RTG4_DEV_KIT

DVP-102-000418-001_Rev_B

Project Name: RTG4_DEV_KIT		
Rev: B1	Part Number: MICROSEMI DVP-102-000418-001	PACTRON: 305-PD-15-0161
Originator: GHURU KUMARAVELU		
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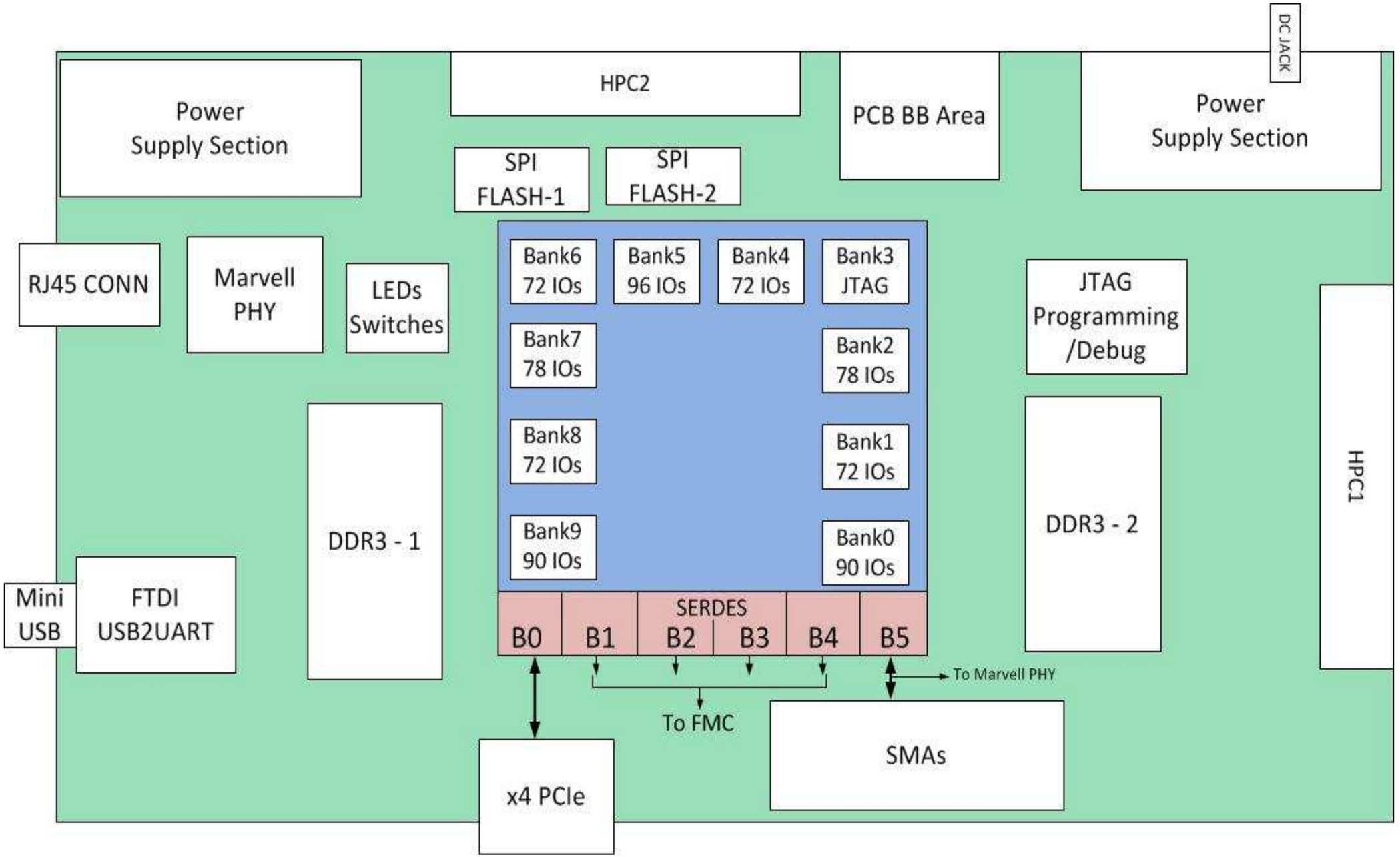
BLOCK DIAGRAM



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MEMORY INTERFACE

U16-1

BANK-0

{5} FDDR0_CB0	AC31	DDRIO77NB0/FDDR_E_DQ_ECC0
{5} FDDR0_CB1	AD31	DDRIO77PB0/FDDR_E_DQ_ECC1
{5} FDDR0_CB2	AC32	DDRIO76NB0/FDDR_E_DQ_ECC2
{5} FDDR0_CB3	AC33	DDRIO76PB0/FDDR_E_DQ_ECC3
{4} FDDR0_DQ0	AG31	DDRIO86NB0/FDDR_E_DQ0
{4} FDDR0_DQ1	AG32	DDRIO86PB0/FDDR_E_DQ1
{4} FDDR0_DQ2	AH32	DDRIO85NB0/FDDR_E_DQ2
{4} FDDR0_DQ3	AH33	DDRIO85PB0/FDDR_E_DQ3
{4} FDDR0_DQ4	AE31	DDRIO83PB0/FDDR_E_DQ4
{4} FDDR0_DQ5	AD34	DDRIO82NB0/FDDR_E_DQ5
{4} FDDR0_DQ6	AC34	DDRIO82PB0/FDDR_E_DQ6
{4} FDDR0_DQ7	AF34	DDRIO81NB0/FDDR_E_DQ7
{4} FDDR0_DQ8	AH36	DDRIO93NB0/FDDR_E_DQ8
{4} FDDR0_DQ9	AG35	DDRIO93PB0/FDDR_E_DQ9
{4} FDDR0_DQ10	AF37	DDRIO92NB0/FDDR_E_DQ10
{4} FDDR0_DQ11	AE37	DDRIO92PB0/FDDR_E_DQ11
{4} FDDR0_DQ12	AH38	DDRIO90PB0/FDDR_E_DQ12
{4} FDDR0_DQ13	AE36	DDRIO89NB0/FDDR_E_DQ13
{4} FDDR0_DQ14	AD36	DDRIO89PB0/FDDR_E_DQ14
{4} FDDR0_DQ15	AD38	DDRIO88NB0/FDDR_E_DQ15
{4} FDDR0_DQ16	AJ34	DDRIO113NB0/FDDR_E_DQ16
{4} FDDR0_DQ17	AJ33	DDRIO113PB0/FDDR_E_DQ17
{4} FDDR0_DQ18	AL33	DDRIO112NB0/FDDR_E_DQ18
{4} FDDR0_DQ19	AL34	DDRIO112PB0/FDDR_E_DQ19
{4} FDDR0_DQ20	AJ31	DDRIO110PB0/FDDR_E_DQ20/FDDR_W_RESERVED_8_16
{4} FDDR0_DQ21	AK32	DDRIO109NB0/FDDR_E_DQ21/FDDR_W_RESERVED_8_16
{4} FDDR0_DQ22	AK33	DDRIO109PB0/FDDR_E_DQ22/FDDR_W_RESERVED_8_16
{4} FDDR0_DQ23	AL35	DDRIO108NB0/FDDR_E_DQ23/FDDR_W_RESERVED_8_16
{5} FDDR0_DQ24	AN37	DDRIO120NB0/FDDR_E_DQ24
{5} FDDR0_DQ25	AM37	DDRIO120PB0/FDDR_E_DQ25
{5} FDDR0_DQ26	AG37	DDRIO119NB0/FDDR_E_DQ26
{5} FDDR0_DQ27	AG36	DDRIO119PB0/FDDR_E_DQ27
{5} FDDR0_DQ28	AM36	DDRIO117PB0/FDDR_E_DQ28
{5} FDDR0_DQ29	AJ36	DDRIO116NB0/FDDR_E_DQ29
{5} FDDR0_DQ30	AJ35	DDRIO116PB0/FDDR_E_DQ30
{5} FDDR0_DQ31	AK38	DDRIO115NB0/FDDR_E_DQ31
{5} FDDR0_CBS0_P	AD33	DDRIO79PB0/FDDR_E_DQS_ECC
{5} FDDR0_CBS0_N	AE33	DDRIO79NB0/FDDR_E_DQS_ECC_N
{4} FDDR0_DQS0_P	AF33	DDRIO84PB0/FDDR_E_DQS0
{4} FDDR0_DQS0_N	AF32	DDRIO84NB0/FDDR_E_DQS0_N
{4} FDDR0_DQS1_P	AE38	DDRIO91PB0/FDDR_E_DQS1
{4} FDDR0_DQS1_N	AF38	DDRIO91NB0/FDDR_E_DQS1_N
{4} FDDR0_DQS2_P	AM35	DDRIO111PB0/FDDR_E_DQS2
{4} FDDR0_DQS2_N	AM34	DDRIO111NB0/FDDR_E_DQS2_N
{5} FDDR0_DQS3_P	AL37	DDRIO118PB0/FDDR_E_DQS3
{5} FDDR0_DQS3_N	AL38	DDRIO118NB0/FDDR_E_DQS3_N
{4,5} FDDR0_CK_P	AG39	DDRIO104PB0/FDDR_E_CLK
{4,5} FDDR0_CK_N	AG40	DDRIO104NB0/FDDR_E_CLK_N

DDRIO102PB0/FDDR_E_ADDR0	AM41	FDDR0_A0 {4,5}
DDRIO101NB0/FDDR_E_ADDR1	AF40	FDDR0_A1 {4,5}
DDRIO101PB0/FDDR_E_ADDR2	AF39	FDDR0_A2 {4,5}
DDRIO100NB0/FDDR_E_ADDR3	AH41	FDDR0_A3 {4,5}
DDRIO100PB0/FDDR_E_ADDR4	AG41	FDDR0_A4 {4,5}
DDRIO99NB0/FDDR_E_ADDR5	AM40	FDDR0_A5 {4,5}
DDRIO99PB0/FDDR_E_ADDR6	AL40	FDDR0_A6 {4,5}
DDRIO98PB0/FDDR_E_ADDR7	AD40	FDDR0_A7 {4,5}
DDRIO97NB0/FDDR_E_ADDR8	AE41	FDDR0_A8 {4,5}
DDRIO97PB0/FDDR_E_ADDR9	AD41	FDDR0_A9 {4,5}
DDRIO96NB0/FDDR_E_ADDR10	AK41	FDDR0_A10 {4,5}
DDRIO96PB0/FDDR_E_ADDR11	AJ41	FDDR0_A11 {4,5}
DDRIO95NB0/FDDR_E_ADDR12	AD39	FDDR0_A12 {4,5}
DDRIO95PB0/FDDR_E_ADDR13/GB12_23/CCC_NE1_CLKI3	AC39	FDDR0_A13 {4,5}
DDRIO94NB0/FDDR_E_ADDR14	AC41	FDDR0_A14 {4,5}
DDRIO94PB0/FDDR_E_ADDR15/GB12_23/CCC_NE1_CLKI2	AB41	FDDR0_A15 {4,5}
DDRIO103NB0/FDDR_E_BA0	AK40	FDDR0_BA0 {4,5}
DDRIO103PB0/FDDR_E_BA1	AJ40	FDDR0_BA1 {4,5}
DDRIO102NB0/FDDR_E_BA2	AN41	FDDR0_BA2 {4,5}
DDRIO105PB0/FDDR_E_CAS_N	AN39	FDDR0_CAS_L {4,5}
DDRIO106PB0/FDDR_E_CS_N	AM39	FDDR0_CS_L {4,5}
DDRIO98NB0/FDDR_E_ODT	AE40	FDDR0_ODT {4,5}
DDRIO105NB0/FDDR_E_RESET_N	AN38	FDDR0_RSTN {4,5}
DDRIO106NB0/FDDR_E_CKE	AL39	FDDR0_CKE {4,5}
DDRIO107PB0/FDDR_E_WE_N	AJ39	FDDR0_WE_L {4,5}
DDRIO107NB0/FDDR_E_RAS_N	AH39	FDDR0_RAS_L {4,5}
DDRIO78PB0/FDDR_E_DM_RDQS_ECC	AD35	FDDR0_CBM {5}
DDRIO83NB0/FDDR_E_DM_RDQS0	AE32	FDDR0_DQM0 {4}
DDRIO90NB0/FDDR_E_DM_RDQS1	AH37	FDDR0_DQM1 {4}
DDRIO110NB0/FDDR_E_DM_RDQS2	AH31	FDDR0_DQM2 {4}
DDRIO117NB0/FDDR_E_DM_RDQS3	AN36	FDDR0_DQM3 {5}
DDRIO80PB0/FDDR_E_TMATCH_ECC_IN	AG34	
DDRIO80NB0/FDDR_E_TMATCH_ECC_OUT	AH34	
DDRIO87NB0/FDDR_E_TMATCH_0_IN	AC37	
DDRIO87PB0/FDDR_E_TMATCH_0_OUT	AC36	
DDRIO114NB0/FDDR_E_TMATCH_1_IN	AK37	
DDRIO114PB0/FDDR_E_TMATCH_1_OUT	AK36	
DDRIO78NB0	AE35	TP28
DDRIO81PB0	AF35	TP27
DDRIO88PB0	AC38	
DDRIO108PB0/FDDR_W_RESERVED	AK35	
DDRIO115PB0	AJ38	

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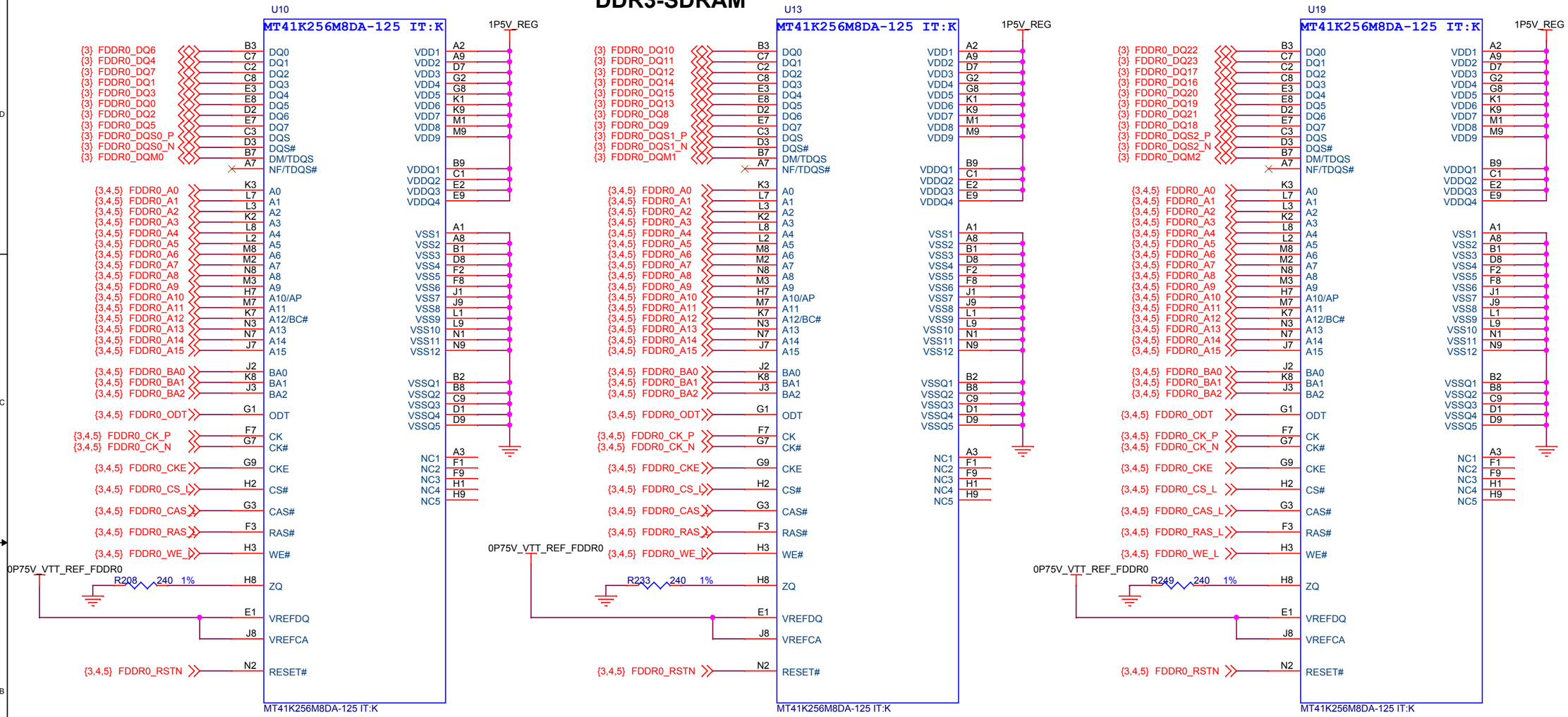
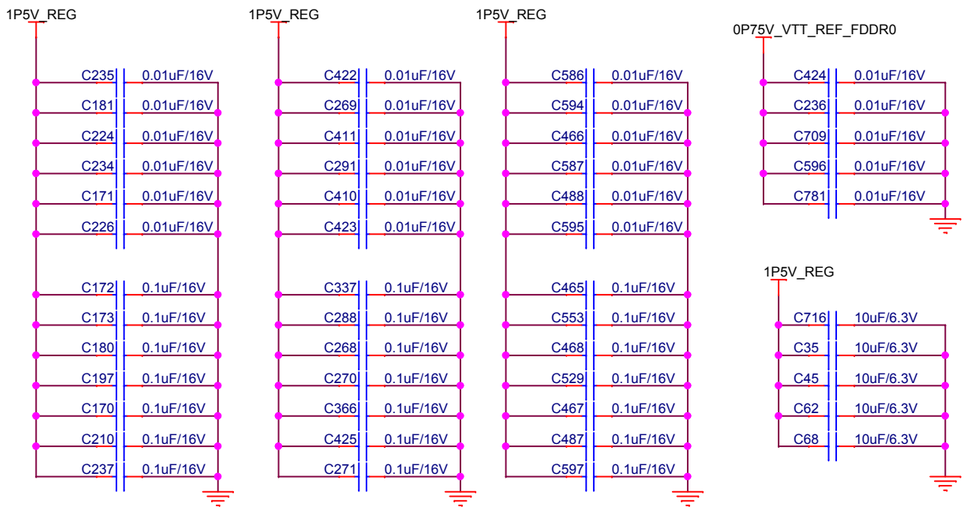
DDR3-SDRAM





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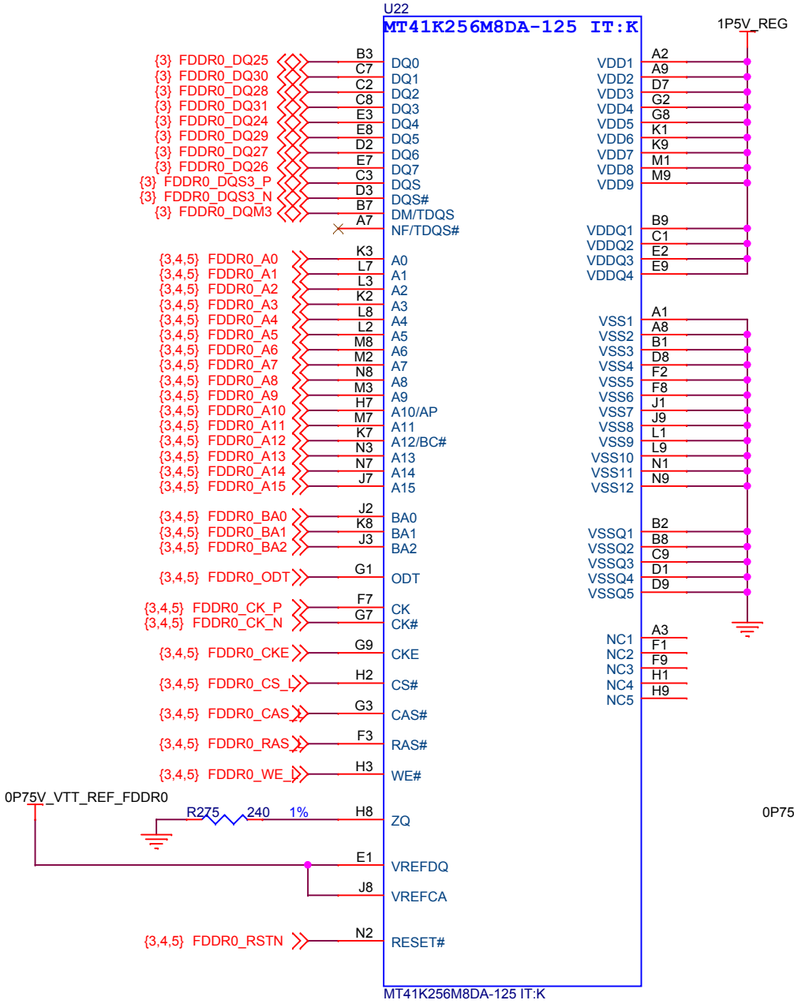
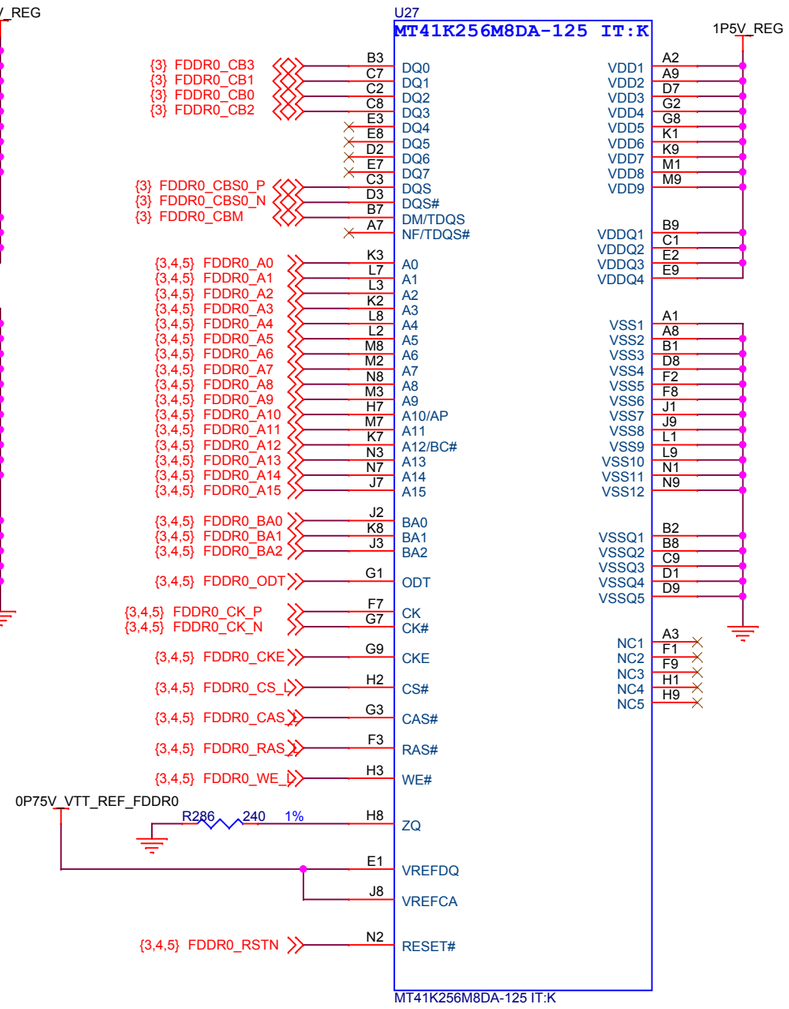
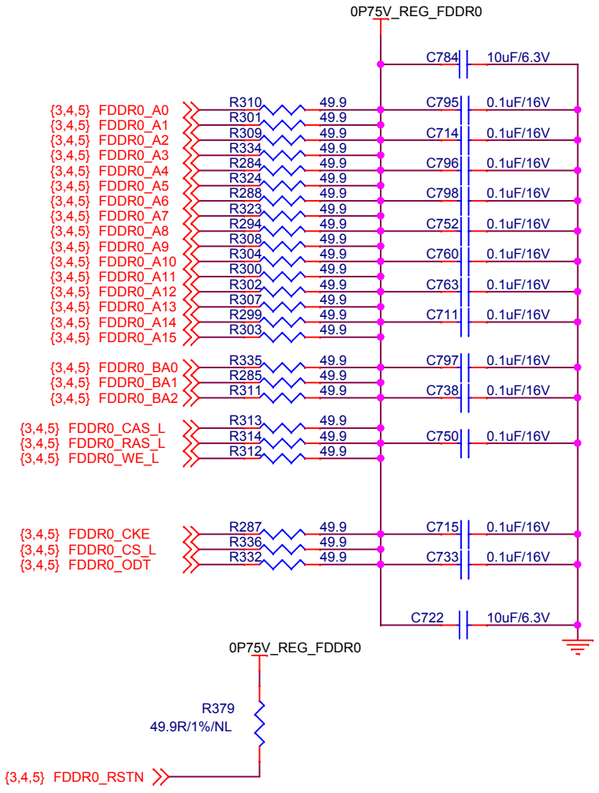
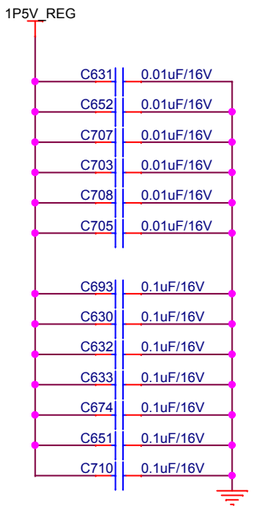
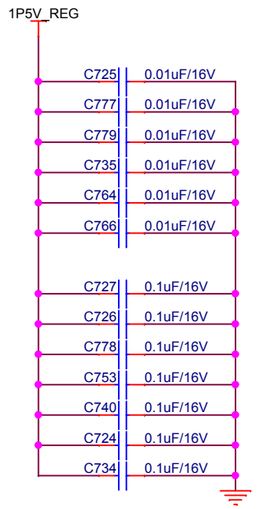
DDR3-SDRAM











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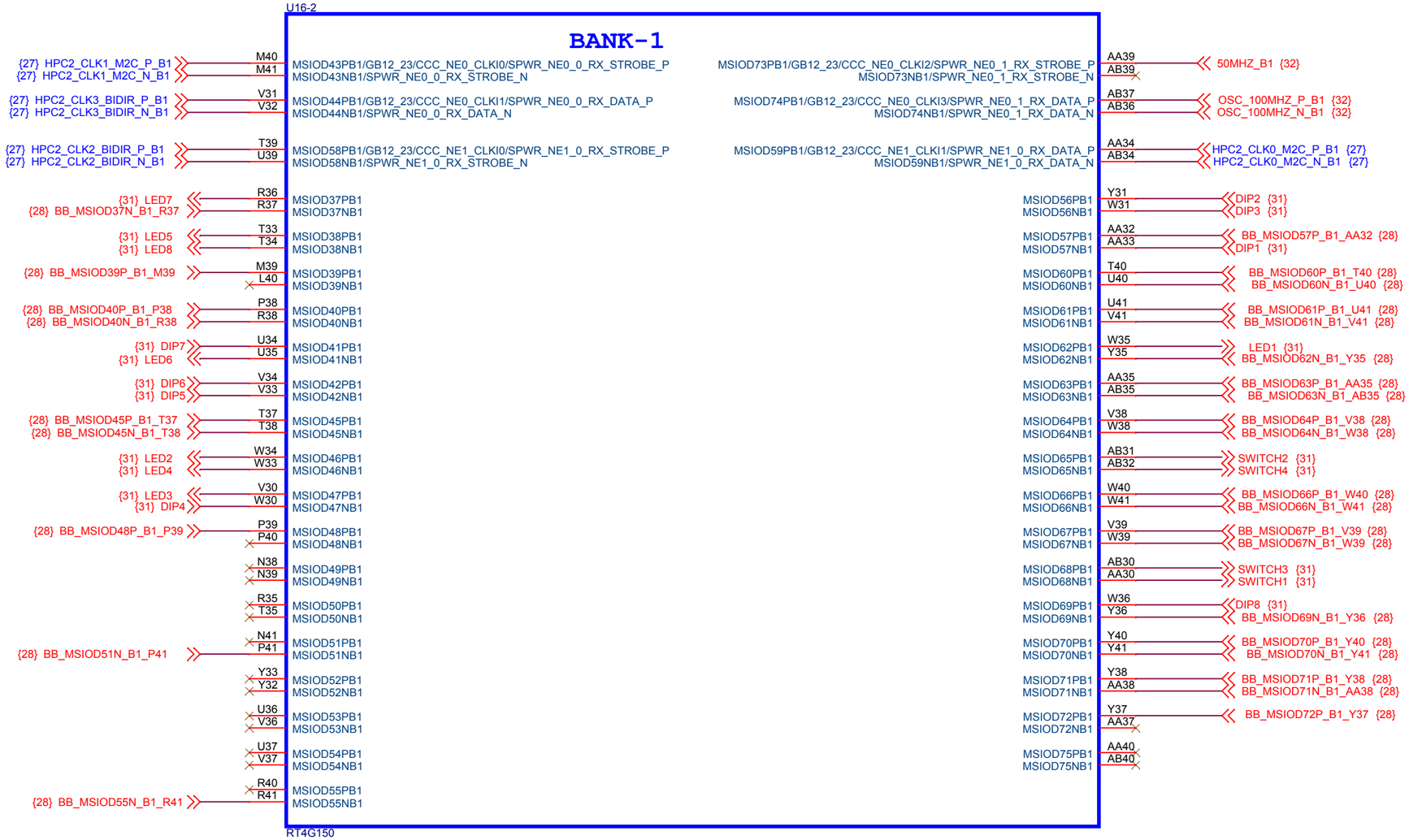
BANK-1



