

U7-12

| | | | | |
|-----------------|-----|------------|---------------|----|
| MGTHRXN0_224 | AP1 | 224_RX0_N | >>>224_RX0_N | 17 |
| MGTHRXP0_224 | AP2 | 224_RX0_P | >>>224_RX0_P | 17 |
| MGTHRXN1_224 | AM1 | 224_RX1_N | >>>224_RX1_N | 17 |
| MGTHRXP1_224 | AM2 | 224_RX1_P | >>>224_RX1_P | 17 |
| MGTHRXN2_224 | AK1 | 224_RX2_N | >>>224_RX2_N | 17 |
| MGTHRXP2_224 | AK2 | 224_RX2_P | >>>224_RX2_P | 17 |
| MGTHRXN3_224 | AJ3 | 224_RX3_N | >>>224_RX3_N | 17 |
| MGTHRXP3_224 | AJ4 | 224_RX3_P | >>>224_RX3_P | 17 |
| MGHTTXN0_224 | AN3 | 224_TX0_N | >>>224_TX0_N | 17 |
| MGHTTXP0_224 | AN4 | 224_TX0_P | >>>224_TX0_P | 17 |
| MGHTTXN1_224 | AM5 | 224_TX1_N | >>>224_TX1_N | 17 |
| MGHTTXP1_224 | AM6 | 224_TX1_P | >>>224_TX1_P | 17 |
| MGHTTXN2_224 | AL3 | 224_TX2_N | >>>224_TX2_N | 17 |
| MGHTTXP2_224 | AL4 | 224_TX2_P | >>>224_TX2_P | 17 |
| MGHTTXN3_224 | AK5 | 224_TX3_N | >>>224_TX3_N | 17 |
| MGHTTXP3_224 | AK6 | 224_TX3_P | >>>224_TX3_P | 17 |
| MGTREFCLK0N_224 | AF5 | 224_CLK0_N | >>>224_CLK0_N | 17 |
| MGTREFCLK0P_224 | AF6 | 224_CLK0_P | >>>224_CLK0_P | 17 |
| MGTREFCLK1N_224 | AD5 | 224_CLK1_N | >>>224_CLK1_N | 17 |
| MGTREFCLK1P_224 | AD6 | 224_CLK1_P | >>>224_CLK1_P | 17 |

xcku040-fva1156

U7-13

| | | | | |
|-----------------|-----|------------|---------------|----|
| MGTREF_R | AH1 | 225_RX0_N | >>>225_RX0_N | 17 |
| MGTAVTTRCAL_R | AH2 | 225_RX0_P | >>>225_RX0_P | 17 |
| MGTHRXN0_225 | AF1 | 225_RX1_N | >>>225_RX1_N | 17 |
| MGTHRXP0_225 | AF2 | 225_RX1_P | >>>225_RX1_P | 17 |
| MGTHRXN1_225 | AD1 | 225_RX2_N | >>>225_RX2_N | 17 |
| MGTHRXP1_225 | AD2 | 225_RX2_P | >>>225_RX2_P | 17 |
| MGTHRXN2_225 | AB1 | 225_RX3_N | >>>225_RX3_N | 17 |
| MGTHRXP2_225 | AB2 | 225_RX3_P | >>>225_RX3_P | 17 |
| MGTHRXN3_225 | AH5 | 225_TX0_N | >>>225_TX0_N | 17 |
| MGTHRXP3_225 | AH6 | 225_TX0_P | >>>225_TX0_P | 17 |
| MGHTTXN0_225 | AG3 | 225_TX1_N | >>>225_TX1_N | 17 |
| MGHTTXP0_225 | AG4 | 225_TX1_P | >>>225_TX1_P | 17 |
| MGHTTXN1_225 | AE3 | 225_TX2_N | >>>225_TX2_N | 17 |
| MGHTTXP1_225 | AE4 | 225_TX2_P | >>>225_TX2_P | 17 |
| MGHTTXN2_225 | AC3 | 225_TX3_N | >>>225_TX3_N | 17 |
| MGHTTXP2_225 | AC4 | 225_TX3_P | >>>225_TX3_P | 17 |
| MGHTTXN3_225 | AB5 | 225_CLK0_N | >>>225_CLK0_N | 17 |
| MGHTTXP3_225 | AB6 | 225_CLK0_P | >>>225_CLK0_P | 17 |
| MGTREFCLK0N_225 | Y5 | 225_CLK1_N | >>>225_CLK1_N | 17 |
| MGTREFCLK0P_225 | Y6 | 225_CLK1_P | >>>225_CLK1_P | 17 |
| MGTREFCLK1N_225 | | | | |
| MGTREFCLK1P_225 | | | | |

xcku040-fva1156

Trace length from the resistor pins to the
FPGA pins MGTREF and MGTAVTTRCAL.
Connection must be equal in length

