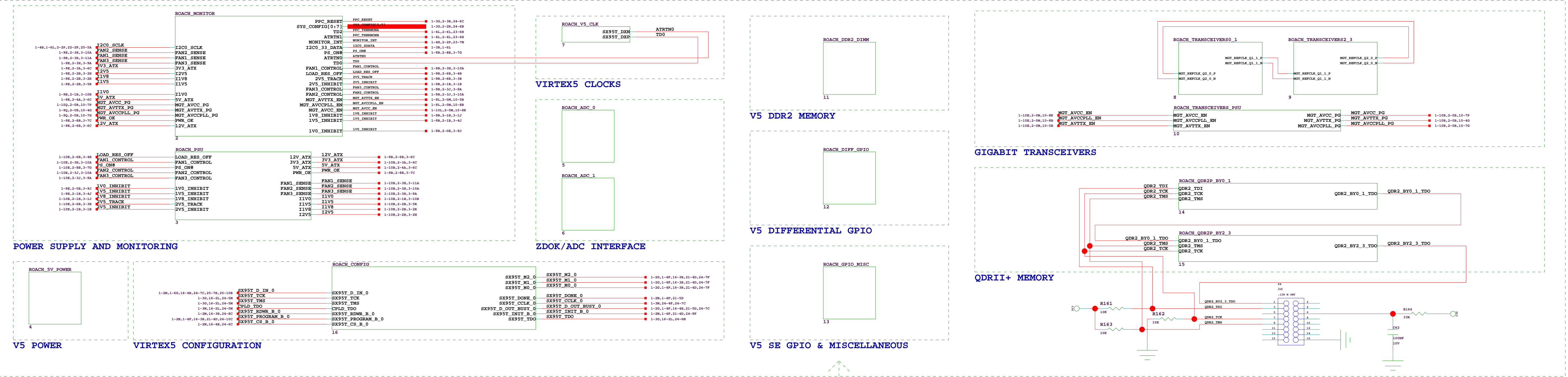
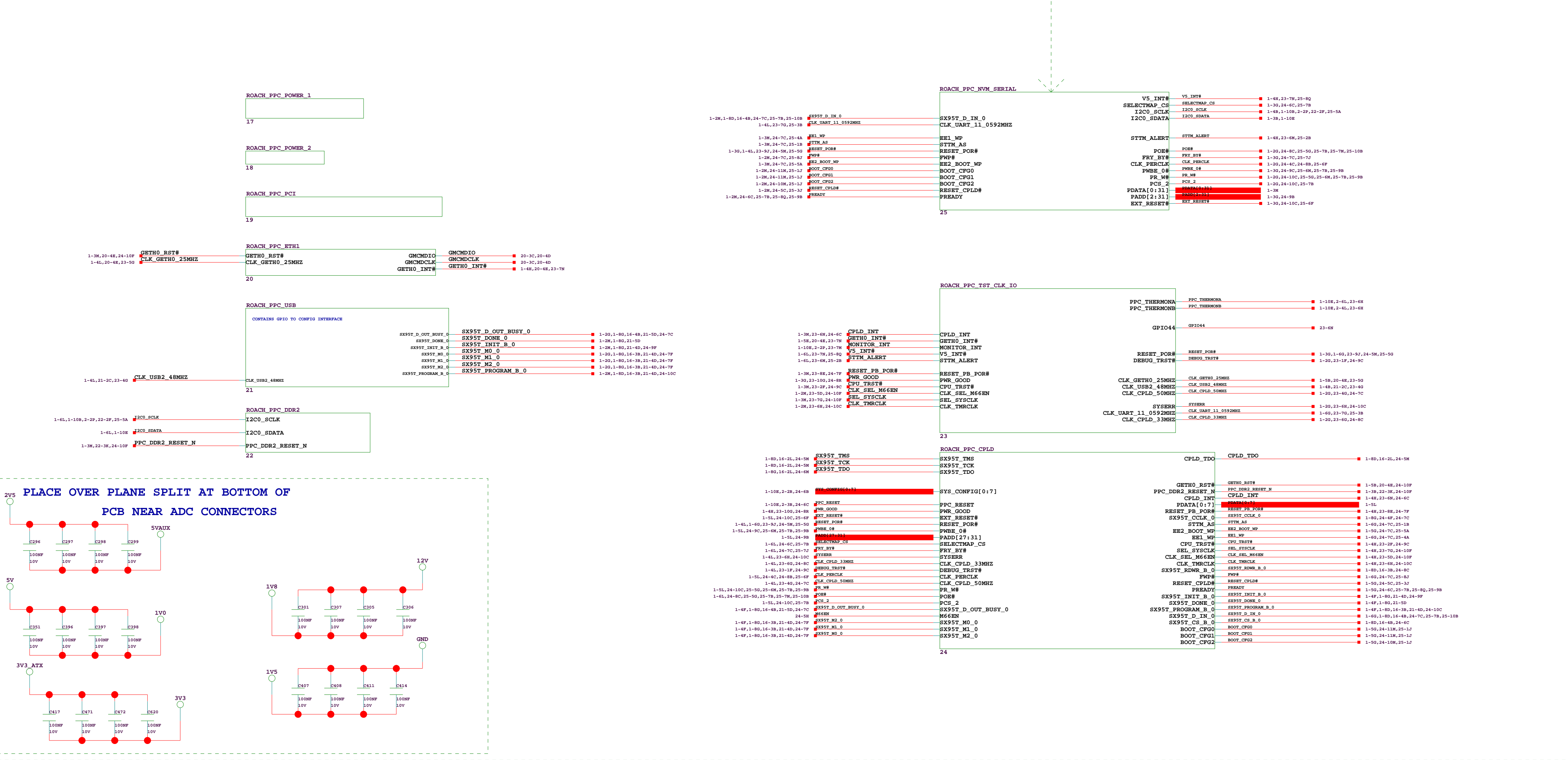


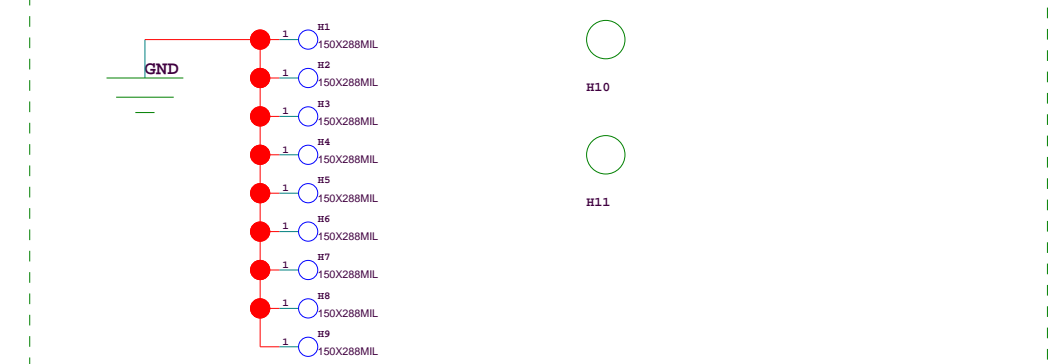
VIRTEX5



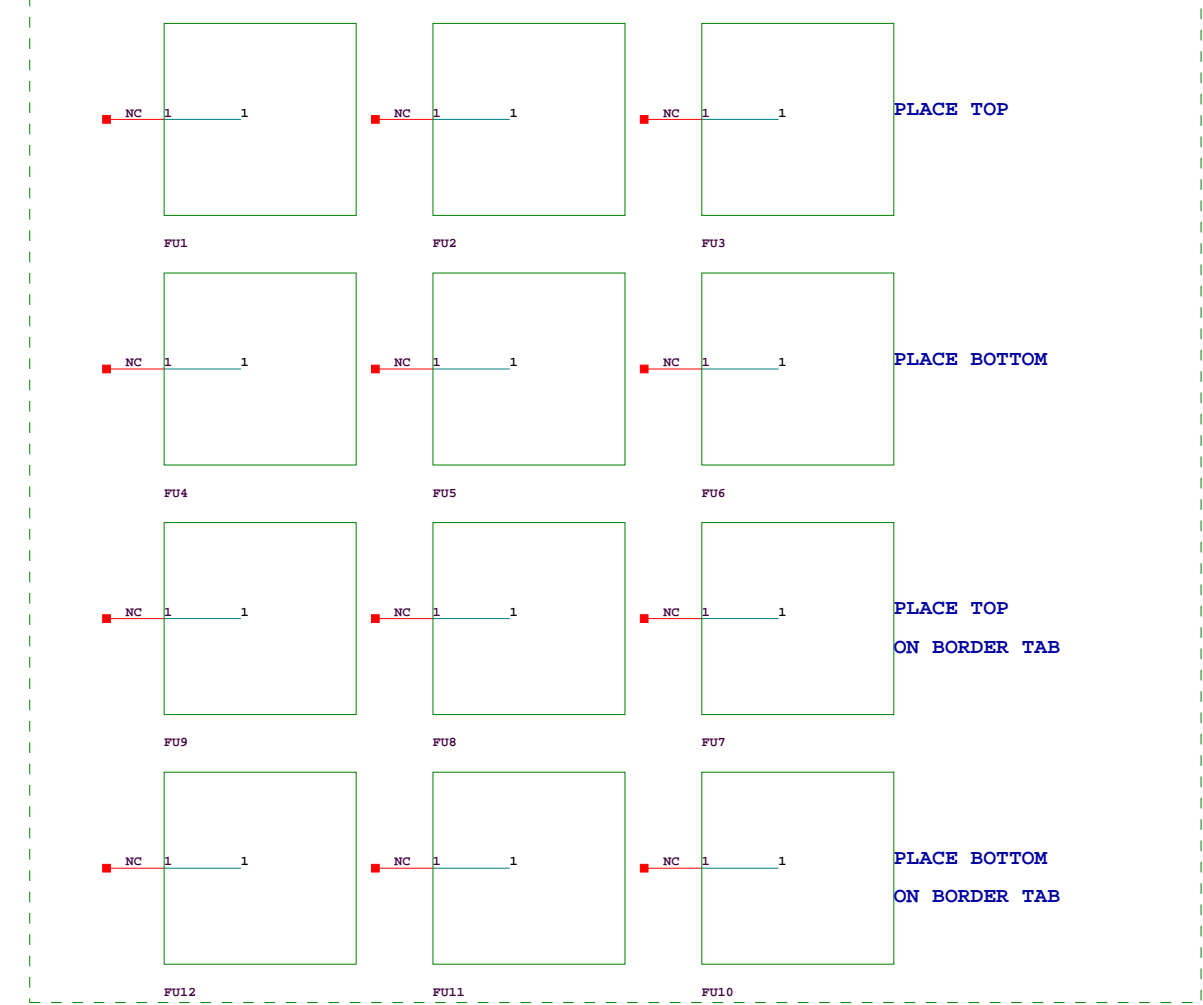
PPC



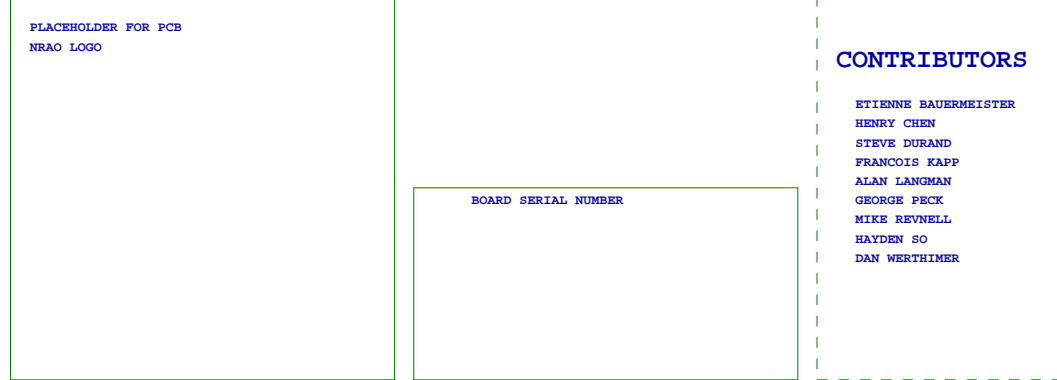
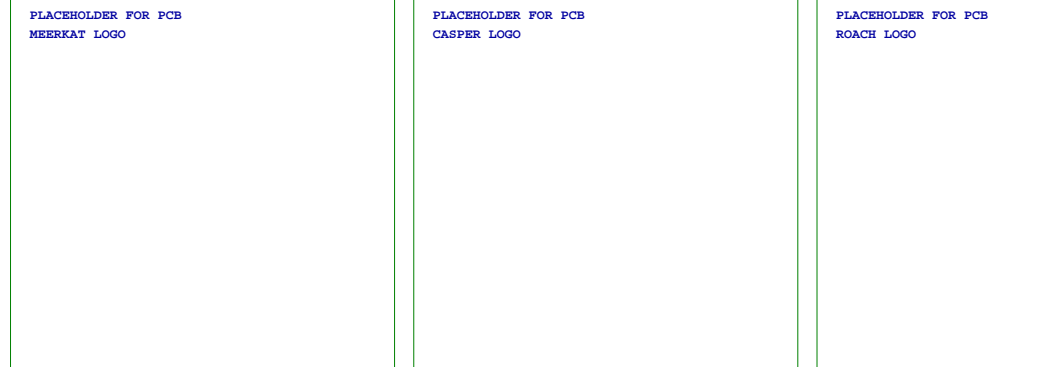
MECHANICAL



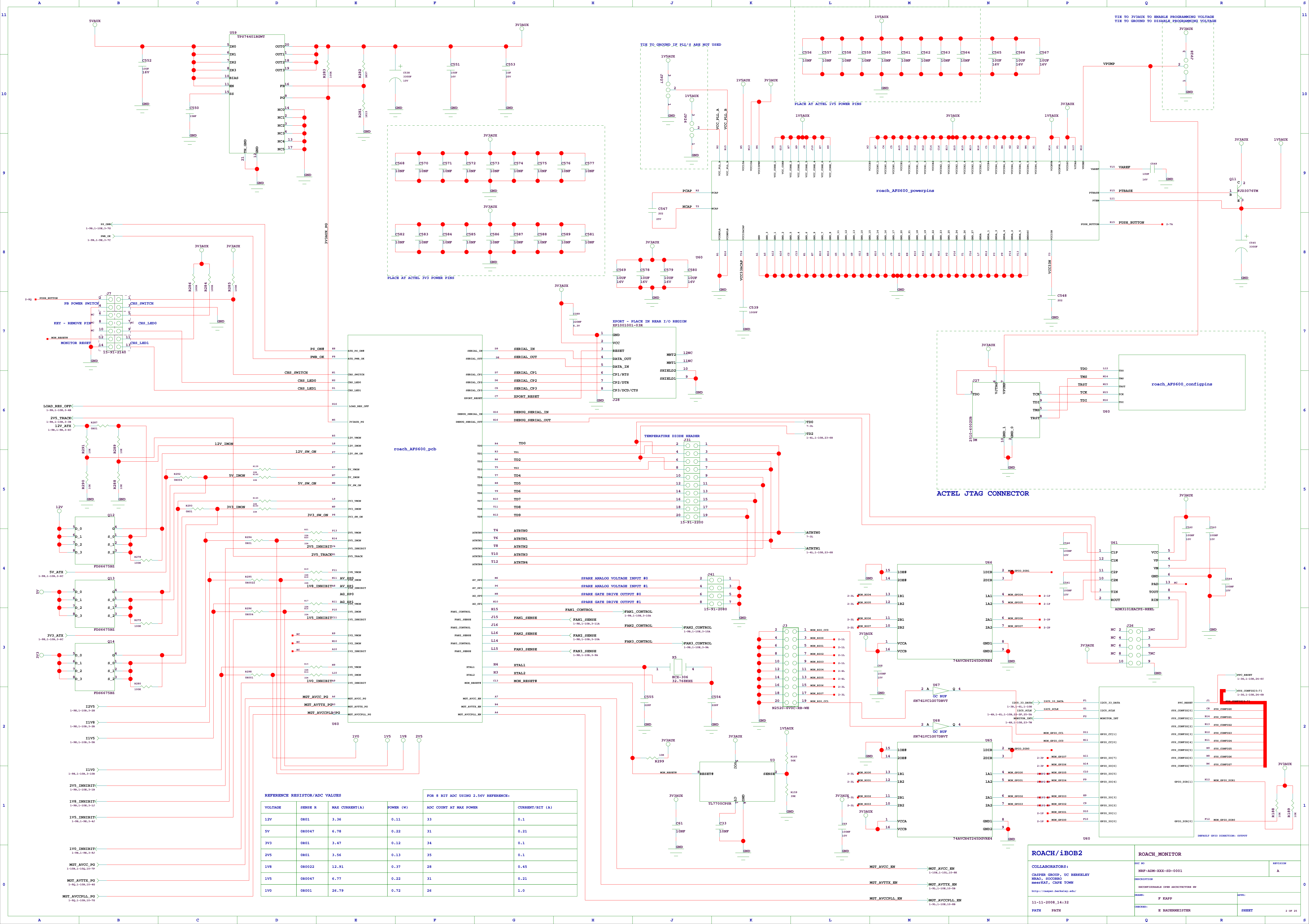
BOARD FIDUCIALS



LOGO'S



ROACH/iBOB2		ROACH_TOP	
COLLABORATORS:	DOC NO	REVISION	
CASPER GROUP, UC BERKELEY	ROACH	1.0.2	
NRAO, SOCCERO	DESCRIPTION		
MAREKAT, CASPE TOWN	RECONFIGURABLE OPEN ARCHITECTURE HW		
http://casper.berkeley.edu/	BRAND:	F KAPP	UPPER
11-11-2008_14:32	CHECKED:	R BAUMGARTNER	
PATH	PATH	SHEET	1 OF 25



