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 3V3_ATX 12V5 11V8 11V5 1-8B,2-3M,3-10B 1-8B,2-6B,3-5B 2V5_TRACK 2V5_INHIBIT 2N3_CONTRACK 1-8E,2-2B,3-2R 11V 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 1-8Q,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 11V0 5V_ATX MGT_AVCC_PG MGT_AVTTX_PG MGT_AVCCPLL_PG ROACH_TRANSCEIVERS_PSU 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 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,2-8B,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 ROACH_QDR2P_BY0_3 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 QDR2_TDI QDR2_TCK QDR2_TMS 1V0_INHIBIT 1V5_INHIBIT QDR2_BY0_1_TDO QDR2_BY0_1_TDO 1-9B,2-1M,3-9B 1V8_INHIBIT 2V5_TRACK 1-9B,2-2B,3-5R 2V5_INHIBIT 1-9B,2-2B,3-2R V5 DIFFERENTIAL GPIO ROACH_QDR2P_BY2_3 QDR2_BY0_1_TDO QDR2_TMS 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,24-7F 1-1G,1-3F,16-3B,21-4D,24-7F QDRII+ MEMORY 1-1M,16-4B,24-7C 1-3L,16-2L,23-6M 1-3L,16-2L,23-6M 1-3L,16-2L,23-6M 1-3L,16-2L,23-6M 1-1M,16-3B,24-8C 1-1M,16-3B,21-4D,24-10C 1-1M,16-4B,24-6C 1-1M,16-4B,24-6C SX95T_M0_0 SX95T_M0_0 SX95T_DONE_0 SX95T_TCK SX95T_TMS SX95T_TDI 1-2M,24-4F,24-7C 1-1G,1-3F,16-4B,21-5D,24-7C SX95T_RDWR_B_0 SX95T_PROGRAM_B_0 1-1M,1-3F,21-4D,24-9F __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,24-6C,25-7B 1-3L,23-7G,25-3D CLK_UART_11.0592MHZ CLK_UART_11.0592MHZ 1-1G,24-5H,25-3B M66EN 1-2M,24-7C,25-3A EE1_WP 1-2M,24-7C,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 1-2M,24-7C,25-1B 1-2G,1-3L,23-9J,24-7F,25-5G 1-1M,24-7C,25-8J 1-2M,24-7C,25-5A 1-1M,24-11M,25-1J 1-1M,24-11M,25-1J 1-1M,24-10M,25-1J 1-1M,24-5C,25-3J RESET_CPLD# ROACH_PPC_POWER_2 RESET_POR# 1-1G,24-8C,25-5G,25-7B,25-7M,25-10B FWP# EE2_BOOT_WP BOOT_CFG0 BOOT_CFG1 BOOT_CFG2 1-1G,24-4C,24-7C,25-6F 1-2G,24-9C,25-6M,25-7B,25-9B 1-1G,24-9C,25-5G,25-6M,25-7B,25-9B 1-1G,24-9C,25-7B PDATA[0:31] RESET_CPLD# 1-2M 1-2G,24-9B,25-10B **U49** ROACH_PPC_PCI 1-2G,24-10C,25-6F 1 150X288MIL ROACH_PPC_ETH1

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,23-7M
1-5L,23-7N,25-8Q
1-5L,23-6M,25-2B
1-7G,16-2L,23-6M
1-2M,23-8E,24-7F
1-2G,23-10G,24-8R
1-2M,23-2F,24-9C
1-1M,23-5D,24-10F
1-1M,23-7G,24-10F
1-1M,23-6H,24-10C
1-1M,23-6H,24-10C

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

1-3L,1-5G,23-9J,24-7F,25-5G RESET_POR#

1-3L, 23-4Q, 24-10F
1-4L, 24-9C, 25-5G, 25-6B, 25-7B, 25-7

1-4L,24-9C,25-6M,25-7B,25-9B PWBE_0#

1-9E,2-2R,24-6C PPC_RESET

1-3H,23-10G,24-8R 1-4L,24-10C,25-6F

1-4L,24-9B,25-10B
1-5L,24-6C,25-7B
ERV BY#

1-4L,24-7C,25-7J FRY_BY#

1-3L,23-64,24-10C
1-2L,23-6G,24-10F
1-3L,23-1F,24-9C
1-4L,24-4C,24-7C,25-6F
1-3L,23-4G,24-10F
DW ##

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# GETHO_RST#

PPC_DDR2_RESET_N PPC_DDR2_RESET_N

PDATA[0:7]

RESET_PB_POR#

SX95T_CCLK_0

STTM_AS

EE2_BOOT_WP

EE1_WP

CPU_TRST#

SEL_SYSCLK

CLK_SEL_M66EN

CLK_TMRCLK

SX95T_RDWR_B_0

FWP#

PREST PB_POR#

RESET_PB_POR#

RESET_PB_POR*

SEMANTA(0:7)

RESET_PB_POR*

SEMANTA(0:7)

