## VIRTEX5 \_\_\_\_\_\_ PPC\_RESET SYS\_CONFIG[0:7] 1-2G,2-2R,24-6B ROACH\_TRANSCEIVERS2\_3 SX95T\_DXN SX95T\_DXP MONITOR\_INT I2C0\_33\_DATA PS\_ON# PS\_ON# ARRIVAL MONITOR\_INT L2C0\_33\_DATA PS\_ON# 1-3L,2-4L,23-6H ROACH\_DDR2\_DIMM 1-5L,2-2P,25-5A 1-8E,2-2M,3-10B 1-8E,2-1M,3-9B 1-8E,2-3M,3-6C 1-8E,2-2B,3-6C 1-8E,2-2B,3-2H 1-8E,2-2B,3-2H 1-3H,2-1P,23-7M I2C0\_SCLK FAN2\_SENSE FAN1\_SENSE 1-8B,2-8B,3-8G FAN3\_SENSE FAN1\_CONTROL LOAD\_RES\_OFF 1-8B,2-3M,3-10B 1-8B,2-6B,3-5B 2V5\_TRACK 2V5\_INHIBIT 2N3\_CONTRACK 1-8E,2-2B,3-2R T1V 1-8B,2-6B,3-3B VIRTEX5 CLOCKS ZV5\_INHIBIT FAN3\_CONTROL FAN2\_CONTROL MGT\_AVTTX\_EN MGT\_AVCCPLL\_EN MGT\_AVCC\_EN LV8\_INHIBIT MGT\_AVCC\_EN LV8\_INHIBIT MGT\_AVCC\_EN LV8\_INHIBIT MGT\_AVCC\_EN LV8\_INHIBIT MGT\_AVCC\_EN LV8\_INHIBIT 1-8E,2-1B,3-10R 1-8E,2-4A,3-7C 1-9Q,2-0B,10-7P 1-9Q,2-0B,10-4G 1-80,2-0B,10-7G 1-8E,2-8B,3-7C 1-8E,2-6B,3-6C 1-8B,2-2M,3-9B 1-8B,2-2M,3-10B 1-8L,2-1M,10-5B ROACH\_TRANSCEIVERS\_PSU 5V\_ATX 1-9E,2-1M,10-8K 1-9E,2-1M,10-8B 1-9E,2-1M,10-5B MGT\_AVCC\_PG MGT\_AVTTX\_PG MGT\_AVTTX\_PG MGT\_AVCCPLL\_PG MGT\_AVCCPLL\_PG MGT\_AVCC\_PG MGT\_AVTTX\_PG MGT\_AVCCPLL\_PG 1-9L,2-1M,10-8B MGT\_AVCC\_EN 1-9B,2-0B,10-7P ROACH\_ADC\_0 1-9L,2-1M,10-8K 1-9B,2-0B,10-4G 1V8\_INHIBIT 1V8\_INHIBIT V5 DDR2 MEMORY MGT\_AVTTX\_EN MGT\_AVCCPLL\_PG 1-8B,2-1B,3-1J 1-8B,2-0B,10-7G PWR\_OK -12V\_ATX 1V5\_INHIBIT 1V5\_INHIBIT 1-8B,2-1B,3-4J 1V0\_INHIBIT 1V0\_INHIBIT \_\_\_\_\_\_\_\_ 1-8B,2-0B,3-9J GIGABIT TRANSCEIVERS ROACH\_PSU ROACH\_DIFF\_GPIO 1-9E,2-6B,3-5B 1-9E,2-3M,3-10B 1-9E,2-2B,3-8G 1-9E,2-2M,3-10B 1-9E,2-2M,3-9B LOAD\_RES\_OFF FAN1\_CONTROL PS\_ON# 1-8B,2-6B,3-6C 3V3\_ATX 5V\_ATX FAN2\_CONTROL FAN3\_CONTROL 1-8B,2-8B,3-7C ROACH\_ADC\_1 QDR2\_TDI QDR2\_TCK QDR2\_TMS QDR2\_BY0\_1\_SYS\_RST\_N 1-8E,2-0B,3-9J 1-8E,2-1B,3-4J 1-8E,2-1B,3-1J 1-9E,2-6B,3-3B 1-9E,2-1B,3-1B 1-9B,2-2M,3-10B 1V0\_INHIBIT 1V5\_INHIBIT QDR2\_TDI QDR2\_TCK QDR2\_BY0\_1\_TDO 1-9B,2-1M,3-9B 1V8\_INHIBIT 2V5\_TRACK 1-9B,2-2B,3-5R QDR2\_TMS QDR2\_BY0\_1\_SYS\_RST\_N 2V5\_INHIBIT 1-9B,2-2B,3-2R TBD: QDRII+ JTAG?? V5 DIFFERENTIAL GPIO ROACH\_QDR2P\_BY2\_ QDR2\_BY0\_1\_TDO QDR2\_TMS QDR2\_TCK QDR2\_BY2\_3\_SYS\_RST\_N QDR2\_BY2\_3\_TDO POWER SUPPLY AND MONITORING ZDOK/ADC INTERFACE . \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ , ROACH\_GPIO\_MISC ROACH\_5V\_POWER 1-1G,1-3F,16-3B,21-4D,24-5J 1-1G,1-3F,16-3B,21-4D,24-5J QDRII+ MEMORY SX95T\_M0\_0 1-1M,16-4A,24-8F 1-3L,16-2L,23-6N 1-3L,16-2L,23-6N 1-3L,16-2L,23-6N 1-1M,16-3B,24-48F 1-1M,1-3F,16-3B,21-4D,24-8F 1-1M,16-4B,24-9F 1-1M,16-4B,24-9F | SX95T\_DONE\_0 | SX95T\_DONE\_0 | SX95T\_CCLK\_0 | SX95T\_CCLK\_0 | SX95T\_D\_OUT\_BUSY\_0 | SX95T\_INIT\_B\_0 | SX95T\_INIT\_B\_0 SX95T\_DONE\_0 SX95T\_TCK 1-1M,1-3F,21-5D,24-8F SX95T\_TMS SX95T\_TDI 1-2M,24-9F 1-1G,1-3F,16-4B,21-5D,24-8F SX95T\_RDWR\_B\_0 SX95T\_PROGRAM\_B\_0 1-1M,1-3F,21-4D,24-8F \_\_SX95T\_CS\_B\_0 VIRTEX5 CONFIGURATION V5 SE GPIO & MISCELLANEOUS V5 POWER PPC ROACH\_PPC\_NVM\_SERIAL ROACH\_PPC\_POWER\_1 1-3H,23-7N,25-8Q 1-2G,24-8C,25-7B 1-3L,23-7G,25-3D CLK\_UART\_11.0592MHZ CLK\_UART\_11.0592MHZ 1-1G,24-10L,25-3B M66EN 1-2M,24-6C,25-3A EE1 WP 1-2M,24-6C,25-1B STTM AS 25-1B 1-3H,23-6M,25-2B M66EN EE1\_WP SCPCLK STTM\_ALERT SCPDO SCPDO POE# FRY BY# CLK\_PERCLK PWBE\_0# PR\_W# PCS\_2 PDATA[0.31] PDATA[0.31] STTM AS **■** 25-0B ROACH\_PPC\_POWER\_2 1-2M,24-6C,25-1B 1-2G,1-3L,23-9J,24-8C,25-5G 1-1M,24-6C,25-5J 1-2M,24-6C,25-5J 1-1M,24-9M,25-1J 1-1M,24-9M,25-1J 1-1M,24-9M,25-1J 1-1M,24-9M,25-1J RESET\_POR# 1-1G,24-8C,25-5G,25-7B,25-7M,25-10B FWP# EE2\_BOOT\_WP BOOT\_CFG0 BOOT\_CFG1 BOOT\_CFG2 1 150X288MIL 1-1G,24-7C,25-6F 1-2G,24-8C,25-6M,25-7B,25-9B 1-1G,24-8C,25-5G,25-6M,25-7B,25-9B 1-1M,24-9M,25-1J 1-1M,24-5C,25-3J RESET\_CPLD# 1-1G,24-8C,25-7B PDATA[0:31] RESET\_CPLD# 1-2M 1-2G,24-10B,25-10B ROACH\_PPC\_PCI 1-2G,24-5J,25-6F 1 150X288MIL

