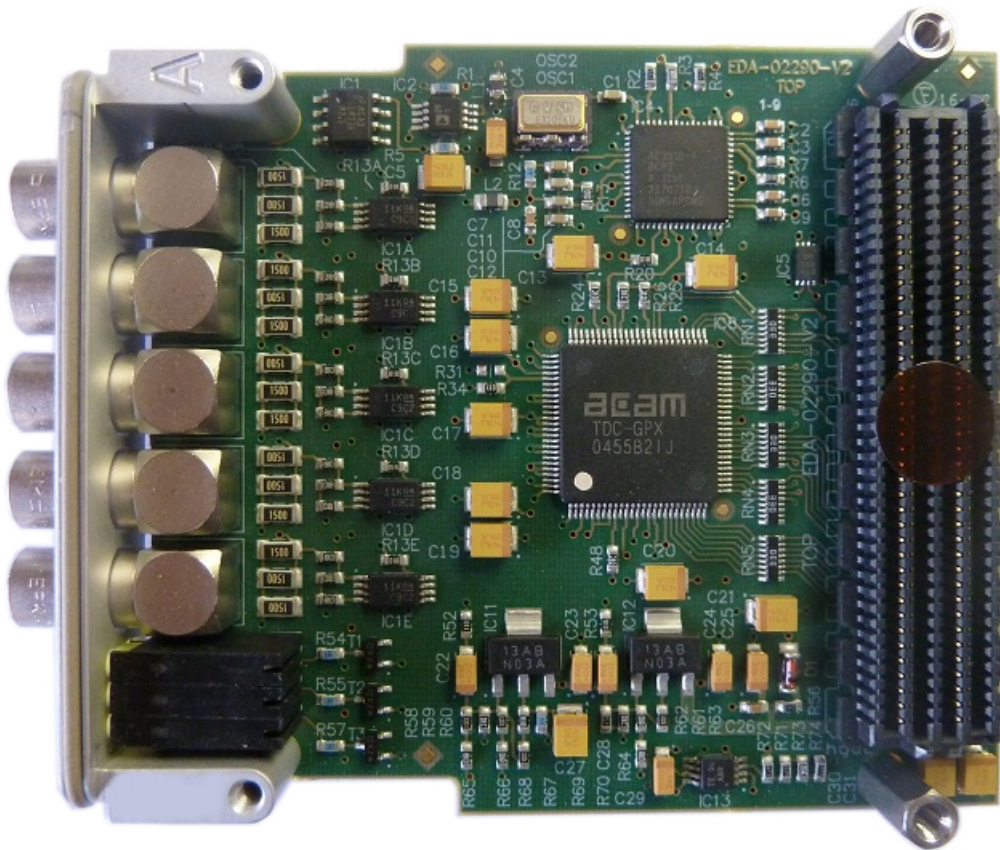


● METLINO
● specification



v1.0(06.2017)

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|--------------------------|------------------------|
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Todo list

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1 Project description

The Metlino board is design to manage the uTCA Chassis system. The module is a double width card.

2 Functional specifications

Programmable resources:

- Xilinx Kintex UltraScale – XCKU040-11FFVA-1156C FPGA
- MMC: LPC17762984

Memory:

- 1Gb DDR3 SDRAM (64-bit interface), 800MHz (clock)
- SPI Flash for FPGA configuration. Accessible by MMC
- SPI Flash for user data storage
- EEPROM with MAC and unique ID

Connectivity:

- 1 high pin count (HPC) FMC slot for single width mezzanine card
- Micro-USB UART connected to FPGA or MMC
- Stand-alone 12V power connector
- MGT connected to:

Supply:

- Monitoring of voltage and Power supply for RTM 12V and FMC 12V
- FMC VADJ fixed to 1V8
- Monitoring current of all FMC buses
- Stand-alone power connectore

Clocking:

- Clock recovery Si5324
- Clock distrbution ADCLK948
- SMA CLK input
- SMA CLK output

Other:

- Temperature, voltage and current monitoring for critical power buses
- Temperature monitoring: FMC1, supply, FPGA core, DDR memory
- JTAG multiplexer (SCANSTA) for FMC access, local JTAG port and remote debug/Chipscope via Ethernet

3 Product view

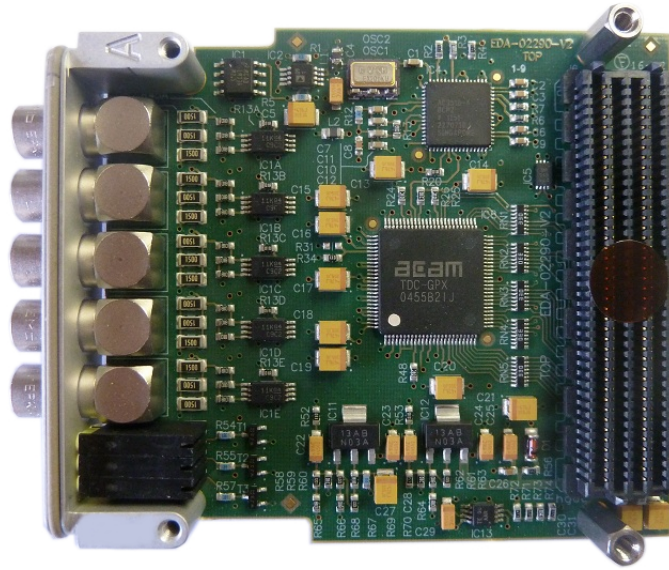


Figure 1: Top view

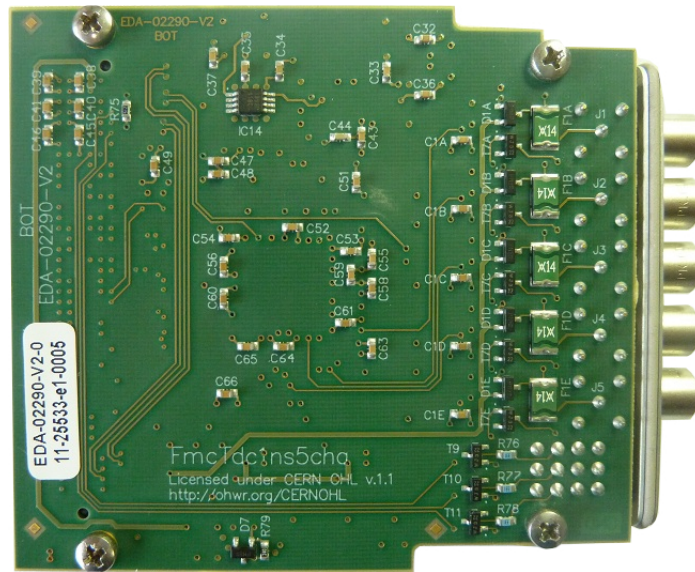


Figure 2: Bottom view

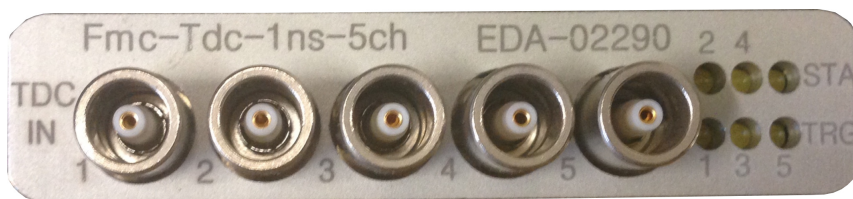


Figure 3: Front view

4 Routing

This section contain general bloch scheme of METLINO board and I2C map with addresses. General Block Scheme -figure 4 shows more important connections between components. I2C connections with addresses can be found in figure 5. Detailed clocking scheme can be found in next paragraph in figure 6.

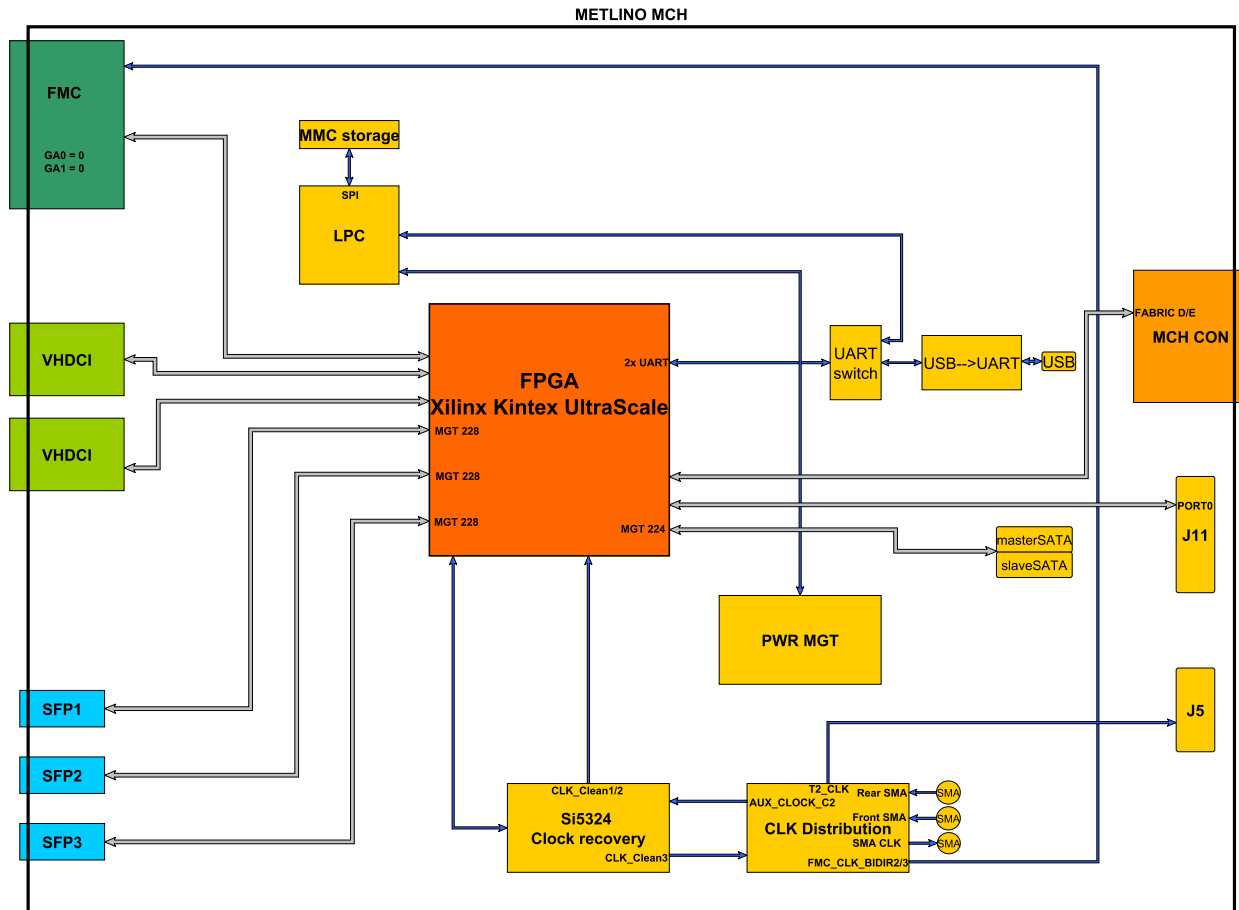


Figure 4: Block Scheme

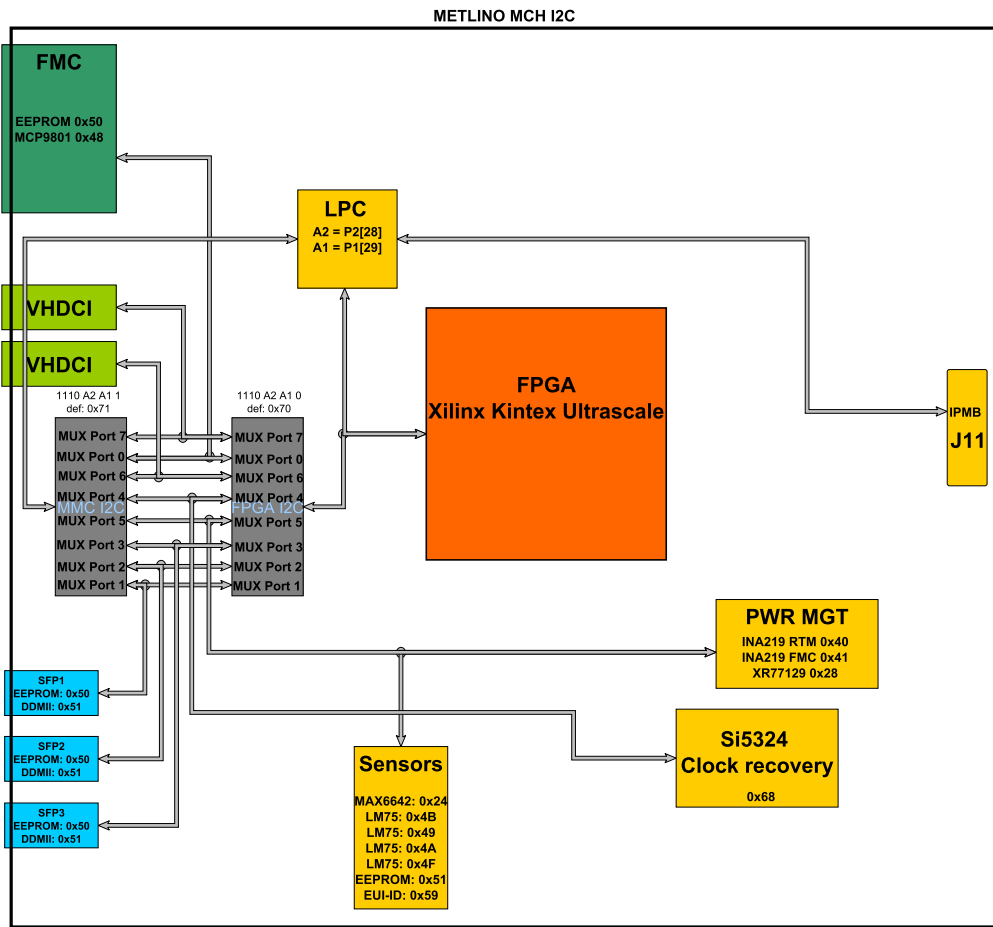


Figure 5: I2C

5 Clocking

This section describes how and where clock signals are routed.