REFERENCE RESISTOR/ADC VALUES					FOR 8 BIT ADC USING 2.56V REFERENCE:	
VOLTAGE	SENSE R	MAX CURRENT(A)	POWER (W)	ADC COUNT AT MAX POWER	CURRENT/BIT (A)	
12V	0R01	3.36	0.11	33	0.1	
5V	0R0047	6.78	0.22	31	0.21	
3V3	0R01	3.47	0.12	34	0.1	
2V5	0R01	3.56	0.13	35	0.1	
1V8	0R0022	12.91	0.37	28	0.45	
1V5	0R0047	6.77	0.22	31	0.21	
1V0	0R001	26.79	0.72	26	1.0	

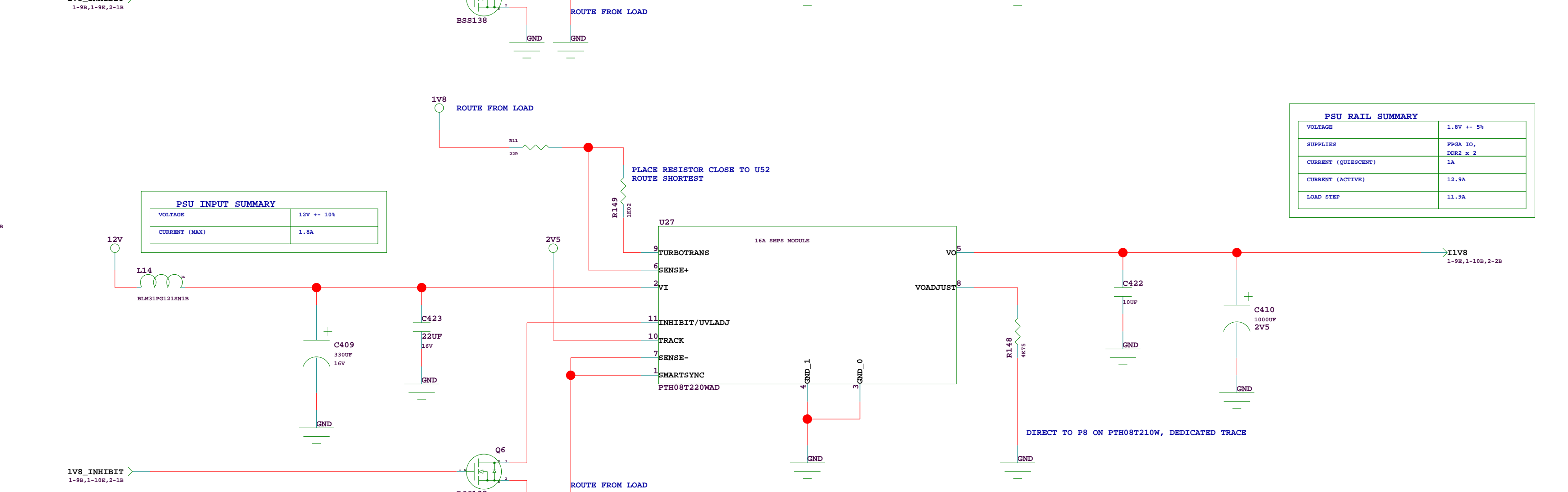
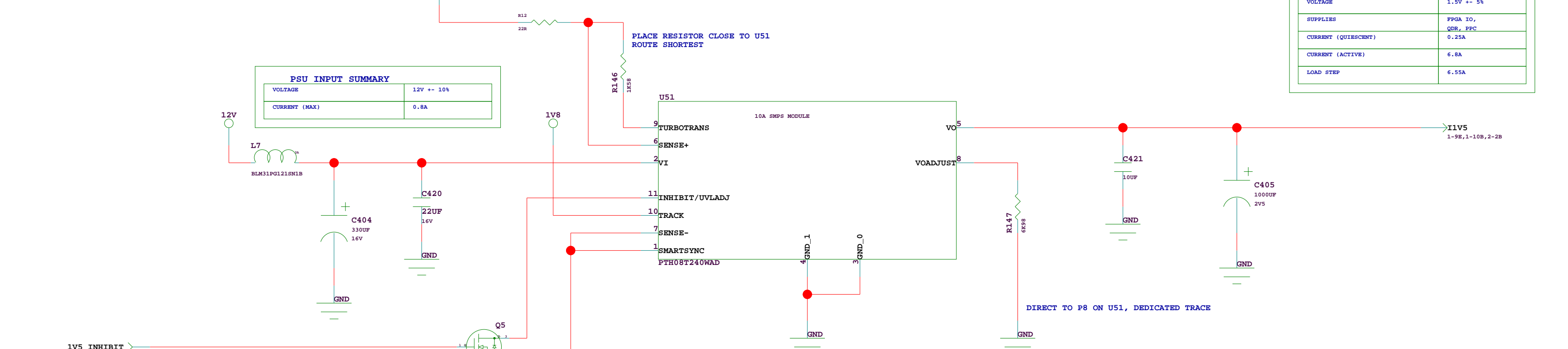
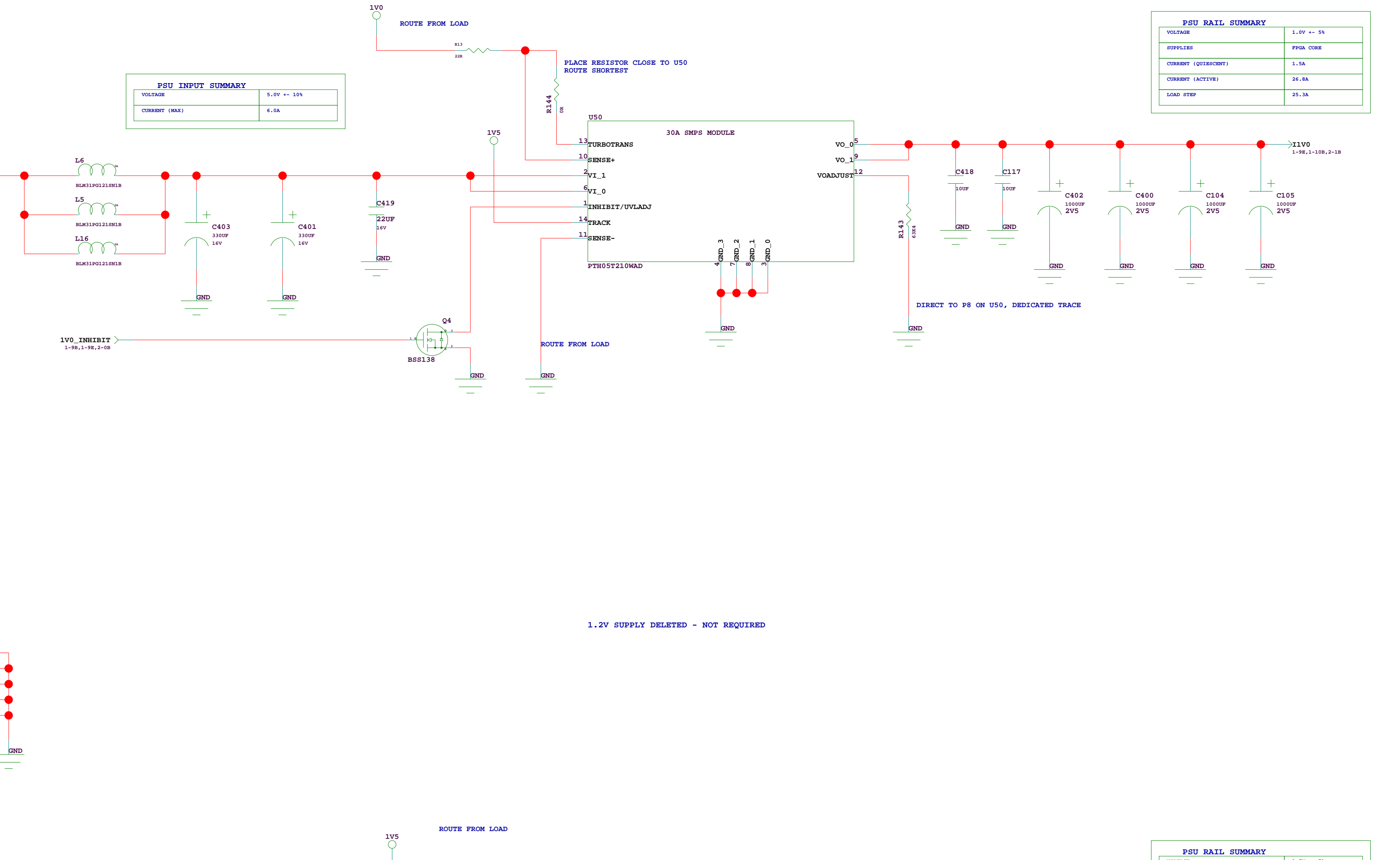
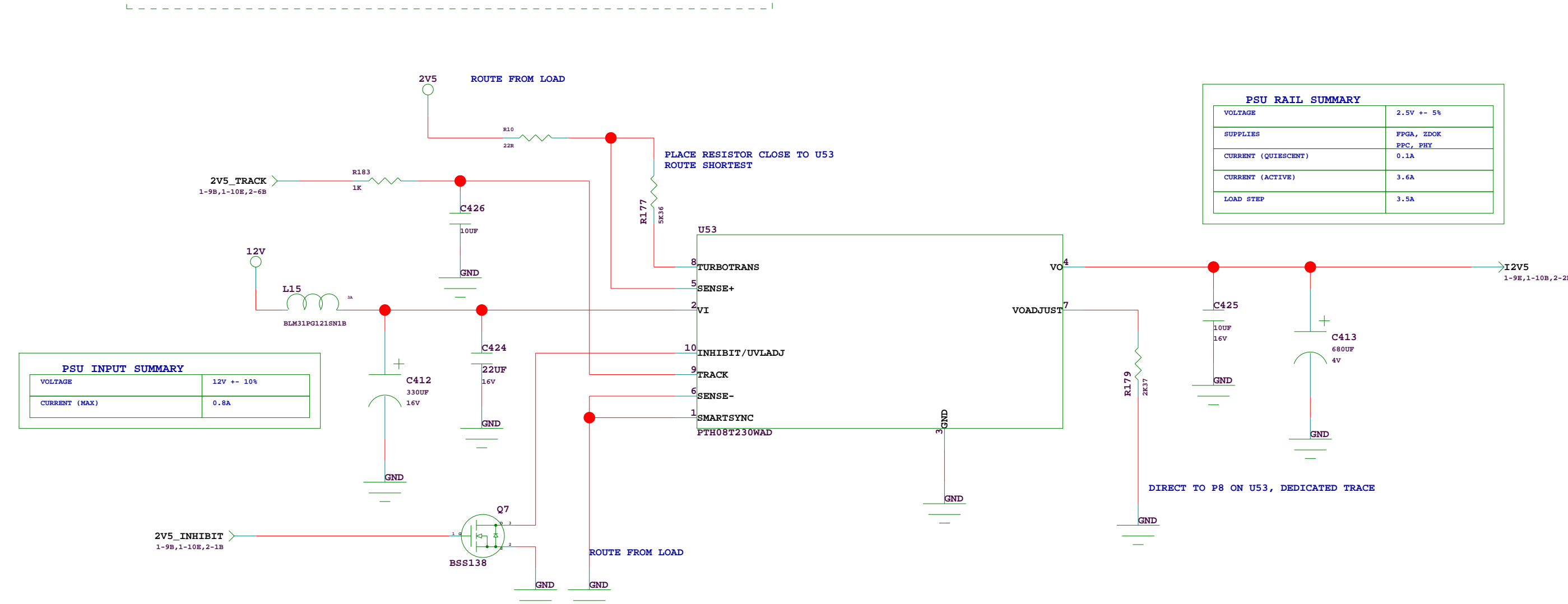
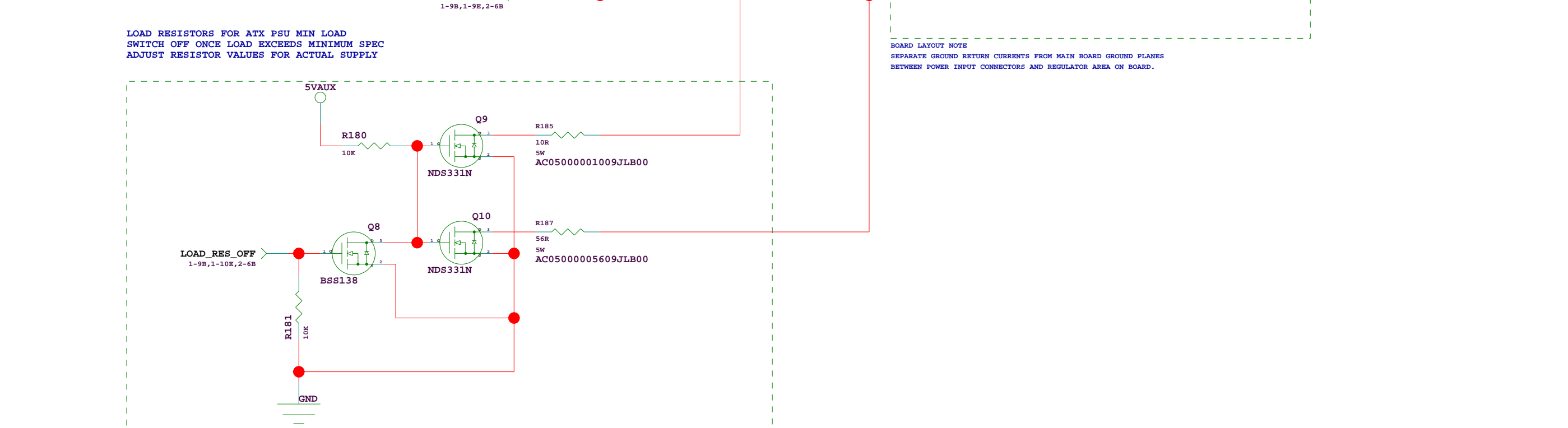
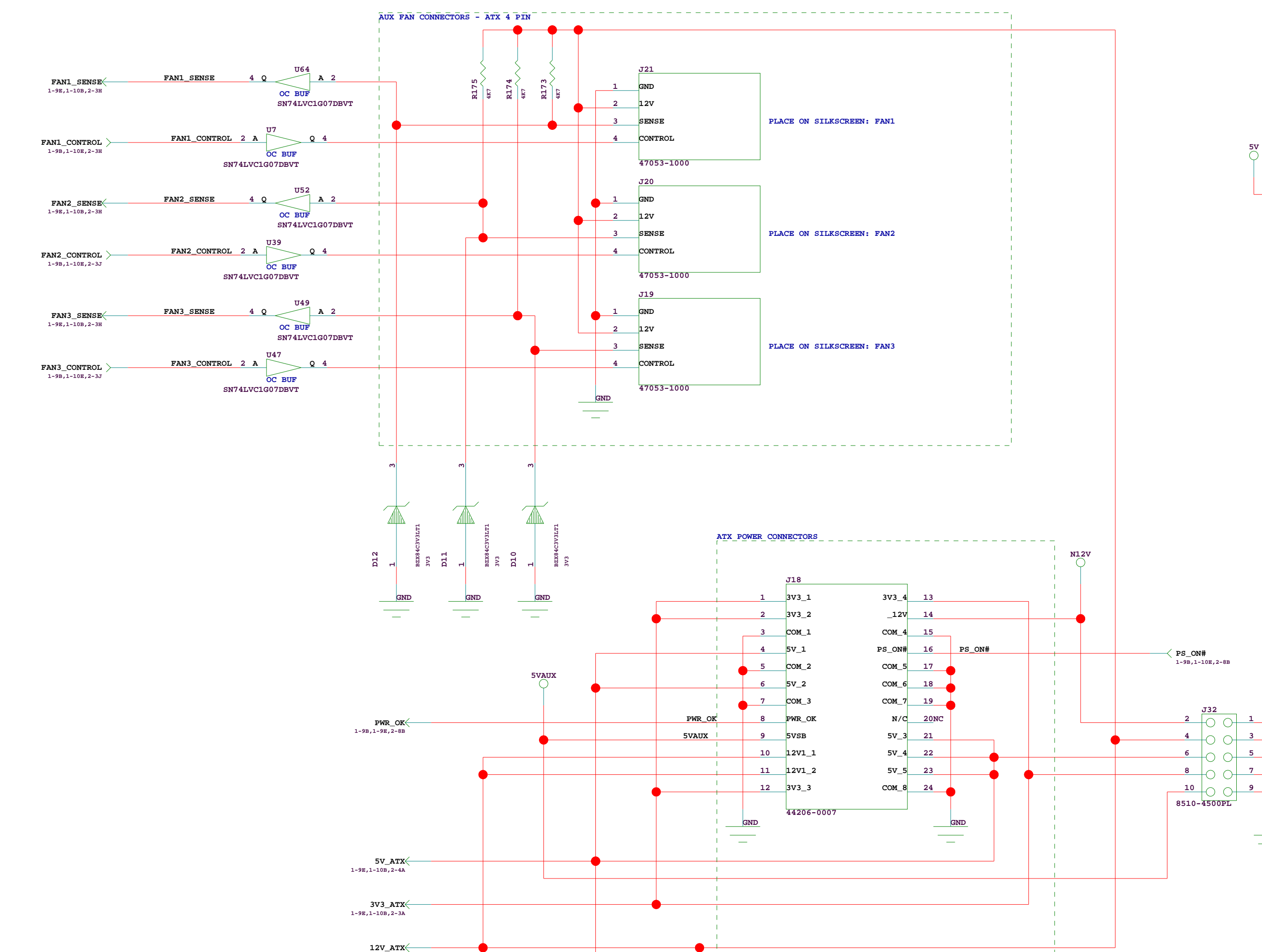
ROACH/iBOE2

