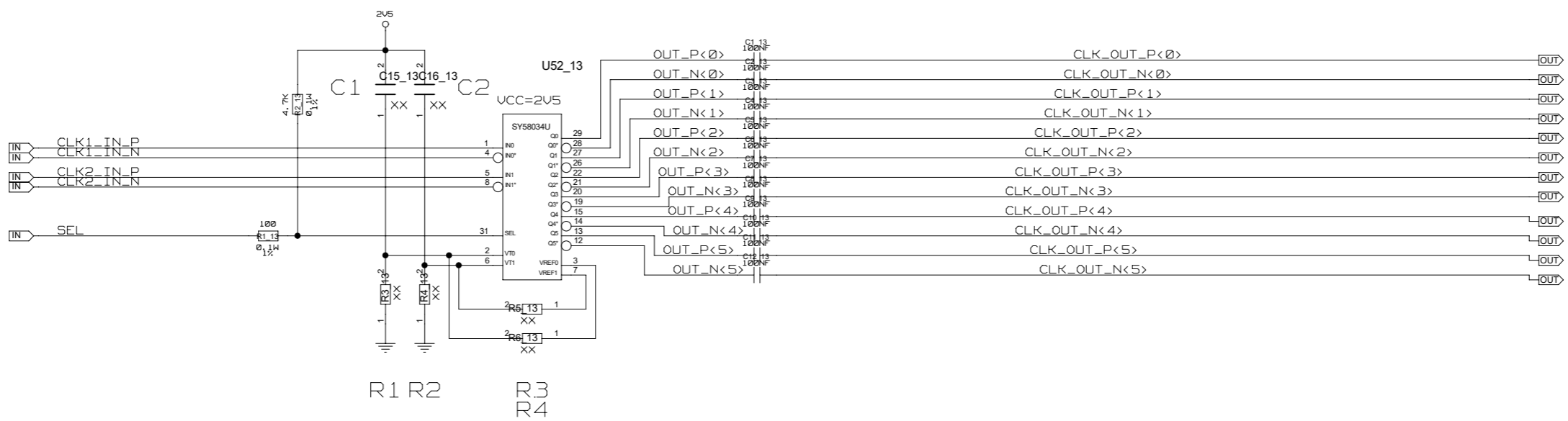
LHC1 + LHC2 CLK



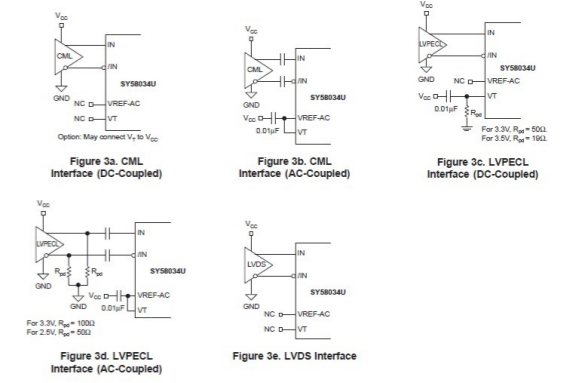
CHECKED	J. V. DE SOUZA			DRAWING TITLE <h1>L1 TOPO</h1>
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	05. 11. 2015		
BLOCK TITLE <h2>CLOCK</h2>				
UNIVERSITY OF MAINZ			SIZE C	REV.
			SCALE	DRAWING NO.
				SHEET OF