ROACH\_PPC\_TST\_CLK\_IO

GETHO INT#

STTM\_ALERT

RESET PB POR#

PWR\_GOOD
CPU\_TRST#
CLK\_SEL\_M66EN
SEL\_SYSCLK

ROACH\_PPC\_CPLD

SYS\_CONFIG[0:7]

PPC RESET

PWR\_GOOD EXT\_RESET#

RESET\_POR#

PADD[27:311

SELECTMAP\_CS FRY\_BY#

PCS 2

M66EN SX95T\_M0\_0 SX95T\_M1\_0

SX95T\_M2\_0

SX95T\_D\_OUT\_BUSY\_0

CLK\_TMRCLK

V5\_INT#

1-4E,20-4E,23-7N
1-9E,2-1P,23-7N
1-5L,23-7N,25-80
1-5L,23-6M,25-2B
1-7G,16-2L,23-6M
1-22,23-8E,24-8C
1-2G,23-10G,24-8K
1-2L,23-5E,24-7C
1-1M,23-7G,24-7C
1-1M,23-7G,24-7C
1-1M,23-7G,24-7C
1-1M,23-6H,24-7C

1-9E,2-2R,24-6B

1-3L,1-5G,23-9J,24-8C,25-5G RESET POR#

1-3L,23-4G,24-7C CLK CPLD SUMHZ
1-4L,24-8C,25-5G,25-6K,25-7B,25-7B,
1-5L,24-8C,25-5G,25-7B,25-7K,25-10B
1-4L,24-8C,25-7B
1-4L,24-8C,25-7B
1-3F,1-7G,16-4B,21-5D,24-8F
1-3F,1-7G,16-3B,21-4D,24-5D
1-3F,1-7G,16-3B,21-4D,24-5D
1-3F,1-7G,16-3B,21-4D,24-5D
1-3F,1-7G,16-3B,21-4D,24-5D
1-3F,1-7G,16-3B,21-4D,24-5D
1-3F,1-7G,16-3B,21-4D,24-5D
1-3F,1-7G,16-3B,21-4D,24-5D