COLLABORATORS:
CASPER GROUP, UC BERKELEY
NRAO, SOCCERO
BAAERKAT, CAPE TOWN
<http://casper.berkeley.edu/>
11-11-2008_14:32
PATH

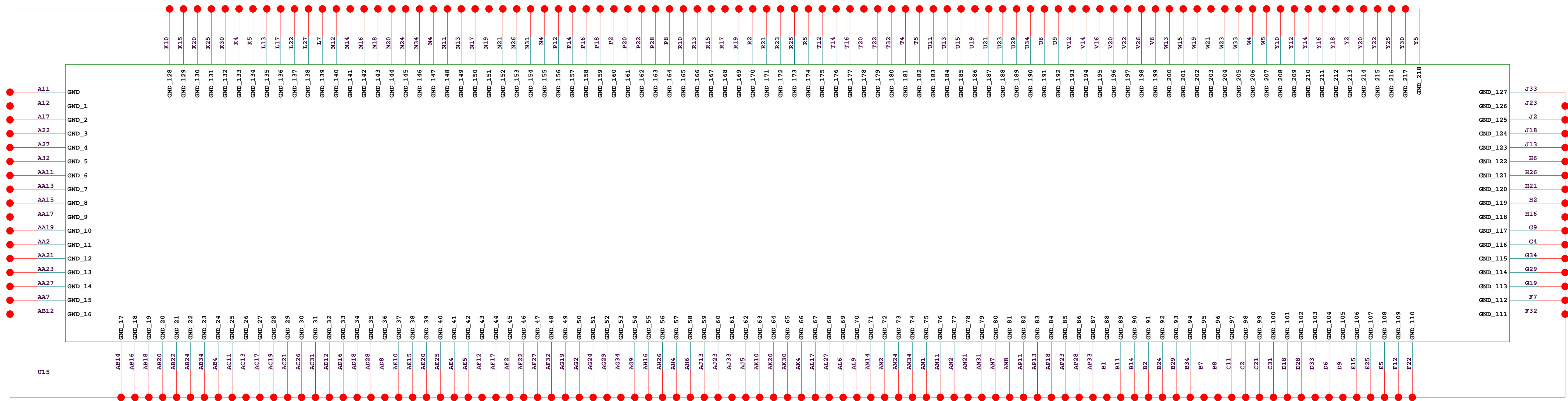
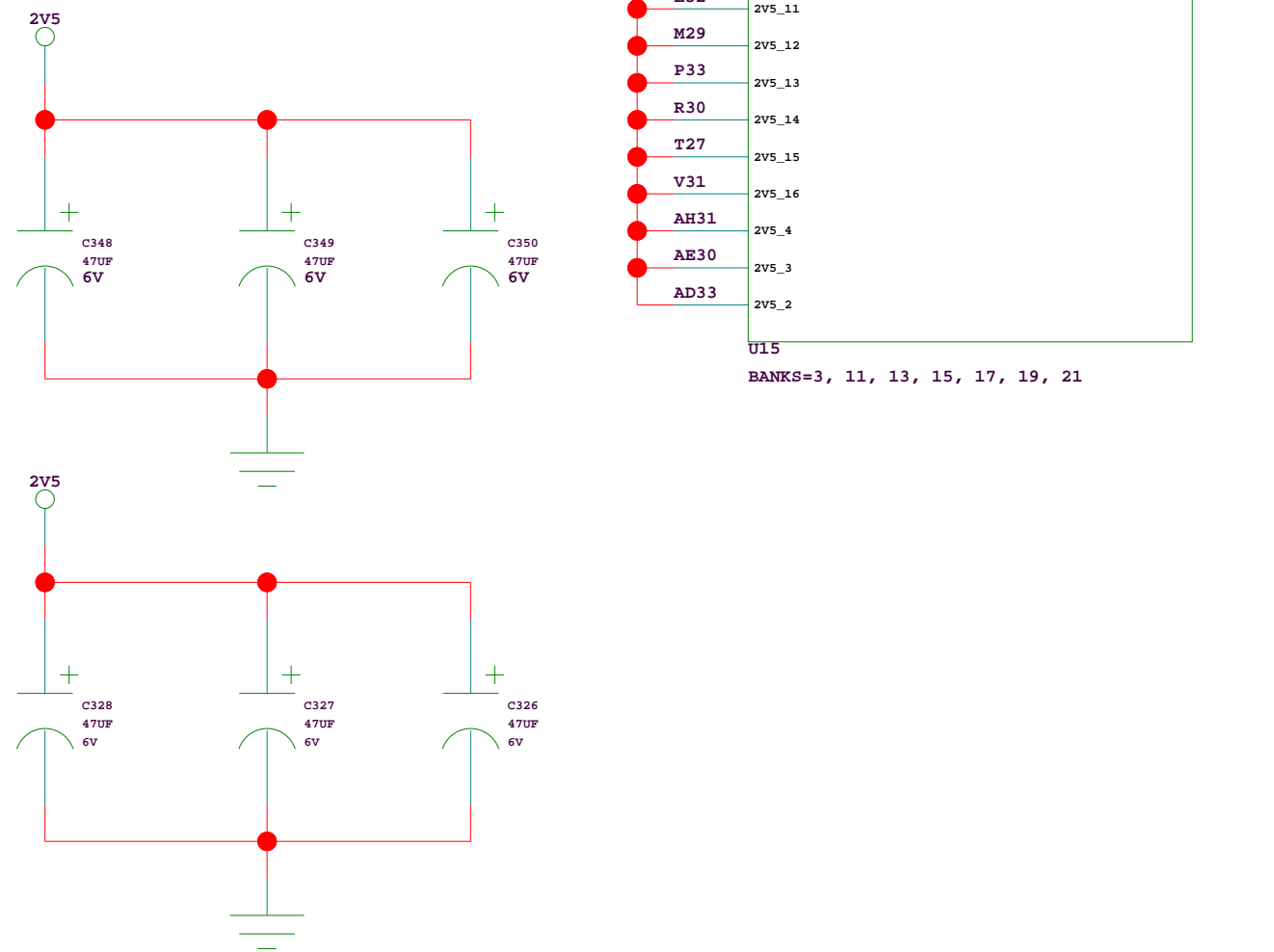
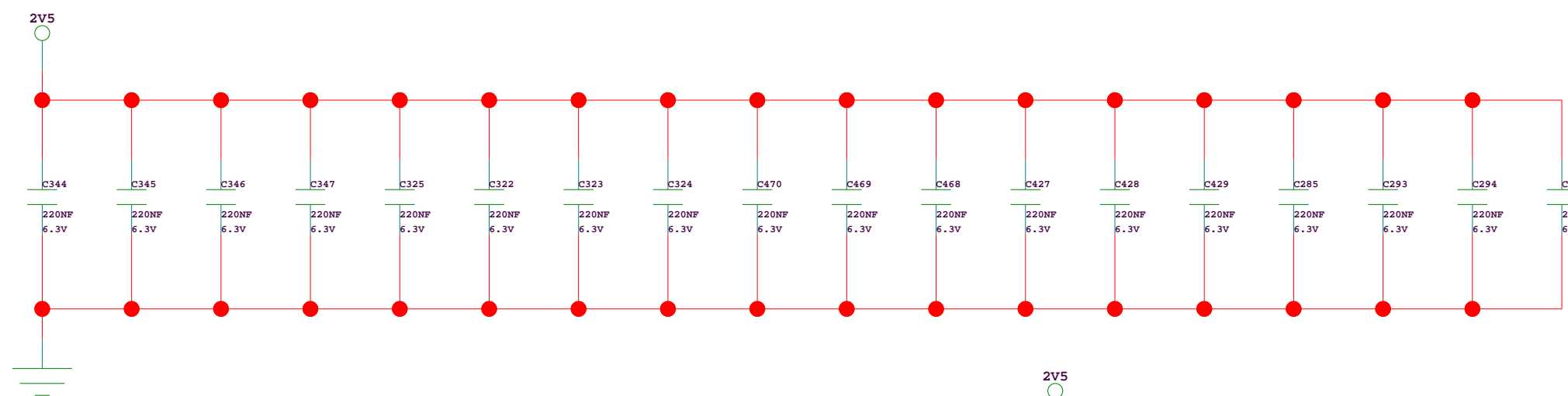
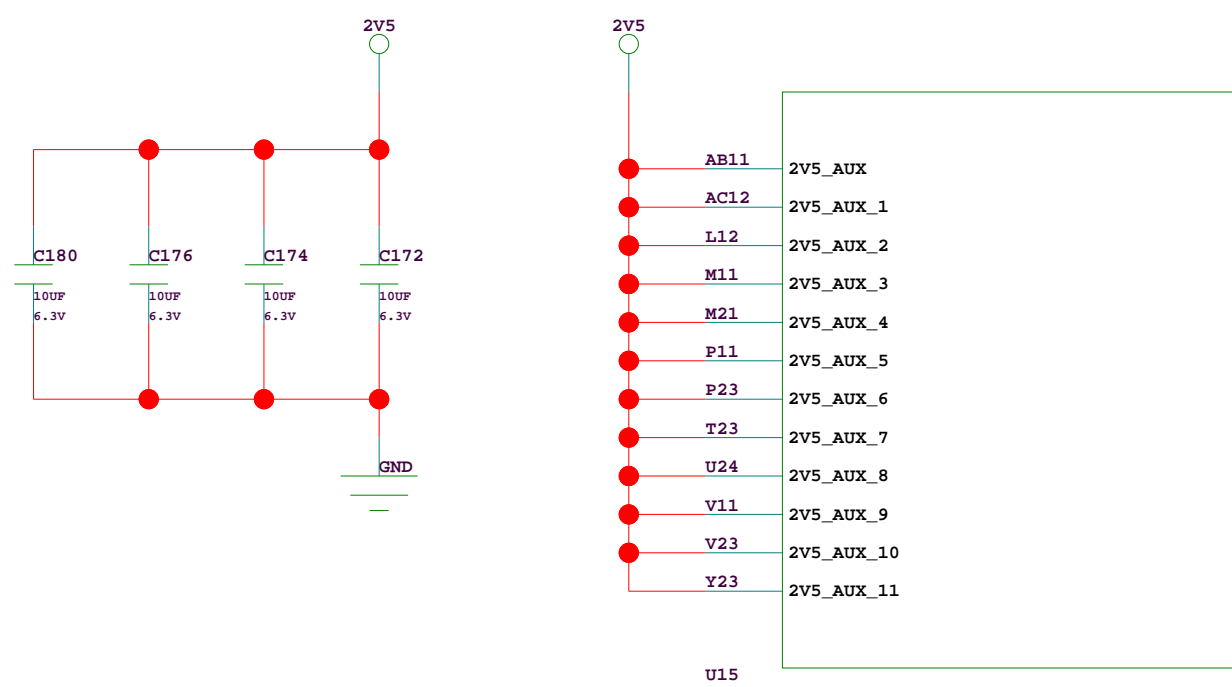
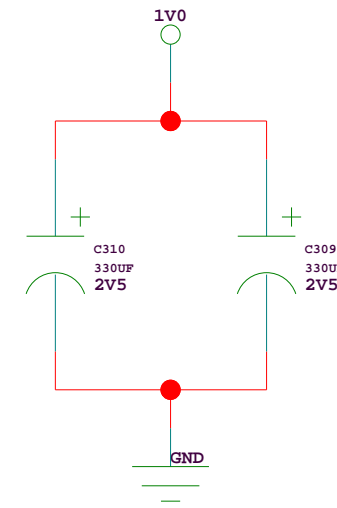
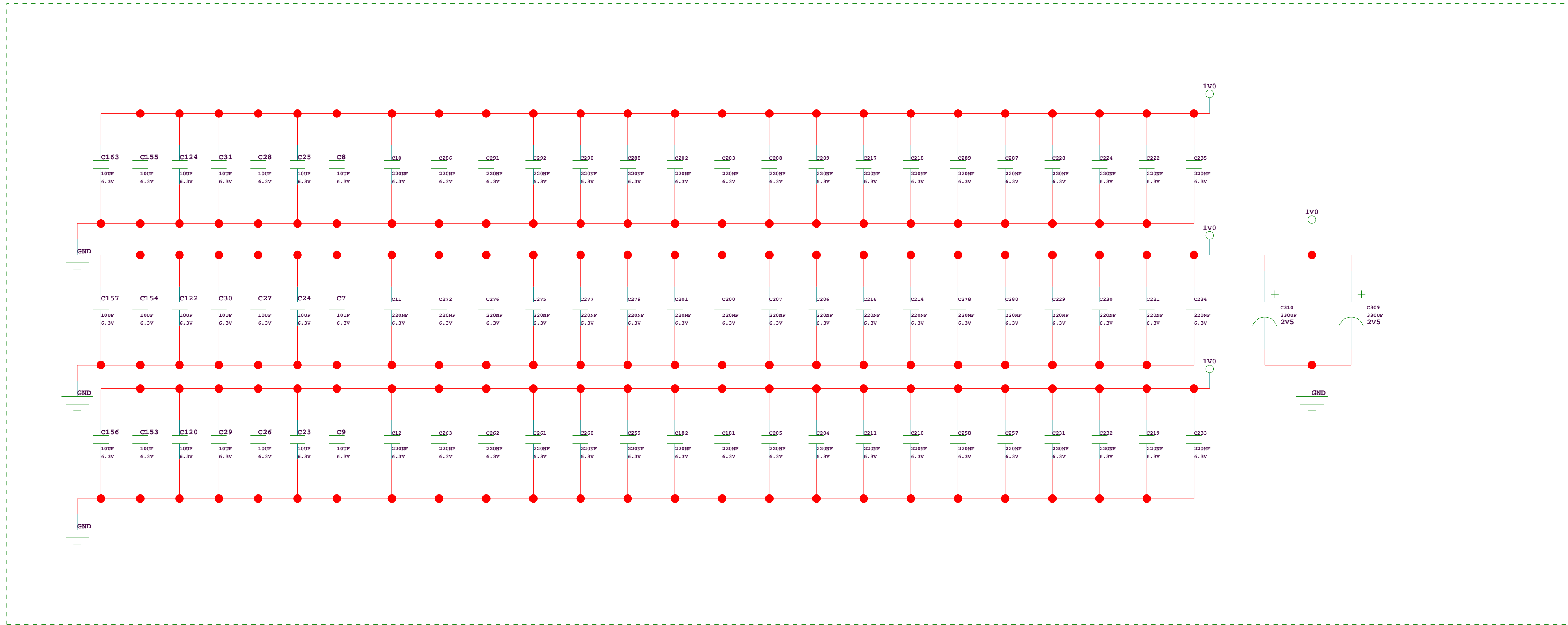
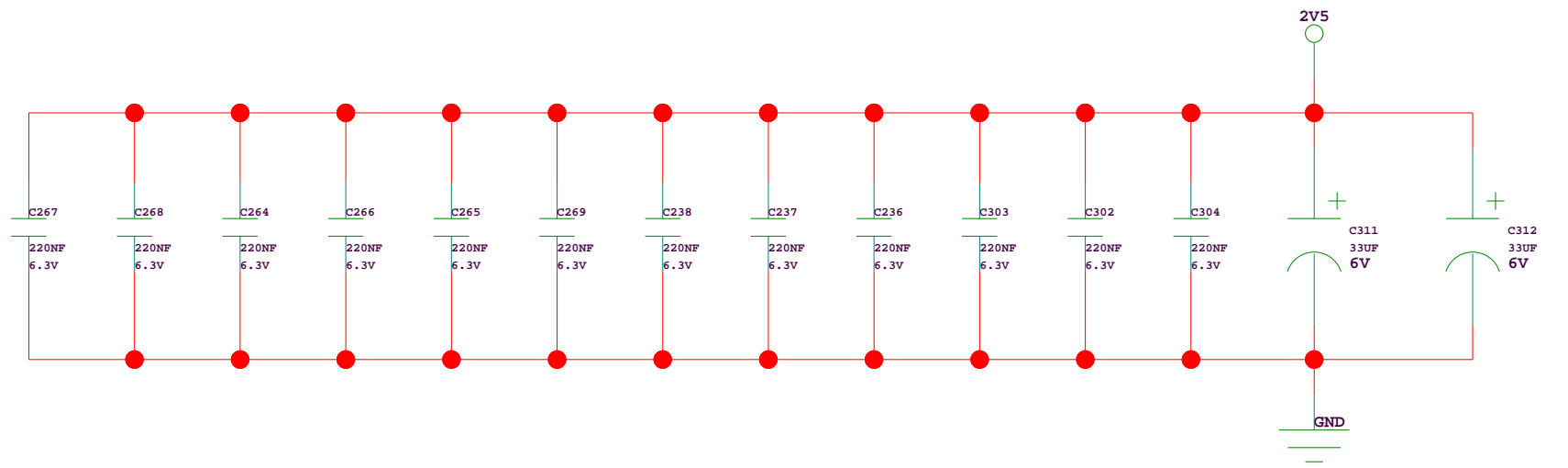
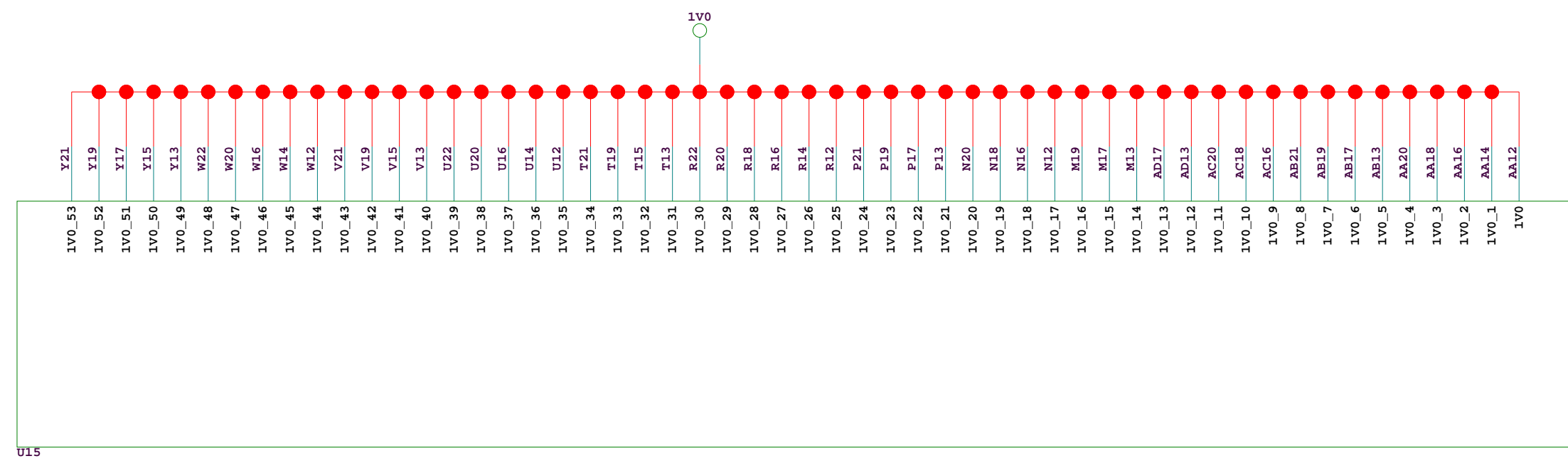
ROACH_MONITOR