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

CLOCK CML FANOUT6 AC



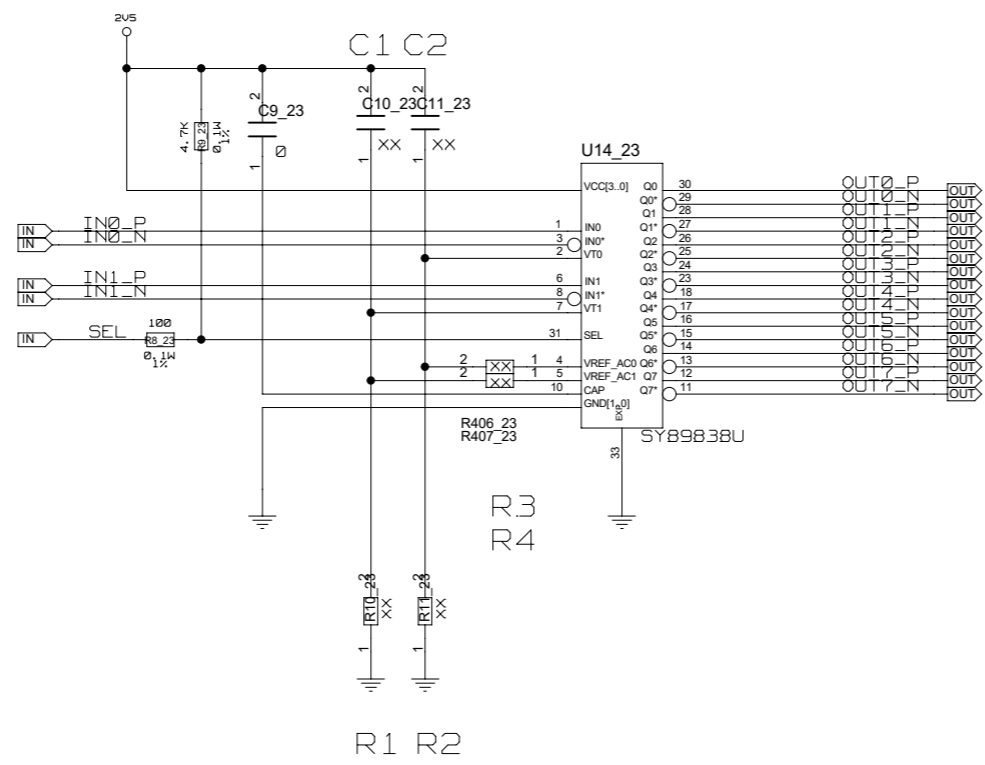
INPUT INTERFACE APPLICATIONS



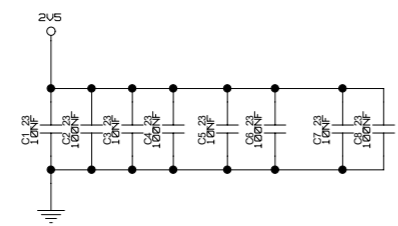
CHECKED	J. V. DE SOUZA			DRAWING TITLE L1TOPO	
CHECKED	U. SCHAEFER				
CHECKED	S. RAVE				
DRAWN	BAUSS				
BLOCK TITLE CLOCK CML FANOUT6 AC					
UNIVERSITY OF MAINZ			SIZE C	REV.	DRAWING NO.
			SCALE		SHEET OF

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

CLOCK_LVDS_FANOUT8



OUT0_P	NA
OUT0_N	12_23
OUT1_P	NA
OUT1_N	11_23
OUT2_P	NA
OUT2_N	12_23
OUT3_P	NA
OUT3_N	13_23
OUT4_P	NA
OUT4_N	14_23
OUT5_P	NA
OUT5_N	15_23
OUT6_P	NA
OUT6_N	16_23
OUT7_P	NA
OUT7_N	17_23

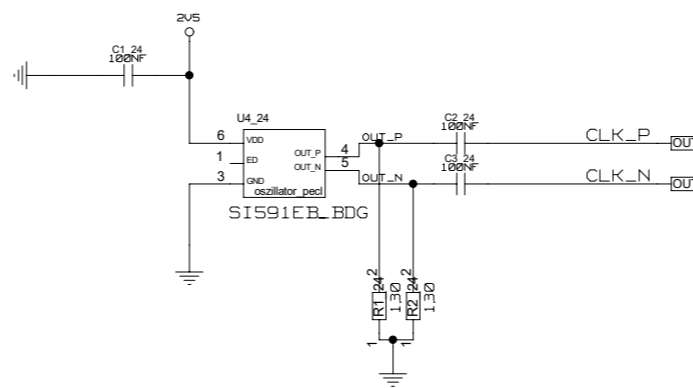


CHECKED	NAME	DATE	SIGN	DRAWING TITLE	
CHECKED	J. V. DE SOUZA			L1 TOPO	
CHECKED	U. SCHAEFER				
CHECKED	S. RAVE				
DRAWN	BAUSS				
BLOCK TITLE				DRAWING NO.	
CLOCK_LVDS_FANOUT8				UNIVERSITY OF MAINZ	
SIZE		REV.	DRAWING NO.		
SCALE			SHEET		OF

REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPR.

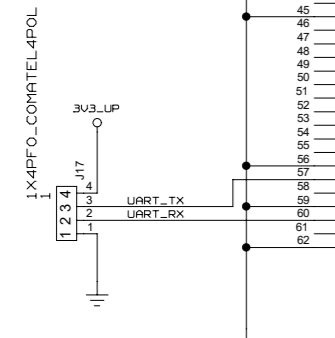
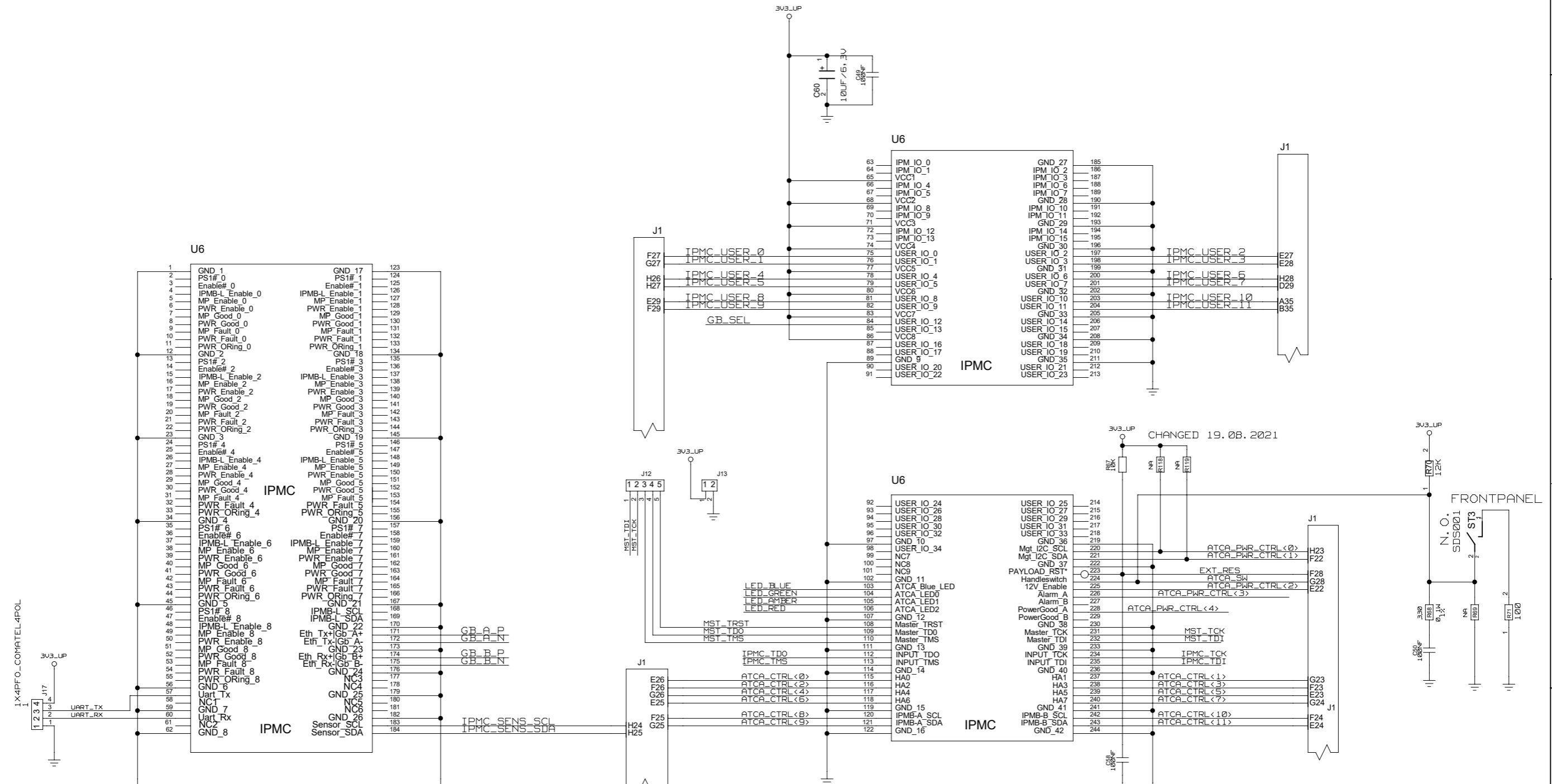
CLOCK_LVPECL_SI591_AC