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{26} HPC1_HB04_P_B2	G39	MSIOD13PB2/GB12_23/CCC_SE1_CLKI0/SPWR_SE1_0_RX_STROBE_P	MSIOD22PB2/GB12_23/CCC_SE0_CLKI0/SPWR_SE0_0_RX_STROBE_P	K37	HPC1_HB17_CC_P_B2 {26}
{26} HPC1_HB04_N_B2	G40	MSIOD13NB2/SPWR_SE1_0_RX_STROBE_N	MSIOD22NB2/SPWR_SE0_0_RX_STROBE_N	K38	HPC1_HB17_CC_N_B2 {26}
{26} HPC1_HB06_CC_P_B2	N32	MSIOD14PB2/GB12_23/CCC_SE1_CLKI1/SPWR_SE1_0_RX_DATA_P	MSIOD23PB2/GB12_23/CCC_SE0_CLKI1/SPWR_SE0_0_RX_DATA_P	N34	HPC1_HB00_CC_P_B2 {26}
{26} HPC1_HB06_CC_N_B2	M32	MSIOD14NB2/SPWR_SE1_0_RX_DATA_N	MSIOD23NB2/SPWR_SE0_0_RX_DATA_N	P34	HPC1_HB00_CC_N_B2 {26}
{26} HPC1_HB12_P_B2	E37	MSIOD1PB2	MSIOD19PB2	H39	HPC1_HB05_P_B2 {26}
{26} HPC1_HB12_N_B2	F37	MSIOD1NB2	MSIOD19NB2	J39	HPC1_HB05_N_B2 {26}
{26} HPC1_HB20_P_B2	L32	MSIOD2PB2	MSIOD20PB2	P31	HPC1_HB01_P_B2 {26}
{26} HPC1_HB20_N_B2	K32	MSIOD2NB2	MSIOD20NB2	N31	HPC1_HB01_N_B2 {26}
{26} HPC1_HB08_P_B2	D40	MSIOD3PB2	MSIOD21PB2	P33	HPC1_HB07_P_B2 {26}
{26} HPC1_HB08_N_B2	D41	MSIOD3NB2	MSIOD21NB2	N33	HPC1_HB07_N_B2 {26}
{26} HPC1_HB14_P_B2	L33	MSIOD4PB2	MSIOD24PB2	G41	
{26} HPC1_HB14_N_B2	K33	MSIOD4NB2	MSIOD24NB2	H41	
{26} HPC1_HB18_P_B2	M30	MSIOD5PB2	MSIOD25PB2	R33	
{26} HPC1_HB18_N_B2	N30	MSIOD5NB2	MSIOD25NB2	R32	
{26} HPC1_HB15_P_B2	G37	MSIOD6PB2	MSIOD26PB2	R31	
{26} HPC1_HB15_N_B2	H37	MSIOD6NB2	MSIOD26NB2	R30	
{26} HPC1_HB09_P_B2	E40	MSIOD7PB2	MSIOD27PB2	L37	
{26} HPC1_HB09_N_B2	E41	MSIOD7NB2	MSIOD27NB2	M37	
{26} HPC1_HB19_P_B2	G36	MSIOD8PB2	MSIOD28PB2	J40	
{26} HPC1_HB19_N_B2	H36	MSIOD8NB2	MSIOD28NB2	J41	
{26} HPC1_HB03_P_B2	M31	MSIOD9PB2	MSIOD29PB2	M35	
{26} HPC1_HB03_N_B2	L30	MSIOD9NB2	MSIOD29NB2	M36	
{26} HPC1_HB13_P_B2	D38	MSIOD10PB2	MSIOD30PB2	U32	
{26} HPC1_HB13_N_B2	D39	MSIOD10NB2	MSIOD30NB2	T32	
{26} HPC1_HB02_P_B2	K35	MSIOD11PB2	MSIOD31PB2	L38	
{26} HPC1_HB02_N_B2	L35	MSIOD11NB2	MSIOD31NB2	L39	
{26} HPC1_HB10_P_B2	F39	MSIOD12PB2	MSIOD32PB2	U30	
{26} HPC1_HB10_N_B2	F40	MSIOD12NB2	MSIOD32NB2	U31	
	H38	MSIOD15PB2	MSIOD33PB2	L34	
	J38	MSIOD15NB2	MSIOD33NB2	M34	
{26} HPC1_HB16_P_B2	J34	MSIOD16PB2	MSIOD34PB2	N36	
{26} HPC1_HB16_N_B2	J35	MSIOD16NB2	MSIOD34NB2	N37	
{26} HPC1_HB21_P_B2	J36	MSIOD17PB2	MSIOD35PB2	P35	
{26} HPC1_HB21_N_B2	K36	MSIOD17NB2	MSIOD35NB2	P36	
{26} HPC1_HB11_P_B2	F38	MSIOD18PB2	MSIOD36PB2	K40	
{26} HPC1_HB11_N_B2	E38	MSIOD18NB2	MSIOD36NB2	K41	

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BANK-3 & MISC

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BANK-3

{30} G4M_JTAG_TCK	L29	JTAG_TCK
{30} G4M_JTAG_TDI	G35	JTAG_TDI
{30} G4M_JTAG_TDO	K31	JTAG_TDO
{30} G4M_JTAG_TMS	K30	JTAG_TMS
{30} G4M_JTAG_nTRST	H34	JTAG_TRSTB

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R226 22R

R223 1K/1%

R222 1K/1%_DNL

U16-11

MISC

DEVRST_N	J33	G4M_RSTB {30}
TEMP_MONITOR	AK31	TEMP_MONITOR
FDDR_E_IMP_CALIB	AN34	R270 240R/1%
FDDR_W_IMP_CALIB	AN8	R269 240R/1%

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3P3V

C56 10uF/25V

C57 0.1uF/16V

C58 100pF/10V

C560 2200pF/16V

U38

D+	2	VDD	T_CRIT_A	4
			ALERT	6
			SMBCLK	8
D-	3	GND	SMBDATA	7

LM99CIMM_NOPB

3P3V

R257 1.5K

R258 1.5K

R256 5.1K

R254 5.1K

T_CRIT_A {8}

ALERT {8}

SMB_CLK {8}

SMB_DATA {8}

TBT

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{26} HPC1_CLK1_M2C_P_B4	F28	MSIO334PB4/GB17/CCC_SE0_CLKI2/SPWR_SE0_1_RX_STROBE_P	MSIO346PB4/GB21/CCC_SE1_CLKI2/SPWR_SE1_1_RX_STROBE_P	D33	HPC1_CLK2_BIDIR_P_B4 {26}
{26} HPC1_CLK1_M2C_N_B4	F29	MSIO334NB4/SPWR_SE0_1_RX_STROBE_N	MSIO346NB4/SPWR_SE1_1_RX_STROBE_N	E33	HPC1_CLK2_BIDIR_N_B4 {26}
{26} HPC1_CLK0_M2C_P_B4	F27	MSIO335PB4/GB19/CCC_SE0_CLKI3/SPWR_SE0_1_RX_DATA_P	MSIO347PB4/GB23/CCC_SE1_CLKI3/SPWR_SE1_1_RX_DATA_P	G29	HPC1_CLK3_BIDIR_P_B4 {26}
{26} HPC1_CLK0_M2C_N_B4	G27	MSIO335NB4/SPWR_SE0_1_RX_DATA_N	MSIO347NB4/SPWR_SE1_1_RX_DATA_N	H29	HPC1_CLK3_BIDIR_N_B4 {26}
UART0 - INTERFACE {18} UART0_RXD	E27	MSIO325PB4	MSIO343PB4	E35	SPI1_FLASH_SDO {8}
{18} UART0_TXD R211 33R	E28	MSIO325NB4	MSIO343NB4	E36	SPI1_FLASH_SDI {8}
{16} PHY_RCVRD_CLK1	J26	MSIO326PB4	MSIO344PB4	K28	HPC1_SCL {26}
{16} PHY_RCVRD_CLK2	H26	MSIO326NB4	MSIO344NB4	K27	HPC1_SDA {26}
{7} SMB_CLK	C28	MSIO327PB4	MSIO345PB4	B36	HPC2_SCL {27}
{7} SMB_DATA	C29	MSIO327NB4	MSIO345NB4	B37	HPC2_SDA {27}
{16} RT4G_PHY_CONFIG1 R207 33R	B31	MSIO328PB4	MSIO348PB4	F32	I2C1_SCL {42}
{16} PHY_SCLK	B32	MSIO328NB4	MSIO348NB4	G32	I2C1_SDA {42}
{16} PHY_MDC R220 33R	G25	MSIO329PB4	MSIO349PB4	D34	HPC1_CLK_DIR_B4 {26}
{16} PHY_RST R217 0R	G26	MSIO329NB4	MSIO349NB4	D35	HPC2_CLK_DIR_B4 {27}
SPI0_WP	F30	MSIO330PB4	MSIO350PB4	J29	ALERT {7}
{20} PHY_MDC_SERDES0	E30	MSIO330NB4	MSIO350NB4	J28	T_CRIT_A {7}
{20} PHY_MDIO_SERDES0	D28	MSIO331PB4	MSIO351PB4	B34	SPI1_FLASH_SCK {8}
{20} WAKEN_SERDES0	D29	MSIO331NB4	MSIO351NB4	B35	SPI1_FLASH_SS {8}
{20} PHY_INTn_SERDES0	J25	MSIO332PB4	MSIO352PB4	F33	J55 SERDES0_PRSNT {20}
{20} SERDES0_PERSTn	J24	MSIO332NB4	MSIO352NB4	G34	SPI1_WP
{30} ETM_TRACECLK	A32	MSIO333PB4	MSIO353PB4	G30	I2C0_SCL {18}
{30} ETM_TRACEDATA0	A33	MSIO333NB4	MSIO353NB4	G31	I2C0_SDA {18}
{30} ETM_TRACEDATA1	D30	MSIO336PB4	MSIO354PB4	C36	SPI0_RESET {8}
{30} ETM_TRACEDATA2	D31	MSIO336NB4	MSIO354NB4	D36	SPI1_RESET {8}
{30} ETM_TRACEDATA3	A34	MSIO337PB4	MSIO355PB4	A37	PHY_CONFIG2_SERDES0 {20}
{30} RVI_nTRST	A35	MSIO337NB4	MSIO355NB4	A38	PHY_CONFIG1_SERDES0 {20}
{30} RVI_TDI	K26	MSIO338PB4	MSIO356PB4	J31	HPC1_PG_M2C {26}
{30} RVI_TMS	K25	MSIO338NB4	MSIO356NB4	J30	HPC2_PG_M2C {27}
{30} RVI_TCK	E31	MSIO339PB4	MSIO357PB4	F34 R213 499R_1%	HPC1_PRSNT_M2CL {26}
{30} RVI_TDO	E32	MSIO339NB4	MSIO357NB4	F35 R218 499R_1%	HPC2_PRSNT_M2CL {27}
{16} PHY_MDIO	C31	MSIO340PB4	MSIO358PB4/PROBE_CAPTURE	C37	J39 J40
{16} PHY_INTn	C32	MSIO340NB4	MSIO358NB4/PROBE_READ_DATA	C38	J44 J45
{8} SPI0_FLASH_SDO	H27	MSIO341PB4	MSIO359PB4/SC_SPI_SDI	H31	RT4G_SPI_SDO {30}
{8} SPI0_FLASH_SDI	H28	MSIO341NB4	MSIO359NB4/SC_SPI_SDO	H32 R219 22R	RT4G_SPI_SDI {30}
{8} SPI0_FLASH_SCK	C34	MSIO342NB4	MSIO360PB4/SC_SPI_CLK	B39	RT4G_SPI_SCK {30}
{8} SPI0_FLASH_SS	C33	MSIO342PB4	MSIO360NB4/SC_SPI_SS	C39	RT4G_SPI_SS {30}

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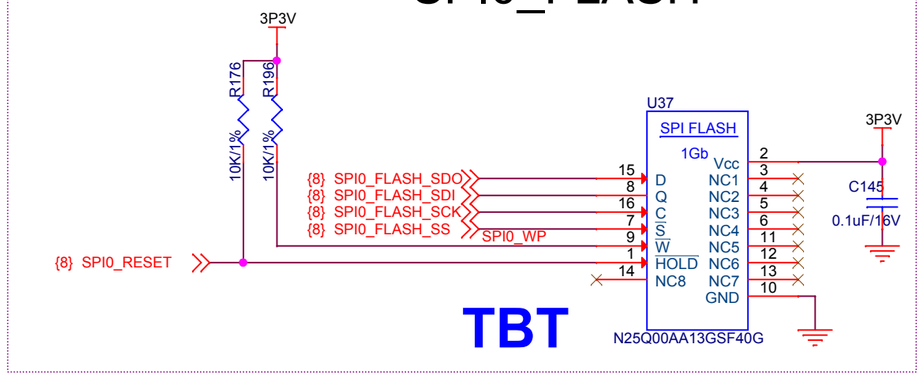
3P3V

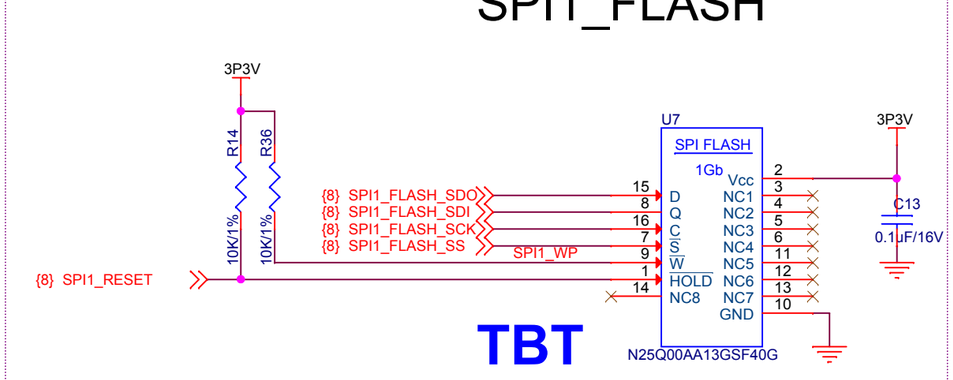
R253 10K
R247 10K
R158 10K
R156 10K
R191 10K
R181 10K

R282 10K

SPI0_FLASH



SPI1_FLASH



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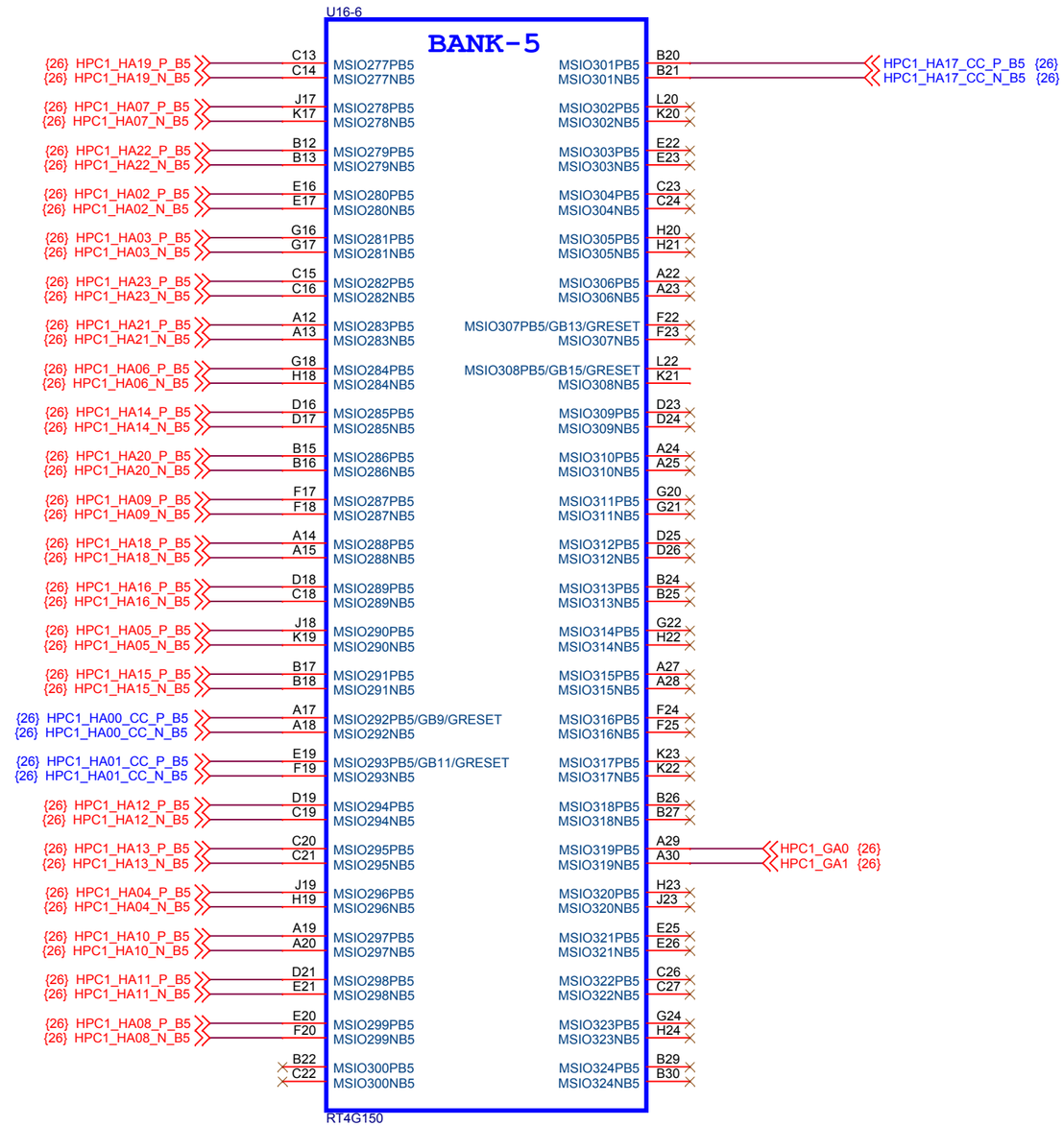

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{26} HPC1_LA17_CC_P_B6	E6	MSIO253PB6/GB1/CCC_SW0_CLKI2/SPWR_SW0_1_RX_STROBE_P	MSIO265PB6/GB5/CCC_SW1_CLKI2/SPWR_SW1_1_RX_STROBE_P	C10	HPC1_LA18_CC_P_B6 {26}
{26} HPC1_LA17_CC_N_B6	E7	MSIO253NB6/SPWR_SW0_1_RX_STROBE_N	MSIO265NB6/SPWR_SW1_1_RX_STROBE_N	C11	HPC1_LA18_CC_N_B6 {26}
{26} HPC1_LA00_CC_P_B6	H10	MSIO254PB6/GB3/CCC_SW0_CLKI3/SPWR_SW0_1_RX_DATA_P	MSIO266PB6/GB7/CCC_SW1_CLKI3/SPWR_SW1_1_RX_DATA_P	K15	HPC1_LA01_CC_P_B6 {26}
{26} HPC1_LA00_CC_N_B6	J9	MSIO254NB6/SPWR_SW0_1_RX_DATA_N	MSIO266NB6/SPWR_SW1_1_RX_DATA_N	K14	HPC1_LA01_CC_N_B6 {26}
{26} HPC1_LA28_P_B6	C4	MSIO241PB6	MSIO259PB6	E9	HPC1_LA15_P_B6 {26}
{26} HPC1_LA28_N_B6	C5	MSIO241NB6	MSIO259NB6	D9	HPC1_LA15_N_B6 {26}
{26} HPC1_LA03_P_B6	K10	MSIO242PB6	MSIO260PB6	J14	HPC1_LA08_P_B6 {26}
{26} HPC1_LA03_N_B6	K11	MSIO242NB6	MSIO260NB6	J13	HPC1_LA08_N_B6 {26}
{26} HPC1_LA29_P_B6	C3	MSIO243PB6	MSIO261PB6	A7	HPC1_LA27_P_B6 {26}
{26} HPC1_LA29_N_B6	B3	MSIO243NB6	MSIO261NB6	A8	HPC1_LA27_N_B6 {26}
{26} HPC1_LA32_P_B6	G7	MSIO244PB6	MSIO262PB6	G12	HPC1_LA14_P_B6 {26}
{26} HPC1_LA32_N_B6	G8	MSIO244NB6	MSIO262NB6	G13	HPC1_LA14_N_B6 {26}
{26} HPC1_LA02_P_B6	H8	MSIO245PB6	MSIO263PB6	H13	HPC1_LA10_P_B6 {26}
{26} HPC1_LA02_N_B6	H9	MSIO245NB6	MSIO263NB6	H14	HPC1_LA10_N_B6 {26}
{26} HPC1_LA25_P_B6	D6	MSIO246PB6	MSIO264PB6	E10	HPC1_LA31_P_B6 {26}
{26} HPC1_LA25_N_B6	C6	MSIO246NB6	MSIO264NB6	E11	HPC1_LA31_N_B6 {26}
{26} HPC1_LA21_P_B6	A4	MSIO247PB6	MSIO267PB6	F13	HPC1_LA13_P_B6 {26}
{26} HPC1_LA21_N_B6	A5	MSIO247NB6	MSIO267NB6	F14	HPC1_LA13_N_B6 {26}
{26} HPC1_LA06_P_B6	H11	MSIO248PB6	MSIO268PB6	D11	HPC1_LA16_P_B6 {26}
{26} HPC1_LA06_N_B6	J11	MSIO248NB6	MSIO268NB6	D12	HPC1_LA16_N_B6 {26}
{26} HPC1_LA30_P_B6	F7	MSIO249PB6	MSIO269PB6	F15	HPC1_LA12_P_B6 {26}
{26} HPC1_LA30_N_B6	F8	MSIO249NB6	MSIO269NB6	G15	HPC1_LA12_N_B6 {26}
{26} HPC1_LA24_P_B6	D7	MSIO250PB6	MSIO270PB6	B10	HPC1_LA20_P_B6 {26}
{26} HPC1_LA24_N_B6	D8	MSIO250NB6	MSIO270NB6	B11	HPC1_LA20_N_B6 {26}
{26} HPC1_LA05_P_B6	J12	MSIO251PB6	MSIO271PB6	F12	HPC1_LA33_P_B6 {26}
{26} HPC1_LA05_N_B6	K12	MSIO251NB6	MSIO271NB6	E12	HPC1_LA33_N_B6 {26}
{26} HPC1_LA26_P_B6	B7	MSIO252PB6	MSIO272PB6	J16	HPC1_LA09_P_B6 {26}
{26} HPC1_LA26_N_B6	B8	MSIO252NB6	MSIO272NB6	K16	HPC1_LA09_N_B6 {26}
{26} HPC1_LA22_P_B6	B5	MSIO255PB6	MSIO273PB6	D13	HPC1_LA11_P_B6 {26}
{26} HPC1_LA22_N_B6	B6	MSIO255NB6	MSIO273NB6	D14	HPC1_LA11_N_B6 {26}
{26} HPC1_LA19_P_B6	C8	MSIO256PB6	MSIO274PB6	A9	HPC1_LA23_P_B6 {26}
{26} HPC1_LA19_N_B6	C9	MSIO256NB6	MSIO274NB6	A10	HPC1_LA23_N_B6 {26}
{26} HPC1_LA07_P_B6	G10	MSIO257PB6	MSIO275PB6	H15	
{26} HPC1_LA07_N_B6	G11	MSIO257NB6	MSIO275NB6	H16	
{26} HPC1_LA04_P_B6	F9	MSIO258PB6	MSIO276PB6	E14	
{26} HPC1_LA04_N_B6	F10	MSIO258NB6	MSIO276NB6	E15	

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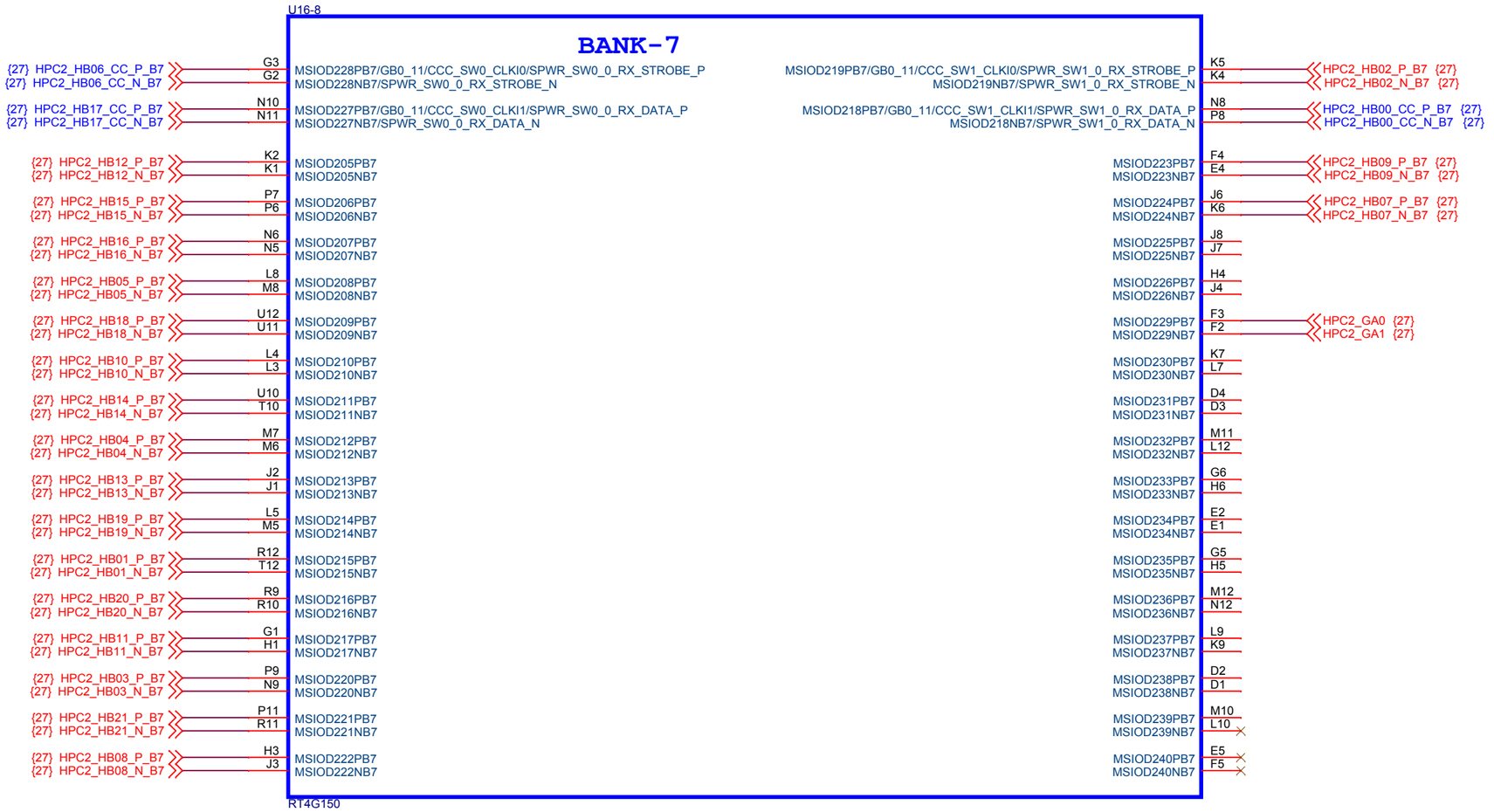