DCC NO
NRF-ADM-XXX-SD-0001
DESCRIPTION
RECONFIGURABLE OPEN ARCHITECTURE HW
F KAPP
R BAUERMEISTER
SHEET

REVISION
A
1 OF 25



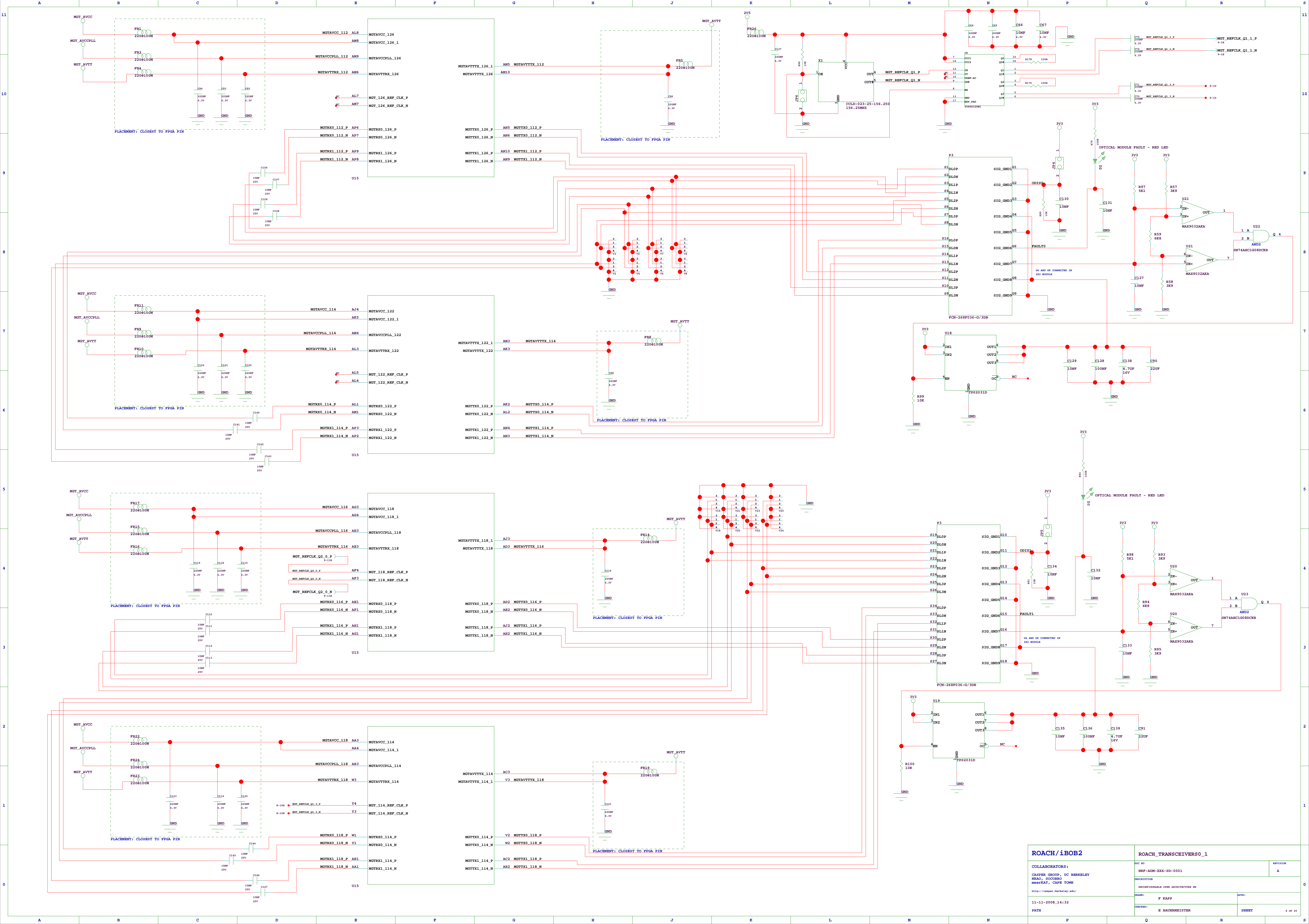
ROACH/iBOE2		ROACH_PSU	
COLLABORATORS:		DOC NO:	REVISION:
CASPER GROUP, UC BERKELEY		NRF-ADM-XXX-SD-0001	A
NRAO, SOONERO		DESCRIPTION:	
BAAERAT, CAPE TOWN		RECONFIGURABLE OPEN ARCHITECTURE HW	
http://casper.berkeley.edu/		ISSUED:	ISSUE:
11-11-2008_14:32		F KAPP	
PATH PATH		REVIEWED:	SHEET
		R BAUERMEISTER	3 OF 25