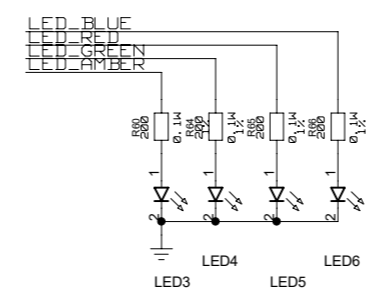
CHECKED	NAME	DATE	SIGN	DRAWING TITLE	
CHECKED	J. V. DE SOUZA			L1 TOPO	
CHECKED	U. SCHAEFER				
CHECKED	S. RAVE				
DRAWN	BAUSS				
BLOCK TITLE				SIZE	DRAWING NO.
CLOCK_LVPECLSI591_LAC				C	
UNIVERSITY OF MAINZ				SCALE	SHEET OF

IPMC CONNECTOR MOLEX_87782-3003

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.



L1TOPO
 ATCA_HA<0..7> BACKPLANE + MEZZANINE
 ATCA_A/B_SCL/SDA BACKPLANE + MEZZANINE



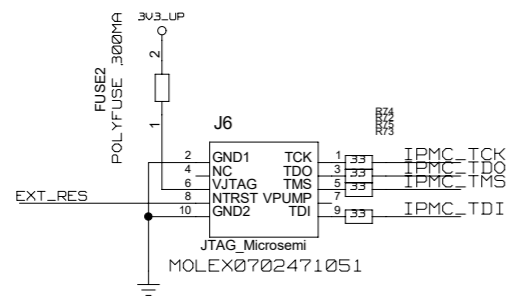
ATCA_CTRL<11..0>
 ATCA_PWR_CTRL<4..0>

NAME	DATE	SIGN	DRAWING TITLE
CHECKED	J. V. DE SOUZA		L1TOPO
CHECKED	U. SCHAEFER		
CHECKED	S. RAVE		
DRAWN	BAUSS	30.10.2015	
BLOCK TITLE			
IPMC			
UNIVERSITY OF MAINZ			
SIZE	REV.	DRAWING NO.	
C			
SCALE		SHEET OF	

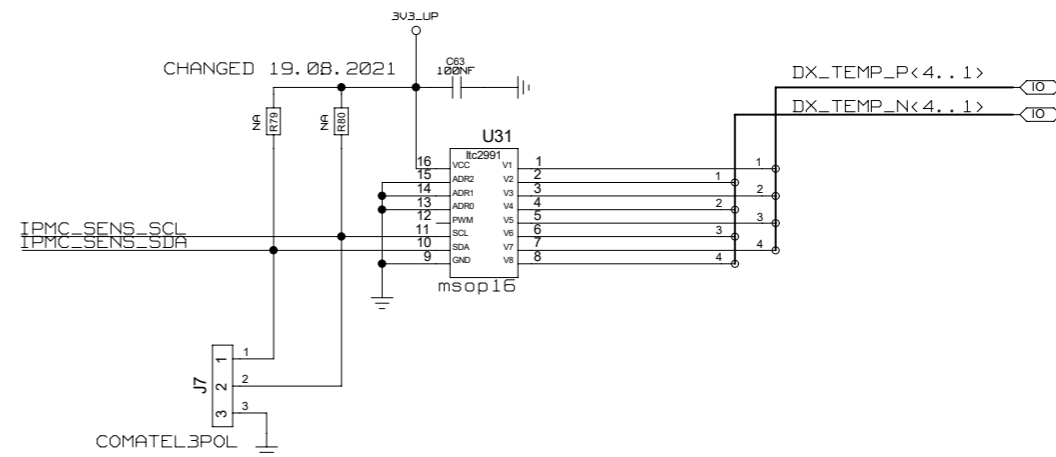
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