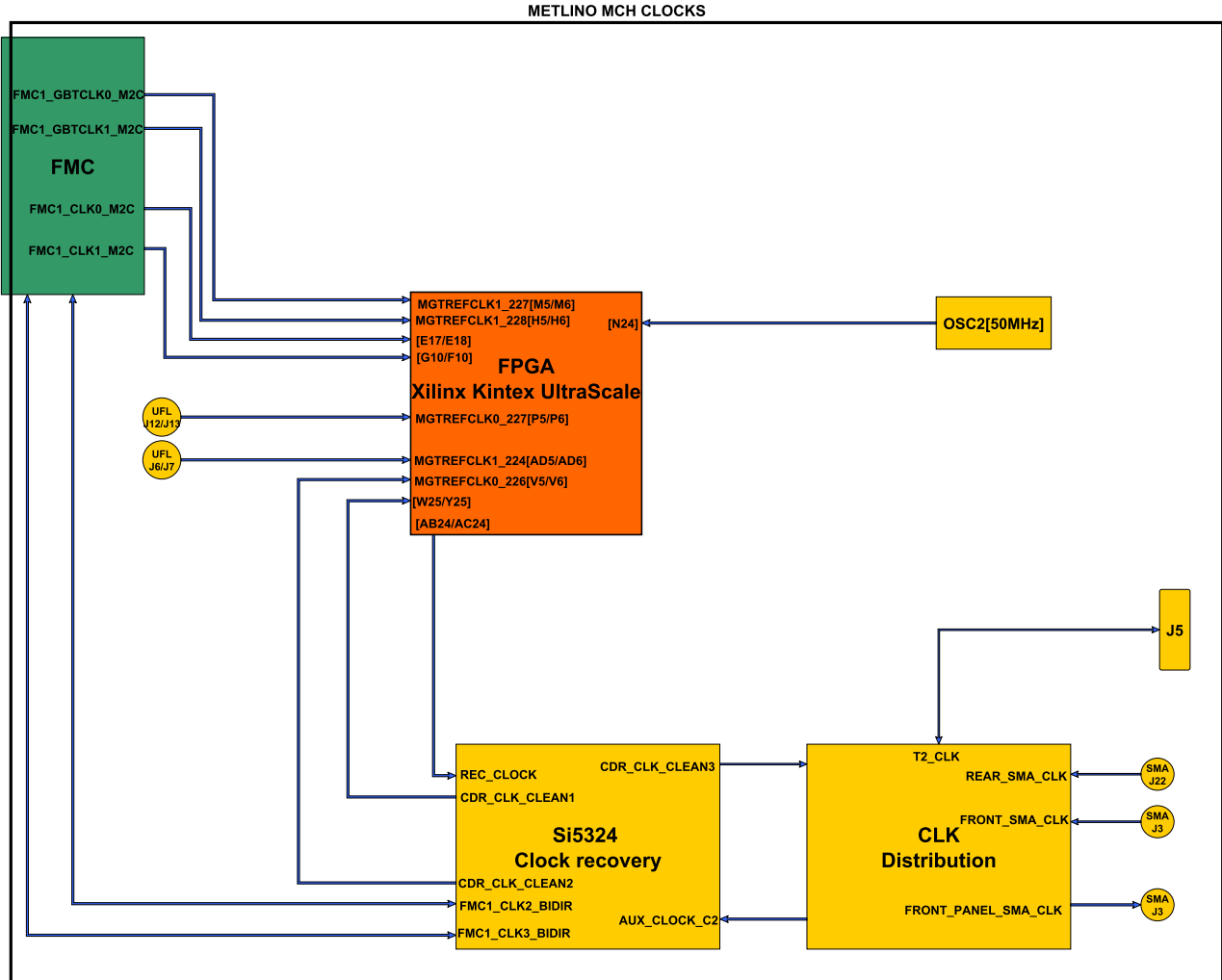


Figure 6: Clocks

6 Signal tables

| SFP1 | | |
|------|-------------------------------|------------------|
| F5 | MGTHTXN0_228 | SFP1TX_N |
| F6 | MGTHTXP0_228 | SFP1TX_P |
| E3 | MGTHRXN0_228 | SFP1RX_N |
| E4 | MGTHRXP0_228 | SFP1RX_P |
| J24 | IO_L4P_T0U_N6_DBC_AD7P_A24_65 | SFP1_LED1 |
| J25 | IO_L4N_T0U_N7_DBC_AD7N_A25_65 | SFP1_LED2 |
| K26 | IO_L3P_T0L_N4_AD15P_A26_65 | SFP1_LOS |
| G26 | IO_L2N_T0L_N3_FWE_FCS2_B_65 | SFP1_MOD_DEF2 |
| G25 | IO_L2P_T0L_N2_FOE_B_65 | SFP1_MOD_DEF1 |
| K27 | IO_L3N_T0L_N5_AD15N_A27_65 | SFP1_MOD_DEF0 |
| H23 | IO_T0U_N12_A28_65 | SFP1_RATE_SELECT |
| H27 | IO_L1P_T0L_N0_DBC_RS0_65 | SFP1_TX_DISABLE |
| G27 | IO_L1N_T0L_N1_DBC_RS1_65 | SFP1_TX_FAULT |

| SFP2 | | |
|------|--------------------------------|------------------|
| D5 | MGTHTXN1_228 | SFP2TX_N |
| D6 | MGTHTXP1_228 | SFP2TX_P |
| D1 | MGTHRXN1_228 | SFP2RX_N |
| D2 | MGTHRXP1_228 | SFP2RX_P |
| K25 | IO_L9N_T1L_N5_AD12N_A15_D31_65 | SFP2_LED1 |
| L25 | IO_L9P_T1L_N4_AD12P_A14_D30_65 | SFP2_LED2 |
| L23 | IO_L8P_T1L_N2_AD5P_A16_65 | SFP2_LOS |
| L27 | IO_L7N_T1L_N1_QBC_AD13N_A19_65 | SFP2_MOD_DEF2 |
| M27 | IO_L7P_T1L_N0_QBC_AD13P_A18_65 | SFP2_MOD_DEF1 |
| L24 | IO_L8N_T1L_N3_AD5N_A17_65 | SFP2_MOD_DEF0 |
| J23 | IO_L6P_T0U_N10_AD6P_A20_65 | SFP2_RATE_SELECT |
| H24 | IO_L6N_T0U_N11_AD6N_A21_65 | SFP2_TX_DISABLE |
| J26 | IO_L5P_T0U_N8_AD14P_A22_65 | SFP2_TX_FAULT |

| SFP3 | | |
|------|------------------------------------|------------------|
| C3 | MGTHTXN2_228 | SFP3TX_N |
| C4 | MGTHTXP2_228 | SFP3TX_P |
| B1 | MGTHRXN2_228 | SFP3RX_N |
| B2 | MGTHRXP2_228 | SFP3RX_P |
| M26 | IO_L11N_T1U_N9_GC_A11_D27_65 | SFP3_LED1 |
| M25 | IO_L11P_T1U_N8_GC_A10_D26_65 | SFP3_LED2 |
| N23 | IO_T1U_N12_PERSTN1_65 | SFP3_LOS |
| L22 | IO_L10P_T1U_N6_QBC_AD4P_A12_D23_65 | SFP3_MOD_DEF2 |
| M24 | IO_L12N_T1U_N11_GC_A09_D25_65 | SFP3_MOD_DEF1 |
| N26 | IO_L13N_T2L_N1_GC_QBC_A07_D21_65 | SFP3_MOD_DEF0 |
| K23 | IO_L10N_T1U_N7_QBC_AD4N_A13_D23_65 | SFP3_RATE_SELECT |
| N27 | IO_T2U_N12_CSI_ADV_B_65 | SFP3_TX_DISABLE |
| P26 | IO_L13P_T2L_N0_GC_QBC_A06_D21_65 | SFP3_TX_FAULT |

| FMC1 | | |
|------|----------------------------|--------------------|
| AA24 | IO_L12P_T1U_N10_GC_47 | FMC1_CLK0_M2C_P |
| AA25 | IO_L12N_T1U_N11_GC_47 | FMC1_CLK0_M2C_N |
| Y23 | IO_L11P_T1U_N8_GC_47 | FMC1_CLK1_M2C_P |
| AA23 | IO_L11N_T1U_N9_GC_47 | FMC1_CLK1_M2C_N |
| AC31 | IO_L12P_T1U_N10_GC_48 | FMC1_GBTCLK0_M2C_P |
| AC32 | IO_L12N_T1U_N11_GC_48 | FMC1_GBTCLK0_M2C_N |
| AE27 | IO_L1P_T0L_N0_DBC_48 | FMC1_DP0_M2C_P |
| AF27 | IO_L1N_T0L_N1_DBC_48 | FMC1_DP0_M2C_N |
| AE28 | IO_L2P_T0L_N2_48 | FMC1_DP0_C2M_P |
| AF28 | IO_L2N_T0L_N3_48 | FMC1_DP0_C2M_N |
| AA32 | IO_L13P_T2L_N0_GC_QBC_48 | FMC1_LA00_CC_P |
| AB32 | IO_L13N_T2L_N1_GC_QBC_48 | FMC1_LA00_CC_N |
| AB30 | IO_L14P_T2L_N2_GC_48 | FMC1_LA01_CC_P |
| AB31 | IO_L14N_T2L_N3_GC_48 | FMC1_LA01_CC_N |
| AF33 | IO_L8P_T1L_N2_AD5P_48 | FMC1_LA02_P |
| AG34 | IO_L8N_T1L_N3_AD5N_48 | FMC1_LA02_N |
| V33 | IO_L21P_T3L_N4_AD8P_48 | FMC1_LA03_P |
| W34 | IO_L21N_T3L_N5_AD8N_48 | FMC1_LA03_N |
| AG31 | IO_L7P_T1L_N0_QBC_AD13P_48 | FMC1_LA04_P |
| AG32 | IO_L7N_T1L_N1_QBC_AD13N_48 | FMC1_LA04_N |
| AE33 | IO_L10P_T1U_N6_QBC_AD4P_48 | FMC1_LA05_P |
| AF34 | IO_L10N_T1U_N7_QBC_AD4N_48 | FMC1_LA05_N |
| AC34 | IO_L15P_T2L_N4_AD11P_48 | FMC1_LA06_P |
| AD34 | IO_L15N_T2L_N5_AD11N_48 | FMC1_LA06_N |
| AC33 | IO_L18P_T2U_N10_AD2P_48 | FMC1_LA07_P |
| AD33 | IO_L18N_T2U_N11_AD2N_48 | FMC1_LA07_N |
| AD30 | IO_L11P_T1U_N8_GC_48 | FMC1_LA08_P |
| AD31 | IO_L11N_T1U_N9_GC_48 | FMC1_LA08_N |
| AE32 | IO_L9P_T1L_N4_AD12P_48 | FMC1_LA09_P |
| AF32 | IO_L9N_T1L_N5_AD12N_48 | FMC1_LA09_N |
| AA34 | IO_L17P_T2U_N8_AD10P_48 | FMC1_LA10_P |
| AB34 | IO_L17N_T2U_N9_AD10N_48 | FMC1_LA10_N |
| AA29 | IO_L16P_T2U_N6_QBC_AD3P_48 | FMC1_LA11_P |
| AB29 | IO_L16N_T2U_N7_QBC_AD3N_48 | FMC1_LA11_N |
| V31 | IO_L24P_T3U_N10_48 | FMC1_LA12_P |
| W31 | IO_L24N_T3U_N11_48 | FMC1_LA12_N |
| W33 | IO_L19P_T3L_N0_DBC_AD9P_48 | FMC1_LA13_P |
| Y33 | IO_L19N_T3L_N1_DBC_AD9N_48 | FMC1_LA13_N |
| U34 | IO_L23P_T3U_N8_48 | FMC1_LA14_P |
| V34 | IO_L23N_T3U_N9_48 | FMC1_LA14_N |
| Y31 | IO_L22P_T3U_N6_DBC_AD0P_48 | FMC1_LA15_P |
| Y32 | IO_L22N_T3U_N7_DBC_AD0N_48 | FMC1_LA15_N |
| W30 | IO_L20P_T3L_N2_AD1P_48 | FMC1_LA16_P |
| Y30 | IO_L20N_T3L_N3_AD1N_48 | FMC1_LA16_N |
| W23 | IO_L13P_T2L_N0_GC_QBC_47 | FMC1_LA17_CC_P |
| W24 | IO_L13N_T2L_N1_GC_QBC_47 | FMC1_LA17_CC_N |
| W25 | IO_L14P_T2L_N2_GC_47 | FMC1_LA18_CC_P |
| Y25 | IO_L14N_T2L_N3_GC_47 | FMC1_LA18_CC_N |
| V22 | IO_L16P_T2U_N6_QBC_AD3P_47 | FMC1_LA19_P |
| V23 | IO_L16N_T2U_N7_QBC_AD3N_47 | FMC1_LA19_N |
| T22 | IO_L17P_T2U_N8_AD10P_47 | FMC1_LA20_P |