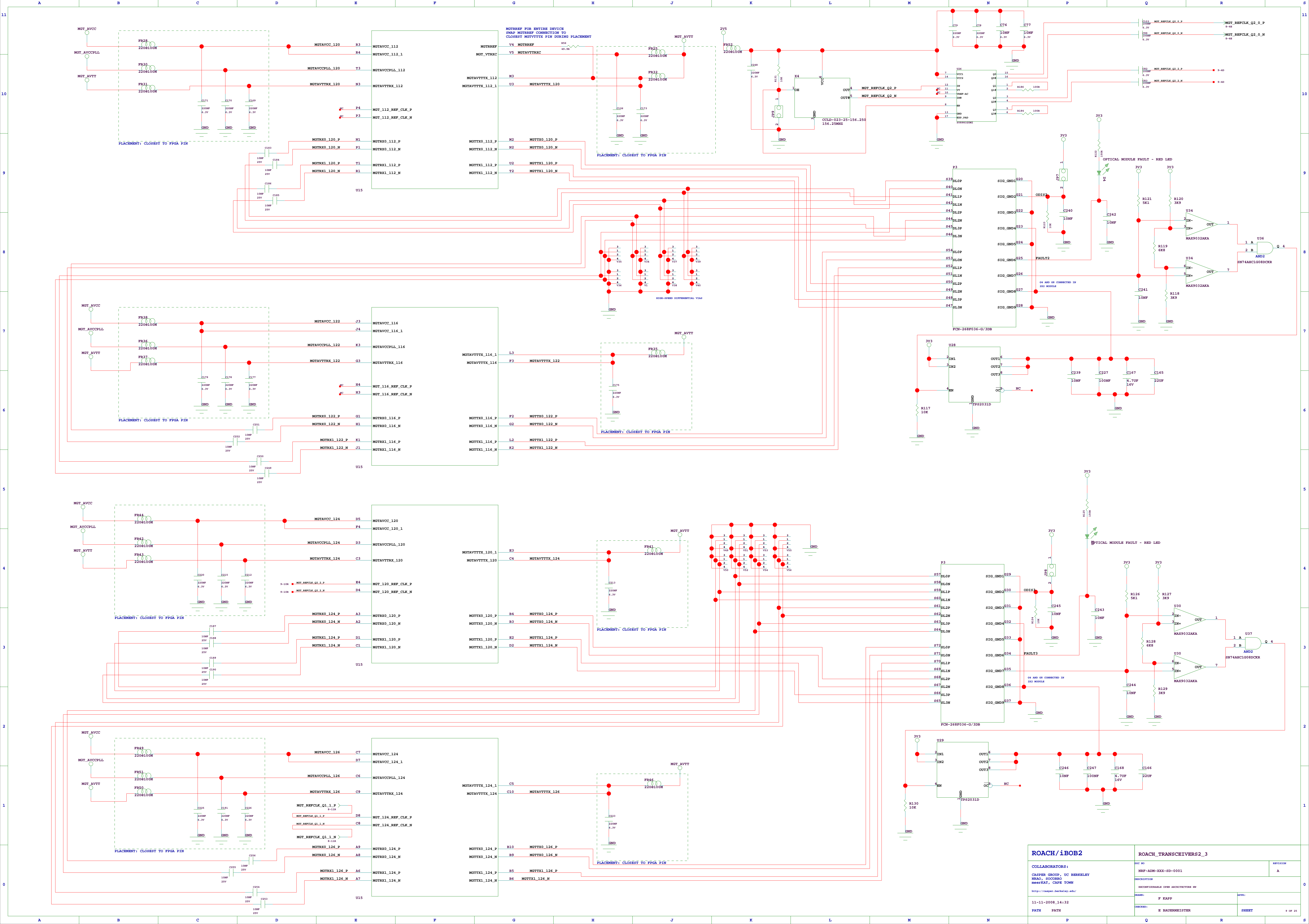


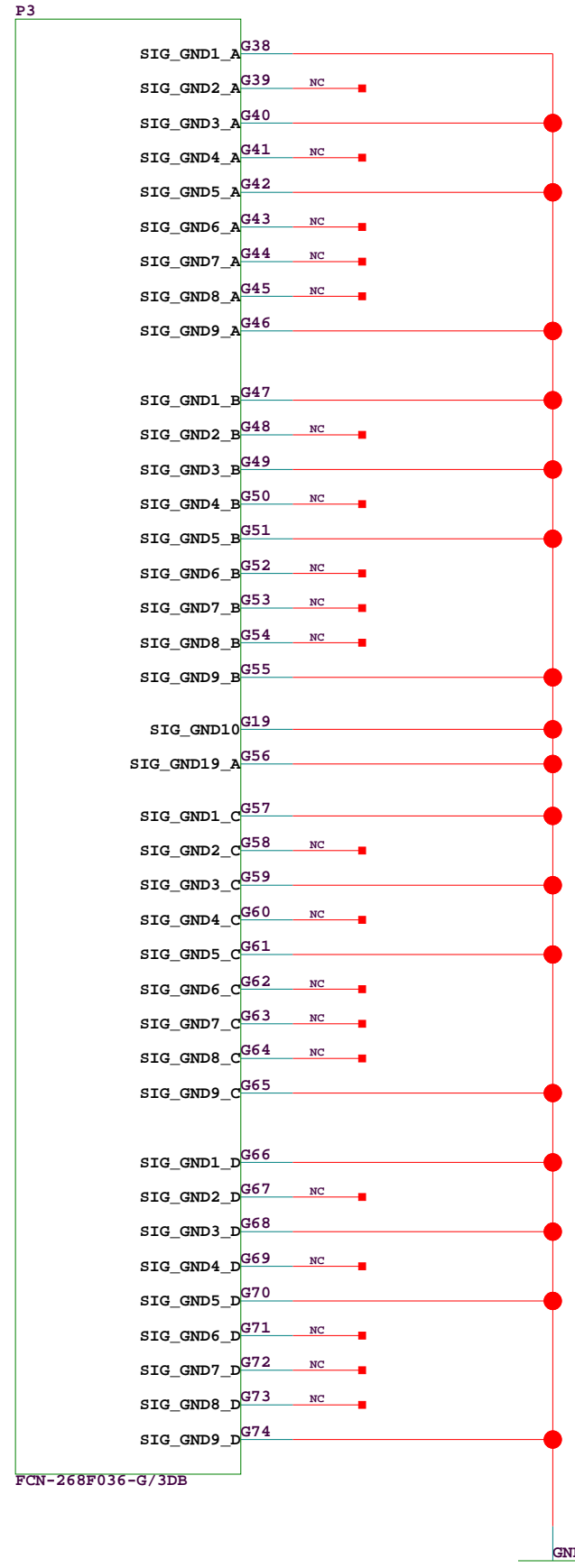
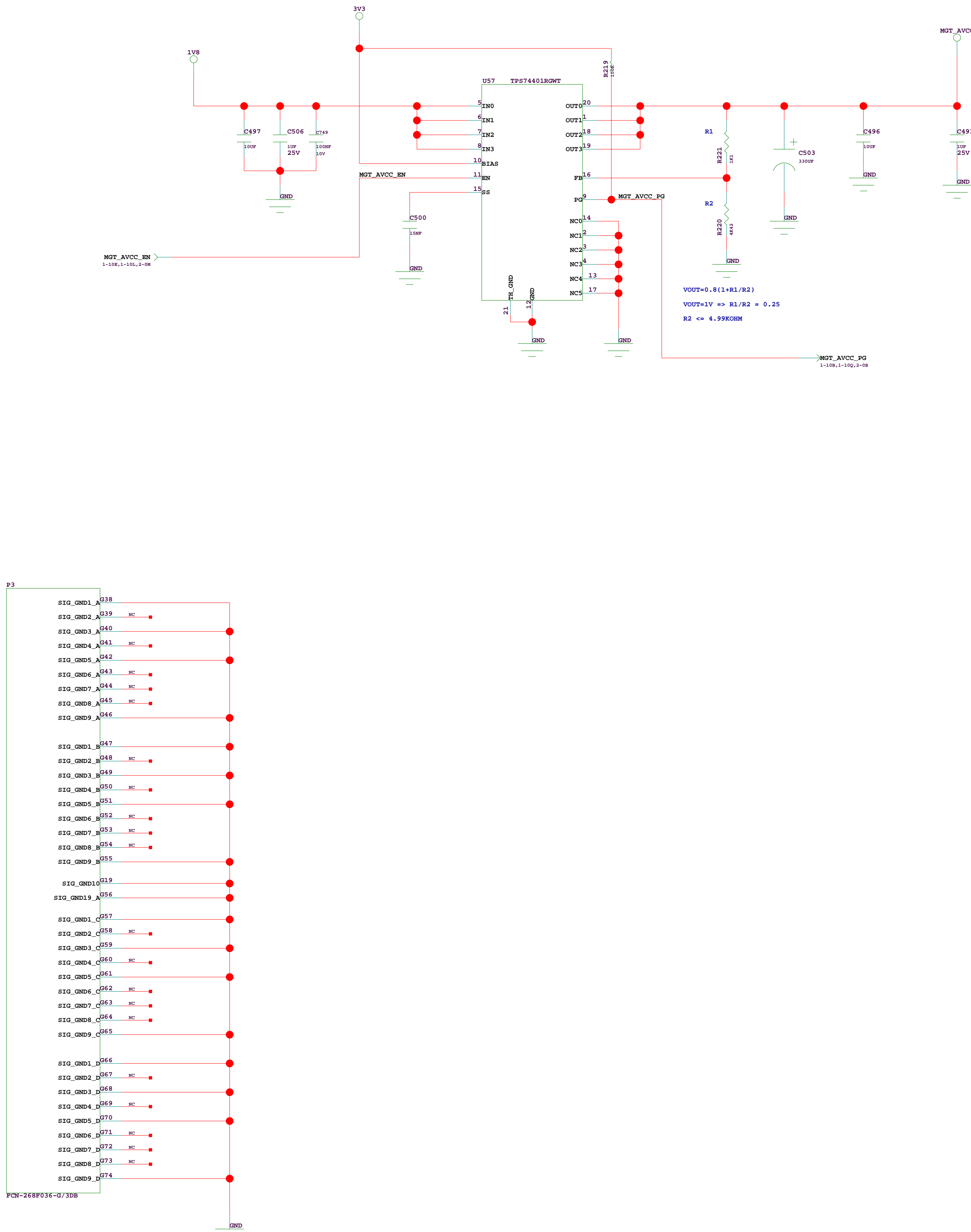
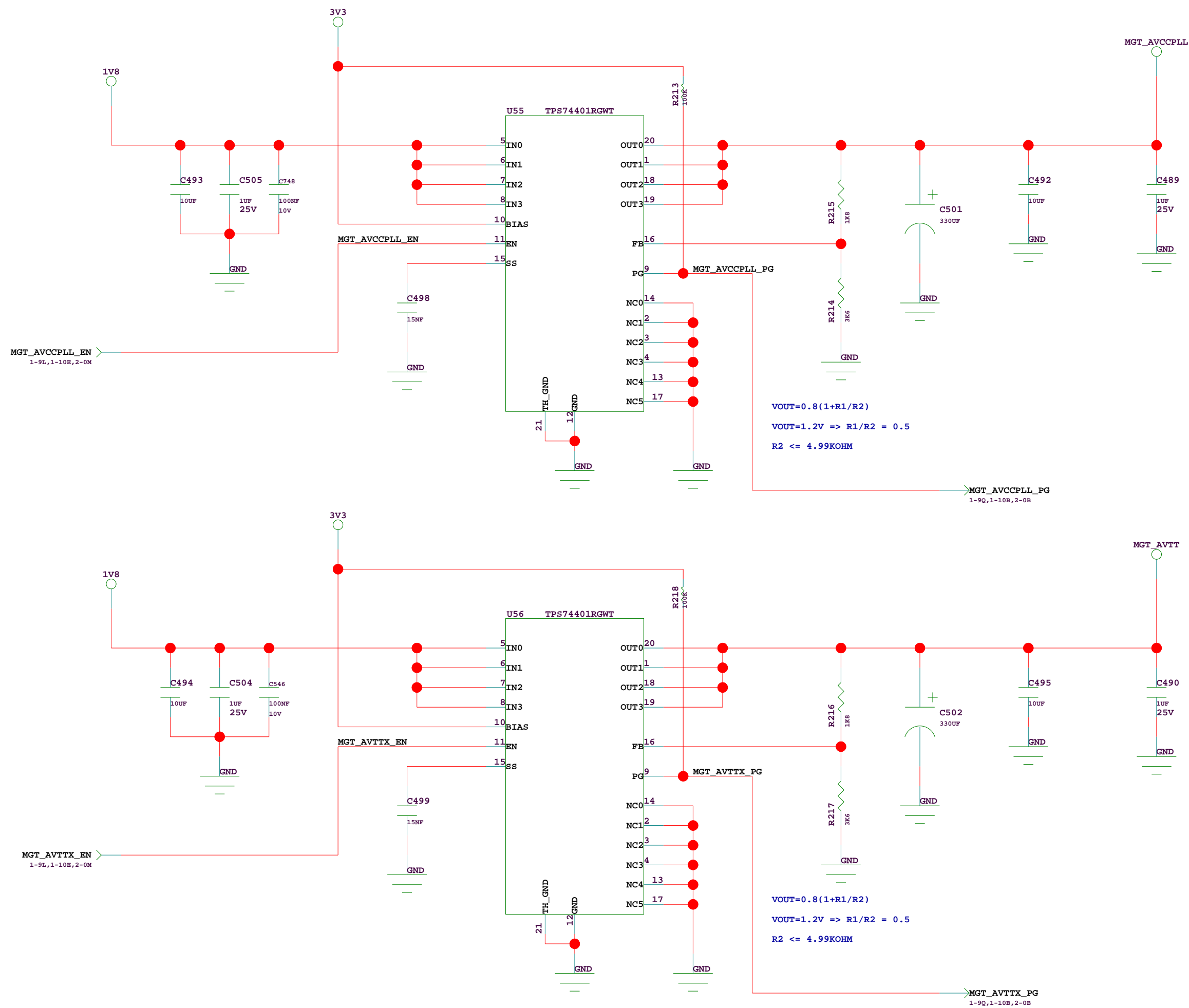
ROACH/iBOB2		ROACH_5V_POWER	
COLLABORATORS:		DOC NO	REVISION
CASPER GROUP, UC BERKELEY MRS. SCORCO me@CASP, CAPE TOWN		HRP-ADM-XXX-SD-0001	A
http://casper.berkeley.edu/		DESCRIPTION	
11-11-2008-14:32		RECONFIGURABLE OPEN ARCHITECTURE ON	
PATH PATH		NAME: F KAPP	APP:
		CHECKED: E BAUERMEISTER	SHEET 4 OF 2