IPMC CONTROL

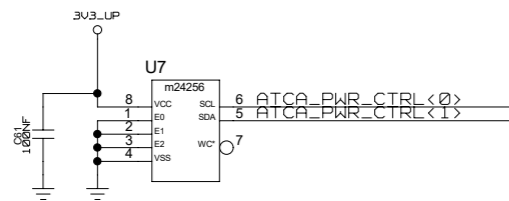
IPMC JTAG PORT FRONT PANEL



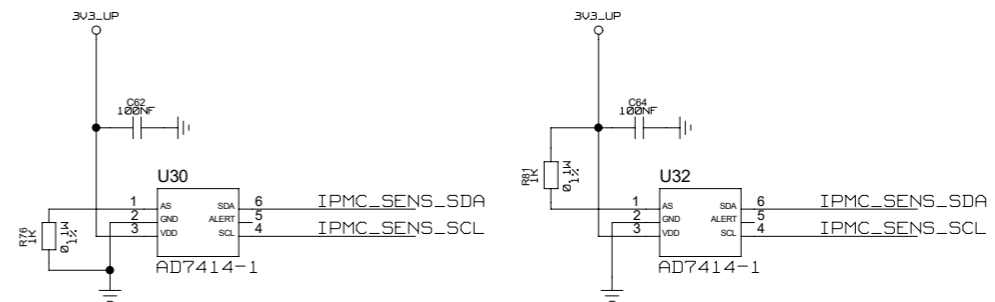
I2C FPGA TEMPERATURE



MEMORY



I2C BOARDTEMP

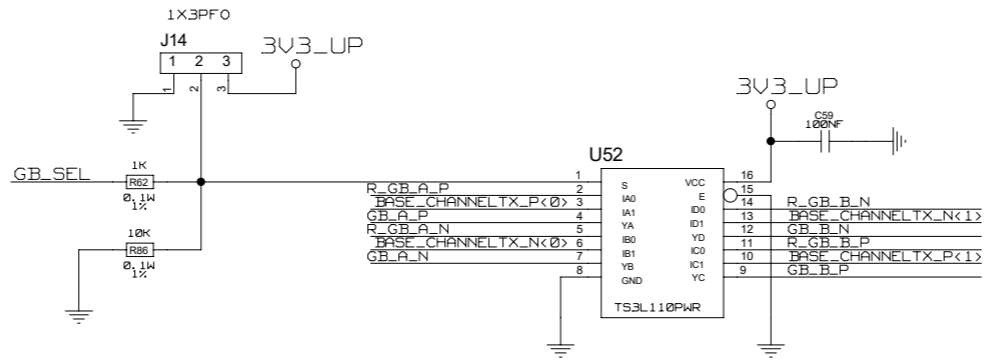


NAME	DATE	SIGN	DRAWING TITLE <h1>L1 TOPO</h1>
CHECKED	J. V. DE SOUZA		
CHECKED	U. SCHAEFER		
CHECKED	S. RAVE		
DRAWN	BAUSS	23.07.2015	
BLOCK TITLE <h2>IPMC</h2>			SIZE C
UNIVERSITY OF MAINZ			REV.
SCALE			DRAWING NO.
SHEET			OF

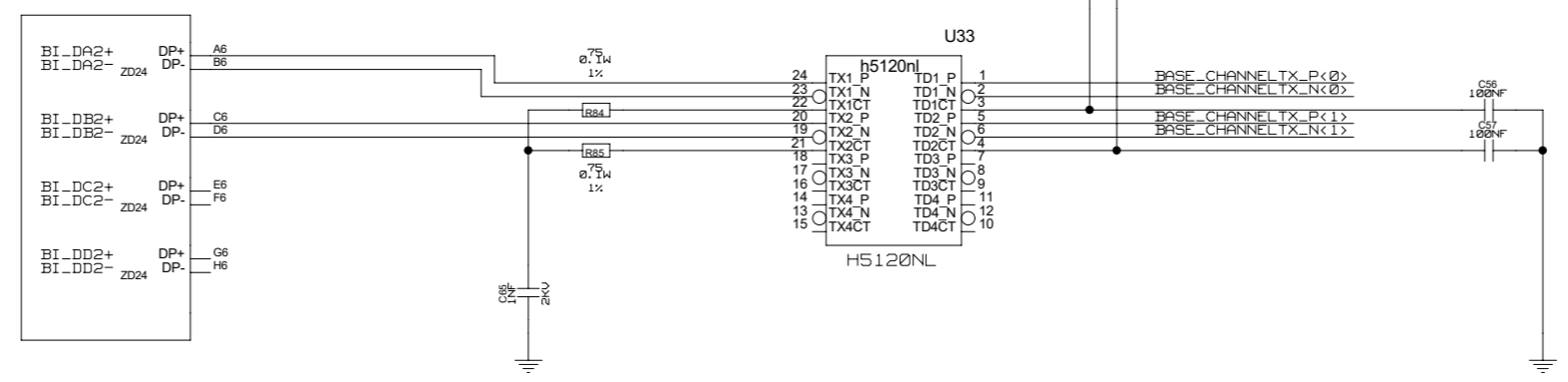
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