RESET_PB_POR*

EE2_BOOT

EE2_BOOT

EE1_WP

EE2_BOOT WP

EE2_BOOT

FWP# FWP# RESET_CPLD# RESET_CPLD#

PDATA[0:71

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,24-9C

1-4B,20-4E,23-5G 1-3B,21-2C,23-4G 1-1G,23-4G,24-10F

1-1G,23-6H,24-10C

1-1G,23-6G,24-10F

1-2G,1-5G,23-9J,24-7F,25-5G

1-4B,20-4E,24-10F

1-2B,22-3K,24-10F

1-3H,23-8E,24-7F

1-5G,24-7C,25-1B 1-4G,24-7C,25-5A

1-5G,24-7C,25-3A

1-3H,23-2F,24-9C

1-3H,23-5D,24-10F 1-3H,23-6H,24-10C

1-7C,16-3B,24-8C

1-4G,24-5C,25-3J

1-7C,16-4B,24-7C

1-6C,16-4B,24-6C

1-4G,24-11M,25-1J

1-3F,1-7G,21-4D,24-9F 1-3F,1-7G,21-5D 1-3F,1-7C,16-3B,21-4D,24-10C

1-2M,20-4E,24-10F 1-3L,20-4E,23-5G CLK_GETH0_25MHZ

1-2M,22-3K,24-10F PPC_DDR2_RESET_N

GETHO_RST#

CLK_GETH0_25MHZ

ROACH_PPC_USB

ROACH_PPC_DDR2

PPC_DDR2_RESET_N

CONTAINS GPIO TO CONFIG INTERFACE

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