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{27} HPC2_LA18_CC_P_B8	M2	MSIOD198PB8/GB0_11/CCC_NW1_CLKI0/SPWR_NW1_0_RX_STROBE_P	MSIOD183PB8/GB0_11/CCC_NW0_CLKI0/SPWR_NW0_0_RX_STROBE_P	T3	HPC2_LA17_CC_P_B8 {27}
{27} HPC2_LA18_CC_N_B8	M1	MSIOD198NB8/SPWR_NW1_0_RX_STROBE_N	MSIOD183NB8/SPWR_NW0_0_RX_STROBE_N	U3	HPC2_LA17_CC_N_B8 {27}
{27} HPC2_LA00_CC_P_B8	V11	MSIOD197PB8/GB0_11/CCC_NW1_CLKI1/SPWR_NW1_0_RX_DATA_P	MSIOD182PB8/GB0_11/CCC_NW0_CLKI1/SPWR_NW0_0_RX_DATA_P	AA8	HPC2_LA01_CC_P_B8 {27}
{27} HPC2_LA00_CC_N_B8	V10	MSIOD197NB8/SPWR_NW1_0_RX_DATA_N	MSIOD182NB8/SPWR_NW0_0_RX_DATA_N	AB8	HPC2_LA01_CC_N_B8 {27}
{27} HPC2_LA26_P_B8	AA3	MSIOD168PB8/GB0_11/CCC_NW1_CLKI2/SPWR_NW1_1_RX_STROBE_P	MSIOD167PB8/GB0_11/CCC_NW1_CLKI3/SPWR_NW1_1_RX_DATA_P	AB5	HPC2_HA00_CC_P_B8 {27}
{27} HPC2_LA26_N_B8	AB3	MSIOD168NB8/SPWR_NW1_1_RX_STROBE_N	MSIOD167NB8/SPWR_NW1_1_RX_DATA_N	AB6	HPC2_HA00_CC_N_B8 {27}
{27} HPC2_LA22_P_B8	AA2	MSIOD166PB8	MSIOD187PB8	U5	HPC2_LA23_P_B8 {27}
{27} HPC2_LA22_N_B8	AB2	MSIOD166NB8	MSIOD187NB8	V5	HPC2_LA23_N_B8 {27}
{27} HPC2_LA15_P_B8	Y5	MSIOD169PB8	MSIOD188PB8	U6	HPC2_LA19_P_B8 {27}
{27} HPC2_LA15_N_B8	AA5	MSIOD169NB8	MSIOD188NB8	V6	HPC2_LA19_N_B8 {27}
{27} HPC2_LA11_P_B8	Y4	MSIOD170PB8	MSIOD189PB8	Y9	HPC2_LA05_P_B8 {27}
{27} HPC2_LA11_N_B8	AA4	MSIOD170NB8	MSIOD189NB8	Y10	HPC2_LA05_N_B8 {27}
{27} HPC2_LA27_P_B8	Y2	MSIOD171PB8	MSIOD190PB8	N1	HPC2_LA29_P_B8 {27}
{27} HPC2_LA27_N_B8	Y1	MSIOD171NB8	MSIOD190NB8	P1	HPC2_LA29_N_B8 {27}
{27} HPC2_LA09_P_B8	W6	MSIOD172PB8	MSIOD191PB8	R7	HPC2_LA16_P_B8 {27}
{27} HPC2_LA09_N_B8	Y6	MSIOD172NB8	MSIOD191NB8	T7	HPC2_LA16_N_B8 {27}
{27} HPC2_LA03_P_B8	AB12	MSIOD173PB8	MSIOD192PB8	N4	HPC2_LA25_P_B8 {27}
{27} HPC2_LA03_N_B8	AA12	MSIOD173NB8	MSIOD192NB8	N3	HPC2_LA25_N_B8 {27}
{27} HPC2_LA28_P_B8	V3	MSIOD174PB8	MSIOD193PB8	P3	HPC2_LA24_P_B8 {27}
{27} HPC2_LA28_N_B8	W3	MSIOD174NB8	MSIOD193NB8	P2	HPC2_LA24_N_B8 {27}
{27} HPC2_LA32_P_B8	W2	MSIOD175PB8	MSIOD194PB8	V12	HPC2_LA07_P_B8 {27}
{27} HPC2_LA32_N_B8	W1	MSIOD175NB8	MSIOD194NB8	W12	HPC2_LA07_N_B8 {27}
{27} HPC2_LA06_P_B8	AB11	MSIOD176PB8	MSIOD195PB8	W8	HPC2_LA13_P_B8 {27}
{27} HPC2_LA06_N_B8	AB10	MSIOD176NB8	MSIOD195NB8	W9	HPC2_LA13_N_B8 {27}
{27} HPC2_LA20_P_B8	V4	MSIOD177PB8	MSIOD196PB8	T5	HPC2_LA21_P_B8 {27}
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{27} HPC2_LA02_P_B8	AA7	MSIOD178PB8	MSIOD199PB8	V8	HPC2_LA14_P_B8 {27}
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{27} HPC2_LA10_P_B8	W7	MSIOD179PB8	MSIOD200PB8	U8	HPC2_LA12_P_B8 {27}
{27} HPC2_LA10_N_B8	Y7	MSIOD179NB8	MSIOD200NB8	U7	HPC2_LA12_N_B8 {27}
{27} HPC2_LA33_P_B8	U1	MSIOD180PB8	MSIOD201PB8	P4	
{27} HPC2_LA33_N_B8	V1	MSIOD180NB8	MSIOD201NB8	R4	
{27} HPC2_LA30_P_B8	T2	MSIOD181PB8	MSIOD202PB8	M3	
{27} HPC2_LA30_N_B8	U2	MSIOD181NB8	MSIOD202NB8	L2	
{27} HPC2_LA04_P_B8	AA10	MSIOD184PB8	MSIOD203PB8	T9	
{27} HPC2_LA04_N_B8	AA9	MSIOD184NB8	MSIOD203NB8	T8	
{27} HPC2_LA08_P_B8	Y11	MSIOD185PB8	MSIOD204PB8	R6	
{27} HPC2_LA08_N_B8	W11	MSIOD185NB8	MSIOD204NB8	R5	
{27} HPC2_LA31_P_B8	R2	MSIOD186PB8			
{27} HPC2_LA31_N_B8	R1	MSIOD186NB8			

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FDDR INTERFACE

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{14,15} FDDR1_A0	AM1	DDRIO139PB9/FDDR_W_ADDR0
{14,15} FDDR1_A1	AF2	DDRIO140NB9/FDDR_W_ADDR1
{14,15} FDDR1_A2	AF3	DDRIO140PB9/FDDR_W_ADDR2
{14,15} FDDR1_A3	AH1	DDRIO141NB9/FDDR_W_ADDR3
{14,15} FDDR1_A4	AG1	DDRIO141PB9/FDDR_W_ADDR4
{14,15} FDDR1_A5	AM2	DDRIO142NB9/FDDR_W_ADDR5
{14,15} FDDR1_A6	AL2	DDRIO142PB9/FDDR_W_ADDR6
{14,15} FDDR1_A7	AD2	DDRIO143PB9/FDDR_W_ADDR7
{14,15} FDDR1_A8	AE1	DDRIO144NB9/FDDR_W_ADDR8
{14,15} FDDR1_A9	AD1	DDRIO144PB9/FDDR_W_ADDR9
{14,15} FDDR1_A10	AK1	DDRIO145NB9/FDDR_W_ADDR10
{14,15} FDDR1_A11	AJ1	DDRIO145PB9/FDDR_W_ADDR11
{14,15} FDDR1_A12	AD3	DDRIO146NB9/FDDR_W_ADDR12
{14,15} FDDR1_A13	AC3	DDRIO146PB9/FDDR_W_ADDR13/GB0_11/CCC_NW0_CLKI3
{14,15} FDDR1_A14	AC1	DDRIO147NB9/FDDR_W_ADDR14
{14,15} FDDR1_A15	AB1	DDRIO147PB9/FDDR_W_ADDR15/GB0_11/CCC_NW0_CLKI2
{14,15} FDDR1_BA0	AK2	DDRIO138NB9/FDDR_W_BA0
{14,15} FDDR1_BA1	AJ2	DDRIO138PB9/FDDR_W_BA1
{14,15} FDDR1_BA2	AN1	DDRIO139NB9/FDDR_W_BA2
{14,15} FDDR1_CAS_L	AN3	DDRIO136PB9/FDDR_W_CAS_N
{14,15} FDDR1_CS_L	AM3	DDRIO135PB9/FDDR_W_CS_N
{14,15} FDDR1_ODT	AE2	DDRIO143NB9/FDDR_W_ODT
{14,15} FDDR1_RSTN	AN4	DDRIO136NB9/FDDR_W_RESET_N
{14,15} FDDR1_CKE	AL3	DDRIO135NB9/FDDR_W_CKE
{14,15} FDDR1_WE_L	AJ3	DDRIO134PB9/FDDR_W_WE_N
{14,15} FDDR1_RAS_L	AH3	DDRIO134NB9/FDDR_W_RAS_N
{15} FDDR1_CBM	AD7	DDRIO163PB9/FDDR_W_DM_RDQS_ECC
{14} FDDR1_DQM0	AE10	DDRIO158NB9/FDDR_W_DM_RDQS0
{14} FDDR1_DQM1	AH5	DDRIO151NB9/FDDR_W_DM_RDQS1
{14} FDDR1_DQM2	AH11	DDRIO131NB9/FDDR_W_DM_RDQS2
{15} FDDR1_DQM3	AN6	DDRIO124NB9/FDDR_W_DM_RDQS3
	AH8	DDRIO161NB9/FDDR_W_TMATCH_ECC_OUT
	AG8	DDRIO161PB9/FDDR_W_TMATCH_ECC_IN
	AC5	DDRIO154NB9/FDDR_W_TMATCH_0_IN
	AC6	DDRIO154PB9/FDDR_W_TMATCH_0_OUT
	AK5	DDRIO127NB9/FDDR_W_TMATCH_1_IN
	AK6	DDRIO127PB9/FDDR_W_TMATCH_1_OUT
	AJ4	DDRIO126PB9
	AK7	DDRIO133PB9/FDDR_W_RESERVED
	AC4	DDRIO153PB9
TP35	AF7	DDRIO160PB9
TP36	AE7	DDRIO163NB9

DDRIO164NB9/FDDR_W_DQ_ECC0	AC11	FDDR1_CB0 {15}
DDRIO164PB9/FDDR_W_DQ_ECC1	AD11	FDDR1_CB1 {15}
DDRIO165NB9/FDDR_W_DQ_ECC2	AC10	FDDR1_CB2 {15}
DDRIO165PB9/FDDR_W_DQ_ECC3	AC9	FDDR1_CB3 {15}
DDRIO155NB9/FDDR_W_DQ0	AG11	FDDR1_DQ0 {14}
DDRIO155PB9/FDDR_W_DQ1	AG10	FDDR1_DQ1 {14}
DDRIO156NB9/FDDR_W_DQ2	AH10	FDDR1_DQ2 {14}
DDRIO156PB9/FDDR_W_DQ3	AH9	FDDR1_DQ3 {14}
DDRIO158PB9/FDDR_W_DQ4	AE11	FDDR1_DQ4 {14}
DDRIO159NB9/FDDR_W_DQ5	AD8	FDDR1_DQ5 {14}
DDRIO159PB9/FDDR_W_DQ6	AC8	FDDR1_DQ6 {14}
DDRIO160NB9/FDDR_W_DQ7	AF8	FDDR1_DQ7 {14}
DDRIO148NB9/FDDR_W_DQ8	AH6	FDDR1_DQ8 {14}
DDRIO148PB9/FDDR_W_DQ9	AG7	FDDR1_DQ9 {14}
DDRIO149NB9/FDDR_W_DQ10	AF5	FDDR1_DQ10 {14}
DDRIO149PB9/FDDR_W_DQ11	AE5	FDDR1_DQ11 {14}
DDRIO151PB9/FDDR_W_DQ12	AH4	FDDR1_DQ12 {14}
DDRIO152NB9/FDDR_W_DQ13	AE6	FDDR1_DQ13 {14}
DDRIO152PB9/FDDR_W_DQ14	AD6	FDDR1_DQ14 {14}
DDRIO153NB9/FDDR_W_DQ15	AD4	FDDR1_DQ15 {14}
DDRIO128NB9/FDDR_W_DQ16	AJ8	FDDR1_DQ16 {14}
DDRIO128PB9/FDDR_W_DQ17	AJ9	FDDR1_DQ17 {14}
DDRIO129NB9/FDDR_W_DQ18	AL9	FDDR1_DQ18 {14}
DDRIO129PB9/FDDR_W_DQ19	AL8	FDDR1_DQ19 {14}
DDRIO131PB9/FDDR_W_DQ20/FDDR_W_RESERVED_8_16	AJ11	FDDR1_DQ20 {14}
DDRIO132NB9/FDDR_W_DQ21/FDDR_W_RESERVED_8_16	AK10	FDDR1_DQ21 {14}
DDRIO132PB9/FDDR_W_DQ22/FDDR_W_RESERVED_8_16	AK9	FDDR1_DQ22 {14}
DDRIO133NB9/FDDR_W_DQ23/FDDR_W_RESERVED_8_16	AL7	FDDR1_DQ23 {14}
DDRIO121NB9/FDDR_W_DQ24	AN5	FDDR1_DQ24 {15}
DDRIO121PB9/FDDR_W_DQ25	AM5	FDDR1_DQ25 {15}
DDRIO122NB9/FDDR_W_DQ26	AG5	FDDR1_DQ26 {15}
DDRIO122PB9/FDDR_W_DQ27	AG6	FDDR1_DQ27 {15}
DDRIO124PB9/FDDR_W_DQ28	AM6	FDDR1_DQ28 {15}
DDRIO125NB9/FDDR_W_DQ29	AJ6	FDDR1_DQ29 {15}
DDRIO125PB9/FDDR_W_DQ30	AJ7	FDDR1_DQ30 {15}
DDRIO126NB9/FDDR_W_DQ31	AK4	FDDR1_DQ31 {15}
DDRIO162PB9/FDDR_W_DQS_ECC	AD9	FDDR1_CBS0_P {15}
DDRIO162NB9/FDDR_W_DQS_ECC_N	AE9	FDDR1_CBS0_N {15}
DDRIO157PB9/FDDR_W_DQS0	AF9	FDDR1_DQS0_P {14}
DDRIO157NB9/FDDR_W_DQS0_N	AF10	FDDR1_DQS0_N {14}
DDRIO150PB9/FDDR_W_DQS1	AE4	FDDR1_DQS1_P {14}
DDRIO150NB9/FDDR_W_DQS1_N	AF4	FDDR1_DQS1_N {14}
DDRIO130PB9/FDDR_W_DQS2	AM7	FDDR1_DQS2_P {14}
DDRIO130NB9/FDDR_W_DQS2_N	AM8	FDDR1_DQS2_N {14}
DDRIO123PB9/FDDR_W_DQS3	AL5	FDDR1_DQS3_P {15}
DDRIO123NB9/FDDR_W_DQS3_N	AL4	FDDR1_DQS3_N {15}
DDRIO137PB9/FDDR_W_CLK	AG3	FDDR1_CK_P {14,15}
DDRIO137NB9/FDDR_W_CLK_N	AG2	FDDR1_CK_N {14,15}

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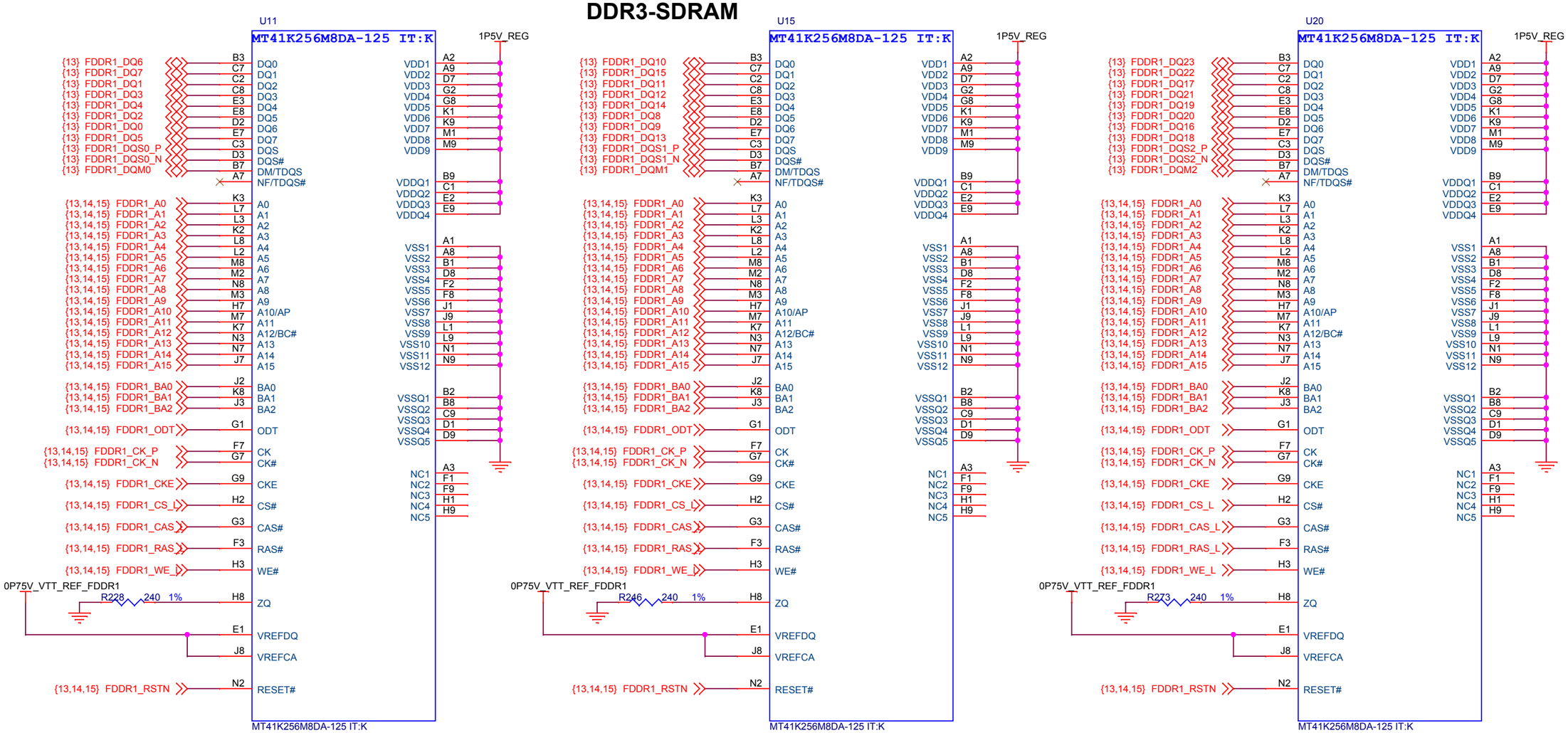
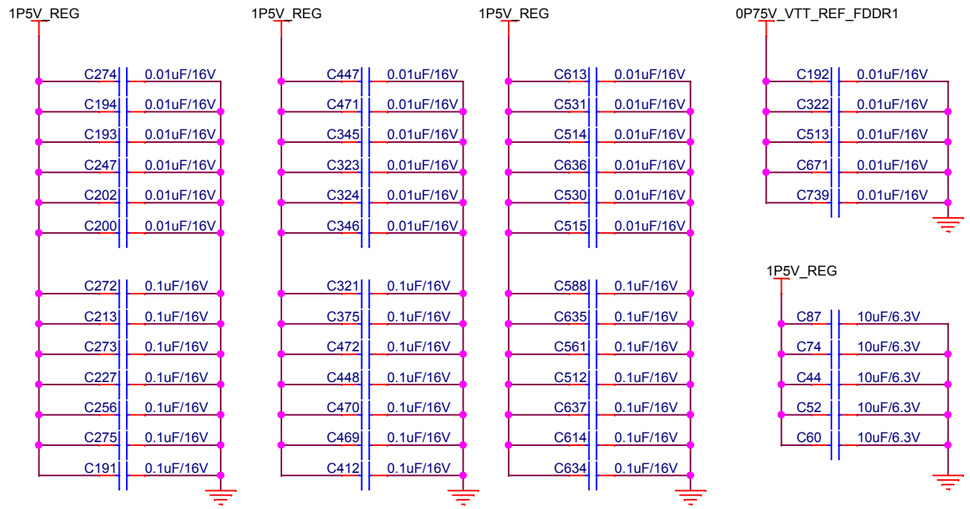
DDR3-SDRAM





TITLE: RTG4_DEV_KIT		
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DDR3-SDRAM

U24
MT41K256M8DA-125 IT:K

{13} FDDR1_DQ25 B3 DQ0
{13} FDDR1_DQ28 C7 DQ1
{13} FDDR1_DQ31 C2 DQ2
{13} FDDR1_DQ30 C8 DQ3
{13} FDDR1_DQ24 E3 DQ4
{13} FDDR1_DQ27 E8 DQ5
{13} FDDR1_DQ29 D2 DQ6
{13} FDDR1_DQ26 E7 DQ7
{13} FDDR1_DQS3_P C3 DQS
{13} FDDR1_DQS3_N D3 DQS#
{13} FDDR1_DQM3 B7 DM/TDQS
A7 NF/TDQS#

{13,14,15} FDDR1_A0 K3 A0
{13,14,15} FDDR1_A1 L7 A1
{13,14,15} FDDR1_A2 L3 A2
{13,14,15} FDDR1_A3 K2 A3
{13,14,15} FDDR1_A4 L8 A4
{13,14,15} FDDR1_A5 L2 A5
{13,14,15} FDDR1_A6 M8 A6
{13,14,15} FDDR1_A7 M2 A7
{13,14,15} FDDR1_A8 N8 A8
{13,14,15} FDDR1_A9 M3 A9
{13,14,15} FDDR1_A10 H7 A10/AP
{13,14,15} FDDR1_A11 M7 A11
{13,14,15} FDDR1_A12 K7 A12/BC#
{13,14,15} FDDR1_A13 N3 A13
{13,14,15} FDDR1_A14 N7 A14
{13,14,15} FDDR1_A15 J7 A15

{13,14,15} FDDR1_BA0 J2 BA0
{13,14,15} FDDR1_BA1 K8 BA1
{13,14,15} FDDR1_BA2 J3 BA2

{13,14,15} FDDR1_ODT G1 ODT

{13,14,15} FDDR1_CK_P F7 CK
{13,14,15} FDDR1_CK_N G7 CK#

{13,14,15} FDDR1_CKE G9 CKE

{13,14,15} FDDR1_CS_L H2 CS#

{13,14,15} FDDR1_CAS_L G3 CAS#

{13,14,15} FDDR1_RAS_L F3 RAS#

{13,14,15} FDDR1_WE_L H3 WE#

0P75V_VTT_REF_FDDR1
R283 240 1% H8 ZQ

E1 VREFDQ
J8 VREFCA

{13,14,15} FDDR1_RSTN N2 RESET#

MT41K256M8DA-125 IT:K

1P5V_REG
A2 VDD1
A9 VDD2
D7 VDD3
G2 VDD4
G8 VDD5
K1 VDD6
K9 VDD7
M1 VDD8
M9 VDD9

B9 VDDQ1
C1 VDDQ2
E2 VDDQ3
E9 VDDQ4

A1 VSS1
A8 VSS2
B1 VSS3
D8 VSS4
F2 VSS5
F8 VSS6
J1 VSS7
J9 VSS8
L1 VSS9
L9 VSS10
N1 VSS11
N9 VSS12

B2 VSSQ1
B8 VSSQ2
C9 VSSQ3
D1 VSSQ4
D9 VSSQ5

A3 NC1
F1 NC2
F9 NC3
H1 NC4
H9 NC5

U29
MT41K256M8DA-125 IT:K

{13} FDDR1_CB1 B3 DQ0
{13} FDDR1_CB0 C7 DQ1
{13} FDDR1_CB3 C2 DQ2
{13} FDDR1_CB2 C8 DQ3
E3 DQ4
E8 DQ5
D2 DQ6
E7 DQ7
{13} FDDR1_CBS0_P C3 DQS
{13} FDDR1_CBS0_N D3 DQS#
{13} FDDR1_CBM B7 DM/TDQS
A7 NF/TDQS#

{13,14,15} FDDR1_A0 K3 A0
{13,14,15} FDDR1_A1 L7 A1
{13,14,15} FDDR1_A2 L3 A2
{13,14,15} FDDR1_A3 K2 A3
{13,14,15} FDDR1_A4 L8 A4
{13,14,15} FDDR1_A5 L2 A5
{13,14,15} FDDR1_A6 M8 A6
{13,14,15} FDDR1_A7 M2 A7
{13,14,15} FDDR1_A8 N8 A8
{13,14,15} FDDR1_A9 M3 A9
{13,14,15} FDDR1_A10 H7 A10/AP
{13,14,15} FDDR1_A11 M7 A11
{13,14,15} FDDR1_A12 K7 A12/BC#
{13,14,15} FDDR1_A13 N3 A13
{13,14,15} FDDR1_A14 N7 A14
{13,14,15} FDDR1_A15 J7 A15

{13,14,15} FDDR1_BA0 J2 BA0
{13,14,15} FDDR1_BA1 K8 BA1
{13,14,15} FDDR1_BA2 J3 BA2

{13,14,15} FDDR1_ODT G1 ODT

{13,14,15} FDDR1_CK_P F7 CK
{13,14,15} FDDR1_CK_N G7 CK#

{13,14,15} FDDR1_CKE G9 CKE

{13,14,15} FDDR1_CS_L H2 CS#

{13,14,15} FDDR1_CAS_L G3 CAS#

{13,14,15} FDDR1_RAS_L F3 RAS#

{13,14,15} FDDR1_WE_L H3 WE#

0P75V_VTT_REF_FDDR1
R340 240 1% H8 ZQ

E1 VREFDQ
J8 VREFCA

{13,14,15} FDDR1_RSTN N2 RESET#

MT41K256M8DA-125 IT:K

1P5V_REG
A2 VDD1
A9 VDD2
D7 VDD3
G2 VDD4
G8 VDD5
K1 VDD6
K9 VDD7
M1 VDD8
M9 VDD9

B9 VDDQ1
C1 VDDQ2
E2 VDDQ3
E9 VDDQ4

A1 VSS1
A8 VSS2
B1 VSS3
D8 VSS4
F2 VSS5
F8 VSS6
J1 VSS7
J9 VSS8
L1 VSS9
L9 VSS10
N1 VSS11
N9 VSS12

B2 VSSQ1
B8 VSSQ2
C9 VSSQ3
D1 VSSQ4
D9 VSSQ5

A3 NC1
F1 NC2
F9 NC3
H1 NC4
H9 NC5

0P75V_REG_FDDR1

C737 10uF/6.3V

{13,14,15} FDDR1_A0 R319 49.9 C751 0.1uF/16V
{13,14,15} FDDR1_A1 R328 49.9
{13,14,15} FDDR1_A2 R320 49.9 C749 0.1uF/16V
{13,14,15} FDDR1_A3 R293 49.9
{13,14,15} FDDR1_A4 R342 49.9 C782 0.1uF/16V
{13,14,15} FDDR1_A5 R305 49.9
{13,14,15} FDDR1_A6 R337 49.9 C789 0.1uF/16V
{13,14,15} FDDR1_A7 R306 49.9
{13,14,15} FDDR1_A8 R333 49.9 C730 0.1uF/16V
{13,14,15} FDDR1_A9 R321 49.9
{13,14,15} FDDR1_A10 R325 49.9 C729 0.1uF/16V
{13,14,15} FDDR1_A11 R329 49.9
{13,14,15} FDDR1_A12 R327 49.9 C762 0.1uF/16V
{13,14,15} FDDR1_A13 R322 49.9
{13,14,15} FDDR1_A14 R330 49.9 C759 0.1uF/16V
{13,14,15} FDDR1_A15 R326 49.9

{13,14,15} FDDR1_BA0 R290 49.9 C806 0.1uF/16V
{13,14,15} FDDR1_BA1 R341 49.9
{13,14,15} FDDR1_BA2 R318 49.9 C805 0.1uF/16V

{13,14,15} FDDR1_CAS_L R316 49.9
{13,14,15} FDDR1_RAS_L R315 49.9 C728 0.1uF/16V
{13,14,15} FDDR1_WE_L R317 49.9

{13,14,15} FDDR1_CKE R339 49.9 C807 0.1uF/16V
{13,14,15} FDDR1_CS_L R289 49.9
{13,14,15} FDDR1_ODT R295 49.9 C731 0.1uF/16V

C800 10uF/6.3V

0P75V_REG_FDDR1

R380
49.9R/1%/NL

{13,14,15} FDDR1_RSTN

1P5V_REG

C712 0.01uF/16V
C677 0.01uF/16V
C672 0.01uF/16V
C673 0.01uF/16V
C678 0.01uF/16V
C719 0.01uF/16V

C670 0.1uF/16V
C697 0.1uF/16V
C713 0.1uF/16V
C706 0.1uF/16V
C720 0.1uF/16V
C718 0.1uF/16V
C717 0.1uF/16V

1P5V_REG

C793 0.01uF/16V
C748 0.01uF/16V
C741 0.01uF/16V
C743 0.01uF/16V
C745 0.01uF/16V
C787 0.01uF/16V

C742 0.1uF/16V
C780 0.1uF/16V
C792 0.1uF/16V
C754 0.1uF/16V
C794 0.1uF/16V
C788 0.1uF/16V
C791 0.1uF/16V

{13,14,15} FDDR1_CK_P R280 75/DNI FDDR1_CK_N {13,14,15}
{13,14,15} FDDR1_CK_P R331 100R/1% FDDR1_CK_N {13,14,15}
{13,14,15} FDDR1_CK_P R224 75/DNI FDDR1_CK_N {13,14,15}
{13,14,15} FDDR1_CK_P R241 75/DNI FDDR1_CK_N {13,14,15}
{13,14,15} FDDR1_CK_P R259 75/DNI FDDR1_CK_N {13,14,15}

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MARVELL PHY-88E1340S

TBT

3P3V
R61 1K/1%
R55 DNI
CLK_SEL0
3P3V
R250 1K/1%
R252 DNI
CLK_SEL1

3P3V
R63 2.2K/1%_NL
R57 1K/1%_NL
R64 1K/1%
1P8V
3P3V
R62 2.2K/1%_NL
R56 1K/1%

U14-5
88E1340S

B9	Q_INP	V12_EN	C7
A9	Q_INN		
A8	Q_OUTP	V18_L	J2
B8	Q_OUTN		
D13	REFCLK_P	V18_R	E13
D14	REFCLK_N		
E14	RCLK1	CLK_SEL0	H14 CLK_SEL0
F14	RCLK2	CLK_SEL1	H13 CLK_SEL1
K14	SCLK	CONFIG[0]	N1 R225 0R
K12	RSET	CONFIG[1]	P1
E3	RESETn	CONFIG[2]	K3 R229 0R PHY_CONFIG2 {17}
G12	TCK	CONFIG[3]	L3 R227 0R PHY_CONFIG3 {17}
G14	TDI	XTAL_IN	J13 XTAL1_25MHZ
D12	TDO	XTAL_OUT	J14 XTAL2_25MHZ
G13	TMS	HSDACP	L14
E12	TRSTn	HSDACN	L13
A6	MDIO	TSTPTF	C8
B6	MDC	TSTPT	K13
D2	INTn	TEST0	B5
		TEST1	A5

{8} PHY_RCVRD_CLK1
{8} PHY_RCVRD_CLK2
R59 33R
R58 33R
{16} PHY_SCLK_1P8V
R245 4.99K/1%
{8} PHY_RST
PHY_RST
R231 4.7K/1%/NL
3P3V 3P3V
R232 10K/1%
R237 10K/1%
PHY_TCK
PHY_TDI
PHY_TDO
PHY_TMS
PHY_TRSTn
{8} PHY_MDIO
{8} PHY_MDC
{8} PHY_INTn