IPMC CONTROL

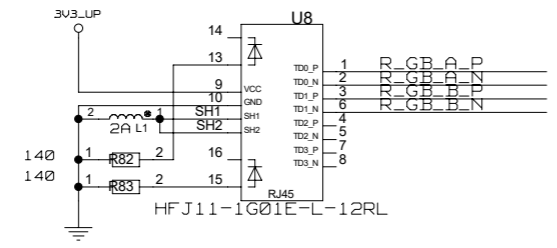
ETHERNET SWITCH



BACKPLANE BASE CHANNEL2



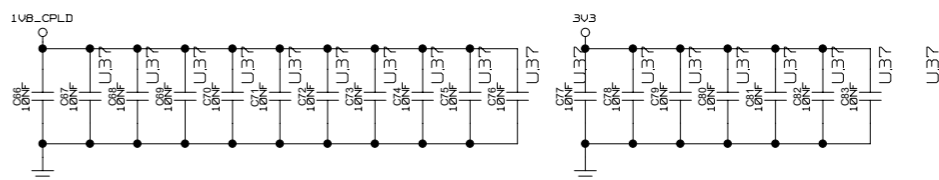
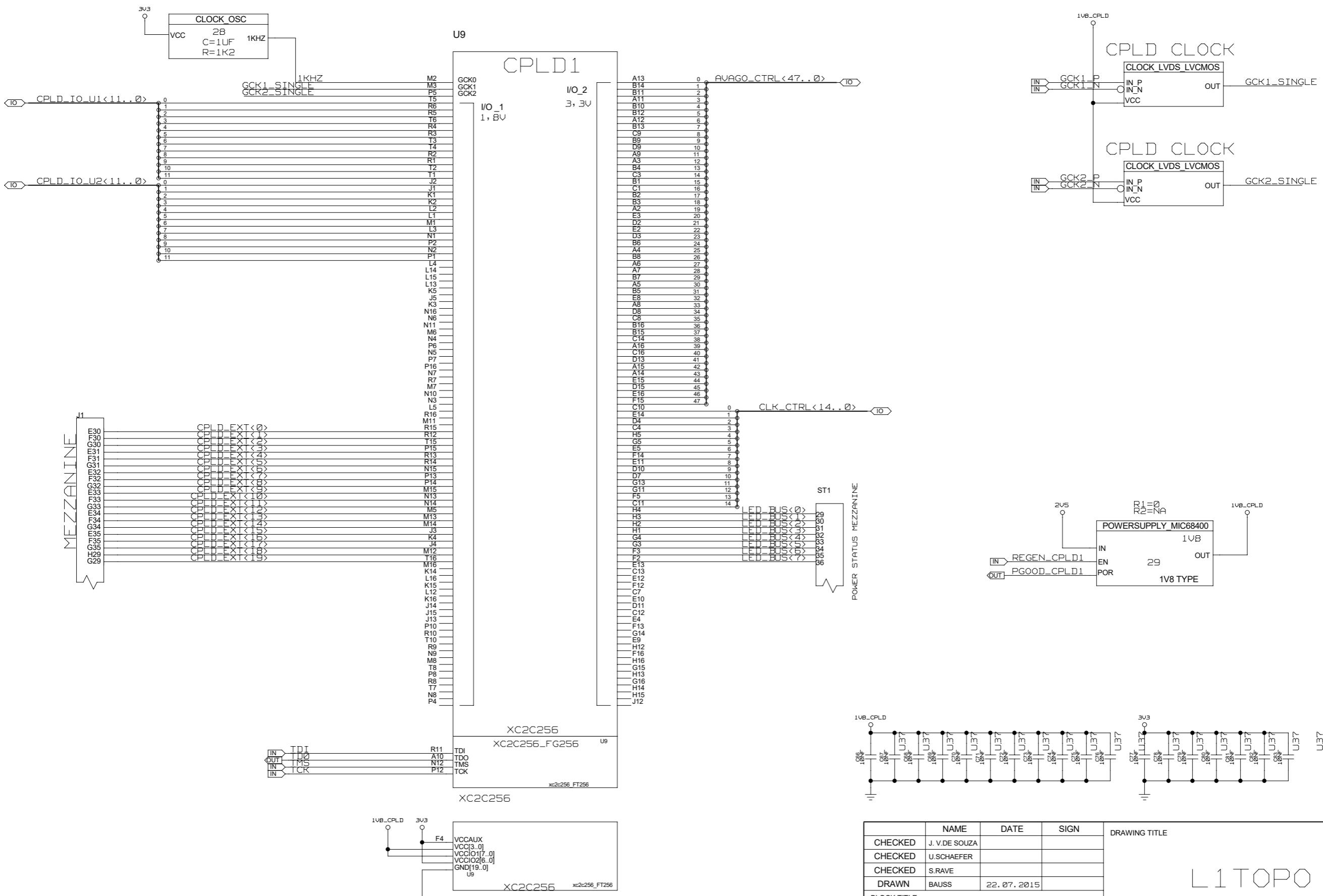
RJ45 FRONT PANEL



CHECKED	NAME	DATE	SIGN	DRAWING TITLE <h1>L1 TOPO</h1>
CHECKED	J. V. DE SOUZA			
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS			
BLOCK TITLE <h2>IPMC</h2>				SIZE C
UNIVERSITY OF MAINZ				REV.
SCALE				DRAWING NO.
SHEET				OF