1-4L,24-8C,25-6M,25-7B,25-9B PWBE\_0#

1-4L,24-10B,25-10B

1-9E,2-2R,24-7C PPC\_RESET

1-3H,23-10G,24-8K PWR GOOD 1-4L,24-5J,25-6F EXT RESET#

1-5L,24-8C,25-7B SELECTMAP\_CS

1-3L,23-6G,24-7C
1-3L,23-6G,24-7C
1-3L,23-1F,24-7C
1-4L,24-7C,25-6F
1-3L,23-4G,24-7C
1-5MHZ
1

1-4L,24-6C,25-7J FRY\_BY#

1-9E,2-6L,23-6H

1-9E,2-4L,23-6H

1-7C,16-2L,23-6N

1-7C,16-2L,23-6M 1-7C,16-2L,23-6N

1-1G,23-1F,24-7C

1-4B,20-4E,23-5G 1-3B,21-2C,23-4G 1-1G,23-4G,24-7C

1-1G,23-6H,24-7C

1-1G,23-6G,24-7C

1-2G,1-5G,23-9J,24-8C,25-5G

1-4B,20-4E,24-5C 1-2B,22-3K,24-5J

1-3H,23-8E,24-8C

1-5G,24-6C,25-1B

1-4G,24-6C,25-5A

1-5G,24-6C,25-3A

1-3H,23-2F,24-7C

1-3H,23-7G,24-7C

1-3H,23-5D,24-7C 1-3H,23-6H,24-7C

1-7C,16-3B,24-8F 1-4G,24-6C,25-8J

1-4G,24-5C,25-3J 1-8L,14-5J,24-6J 1-3F,1-7G,21-4D,24-8F

1-6C,16-4B,24-9F 1-4G,24-9M,25-1J

1-4G,24-9M,25-1J —■ 1-4G,24-9M,25-1J

1-3F,1-7G,21-5D,24-8F

1-3F,1-7C,16-3B,21-4D,24-8F 1-7C,16-4A,24-8F

PPC\_THERMONB PPC\_THERMONB

GPIO44
SX95T\_TDI
SX95T\_TCK
SX95T\_TCK
SX95T\_TMS
RESET\_POR#
RESET\_POR#
RESET\_POR#
RESET\_POR#
RESET\_POR#

DEBUG\_TRST#

CLK\_GETH0\_25MHZ
CLK\_USB2.0\_48MHZ
CLK\_CPLD\_50MHZ
CLK\_CPLD\_50MHZ

SYSERR

CLK\_UART\_11.0592MHZ

CLK\_CPLD\_33MHZ

CLK\_CPLD\_33MHZ

GETHO\_RST#