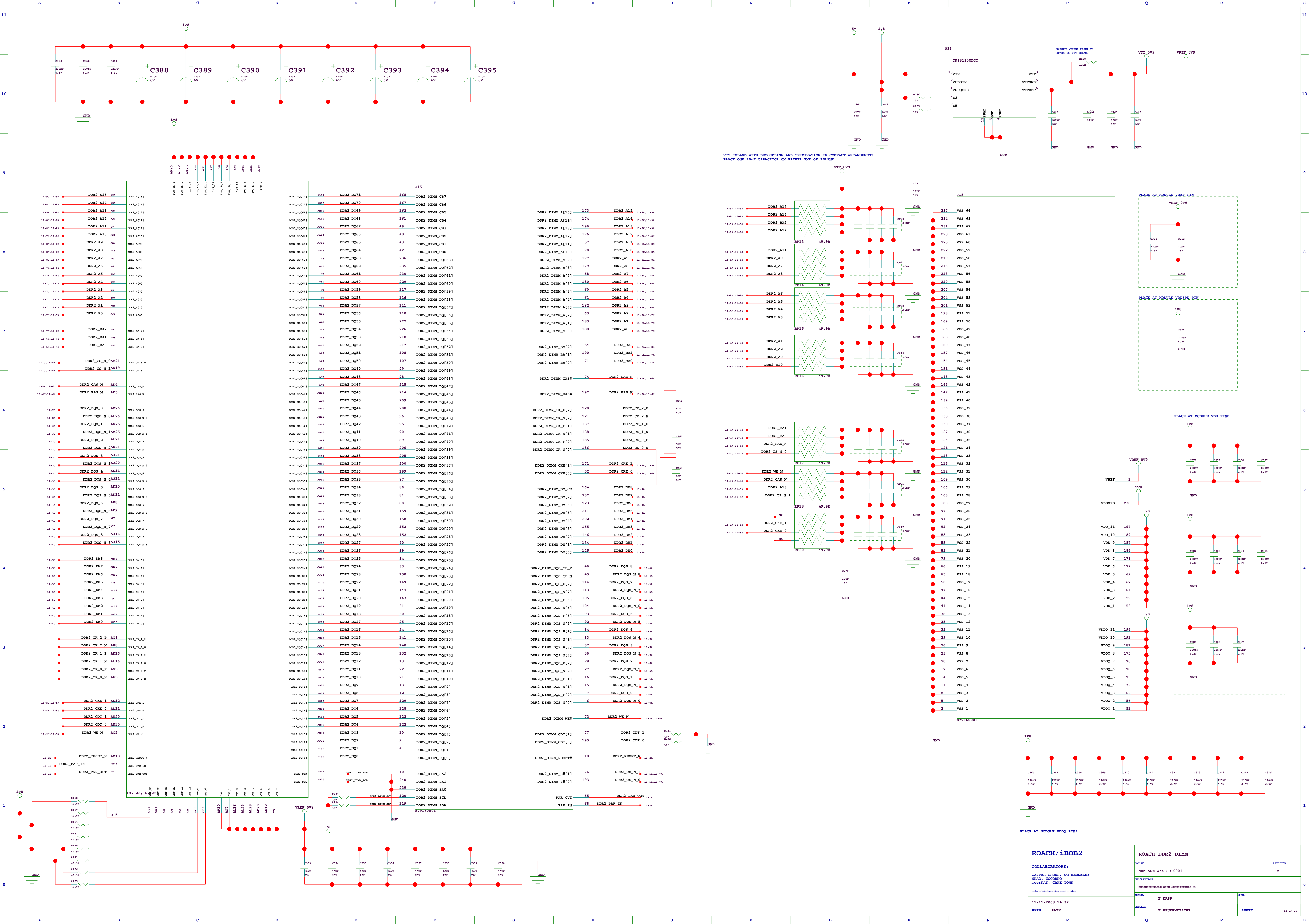


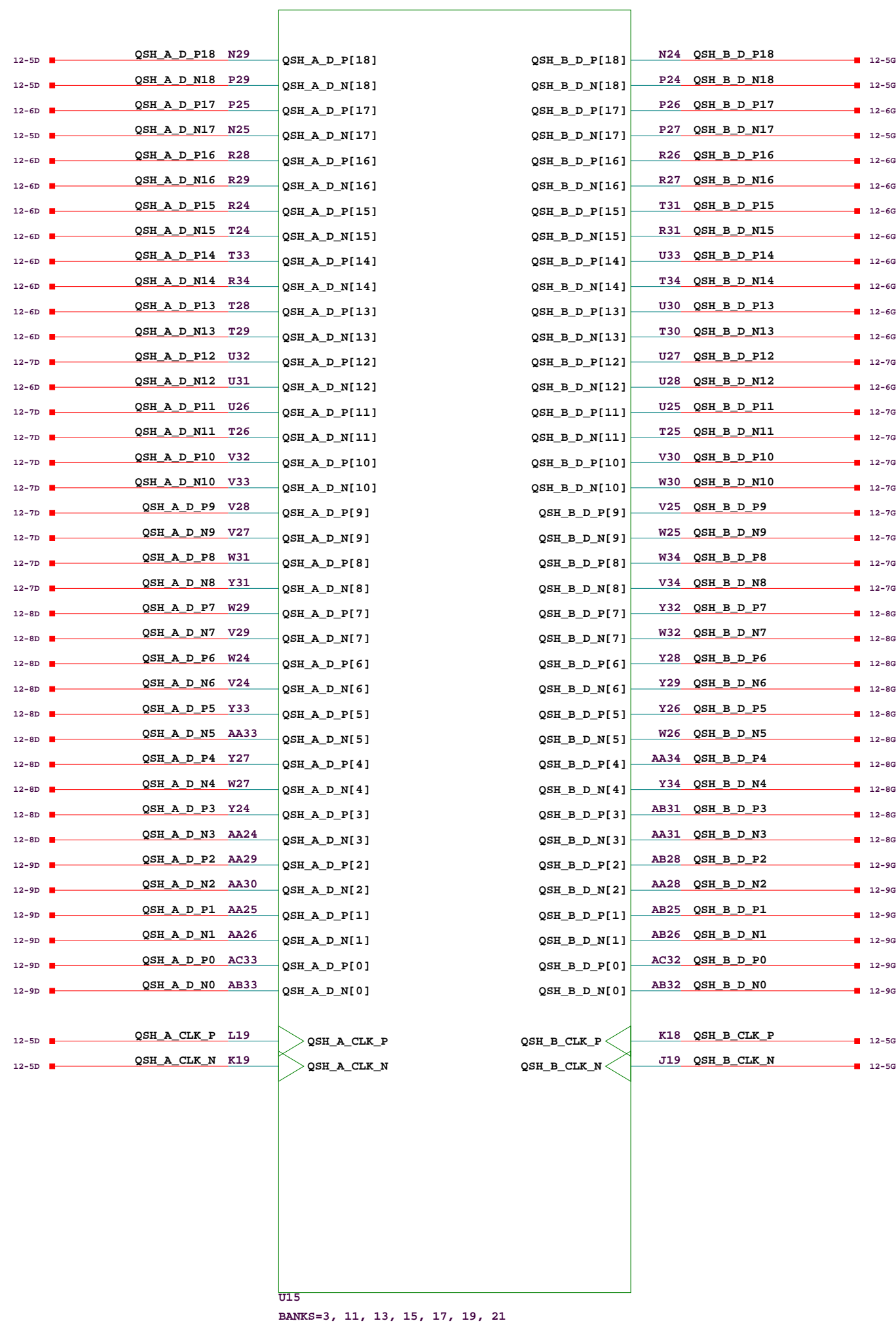
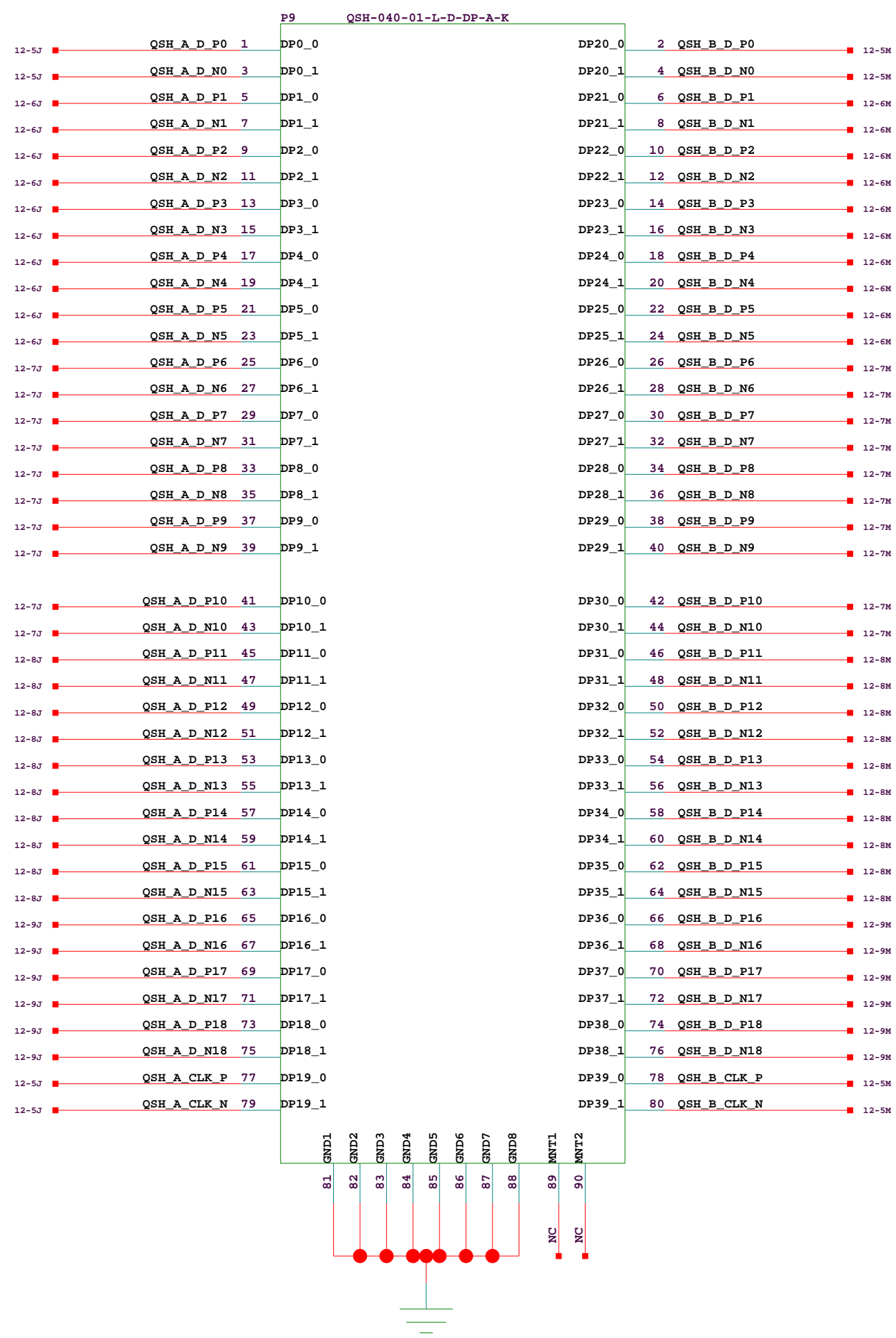