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

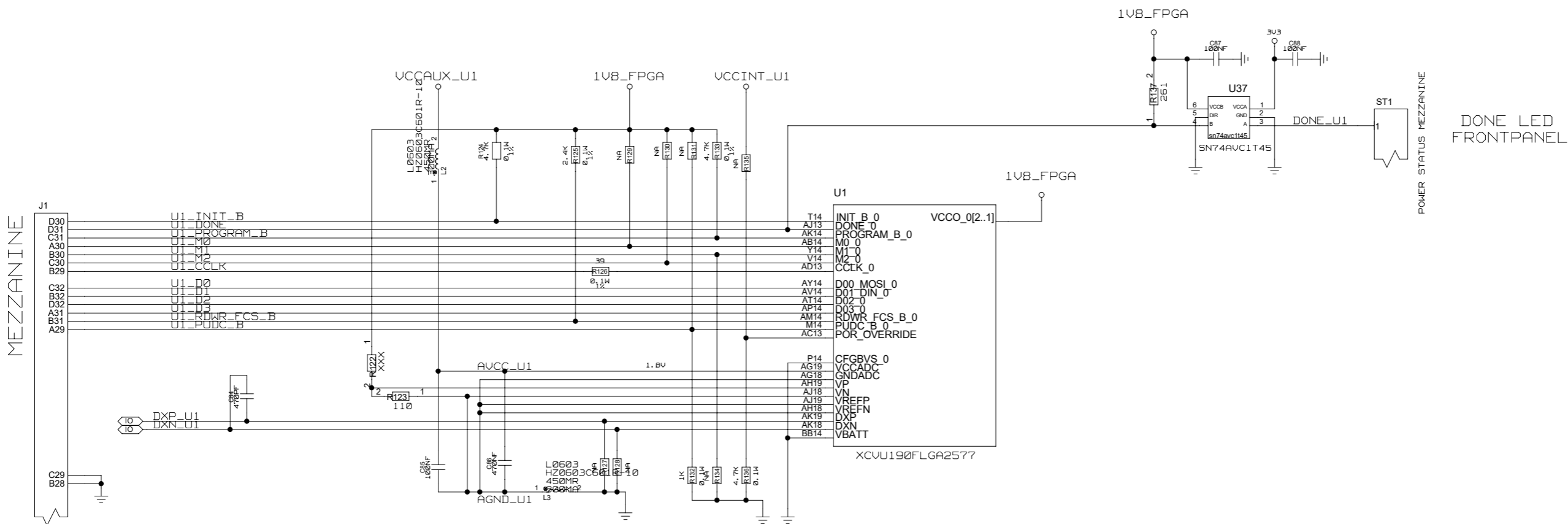
CONTROL AND CONFIG CPLD



NAME	DATE	SIGN	DRAWING TITLE									
CHECKED J. V. DE SOUZA			L1 TOPO									
CHECKED U. SCHAEFER												
CHECKED S. RAVE												
DRAWN BAUSS	22.07.2015											
BLOCK TITLE			CPLD									
UNIVERSITY OF MAINZ			<table border="1"> <tr> <td>SIZE</td> <td>REV.</td> <td>DRAWING NO.</td> </tr> <tr> <td>C</td> <td></td> <td></td> </tr> <tr> <td>SCALE</td> <td></td> <td>SHEET 1 OF 1</td> </tr> </table>	SIZE	REV.	DRAWING NO.	C			SCALE		SHEET 1 OF 1
SIZE	REV.	DRAWING NO.										
C												
SCALE		SHEET 1 OF 1										

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

CONFIG U1

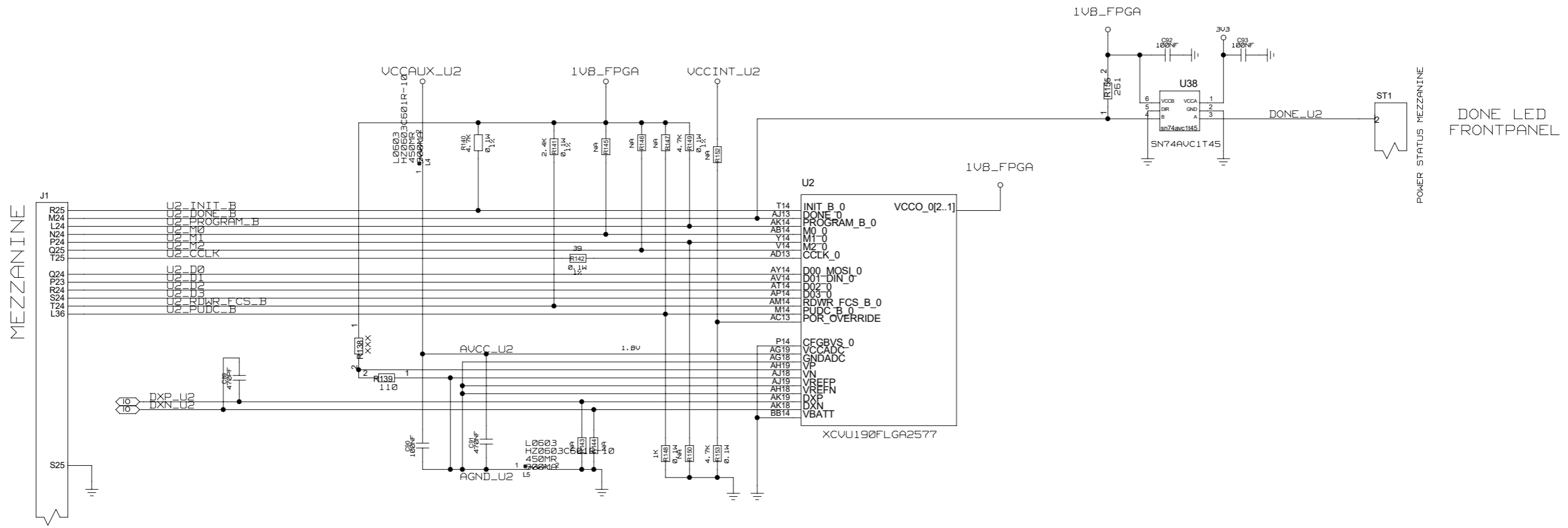


CCLK, D0-3 50 OHM IMPEDANCE

CHECKED	NAME	DATE	SIGN	DRAWING TITLE	
CHECKED	J. V. DE SOUZA			L1 TOPO	
CHECKED	U. SCHAEFER				
CHECKED	S. RAVE				
DRAWN	BAUSS	17.09.2015			
BLOCK TITLE				SIZE	DRAWING NO.
CONFIGURATION PROCESSOR U1				C	
UNIVERSITY OF MAINZ				SCALE	SHEET 1 OF 1