| | | |
|------|----------------------------|-----------------|
| T23 | IO_L17N_T2U_N9_AD10N_47 | FMC1_LA20_N |
| V21 | IO_L18P_T2U_N10_AD2P_47 | FMC1_LA21_P |
| W21 | IO_L18N_T2U_N11_AD2N_47 | FMC1_LA21_N |
| U21 | IO_L15P_T2L_N4_AD11P_47 | FMC1_LA22_P |
| U22 | IO_L15N_T2L_N5_AD11N_47 | FMC1_LA22_N |
| AB21 | IO_L10P_T1U_N6_QBC_AD4P_47 | FMC1_LA23_P |
| AC21 | IO_L10N_T1U_N7_QBC_AD4N_47 | FMC1_LA23_N |
| AC22 | IO_L8P_T1L_N2_AD5P_47 | FMC1_LA24_P |
| AC23 | IO_L8N_T1L_N3_AD5N_47 | FMC1_LA24_N |
| AA20 | IO_L9P_T1L_N4_AD12P_47 | FMC1_LA25_P |
| AB20 | IO_L9N_T1L_N5_AD12N_47 | FMC1_LA25_N |
| AA22 | IO_L7P_T1L_N0_QBC_AD13P_47 | FMC1_LA26_P |
| AB22 | IO_L7N_T1L_N1_QBC_AD13N_47 | FMC1_LA26_N |
| AB25 | IO_L6P_T0U_N10_AD6P_47 | FMC1_LA27_P |
| AB26 | IO_L6N_T0U_N11_AD6N_47 | FMC1_LA27_N |
| V26 | IO_L24P_T3U_N10_47 | FMC1_LA28_P |
| W26 | IO_L24N_T3U_N11_47 | FMC1_LA28_N |
| V29 | IO_L23P_T3U_N8_47 | FMC1_LA29_P |
| W29 | IO_L23N_T3U_N9_47 | FMC1_LA29_N |
| U26 | IO_L22P_T3U_N6_DBC_AD0P_47 | FMC1_LA30_P |
| U27 | IO_L22N_T3U_N7_DBC_AD0N_47 | FMC1_LA30_N |
| W28 | IO_L21P_T3L_N4_AD8P_47 | FMC1_LA31_P |
| Y28 | IO_L21N_T3L_N5_AD8N_47 | FMC1_LA31_N |
| U24 | IO_L20P_T3L_N2_AD1P_47 | FMC1_LA32_P |
| U25 | IO_L20N_T3L_N3_AD1N_47 | FMC1_LA32_N |
| V27 | IO_L19P_T3L_N0_DBC_AD9P_47 | FMC1_LA33_P |
| V28 | IO_L19N_T3L_N1_DBC_AD9N_47 | FMC1_LA33_N |
| AA30 | VREF_48 | FMC1_VREF_A_M2C |
| V24 | VREF_47 | FMC1_VREF_A_M2C |

| | | |
|------------|----------------------------|--------|
| AMC | | |
| FP1 | | |
| AL3 | MGTHTXN2_224 | TX4C_N |
| AL4 | MGTHTXP2_224 | TX4C_P |
| AK1 | MGTHRNX2_224 | RX4_N |
| AK2 | MGTHRXP2_224 | RX4_P |
| AK5 | MGTHTXN3_224 | TX5C_N |
| AK6 | MGTHTXP3_224 | TX5C_P |
| AJ3 | MGTHRNX3_224 | RX5_N |
| AJ4 | MGTHRXP3_224 | RX5_P |
| AH17 | IO_L13N_T2L_N1_GC_QBC_45 | TXC6_N |
| AH18 | IO_L13P_T2L_N0_GC_QBC_45 | TXC6_P |
| AJ16 | IO_L14N_T2L_N3_GC_45 | RXC6_N |
| AH16 | IO_L14P_T2L_N2_GC_45 | RXC6_P |
| AP15 | IO_L6N_T0U_N11_AD6N_45 | TXC7_N |
| AP16 | IO_L6P_T0U_N10_AD6P_45 | TXC7_P |
| AM14 | IO_L7N_T1L_N1_QBC_AD13N_45 | RXC7_N |
| AL14 | IO_L7P_T1L_N0_QBC_AD13P_45 | RXC7_P |
| FP2 | | |
| K12 | IO_L17N_T2U_N9_AD10N_66 | TXC8_N |
| L12 | IO_L17P_T2U_N8_AD10P_66 | TXC8_P |

| | | |
|------------|----------------------------|---------|
| H13 | IO_L18N_T2U_N11_AD2N_66 | RXC8_N |
| J13 | IO_L18P_T2U_N10_AD2P_66 | RXC8_P |
| K11 | IO_L15P_T2L_N4_AD11P_66 | TXC9_N |
| J11 | IO_L15N_T2L_N5_AD11N_66 | TXC9_P |
| K13 | IO_L16N_T2U_N7_QBC_AD3N_66 | RXC9_N |
| L13 | IO_L16P_T2U_N6_QBC_AD3P_66 | RXC9_P |
| AN17 | IO_L4N_T0U_N7_DBC_AD7N_45 | TXC10_N |
| AN18 | IO_L4P_T0U_N6_DBC_AD7P_45 | TXC10_P |
| AM15 | IO_L5N_T0U_N9_AD14N_45 | RXC10_N |
| AM16 | IO_L5P_T0U_N8_AD14P_45 | RXC10_P |
| AP18 | IO_L2N_T0L_N3_45 | TXC11_N |
| AN19 | IO_L2P_T0L_N2_45 | TXC11_P |
| AN16 | IO_L3N_T0L_N5_AD15N_45 | RXC11_N |
| AM17 | IO_L3P_T0L_N4_AD15P_45 | RXC11_P |
| P2P | | |
| AC27 | IO_L4N_T0U_N7_DBC_AD7N_47 | TXC12_N |
| AC26 | IO_L4P_T0U_N6_DBC_AD7P_47 | TXC12_P |
| AB27 | IO_L5N_T0U_N9_AD14N_47 | RXC12_N |
| AA27 | IO_L5P_T0U_N8_AD14P_47 | RXC12_P |
| AD26 | IO_L2N_T0L_N3_47 | TXC13_N |
| AD25 | IO_L2P_T0L_N2_47 | TXC13_P |
| AC24 | IO_L3N_T0L_N5_AD15N_47 | RXC13_N |
| AB24 | IO_L3P_T0L_N4_AD15P_47 | RXC13_P |
| AE30 | IO_L5N_T0U_N9_AD14N_48 | TXC14_N |
| AD29 | IO_L5P_T0U_N8_AD14P_48 | TXC14_P |
| AG30 | IO_L6N_T0U_N11_AD6N_48 | RXC14_N |
| AF30 | IO_L6P_T0U_N10_AD6P_48 | RXC14_P |
| AD28 | IO_L3N_T0L_N5_AD15N_48 | TXC15_N |
| AC28 | IO_L3P_T0L_N4_AD15P_48 | TXC15_P |
| AG29 | IO_L4N_T0U_N7_DBC_AD7N_48 | RXC15_N |
| AF29 | IO_L4P_T0U_N6_DBC_AD7P_48 | RXC15_P |

| RTM | | |
|------------|--------------|-----------|
| B5 | MGTHTXN3_228 | GTP0TXC_N |
| B6 | MGTHTXP3_228 | GTP0TXC_P |
| A3 | MGTHRXN3_228 | GTP0RX_N |
| A4 | MGTHRXP3_228 | GTP0RX_P |
| C3 | MGTHTXN2_228 | GTP1TXC_N |
| C4 | MGTHTXP2_228 | GTP1TXC_P |
| B1 | MGTHRXN2_228 | GTP1RX_N |
| B2 | MGTHRXP2_228 | GTP1RX_P |
| D5 | MGTHTXN1_228 | GTP2TXC_N |
| D6 | MGTHTXP1_228 | GTP2TXC_P |
| D1 | MGTHRXN1_228 | GTP2RX_N |
| D2 | MGTHRXP1_228 | GTP2RX_P |
| F5 | MGTHTXN0_228 | GTP3TXC_N |
| F6 | MGTHTXP0_228 | GTP3TXC_P |
| E3 | MGTHRXN0_228 | GTP3RX_N |
| E4 | MGTHRXP0_228 | GTP3RX_P |
| G3 | MGTHTXN3_227 | GTP4TXC_N |
| G4 | MGTHTXP3_227 | GTP4TXC_P |
| F1 | MGTHRXN3_227 | GTP4RX_N |

| | | |
|-----|--------------|------------|
| F2 | MGTHRXP3_227 | GTP4RX_P |
| J3 | MGTHTXN2_227 | GTP5TXC_N |
| J4 | MGTHTXP2_227 | GTP5TXC_P |
| H1 | MGTHRXN2_227 | GTP5RX_N |
| H2 | MGTHRXP2_227 | GTP5RX_P |
| L3 | MGTHTXN1_227 | GTP6TXC_N |
| L4 | MGTHTXP1_227 | GTP6TXC_P |
| K1 | MGTHRXN1_227 | GTP6RX_N |
| K2 | MGTHRXP1_227 | GTP6RX_P |
| N3 | MGTHTXN0_227 | GTP7TXC_N |
| N4 | MGTHTXP0_227 | GTP7TXC_P |
| M1 | MGTHRXN0_227 | GTP7RX_N |
| M2 | MGTHRXP0_227 | GTP7RX_P |
| R3 | MGTHTXN3_226 | GTP8TXC_N |
| R4 | MGTHTXP3_226 | GTP8TXC_P |
| P1 | MGTHRXN3_226 | GTP8RX_N |
| P2 | MGTHRXP3_226 | GTP8RX_P |
| U3 | MGTHTXN2_226 | GTP9TXC_N |
| U4 | MGTHTXP2_226 | GTP9TXC_P |
| T1 | MGTHRXN2_226 | GTP9RX_N |
| T2 | MGTHRXP2_226 | GTP9RX_P |
| W3 | MGTHTXN1_226 | GTP10TXC_N |
| W4 | MGTHTXP1_226 | GTP10TXC_P |
| V1 | MGTHRXN1_226 | GTP10RX_N |
| V2 | MGTHRXP1_226 | GTP10RX_P |
| AA3 | MGTHTXN0_226 | GTP11TXC_N |
| AA4 | MGTHTXP0_226 | GTP11TXC_P |
| AC3 | MGTHTXN3_225 | GTP12TXC_N |
| AC4 | MGTHTXP3_225 | GTP12TXC_P |
| AB1 | MGTHRXN3_225 | GTP12RX_N |
| AB2 | MGTHRXP3_225 | GTP12RX_P |
| AE3 | MGTHTXN2_225 | GTP13TXC_N |
| AE4 | MGTHTXP2_225 | GTP13TXC_P |
| AD1 | MGTHRXN2_225 | GTP13RX_N |
| AD2 | MGTHRXP2_225 | GTP13RX_P |
| AG3 | MGTHTXN1_225 | GTP14TXC_N |
| AG4 | MGTHTXP1_225 | GTP14TXC_P |
| AF1 | MGTHRXN1_225 | GTP14RX_N |
| AF2 | MGTHRXP1_225 | GTP14RX_P |
| AH5 | MGTHTXN0_225 | GTP15TXC_N |
| AH6 | MGTHTXP0_225 | GTP15TXC_P |
| AH1 | MGTHRXN0_225 | GTP15RX_N |
| AH2 | MGTHRXP0_225 | GTP15RX_P |