VDDOL-RESETn/LED/INTn/CONFIG
VDDOR-JTAG, RCLK,REF_CLk,CLK_SEL
VDDOM MDC MDIO TEST

J28
1 {17} PHY_CONFIG1
2
3 {17} RT4G_PHY_CONFIG1 {8}
3 PIN JUMPER
DEFAULT JUMPER OPTION 1&2

J31
2 1
HEADER 1x2

R251 49.9R/1%
R242 49.9R/1%

3P3V
R65 4.7K/1%/NL
R73 4.7K/1%/NL
TP33 PHY_TRSTn
TP38 PHY_TMS
TP39 PHY_TCK
TP41 PHY_TDO
TP40 PHY_TDI
TP47
R66 4.7K/1%

TP31 PHY_MDIO
TP32 PHY_MDC

C55 27pF/50V
Y3
XTAL1_25MHZ 1
2
XTAL2_25MHZ 3
4
C64 27pF/50V
25MHZ
MFG Part # = FA-238 25.0000MB-C3

U14-7
88E1340S

C1	VSS1	VSS30	F8
C2	VSS2	VSS31	G8
N2	VSS3	VSS32	H8
P2	VSS4	VSS33	J8
C3	VSS5	VSS34	K8
D3	VSS6	VSS35	C9
M3	VSS7	VSS36	F9
C4	VSS8	VSS37	G9
K4	VSS9	VSS38	H9
M4	VSS10	VSS39	J9
C5	VSS11	VSS40	K9
F5	VSS12	VSS41	A10
G5	VSS13	VSS42	B10
H5	VSS14	VSS43	C10
J5	VSS15	VSS44	F10
K5	VSS16	VSS45	G10
C6	VSS17	VSS46	H10
F6	VSS18	VSS47	J10
G6	VSS19	VSS48	K10
H6	VSS20	VSS49	C11
J6	VSS21	VSS50	H11
K6	VSS22	VSS51	J11
A7	VSS23	VSS52	C12
B7	VSS24	VSS53	L12
F7	VSS25	VSS54	C13
G7	VSS26	VSS55	M13
H7	VSS27	VSS56	C14
J7	VSS28	VSS57	M14
K7	VSS29	VSSC	J12

1P8V
1P0V_PHY
U14-6
88E1340S

D4	AVDDH1	DVDD1	F4
E4	AVDDH2	DVDD2	G4
L4	AVDDH3	DVDD3	H4
D5	AVDDH4	DVDD4	J4
E5	AVDDH5	DVDD5	E6
L5	AVDDH6	DVDD6	E7
L6	AVDDH7	DVDD7	E8
L7	AVDDH8	DVDD8	E9
D8	AVDDH9	DVDD9	F11
L8	AVDDH10	DVDD10	G11
D9	AVDDH11	DVDD11	F12
L9	AVDDH12		
D10	AVDDH13		
E10	AVDDH14		
L10	AVDDH15	VDDOL1	F3
D11	AVDDH16	VDDOL2	G3
E11	AVDDH17	VDDOL3	H3
K11	AVDDH18	VDDOL4	J3
L11	AVDDH19		
		VDDOM1	D6
		VDDOM2	D7
H12	VDDC	VDDOR	F13

3P3V

LEVEL TRANSLATOR FOR PHY_SCLK

3P3V
C65 0.1uF/16V
1P8V
C59 0.1uF/16V
{8} PHY_SCLK
PHY_SCLK_1P8V {16}
U39
TXS0108EPWR

19	VCCB	VCCA	2
20	B1	A1	1
18	B2	A2	3
17	B3	A3	4
16	B4	A4	5
15	B5	A5	6
14	B6	A6	7
13	B7	A7	8
12	B8	A8	9
11	GND	OE	10

DECOUPLING CAPACITORS

1P0V_PHY
C428 C317 C381 C318 C427 C319 C349 C398 C320 C365 C463 C421 C420
0.1uF/16V ... 10uF/6.3V

1P8V
C444 C306 C328 C304 C380 C327 C413 C396 C449 C426 C438
0.1uF/16V ... 10uF/6.3V

1P8V
C436 C305 C329 C414 C382 C397 C362 C437 C450 C350 C53
0.1uF/16V ... 10uF/6.3V

3P3V
C482 C364 C290 C289 C286 C348 C276 C532
0.1uF/16V ... 10uF/6.3V

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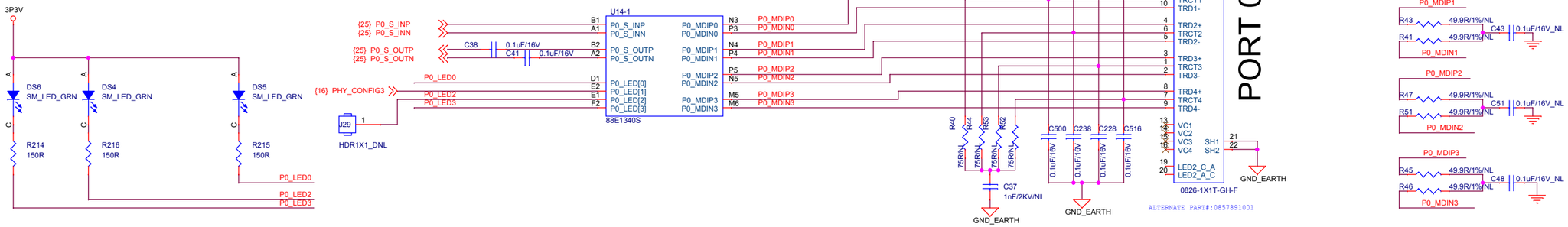
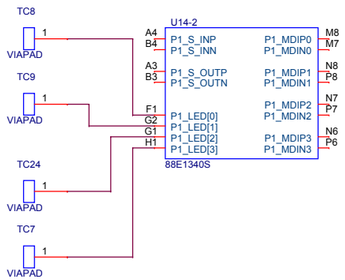
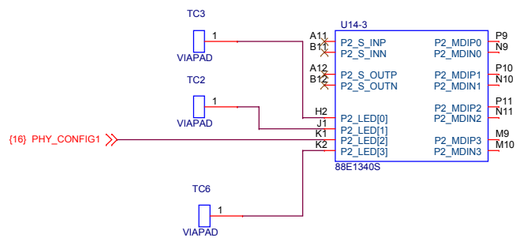
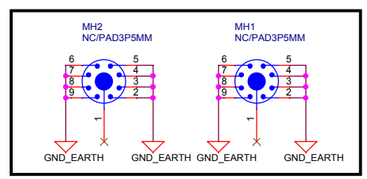
MARVELL PHY - RJ45 INTERFACE

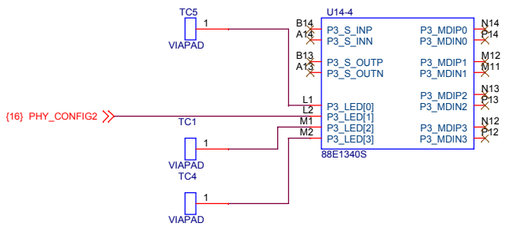
TBT











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FT4232H CIRCUITRY

3P3V_FT
L6
HZ0805E601R-10
3P3V_FT
L5
HZ0805E601R-10
C809
4.7uF/16V
C768
4.7uF/16V
C799
0.1uF/16V
C786
0.1uF/16V
1P8V_FT
C802
0.1uF/16V
C803
0.1uF/16V
C758
0.1uF/16V
3P3V_FT
C761
0.1uF/16V
C757
0.1uF/16V
C790
0.1uF/16V
C808
0.1uF/16V
VCC_BUS
L2
HZ0805E601R-10
C110
0.01uF/16V
R96
1.5K
DS7
LED-ORN-SMT
C818
10uF/10V/X5R
5V0_FT
C817
0.1uF/16V
C816
4.7uF/16V
U33
VIN
GND
VOUT
TAB
REG1117F-3.3/500
3P3V_FT
C812
0.1uF/16V
C813
10uF/25V
1P8V_FT
3P3V_FT
U30
VREGIN
VREGOUT
VPHY
VPLL
VCORE_1
VCORE_2
VCORE_3
VCCIO_1
VCCIO_2
VCCIO_3
VCCIO_4
AD0
AD1
AD2
AD3
AD4
AD5
AD6
AD7
BD0
BD1
BD2
BD3
BD4
BD5
BD6
BD7
CD0
CD1
CD2
CD3
CD4
CD5
CD6
CD7
DD0
DD1
DD2
DD3
DD4
DD5
DD6
DD7
DM
DP
REF
RESET#
OSCI
OSCO
TEST
PWREN#
SUSPEND#
AGND
GND_1
GND_2
GND_3
GND_4
GND_5
GND_6
GND_7
GND_8
FT4232H
FTDI_SCK_TCK {30}
FTDI_SDO_TDI {30}
FTDI_SDI_TDO {30}
FTDI_SS_TMS {30}
FTDI_TRSTn {30}
3P3V_FT
R346
10K/1%
I2C0_SCL {8}
BD2
J51
3P3V_FT
R95
10K/1%
I2C0_SDA {8}
R344
33R
R345
0R
UART0_RXD {8}
UART0_TXD {8}
12V_POWER_ENABLE
JTAG_SEL_FTDI {30}
DD2
DD3
DD4
DD5
DD6
DD7
PWREN#
ENABLE_FT4232 {37}
VCC_BUS
J47
VBUS
GND1
GND2
GND3
GND4
D-
D+
NC
GND
USB_MINI_RECEP
Part Number = UX60-MB-5ST
MANUFACTURER = Hirose Electric
C767
10uF/25V
C811
0.1uF/16V
1P8V_FT
C756
3.3uF/10V
DM_FT4232H
DP_FT4232H
CR2
CR1
PGB1010603MR
PGB1010603MR
R338
12K/1%
3P3V_FT
FT4232H_RST
R80
10K/1%
R81
0K/1%
R292
10K/1%
3P3V_FT
U25
VCC
CS
CLK
DI
GND
DO
93LC56BT-I/OT
C732
0.1uF/16V
CS
CLK
DATA
R296
2K/1%
3P3V_FT
C804
0.1uF/16V
U31
VCC
RST
GND
DS1818
DS1818R-5+T&R
Maxim Integrated Products
FT4232H_RST
X1
12MHZ/12pF
C84
27pF/50V
C90
27pF/50V
J46
12V_POWER_ENABLE
HEADER 1x2
R298
0R
Q1
2N7002
R291
1K/1%
C823
0.1uF_50V
J41
PWREN#
HDR1X1_DNL
J38
DD2
HDR1X1_DNL
J43
DD3
HDR1X1_DNL
J37
DD4
HDR1X1_DNL
J42
DD5
HDR1X1_DNL
J36
DD6
HDR1X1_DNL
J35
DD7
HDR1X1_DNL

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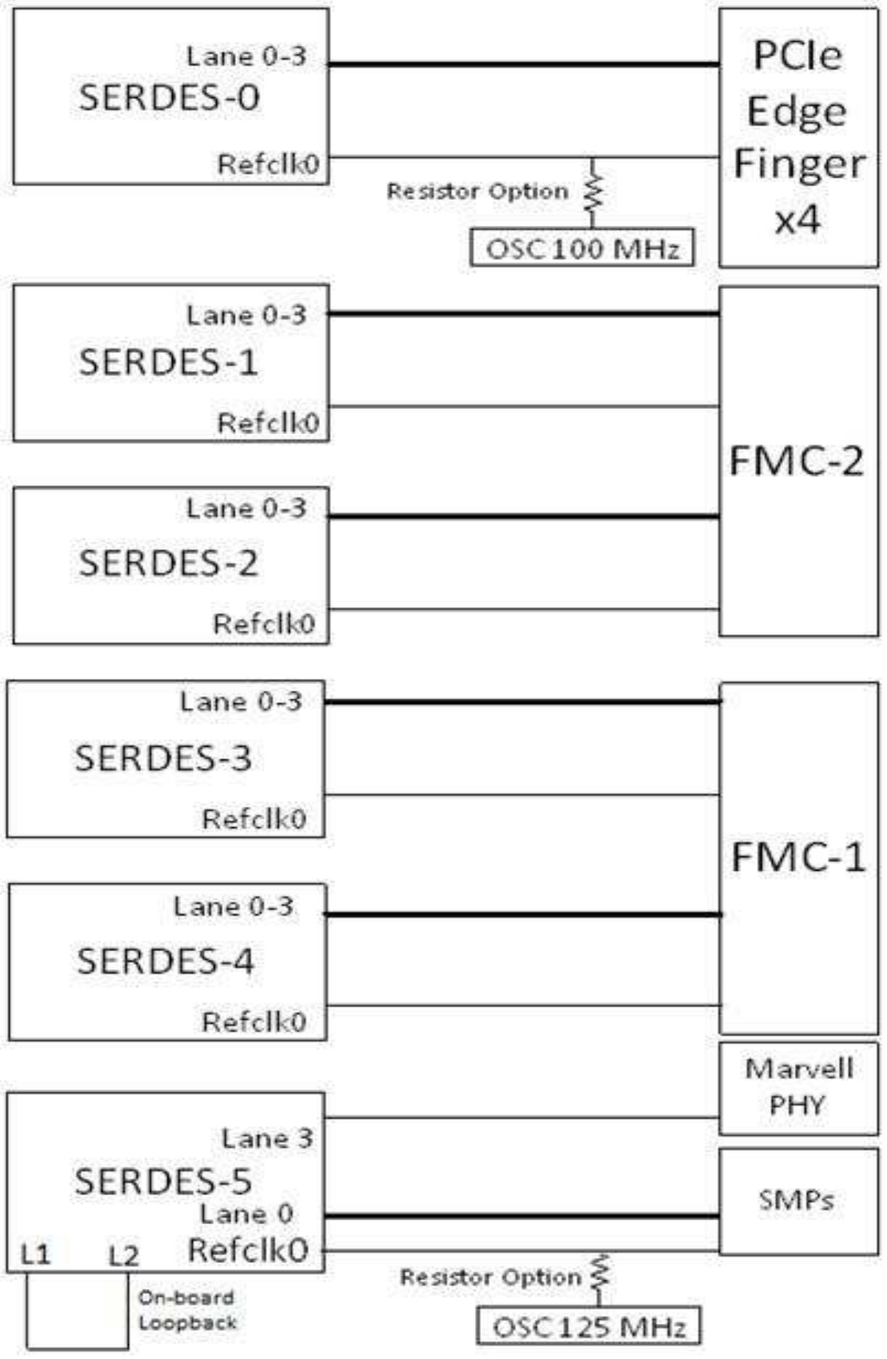
SERDES BLOCK DIAGRAM

SERDES Block allocation for RTG4 DEV KIT



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SERDES 0

U16-12

SERDES-0

{20} SERDES0_RXD0_P
{20} SERDES0_RXD0_N
{20} SERDES0_RXD1_P
{20} SERDES0_RXD1_N
{20} SERDES0_RXD2_P
{20} SERDES0_RXD2_N
{20} SERDES0_RXD3_P
{20} SERDES0_RXD3_N

AV4 SERDES_PCIE_0_RXD0_P
AW4 SERDES_PCIE_0_RXD0_N
AY5 SERDES_PCIE_0_RXD1_P
BA5 SERDES_PCIE_0_RXD1_N
AY7 SERDES_PCIE_0_RXD2_P
BA7 SERDES_PCIE_0_RXD2_N
AY9 SERDES_PCIE_0_RXD3_P
BA9 SERDES_PCIE_0_RXD3_N

SERDES_PCIE_0_TXD0_P AU3 — C776 0.1uF/16V — SERDES0_TXD0_P {20}
SERDES_PCIE_0_TXD0_N AT3 — C775 0.1uF/16V — SERDES0_TXD0_N {20}
SERDES_PCIE_0_TXD1_P AU5 — C774 0.1uF/16V — SERDES0_TXD1_P {20}
SERDES_PCIE_0_TXD1_N AT5 — C773 0.1uF/16V — SERDES0_TXD1_N {20}
SERDES_PCIE_0_TXD2_P AW6 — C772 0.1uF/16V — SERDES0_TXD2_P {20}
SERDES_PCIE_0_TXD2_N AV6 — C771 0.1uF/16V — SERDES0_TXD2_N {20}
SERDES_PCIE_0_TXD3_P AW8 — C770 0.1uF/16V — SERDES0_TXD3_P {20}
SERDES_PCIE_0_TXD3_N AV8 — C769 0.1uF/16V — SERDES0_TXD3_N {20}

SERDES0_PLLREFRET_L01 — R262 1.21K/1% — AM13 SERDES_PCIE_0_L01_REFRET, AM12 SERDES_PCIE_0_L01_REXT
SERDES_PCIE_0_L23_REFRET AM14, SERDES_PCIE_0_L23_REXT AM15 — R261 1.21K/1% — SERDES0_PLLREFRET_L23

2.5V
SERDES0_VDDPLL_AN13 — AN13 SERDES_PCIE_0_L01_VDDAPLL
SERDES0_VDDPLL_AN14 — AN14 SERDES_PCIE_0_L23_VDDAPLL

1P2V_SERDES_IO

1.2V
AM11 SERDES_PCIE_0_L01_VDDAIO_1
AN11 SERDES_PCIE_0_L01_VDDAIO_2
AT2 SERDES_PCIE_0_L01_VDDAIO_3
AU4 SERDES_PCIE_0_L01_VDDAIO_4
AV5 SERDES_PCIE_0_L01_VDDAIO_5
AW3 SERDES_PCIE_0_L01_VDDAIO_6

1.2V
SERDES_PCIE_0_L23_VDDAIO_1 AL12
SERDES_PCIE_0_L23_VDDAIO_2 AL13
SERDES_PCIE_0_L23_VDDAIO_3 AT6
SERDES_PCIE_0_L23_VDDAIO_4 AU8
SERDES_PCIE_0_L23_VDDAIO_5 AV9
SERDES_PCIE_0_L23_VDDAIO_6 AW7

1P2V_SERDES_IO

SERDES_PCIE_0_REFCLK_P AU7 — R370 0R — FING_SERDES0_REFCLK0_P {20}
SERDES_PCIE_0_REFCLK_N AT7 — R361 0R — FING_SERDES0_REFCLK0_N {20}
R365 0R/DNL — OSC_100MHZ_SERDES0_REFCLK0_P {20}
R363 0R/DNL — OSC_100MHZ_SERDES0_REFCLK0_N {20}

RT4G150

REFCLK -100MHz

3P3V
R357 1K/1%
C814 0.1uF/16V
Y5
1 OE — VDD 6
2 NC — OUT- 5
3 GND — OUT+ 4
100_MHz
CCLD-033-50-100.000

R362 0R — OSC_100MHZ_SERDES0_REFCLK0_N {20}
R364 0R — OSC_100MHZ_SERDES0_REFCLK0_P {20}

R359 DNP, R368 DNP, R360 DNP, R369 DNP
R358 150R_NL, R367 150R_NL

NOTE:
R358, R367, R360, R369, R359, R368 are not populated on board.
They were placed for internal debugging purpose

PCIe CONNECTOR

12P0V_PCIE, 3P3V_PCIE, 3P3V
R371 0.001R/1W/DNL

CON1

B1	P12V_B1	PRSNT1_N	A1
B2	P12V_B2	A2P12V_A2	A2
B3	RSVD_B3	P12V_A3	A3
B4	GND_B4	GND_A4	A4
B5	SMCLK	TCK	A5
B6	SMDAT	TDI	A6
B7	GND_B7	TDO	A7
B8	P3V3_B8	TMS	A8
B9	TRST_N	P3V3_A9	A9
B10	P3V3AUX	P3V3_A10	A10
B11	WAKE_N	RESET_L	A11
B12	RSVD_B12	GND_A12	A12
B13	GND_B13	REFCLKp	A13
B14	HSOp0	REFCLKn	A14
B15	HSOn0	GND_A15	A15
B16	GND_B16	HSIp0	A16
B17	PRSNT2_1N	HSIn0	A17
B18	GND_B18	GND_A18	A18
B19	HSOp1	RSVD_A19	A19
B20	HSOn1	GND_A20	A20
B21	GND_B21	HSIp1	A21
B22	GND_B22	HSIn1	A22
B23	HSOp2	GND_A23	A23
B24	HSOn2	GND_A24	A24
B25	GND_B25	HSIp2	A25
B26	GND_B26	HSIn2	A26
B27	HSOp3	GND_A27	A27
B28	HSOn3	GND_A28	A28
B29	GND_B29	HSIp3	A29
B30	RSVD_B30	HSIn3	A30
B31	PRSNT2_4N	GND_A31	A31
B32	GND_B32	RSVD_A32	A32

PCIEXP_4X_EDGE_FINGER

SERDES0_PRSNT — SERDES0_PRSNT {8}
R373 0
R374 0R/DNL — PHY_CONFIG2_SERDES0 {8}
SERDES0_PERSTn {8}
FING_SERDES0_REFCLK0_P {20}
FING_SERDES0_REFCLK0_N {20}
SERDES0_TXD0_P {20}
SERDES0_TXD0_N {20}
R372 0R/DNL — PHY_CONFIG1_SERDES0 {8}
SERDES0_TXD1_P {20}
SERDES0_TXD1_N {20}
SERDES0_TXD2_P {20}
SERDES0_TXD2_N {20}
SERDES0_TXD3_P {20}
SERDES0_TXD3_N {20}

{8} PHY_MDC_SERDES0 — R138 0R/DNL
{8} PHY_MDIO_SERDES0 — R139 0R/DNL
{8} PHY_INTn_SERDES0 — R135 0R/DNL
{8} WAKEN_SERDES0 — R383 0R/DNL
SERDES0_PRSNT — R136 0R/DNL
SERDES0_PRSNT — R137 0

2P5V
TP71, TP72, TP81, TP82
SERDES0_VDDPLL_AN13 — R356 3.3R/1% — C612 0.1uF/16V — C102 33uF/10V
SERDES0_PLLREFRET_L01
SERDES0_VDDPLL_AN14 — R123 3.3R/1% — C604 0.1uF/16V — C111 33uF/10V
SERDES0_PLLREFRET_L23
TP75 SQUARE_PAD 1
TP85 SQUARE_PAD 1

SERDES0-DECOUPLING CAPACITORS

1P2V_SERDES_IO

C577	0.1uF/16V	C578	0.1uF/16V
C607	0.1uF/16V	C628	0.1uF/16V
C645	0.1uF/16V	C657	0.1uF/16V
C646	0.1uF/16V	C691	0.1uF/16V
C687	0.1uF/16V	C680	0.1uF/16V
C649	0.1uF/16V	C690	0.1uF/16V
C736	10uF/25V	C78	10uF/25V

TC17 1 BGAPAD

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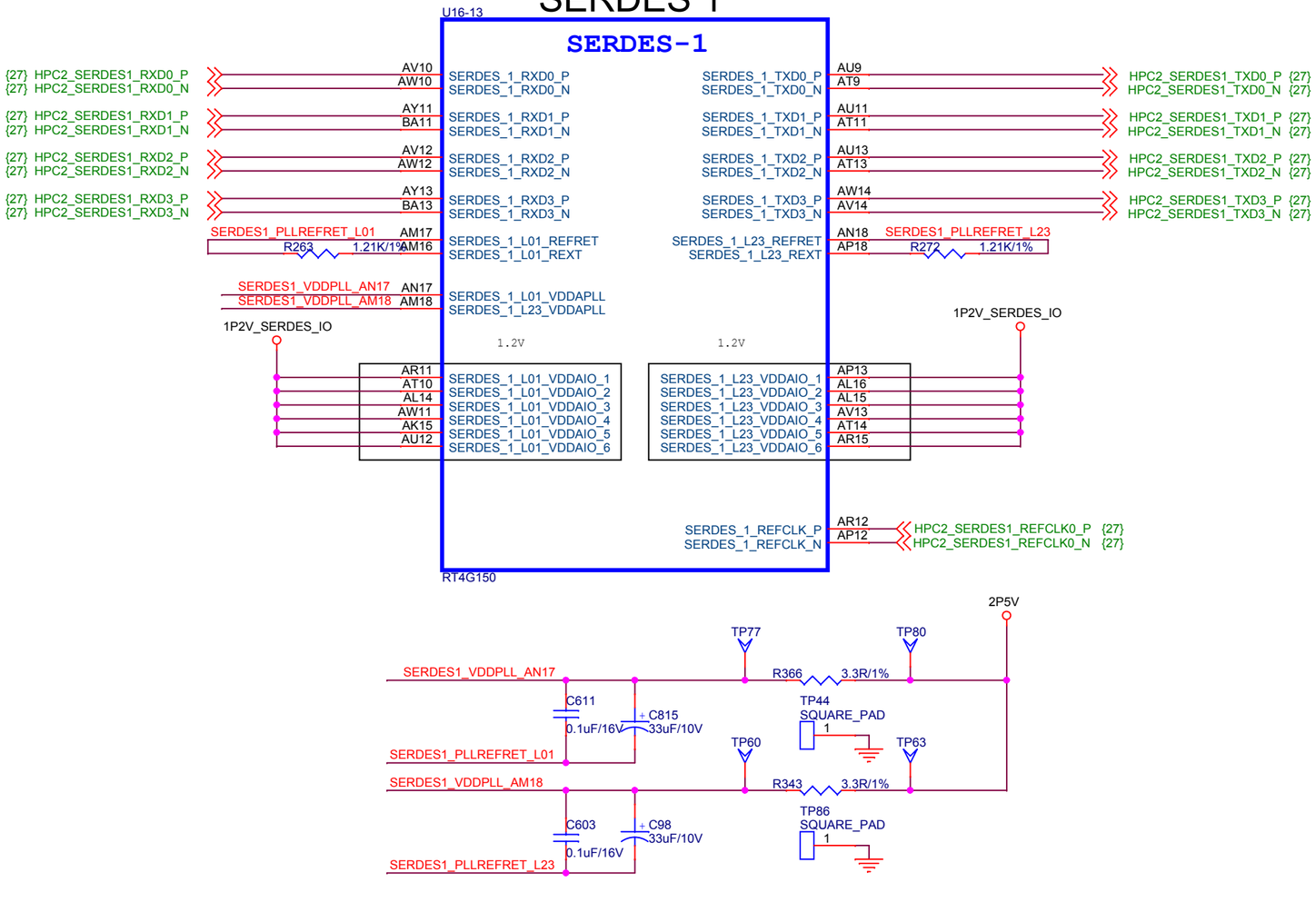
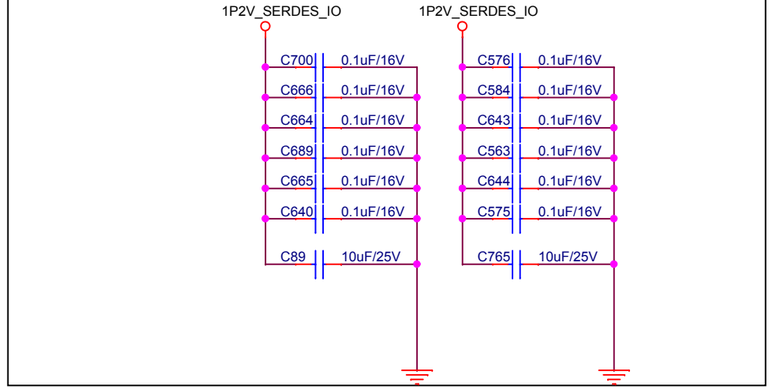
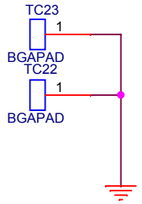
SERDES 1



SERDES1-DECOUPLING CAPACITORS





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SERDES 2

U16-15

SERDES-2

{27} HPC2_SERDES2_RXD0_P — AY15 — SERDES_2_RXD0_P
{27} HPC2_SERDES2_RXD0_N — BA15 — SERDES_2_RXD0_N
SERDES_2_TXD0_P — AU15 — HPC2_SERDES2_TXD0_P {27}
SERDES_2_TXD0_N — AT15 — HPC2_SERDES2_TXD0_N {27}

{27} HPC2_SERDES2_RXD1_P — AV16 — SERDES_2_RXD1_P
{27} HPC2_SERDES2_RXD1_N — AW16 — SERDES_2_RXD1_N
SERDES_2_TXD1_P — AU17 — HPC2_SERDES2_TXD1_P {27}
SERDES_2_TXD1_N — AT17 — HPC2_SERDES2_TXD1_N {27}

{27} HPC2_SERDES2_RXD2_P — AY17 — SERDES_2_RXD2_P
{27} HPC2_SERDES2_RXD2_N — BA17 — SERDES_2_RXD2_N
SERDES_2_TXD2_P — AW18 — HPC2_SERDES2_TXD2_P {27}
SERDES_2_TXD2_N — AV18 — HPC2_SERDES2_TXD2_N {27}

{27} HPC2_SERDES2_RXD3_P — AY19 — SERDES_2_RXD3_P
{27} HPC2_SERDES2_RXD3_N — BA19 — SERDES_2_RXD3_N
SERDES_2_TXD3_P — AU19 — HPC2_SERDES2_TXD3_P {27}
SERDES_2_TXD3_N — AT19 — HPC2_SERDES2_TXD3_N {27}

SERDES2_PLLREFRET_L01 — R267 1.21K/1% — AN19 — SERDES_2_L01_REFRET
AM19 — SERDES_2_L01_REXT
SERDES_2_L23_REFRET — AN20 — SERDES2_PLLREFRET_L23
SERDES_2_L23_REXT — AM20 — R266 1.21K/1%

2.5V
SERDES2_VDDPLL_AP19 — AP19 — SERDES_2_L01_VDDAPLL
SERDES2_VDDPLL_AP20 — AP20 — SERDES_2_L23_VDDAPLL

1P2V_SERDES_IO
1.2V

AL17	SERDES_2_L01_VDDAIO_1	SERDES_2_L23_VDDAIO_1	AL20
AW15	SERDES_2_L01_VDDAIO_2	SERDES_2_L23_VDDAIO_2	AL19
AL18	SERDES_2_L01_VDDAIO_3	SERDES_2_L23_VDDAIO_3	AW19
AV17	SERDES_2_L01_VDDAIO_4	SERDES_2_L23_VDDAIO_4	AR19
AP17	SERDES_2_L01_VDDAIO_5	SERDES_2_L23_VDDAIO_5	AU20
AU16	SERDES_2_L01_VDDAIO_6	SERDES_2_L23_VDDAIO_6	AT18