PPC\_DDR2\_RESET\_N

QDR2\_BY2\_3\_SYS\_RST\_N

QDR2\_BY2\_3\_SYS\_RST\_N

RESET\_PB\_POR#
SX95T\_CCLK\_0
SX95T\_CCLK\_0

PDATA[0:71

ROACH\_PPC\_ETH1

CLK\_GETH0\_25MHZ

ROACH\_PPC\_USB

ROACH\_PPC\_DDR2

PPC\_DDR2\_RESET\_N

CONTAINS GPIO TO CONFIG INTERFACE

GETHO\_RST#

GMCMDIO GMCMDCLK GETH0\_INT#

SX95T\_PROGRAM\_B\_0

SX95T\_M1\_0
SX95T\_M2\_0
SX95T\_M2\_0
SX95T\_M2\_0

20-3C,20-4D

20-3C,20-4D 1-3H,20-4E,23-7N

1-1M,1-7G,21-5D,24-8F 1-1M,1-7G,21-4D,24-8F

1-1G,1-7G,16-3B,21-4D,24-5J 1-1G,1-7G,16-3B,21-4D,24-5J

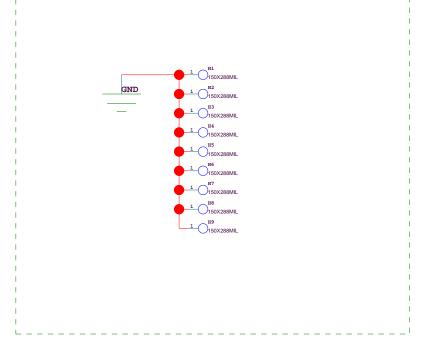
1-1M,1-7C,16-3B,21-4D,24-8F

GMCMDIO

SX95T\_PROGRAM\_B\_0

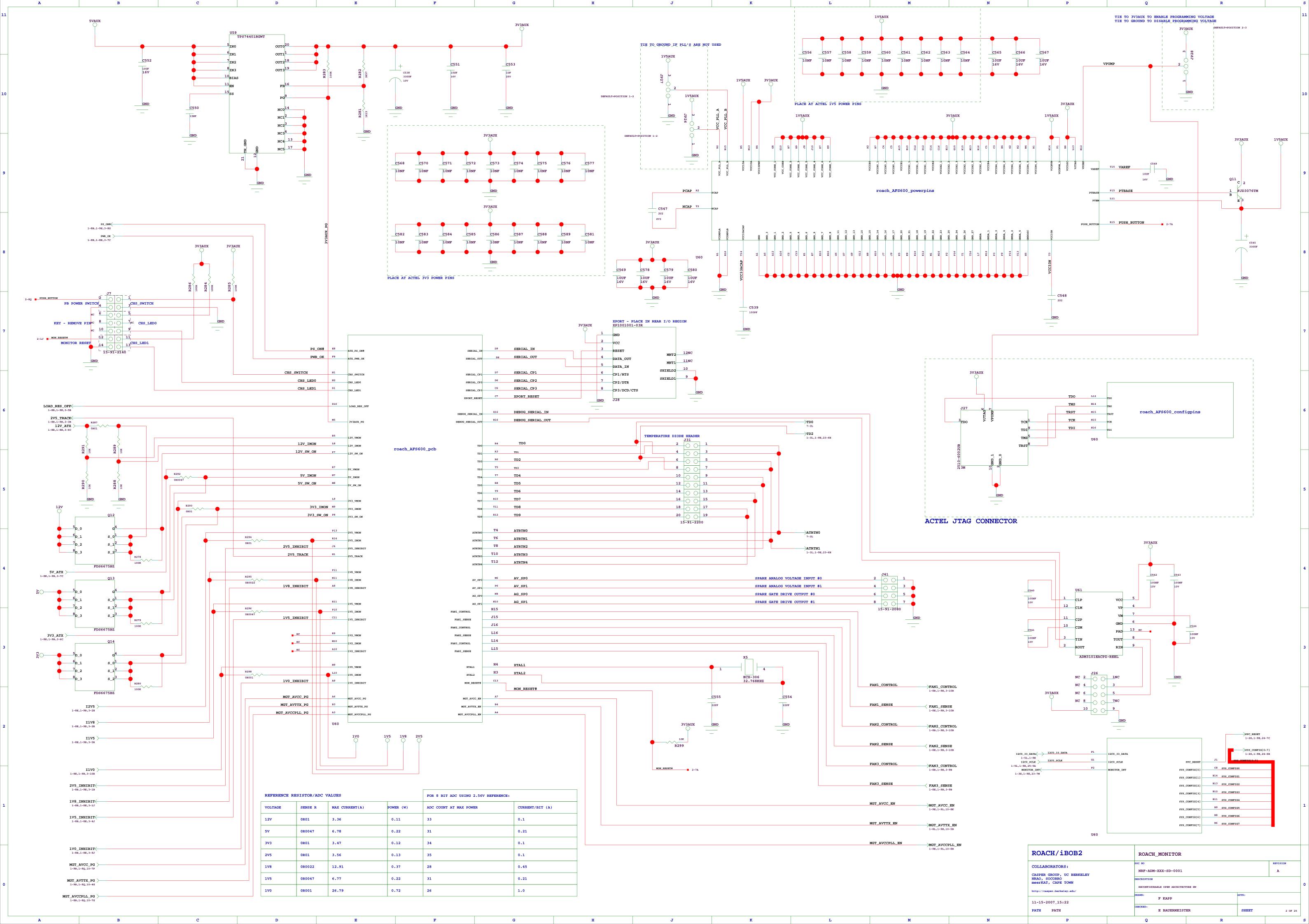
GMCMDCLK GETH0\_INT#

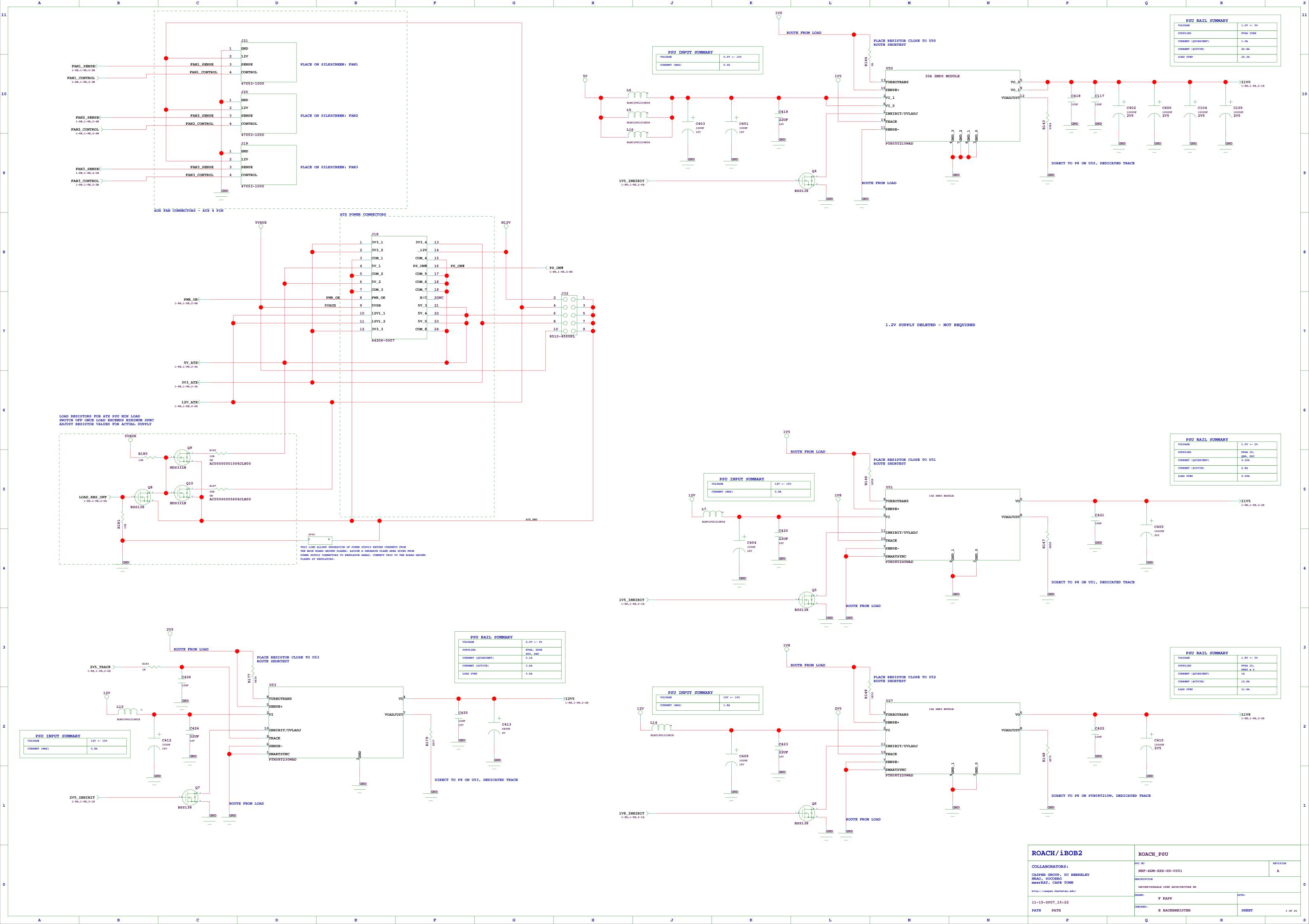
1-2M,22-3K,24-5J PPC\_DDR2\_RESET\_N

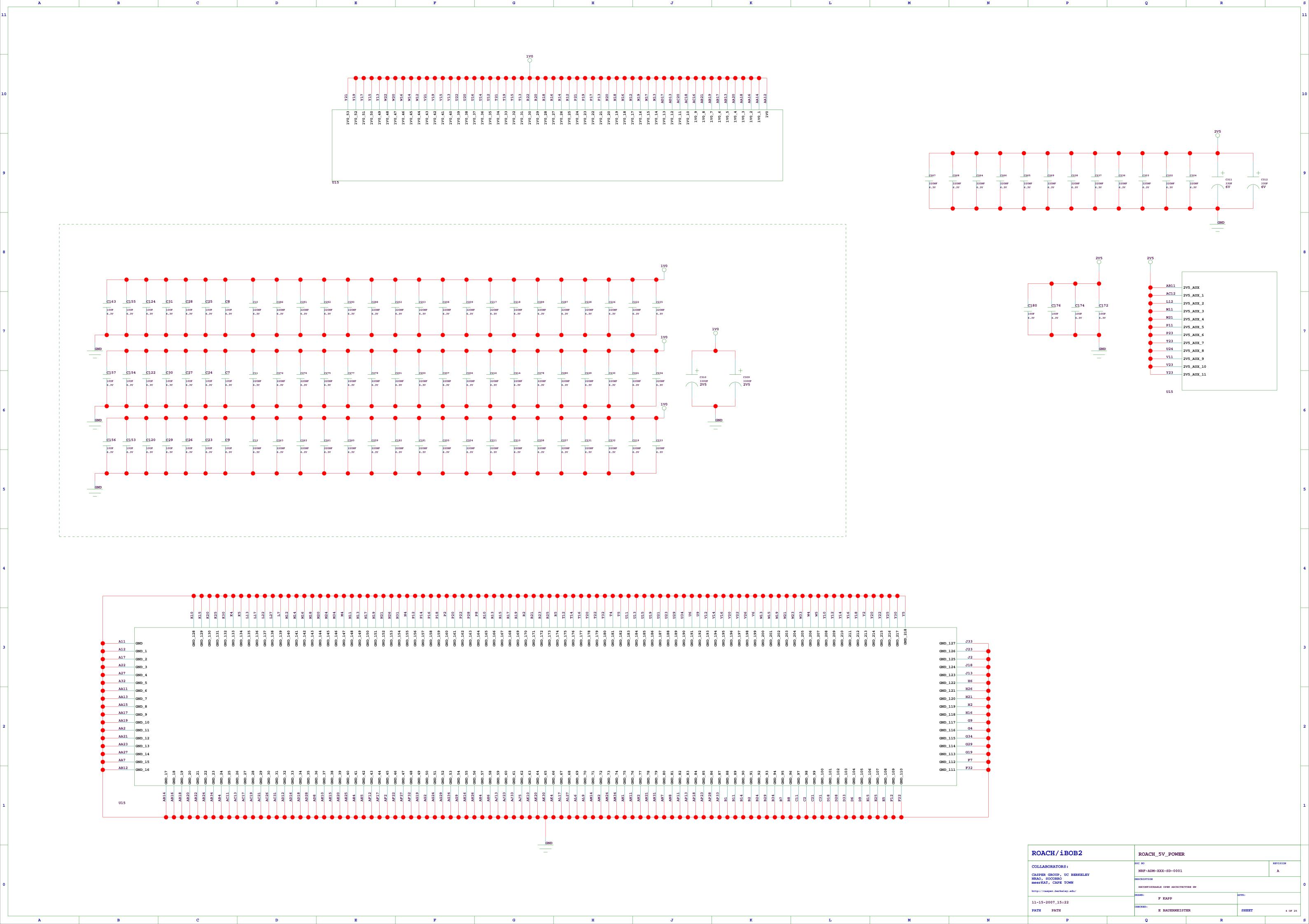


CONTRIBUTORS ETIENNE BAUERMEISTER HENRY CHEN STEVE DURAND FRANCOIS KAPP ALAN LANGMAN GEORGE PECK MIKE REVNELL HAYDEN SO DAN WERTHIMER

ROACH/iBOB2	ROACH_TOP			
COLLABORATORS:	DOC NO		REVISION	
CASPER GROUP, UC BERKELEY NRAO, SOCORRO meerKAT, CAPE TOWN http://casper.berkeley.edu/	NRF-ADM-XXX-SD-0001		A	
	DESCRIPTION			
	RECONFIGURABLE OPEN ARCHITECTURE HW			
		APPR:		
11-15-2007_15:22	F KAPP			
מארט פארט	CHECKED:	CUPPT		