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

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

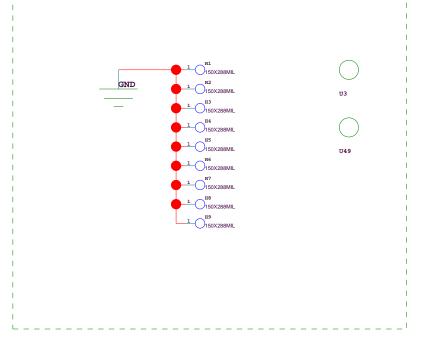
1-1M,1-7C,16-3B,21-4D,24-10C

1-1M,1-7G,21-5D 1-1M,1-7G,21-4D,24-9F

GMCMDIO

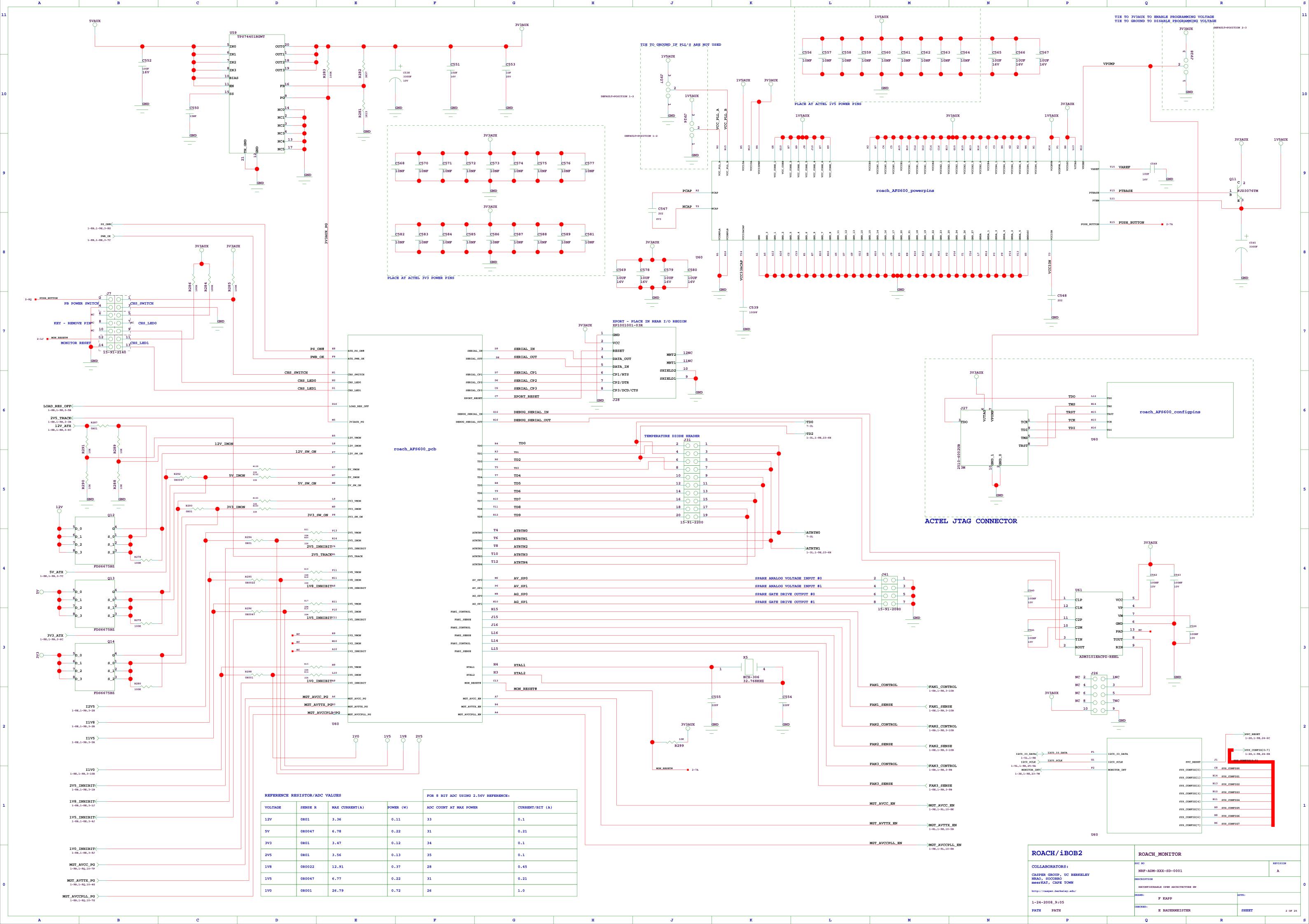
SX95T_PROGRAM_B_0

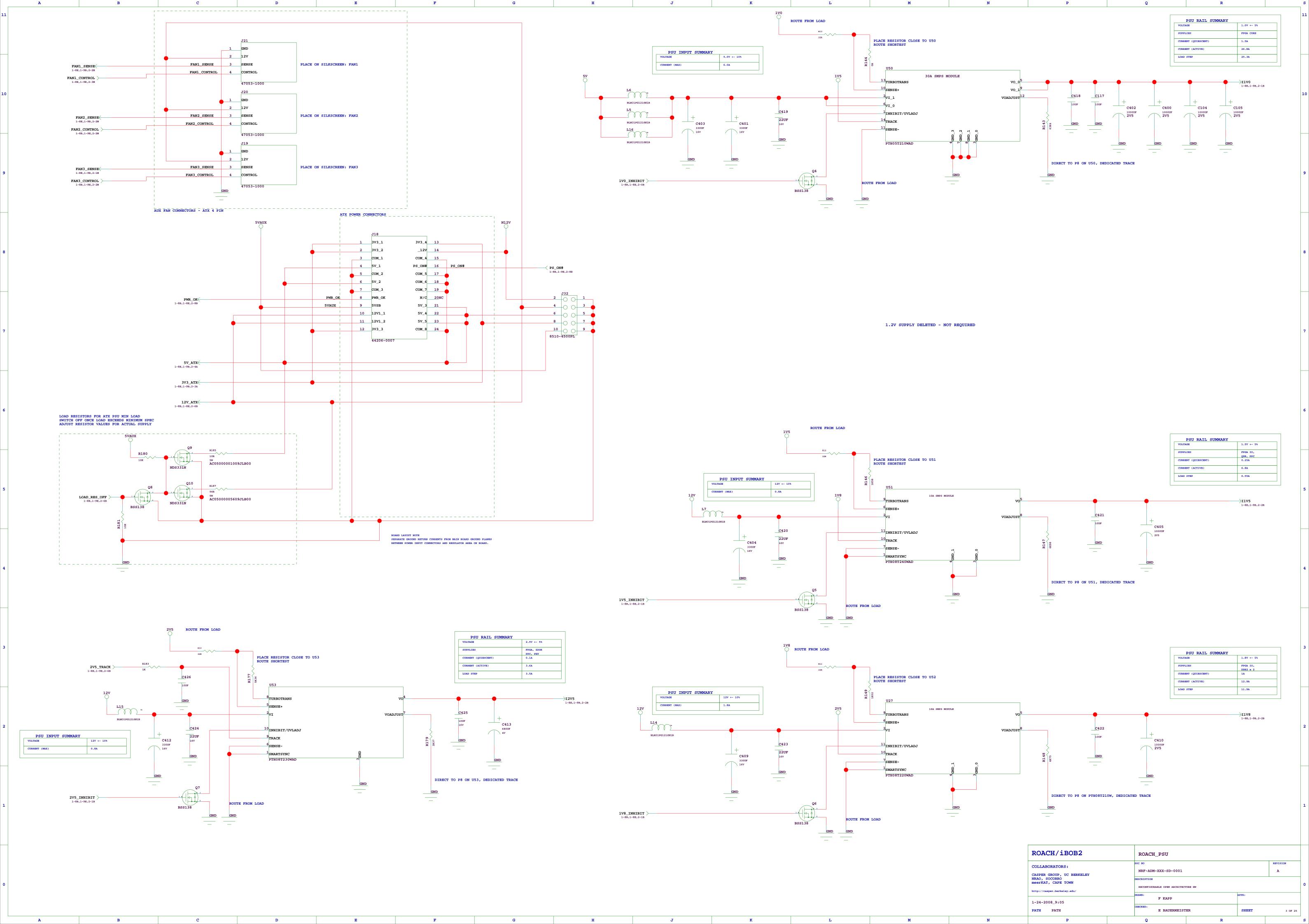
GMCMDCLK GETH0_INT#

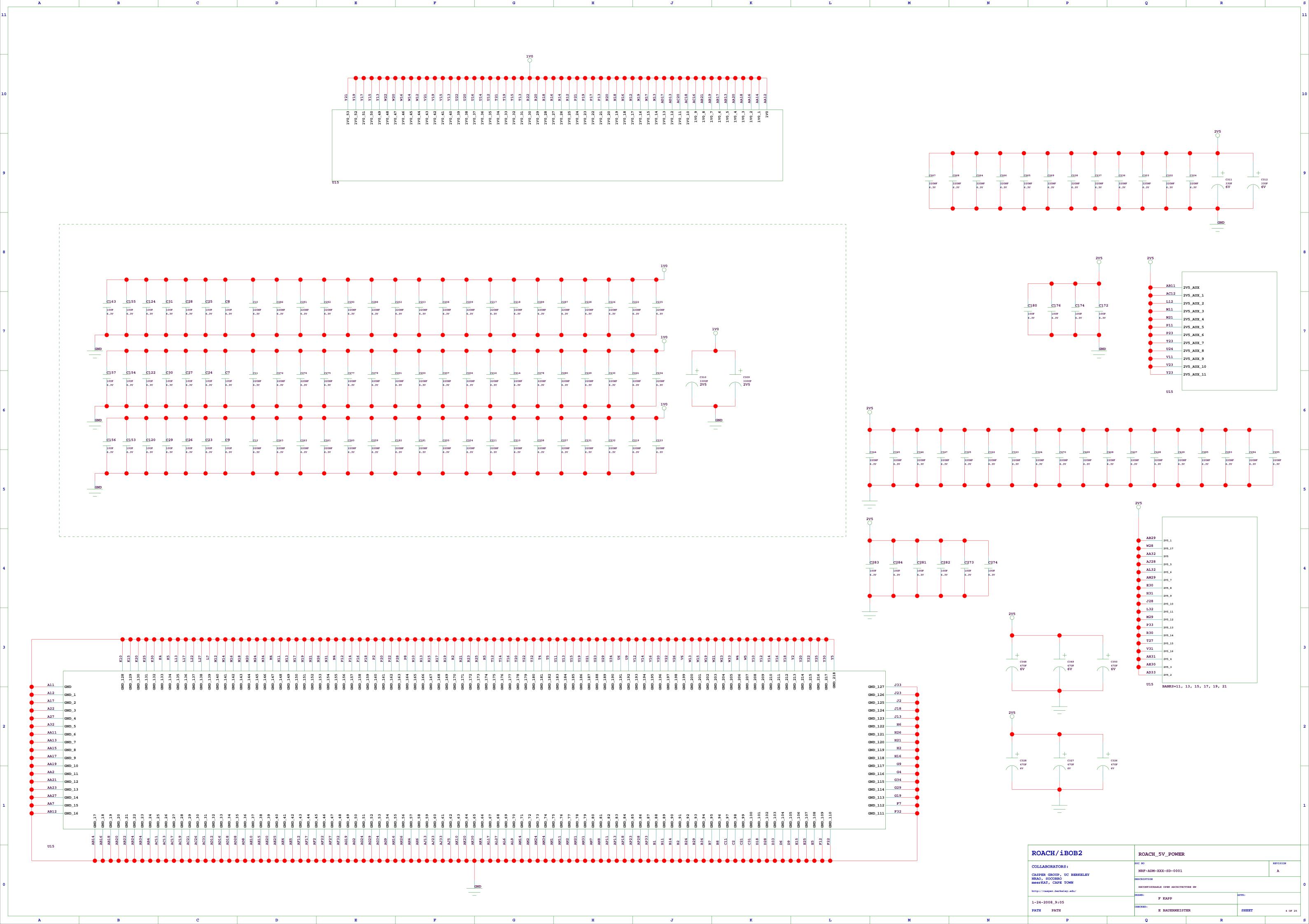


CONTRIBUTORS ETIENNE BAUERMEISTER HENRY CHEN STEVE DURAND FRANCOIS KAPP ALAN LANGMAN GEORGE PECK MIKE REVNELL HAYDEN SO DAN WERTHIMER

ROACH/iBOB2	ROACH_TOP				
	DOC NO		REVISION		
COLLABORATORS: CASPER GROUP, UC BERKELEY	NRF-ADM-XXX-SD-0001	NRF-ADM-XXX-SD-0001			
NRAO, SOCORRO	DESCRIPTION				
meerKAT, CAPE TOWN http://casper.berkeley.edu/	RECONFIGURABLE OPEN ARCHITECTURE HW				
nctp://casper.berkeley.edu/	DRAWN:	APPR:		1	
1-24-2008_9:05	F KAPP				
	CHECKED:				
PATH PATH	E BAUERMEISTER	SHEET	1 OF 25		