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

CONFIG U2



CCLK, D0-3 50 OHM IMPEDANCE

NAME	DATE	SIGN	DRAWING TITLE	
CHECKED	J. V. DE SOUZA		L1 TOPO	
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS			
BLOCK TITLE			UNIVERSITY OF MAINZ	
SIZE	REV.	DRAWING NO.		
C				
SCALE				SHEET OF

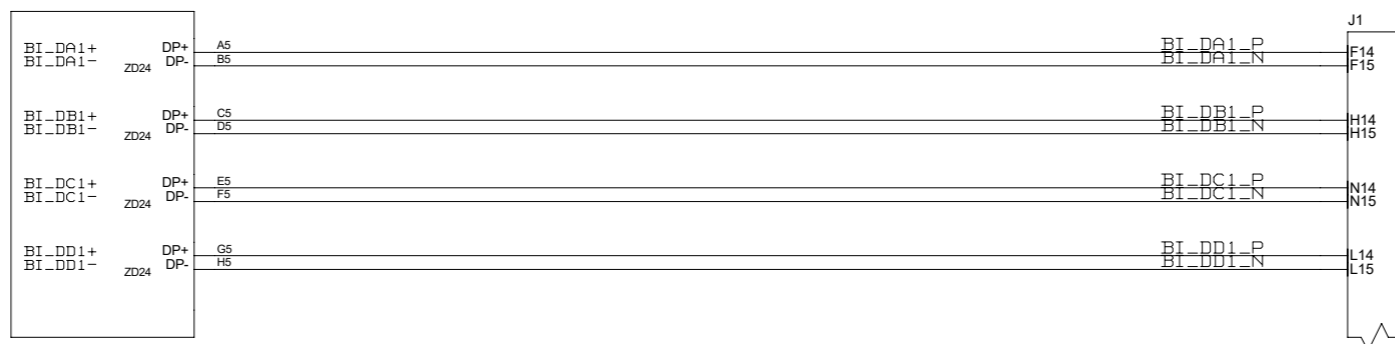
REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPR.