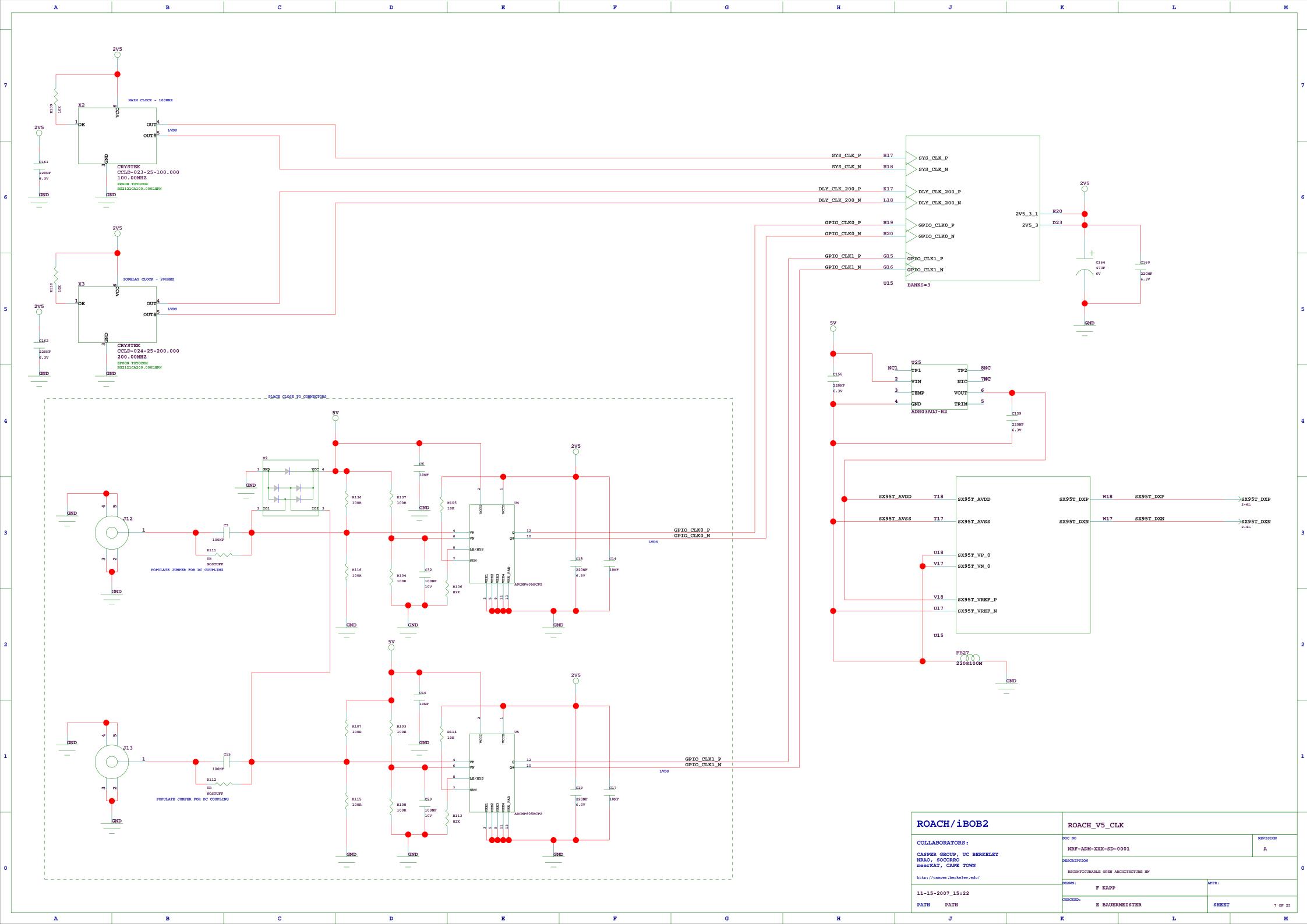


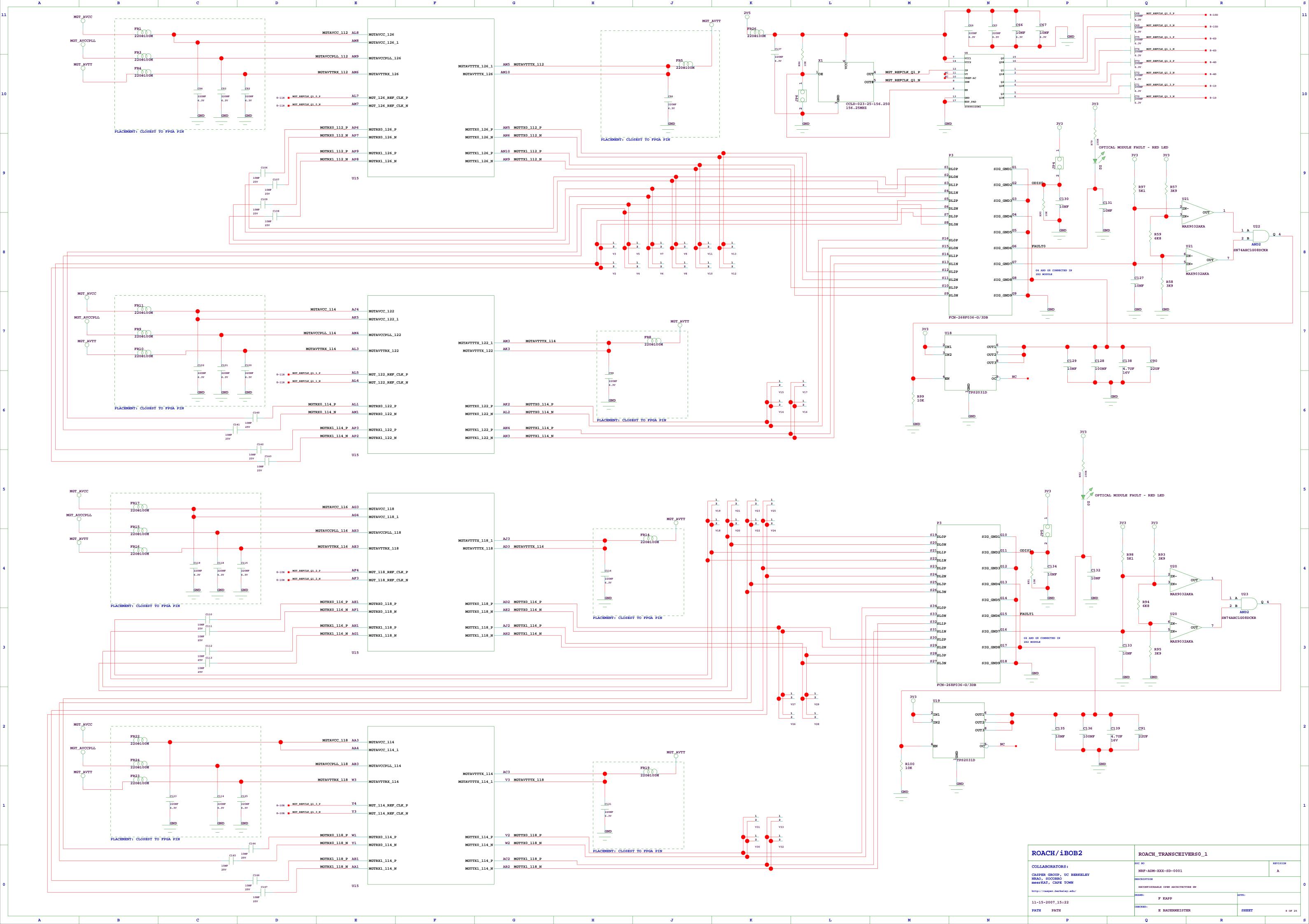


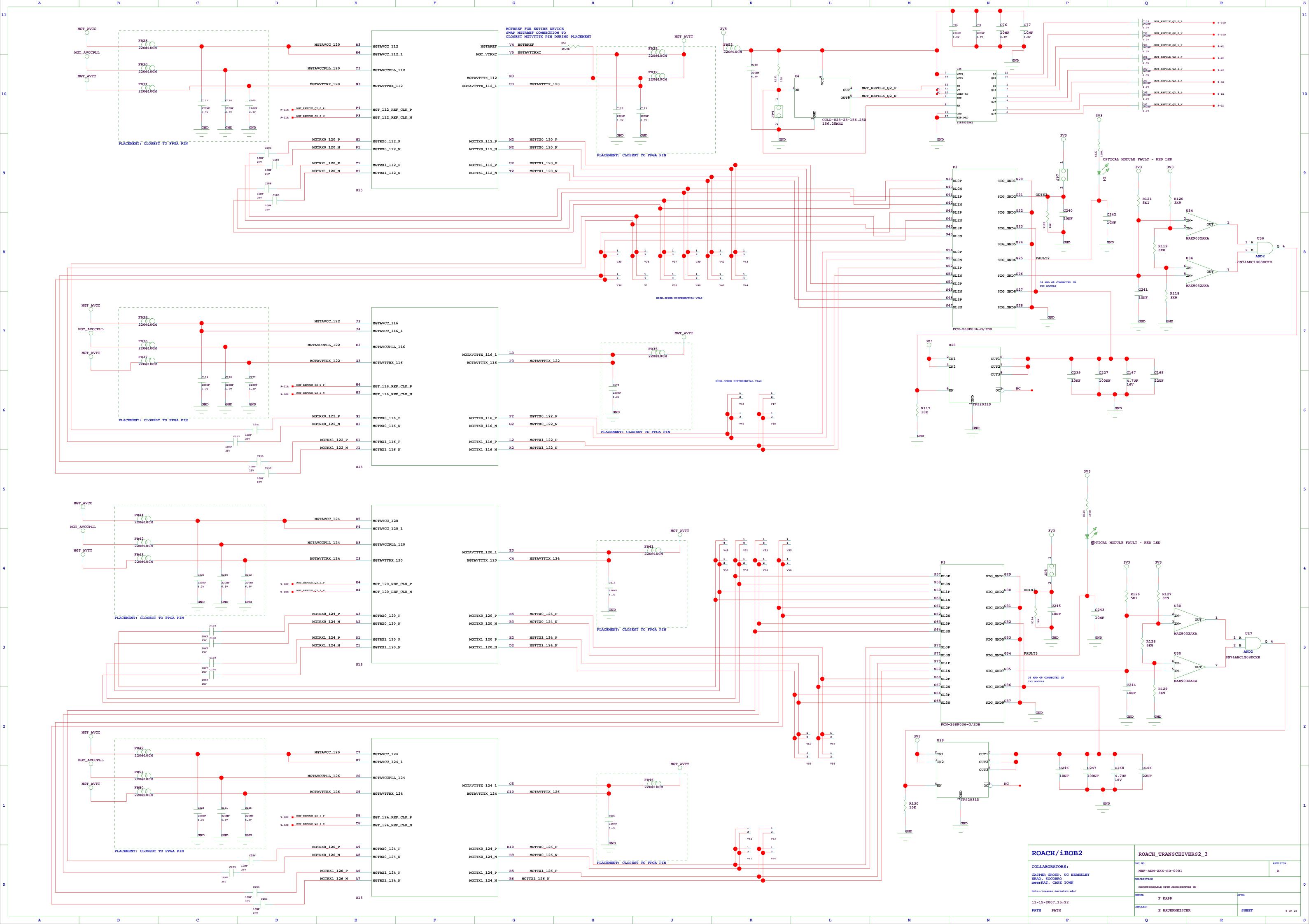


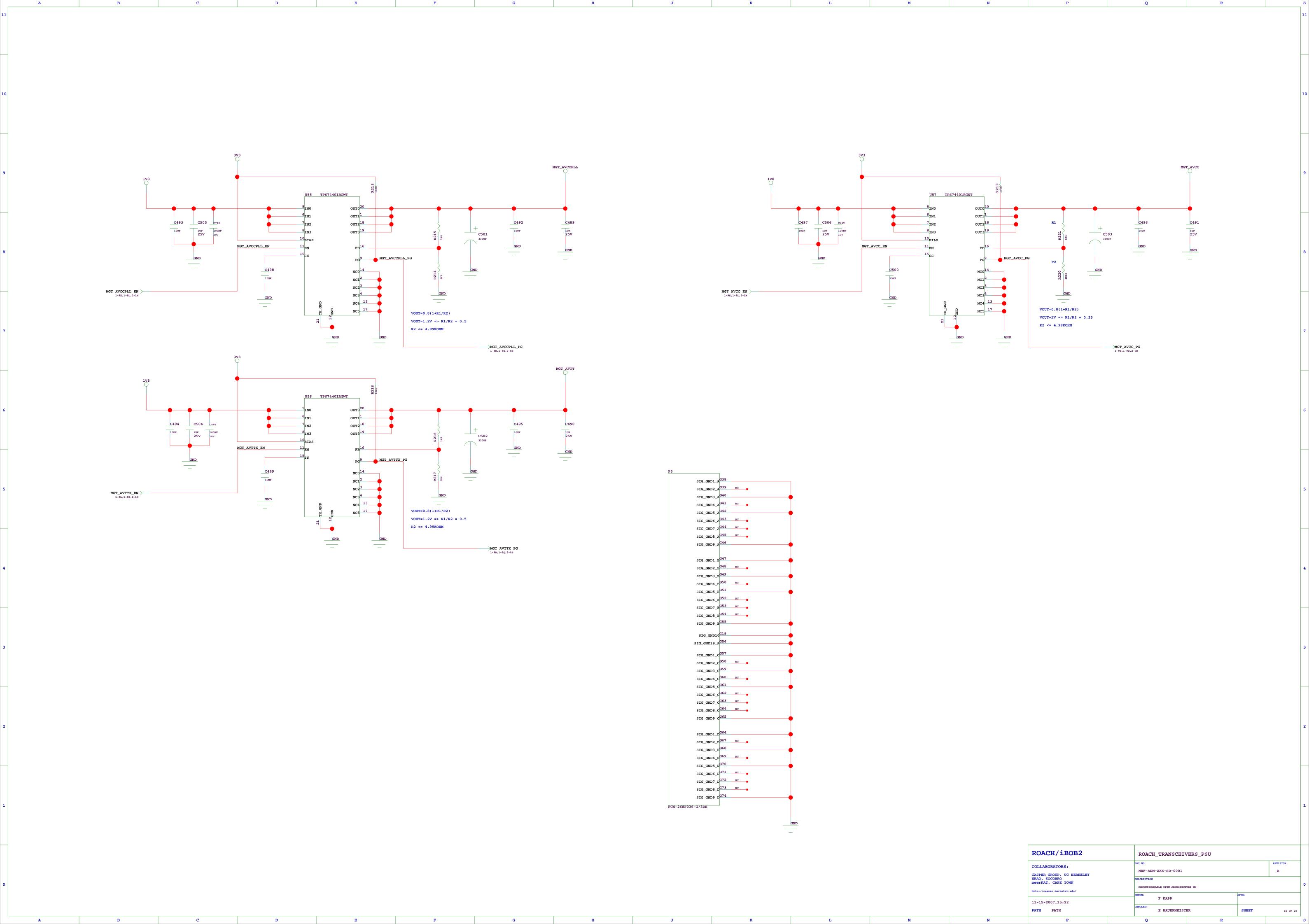


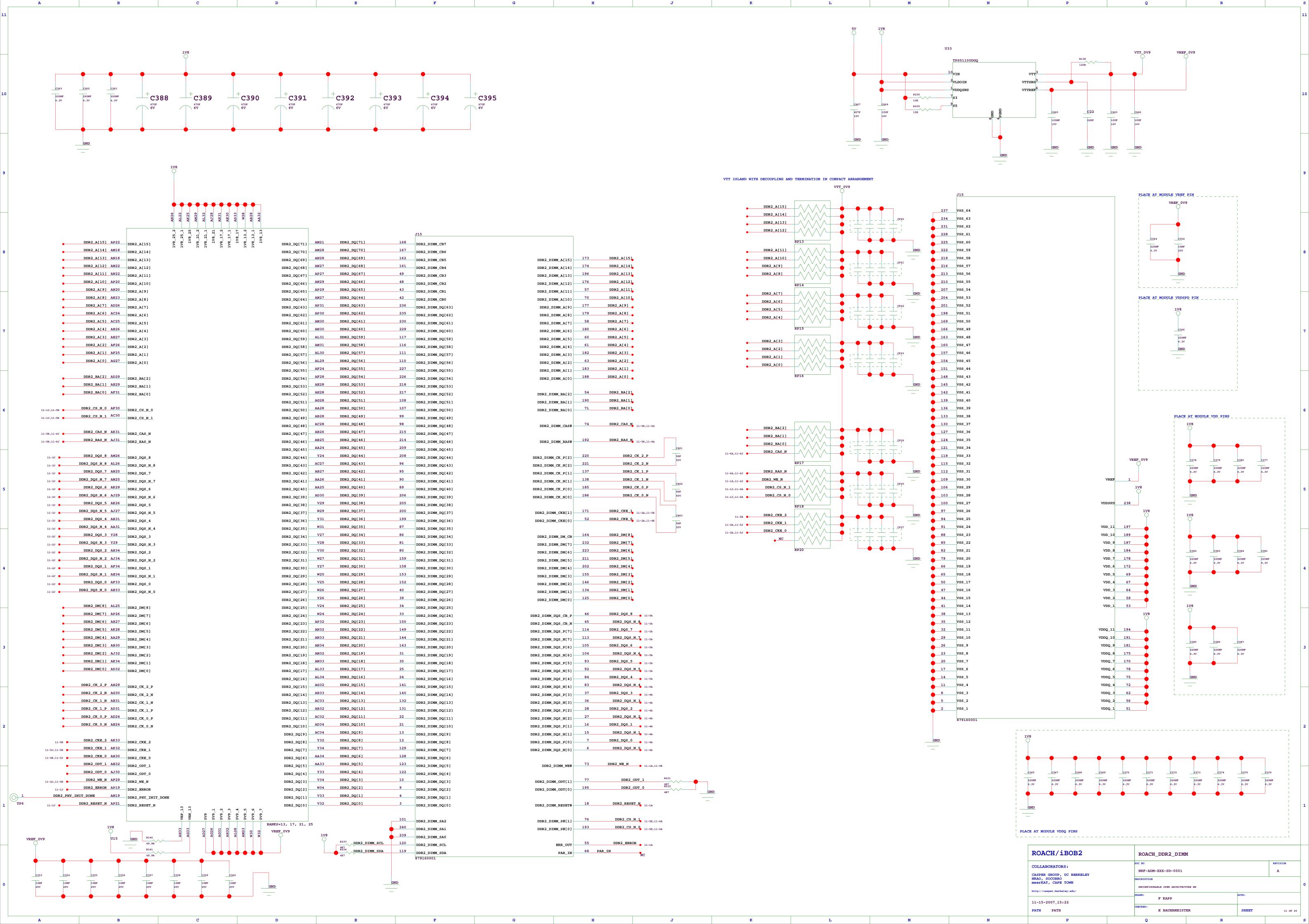


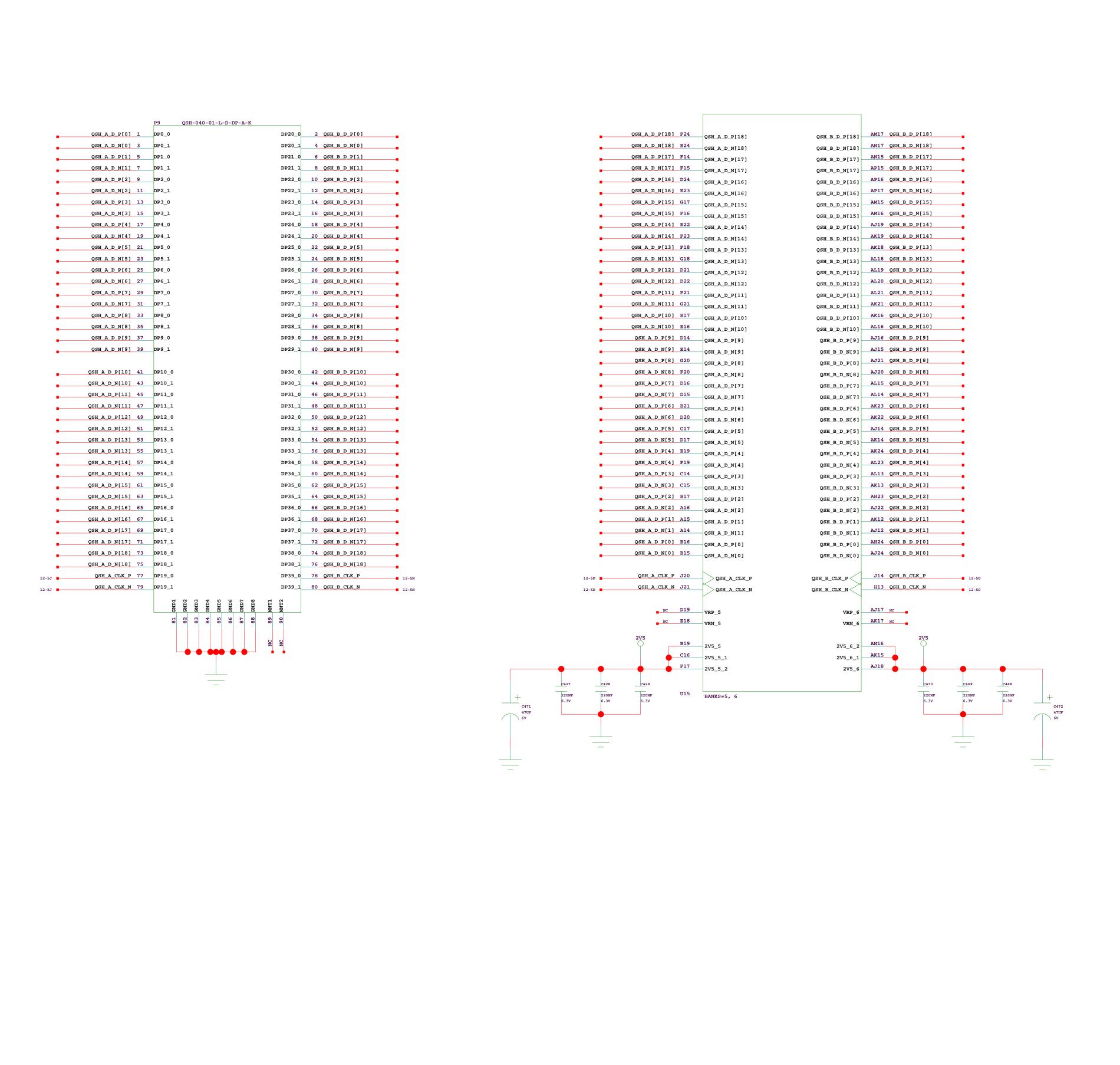






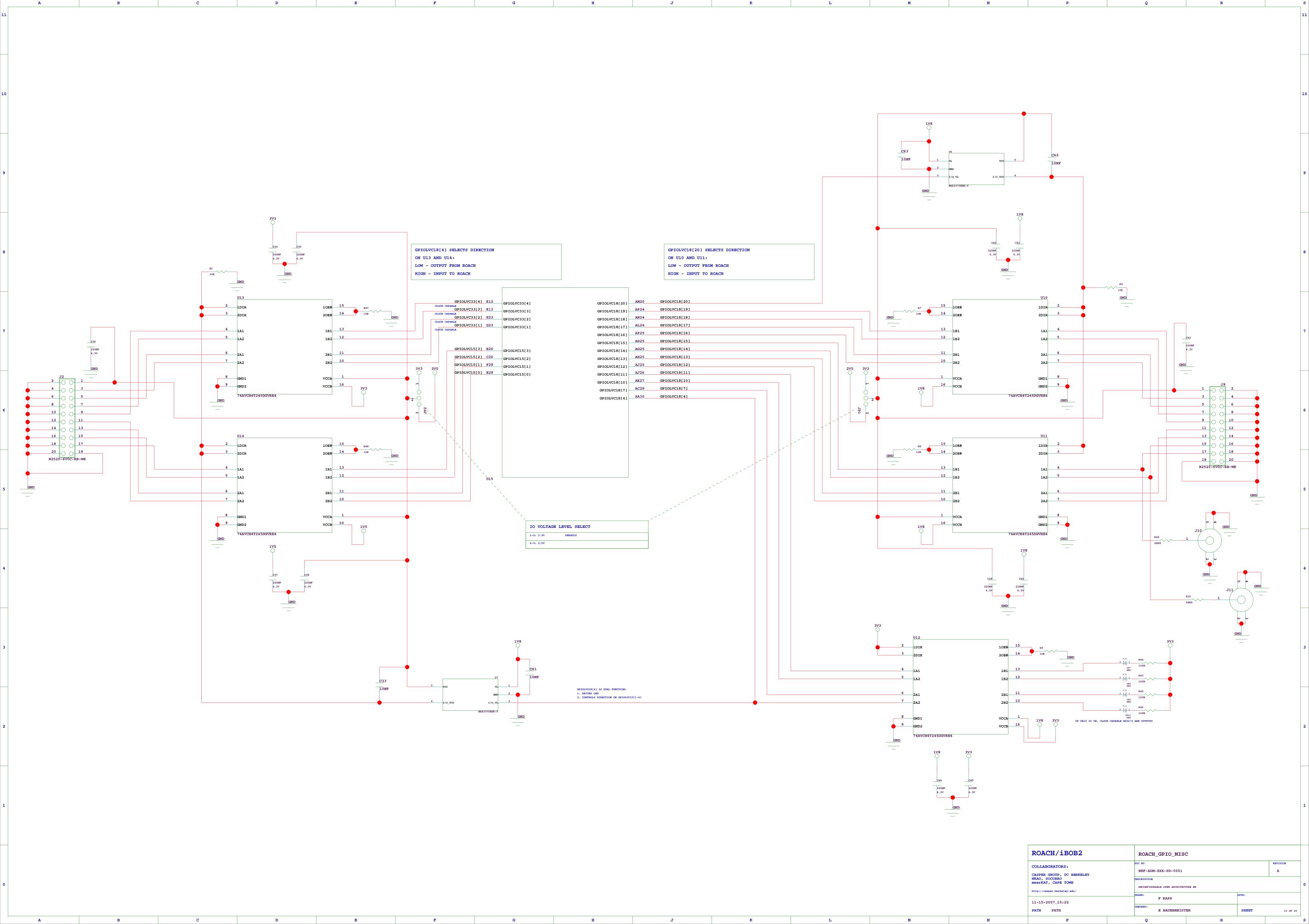


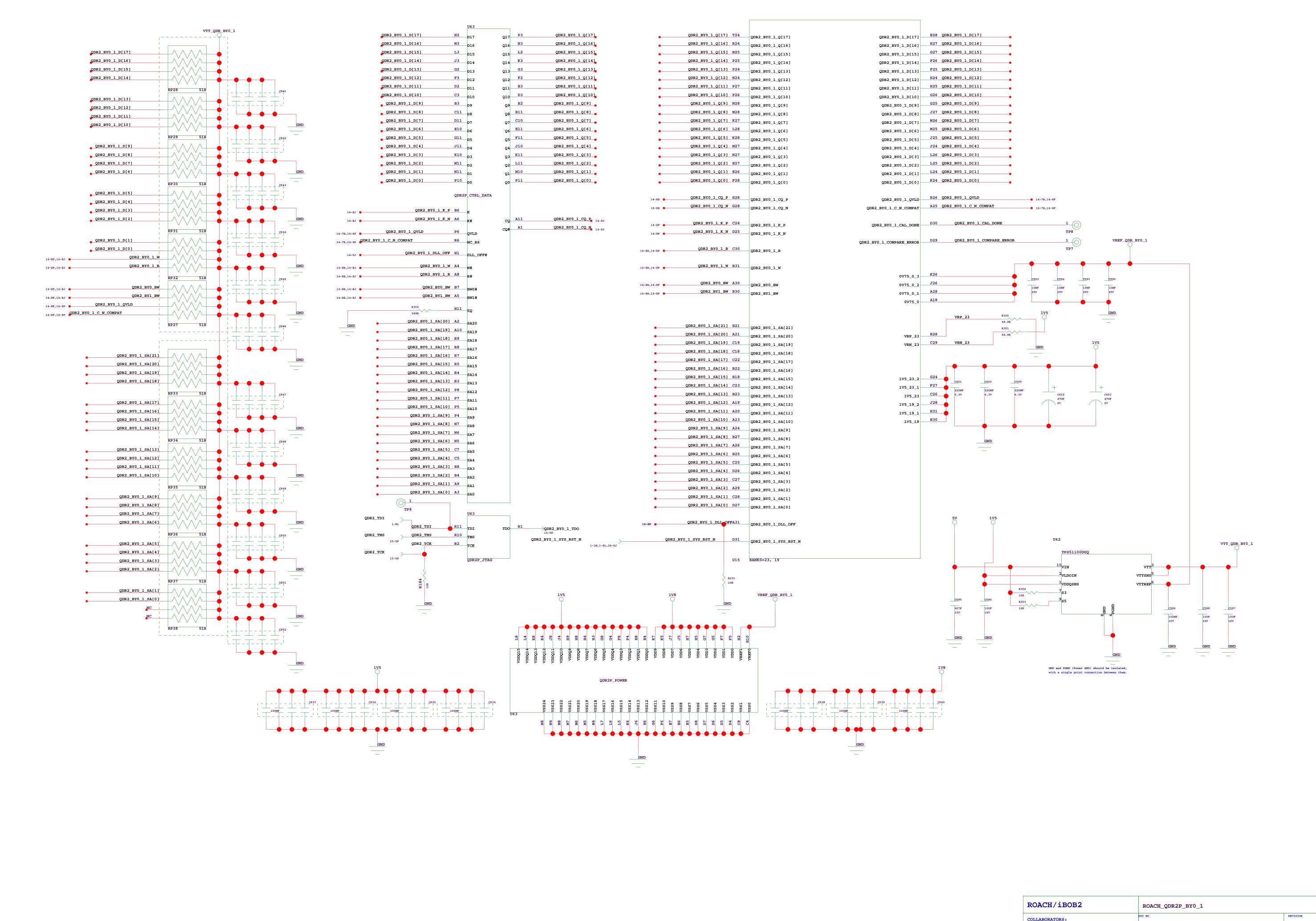