1P2V_SERDES_IO

SERDES_2_REFCLK_P — AR16 — HPC2_SERDES2_REFCLK0_P {27}
SERDES_2_REFCLK_N — AP16 — HPC2_SERDES2_REFCLK0_N {27}

RT4G150

TP56 TP58 2P5V
SERDES2_VDDPLL_AP19 — R92 3.3R/1% — TP74 SQUARE_PAD 1
C617 0.1uF/16V — C785 33uF/16V
SERDES2_PLLREFRET_L01
TP64 TP67
SERDES2_VDDPLL_AP20 — R347 3.3R/1% — TP87 SQUARE_PAD 1
C627 0.1uF/16V — C801 33uF/16V
SERDES2_PLLREFRET_L23

SERDES2-DECOUPLING CAPACITORS

1P2V_SERDES_IO		1P2V_SERDES_IO	
C572	0.1uF/16V	C574	0.1uF/16V
C699	0.1uF/16V	C684	0.1uF/16V
C688	0.1uF/16V	C663	0.1uF/16V
C654	0.1uF/16V	C573	0.1uF/16V
C571	0.1uF/16V	C648	0.1uF/16V
C642	0.1uF/16V	C669	0.1uF/16V
C783	10uF/25V	C93	10uF/25V

TC14
1 BGAPAD TC15
1 BGAPAD TC19
1 BGAPAD

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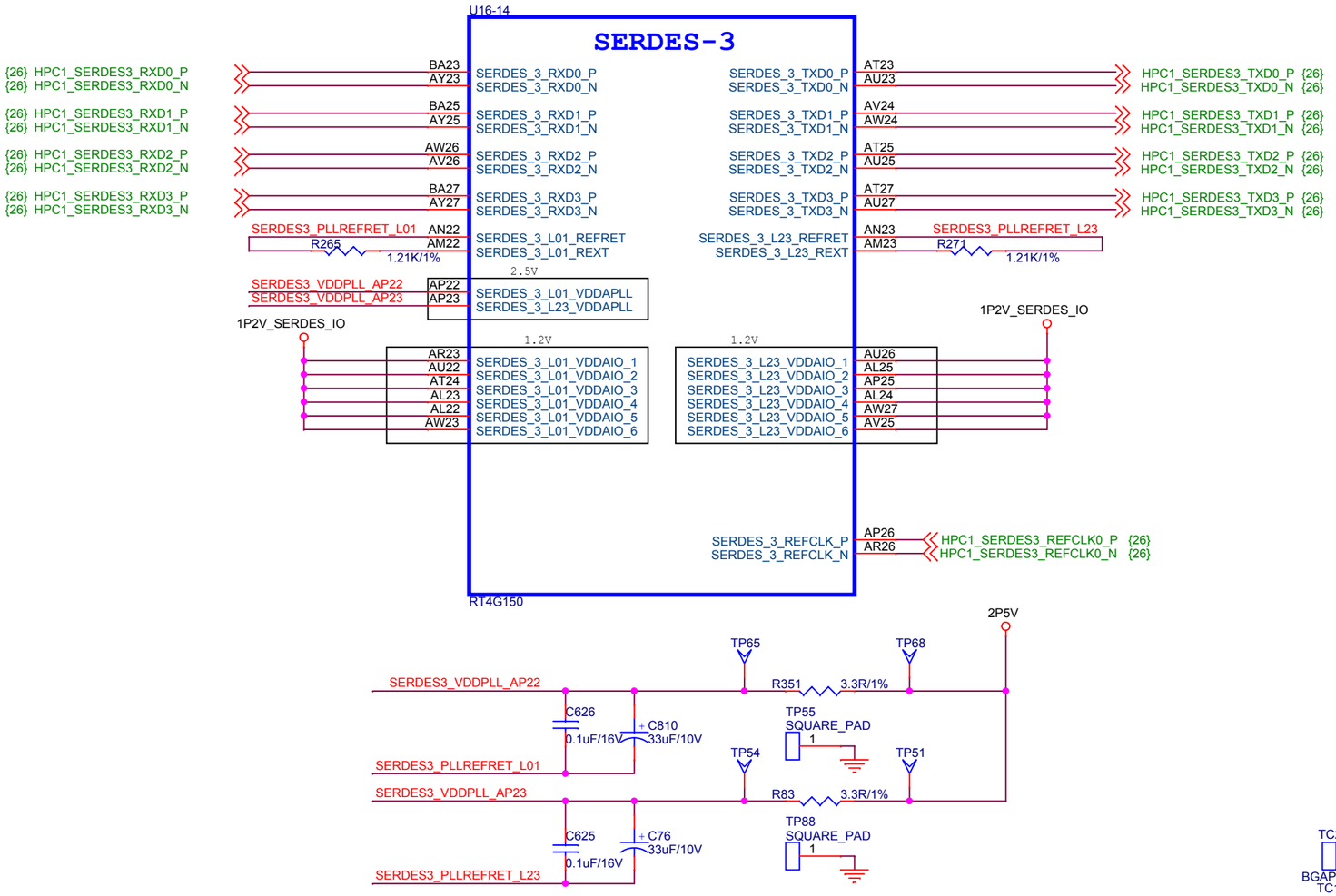
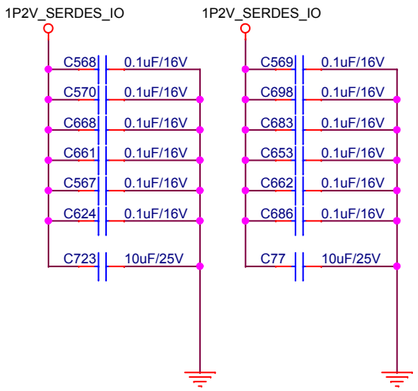
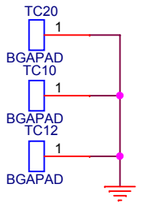
SERDES 3



SERDES3-DECOUPLING CAPACITORS





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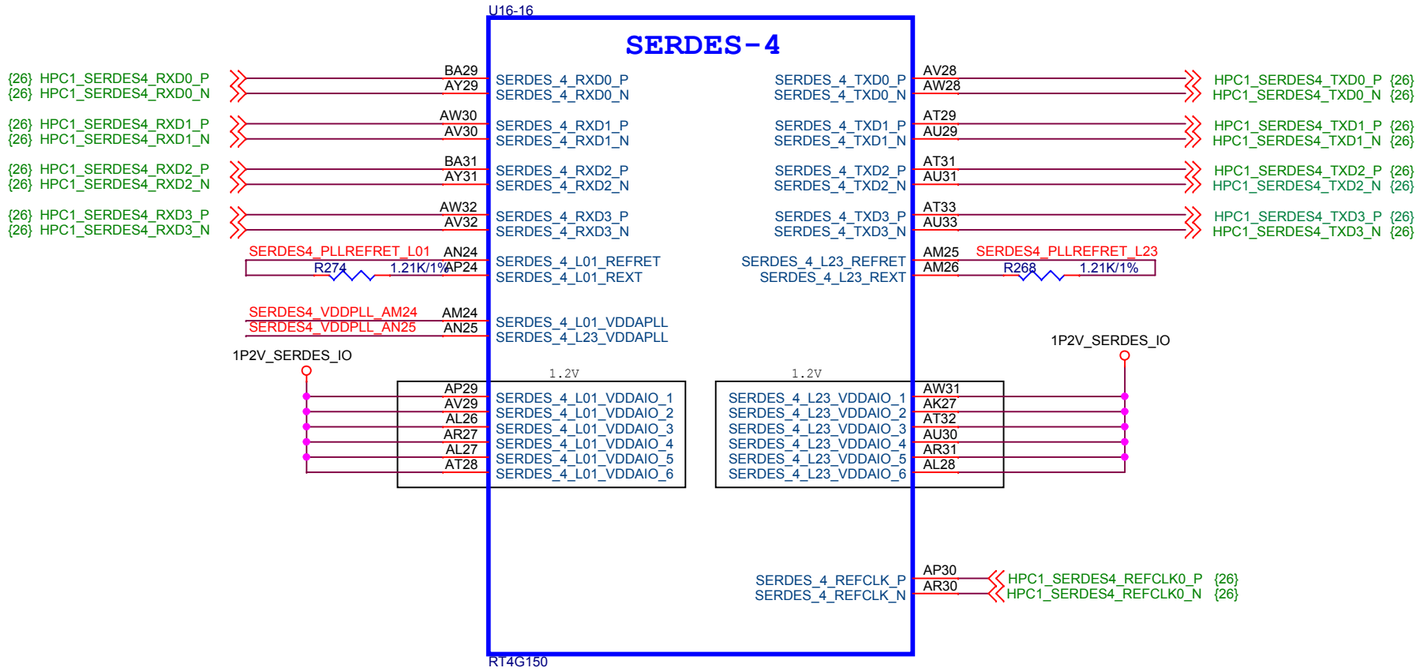
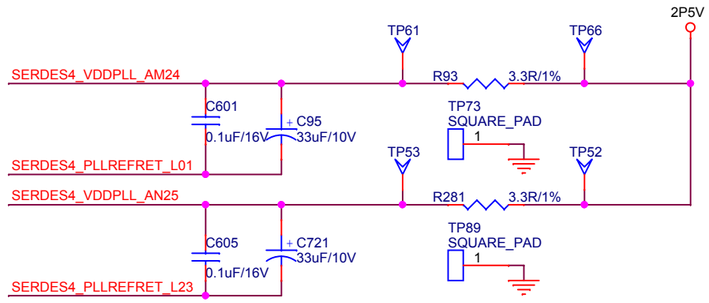
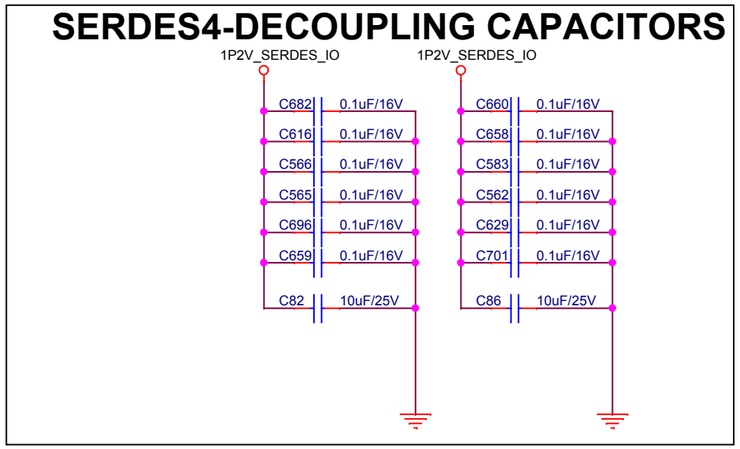
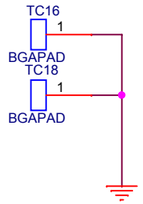
SERDES 4









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SERDES 5

U16-17

SERDES-5

RT4G150

J49 — 32K10K-400L5
J58 — 32K10K-400L5
J50 — 32K10K-400L5
J59 — 32K10K-400L5
J48 — 32K10K-400L5
J57 — 32K10K-400L5

SERDES5_RXP_0	BA33	SERDES_PCIE_5_RXD0_P	
SERDES5_RXN_0	AY33	SERDES_PCIE_5_RXD0_N	
	BA35	SERDES_PCIE_5_RXD1_P	
	AY35	SERDES_PCIE_5_RXD1_N	
C819 0.1uF/16V C820 0.1uF/16V	AU37	SERDES_PCIE_5_TXD2_N	
	AT37	SERDES_PCIE_5_TXD2_P	
	AW38	SERDES_PCIE_5_RXD3_P	
{17} P0_S_OUTP	AW38	SERDES_PCIE_5_RXD3_P	
{17} P0_S_OUTN	AY38	SERDES_PCIE_5_RXD3_N	
SERDES5_PLLREFRET_L01	AM28	SERDES_PCIE_5_L01_REFRET	
R260 1.21K/1%	AM27	SERDES_PCIE_5_L01_REXT	
SERDES5_VDDPLL_AN28	AN28	SERDES_PCIE_5_L01_VDDAPLL	2.5V
SERDES5_VDDPLL_AN29	AN29	SERDES_PCIE_5_L23_VDDAPLL	
1P2V_SERDES_IO			1.2V
	AL30	SERDES_PCIE_5_L01_VDDAIO_1	
	AL29	SERDES_PCIE_5_L01_VDDAIO_2	
	AT36	SERDES_PCIE_5_L01_VDDAIO_3	
	AU34	SERDES_PCIE_5_L01_VDDAIO_4	
	AV33	SERDES_PCIE_5_L01_VDDAIO_5	
	AW35	SERDES_PCIE_5_L01_VDDAIO_6	

	AV34	SERDES_PCIE_5_TXD0_P	C746 0.1uF/16V
	AW34	SERDES_PCIE_5_TXD0_N	C747 0.1uF/16V
	BA37	SERDES_PCIE_5_RXD2_P	
	AY37	SERDES_PCIE_5_RXD2_N	
	AW36	SERDES_PCIE_5_TXD1_N	C821 0.1uF/16V
	AV36	SERDES_PCIE_5_TXD1_P	C822 0.1uF/16V
	AT39	SERDES_PCIE_5_TXD3_P	C638 0.1uF/16V
	AU39	SERDES_PCIE_5_TXD3_N	C650 0.1uF/16V
	AM29	SERDES_PCIE_5_L23_REFRET	SERDES5_PLLREFRET_L23
	AM30	SERDES_PCIE_5_L23_REXT	R264 1.21K/1%
1P2V_SERDES_IO			1.2V
	AM31	SERDES_PCIE_5_L23_VDDAIO_1	
	AN31	SERDES_PCIE_5_L23_VDDAIO_2	
	AU38	SERDES_PCIE_5_L23_VDDAIO_3	
	AV37	SERDES_PCIE_5_L23_VDDAIO_4	
	AW39	SERDES_PCIE_5_L23_VDDAIO_5	
	AT40	SERDES_PCIE_5_L23_VDDAIO_6	

TRACE LENGTH SHOULD BE 6 INCHES

TRACE LENGTH SHOULD BE 6 INCHES

{17} P0_S_INP
{17} P0_S_INN

	AT35	SERDES_PCIE_5_REFCLK_P	R97 0R/DNL
	AU35	SERDES_PCIE_5_REFCLK_N	R106 0R/DNL

R102 0R — OSC_125MHZ_SERDES5_REFCLK0_P {25}
R104 0R — OSC_125MHZ_SERDES5_REFCLK0_N {25}

REFCLK -125MHz

3P3V
R94 1K/1%
C100 0.1uF/16V
Y4
OE — VDD 6
NC — OUT+ 4
GND — OUT- 5
125_MHz
CCLD-033-50-125.000

R105 0R — OSC_125MHZ_SERDES5_REFCLK0_N {25}
R103 0R — OSC_125MHZ_SERDES5_REFCLK0_P {25}

R108 DNP, R99 DNP, R109 DNP, R100 DNP
R107 150R_NL, R98 150R_NL

NOTE:
R107, R98, R109, R100, R108, R99 are not populated on board. They were placed for internal debugging purpose

SERDES5-DECOUPLING CAPACITORS

TC11 BGAPAD, TC13 BGAPAD, TC21 BGAPAD

1P2V_SERDES_IO		1P2V_SERDES_IO	
C582	0.1uF/16V	C599	0.1uF/16V
C621	0.1uF/16V	C655	0.1uF/16V
C609	0.1uF/16V	C667	0.1uF/16V
C685	0.1uF/16V	C692	0.1uF/16V
C676	0.1uF/16V	C681	0.1uF/16V
C622	0.1uF/16V	C656	0.1uF/16V
C744	10uF/25V	C755	10uF/25V

2P5V
TP42, TP46, TP45, TP50
SERDES5_VDDPLL_AN28 — R278 3.3R/1% — C610 0.1uF/16V — C675 33uF/10V — TP70 SQUARE_PAD — SERDES5_PLLREFRET_L01
SERDES5_VDDPLL_AN29 — R75 3.3R/1% — C600 0.1uF/16V — C69 33uF/10V — TP90 SQUARE_PAD — SERDES5_PLLREFRET_L23

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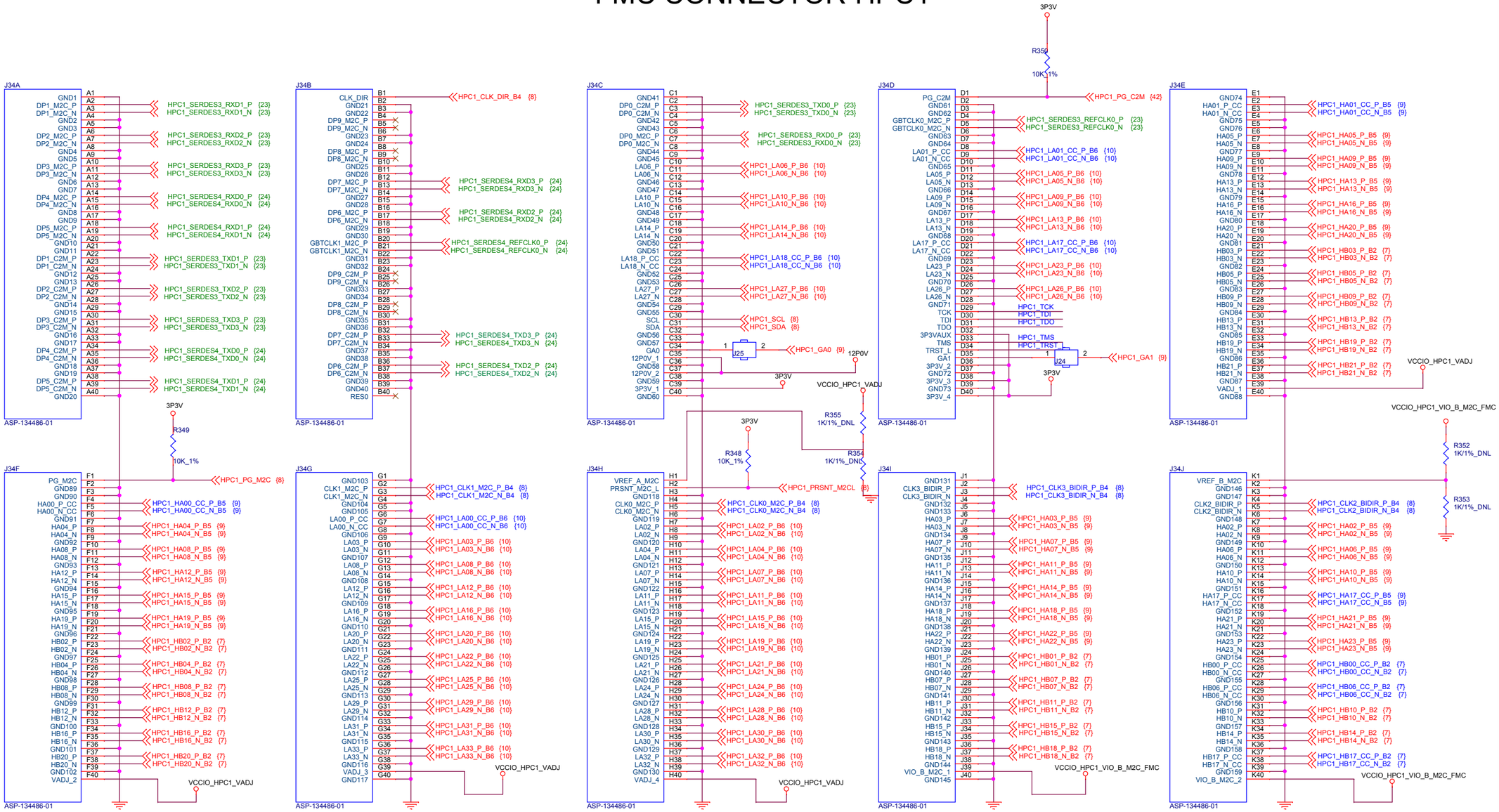
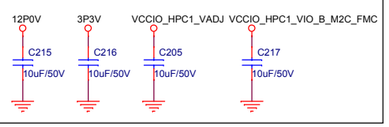
FMC CONNECTOR-HPC1



DECOUPLING CAPACITORS



NOTE:

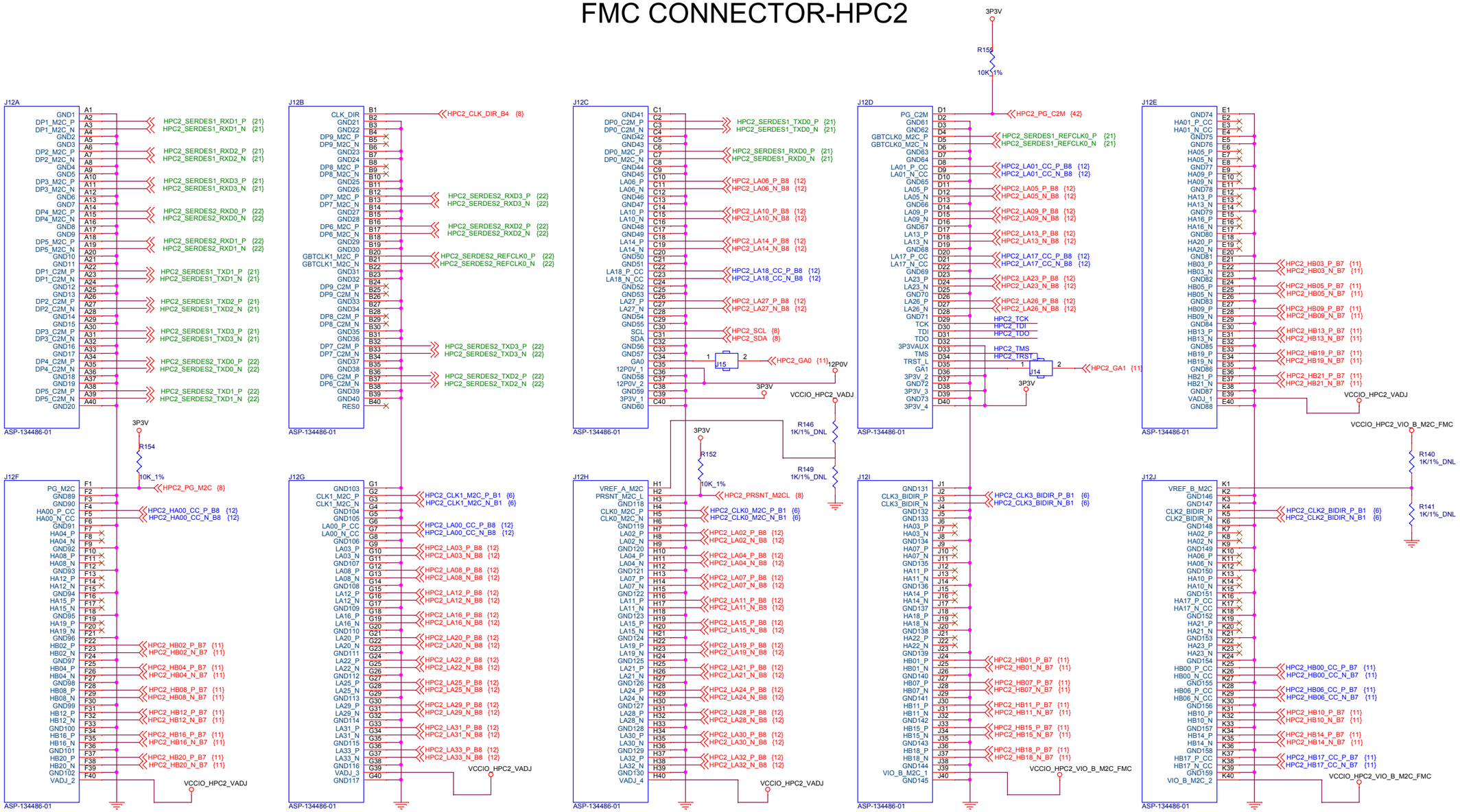
1.FMC HPC1 LA & HA bank IO's support maximum of 3.3V.

2.FMC HPC1 HB bank IO's support maximum of 2.5V.

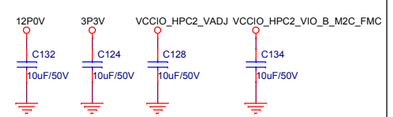
3.The Supporting Voltages of FMC HPC1(VCCIO_HPC1_VADJ) are 1.2V,1.5V,1.8V, 2.5V and 3.3V.

TITLE	RTG4_DEV_KIT		
Microsemi			
SIZE C	DOCUMENT NO.	REV B1	
DATE: Tuesday, March 22, 2016		SH 26 OF 45	

FMC CONNECTOR-HPC2



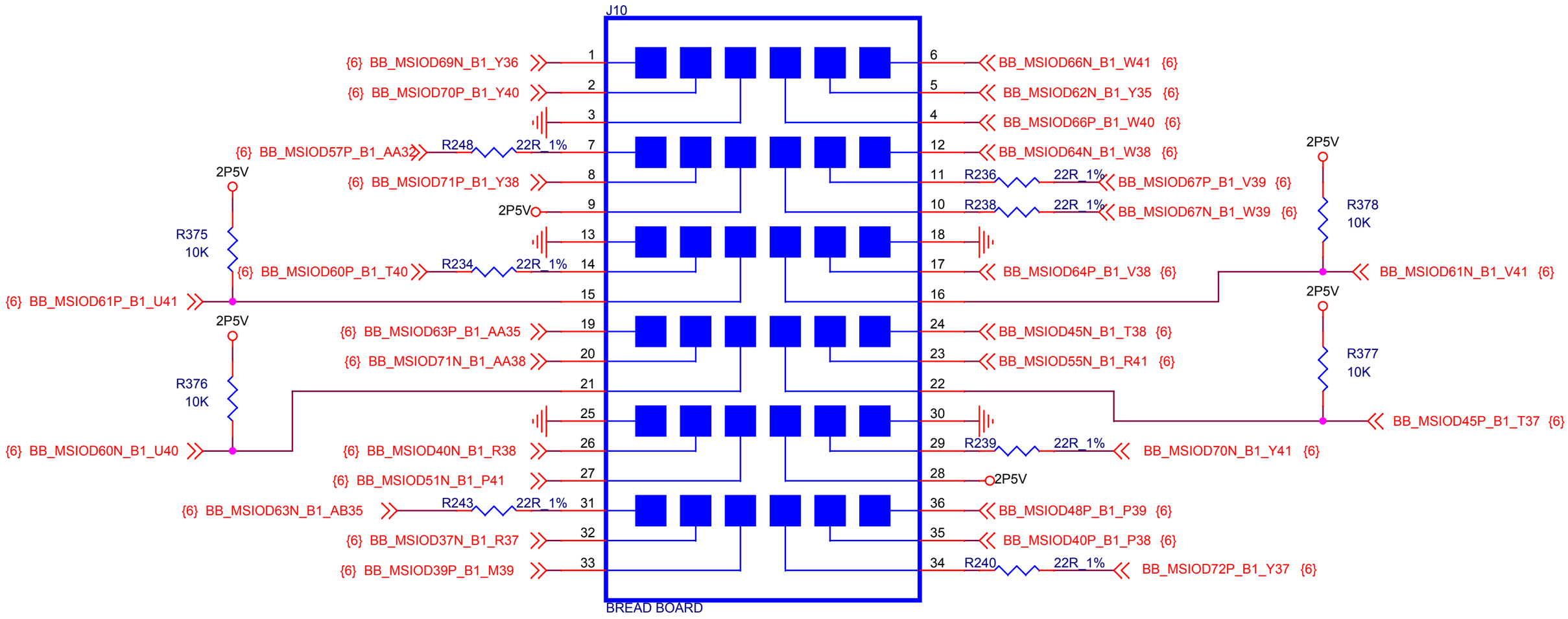
DECOUPLING CAPACITORS



NOTE:
1.FMC HPC2 IO's support maximum of 2.5V
2.The Supporting Voltages of FMC HPC2(VCCIO_HPC2_VADJ) are 1.2V,1.5V,1.8V and 2.5V.