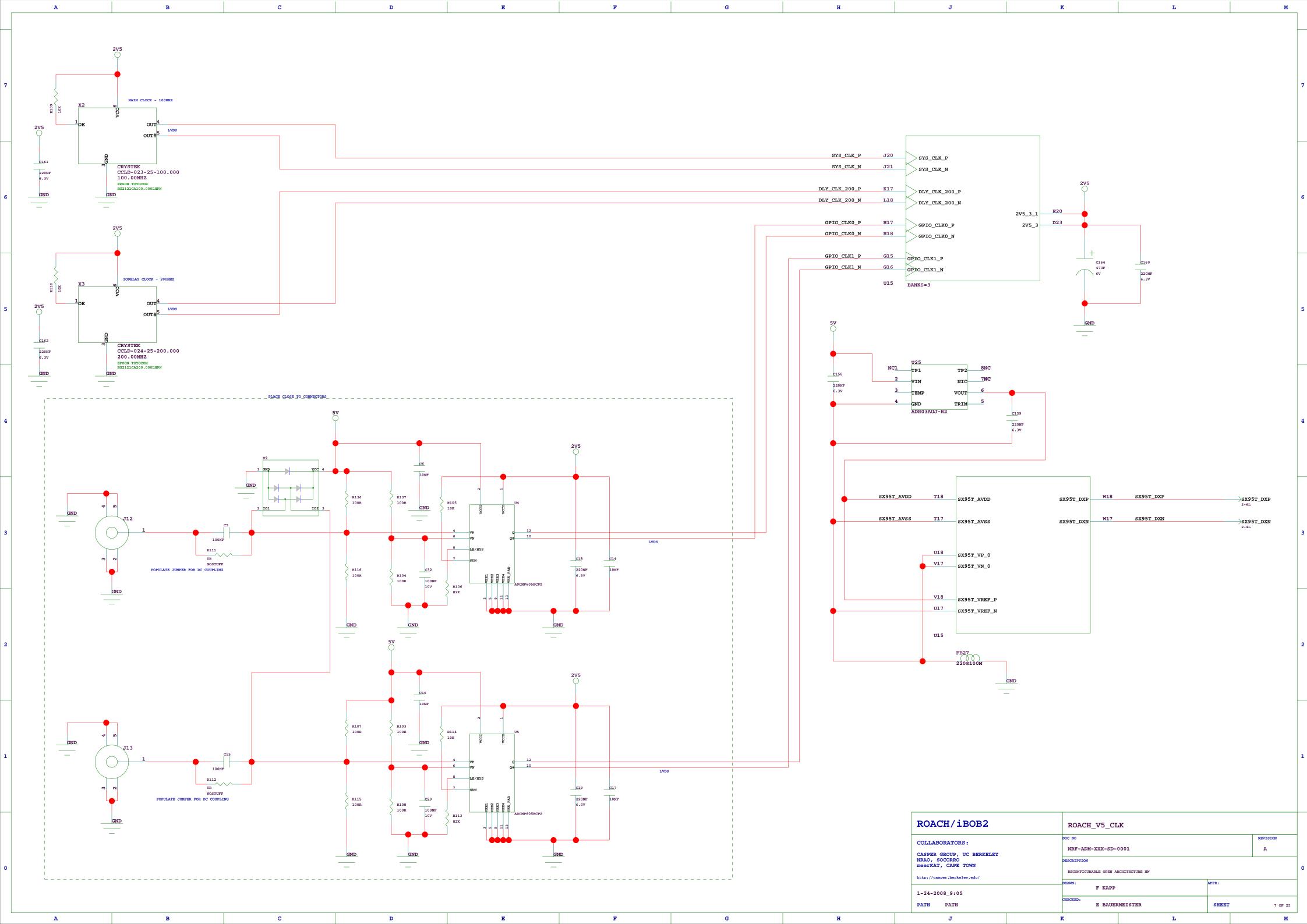


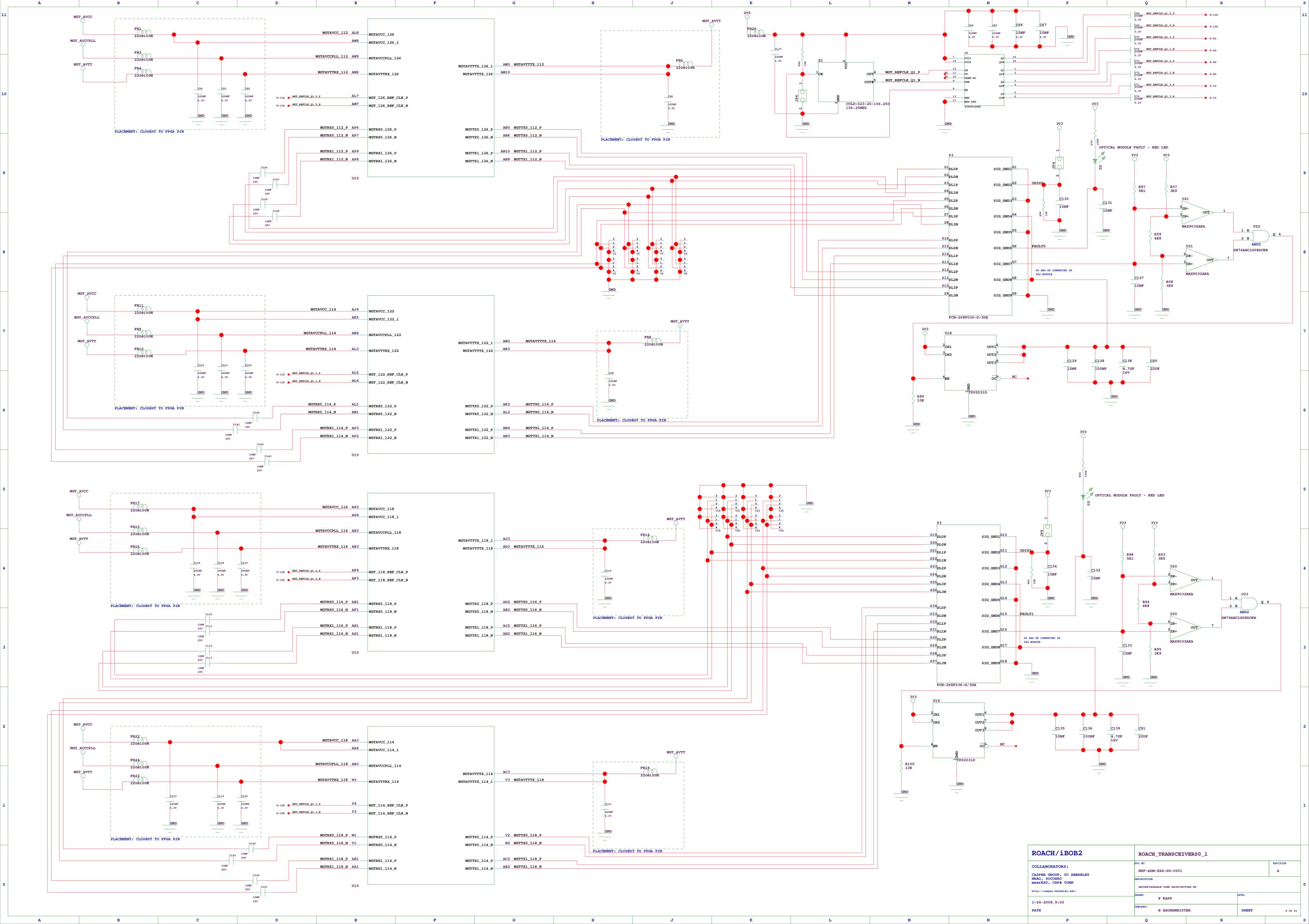


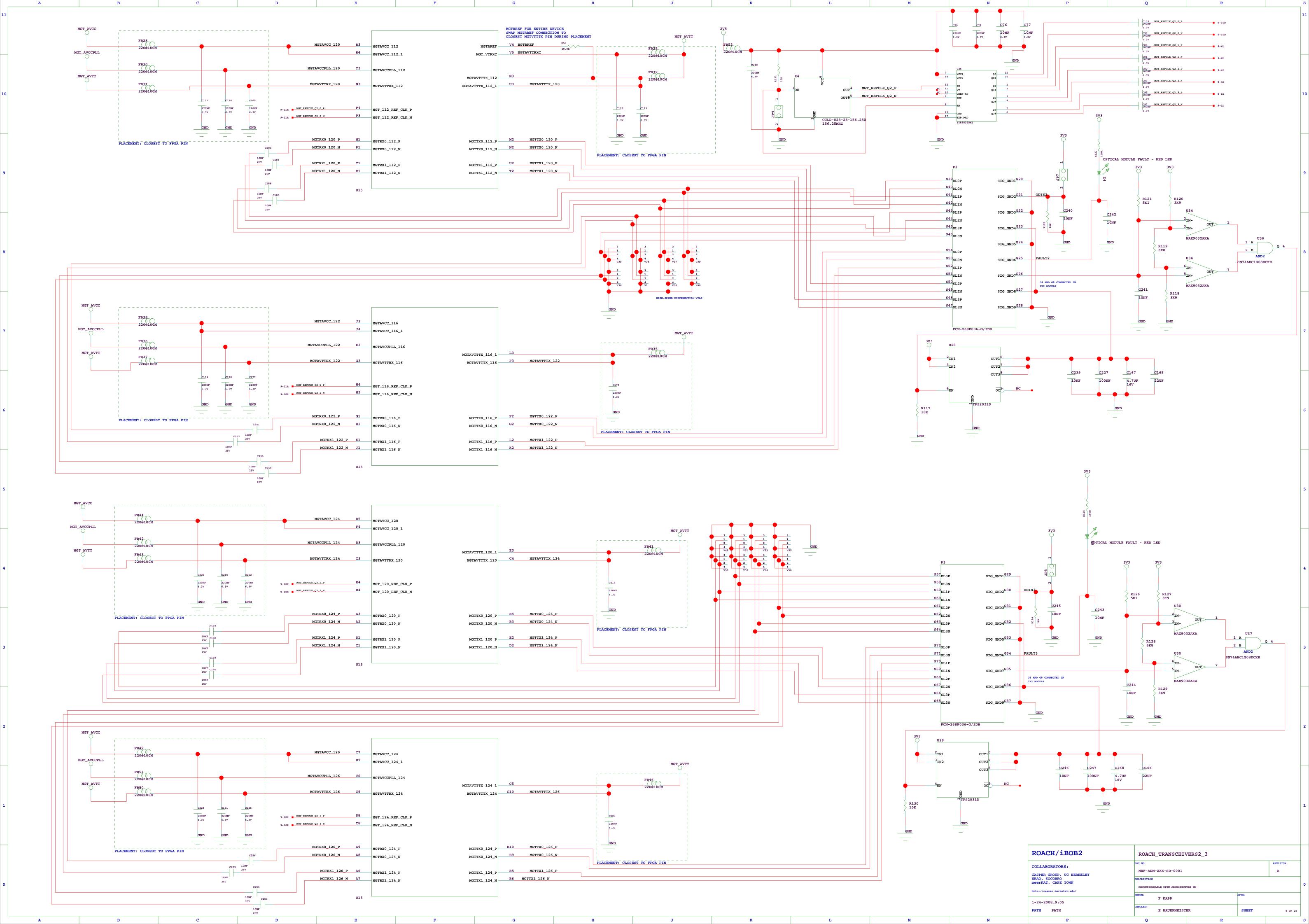


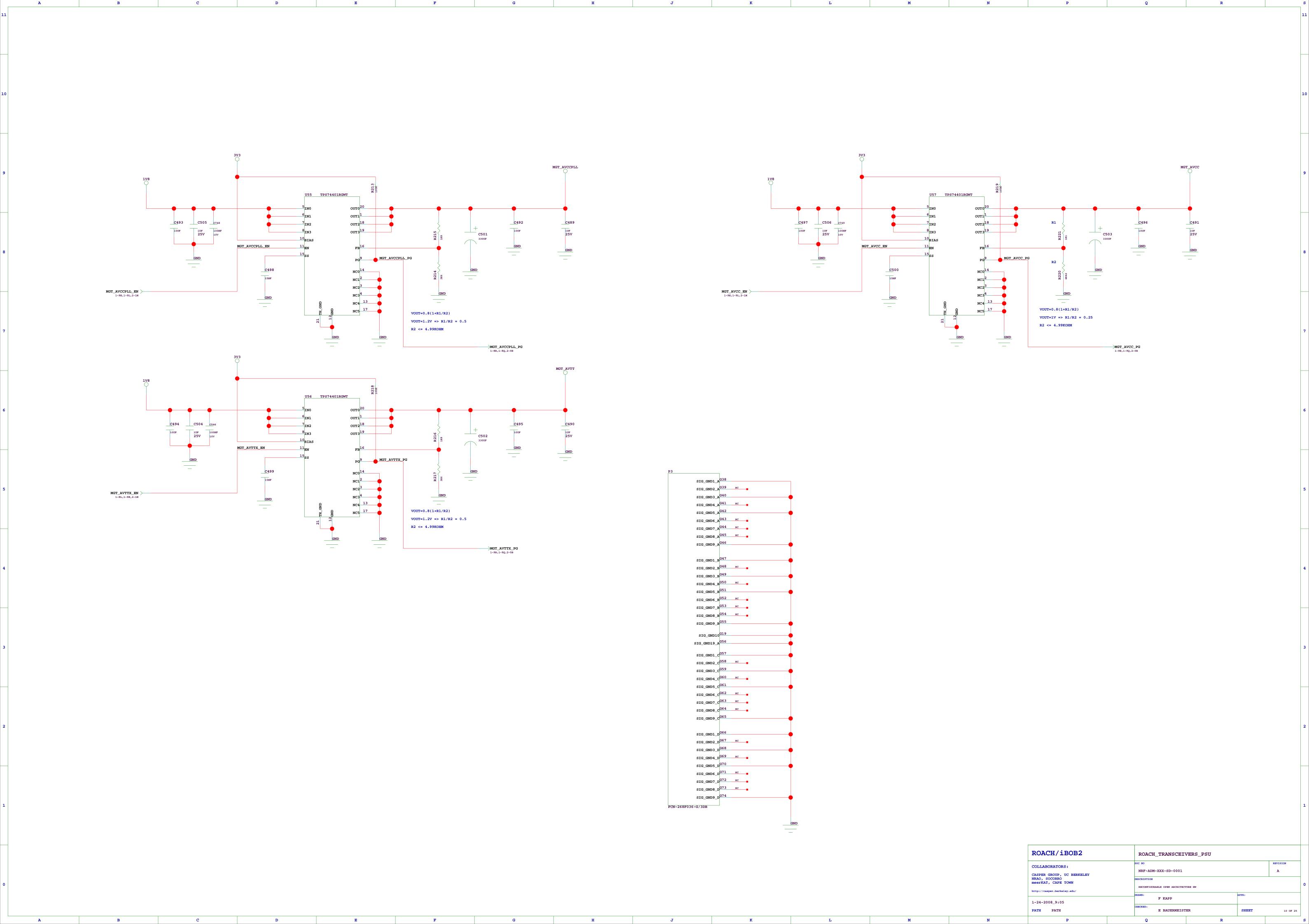


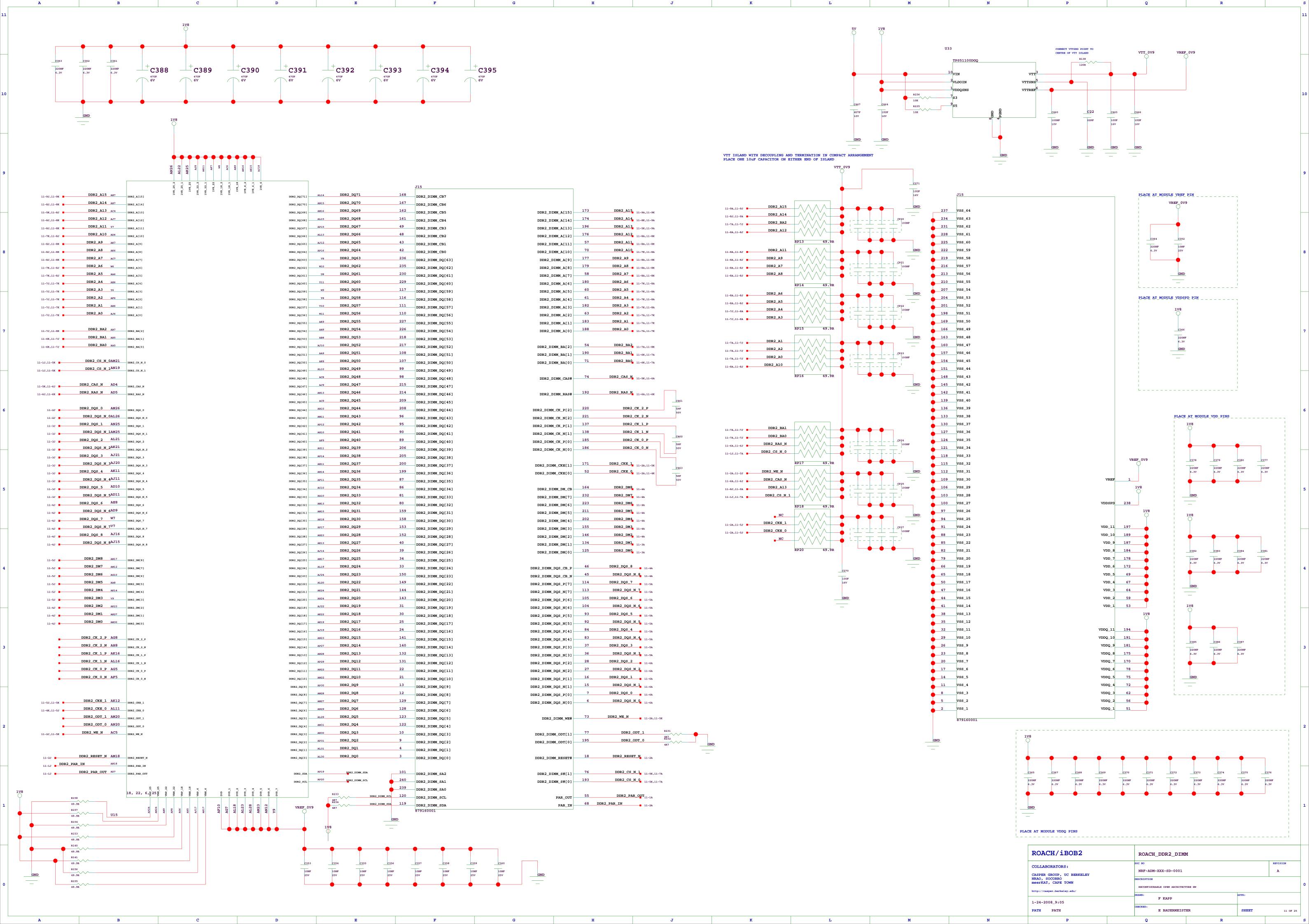


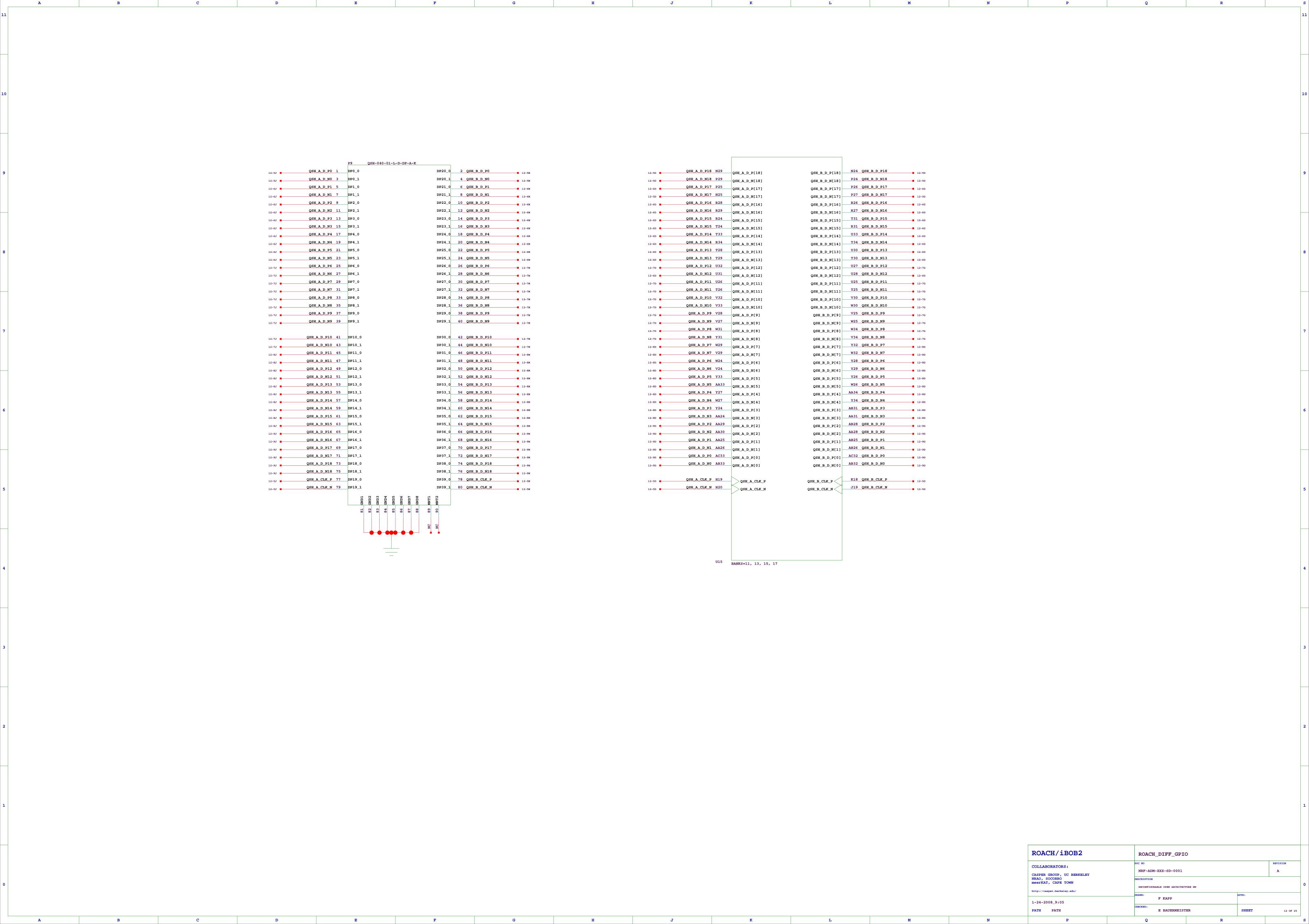