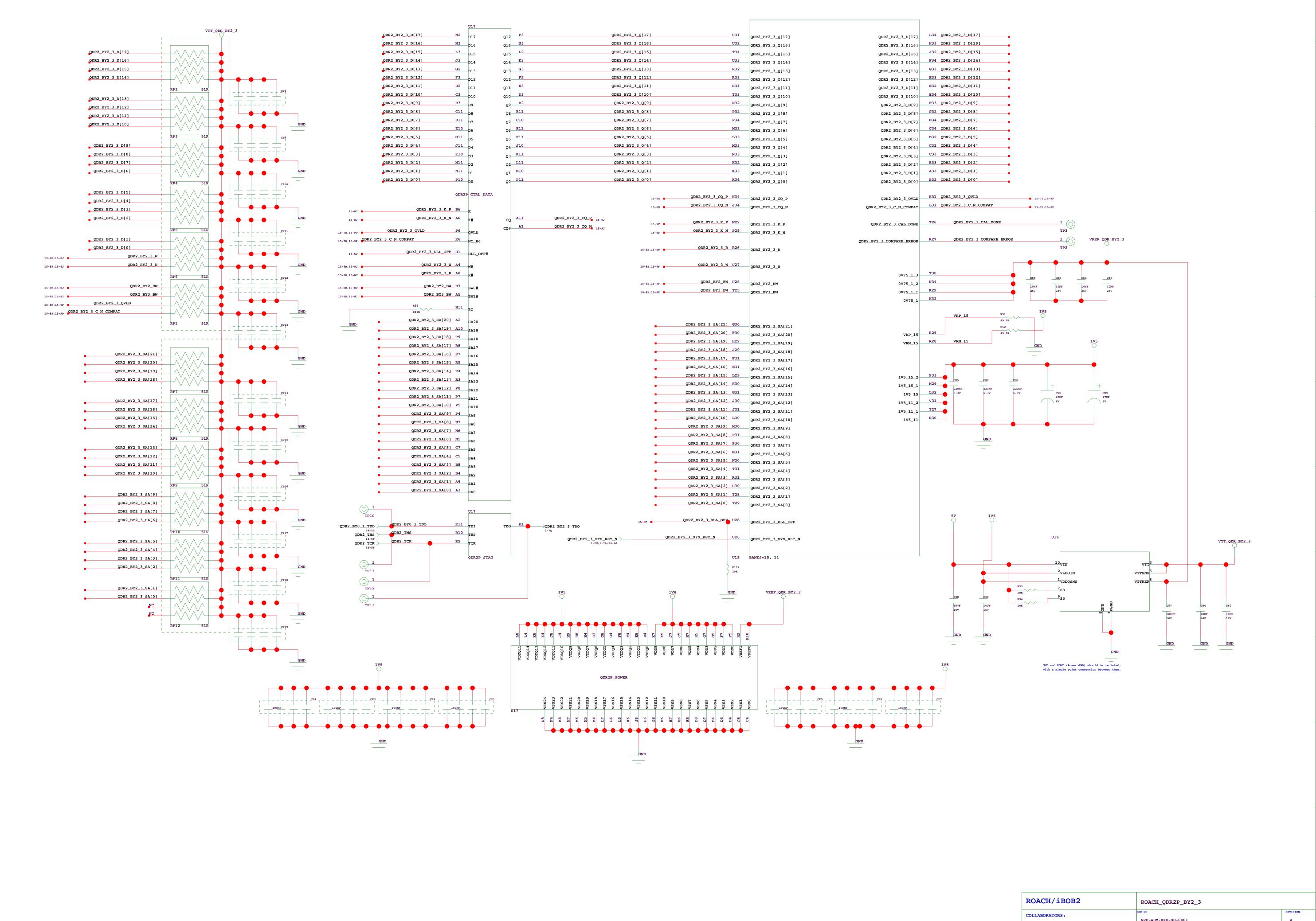
ROACH\_DIFF\_GPIO COLLABORATORS: NRF-ADM-XXX-SD-0001 CASPER GROUP, UC BERKELEY NRAO, SOCORRO meerKAT, CAPE TOWN RECONFIGURABLE OPEN ARCHITECTURE HW F KAPP 11-15-2007\_15:22 E BAUERMEISTER PATH PATH

ROACH/iBOB2

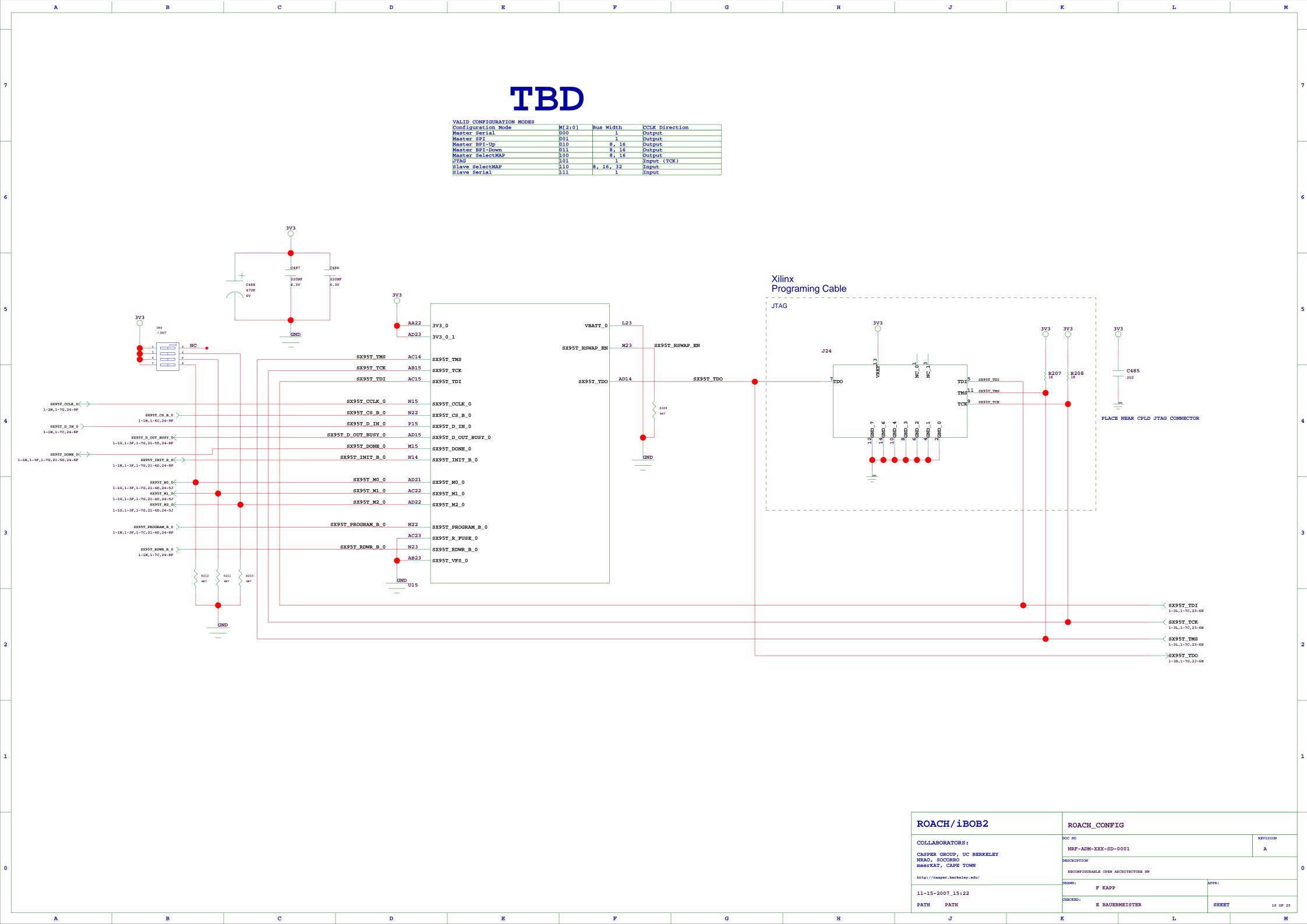