IPBUS

BACKPLANE BASE CHANNEL 1

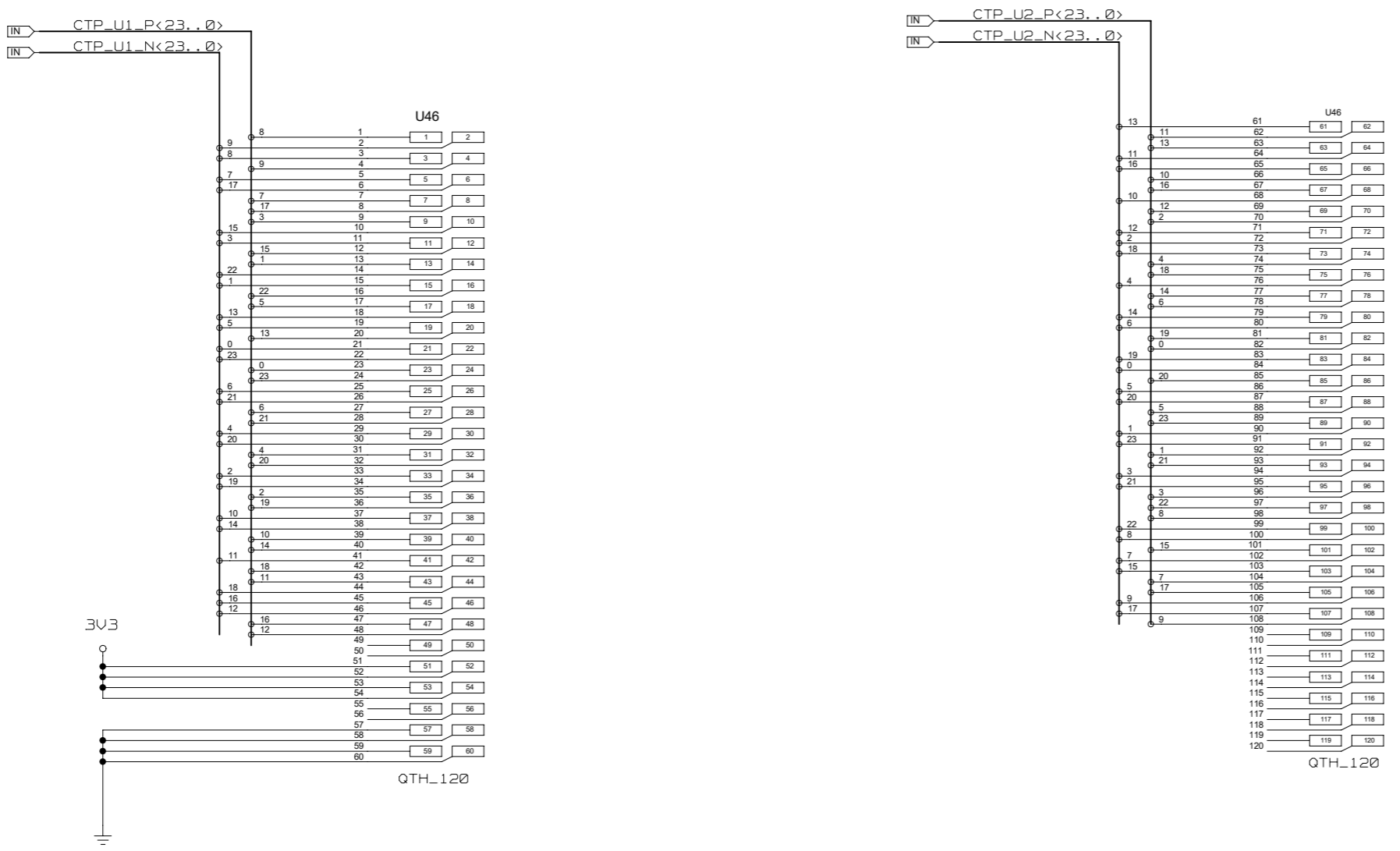
MEZZANINE



CHECKED	J. V. DE SOUZA	DATE	SIGN	DRAWING TITLE <h1>L1 TOPO</h1>
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	05. 11. 2015		
BLOCK TITLE <h2>IPBUS</h2>				SIZE C
UNIVERSITY OF MAINZ				REV.
				DRAWING NO.
				SHEET OF

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

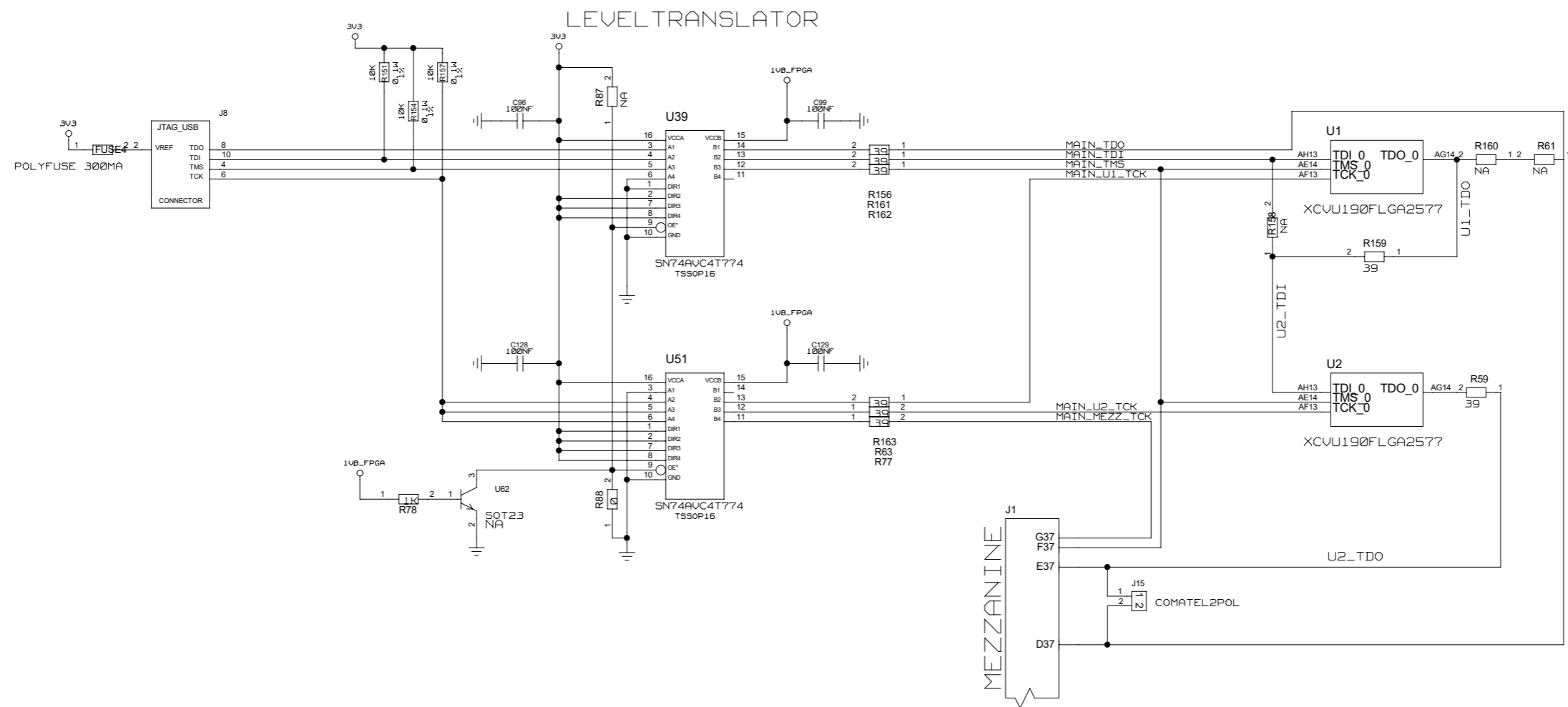
CONNECTOR CTP MEZZ



CHECKED	J. V. DE SOUZA	DATE	SIGN	DRAWING TITLE <h1>L1 TOPO</h1>	
CHECKED	U. SCHAEFER				
CHECKED	S. RAVE				
DRAWN	BAUSS				
BLOCK TITLE <h2>CTP_MEZZ</h2>					
UNIVERSITY OF MAINZ				SIZE C	DRAWING NO.
				SCALE	SHEET OF

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPR.

JTAG CHAIN



NAME	DATE	SIGN	DRAWING TITLE	
CHECKED	J. V. DE SOUZA		L1 TOPO	
CHECKED	U. SCHAEFER			
CHECKED	S. RAVE			
DRAWN	BAUSS	08.06.2017		
BLOCK TITLE			JTAG	
UNIVERSITY OF MAINZ			SIZE	DRAWING NO.
			C	REV.
SCALE			SHEET OF	