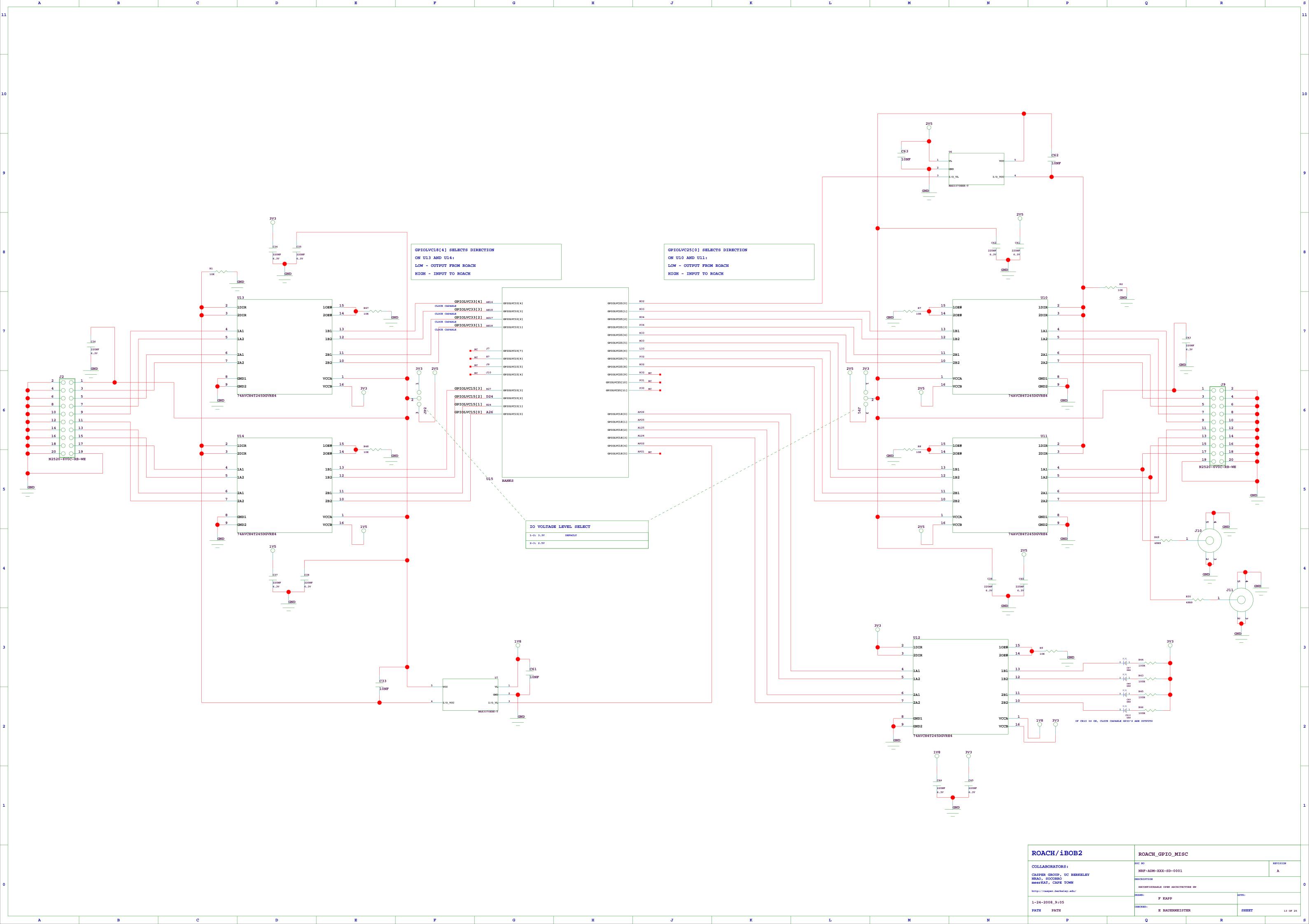


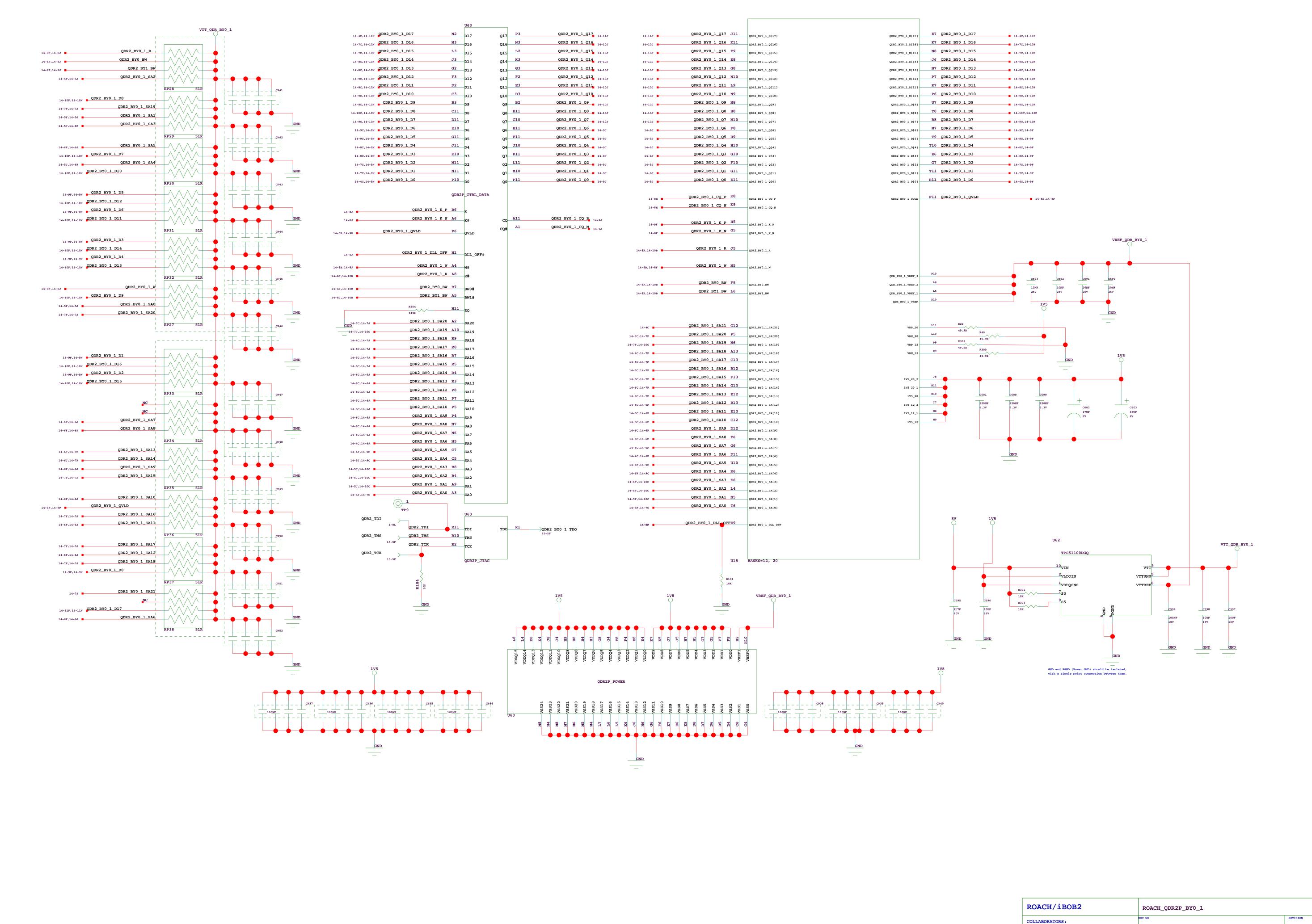












CASPER GROUP, UC BERKELEY
NRAO, SOCORRO
meerKAT, CAPE TOWN

http://casper.berkeley.edu/

1-24-2008_9:05

PATH PATH

P

Q