COLLABORATORS: NRF-ADM-XXX-SD-0001 NRAO, SOCORRO meerKAT, CAPE TOWN RECONFIGURABLE OPEN ARCHITECTURE HW F KAPP 11-15-2007\_15:22 PATH PATH E BAUERMEISTER



NRF-ADM-XXX-SD-0001 NRAO, SOCORRO meerKAT, CAPE TOWN RECONFIGURABLE OPEN ARCHITECTURE HW F KAPP 11-15-2007\_15:22 PATH PATH E BAUERMEISTER





REMOVED VTT AND VREF - INCLUDED ON ROACH\_PPC\_DDR2

ROACH/iBOB2		ROACH_PPC_POWER_1					
COLLABORATORS:  CASPER GROUP, UC BERKELEY		DOC NO NRF-ADM-XXX-SD-0001			REVISION		
NRAO, SOCORRO meerKAT, CAPE TOWN	_ D	DESCRIPTION  RECONFIGURABLE OPEN ARCHITECTURE HW					
http://casper.berkeley.edu/		RECONFIGURABLE OPEN ARCHITECT	URE HW				
11-15-2007_15:22 PATH PATH		DRAWN: APP			PPR:		
		CHECKED: E BAUERMEIST	SHEET 17 OF 25				
P		0	R				