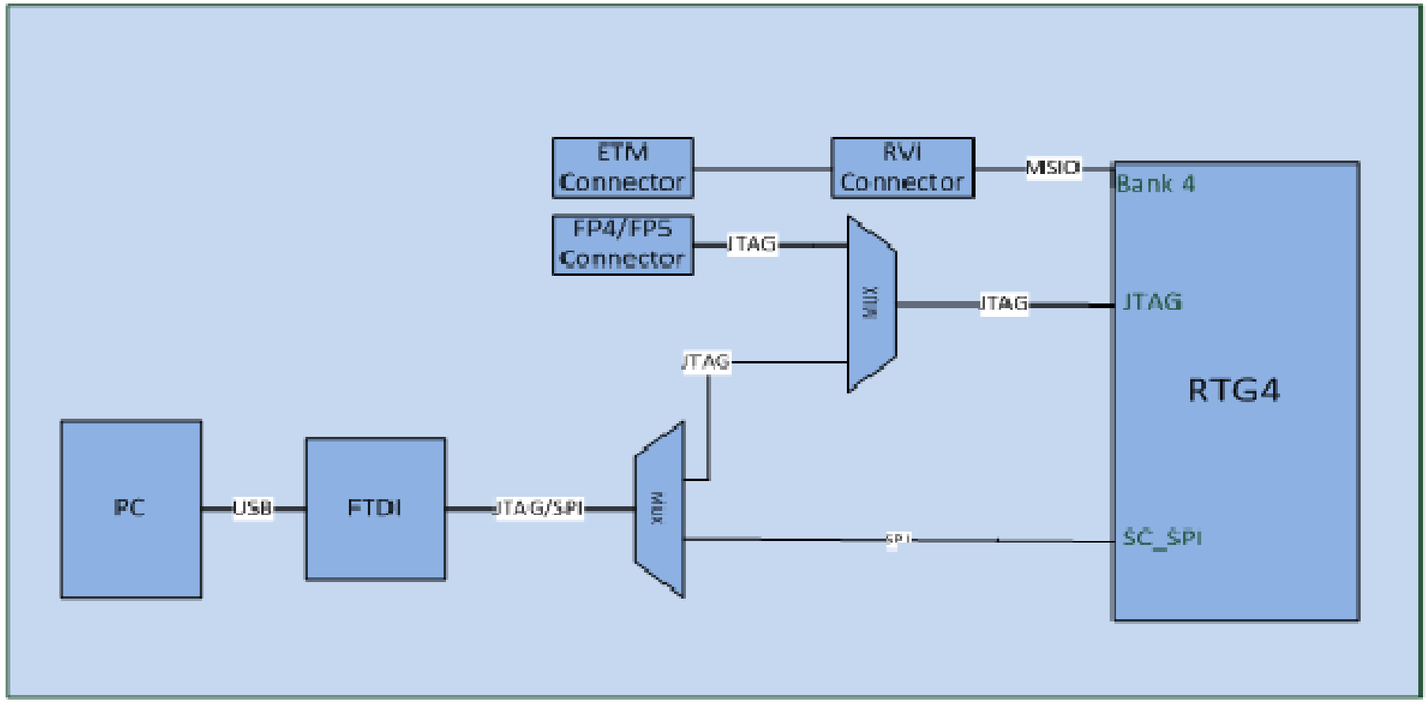
TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: C	DOCUMENT NO.	REV: B1
DATE: Tuesday, March 22, 2016	SH 27 OF 45	

BREAD BOARD CONNECTOR



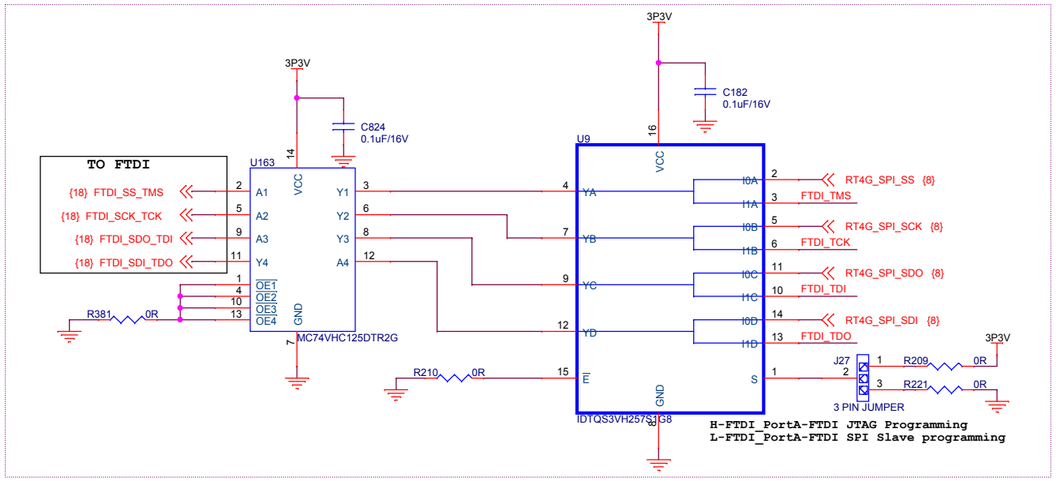
TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: Custom	DOCUMENT NO.	REV: B1
DATE: Tuesday, March 22, 2016		SH 28 OF 45

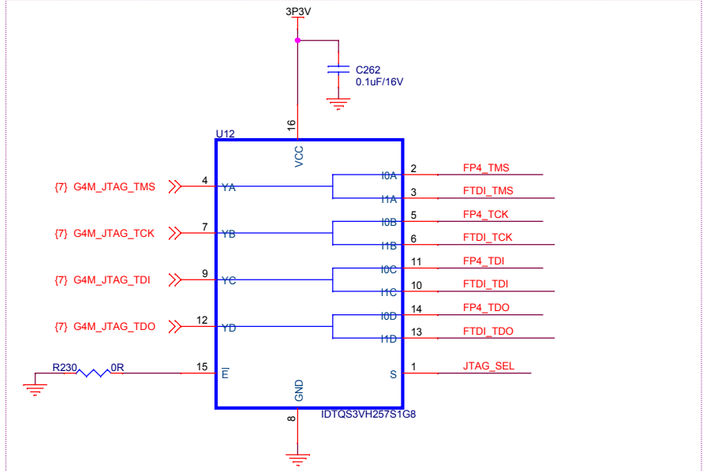
PROGRAMING SCHEME

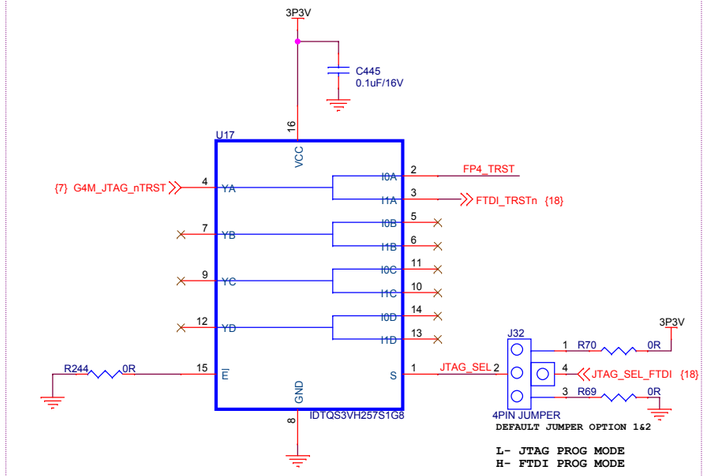


TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: A	DOCUMENT NO.	REV: B1
DATE: Tuesday, March 22, 2016		SH 29 OF 45

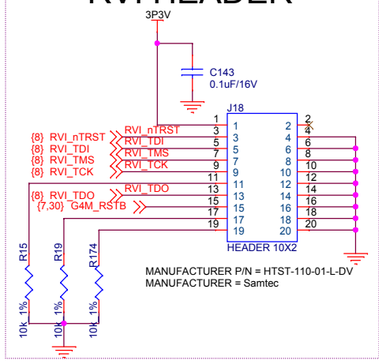
PROGRAMING CIRCUITRY



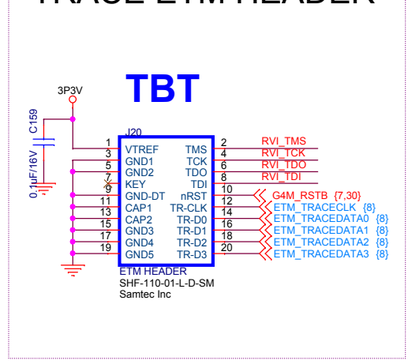




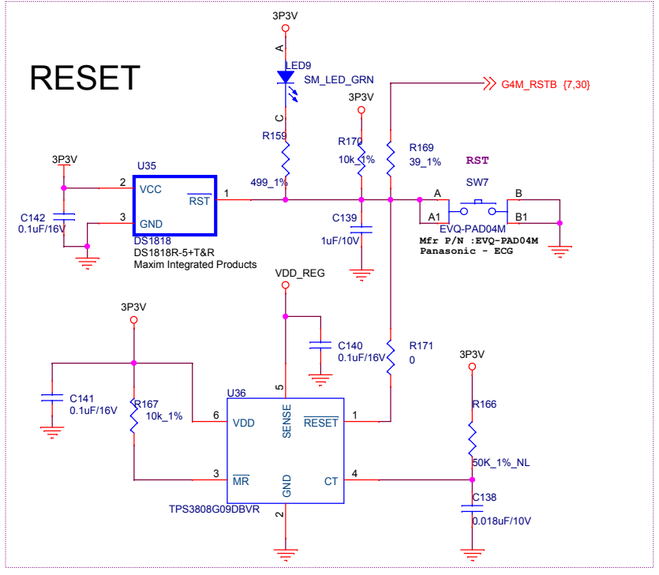
RVI HEADER



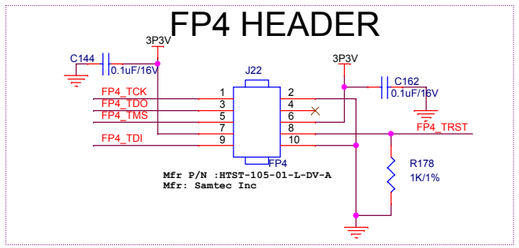
TRACE ETM HEADER



RESET

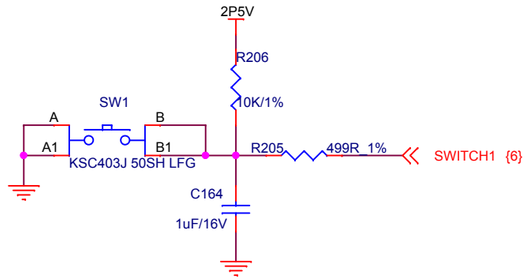


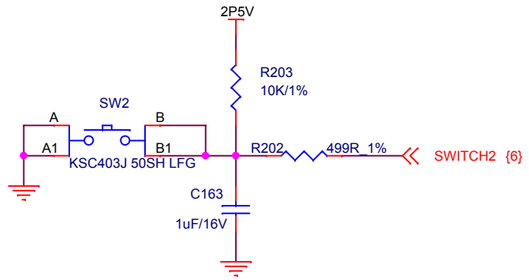
FP4 HEADER

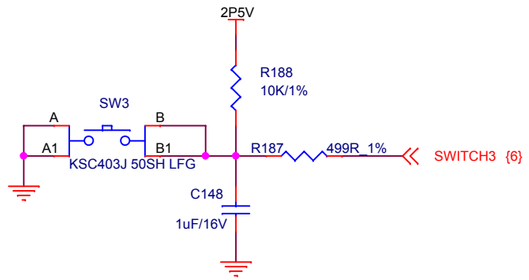


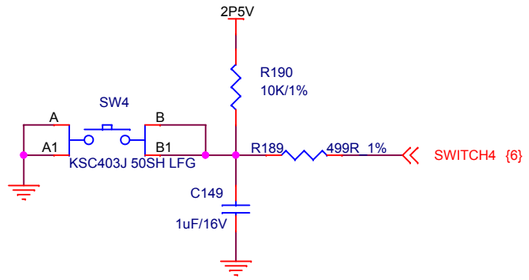
TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: Custom	DOCUMENT NO.	REV: B1
DATE: Tuesday, March 22, 2016	SH 30 OF 45	

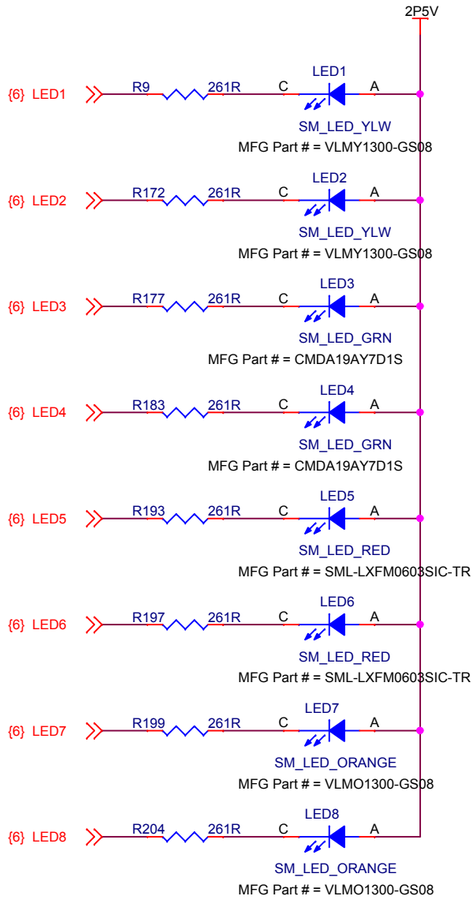
DEBUG CIRCUITRY

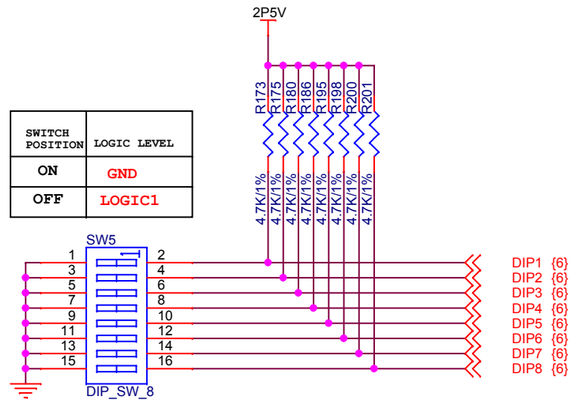












SWITCH POSITION	LOGIC LEVEL
ON	GND
OFF	LOGIC1

NET NAME	FPGA PIN NAME	FPGA PIN NO
SWITCH1	MSIOD68NB1	AA30
SWITCH2	MSIOD65PB1	AB31
SWITCH3	MSIOD68PB1	AB30
SWITCH4	MSIOD65NB1	AB32

NET NAME	FPGA PIN NAME	FPGA PIN NO
LED1	MSIOD62PB1	W35
LED2	MSIOD46PB1	W34
LED3	MSIOD47PB1	V30
LED4	MSIOD46NB1	W33
LED5	MSIOD38PB1	T33
LED6	MSIOD41NB1	U35
LED7	MSIOD37PB1	R36
LED8	MSIOD38NB1	T34

NET NAME	FPGA PIN NAME	FPGA PIN NO
DIP1	MSIOD57NB1	AA33
DIP2	MSIOD56PB1	Y31
DIP3	MSIOD56NB1	W31
DIP4	MSIOD47NB1	W30
DIP5	MSIOD42NB1	V33
DIP6	MSIOD42PB1	V34
DIP7	MSIOD41PB1	U34
DIP8	MSIOD69PB1	W36

TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: Custom	DOCUMENT NO.	REV: B1
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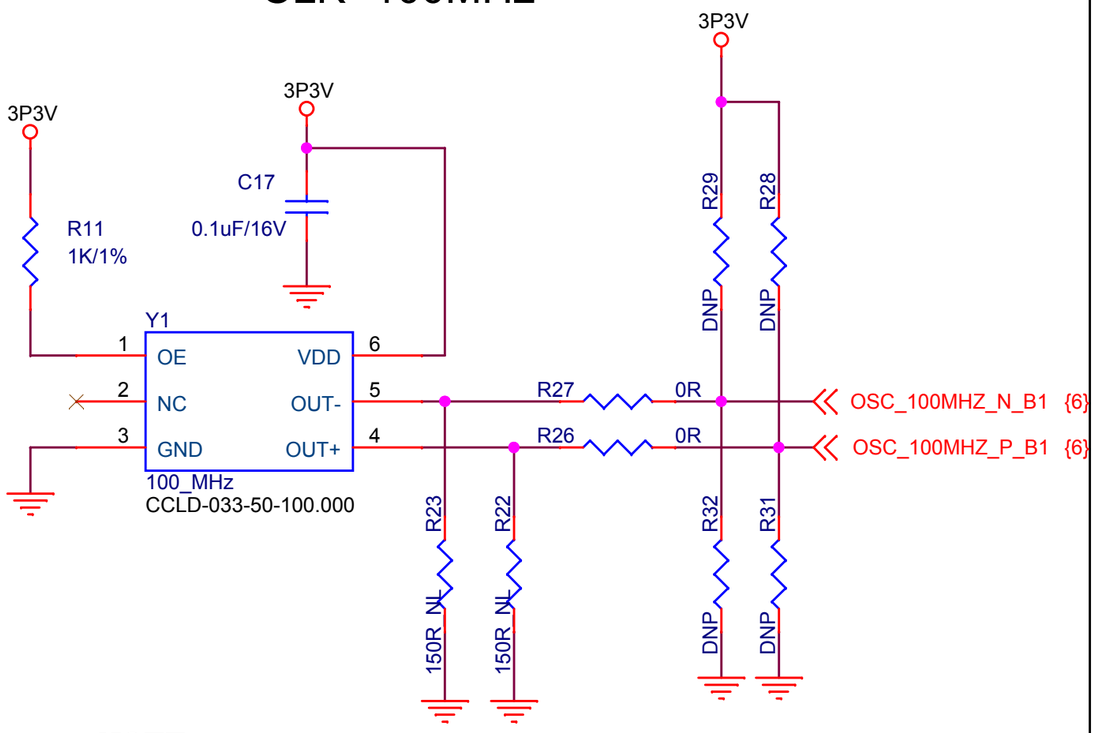
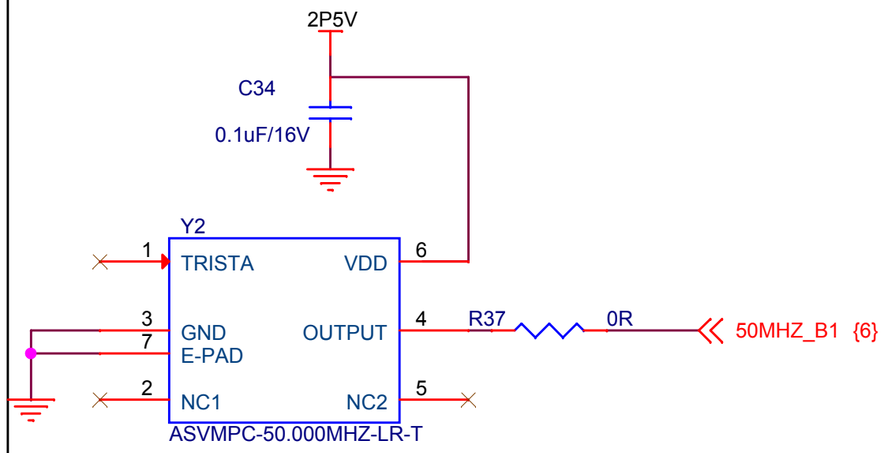
CLOCK CIRCUITRY

CLK -100MHz



NOTE:
R23, R22, R29, R28, R32, R31 are not populated on board. They were placed for internal debugging purpose

CLK -50MHz



TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: A	DOCUMENT NO.	REV: B1
DATE: Tuesday, March 22, 2016	SH 32 OF 45	

POWER

U16-19 — POWER

VDD_REG

AA15	VDD_1
AA19	VDD_2
AA23	VDD_3
AA27	VDD_4
AB16	VDD_5
AB18	VDD_6
AB20	VDD_7
AB22	VDD_8
AB24	VDD_9
AC17	VDD_10
AC19	VDD_11
AC21	VDD_12
AC23	VDD_13
AC25	VDD_14
AD16	VDD_15
AD18	VDD_16
AD20	VDD_17
AD22	VDD_18
AD24	VDD_19
AD26	VDD_20
AE15	VDD_21
AE17	VDD_22
AE19	VDD_23
AE21	VDD_24
AE23	VDD_25
AE25	VDD_26
AE27	VDD_27
AF16	VDD_28
AF18	VDD_29
AF20	VDD_30
AF22	VDD_31
AF24	VDD_32
AG17	VDD_33
AG19	VDD_34
AG21	VDD_35
AG23	VDD_36
AG25	VDD_37
AH16	VDD_38
AH20	VDD_39
AH22	VDD_40
AH26	VDD_41

VDD

VDD_REG

N15	VDD_42
N19	VDD_43
N23	VDD_44
N27	VDD_45
P16	VDD_46
P20	VDD_47
P24	VDD_48
R17	VDD_49
R19	VDD_50
R21	VDD_51
R23	VDD_52
R25	VDD_53
T16	VDD_54
T18	VDD_55
T20	VDD_56
T22	VDD_57
T24	VDD_58
T26	VDD_59
U15	VDD_60
U17	VDD_61
U19	VDD_62
U21	VDD_63
U23	VDD_64
U25	VDD_65
U27	VDD_66
V16	VDD_67
V18	VDD_68
V20	VDD_69
V22	VDD_70
V24	VDD_71
W17	VDD_72
W19	VDD_73
W21	VDD_74
W23	VDD_75
W25	VDD_76
Y16	VDD_77
P18	VDD_78
Y20	VDD_79
P22	VDD_80
Y24	VDD_81
Y26	VDD_82

{40} CORE_SENSE+

3P3V_LDO — TP83 TP_SMD

R184 1R_1W_1%

VDDPLL1 — TP84 TP_SMD

C16 22uF/16V

VDDPLL

AH18	VDDPLL_1
AH24	VDDPLL_2
AG15	VDDPLL_3
AG27	VDDPLL_4
AC15	VDDPLL_5
AC27	VDDPLL_6
W15	VDDPLL_7
W27	VDDPLL_8
R15	VDDPLL_9
R27	VDDPLL_10
N17	VDDPLL_11
N21	VDDPLL_12
N25	VDDPLL_13

VPP

VPP — J23 — 3P3V_LDO

AA17	VPP_1
AA21	VPP_2
AA25	VPP_3
AB26	VPP_4
AF26	VPP_5
Y18	VPP_6
Y22	VPP_7
P26	VPP_8
V26	VPP_9

J23: 1 — 2

DEFAULT JUMPER OPTION 1&2

VREF

0P75V_VTT_REF_FDDR0

AN33	VREF0_1
AL32	VREF0_2
AN9	VREF9_1
AL10	VREF9_2

0P75V_VTT_REF_FDDR1

RT4G150

U16-18 — POWER

1P5V_REG

AC40	VDDI0_1
AD30	VDDI0_2
AD37	VDDI0_3
AE29	VDDI0_4
AE34	VDDI0_5
AF28	VDDI0_6
AF30	VDDI0_7
AF31	VDDI0_8
AF41	VDDI0_9
AG29	VDDI0_10
AG38	VDDI0_11
AH28	VDDI0_12
AH30	VDDI0_13
AH35	VDDI0_14
AJ29	VDDI0_15
AJ32	VDDI0_16
AK39	VDDI0_17
AL36	VDDI0_18
AM33	VDDI0_19
AN40	VDDI0_20

BANK-0

VCCIO_HPC1_VADJ

A6	VDDI6_1
B9	VDDI6_2
C12	VDDI6_3
D15	VDDI6_4
D5	VDDI6_5
E8	VDDI6_6
F11	VDDI6_7
G14	VDDI6_8
H17	VDDI6_9
J10	VDDI6_10
L13	VDDI6_11
L15	VDDI6_12
L17	VDDI6_13
M14	VDDI6_14
M16	VDDI6_15

BANK-6

2P5V

AA29	VDDI1_1
AA36	VDDI1_2
AB28	VDDI1_3
AB33	VDDI1_4
AC29	VDDI1_5
AD28	VDDI1_6
N40	VDDI1_7
P37	VDDI1_8
T41	VDDI1_9
U38	VDDI1_10
V35	VDDI1_11
W29	VDDI1_12
W32	VDDI1_13
Y28	VDDI1_14
Y30	VDDI1_15
Y39	VDDI1_16

BANK-1

VCCIO_HPC2_VIO_B_M2C_FMC

C2	VDDI7_1
F1	VDDI7_2
G4	VDDI7_3
H7	VDDI7_4
K3	VDDI7_5
L6	VDDI7_6
M9	VDDI7_7
N13	VDDI7_8
P12	VDDI7_9
P14	VDDI7_10
R13	VDDI7_11
R8	VDDI7_12
T11	VDDI7_13
T14	VDDI7_14
U13	VDDI7_15
V14	VDDI7_16

BANK-7

VCCIO_HPC1_VIO_B_M2C_FMC

C40	VDDI2_1
F41	VDDI2_2
G38	VDDI2_3
H35	VDDI2_4
K39	VDDI2_5
L36	VDDI2_6
M33	VDDI2_7
N29	VDDI2_8
P28	VDDI2_9
P30	VDDI2_10
R29	VDDI2_11
R34	VDDI2_12
T28	VDDI2_13
T31	VDDI2_14
U29	VDDI2_15
V28	VDDI2_16

BANK-2

VCCIO_HPC2_VADJ

AA13	VDDI8_1
AA6	VDDI8_2
AB14	VDDI8_3
AB9	VDDI8_4
AC13	VDDI8_5
AD14	VDDI8_6
N2	VDDI8_7
P5	VDDI8_8
T1	VDDI8_9
U4	VDDI8_10
V7	VDDI8_11
W10	VDDI8_12
W13	VDDI8_13
Y12	VDDI8_14
Y14	VDDI8_15
Y3	VDDI8_16

BANK-8

3P3V

H33	VDDI3

BANK-3

1P5V_REG

AC2	VDDI9_1
AD12	VDDI9_2
AD5	VDDI9_3
AE13	VDDI9_4
AE8	VDDI9_5
AF1	VDDI9_6
AF11	VDDI9_7
AF12	VDDI9_8
AF14	VDDI9_9
AG13	VDDI9_10
AG4	VDDI9_11
AH12	VDDI9_12
AH14	VDDI9_13
AH7	VDDI9_14
AJ10	VDDI9_15
AJ13	VDDI9_16
AK3	VDDI9_17
AL6	VDDI9_18
AM9	VDDI9_19
AN2	VDDI9_20

BANK-9

3P3V

A36	VDDI4_1
B33	VDDI4_2
C30	VDDI4_3
D27	VDDI4_4
D37	VDDI4_5
E34	VDDI4_6
F31	VDDI4_7
G28	VDDI4_8
H25	VDDI4_9
J32	VDDI4_10
L25	VDDI4_11
L27	VDDI4_12
L28	VDDI4_13
M26	VDDI4_14
M28	VDDI4_15

BANK-4

VCCIO_HPC1_VADJ

A16	VDDI5_1
A26	VDDI5_2
B19	VDDI5_3
B23	VDDI5_4
E18	VDDI5_5
E24	VDDI5_6
F21	VDDI5_7
J20	VDDI5_8
J22	VDDI5_9
L19	VDDI5_10
L21	VDDI5_11
L23	VDDI5_12
M18	VDDI5_13
M20	VDDI5_14
M22	VDDI5_15
M24	VDDI5_16