A Appendix

| FPGA ball | FPGA signal | Signal on the board |
|-----------|----------------------------|---------------------|
| A1 | GND-2 | GND |
| A2 | GND-1 | GND |
| A3 | MGTHRXN3_228 | FMC1_DP4_M2C_N |
| A4 | MGTHRXP3_228 | FMC1_DP4_M2C_P |
| A5 | GND-3 | GND |
| A6 | GND-4 | GND |
| A7 | GND-5 | GND |
| A8 | IO_T0U_N12_VRP_66 | VRP_48 |
| A9 | IO_L2N_T0L_N3_66 | NC |
| A10 | IO_L4N_T0U_N7_DBC_AD7N_66 | RxFE_C_7_N |
| A11 | GND-6 | GND |
| A12 | IO_L23N_T3U_N9_66 | FMC1_LA29_N |
| A13 | IO_L23P_T3U_N8_66 | FMC1_LA29_P |
| A14 | IO_L1N_T0L_N1_DBC_68 | NC |
| A15 | IO_L3N_T0L_N5_AD15N_68 | RxFE_C_5_N |
| A16 | VCCO_68-6 | P1V8 |
| A17 | IO_T0U_N12_VRP_68 | VRP_47 |
| A18 | IO_L2N_T0L_N3_68 | TxFE_C_5_N |
| A19 | IO_L2P_T0L_N2_68 | TxFE_C_5_P |
| A20 | IO_L17N_T2U_N9_AD10N_67 | VHDCI1_17_N |
| A21 | GND-7 | GND |
| A22 | IO_T2U_N12_67 | NC |
| A23 | IO_T1U_N12_67 | NC |
| A24 | IO_L10N_T1U_N7_QBC_AD4N_67 | VHDCI1_23_N |
| A25 | IO_L8N_T1L_N3_AD5N_67 | VHDCI1_25_N |
| A26 | VCCO_67-2 | P1V5 |
| A27 | IO_L6P_T0U_N10_AD6P_67 | VHDCI1_27_P |
| A28 | IO_L6N_T0U_N11_AD6N_67 | VHDCI1_27_N |
| A29 | IO_L4N_T0U_N7_DBC_AD7N_67 | VHDCI1_29_N |
| A30 | GND-8 | GND |
| A31 | GND-9 | GND |
| A32 | GND-10 | GND |
| A33 | NC-12 | NC |
| A34 | NC-11 | NC |
| AA1 | GND-45 | GND |
| AA2 | GND-46 | GND |
| AA3 | MGTHTXN0_226 | NC |
| AA4 | MGTHTXP0_226 | NC |
| AA5 | GND-47 | GND |
| AA6 | MGTVCCAUX_R-1 | MGTVCCAUX |
| AA7 | D02_0 | QSPI0_IO2 |
| AA8 | VCCAUX-1 | VCCAUX |
| AA9 | CCLK_0 | FPGA_CCLK |
| AA10 | VCCINT-7 | VCCINT |
| AA11 | GND-49 | GND |
| AA12 | VCCINT-32 | VCCINT |
| AA13 | GND-50 | GND |
| AA14 | VCCINT-44 | VCCINT |
| AA15 | GND-51 | GND |
| AA16 | VCCINT-42 | VCCINT |

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|------|----------------------------|-----------------|
| AA17 | GND-52 | GND |
| AA18 | VCCBRAM-4 | VCCBRAM |
| AA19 | GND-53 | GND |
| AA20 | IO_L9P_T1L_N4_AD12P_47 | VHDCI2_4_P |
| AA21 | GND-54 | GND |
| AA22 | IO_L7P_T1L_N0_QBC_AD13P_47 | VHDCI2_6_P |
| AA23 | IO_L11N_T1U_N9_GC_47 | VHDCI2_32_N |
| AA24 | IO_L12P_T1U_N10_GC_47 | NC |
| AA25 | IO_L12N_T1U_N11_GC_47 | NC |
| AA26 | VCCO_47-3 | P1V8 |
| AA27 | IO_L5P_T0U_N8_AD14P_47 | VHDCI2_8_P |
| AA28 | IO_T0U_N12_VRP_47 | VRP_68 |
| AA29 | IO_L16P_T2U_N6_QBC_AD3P_48 | VHDCI2_10_P |
| AA30 | VREF_48 | FMC1_VREF_A_M2C |
| AA31 | GND-55 | GND |
| AA32 | IO_L13P_T2L_N0_GC_QBC_48 | VHDCI2_13_P |
| AA33 | IO_T2U_N12_48 | NC |
| AA34 | IO_L17P_T2U_N8_AD10P_48 | VHDCI1_9_P |
| AB1 | MGTHR3N3_225 | RxFD_8_N |
| AB2 | MGTHRP3_225 | RxFD_8_P |
| AB3 | GND-56 | GND |
| AB4 | GND-57 | GND |
| AB5 | MGTREFCLK0N_225 | NC |
| AB6 | MGTREFCLK0P_225 | NC |
| AB7 | D01_DIN_0 | QSPI0_IO1 |
| AB8 | GND-31 | GND |
| AB9 | VCCO_0-2 | P3V3 |
| AB10 | GND-58 | GND |
| AB11 | VCCINT-33 | VCCINT |
| AB12 | GND-59 | GND |
| AB13 | VCCINT-34 | VCCINT |
| AB14 | GND-60 | GND |
| AB15 | VCCINT-4 | VCCINT |
| AB16 | GND-61 | GND |
| AB17 | VCCBRAM-2 | VCCBRAM |
| AB18 | GND-62 | GND |
| AB19 | VCCAUX_IO-8 | VCCAUX |
| AB20 | IO_L9N_T1L_N5_AD12N_47 | VHDCI2_4_N |
| AB21 | IO_L10P_T1U_N6_QBC_AD4P_47 | VHDCI2_3_P |
| AB22 | IO_L7N_T1L_N1_QBC_AD13N_47 | VHDCI2_6_N |
| AB23 | VCCO_47-5 | P1V8 |
| AB24 | IO_L3P_T0L_N4_AD15P_47 | REC_CLOCK_P |
| AB25 | IO_L6P_T0U_N10_AD6P_47 | VHDCI2_7_P |
| AB26 | IO_L6N_T0U_N11_AD6N_47 | VHDCI2_7_N |
| AB27 | IO_L5N_T0U_N9_AD14N_47 | VHDCI2_8_N |
| AB28 | GND-63 | GND |
| AB29 | IO_L16N_T2U_N7_QBC_AD3N_48 | VHDCI2_10_N |
| AB30 | IO_L14P_T2L_N2_GC_48 | VHDCI2_12_P |
| AB31 | IO_L14N_T2L_N3_GC_48 | VHDCI2_12_N |
| AB32 | IO_L13N_T2L_N1_GC_QBC_48 | VHDCI2_13_N |
| AB33 | VCCO_48-5 | P1V8 |
| AB34 | IO_L17N_T2U_N9_AD10N_48 | VHDCI1_9_N |
| AC1 | GND-64 | GND |

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|------|----------------------------|--------------|
| AC2 | MGTAVTT_R-15 | MGTAVTT |
| AC3 | MGTHTXN3_225 | NC |
| AC4 | MGTHTXP3_225 | NC |
| AC5 | GND-65 | GND |
| AC6 | MGTAVCC_R-9 | MGTAVCC |
| AC7 | D00_MOSI_0 | QSPI0_IO0 |
| AC8 | VCCAUX-2 | VCCAUX |
| AC9 | TCK_0 | FPGA_TCK |
| AC10 | VCCINT-35 | VCCINT |
| AC11 | GND-67 | GND |
| AC12 | VCCINT-5 | VCCINT |
| AC13 | GND-68 | GND |
| AC14 | VCCINT-36 | VCCINT |
| AC15 | GND-69 | GND |
| AC16 | VCCINT-14 | VCCINT |
| AC17 | GND-70 | GND |
| AC18 | VCCAUX_IO-9 | VCCAUX |
| AC19 | GND-71 | GND |
| AC20 | VCCO_47-6 | P1V8 |
| AC21 | IO_L10N_T1U_N7_QBC_AD4N_47 | VHDCI2_3_N |
| AC22 | IO_L8P_T1L_N2_AD5P_47 | VHDCI2_5_P |
| AC23 | IO_L8N_T1L_N3_AD5N_47 | VHDCI2_5_N |
| AC24 | IO_L3N_T0L_N5_AD15N_47 | REC_CLOCK_N |
| AC25 | GND-72 | GND |
| AC26 | IO_L4P_T0U_N6_DBC_AD7P_47 | VHDCI2_9_P |
| AC27 | IO_L4N_T0U_N7_DBC_AD7N_47 | VHDCI2_9_N |
| AC28 | IO_L3P_T0L_N4_AD15P_48 | VHDCI2_22_P |
| AC29 | IO_T0U_N12_VRP_48 | NC |
| AC30 | VCCO_48-1 | P1V8 |
| AC31 | IO_L12P_T1U_N10_GC_48 | VHDCI2_14_P |
| AC32 | IO_L12N_T1U_N11_GC_48 | VHDCI2_14_N |
| AC33 | IO_L18P_T2U_N10_AD2P_48 | VHDCI1_8_P |
| AC34 | IO_L15P_T2L_N4_AD11P_48 | VHDCI2_11_P |
| AD1 | MGTHRXP2_225 | RxFD_7_N |
| AD2 | MGTHRXP2_225 | RxFD_7_P |
| AD3 | MGTAVTT_R-14 | MGTAVTT |
| AD4 | GND-73 | GND |
| AD5 | MGTREFCLK1N_224 | NC |
| AD6 | MGTREFCLK1P_224 | NC |
| AD7 | VBATT | FPGA_VBATT |
| AD8 | IO_L17N_T2U_N9_AD10N_64 | TxFEC_10_N |
| AD9 | IO_L17P_T2U_N8_AD10P_64 | TxFEC_10_P |
| AD10 | IO_L16P_T2U_N6_QBC_AD3P_64 | RxFEC_11_P |
| AD11 | IO_L10P_T1U_N6_QBC_AD4P_64 | NCN |
| AD12 | GND-74 | GND |
| AD13 | VREF_64 | NC |
| AD14 | IO_T3U_N12_45 | NC |
| AD15 | IO_L24N_T3U_N11_45 | DDR3_64_CKE |
| AD16 | IO_L24P_T3U_N10_45 | DDR3_64_WE_N |
| AD17 | VCCO_45-4 | P1V5 |
| AD18 | IO_L19N_T3L_N1_DBC_AD9N_45 | NC |
| AD19 | IO_L19P_T3L_N0_DBC_AD9P_45 | DDR3_64_A11 |
| AD20 | IO_L3P_T0L_N4_AD15P_44 | DDR3_64_DQ5 |