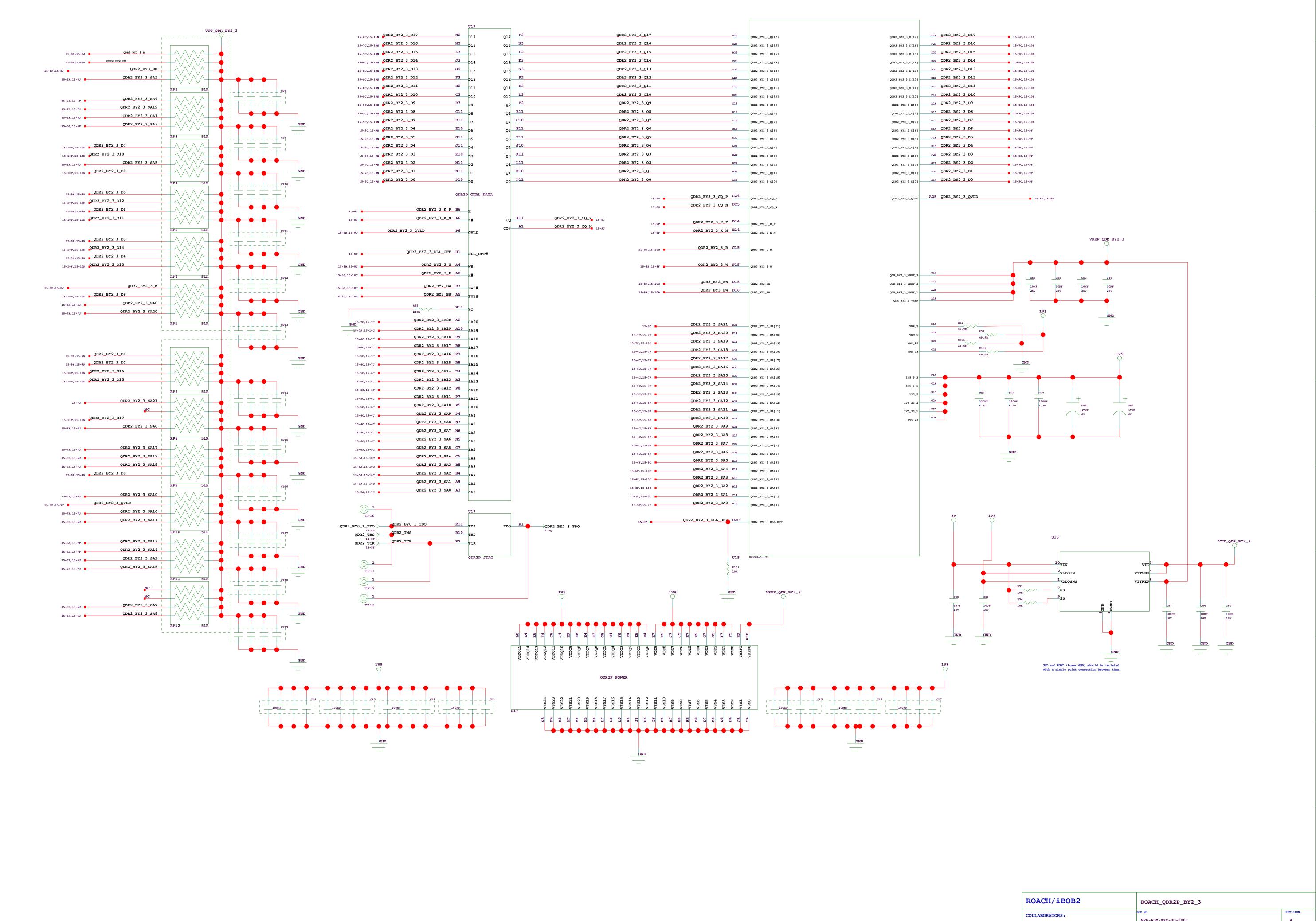
RRF-ADM-XXX-SD-0001

A

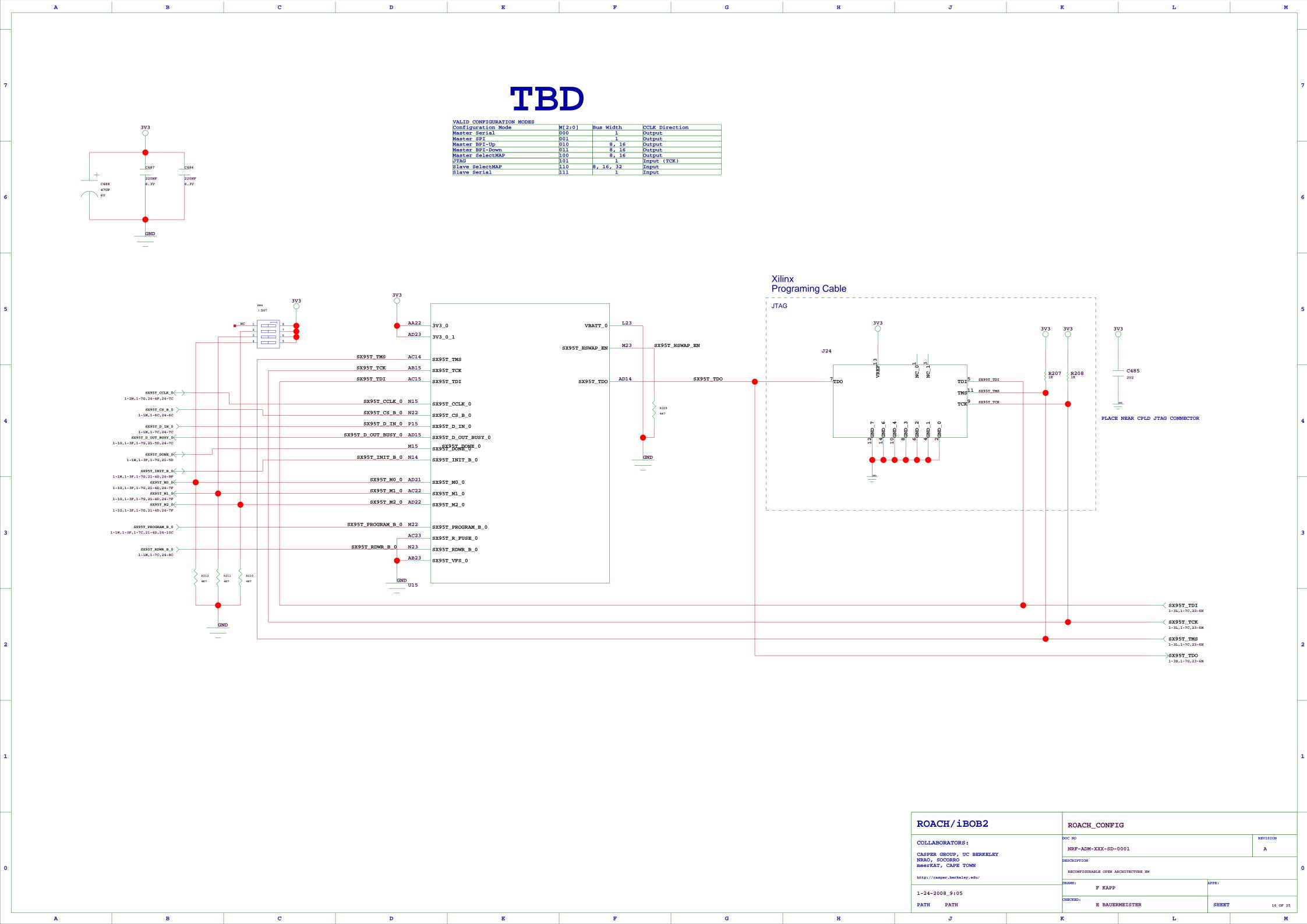
DESCRIPTION
RECONFIGURABLE OPEN ARCHITECTURE HW

APPR:

CHECKED:
E BAUERMEISTER
SHEET
14



NRF-ADM-XXX-SD-0001 CASPER GROUP, UC BERKELEY NRAO, SOCORRO meerKAT, CAPE TOWN RECONFIGURABLE OPEN ARCHITECTURE HW F KAPP 1-24-2008_9:05 PATH PATH E BAUERMEISTER





REMOVED VTT AND VREF - INCLUDED ON ROACH_PPC_DDR2

ROACH/iBOB2		ROACH_PPC_POWER_1				
COLLABORATORS: CASPER GROUP, UC BERKELEY NRAO, SOCORRO meerkAT, CAPE TOWN		DOC NO NRF-ADM-XXX-SD-0001			REVISION A	
		DESCRIPTION				
http://casper.berkeley.edu/ 1-24-2008_9:05 PATH PATH		RECONFIGURABLE OPEN ARCHITECTURE HW				
		PRAWN: F KAPP		APPR:		
		CHECKED: E BAUERMEISTER		SHEET 17 OF 25		
P		0	R	1		