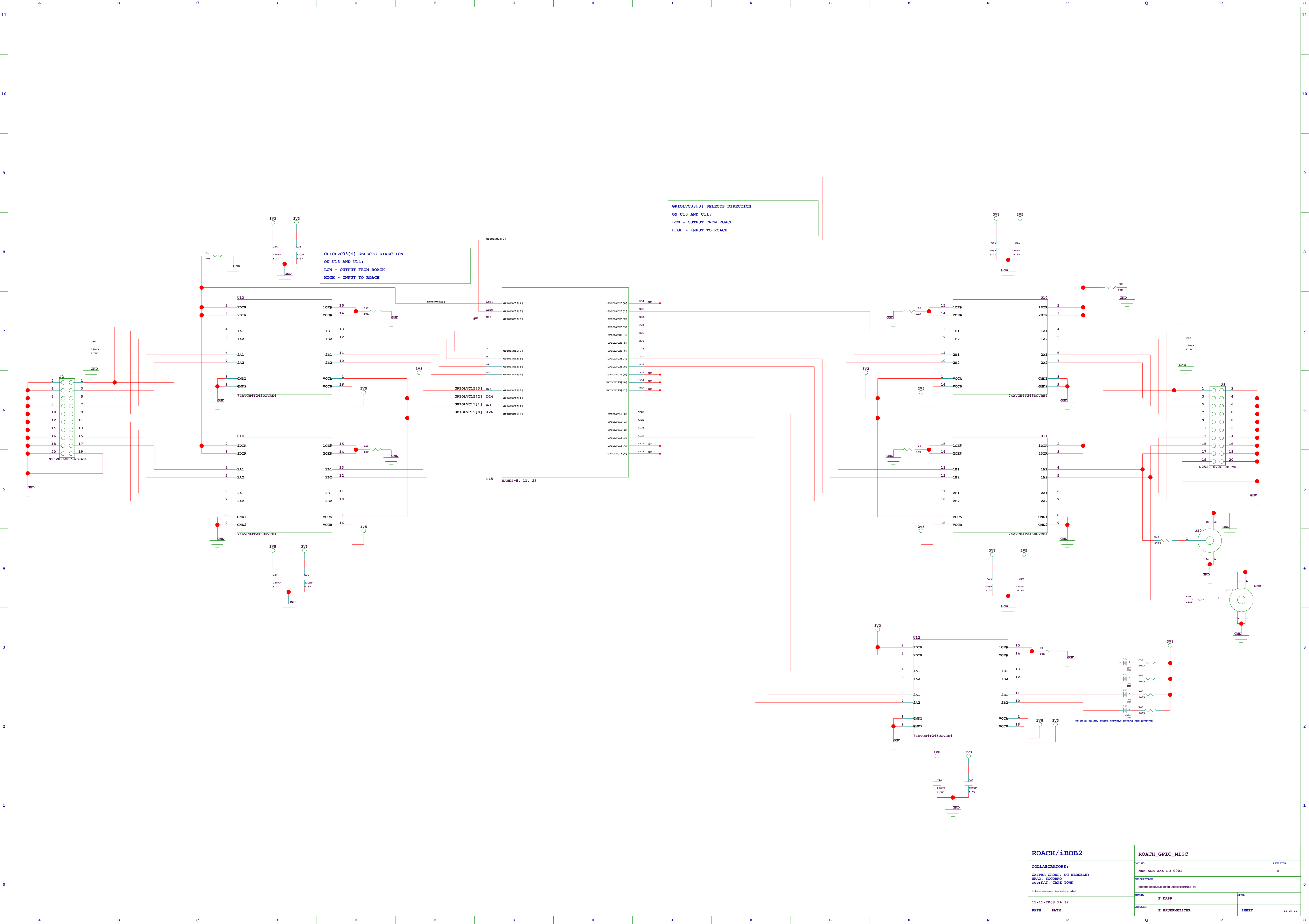




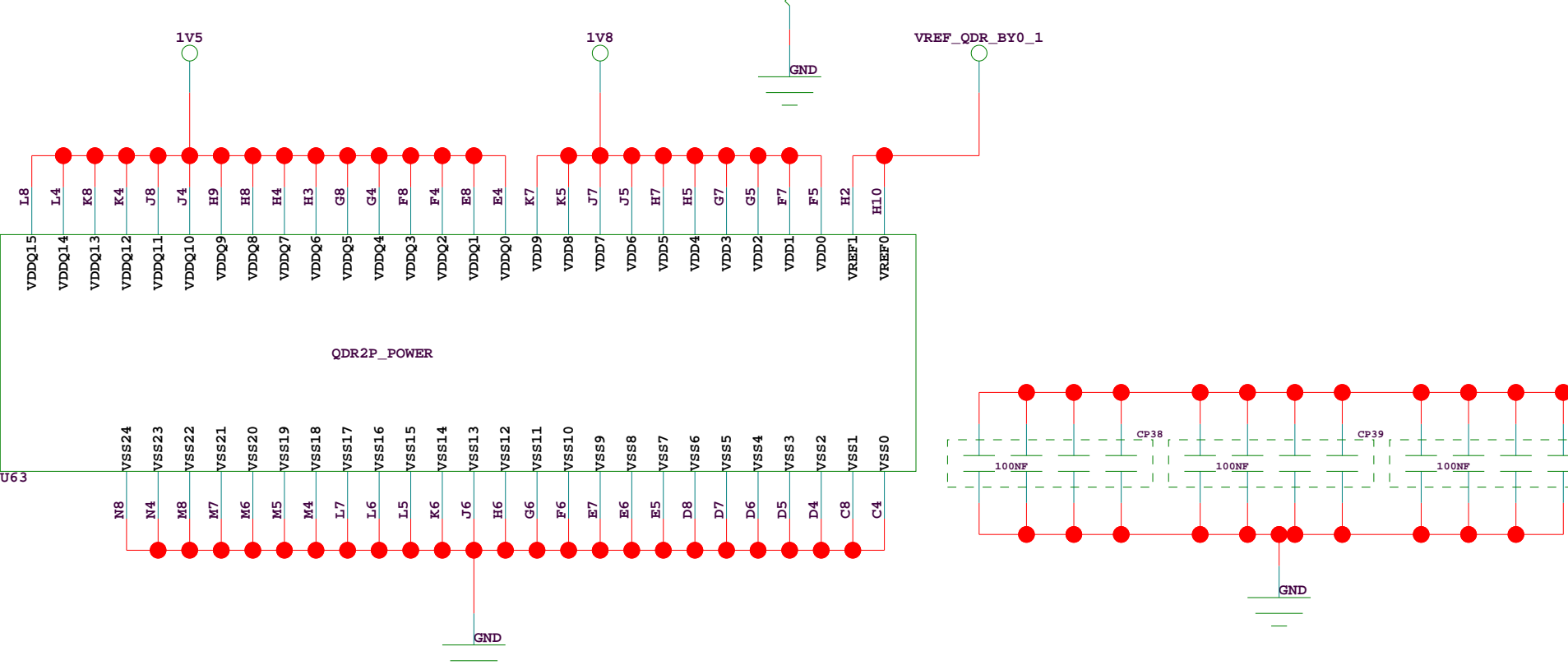
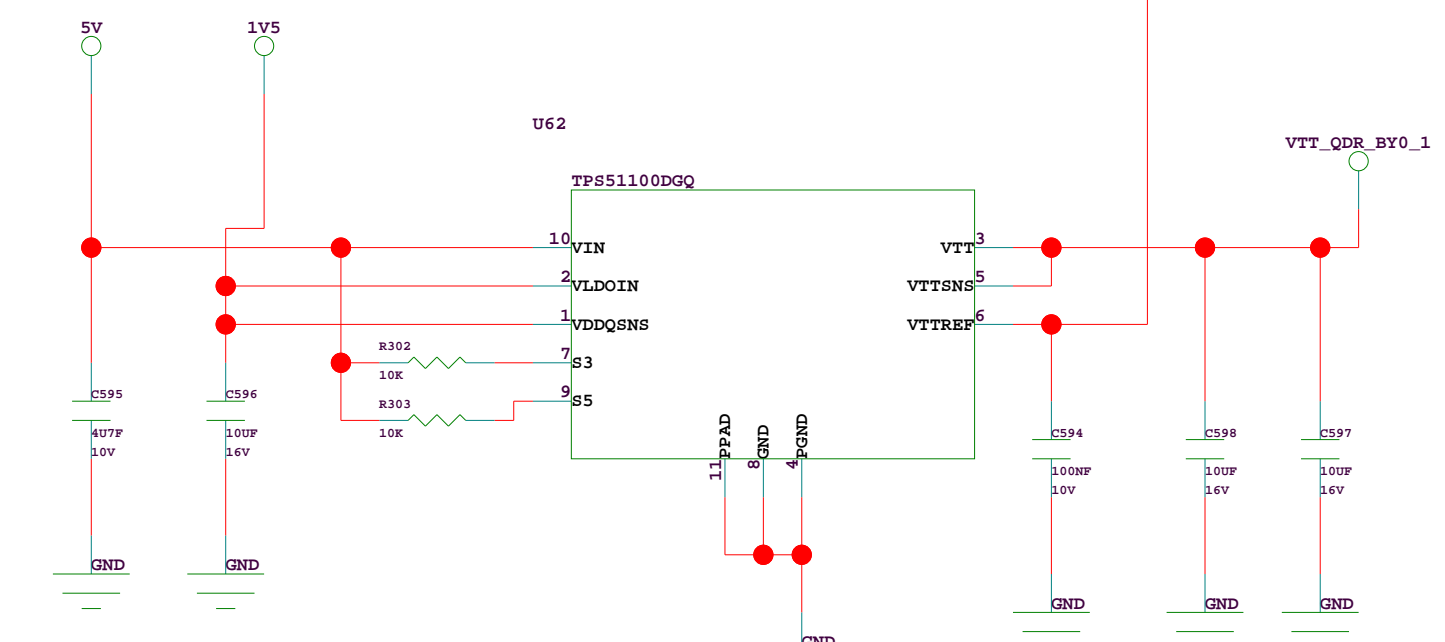
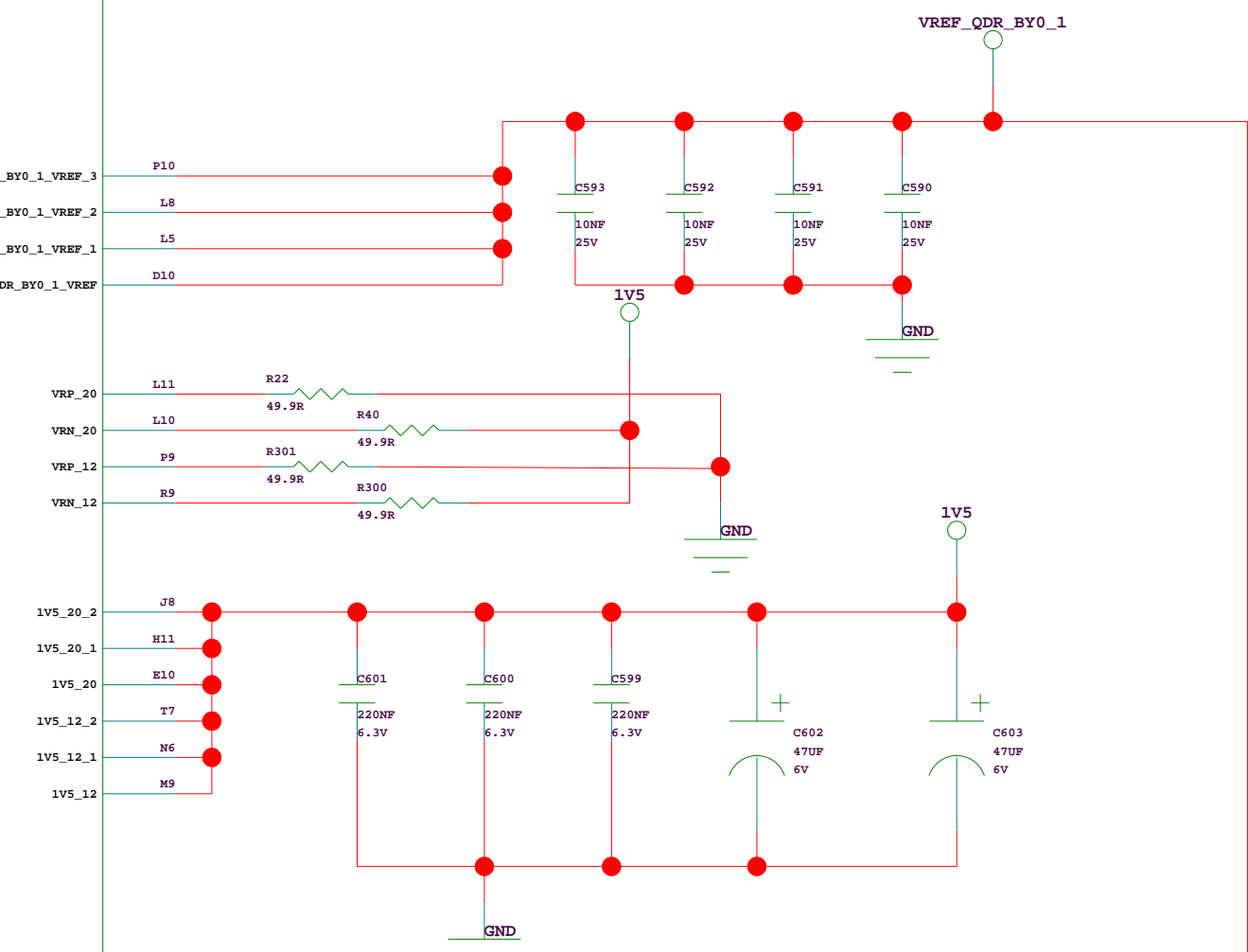
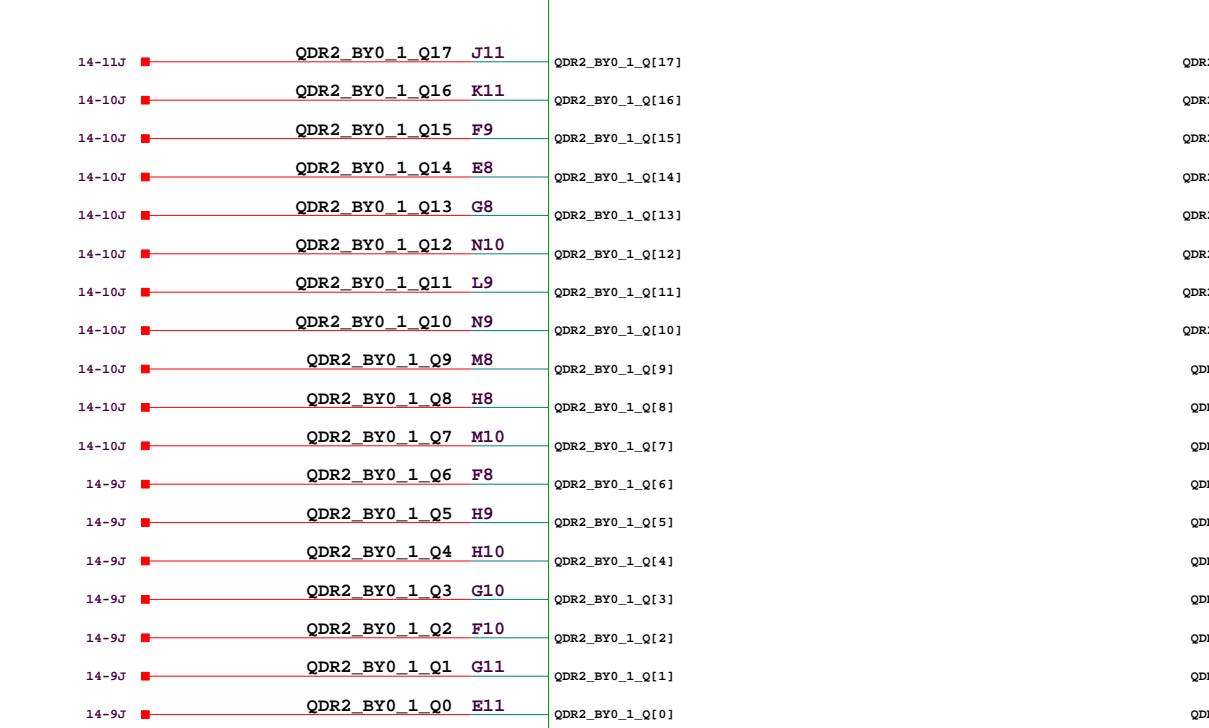
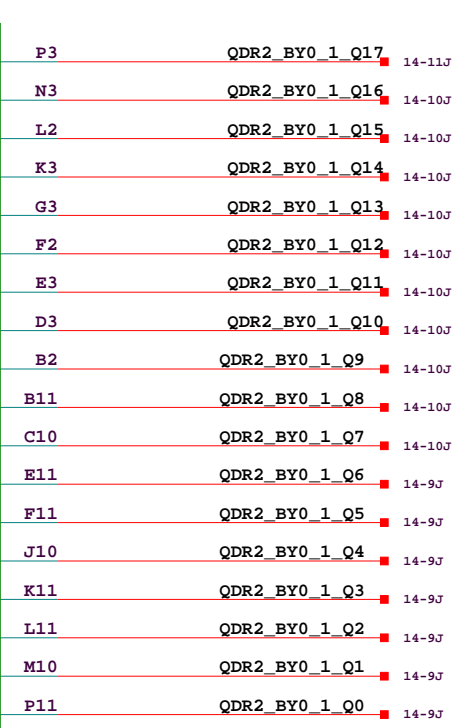
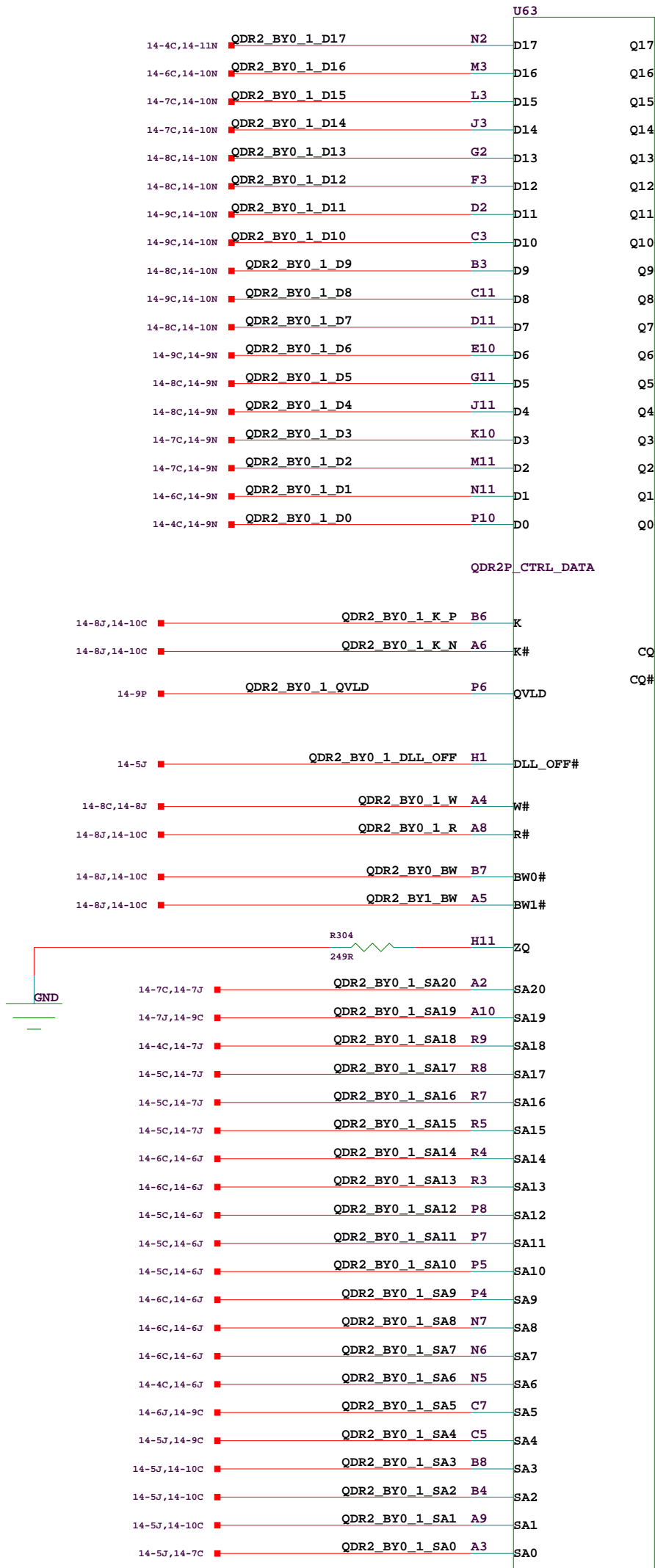
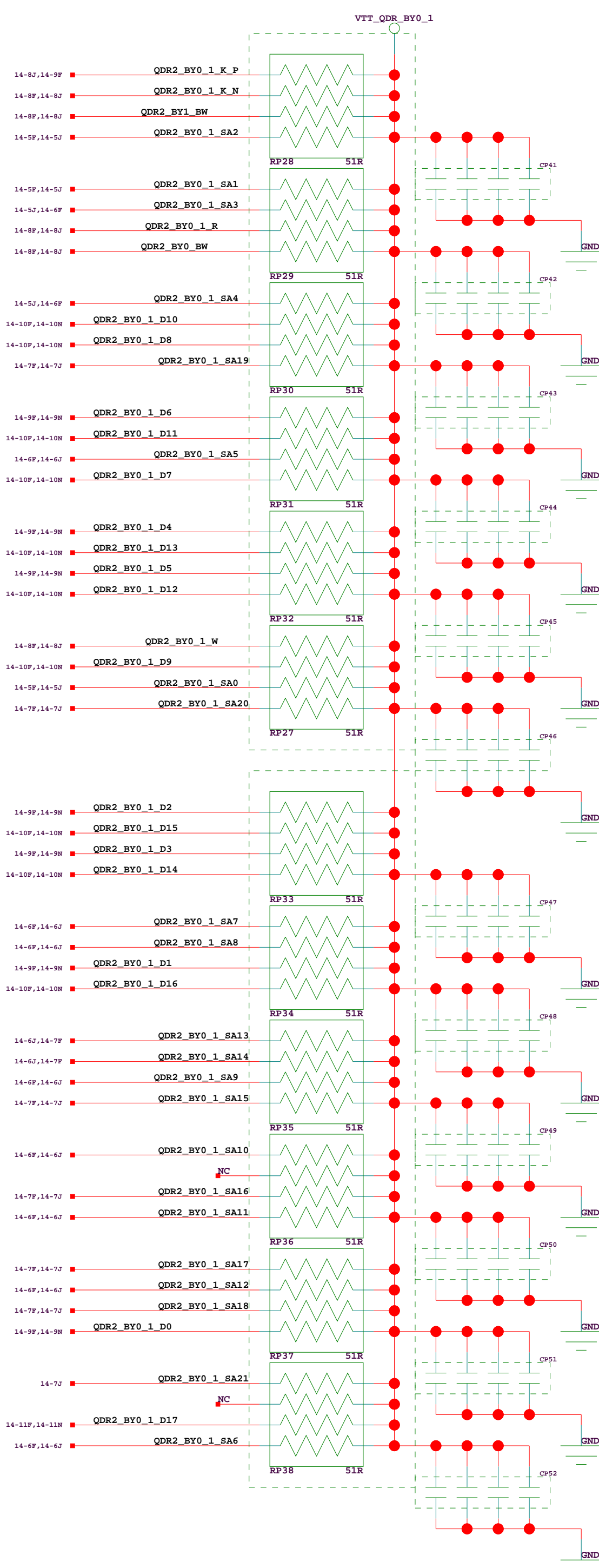




ROACH/iBOB2		ROACH_DIFF_GPIO	
COLLABORATORS: CASPER GROUP, UC BERKELEY NIKO, ROCOMBO MAREKAT, CASP TOWN http://casper.berkeley.edu/		SOC NO NRP-ADM-XXX-ED-0001 DESCRIPTION RECONFIGURABLE OPEN ARCHITECTURE SW	REVISION A
11-11-2008_14:32		DESIGNS: F KAPP	APPR:
PATH	PATH	CHECKED: K BAUMENISTER	SHEET 12 OF 2