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|------|----------------------------|--------------|
| AD21 | IO_L1P_T0L_N0_DBC_44 | DDR3_64_DM0 |
| AD22 | GND-75 | GND |
| AD23 | VREF_44 | DDR3_64_VREF |
| AD24 | IO_T0U_N12_VRP_44 | VRP_44 |
| AD25 | IO_L2P_T0L_N2_47 | NC |
| AD26 | IO_L2N_T0L_N3_47 | NC |
| AD27 | VCCO_48-7 | P1V8 |
| AD28 | IO_L3N_T0L_N5_AD15N_48 | VHDCI2_22_N |
| AD29 | IO_L5P_T0U_N8_AD14P_48 | VHDCI2_20_P |
| AD30 | IO_L11P_T1U_N8_GC_48 | VHDCI2_15_P |
| AD31 | IO_L11N_T1U_N9_GC_48 | VHDCI2_15_N |
| AD32 | GND-76 | GND |
| AD33 | IO_L18N_T2U_N11_AD2N_48 | VHDCI1_8_N |
| AD34 | IO_L15N_T2L_N5_AD11N_48 | VHDCI2_11_N |
| AE1 | GND-77 | GND |
| AE2 | GND-78 | GND |
| AE3 | MGTHTXN2_225 | NC |
| AE4 | MGTHTXP2_225 | NC |
| AE5 | GND-79 | GND |
| AE6 | MGTAVCC_R-10 | MGTAVCC |
| AE7 | GND-80 | GND |
| AE8 | IO_L15P_T2L_N4_AD11P_64 | TxFEC_11_P |
| AE9 | GND-81 | GND |
| AE10 | IO_L16N_T2U_N7_QBC_AD3N_64 | RxFEC_11_N |
| AE11 | IO_L10N_T1U_N7_QBC_AD4N_64 | NC |
| AE12 | IO_L9P_T1L_N4_AD12P_64 | NC |
| AE13 | IO_L7P_T1L_N0_QBC_AD13P_64 | AUX_UART_TxD |
| AE14 | VCCO_45-3 | P1V5 |
| AE15 | IO_L22N_T3U_N7_DBC_AD0N_45 | DDR3_64_CK_N |
| AE16 | IO_L22P_T3U_N6_DBC_AD0P_45 | DDR3_64_CK_P |
| AE17 | IO_L23P_T3U_N8_45 | DDR3_64_A0 |
| AE18 | IO_L21P_T3L_N4_AD8P_45 | DDR3_64_A2 |
| AE19 | GND-82 | GND |
| AE20 | IO_L3N_T0L_N5_AD15N_44 | DDR3_64_DQ7 |
| AE21 | IO_L1N_T0L_N1_DBC_44 | NC |
| AE22 | IO_L5P_T0U_N8_AD14P_44 | DDR3_64_DQ4 |
| AE23 | IO_L5N_T0U_N9_AD14N_44 | DDR3_64_DQ0 |
| AE24 | VCCO_44-6 | P1V5 |
| AE25 | IO_L7P_T1L_N0_QBC_AD13P_44 | DDR3_64_DM1 |
| AE26 | IO_L7N_T1L_N1_QBC_AD13N_44 | HW_ID3 |
| AE27 | IO_L1P_T0L_N0_DBC_48 | VHDCI2_24_P |
| AE28 | IO_L2P_T0L_N2_48 | VHDCI2_23_P |
| AE29 | GND-83 | GND |
| AE30 | IO_L5N_T0U_N9_AD14N_48 | VHDCI2_20_N |
| AE31 | IO_T1U_N12_48 | NC |
| AE32 | IO_L9P_T1L_N4_AD12P_48 | VHDCI2_17_P |
| AE33 | IO_L10P_T1U_N6_QBC_AD4P_48 | VHDCI2_16_P |
| AE34 | VCCO_48-2 | P1V8 |
| AF1 | MGTHRNXN1_225 | RxFD_6_N |
| AF2 | MGTHRXP1_225 | RxFD_6_P |
| AF3 | GND-84 | GND |
| AF4 | GND-85 | GND |
| AF5 | MGTREFCLK0N_224 | NC |

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|------|----------------------------|----------------|
| AF6 | MGTREFCLK0P_224 | NC |
| AF7 | GND-86 | GND |
| AF8 | IO_L15N_T2L_N5_AD11N_64 | TxFEC_11_N |
| AF9 | IO_L14P_T2L_N2_GC_64 | RxFEC_12_P |
| AF10 | IO_L13P_T2L_N0_GC_QBC_64 | TxFEC_12_P |
| AF11 | VCCO_64-4 | P3V3 |
| AF12 | IO_L9N_T1L_N5_AD12N_64 | NC |
| AF13 | IO_L7N_T1L_N1_QBC_AD13N_64 | AUX_UART_RxD |
| AF14 | IO_L20N_T3L_N3_AD1N_45 | DDR3_64_RAS_N |
| AF15 | IO_L20P_T3L_N2_AD1P_45 | DDR3_64_A10 |
| AF16 | GND-87 | GND |
| AF17 | IO_L23N_T3U_N9_45 | DDR3_64_BA0 |
| AF18 | IO_L21N_T3L_N5_AD8N_45 | DDR3_64_A8 |
| AF19 | VREF_45 | DDR3_64_VREF |
| AF20 | IO_L2P_T0L_N2_44 | DDR3_64_DQ3 |
| AF21 | VCCO_44-2 | P1V5 |
| AF22 | IO_L6P_T0U_N10_AD6P_44 | DDR3_64_DQ2 |
| AF23 | IO_L8P_T1L_N2_AD5P_44 | DDR3_64_DQ11 |
| AF24 | IO_L8N_T1L_N3_AD5N_44 | DDR3_64_DQ13 |
| AF25 | IO_T1U_N12_44 | NC |
| AF26 | GND-88 | GND |
| AF27 | IO_L1N_T0L_N1_DBC_48 | VHDCI2_24_N |
| AF28 | IO_L2N_T0L_N3_48 | VHDCI2_23_N |
| AF29 | IO_L4P_T0U_N6_DBC_AD7P_48 | VHDCI2_21_P |
| AF30 | IO_L6P_T0U_N10_AD6P_48 | VHDCI2_1_P |
| AF31 | VCCO_48-6 | P1V8 |
| AF32 | IO_L9N_T1L_N5_AD12N_48 | VHDCI2_17_N |
| AF33 | IO_L8P_T1L_N2_AD5P_48 | VHDCI2_18_P |
| AF34 | IO_L10N_T1U_N7_QBC_AD4N_48 | VHDCI2_16_N |
| AG1 | GND-89 | GND |
| AG2 | MGTAVTT_R-13 | MGTAVTT |
| AG3 | MGTHTFXN1_225 | NC |
| AG4 | MGTHTXP1_225 | NC |
| AG5 | GND-90 | GND |
| AG6 | MGTAVCC_R-14 | MGTAVCC |
| AG7 | GND-91 | GND |
| AG8 | VCCO_64-5 | P3V3 |
| AG9 | IO_L14N_T2L_N3_GC_64 | RxFEC_12_N |
| AG10 | IO_L13N_T2L_N1_GC_QBC_64 | TxFEC_12_N |
| AG11 | IO_L12P_T1U_N10_GC_64 | NC |
| AG12 | IO_L11P_T1U_N8_GC_64 | NC |
| AG13 | GND-92 | GND |
| AG14 | IO_L18N_T2U_N11_AD2N_45 | DDR3_64_CAS_N |
| AG15 | IO_L18P_T2U_N10_AD2P_45 | NC |
| AG16 | IO_L15N_T2L_N5_AD11N_45 | DDR3_64_A4 |
| AG17 | IO_L15P_T2L_N4_AD11P_45 | DDR3_64_A7 |
| AG18 | VCCO_45-1 | P1V5 |
| AG19 | IO_L17P_T2U_N8_AD10P_45 | DDR3_64_A13 |
| AG20 | IO_L2N_T0L_N3_44 | DDR3_64_DQ1 |
| AG21 | IO_L4P_T0U_N6_DBC_AD7P_44 | DDR3_64_DQS0_P |
| AG22 | IO_L6N_T0U_N11_AD6N_44 | DDR3_64_DQ6 |
| AG23 | GND-93 | GND |
| AG24 | IO_L9P_T1L_N4_AD12P_44 | DDR3_64_DQ9 |

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|------|----------------------------|----------------|
| AG25 | IO_L9N_T1L_N5_AD12N_44 | DDR3_64_DQ15 |
| AG26 | IO_T0U_N12_VRP_46 | VRP_46 |
| AG27 | VREF_46 | DDR3_64_VREF |
| AG28 | VCCO_46-7 | P1V5 |
| AG29 | IO_L4N_T0U_N7_DBC_AD7N_48 | VHDCI2_21_N |
| AG30 | IO_L6N_T0U_N11_AD6N_48 | VHDCI2_1_N |
| AG31 | IO_L7P_T1L_N0_QBC_AD13P_48 | VHDCI2_19_P |
| AG32 | IO_L7N_T1L_N1_QBC_AD13N_48 | VHDCI2_19_N |
| AG33 | GND-94 | GND |
| AG34 | IO_L8N_T1L_N3_AD5N_48 | VHDCI2_18_N |
| AH1 | MGTHR_XN0_225 | RxFD_5_N |
| AH2 | MGTHR_XP0_225 | RxFD_5_P |
| AH3 | MGTAVTT_R-12 | MGTAVTT |
| AH4 | GND-95 | GND |
| AH5 | MGHTXN0_225 | NC |
| AH6 | MGHTXP0_225 | NC |
| AH7 | GND-96 | GND |
| AH8 | IO_L18N_T2U_N11_AD2N_64 | RxFEC_10_N |
| AH9 | IO_L18P_T2U_N10_AD2P_64 | RxFEC_10_P |
| AH10 | GND-97 | GND |
| AH11 | IO_L12N_T1U_N11_GC_64 | NC |
| AH12 | IO_L11N_T1U_N9_GC_64 | NC |
| AH13 | IO_L8P_T1L_N2_AD5P_64 | NC |
| AH14 | IO_T2U_N12_45 | NC |
| AH15 | VCCO_45-2 | P1V5 |
| AH16 | IO_L14P_T2L_N2_GC_45 | DDR3_64_A14 |
| AH17 | IO_L13N_T2L_N1_GC_QBC_45 | DDR3_64_A1 |
| AH18 | IO_L13P_T2L_N0_GC_QBC_45 | NC |
| AH19 | IO_L17N_T2U_N9_AD10N_45 | DDR3_64_A9 |
| AH20 | GND-98 | GND |
| AH21 | IO_L4N_T0U_N7_DBC_AD7N_44 | DDR3_64_DQS0_N |
| AH22 | IO_L12P_T1U_N10_GC_44 | DDR3_64_DQ14 |
| AH23 | IO_L12N_T1U_N11_GC_44 | DDR3_64_DQ12 |
| AH24 | IO_L10P_T1U_N6_QBC_AD4P_44 | DDR3_64_DQS1_P |
| AH25 | VCCO_44-3 | P1V5 |
| AH26 | IO_L1P_T0L_N0_DBC_46 | DDR3_64_DM4 |
| AH27 | IO_L5P_T0U_N8_AD14P_46 | DDR3_64_DQ37 |
| AH28 | IO_L5N_T0U_N9_AD14N_46 | DDR3_64_DQ32 |
| AH29 | IO_T2U_N12_46 | NC |
| AH30 | GND-99 | GND |
| AH31 | IO_L17P_T2U_N8_AD10P_46 | DDR3_64_DQ48 |
| AH32 | IO_L17N_T2U_N9_AD10N_46 | DDR3_64_DQ49 |
| AH33 | IO_L16P_T2U_N6_QBC_AD3P_46 | DDR3_64_DQS6_P |
| AH34 | IO_L18P_T2U_N10_AD2P_46 | DDR3_64_DQ54 |
| AJ1 | GND-100 | GND |
| AJ2 | GND-101 | GND |
| AJ3 | MGTHR_XN3_224 | RxFD_4_N |
| AJ4 | MGTHR_XP3_224 | RxFD_4_P |
| AJ5 | GND-102 | GND |
| AJ6 | MGTAVCC_R-11 | MGTAVCC |
| AJ7 | GND-103 | GND |
| AJ8 | IO_L23N_T3U_N9_64 | SI5324_RST |
| AJ9 | IO_L23P_T3U_N8_64 | MMC_MOSI1 |