BANK-5

2P5V

AR21	SERDES_VDDI_1
AP14	SERDES_VDDI_2
AP28	SERDES_VDDI_3
AN21	SERDES_VDDI_4

SERDES

SERDES_VREF_1 — AW21

SERDES_VREF_2 — BA21

J53: 1 — 2

DEFAULT JUMPER OPTION 1&2

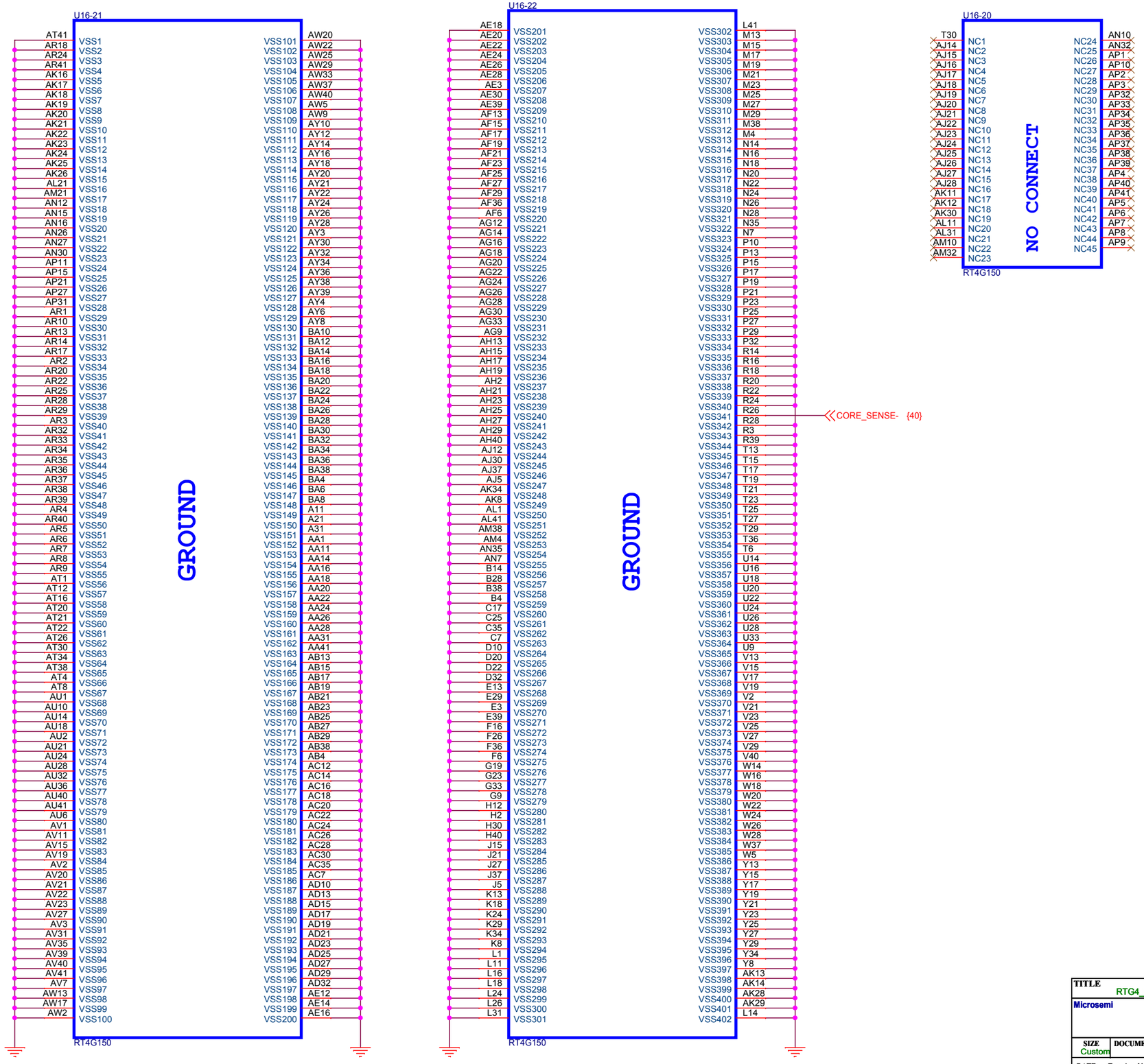
C679 0.1uF/16V

C695 0.1uF/16V

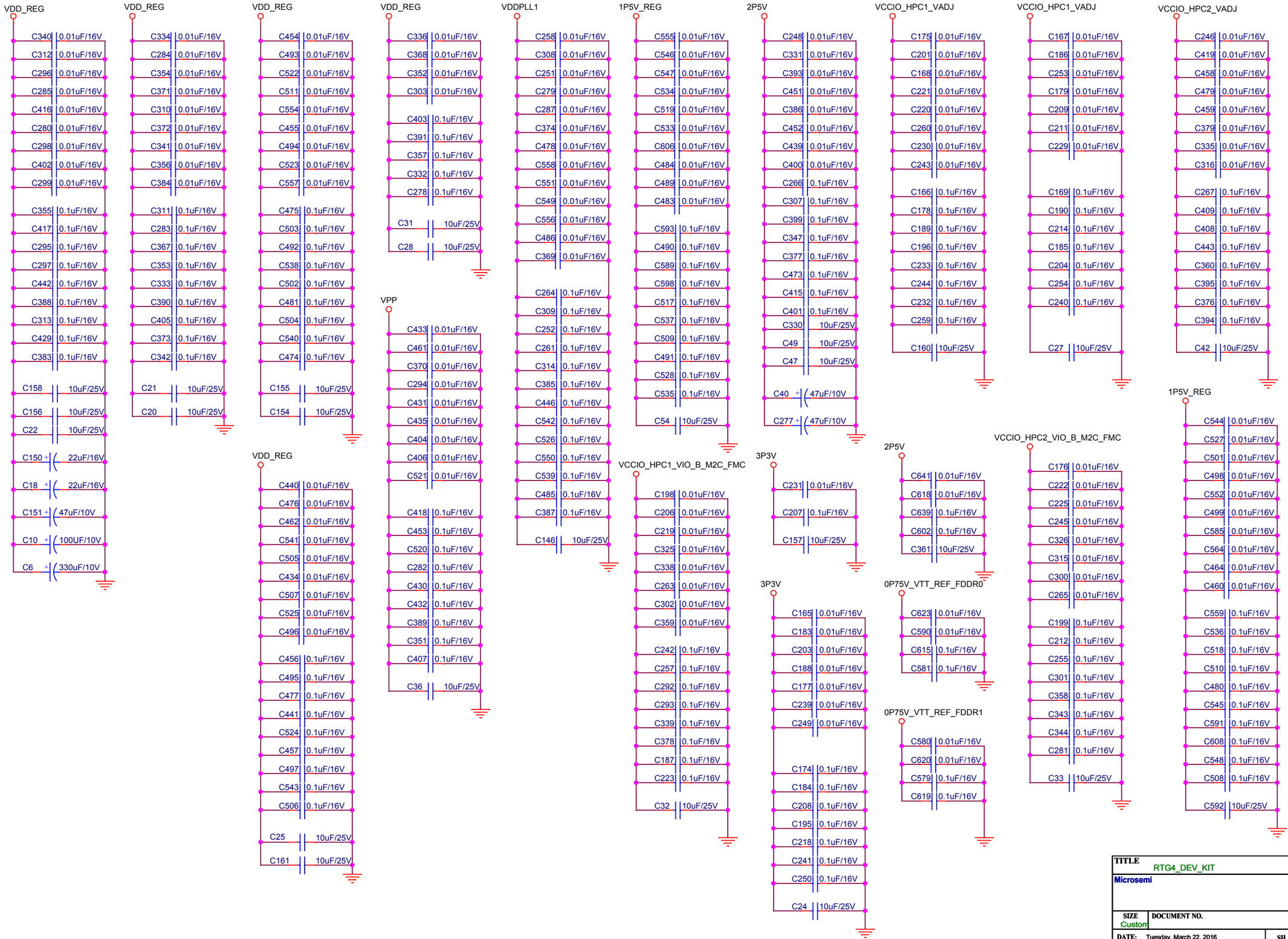
R382 1K/1%

RT4G150

TITLE	RTG4_DEV_KIT
Microsemi	
SIZE: Custom	DOCUMENT NO.
REV: B1	
DATE: Tuesday, March 22, 2016	SH 33 OF 45



TITLE	RTG4_DEV_KIT
Microsemi	
SIZE: Custom	DOCUMENT NO.
REV: B1	
DATE: Tuesday, March 22, 2016	SH 34 OF 45


VDD_REG
C340 0.01uF/16V
C312 0.01uF/16V
C296 0.01uF/16V
C285 0.01uF/16V
C416 0.01uF/16V
C280 0.01uF/16V
C298 0.01uF/16V
C402 0.01uF/16V
C299 0.01uF/16V
C355 0.1uF/16V
C417 0.1uF/16V
C295 0.1uF/16V
C297 0.1uF/16V
C442 0.1uF/16V
C388 0.1uF/16V
C313 0.1uF/16V
C429 0.1uF/16V
C383 0.1uF/16V
C158 10uF/25V
C156 10uF/25V
C22 10uF/25V
C150 22uF/16V
C18 22uF/16V
C151 47uF/10V
C10 100UF/10V
C6 330uF/10V
VDD_REG
C334 0.01uF/16V
C284 0.01uF/16V
C354 0.01uF/16V
C371 0.01uF/16V
C310 0.01uF/16V
C372 0.01uF/16V
C341 0.01uF/16V
C356 0.01uF/16V
C384 0.01uF/16V
C311 0.1uF/16V
C283 0.1uF/16V
C367 0.1uF/16V
C353 0.1uF/16V
C333 0.1uF/16V
C390 0.1uF/16V
C405 0.1uF/16V
C373 0.1uF/16V
C342 0.1uF/16V
C21 10uF/25V
C20 10uF/25V
VDD_REG
C454 0.01uF/16V
C493 0.01uF/16V
C522 0.01uF/16V
C511 0.01uF/16V
C554 0.01uF/16V
C455 0.01uF/16V
C494 0.01uF/16V
C523 0.01uF/16V
C557 0.01uF/16V
C475 0.1uF/16V
C503 0.1uF/16V
C492 0.1uF/16V
C538 0.1uF/16V
C502 0.1uF/16V
C481 0.1uF/16V
C504 0.1uF/16V
C540 0.1uF/16V
C474 0.1uF/16V
C155 10uF/25V
C154 10uF/25V
VDD_REG
C440 0.01uF/16V
C476 0.01uF/16V
C462 0.01uF/16V
C541 0.01uF/16V
C505 0.01uF/16V
C434 0.01uF/16V
C507 0.01uF/16V
C525 0.01uF/16V
C496 0.01uF/16V
C456 0.1uF/16V
C495 0.1uF/16V
C477 0.1uF/16V
C441 0.1uF/16V
C524 0.1uF/16V
C457 0.1uF/16V
C497 0.1uF/16V
C543 0.1uF/16V
C506 0.1uF/16V
C25 10uF/25V
C161 10uF/25V
VDD_REG
C336 0.01uF/16V
C368 0.01uF/16V
C352 0.01uF/16V
C303 0.01uF/16V
C403 0.1uF/16V
C391 0.1uF/16V
C357 0.1uF/16V
C332 0.1uF/16V
C278 0.1uF/16V
C31 10uF/25V
C28 10uF/25V
VPP
C433 0.01uF/16V
C461 0.01uF/16V
C370 0.01uF/16V
C294 0.01uF/16V
C431 0.01uF/16V
C435 0.01uF/16V
C404 0.01uF/16V
C406 0.01uF/16V
C521 0.01uF/16V
C418 0.1uF/16V
C453 0.1uF/16V
C520 0.1uF/16V
C282 0.1uF/16V
C430 0.1uF/16V
C432 0.1uF/16V
C389 0.1uF/16V
C351 0.1uF/16V
C407 0.1uF/16V
C36 10uF/25V
VDDPLL1
C258 0.01uF/16V
C308 0.01uF/16V
C251 0.01uF/16V
C279 0.01uF/16V
C287 0.01uF/16V
C374 0.01uF/16V
C478 0.01uF/16V
C558 0.01uF/16V
C551 0.01uF/16V
C549 0.01uF/16V
C556 0.01uF/16V
C486 0.01uF/16V
C369 0.01uF/16V
C264 0.1uF/16V
C309 0.1uF/16V
C252 0.1uF/16V
C261 0.1uF/16V
C314 0.1uF/16V
C385 0.1uF/16V
C446 0.1uF/16V
C542 0.1uF/16V
C526 0.1uF/16V
C550 0.1uF/16V
C539 0.1uF/16V
C485 0.1uF/16V
C387 0.1uF/16V
C146 10uF/25V
1P5V_REG
C555 0.01uF/16V
C546 0.01uF/16V
C547 0.01uF/16V
C534 0.01uF/16V
C519 0.01uF/16V
C533 0.01uF/16V
C606 0.01uF/16V
C484 0.01uF/16V
C489 0.01uF/16V
C483 0.01uF/16V
C593 0.1uF/16V
C490 0.1uF/16V
C589 0.1uF/16V
C598 0.1uF/16V
C517 0.1uF/16V
C537 0.1uF/16V
C509 0.1uF/16V
C491 0.1uF/16V
C528 0.1uF/16V
C535 0.1uF/16V
C54 10uF/25V
VCCIO_HPC1_VIO_B_M2C_FMC
C198 0.01uF/16V
C206 0.01uF/16V
C219 0.01uF/16V
C325 0.01uF/16V
C338 0.01uF/16V
C263 0.01uF/16V
C302 0.01uF/16V
C359 0.01uF/16V
C242 0.1uF/16V
C257 0.1uF/16V
C292 0.1uF/16V
C293 0.1uF/16V
C339 0.1uF/16V
C378 0.1uF/16V
C187 0.1uF/16V
C223 0.1uF/16V
C32 10uF/25V
2P5V
C248 0.01uF/16V
C331 0.01uF/16V
C393 0.01uF/16V
C451 0.01uF/16V
C386 0.01uF/16V
C452 0.01uF/16V
C439 0.01uF/16V
C400 0.01uF/16V
C266 0.1uF/16V
C307 0.1uF/16V
C399 0.1uF/16V
C347 0.1uF/16V
C377 0.1uF/16V
C473 0.1uF/16V
C415 0.1uF/16V
C401 0.1uF/16V
C330 10uF/25V
C49 10uF/25V
C47 10uF/25V
C40 47uF/10V
C277 47uF/10V
3P3V
C231 0.01uF/16V
C207 0.1uF/16V
C157 10uF/25V
3P3V
C165 0.01uF/16V
C183 0.01uF/16V
C203 0.01uF/16V
C188 0.01uF/16V
C177 0.01uF/16V
C239 0.01uF/16V
C249 0.01uF/16V
C174 0.1uF/16V
C184 0.1uF/16V
C208 0.1uF/16V
C195 0.1uF/16V
C218 0.1uF/16V
C241 0.1uF/16V
C250 0.1uF/16V
C24 10uF/25V
VCCIO_HPC1_VADJ
C175 0.01uF/16V
C201 0.01uF/16V
C168 0.01uF/16V
C221 0.01uF/16V
C220 0.01uF/16V
C260 0.01uF/16V
C230 0.01uF/16V
C243 0.01uF/16V
C166 0.1uF/16V
C178 0.1uF/16V
C189 0.1uF/16V
C196 0.1uF/16V
C233 0.1uF/16V
C244 0.1uF/16V
C232 0.1uF/16V
C259 0.1uF/16V
C160 10uF/25V
2P5V
C641 0.01uF/16V
C618 0.01uF/16V
C639 0.1uF/16V
C602 0.1uF/16V
C361 10uF/25V
0P75V_VTT_REF_FDDR0
C623 0.01uF/16V
C590 0.01uF/16V
C615 0.1uF/16V
C581 0.1uF/16V
0P75V_VTT_REF_FDDR1
C580 0.01uF/16V
C620 0.01uF/16V
C579 0.1uF/16V
C619 0.1uF/16V
VCCIO_HPC1_VADJ
C167 0.01uF/16V
C186 0.01uF/16V
C253 0.01uF/16V
C179 0.01uF/16V
C209 0.01uF/16V
C211 0.01uF/16V
C229 0.01uF/16V
C169 0.1uF/16V
C190 0.1uF/16V
C214 0.1uF/16V
C185 0.1uF/16V
C204 0.1uF/16V
C254 0.1uF/16V
C240 0.1uF/16V
C27 10uF/25V
VCCIO_HPC2_VIO_B_M2C_FMC
C176 0.01uF/16V
C222 0.01uF/16V
C225 0.01uF/16V
C245 0.01uF/16V
C326 0.01uF/16V
C315 0.01uF/16V
C300 0.01uF/16V
C265 0.01uF/16V
C199 0.1uF/16V
C212 0.1uF/16V
C255 0.1uF/16V
C301 0.1uF/16V
C358 0.1uF/16V
C343 0.1uF/16V
C344 0.1uF/16V
C281 0.1uF/16V
C33 10uF/25V
VCCIO_HPC2_VADJ
C246 0.01uF/16V
C419 0.01uF/16V
C458 0.01uF/16V
C479 0.01uF/16V
C459 0.01uF/16V
C379 0.01uF/16V
C335 0.01uF/16V
C316 0.01uF/16V
C267 0.1uF/16V
C409 0.1uF/16V
C408 0.1uF/16V
C443 0.1uF/16V
C360 0.1uF/16V
C395 0.1uF/16V
C376 0.1uF/16V
C394 0.1uF/16V
C42 10uF/25V
1P5V_REG
C544 0.01uF/16V
C527 0.01uF/16V
C501 0.01uF/16V
C498 0.01uF/16V
C552 0.01uF/16V
C499 0.01uF/16V
C585 0.01uF/16V
C564 0.01uF/16V
C464 0.01uF/16V
C460 0.01uF/16V
C559 0.1uF/16V
C536 0.1uF/16V
C518 0.1uF/16V
C510 0.1uF/16V
C480 0.1uF/16V
C545 0.1uF/16V
C591 0.1uF/16V
C608 0.1uF/16V
C548 0.1uF/16V
C508 0.1uF/16V
C592 10uF/25V
TITLE
RTG4_DEV_KIT
Microsemi
SIZE
Custom
DOCUMENT NO.
REV
B1
DATE: Tuesday, March 22, 2016
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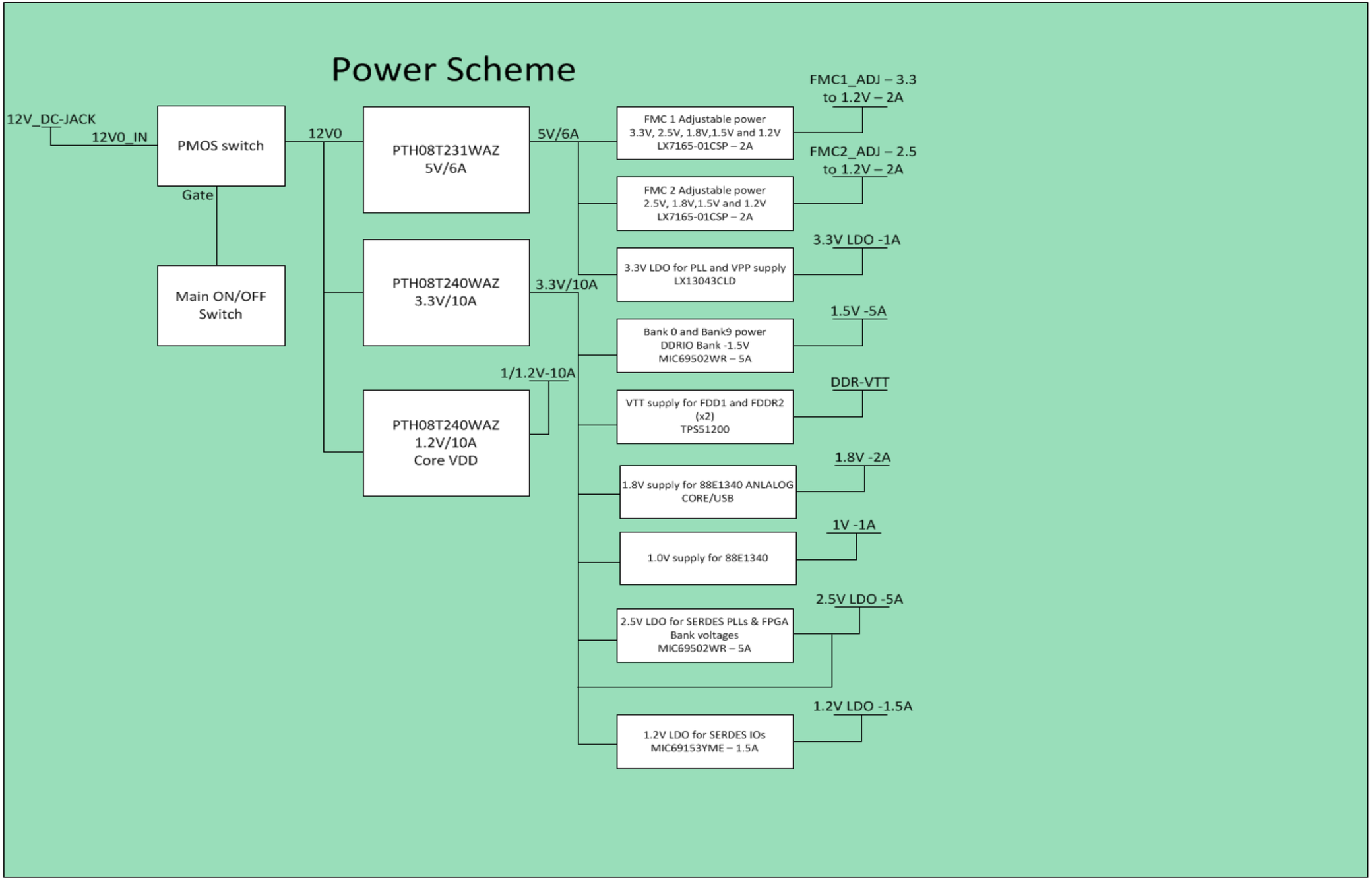
Power Scheme



TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: B	DOCUMENT NO.	REV: B1
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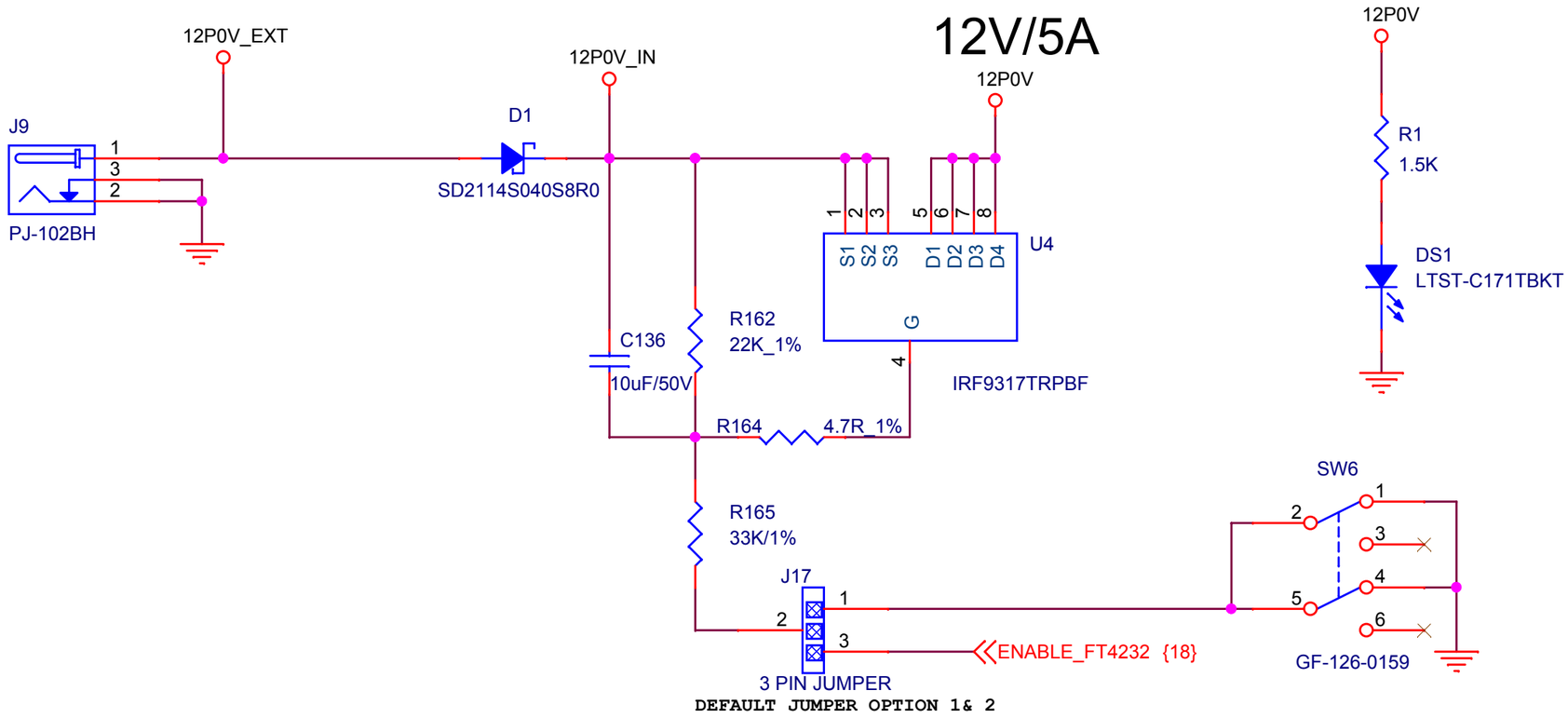
12V EXTERNAL SUPPLY



TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: A	DOCUMENT NO.	REV: B1
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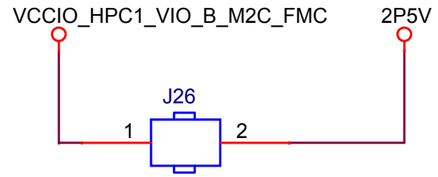
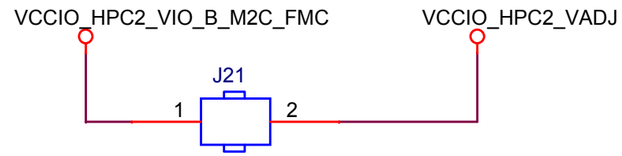
BANK-2 HEADER

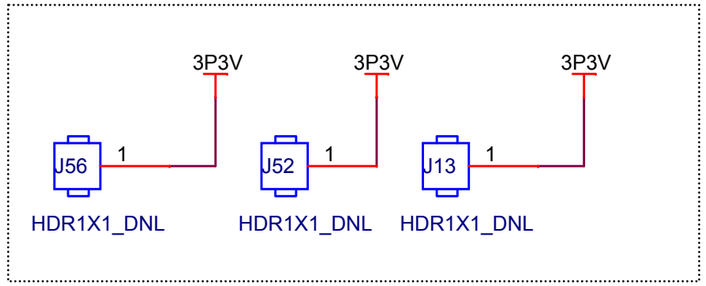


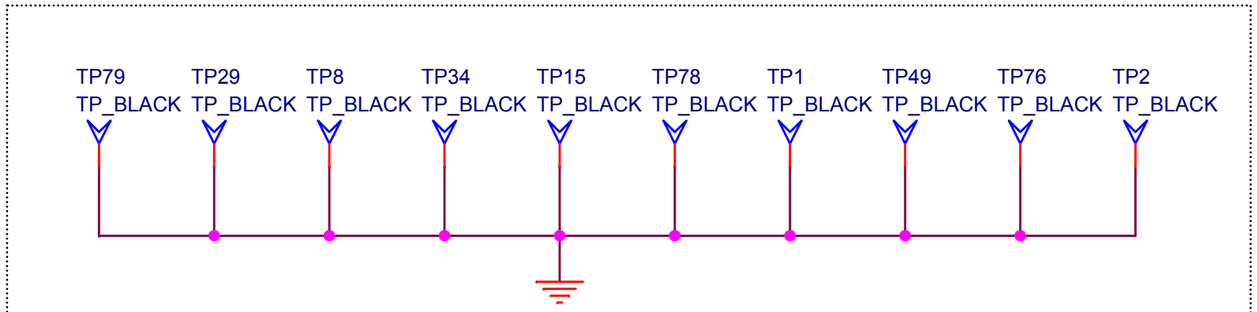
DEFAULT JUMPER OPTION 1&2

BANK-7 HEADER



DEFAULT JUMPER OPTION 1&2





TITLE RTG4_DEV_KIT		
Microsemi		
SIZE A	**DOCUMENT NO.**	**REV** B1
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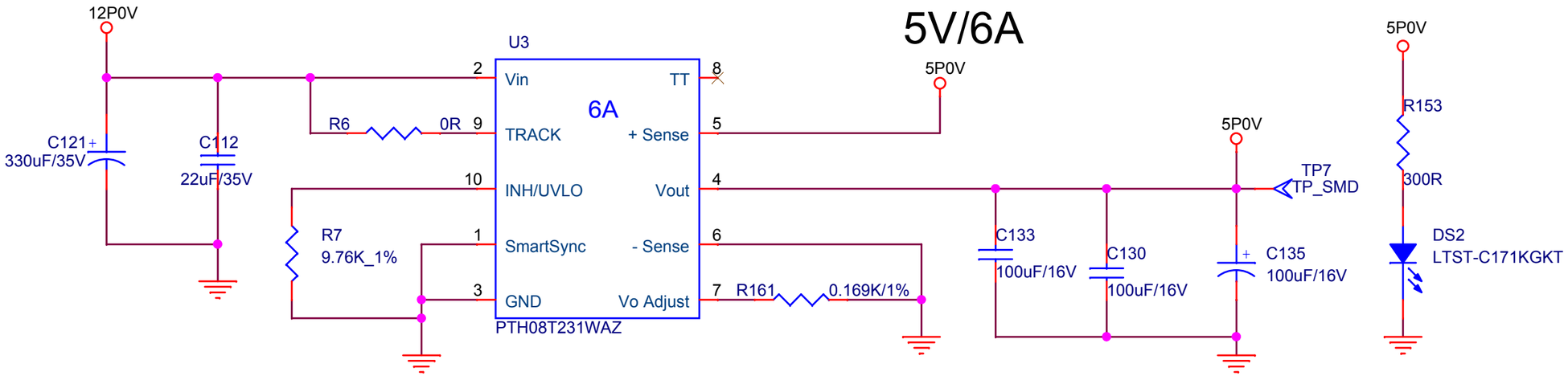
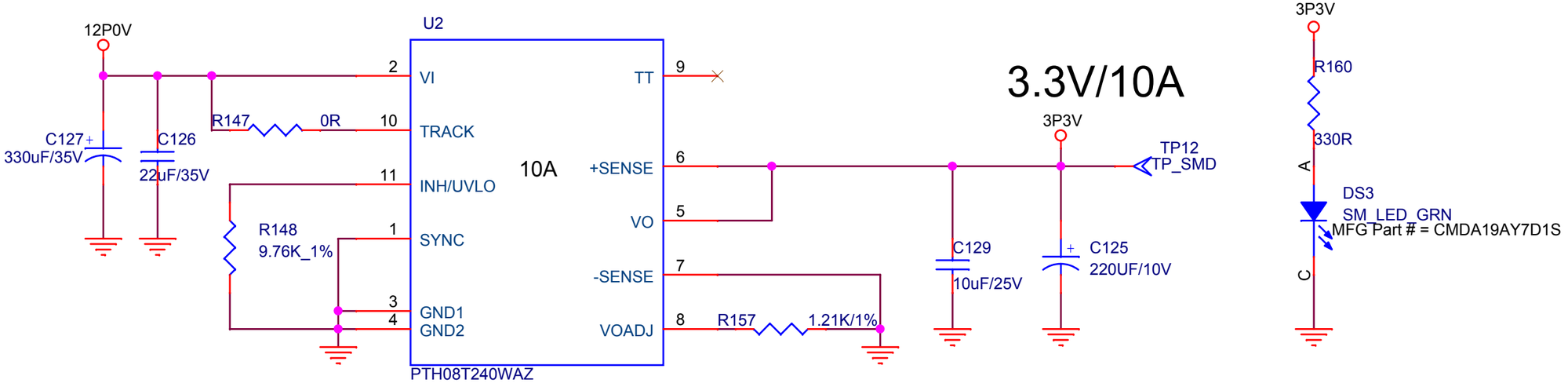
POWER SUPPLIES - 1