U7-14

| | | | | |
|-----------------|-----|------------|---------------|----|
| MGTHRXN0_226 | Y1 | 226_RX0_N | >>>226_RX0_N | 17 |
| MGTHRXP0_226 | Y2 | 226_RX0_P | >>>226_RX0_P | 17 |
| MGTHRXN1_226 | V1 | 226_RX1_N | >>>226_RX1_N | 17 |
| MGTHRXP1_226 | V2 | 226_RX1_P | >>>226_RX1_P | 17 |
| MGTHRXN2_226 | T1 | 226_RX2_N | >>>226_RX2_N | 19 |
| MGTHRXP2_226 | T2 | 226_RX2_P | >>>226_RX2_P | 19 |
| MGTHRXN3_226 | P1 | 226_RX3_N | >>>226_RX3_N | 19 |
| MGTHRXP3_226 | P2 | 226_RX3_P | >>>226_RX3_P | 19 |
| MGHTTXN0_226 | AA3 | 226_TX0_N | >>>226_TX0_N | 17 |
| MGHTTXP0_226 | AA4 | 226_TX0_P | >>>226_TX0_P | 17 |
| MGHTTXN1_226 | W3 | 226_TX1_N | >>>226_TX1_N | 17 |
| MGHTTXP1_226 | W4 | 226_TX1_P | >>>226_TX1_P | 17 |
| MGHTTXN2_226 | U3 | 226_TX2_N | >>>226_TX2_N | 19 |
| MGHTTXP2_226 | U4 | 226_TX2_P | >>>226_TX2_P | 19 |
| MGHTTXN3_226 | R3 | 226_TX3_N | >>>226_TX3_N | 19 |
| MGHTTXP3_226 | R4 | 226_TX3_P | >>>226_TX3_P | 19 |
| MGTREFCLK0N_226 | V5 | 226_CLK0_N | >>>226_CLK0_N | 19 |
| MGTREFCLK0P_226 | V6 | 226_CLK0_P | >>>226_CLK0_P | 19 |
| MGTREFCLK1N_226 | T5 | 226_CLK1_N | >>>226_CLK1_N | 19 |
| MGTREFCLK1P_226 | T6 | 226_CLK1_P | >>>226_CLK1_P | 19 |

xcku040-fva1156

U7-15

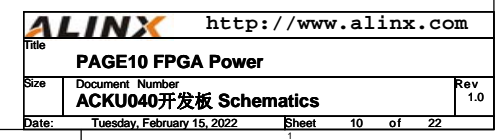
| | | | | |
|-----------------|----|------------|---------------|----|
| MGTHRXN0_227 | M1 | 227_RX0_N | >>>227_RX0_N | 19 |
| MGTHRXP0_227 | M2 | 227_RX0_P | >>>227_RX0_P | 19 |
| MGTHRXN1_227 | K1 | 227_RX1_N | >>>227_RX1_N | 19 |
| MGTHRXP1_227 | K2 | 227_RX1_P | >>>227_RX1_P | 19 |
| MGTHRXN2_227 | H1 | 227_RX2_N | >>>227_RX2_N | 19 |
| MGTHRXP2_227 | H2 | 227_RX2_P | >>>227_RX2_P | 19 |
| MGTHRXN3_227 | F1 | 227_RX3_N | >>>227_RX3_N | 19 |
| MGTHRXP3_227 | F2 | 227_RX3_P | >>>227_RX3_P | 19 |
| MGHTTXN0_227 | N3 | 227_TX0_N | >>>227_TX0_N | 19 |
| MGHTTXP0_227 | N4 | 227_TX0_P | >>>227_TX0_P | 19 |
| MGHTTXN1_227 | L3 | 227_TX1_N | >>>227_TX1_N | 19 |
| MGHTTXP1_227 | L4 | 227_TX1_P | >>>227_TX1_P | 19 |
| MGHTTXN2_227 | J3 | 227_TX2_N | >>>227_TX2_N | 19 |
| MGHTTXP2_227 | J4 | 227_TX2_P | >>>227_TX2_P | 19 |
| MGHTTXN3_227 | G3 | 227_TX3_N | >>>227_TX3_N | 19 |
| MGHTTXP3_227 | G4 | 227_TX3_P | >>>227_TX3_P | 19 |
| MGTREFCLK0N_227 | P5 | 227_CLK0_N | >>>227_CLK0_N | 19 |
| MGTREFCLK0P_227 | P6 | 227_CLK0_P | >>>227_CLK0_P | 19 |
| MGTREFCLK1N_227 | M5 | 227_CLK1_N | >>>227_CLK1_N | 19 |
| MGTREFCLK1P_227 | M6 | 227_CLK1_P | >>>227_CLK1_P | 19 |