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|------|----------------------------|----------------|
| AJ10 | IO_T2U_N12_64 | SI5324_INT_ALM |
| AJ11 | IO_T1U_N12_64 | FPGA_RESETh |
| AJ12 | VCCO_64-3 | P3V3 |
| AJ13 | IO_L8N_T1L_N3_AD5N_64 | NC |
| AJ14 | IO_L16N_T2U_N7_QBC_AD3N_45 | DDR3_64_A12 |
| AJ15 | IO_L16P_T2U_N6_QBC_AD3P_45 | DDR3_64_A3 |
| AJ16 | IO_L14N_T2L_N3_GC_45 | NC |
| AJ17 | GND-104 | GND |
| AJ18 | IO_L11P_T1U_N8_GC_45 | DDR3_64_ODT |
| AJ19 | IO_T1U_N12_45 | NC |
| AJ20 | IO_L16P_T2U_N6_QBC_AD3P_44 | DDR3_64_DQS2_P |
| AJ21 | IO_L13P_T2L_N0_GC_QBC_44 | DDR3_64_DM2 |
| AJ22 | VCCO_44-4 | P1V5 |
| AJ23 | IO_L11P_T1U_N8_GC_44 | DDR3_64_DQ10 |
| AJ24 | IO_L11N_T1U_N9_GC_44 | DDR3_64_DQ8 |
| AJ25 | IO_L10N_T1U_N7_QBC_AD4N_44 | DDR3_64_DQS1_N |
| AJ26 | IO_L1N_T0L_N1_DBC_46 | NC |
| AJ27 | GND-105 | GND |
| AJ28 | IO_L6P_T0U_N10_AD6P_46 | DDR3_64_DQ36 |
| AJ29 | IO_L13P_T2L_N0_GC_QBC_46 | DDR3_64_DM6 |
| AJ30 | IO_L15P_T2L_N4_AD11P_46 | DDR3_64_DQ53 |
| AJ31 | IO_L15N_T2L_N5_AD11N_46 | DDR3_64_DQ52 |
| AJ32 | VCCO_46-2 | P1V5 |
| AJ33 | IO_L16N_T2U_N7_QBC_AD3N_46 | DDR3_64_DQS6_N |
| AJ34 | IO_L18N_T2U_N11_AD2N_46 | DDR3_64_DQ50 |
| AK1 | MGTHRNX2_224 | RxFD_3_N |
| AK2 | MGTHRXP2_224 | RxFD_3_P |
| AK3 | GND-106 | GND |
| AK4 | GND-107 | GND |
| AK5 | MGTHTXN3_224 | NC |
| AK6 | MGTHTXP3_224 | NC |
| AK7 | GND-108 | GND |
| AK8 | IO_L24P_T3U_N10_64 | MMC_SCK1 |
| AK9 | VCCO_64-6 | P3V3 |
| AK10 | IO_L21P_T3L_N4_AD8P_64 | TxFEC_1_P |
| AK11 | IO_T0U_N12_64 | CLK_MUX_SEL |
| AK12 | IO_L5P_T0U_N8_AD14P_64 | NC |
| AK13 | IO_L6P_T0U_N10_AD6P_64 | NC |
| AK14 | GND-109 | GND |
| AK15 | IO_L9P_T1L_N4_AD12P_45 | DDR3_64_BA2 |
| AK16 | IO_L12N_T1U_N11_GC_45 | SYSCLK_300_N |
| AK17 | IO_L12P_T1U_N10_GC_45 | SYSCLK_300_P |
| AK18 | IO_L11N_T1U_N9_GC_45 | DDR3_64_A6 |
| AK19 | VCCO_45-7 | P1V5 |
| AK20 | IO_L16N_T2U_N7_QBC_AD3N_44 | DDR3_64_DQS2_N |
| AK21 | IO_L13N_T2L_N1_GC_QBC_44 | HW_ID2 |
| AK22 | IO_L14P_T2L_N2_GC_44 | DDR3_64_DQ20 |
| AK23 | IO_L14N_T2L_N3_GC_44 | DDR3_64_DQ19 |
| AK24 | GND-110 | GND |
| AK25 | IO_T2U_N12_44 | HW_ID1 |
| AK26 | IO_L3P_T0L_N4_AD15P_46 | DDR3_64_DQ33 |
| AK27 | IO_L3N_T0L_N5_AD15N_46 | DDR3_64_DQ38 |
| AK28 | IO_L6N_T0U_N11_AD6N_46 | DDR3_64_DQ34 |

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| AK29 | VCCO_46-3 | P1V5 |
| AK30 | IO_L13N_T2L_N1_GC_QBC_46 | NC |
| AK31 | IO_L14P_T2L_N2_GC_46 | DDR3_64_DQ51 |
| AK32 | IO_L14N_T2L_N3_GC_46 | DDR3_64_DQ55 |
| AK33 | IO_T3U_N12_46 | NC |
| AK34 | GND-111 | GND |
| AL1 | GND-112 | GND |
| AL2 | MGTAVTT_R-11 | MGTAVTT |
| AL3 | MGTHTXN2_224 | NC |
| AL4 | MGTHTXP2_224 | NC |
| AL5 | GND-113 | GND |
| AL6 | MGTAVCC_R-12 | MGTAVCC |
| AL7 | GND-114 | GND |
| AL8 | IO_L24N_T3U_N11_64 | MMC_SSEL1 |
| AL9 | IO_L21N_T3L_N5_AD8N_64 | TxFEC_1_N |
| AL10 | IO_L19P_T3L_N0_DBC_AD9P_64 | TxFEC_2_P |
| AL11 | GND-115 | GND |
| AL12 | IO_L5N_T0U_N9_AD14N_64 | NC |
| AL13 | IO_L6N_T0U_N11_AD6N_64 | NC |
| AL14 | IO_L7P_T1L_N0_QBC_AD13P_45 | RxFE_C_8_P |
| AL15 | IO_L9N_T1L_N5_AD12N_45 | DDR3_64_BA1 |
| AL16 | VCCO_45-5 | P1V5 |
| AL17 | IO_L10N_T1U_N7_QBC_AD4N_45 | DDR3_64_A5 |
| AL18 | IO_L10P_T1U_N6_QBC_AD4P_45 | DDR3_64_RST_N |
| AL19 | IO_L8P_T1L_N2_AD5P_45 | DDR3_64_CE0_N |
| AL20 | IO_L15P_T2L_N4_AD11P_44 | DDR3_64_DQ22 |
| AL21 | GND-116 | GND |
| AL22 | IO_L17P_T2U_N8_AD10P_44 | DDR3_64_DQ16 |
| AL23 | IO_L17N_T2U_N9_AD10N_44 | DDR3_64_DQ23 |
| AL24 | IO_L18P_T2U_N10_AD2P_44 | DDR3_64_DQ21 |
| AL25 | IO_L18N_T2U_N11_AD2N_44 | DDR3_64_DQ17 |
| AL26 | VCCO_46-1 | P1V5 |
| AL27 | IO_L4P_T0U_N6_DBC_AD7P_46 | DDR3_64_DQS4_P |
| AL28 | IO_L4N_T0U_N7_DBC_AD7N_46 | DDR3_64_DQS4_N |
| AL29 | IO_L11P_T1U_N8_GC_46 | DDR3_64_DQ44 |
| AL30 | IO_L12P_T1U_N10_GC_46 | DDR3_64_DQ40 |
| AL31 | GND-117 | GND |
| AL32 | IO_L19P_T3L_N0_DBC_AD9P_46 | DDR3_64_DM7 |
| AL33 | IO_L19N_T3L_N1_DBC_AD9N_46 | NC |
| AL34 | IO_L24P_T3U_N10_46 | DDR3_64_DQ62 |
| AM1 | MGTHRNX1_224 | RxFD_2_N |
| AM2 | MGTHRXP1_224 | RxFD_2_P |
| AM3 | MGTAVTT_R-10 | MGTAVTT |
| AM4 | GND-118 | GND |
| AM5 | MGTHTXN1_224 | NC |
| AM6 | MGTHTXP1_224 | NC |
| AM7 | GND-119 | GND |
| AM8 | GND-120 | GND |
| AM9 | IO_T3U_N12_64 | MMC_MISO1 |
| AM10 | IO_L19N_T3L_N1_DBC_AD9N_64 | TxFEC_2_N |
| AM11 | IO_L3P_T0L_N4_AD15P_64 | NC |
| AM12 | IO_L4P_T0U_N6_DBC_AD7P_64 | NC |
| AM13 | VCCO_64-2 | P3V3 |

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| AM14 | IO_L7N_T1L_N1_QBC_AD13N_45 | RxFE_C_8_N |
| AM15 | IO_L5N_T0U_N9_AD14N_45 | RxFE_C_9_N |
| AM16 | IO_L5P_T0U_N8_AD14P_45 | RxFE_C_9_P |
| AM17 | IO_L3P_T0L_N4_AD15P_45 | TxFE_C_3_P |
| AM18 | GND-121 | GND |
| AM19 | IO_L8N_T1L_N3_AD5N_45 | NC |
| AM20 | IO_L15N_T2L_N5_AD11N_44 | DDR3_64_DQ18 |
| AM21 | IO_L19P_T3L_N0_DBC_AD9P_44 | DDR3_64_DM3 |
| AM22 | IO_L20P_T3L_N2_AD1P_44 | DDR3_64_DQ31 |
| AM23 | VCCO_44-1 | P1V5 |
| AM24 | IO_L21P_T3L_N4_AD8P_44 | DDR3_64_DQ24 |
| AM25 | IO_T3U_N12_44 | HW_ID0 |
| AM26 | IO_L2P_T0L_N2_46 | DDR3_64_DQ39 |
| AM27 | IO_L2N_T0L_N3_46 | DDR3_64_DQ35 |
| AM28 | GND-122 | GND |
| AM29 | IO_L11N_T1U_N9_GC_46 | DDR3_64_DQ46 |
| AM30 | IO_L12N_T1U_N11_GC_46 | DDR3_64_DQ42 |
| AM31 | IO_T1U_N12_46 | NC |
| AM32 | IO_L23P_T3U_N8_46 | DDR3_64_DQ60 |
| AM33 | VCCO_46-4 | P1V5 |
| AM34 | IO_L24N_T3U_N11_46 | DDR3_64_DQ58 |
| AN1 | GND-123 | GND |
| AN2 | GND-124 | GND |
| AN3 | MGTHTXN0_224 | NC |
| AN4 | MGTHTXP0_224 | NC |
| AN5 | GND-125 | GND |
| AN6 | MGTAVCC_R-13 | MGTAVCC |
| AN7 | GND-126 | GND |
| AN8 | IO_L22P_T3U_N6_DBC_AD0P_64 | RxFEC_1_P |
| AN9 | IO_L20P_T3L_N2_AD1P_64 | RxFEC_2_P |
| AN10 | VCCO_64-1 | P3V3 |
| AN11 | IO_L3N_T0L_N5_AD15N_64 | NC |
| AN12 | IO_L4N_T0U_N7_DBC_AD7N_64 | NC |
| AN13 | IO_L2P_T0L_N2_64 | NC |
| AN14 | IO_L1P_T0L_N0_DBC_45 | NC |
| AN15 | GND-127 | GND |
| AN16 | IO_L3N_T0L_N5_AD15N_45 | TxFE_C_3_N |
| AN17 | IO_L4N_T0U_N7_DBC_AD7N_45 | TxFE_C_9_N |
| AN18 | IO_L4P_T0U_N6_DBC_AD7P_45 | TxFE_C_9_P |
| AN19 | IO_L2P_T0L_N2_45 | RxFE_C_3_P |
| AN20 | VCCO_44-5 | P1V5 |
| AN21 | IO_L19N_T3L_N1_DBC_AD9N_44 | NC |
| AN22 | IO_L20N_T3L_N3_AD1N_44 | DDR3_64_DQ29 |
| AN23 | IO_L24P_T3U_N10_44 | DDR3_64_DQ25 |
| AN24 | IO_L21N_T3L_N5_AD8N_44 | DDR3_64_DQ26 |
| AN25 | GND-128 | GND |
| AN26 | IO_L7P_T1L_N0_QBC_AD13P_46 | DDR3_64_DM5 |
| AN27 | IO_L9P_T1L_N4_AD12P_46 | DDR3_64_DQ47 |
| AN28 | IO_L9N_T1L_N5_AD12N_46 | DDR3_64_DQ43 |
| AN29 | IO_L10P_T1U_N6_QBC_AD4P_46 | DDR3_64_DQS5_P |
| AN30 | VCCO_46-6 | P1V5 |
| AN31 | IO_L21P_T3L_N4_AD8P_46 | DDR3_64_DQ61 |
| AN32 | IO_L23N_T3U_N9_46 | DDR3_64_DQ63 |