REGULATOR 1: 5V/6A



REGULATOR 2: 3.3V/10A



TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: Custom	DOCUMENT NO.	REV: B1
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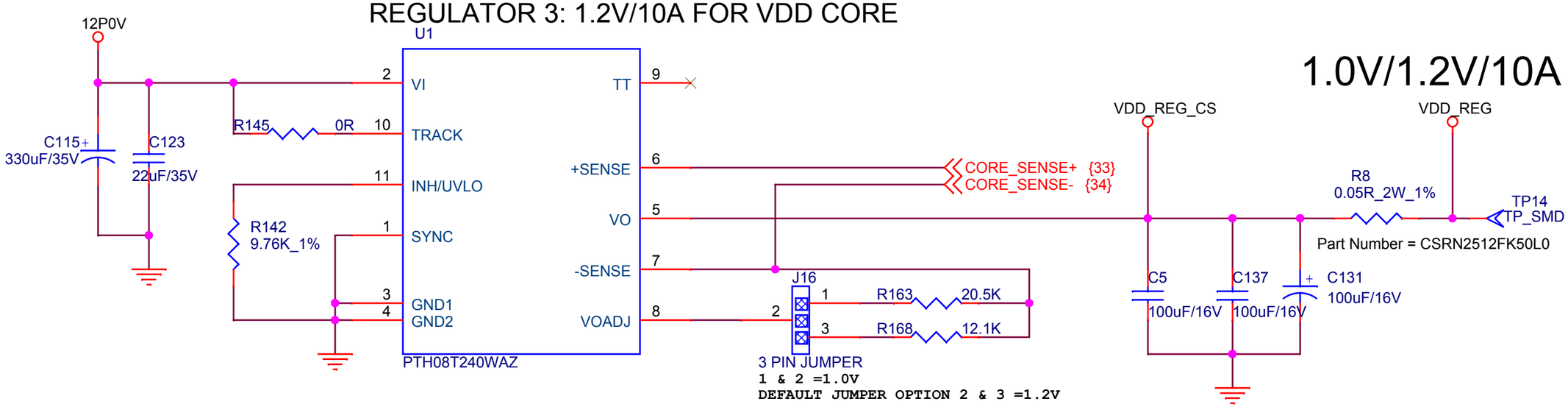
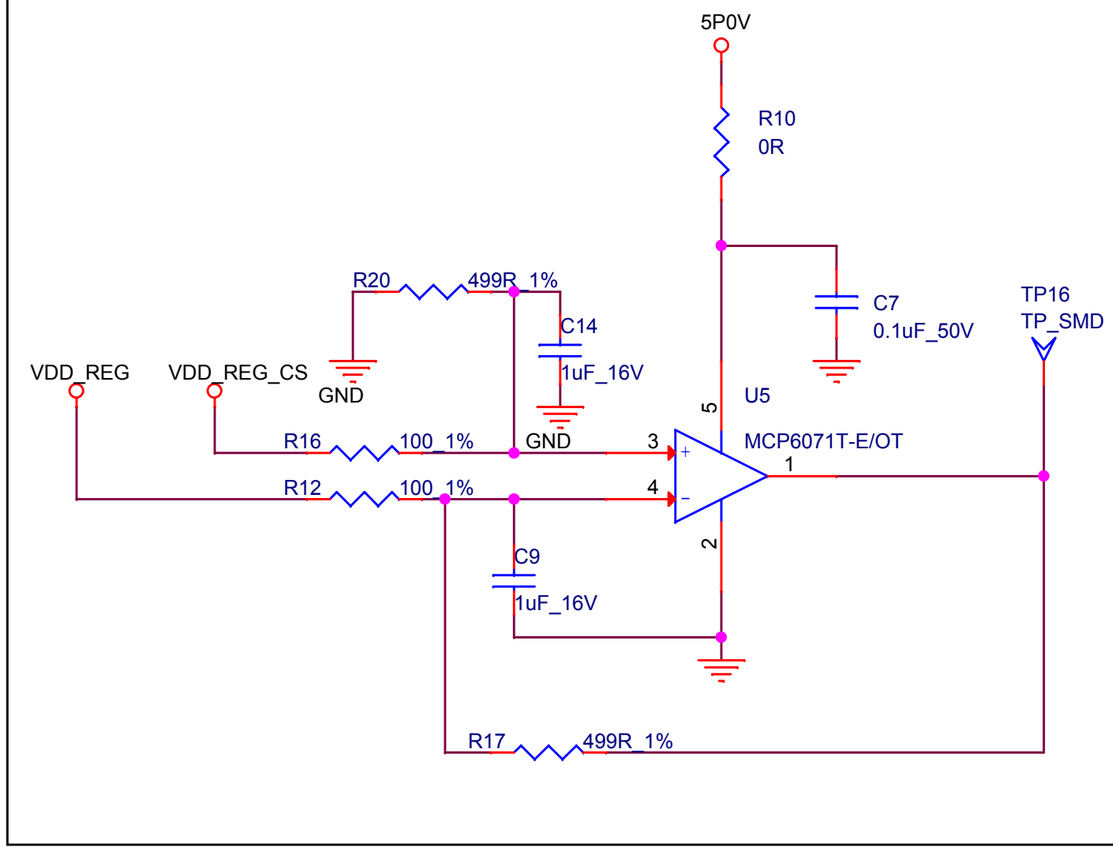
POWER SUPPLIES - 2

REGULATOR 3: 1.2V/10A FOR VDD CORE



CORE CURRENT SENSING CIRCUIT



TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: A	DOCUMENT NO.	REV: B1
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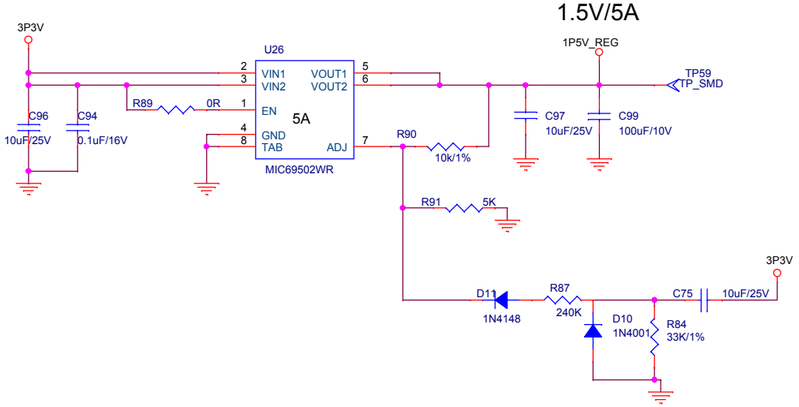
POWER SUPPLIES 3

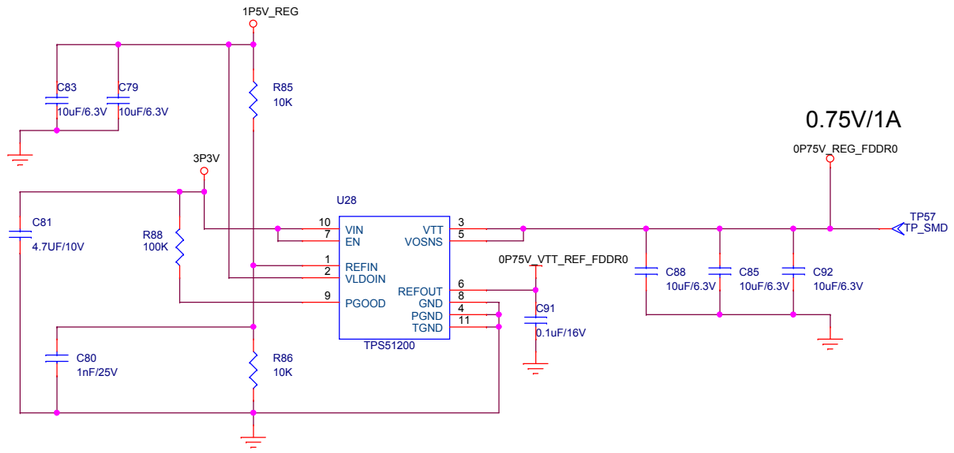
REGULATOR 4 : 3.3V to 1.5V FOR BANK 0 AND BANK 9

1.5V/5A



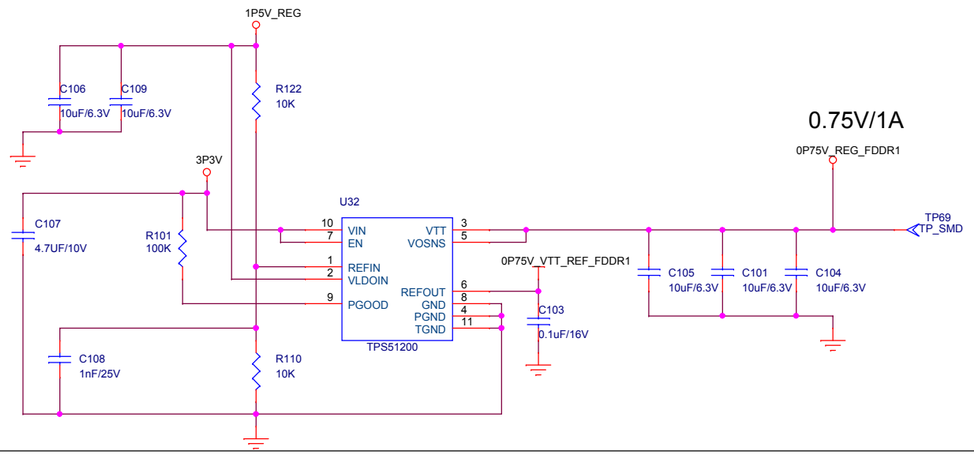
REGULATOR 5: 0.75V FOR FDDR-0 -VTT SUPPLY

0.75V/1A



REGULATOR 6: 0.75V FOR FDDR-1 -VTT SUPPLY

0.75V/1A



TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: Custom	DOCUMENT NO.	REV: B1
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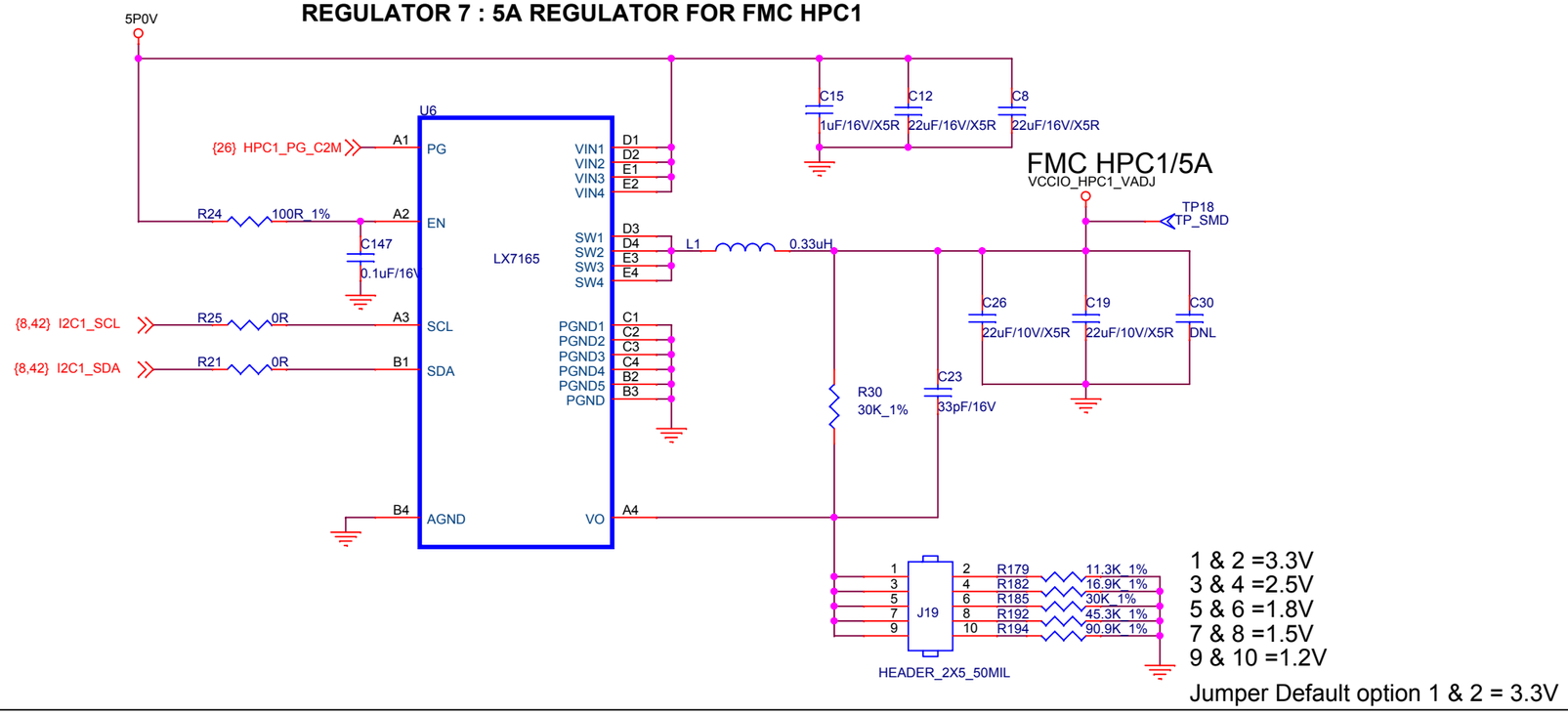
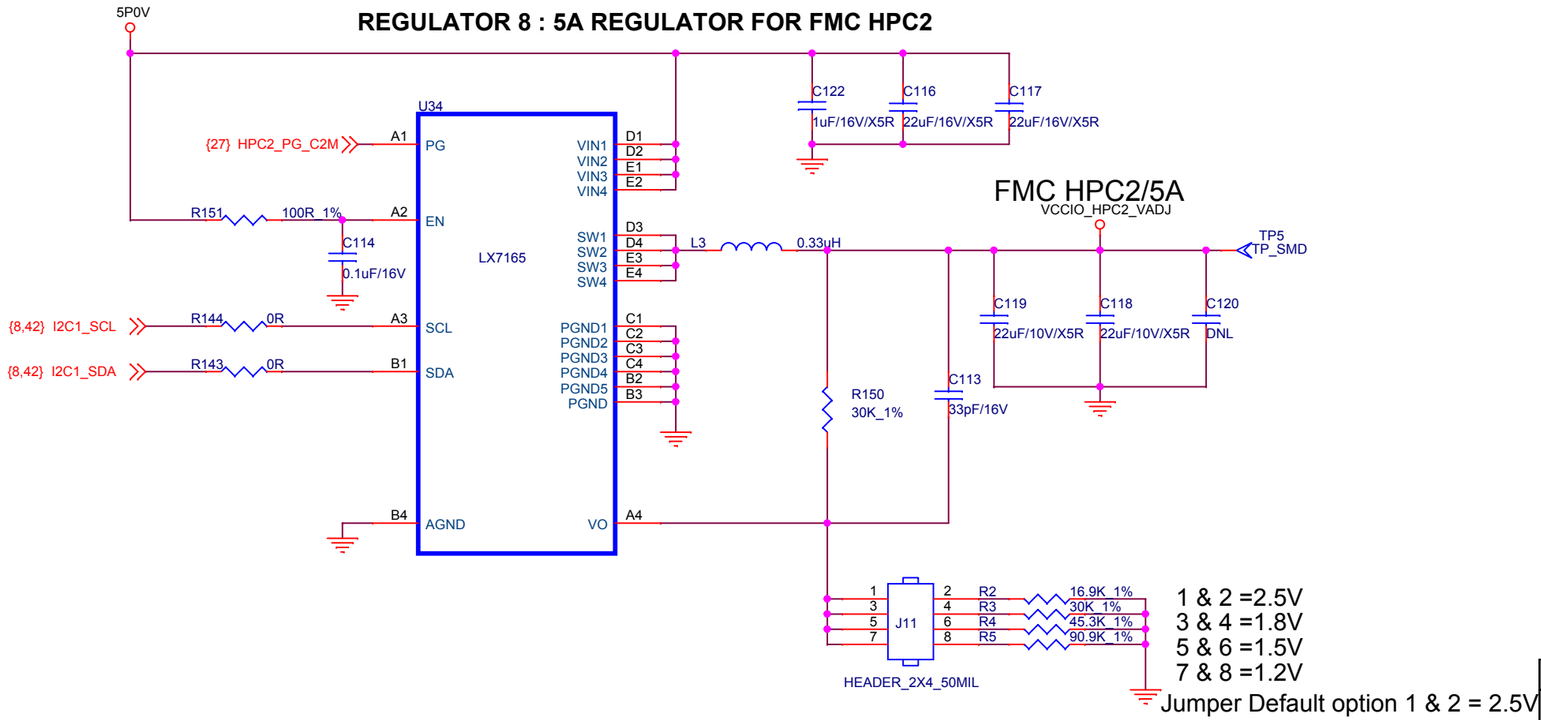
POWER SUPPLIES - 4

REGULATOR 7 : 5A REGULATOR FOR FMC HPC1



REGULATOR 8 : 5A REGULATOR FOR FMC HPC2



TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: Custom	DOCUMENT NO.	REV: B1
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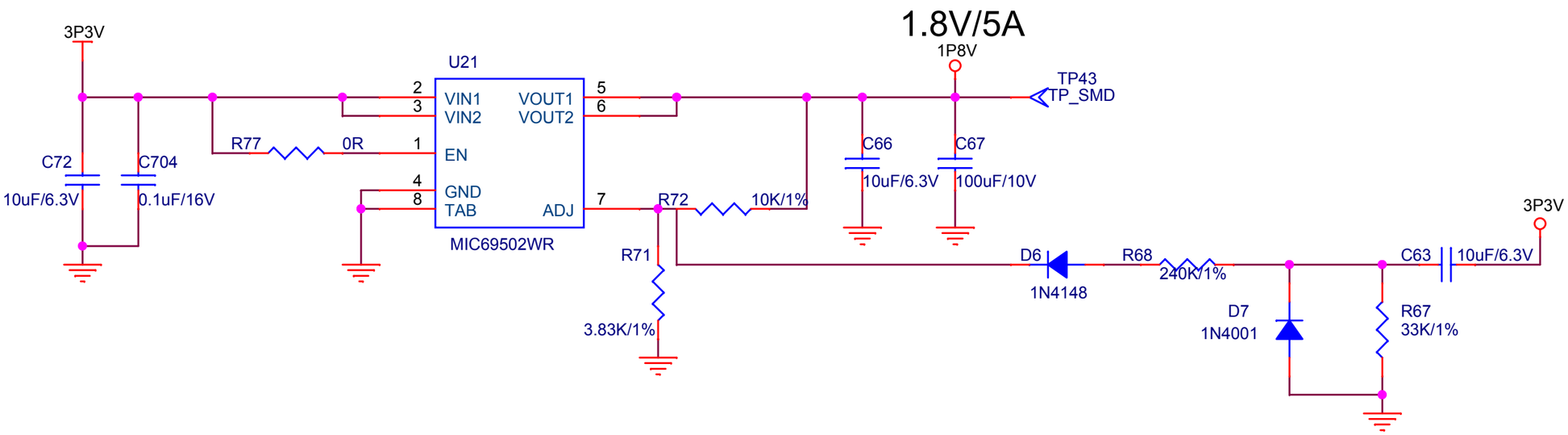
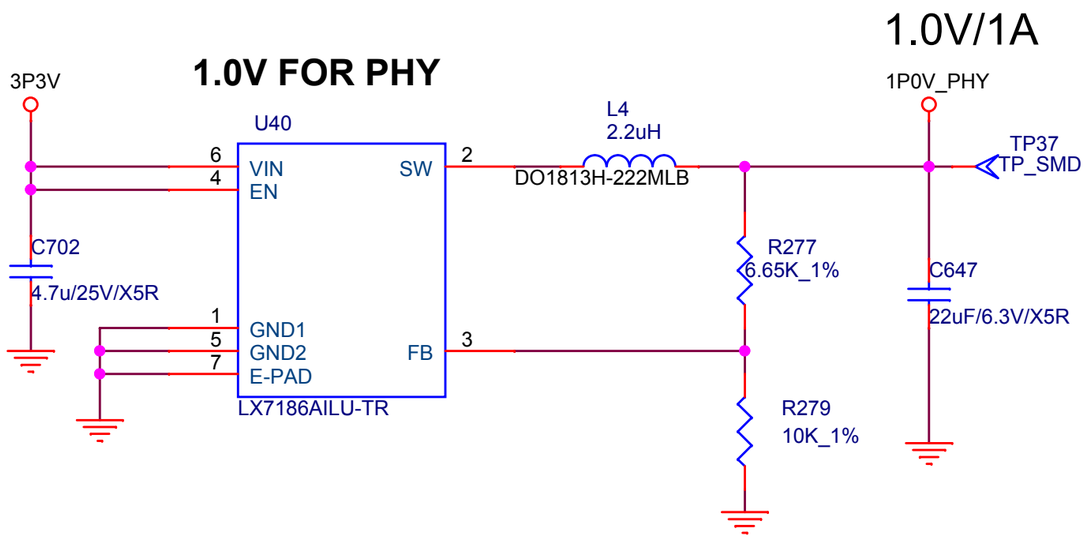
POWER SUPPLIES - 5

REGULATOR 9: 1.8V/5A FOR 88E1340 ANLALOG CORE/USB



REGULATOR 10: 1V/1A_FOR PHY 88E1340



TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: A	DOCUMENT NO.	REV: B1
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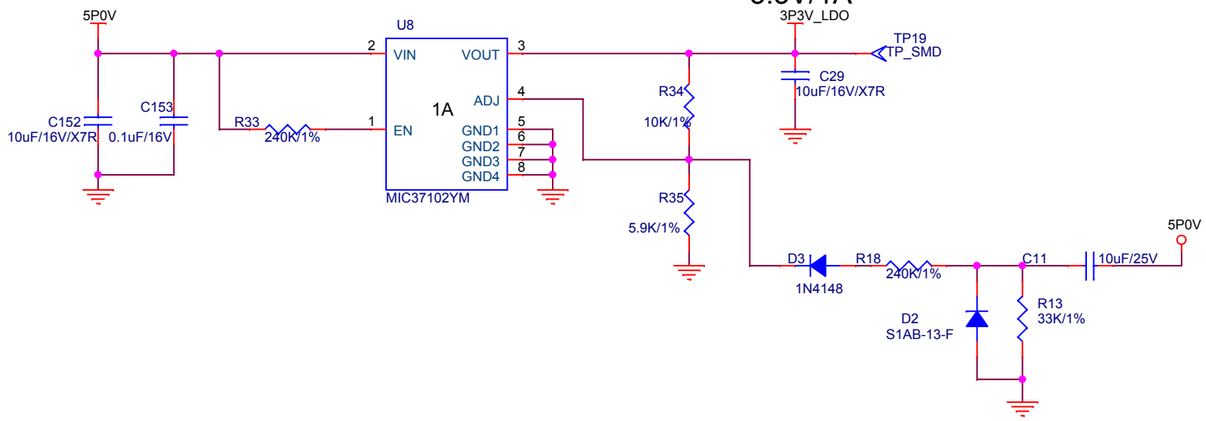
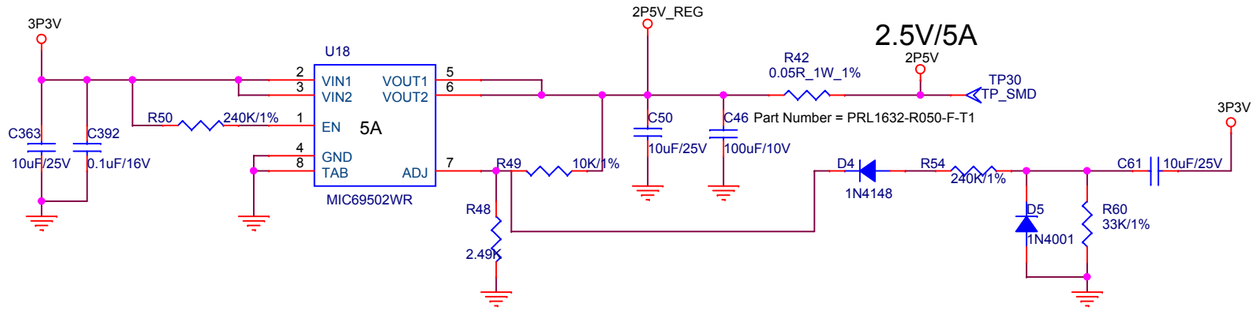
POWER SUPPLIES 6

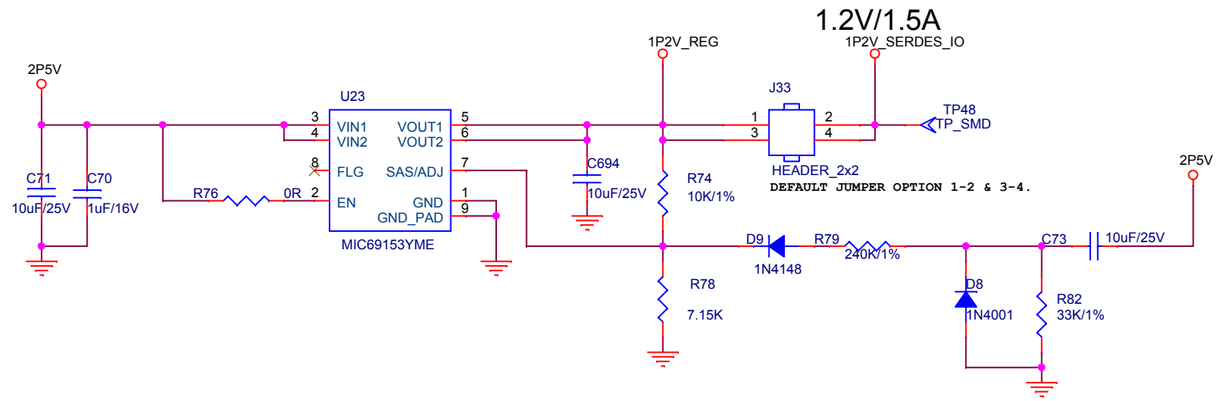
REGULATOR 11 : 3.3V/1A FOR PLL & VPP



REGULATOR 12: 3.3V for 2.5V



REGULATOR 13: 2.5V for 1.2V/5A SERDES VDDIO



TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: Custom	DOCUMENT NO.	REV: B1
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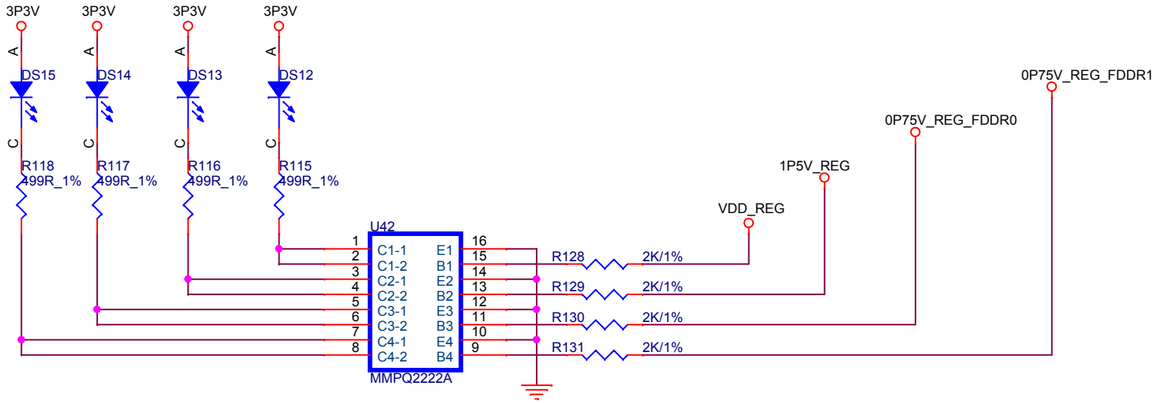
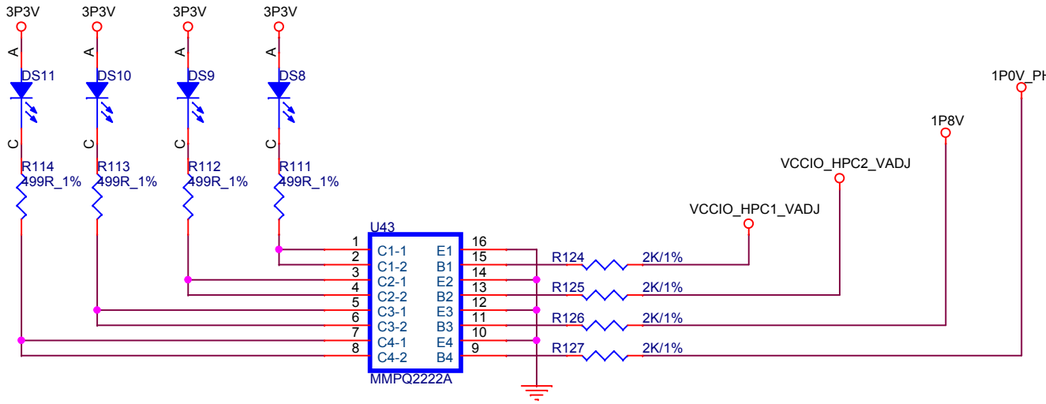
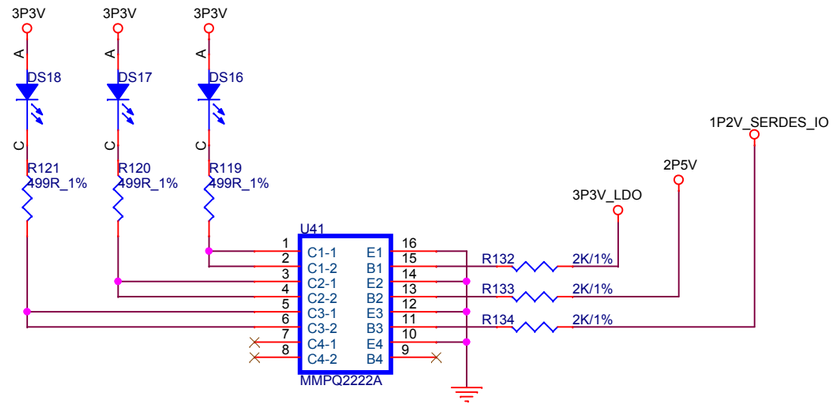
POWER LEDs







TITLE: RTG4_DEV_KIT		
Microsemi		
SIZE: Custom	DOCUMENT NO.	REV: B1
DATE: Tuesday, March 22, 2016		SH 45 OF 45