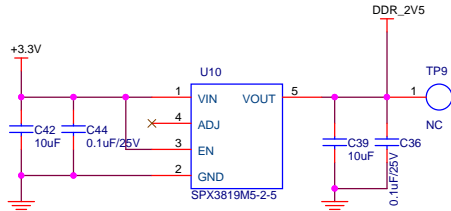
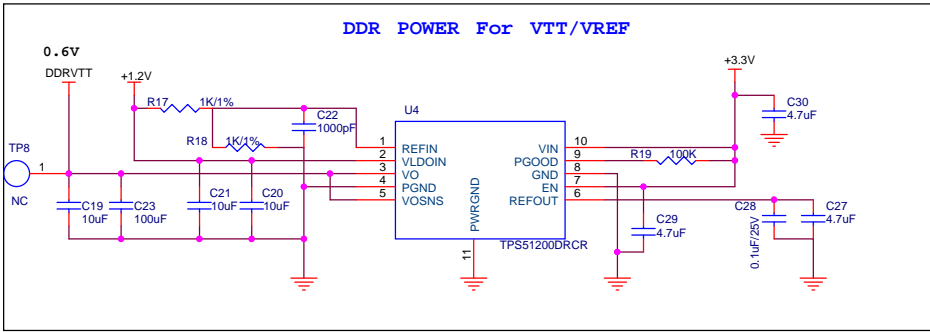
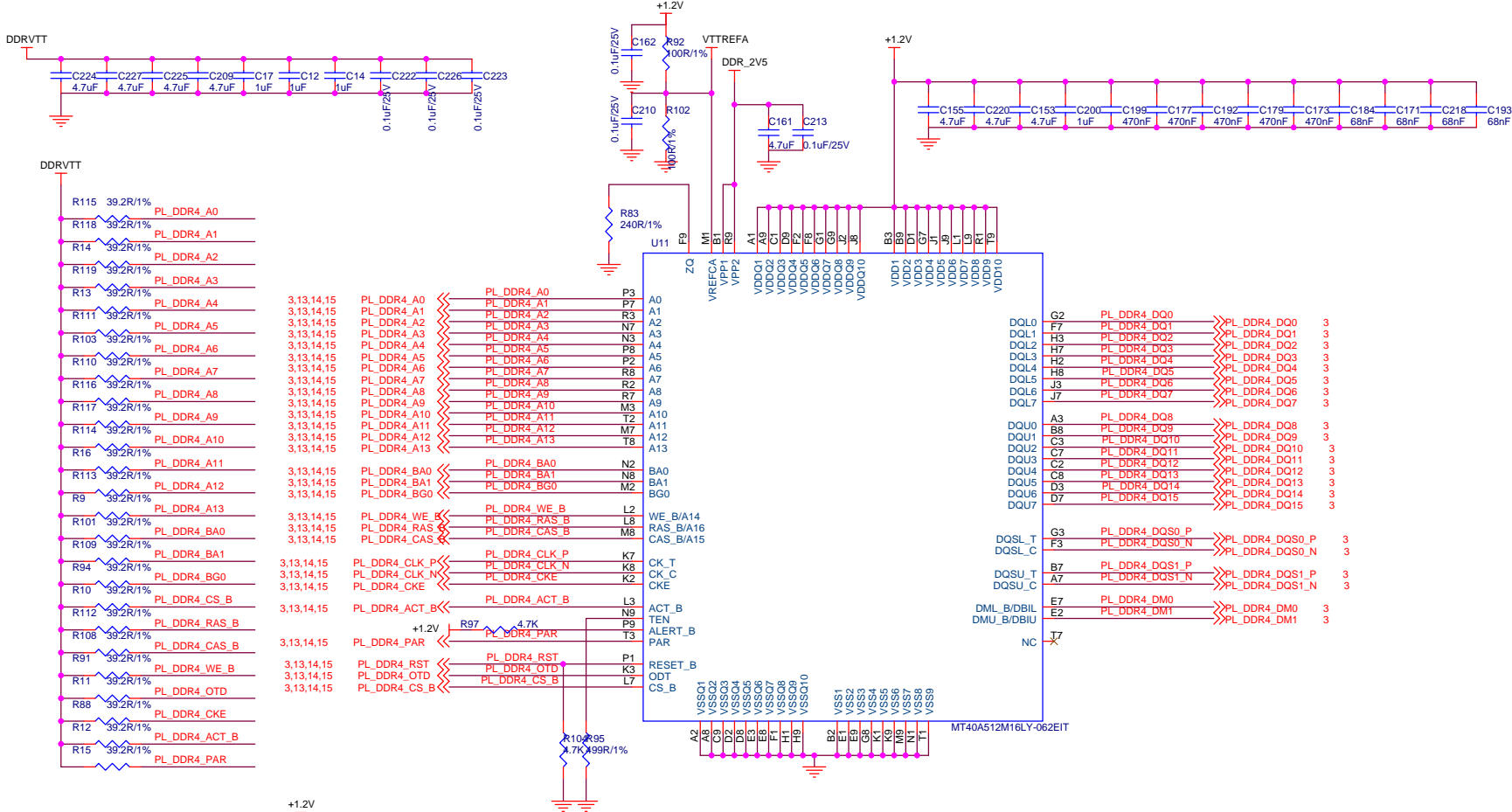
xcku040-fva1156