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| AN33 | IO_L20P_T3L_N2_AD1P_46 | DDR3_64_DQ56 |
| AN34 | IO_L22P_T3U_N6_DBC_AD0P_46 | DDR3_64_DQS7_P |
| AP1 | MGTHRXN0_224 | RxFD_1_N |
| AP2 | MGTHRXP0_224 | RxFD_1_P |
| AP3 | GND-129 | GND |
| AP4 | GND-130 | GND |
| AP5 | MGTRREF_R | NC |
| AP6 | MGTAVTTRCAL_R | MGTAVTT |
| AP7 | GND-131 | GND |
| AP8 | IO_L22N_T3U_N7_DBC_AD0N_64 | RxFEC_1_N |
| AP9 | IO_L20N_T3L_N3_AD1N_64 | RxFEC_2_N |
| AP10 | IO_L1N_T0L_N1_DBC_64 | NC |
| AP11 | IO_L1P_T0L_N0_DBC_64 | NC |
| AP12 | GND-132 | GND |
| AP13 | IO_L2N_T0L_N3_64 | NC |
| AP14 | IO_L1N_T0L_N1_DBC_45 | NC |
| AP15 | IO_L6N_T0U_N11_AD6N_45 | TxFE_C_8_N |
| AP16 | IO_L6P_T0U_N10_AD6P_45 | TxFE_C_8_P |
| AP17 | VCCO_45-6 | P1V5 |
| AP18 | IO_L2N_T0L_N3_45 | RxFE_C_3_N |
| AP19 | IO_T0U_N12_VRP_45 | VRP_45 |
| AP20 | IO_L22P_T3U_N6_DBC_AD0P_44 | DDR3_64_DQS3_P |
| AP21 | IO_L22N_T3U_N7_DBC_AD0N_44 | DDR3_64_DQS3_N |
| AP22 | GND-133 | GND |
| AP23 | IO_L24N_T3U_N11_44 | DDR3_64_DQ27 |
| AP24 | IO_L23P_T3U_N8_44 | DDR3_64_DQ30 |
| AP25 | IO_L23N_T3U_N9_44 | DDR3_64_DQ28 |
| AP26 | IO_L7N_T1L_N1_QBC_AD13N_46 | NC |
| AP27 | VCCO_46-5 | P1V5 |
| AP28 | IO_L8P_T1L_N2_AD5P_46 | DDR3_64_DQ45 |
| AP29 | IO_L8N_T1L_N3_AD5N_46 | DDR3_64_DQ41 |
| AP30 | IO_L10N_T1U_N7_QBC_AD4N_46 | DDR3_64_DQS5_N |
| AP31 | IO_L21N_T3L_N5_AD8N_46 | DDR3_64_DQ59 |
| AP32 | GND-134 | GND |
| AP33 | IO_L20N_T3L_N3_AD1N_46 | DDR3_64_DQ57 |
| AP34 | IO_L22N_T3U_N7_DBC_AD0N_46 | DDR3_64_DQS7_N |
| B1 | MGTHRXN2_228 | SFP3RX_N |
| B2 | MGTHRXP2_228 | SFP3RX_P |
| B3 | GND-11 | GND |
| B4 | GND-12 | GND |
| B5 | MGHTTXN3_228 | FMC1_DP4_C2M_N |
| B6 | MGHTTXP3_228 | FMC1_DP4_C2M_P |
| B7 | GND-13 | GND |
| B8 | GND-14 | GND |
| B9 | IO_L2P_T0L_N2_66 | NC |
| B10 | IO_L4P_T0U_N6_DBC_AD7P_66 | RxFE_C_7_P |
| B11 | IO_L21N_T3L_N5_AD8N_66 | FMC1_LA31_N |
| B12 | IO_L20N_T3L_N3_AD1N_66 | FMC1_LA32_N |
| B13 | VCCO_66-2 | P1V5 |
| B14 | IO_L1P_T0L_N0_DBC_68 | NC |
| B15 | IO_L3P_T0L_N4_AD15P_68 | RxFE_C_5_P |
| B16 | IO_L5N_T0U_N9_AD14N_68 | RxFE_C_4_N |
| B17 | IO_L5P_T0U_N8_AD14P_68 | RxFE_C_4_P |

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| B18 | GND-15 | GND |
| B19 | IO_L4N_T0U_N7_DBC_AD7N_68 | TxFE_C_4_N |
| B20 | IO_L17P_T2U_N8_AD10P_67 | VHDCI1_17_P |
| B21 | IO_L15P_T2L_N4_AD11P_67 | VHDCI1_19_P |
| B22 | IO_L15N_T2L_N5_AD11N_67 | VHDCI1_19_N |
| B23 | VCCO_67-1 | P1V5 |
| B24 | IO_L10P_T1U_N6_QBC_AD4P_67 | VHDCI1_23_P |
| B25 | IO_L8P_T1L_N2_AD5P_67 | VHDCI1_25_P |
| B26 | IO_L9N_T1L_N5_AD12N_67 | VHDCI1_24_N |
| B27 | IO_L2N_T0L_N3_67 | VHDCI1_30_N |
| B28 | GND-16 | GND |
| B29 | IO_L4P_T0U_N6_DBC_AD7P_67 | VHDCI1_29_P |
| B30 | GND-17 | GND |
| B31 | NC-23 | NC |
| B32 | NC-26 | NC |
| B33 | GND-18 | GND |
| B34 | GND-19 | GND |
| C1 | GND-20 | GND |
| C2 | MGTAVTT_R-16 | MGTAVTT |
| C3 | MGTHTXN2_228 | SFP3TX_N |
| C4 | MGTHTXP2_228 | SFP3TX_P |
| C5 | GND-21 | GND |
| C6 | MGTAVCC_R-1 | MGTAVCC |
| C7 | GND-22 | GND |
| C8 | IO_L3N_T0L_N5_AD15N_66 | TxFE_C_7_N |
| C9 | IO_L5N_T0U_N9_AD14N_66 | TxFE_C_6_N |
| C10 | VCCO_66-1 | P1V5 |
| C11 | IO_L21P_T3L_N4_AD8P_66 | FMC1_LA31_P |
| C12 | IO_L20P_T3L_N2_AD1P_66 | FMC1_LA32_P |
| C13 | IO_L24N_T3U_N11_66 | FMC1_LA28_N |
| C14 | IO_L7N_T1L_N1_QBC_AD13N_68 | FMC1_LA22_P |
| C15 | GND-23 | GND |
| C16 | IO_T1U_N12_68 | NC |
| C17 | IO_L6N_T0U_N11_AD6N_68 | FMC1_LA15_N |
| C18 | IO_L6P_T0U_N10_AD6P_68 | FMC1_LA15_P |
| C19 | IO_L4P_T0U_N6_DBC_AD7P_68 | TxFE_C_4_P |
| C20 | VCCO_67-6 | P1V5 |
| C21 | IO_L16P_T2U_N6_QBC_AD3P_67 | VHDCI1_18_P |
| C22 | IO_L16N_T2U_N7_QBC_AD3N_67 | VHDCI1_18_N |
| C23 | IO_L13N_T2L_N1_GC_QBC_67 | VHDCI1_20_N |
| C24 | IO_L12N_T1U_N11_GC_67 | VHDCI1_21_N |
| C25 | GND-24 | GND |
| C26 | IO_L9P_T1L_N4_AD12P_67 | VHDCI1_24_P |
| C27 | IO_L2P_T0L_N2_67 | VHDCI1_30_P |
| C28 | IO_L5N_T0U_N9_AD14N_67 | VHDCI1_28_N |
| C29 | IO_T0U_N12_VRP_67 | NC |
| C30 | GND-25 | GND |
| C31 | GND-26 | GND |
| C32 | MGTAVTT_L-4 | GND |
| C33 | NC-24 | NC |
| C34 | NC-25 | NC |
| D1 | MGTHRXN1_228 | SFP2RX_N |
| D2 | MGTHRXP1_228 | SFP2RX_P |

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| D3 | MGTAVTT_R-9 | MGTAVTT |
| D4 | GND-27 | GND |
| D5 | MGTHTXN1_228 | SFP2TX_N |
| D6 | MGTHTXP1_228 | SFP2TX_P |
| D7 | GND-28 | GND |
| D8 | IO_L3P_T0L_N4_AD15P_66 | TxFE_C_7_P |
| D9 | IO_L5P_T0U_N8_AD14P_66 | TxFE_C_6_P |
| D10 | IO_L6N_T0U_N11_AD6N_66 | RxFE_C_6_N |
| D11 | IO_L19N_T3L_N1_DBC_AD9N_66 | FMC1_LA33_N |
| D12 | GND-29 | GND |
| D13 | IO_L24P_T3U_N10_66 | FMC1_LA28_P |
| D14 | IO_L7P_T1L_N0_QBC_AD13P_68 | FMC1_LA22_N |
| D15 | IO_L8N_T1L_N3_AD5N_68 | FMC1_LA32_P |
| D16 | IO_L11N_T1U_N9_GC_68 | NC |
| D17 | VCCO_68-5 | P1V8 |
| D18 | IO_L10N_T1U_N7_QBC_AD4N_68 | FMC1_LA16_N |
| D19 | IO_L10P_T1U_N6_QBC_AD4P_68 | FMC1_LA16_P |
| D20 | IO_L18P_T2U_N10_AD2P_67 | VHDCI1_16_P |
| D21 | IO_L18N_T2U_N11_AD2N_67 | VHDCI1_16_N |
| D22 | GND-30 | GND |
| D23 | IO_L13P_T2L_N0_GC_QBC_67 | VHDCI1_20_P |
| D24 | IO_L12P_T1U_N10_GC_67 | VHDCI1_21_P |
| D25 | IO_L11N_T1U_N9_GC_67 | VHDCI1_22_N |
| D26 | IO_L7N_T1L_N1_QBC_AD13N_67 | VHDCI1_26_N |
| D27 | VCCO_67-4 | P1V5 |
| D28 | IO_L5P_T0U_N8_AD14P_67 | VHDCI1_28_P |
| D29 | IO_L3N_T0L_N5_AD15N_67 | VHDCI1_2_N |
| D30 | GND-31 | GND |
| D31 | NC-29 | NC |
| D32 | NC-32 | NC |
| D33 | MGTAVTT_L-2 | GND |
| D34 | GND-32 | GND |
| E1 | GND-33 | GND |
| E2 | GND-34 | GND |
| E3 | MGTHRNXN0_228 | SFP1RX_N |
| E4 | MGTHRXP0_228 | SFP1RX_P |
| E5 | GND-35 | GND |
| E6 | MGTAVCC_R-2 | MGTAVCC |
| E7 | GND-36 | GND |
| E8 | IO_L1N_T0L_N1_DBC_66 | NC |
| E9 | GND-37 | GND |
| E10 | IO_L6P_T0U_N10_AD6P_66 | RxFE_C_6_P |
| E11 | IO_L19P_T3L_N0_DBC_AD9P_66 | FMC1_LA33_P |
| E12 | IO_T3U_N12_66 | NC |
| E13 | IO_L22N_T3U_N7_DBC_AD0N_66 | FMC1_LA30_N |
| E14 | VCCO_68-4 | P1V8 |
| E15 | IO_L8P_T1L_N2_AD5P_68 | FMC1_LA32_N |
| E16 | IO_L11P_T1U_N8_GC_68 | NC |
| E17 | IO_L12N_T1U_N11_GC_68 | FMC1_CLK0_M2C_N |
| E18 | IO_L12P_T1U_N10_GC_68 | FMC1_CLK0_M2C_P |
| E19 | GND-38 | GND |
| E20 | IO_L20P_T3L_N2_AD1P_67 | VHDCI1_14_P |
| E21 | IO_L20N_T3L_N3_AD1N_67 | VHDCI1_14_N |

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| E22 | IO_L14P_T2L_N2_GC_67 | VHDCI1_1_P |
| E23 | IO_L14N_T2L_N3_GC_67 | VHDCI1_1_N |
| E24 | VCCO_67-5 | P1V5 |
| E25 | IO_L11P_T1U_N8_GC_67 | VHDCI1_22_P |
| E26 | IO_L7P_T1L_N0_QBC_AD13P_67 | VHDCI1_26_P |
| E27 | IO_L1N_T0L_N1_DBC_67 | VHDCI1_31_N |
| E28 | IO_L3P_T0L_N4_AD15P_67 | VHDCI1_2_P |
| E29 | GND-39 | GND |
| E30 | GND-40 | GND |
| E31 | MGTAVCC_L-6 | GND |
| E32 | GND-41 | GND |
| E33 | NC-30 | NC |
| E34 | NC-31 | NC |
| F1 | MGTHRXN3_227 | FMC1_DP3_M2C_N |
| F2 | MGTHRXP3_227 | FMC1_DP3_M2C_P |
| F3 | GND-42 | GND |
| F4 | GND-43 | GND |
| F5 | MGTHTXN0_228 | SFP1TX_N |
| F6 | MGTHTXP0_228 | SFP1TX_P |
| F7 | GND-44 | GND |
| F8 | IO_L1P_T0L_N0_DBC_66 | NC |
| F9 | IO_L11N_T1U_N9_GC_66 | FMC1_LA23_N |
| F10 | IO_L12N_T1U_N11_GC_66 | FMC1_CLK1_M2C_N |
| F11 | VCCO_66-3 | P1V5 |
| F12 | IO_T2U_N12_66 | NC |
| F13 | IO_L22P_T3U_N6_DBC_AD0P_66 | FMC1_LA30_P |
| F14 | IO_L9N_T1L_N5_AD12N_68 | FMC1_LA33_P |
| F15 | IO_L9P_T1L_N4_AD12P_68 | FMC1_LA33_N |
| F16 | GND-45 | GND |
| F17 | IO_L14N_T2L_N3_GC_68 | FMC1_LA21_P |
| F18 | IO_L14P_T2L_N2_GC_68 | FMC1_LA21_N |
| F19 | IO_L16N_T2U_N7_QBC_AD3N_68 | FMC1_LA27_P |
| F20 | IO_L22N_T3U_N7_DBC_AD0N_67 | VHDCI1_12_N |
| F21 | VCCO_67-3 | P1V5 |
| F22 | IO_L23N_T3U_N9_67 | VHDCI1_11_N |
| F23 | IO_L21P_T3L_N4_AD8P_67 | VHDCI1_13_P |
| F24 | IO_L21N_T3L_N5_AD8N_67 | VHDCI1_13_N |
| F25 | IO_L19N_T3L_N1_DBC_AD9N_67 | VHDCI1_15_N |
| F26 | GND-46 | GND |
| F27 | IO_L1P_T0L_N0_DBC_67 | VHDCI1_31_P |
| F28 | GND-47 | GND |
| F29 | GND-48 | GND |
| F30 | MGTAVCC_L-1 | GND |
| F31 | NC-34 | NC |
| F32 | NC-35 | NC |
| F33 | GND-49 | GND |
| F34 | GND-50 | GND |
| G1 | GND-51 | GND |
| G2 | MGTAVTT_R-8 | MGTAVTT |
| G3 | MGTHTXN3_227 | FMC1_DP3_C2M_N |
| G4 | MGTHTXP3_227 | FMC1_DP3_C2M_P |
| G5 | GND-52 | GND |
| G6 | MGTAVCC_R-3 | MGTAVCC |