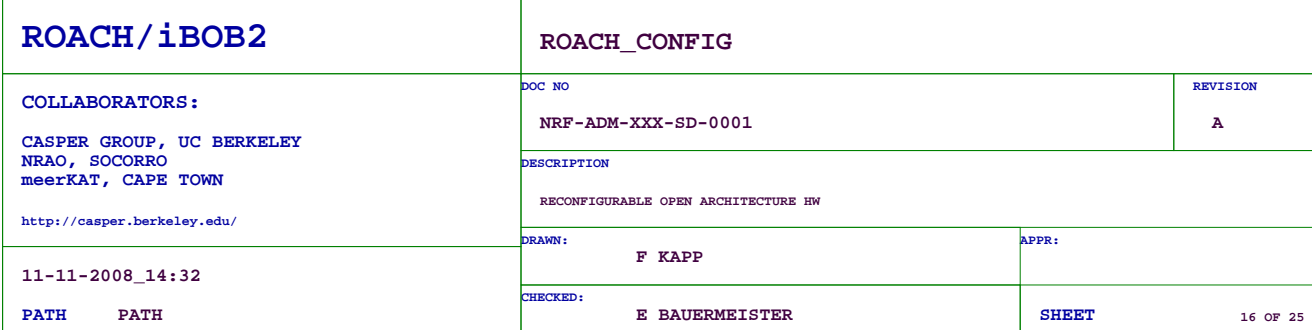
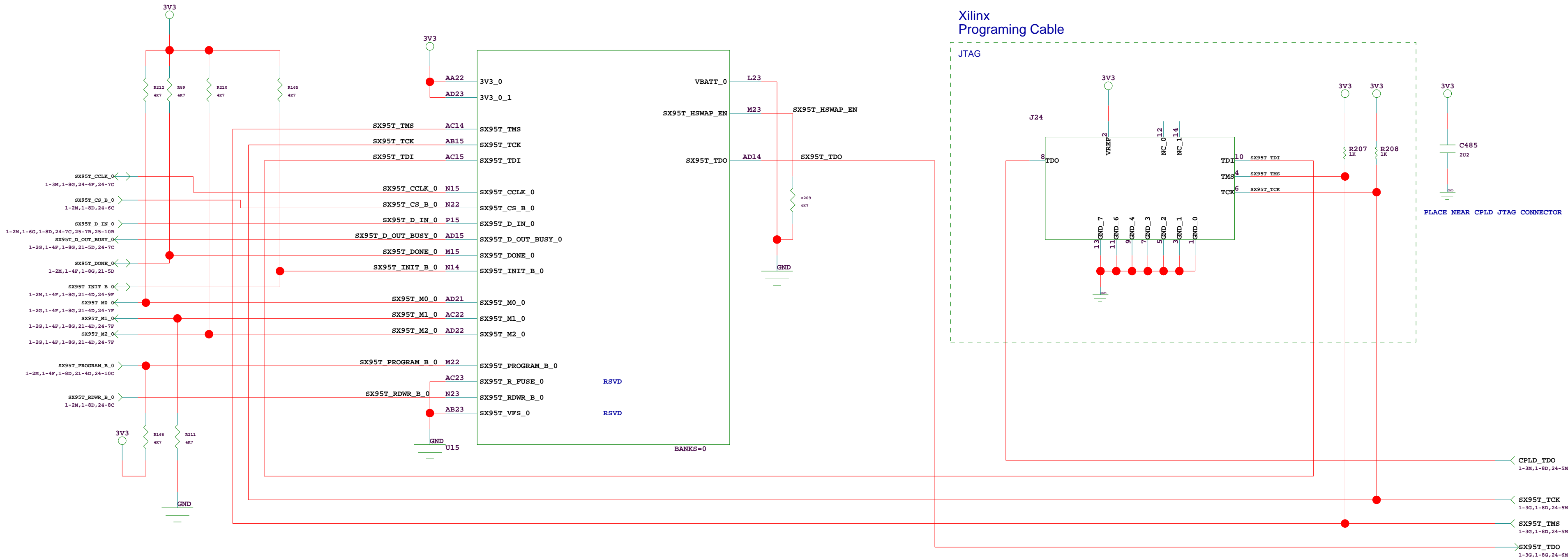


ROACH/iBOE2			ROACH_GPIO_MISC	
COLLABORATORS:			DOC NO	REVISION
CASPER GROUP, UC BERKELEY			NRF-ADM-XXX-BD-0001	A
DESCRIPTION			11-11-2008_14:32	
NRAO, SOONERO			DESIGNED BY	DATE
MAMERAT, CAPE TOWN			F KAPP	11-11-2008_14:32
RECONFIGURABLE OPEN ARCHITECTURE HW			CHECKED BY	SHEET
PATH			R BAUERMISTROT	13 OF 25

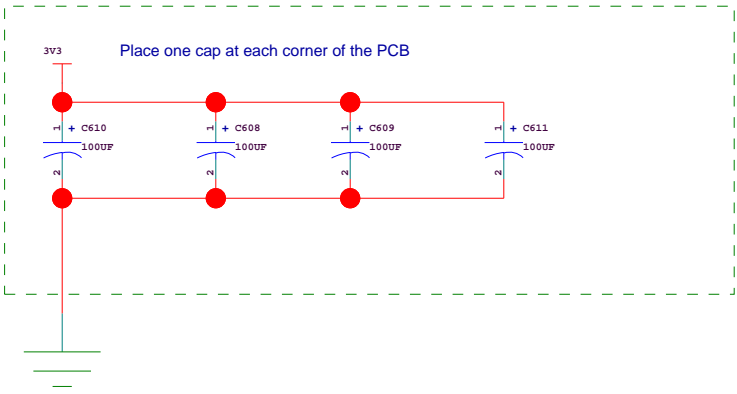


ROACH/iBOB2		ROACH_QDR2P_BY0_1	
COLLABORATORS:		DOC NO:	REVISION
CASPER GROUP, UC BERKELEY ROAD, GROUND MOUNTAIN, CAE TOWN		REF-ADM-XXX-ED-0001	A
http://casper.berkeley.edu/		DESCRIPTION:	
		RECONSTRUCTABLE OPEN ARCHITECTURE SW	
11-11-2008_14:32		DRAWN:	APPROVED:
PATH PATH		P KAPP	
		CHECKED:	SHEET
		E BAUMERMEISTER	14 OF 2

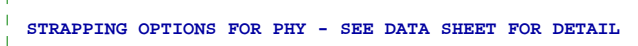
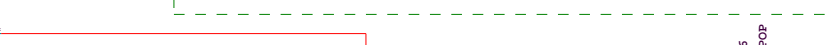
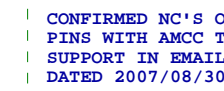
VALID CONFIGURATION MODES			
Configuration Mode	M[2:0]	Bus Width	CCLK Direction
Master Serial	000	1	Output
Master SPI	001	1	Output
Master BPI-Up	010	8, 16	Output
Master BPI-Down	011	8, 16	Output
Master SelectMAP	100	8, 16	Output
JTAG	101	1	Input (TCK)
Slave SelectMAP	110	8, 16, 32	Input
Slave Serial	111	1	Input



	A	B	C	D	E	F	G	H	J	K	L	M
7												
6			REMOVED 3V3 GENERATION									
5												
4		REMOVED +12V GENERATION		REMOVED -12V GENERATION								
3												
2												
1		REMOVED +1V GENERATION		REMOVED +2V5 GENERATION								
0												
	A	B	C	D	E	F	G	H	J	K	L	M

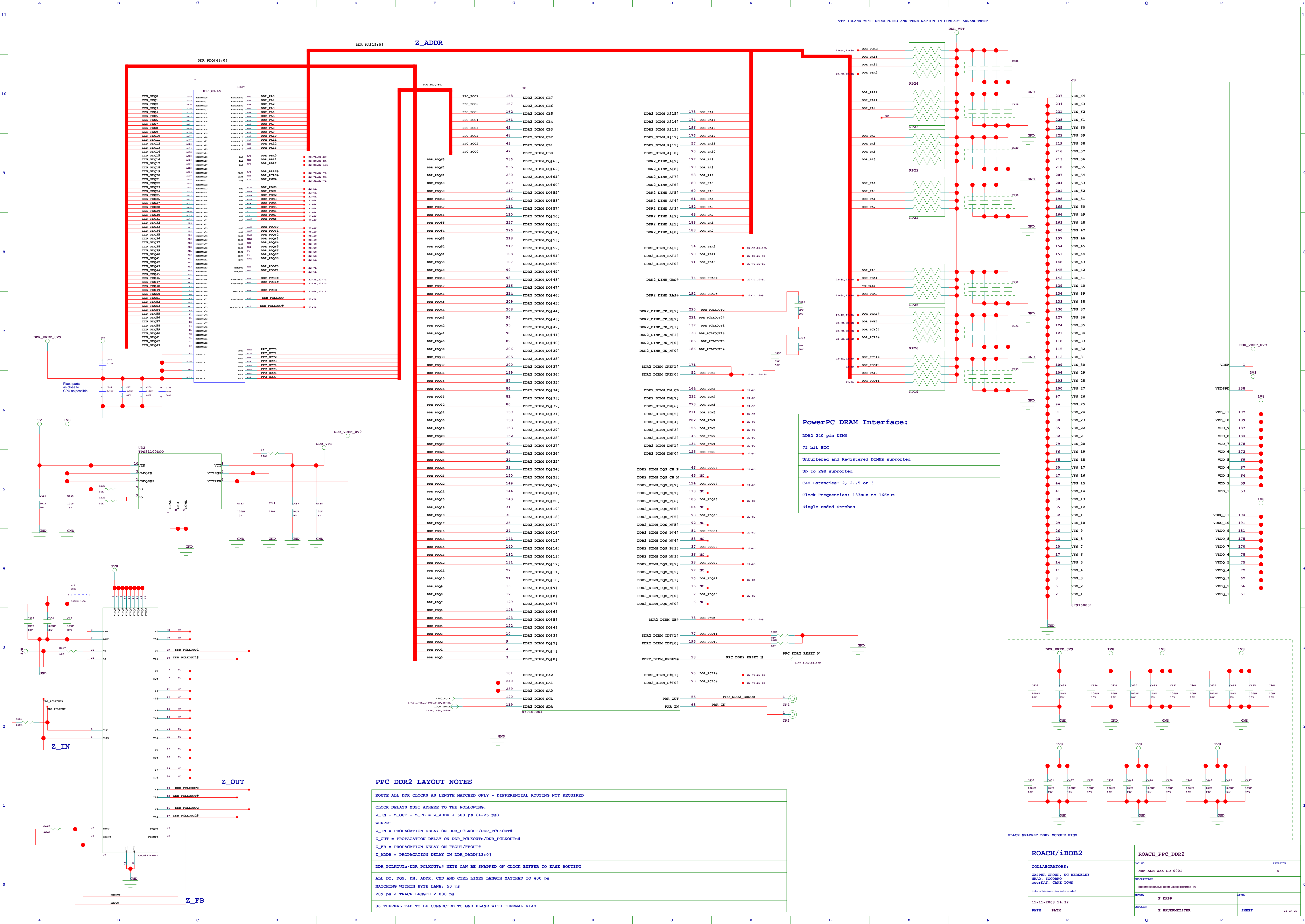


ROACH/iBOB2	ROACH_PPC_POWER_2	
COLLABORATORS: CASPER GROUP, UC BERKELEY NRAO, SOCORRO meerKAT, CAPE TOWN http://casper.berkeley.edu/	DOC NO NRF-ADM-XXX-SD-0001	REVISION A
	DESCRIPTION RECONFIGURABLE OPEN ARCHITECTURE HW	
	DRAWN: F KAPP	APPR:
11-11-2008_14:32	CHECKED: E BAUERMEISTER	SHEET 18 OF 25
PATH	PATH	



JUMPER DEFAULTS

ROACH/iBOB2BOACH BBC ETH1



Critical Placement and Route
Clock Rules:

Clock Rules:
CLK_UART_11_0592MHz = as short as possible
CLK_SYS_33MHz = as short as possible
CLK_CPLD_33MHz = CLK_SYS_33MHz

Critical Placement and Route
Clock Rules:

Clock Rules:
CLK_PC13_6633MHz = as short as possible
CLK_PC12_6633MHz = CLK_PC13_6633MHz
CLK_PC11_6633MHz = CLK_PC12_6633MHz + 2.5°
CLK_GETH0_25MHz = as short as possible
CLK_GETH1_25MHz = CLK_GETH0_25MHz
CLK_CPLD_50MHz = as short as possible
CLK_USB2_0_48MHz = as short as possible
CLK_USB2_0_12MHz = as short as possible

TRACE & JTAG CONNECTORS

Critical placement and routing
of the Trace connector and nets.
Up to CPU frequency!

TRACE PORT

ROACH/iBOE2

ROACH_PPC_TST_CLK_IO

COLLABORATORS:
CASPER GROUP, UC BERKELEY
NRAO, SOONERO
BAMERAT, CAPE TOWN

DOC NO
NRF-ADM-XXX-BD-0001

REVISION
A

DESCRIPTION
RECONFIGURABLE OPEN ARCHITECTURE HW

DESIGN:
F KAPP

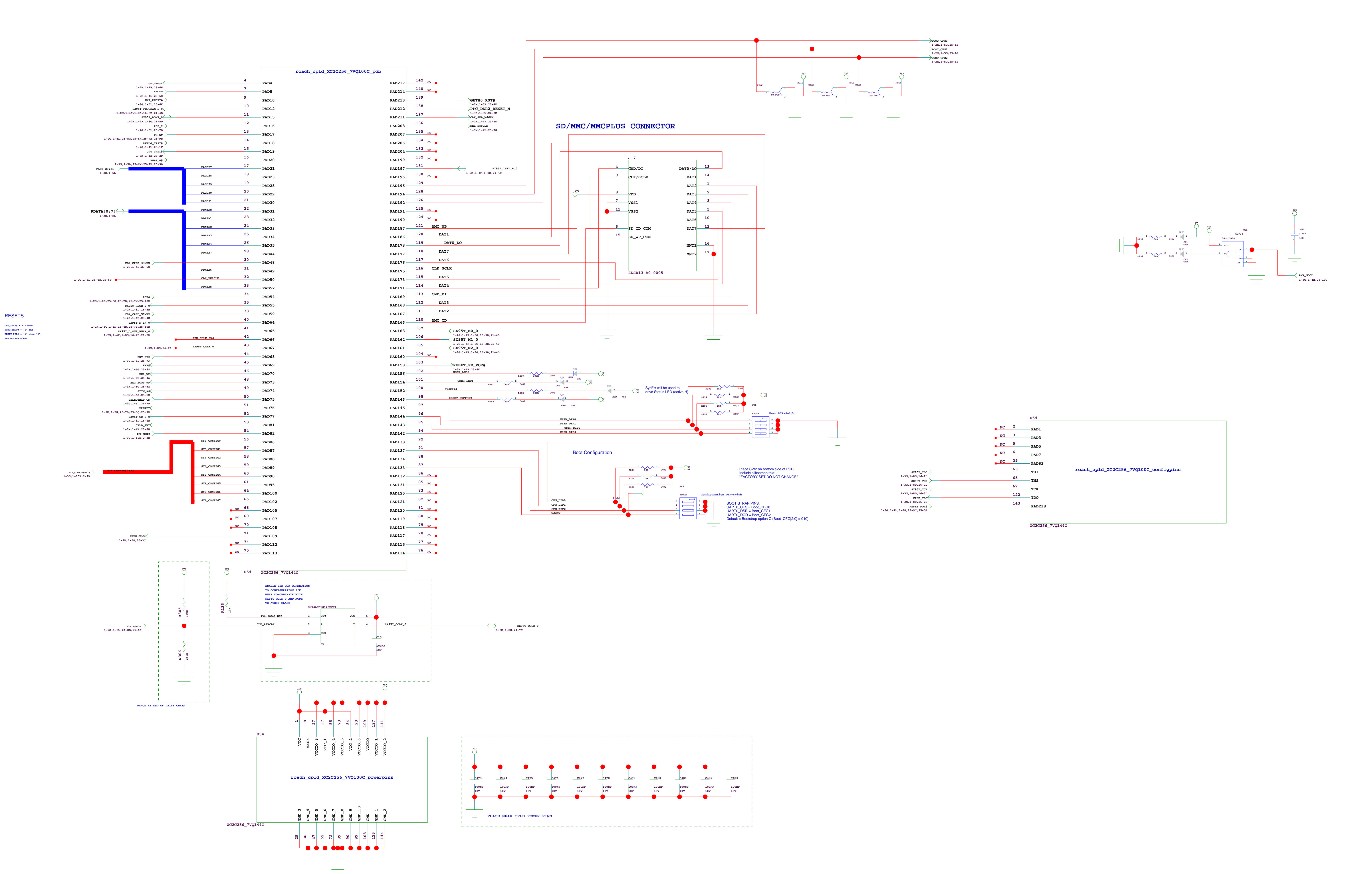
APP:

11-11-2008_14:32

CHECKED:
R BAUERNBIESTER

SHEET

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ROACH/IBOB2		ROACH_PPC_CPLD	
COLLABORATORS:		DOC NO	REVISION
CASPER GROUP, UC BERKELEY NRAD, SOCCORO BHEERAT, CAPE TOWN		NRP-ADM-XXX-ID-0001	A
DESCRIPTION			
http://casper.berkeley.edu/		RECONSTRUCTIBLE OPEN ARCHITECTURE HW	
11-11-2008, 14:32		NAME:	APP:
PATH PATH		CHECKED:	
		E BAUERMEISTER	SHEET
			24 OF 25