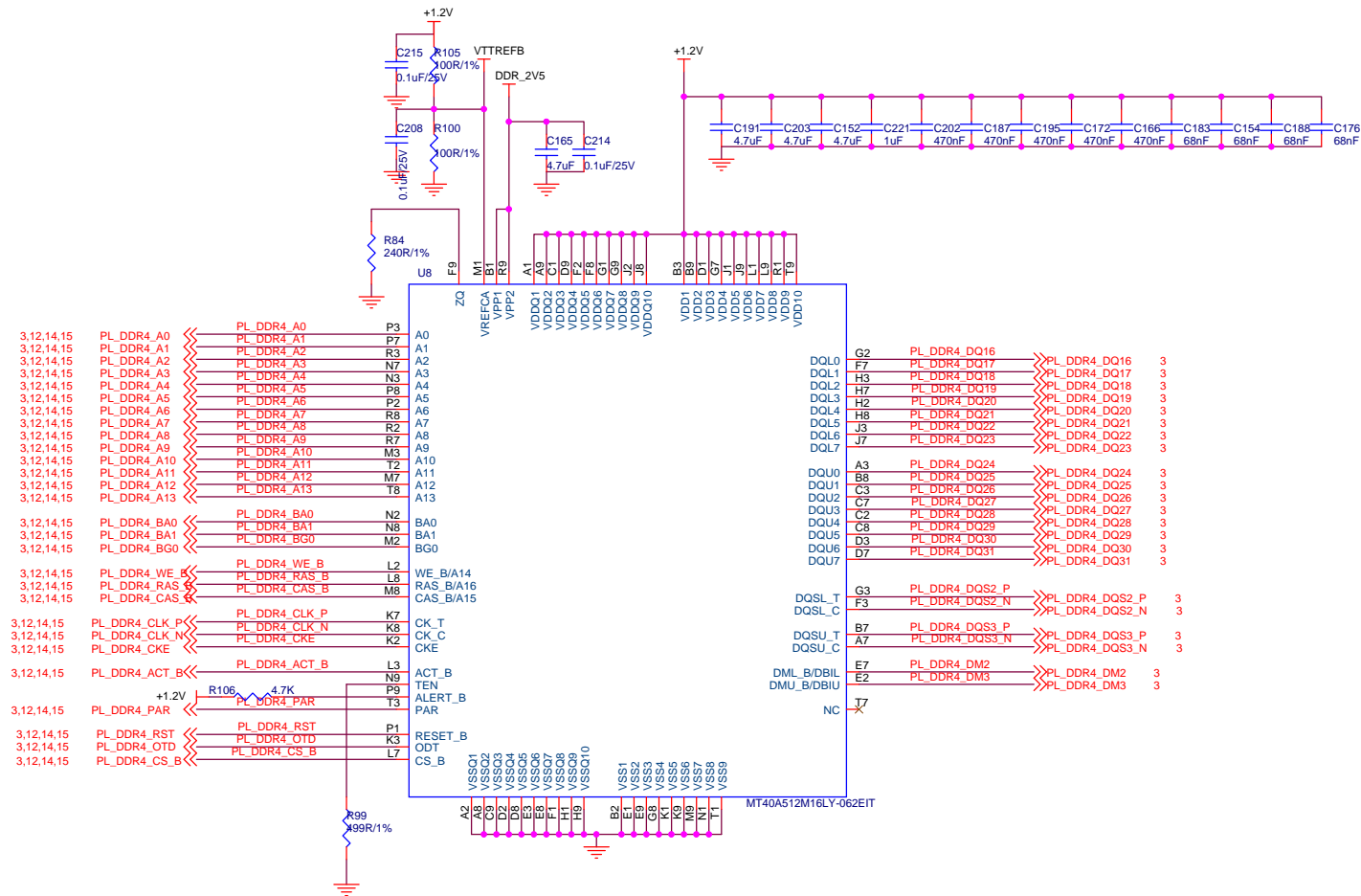
U7-16

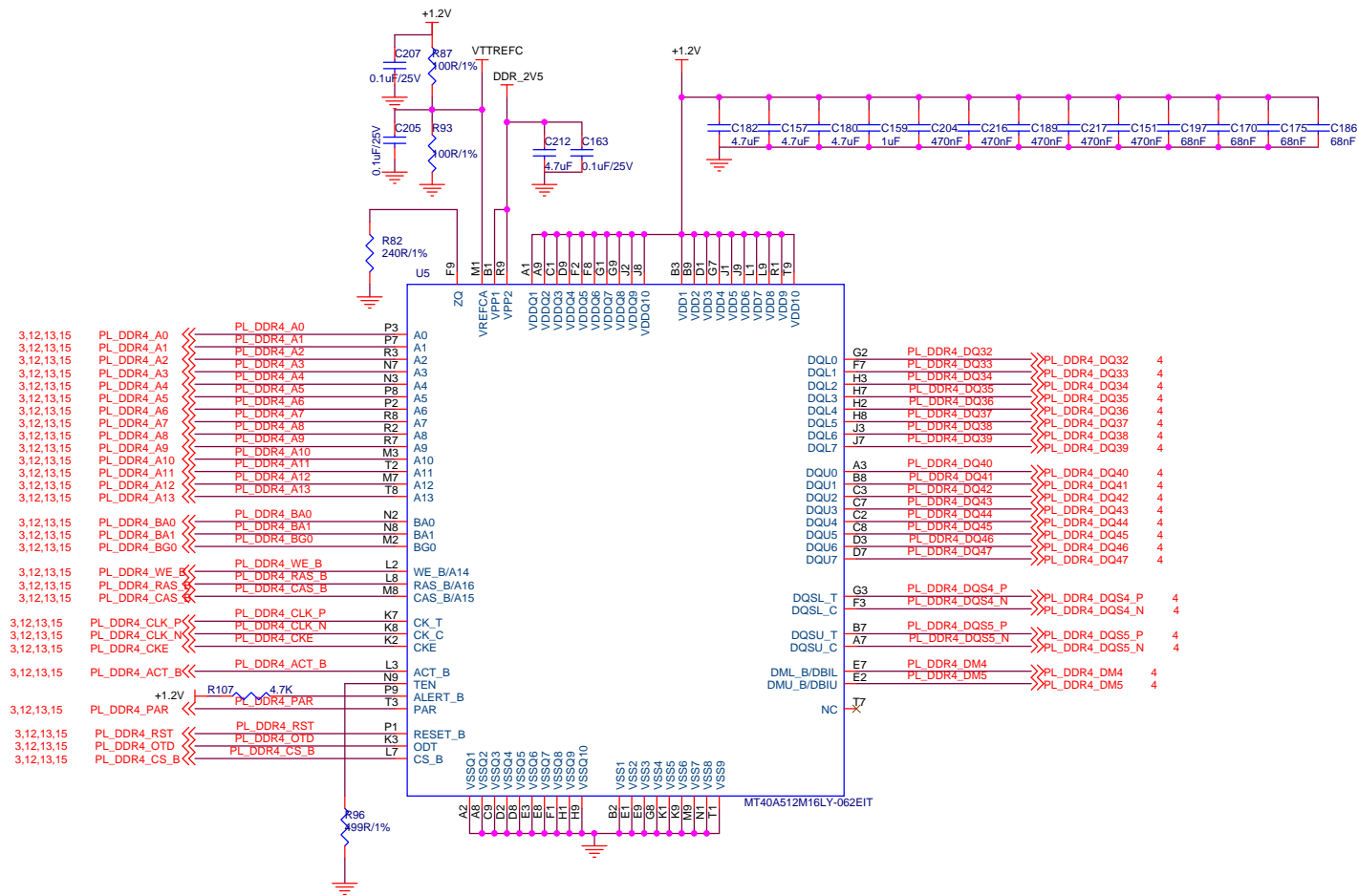
| | | | | |
|-----------------|----|------------|---------------|----|
| MGTHRXN0_228 | E3 | 228_RX0_N | >>>228_RX0_N | 19 |
| MGTHRXP0_228 | E4 | 228_RX0_P | >>>228_RX0_P | 19 |
| MGTHRXN1_228 | D1 | 228_RX1_N | >>>228_RX1_N | 19 |
| MGTHRXP1_228 | D2 | 228_RX1_P | >>>228_RX1_P | 19 |
| MGTHRXN2_228 | B1 | 228_RX2_N | >>>228_RX2_N | 19 |
| MGTHRXP2_228 | B2 | 228_RX2_P | >>>228_RX2_P | 19 |
| MGTHRXN3_228 | A3 | 228_RX3_N | >>>228_RX3_N | 19 |
| MGTHRXP3_228 | A4 | 228_RX3_P | >>>228_RX3_P | 19 |
| MGHTTXN0_228 | F5 | 228_TX0_N | >>>228_TX0_N | 19 |
| MGHTTXP0_228 | F6 | 228_TX0_P | >>>228_TX0_P | 19 |
| MGHTTXN1_228 | D5 | 228_TX1_N | >>>228_TX1_N | 19 |
| MGHTTXP1_228 | D6 | 228_TX1_P | >>>228_TX1_P | 19 |
| MGHTTXN2_228 | C3 | 228_TX2_N | >>>228_TX2_N | 19 |
| MGHTTXP2_228 | C4 | 228_TX2_P | >>>228_TX2_P | 19 |
| MGHTTXN3_228 | B5 | 228_TX3_N | >>>228_TX3_N | 19 |
| MGHTTXP3_228 | B6 | 228_TX3_P | >>>228_TX3_P | 19 |
| MGTREFCLK0N_228 | K5 | 228_CLK0_N | >>>228_CLK0_N | 19 |
| MGTREFCLK0P_228 | K6 | 228_CLK0_P | >>>228_CLK0_P | 19 |
| MGTREFCLK1N_228 | H5 | 228_CLK1_N | >>>228_CLK1_N | 19 |
| MGTREFCLK1P_228 | H6 | 228_CLK1_P | >>>228_CLK1_P | 19 |

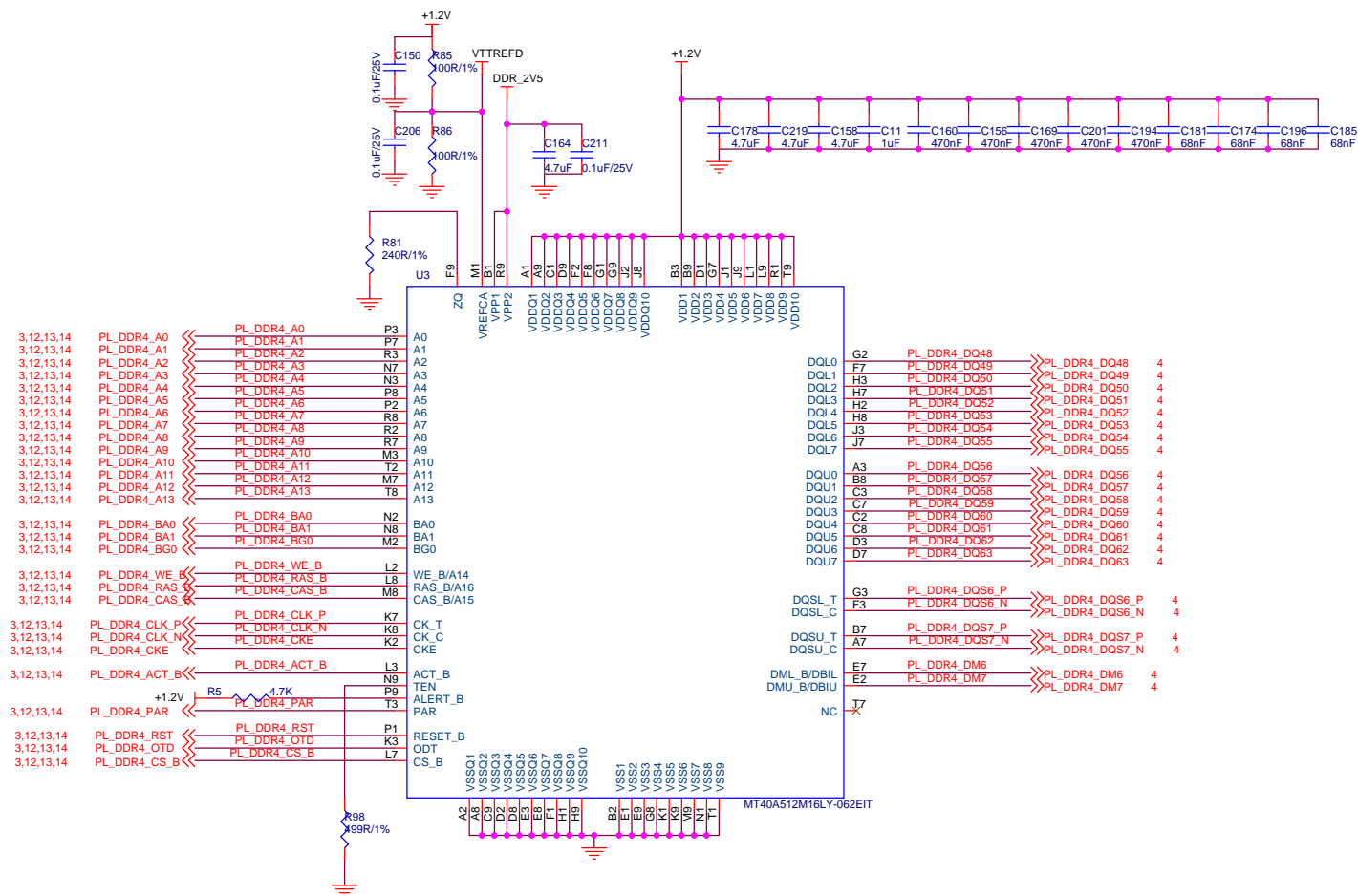
xcku040-fva1156



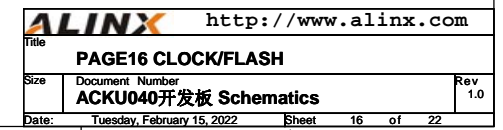


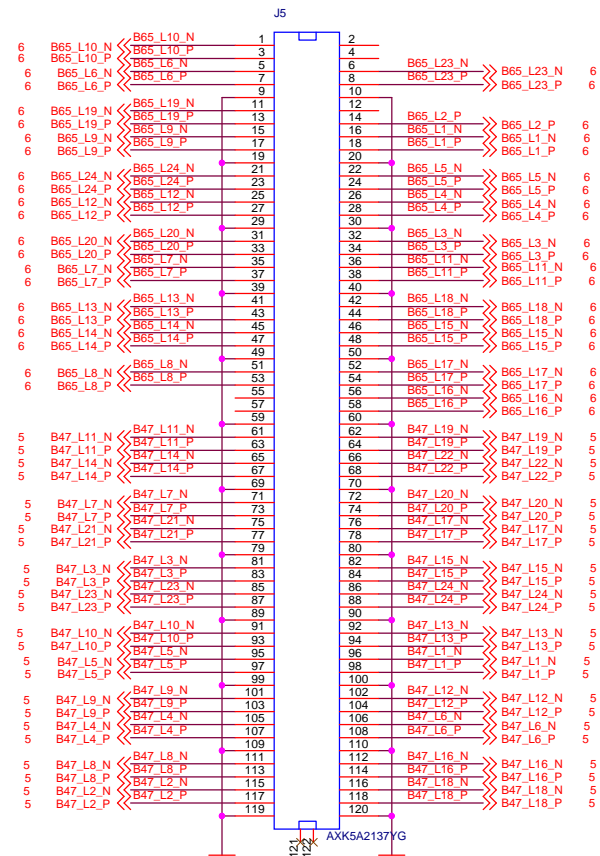
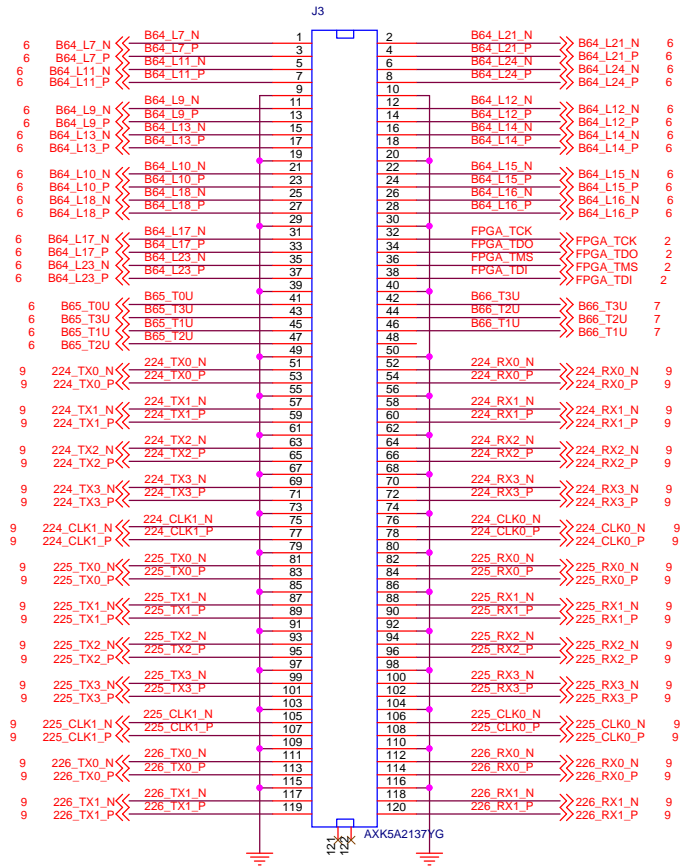


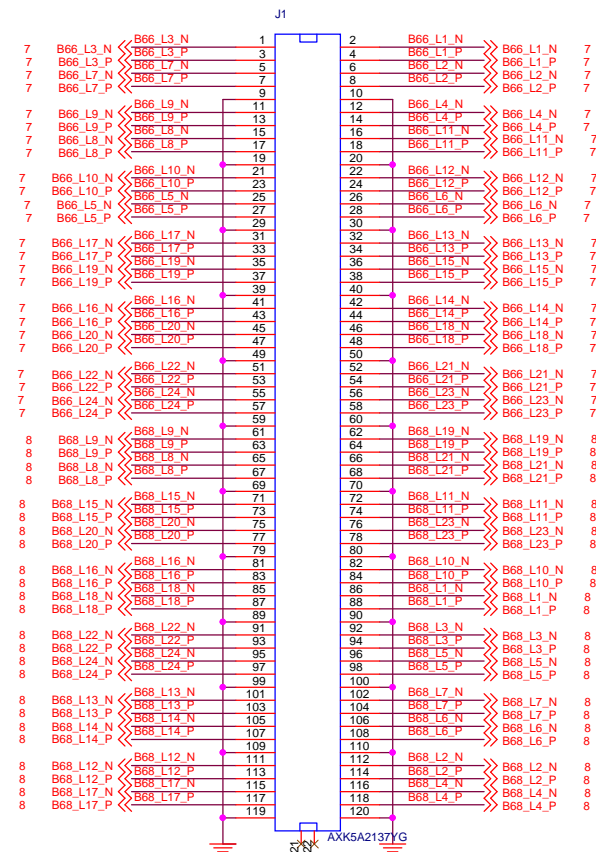
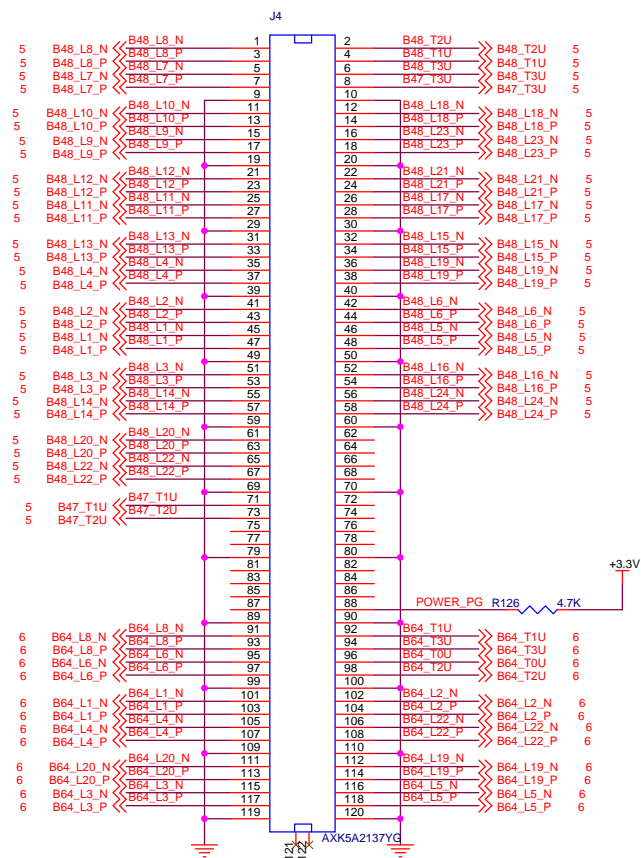


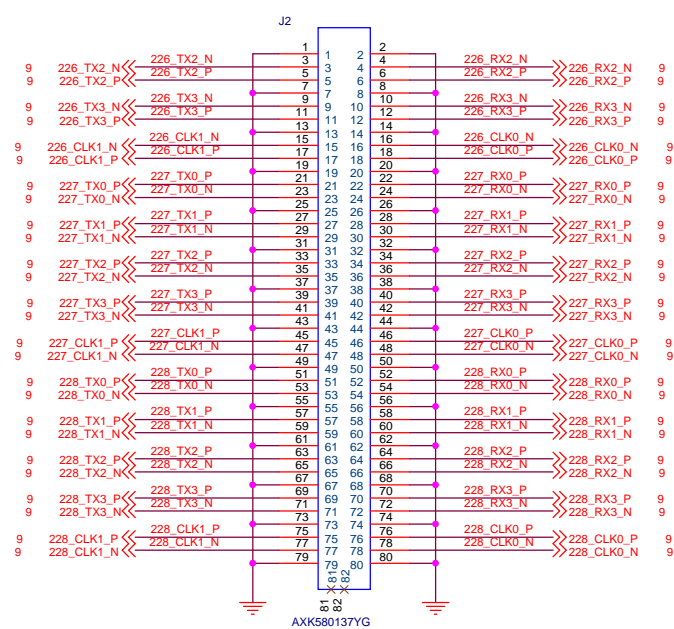


200MHz

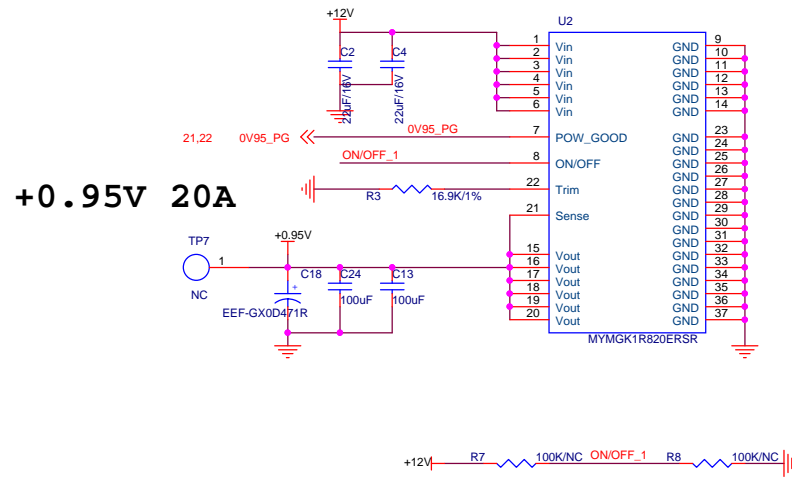


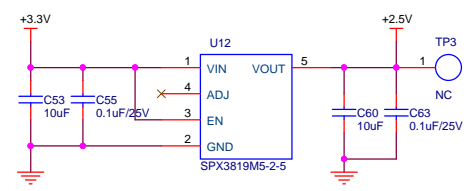
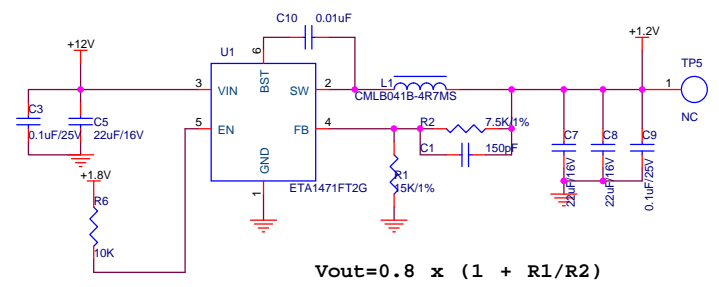
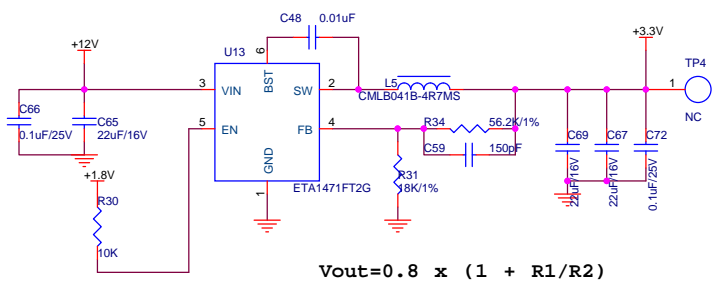
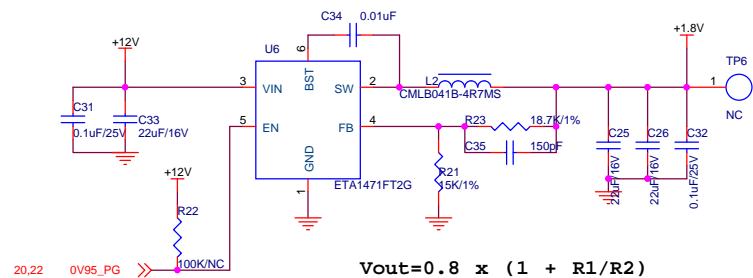




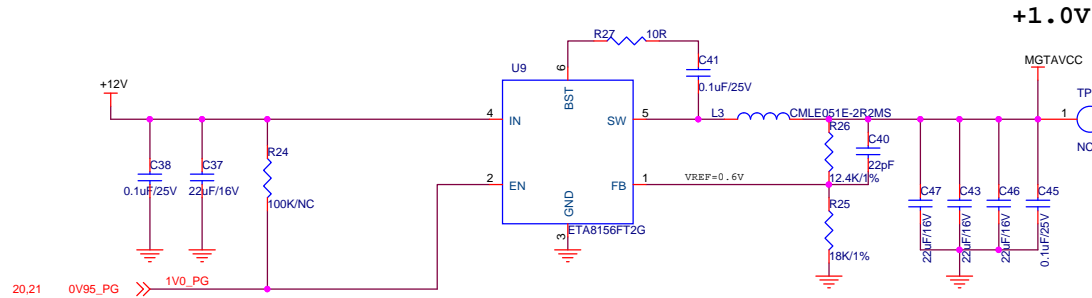


Input: 8V to 15V



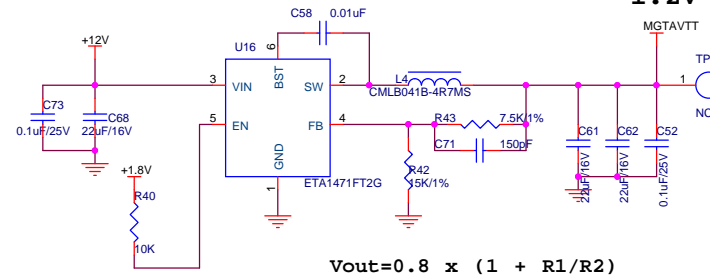


1.0V POWER 6A



$$V_{out} = 0.6 \times (1 + R1/R2)$$

1.2V



$$V_{out} = 0.8 \times (1 + R1/R2)$$

$$V_{out} = 0.8 \times (1 + R1/R2)$$