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| G7 | GND-53 | GND |
| G8 | VCCO_66-6 | P1V5 |
| G9 | IO_L11P_T1U_N8_GC_66 | FMC1_LA23_P |
| G10 | IO_L12P_T1U_N10_GC_66 | FMC1_CLK1_M2C_P |
| G11 | IO_L13N_T2L_N1_GC_QBC_66 | FMC1_LA17_CC_N |
| G12 | IO_L14N_T2L_N3_GC_66 | FMC1_LA18_CC_N |
| G13 | GND-54 | GND |
| G14 | IO_L15N_T2L_N5_AD11N_68 | FMC1_LA14_N |
| G15 | IO_L15P_T2L_N4_AD11P_68 | FMC1_LA14_P |
| G16 | IO_L13N_T2L_N1_GC_QBC_68 | FMC1_LA20_P |
| G17 | IO_L13P_T2L_N0_GC_QBC_68 | FMC1_LA20_N |
| G18 | VCCO_68-3 | P1V8 |
| G19 | IO_L16P_T2U_N6_QBC_AD3P_68 | FMC1_LA27_N |
| G20 | IO_L22P_T3U_N6_DBC_AD0P_67 | VHDCI1_12_P |
| G21 | IO_L24N_T3U_N11_67 | VHDCI1_10_N |
| G22 | IO_L23P_T3U_N8_67 | VHDCI1_11_P |
| G23 | GND-55 | GND |
| G24 | IO_L19P_T3L_N0_DBC_AD9P_67 | VHDCI1_15_P |
| G25 | IO_L2P_T0L_N2_FOE_B_65 | SFP1_MOD_DEF1 |
| G26 | IO_L2N_T0L_N3_FWE_FCS2_B_65 | SFP1_MOD_DEF2 |
| G27 | IO_L1N_T0L_N1_DBC_RS1_65 | SFP1_TX_FAULT |
| G28 | GND-56 | GND |
| G29 | NC-33 | NC |
| G30 | NC-36 | NC |
| G31 | GND-57 | GND |
| G32 | MGTAVTT_L-1 | GND |
| G33 | NC-40 | NC |
| G34 | NC-41 | NC |
| H1 | MGTHRNX2_227 | FMC1_DP2_M2C_N |
| H2 | MGTHRXP2_227 | FMC1_DP2_M2C_P |
| H3 | MGTAVTT_R-7 | MGTAVTT |
| H4 | GND-58 | GND |
| H5 | MGTREFCLK1N_228 | FMC1_GBTCLK1_M2C_N |
| H6 | MGTREFCLK1P_228 | FMC1_GBTCLK1_M2C_P |
| H7 | GND-59 | GND |
| H8 | IO_L9N_T1L_N5_AD12N_66 | FMC1_LA24_N |
| H9 | IO_L8N_T1L_N3_AD5N_66 | FMC1_LA26_N |
| H10 | GND-60 | GND |
| H11 | IO_L13P_T2L_N0_GC_QBC_66 | FMC1_LA17_CC_P |
| H12 | IO_L14P_T2L_N2_GC_66 | FMC1_LA18_CC_P |
| H13 | IO_L18N_T2U_N11_AD2N_66 | FMC1_LA21_N |
| H14 | IO_T2U_N12_68 | |
| H15 | VCCO_68-2 | P1V8 |
| H16 | IO_L17N_T2U_N9_AD10N_68 | FMC1_LA30_P |
| H17 | IO_L17P_T2U_N8_AD10P_68 | FMC1_LA30_N |
| H18 | IO_L18N_T2U_N11_AD2N_68 | FMC1_LA31_P |
| H19 | IO_L18P_T2U_N10_AD2P_68 | FMC1_LA31_N |
| H20 | GND-61 | GND |
| H21 | IO_L24P_T3U_N10_67 | VHDCI1_10_P |
| H22 | IO_T3U_N12_67 | NC |
| H23 | IO_T0U_N12_A28_65 | SFP1_RATE_SELECT |
| H24 | IO_L6N_T0U_N11_AD6N_A21_65 | SFP2_TX_DISABLE |
| H25 | VCCO_65-7 | P3V3 |

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| H26 | IO_L5N_T0U_N9_AD14N_A23_65 | FPGA_STATUS |
| H27 | IO_L1P_T0L_N0_DBC_RS0_65 | SFP1_TX_DISABLE |
| H28 | GND-62 | GND |
| H29 | MGTAVCC_L-2 | GND |
| H30 | GND-63 | GND |
| H31 | NC-39 | NC |
| H32 | NC-42 | NC |
| H33 | MGTAVTT_L-8 | GND |
| H34 | GND-64 | GND |
| J1 | GND-65 | GND |
| J2 | GND-66 | GND |
| J3 | MGTHTXN2_227 | FMC1_DP2_C2M_N |
| J4 | MGTHTXP2_227 | FMC1_DP2_C2M_P |
| J5 | GND-67 | GND |
| J6 | MGTAVCC_R-4 | MGTAVCC |
| J7 | GND-68 | GND |
| J8 | IO_L9P_T1L_N4_AD12P_66 | FMC1_LA24_P |
| J9 | IO_L8P_T1L_N2_AD5P_66 | FMC1_LA26_P |
| J10 | IO_L10N_T1U_N7_QBC_AD4N_66 | FMC1_LA25_N |
| J11 | IO_L15N_T2L_N5_AD11N_66 | FMC1_LA22_N |
| J12 | VCCO_66-4 | P1V5 |
| J13 | IO_L18P_T2U_N10_AD2P_66 | FMC1_LA21_P |
| J14 | IO_L19N_T3L_N1_DBC_AD9N_68 | FMC1_LA25_P |
| J15 | IO_L19P_T3L_N0_DBC_AD9P_68 | FMC1_LA25_N |
| J16 | IO_L23N_T3U_N9_68 | FMC1_LA26_P |
| J17 | GND-69 | GND |
| J18 | IO_L22N_T3U_N7_DBC_AD0N_68 | FMC1_LA24_P |
| J19 | IO_L22P_T3U_N6_DBC_AD0P_68 | FMC1_LA24_N |
| J20 | VREF_67 | DDR32_VREF |
| J21 | VREF_65 | NC |
| J22 | VCCO_65-2 | P3V3 |
| J23 | IO_L6P_T0U_N10_AD6P_A20_65 | SFP2_RATE_SELECT |
| J24 | IO_L4P_T0U_N6_DBC_AD7P_A24_65 | SFP1_LED1 |
| J25 | IO_L4N_T0U_N7_DBC_AD7N_A25_65 | SFP1_LED2 |
| J26 | IO_L5P_T0U_N8_AD14P_A22_65 | SFP2_TX_FAULT |
| J27 | GND-70 | GND |
| J28 | GND-71 | GND |
| J29 | NC-27 | NC |
| J30 | NC-28 | NC |
| J31 | MGTAVCC_L-3 | GND |
| J32 | GND-72 | GND |
| J33 | NC-2 | NC |
| J34 | NC-3 | NC |
| K1 | MGTTHRNXN1_227 | FMC1_DP1_M2C_N |
| K2 | MGTTHRXP1_227 | FMC1_DP1_M2C_P |
| K3 | GND-73 | GND |
| K4 | GND-74 | GND |
| K5 | MGTREFCLK0N_228 | NC |
| K6 | MGTREFCLK0P_228 | NC |
| K7 | M0_0 | FPGA_M0 |
| K8 | IO_L7N_T1L_N1_QBC_AD13N_66 | FMC1_LA27_N |
| K9 | VCCO_66-5 | P1V5 |
| K10 | IO_L10P_T1U_N6_QBC_AD4P_66 | FMC1_LA25_P |

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| K11 | IO_L15P_T2L_N4_AD11P_66 | FMC1_LA22_P |
| K12 | IO_L17N_T2U_N9_AD10N_66 | FMC1_LA20_N |
| K13 | IO_L16N_T2U_N7_QBC_AD3N_66 | FMC1_LA19_N |
| K14 | GND-75 | GND |
| K15 | IO_L21N_T3L_N5_AD8N_68 | FMC1_LA23_P |
| K16 | IO_L23P_T3U_N8_68 | FMC1_LA26_N |
| K17 | IO_L20N_T3L_N3_AD1N_68 | FMC1_LA28_P |
| K18 | IO_L20P_T3L_N2_AD1P_68 | FMC1_LA28_N |
| K19 | VCCO_68-1 | P1V8 |
| K20 | IO_L24P_T3U_N10_EMCCCLK_65 | PRI_UART_TxD |
| K21 | IO_L24N_T3U_N11_DOUT_CSO_B | CSPI1_CS_B |
| K22 | IO_T3U_N12_PERSTN0_65 | PRI_UART_RxD |
| K23 | IO_L10N_T1U_N7_QBC_AD4N_A13 | SFP3_GATE_SELECT |
| K24 | GND-76 | GND |
| K25 | IO_L9N_T1L_N5_AD12N_A15_D31 | SFP2_LED1 |
| K26 | IO_L3P_T0L_N4_AD15P_A26_65 | SFP1_LOS |
| K27 | IO_L3N_T0L_N5_AD15N_A27_65 | SFP1_MOD_DEF0 |
| K28 | GND-77 | GND |
| K29 | MGTVCCAUX_L-1 | GND |
| K30 | GND-78 | GND |
| K31 | NC-1 | NC |
| K32 | NC-4 | NC |
| K33 | MGTAVTT_L-5 | GND |
| K34 | GND-79 | GND |
| L1 | GND-80 | GND |
| L2 | MGTAVTT_R-6 | MGTAVTT |
| L3 | MGTHTXN1_227 | FMC1_DP1_C2M_N |
| L4 | MGTHTXP1_227 | FMC1_DP1_C2M_P |
| L5 | GND-81 | GND |
| L6 | MGTAVCC_R-5 | MGTAVCC |
| L7 | M1_0 | FPGA_M1 |
| L8 | IO_L7P_T1L_N0_QBC_AD13P_66 | FMC1_LA27_P |
| L9 | IO_T1U_N12_66 | NC |
| L10 | VREF_66 | DDR32_VREF |
| L11 | GND-82 | GND |
| L12 | IO_L17P_T2U_N8_AD10P_66 | FMC1_LA20_P |
| L13 | IO_L16P_T2U_N6_QBC_AD3P_66 | FMC1_LA19_P |
| L14 | VREF_68 | NC |
| L15 | IO_L21P_T3L_N4_AD8P_68 | FMC1_LA23_N |
| L16 | VCCO_68-7 | P1V8 |
| L17 | IO_T3U_N12_68 | NC |
| L18 | IO_L24N_T3U_N11_68 | FMC1_LA29_P |
| L19 | IO_L24P_T3U_N10_68 | FMC1_LA29_N |
| L20 | IO_L22N_T3U_N7_DBC_AD0N_D05 | CSPI1_IO1 |
| L21 | GND-83 | GND |
| L22 | IO_L10P_T1U_N6_QBC_AD4P_A12 | SFP3_MOD_DEF2 |
| L23 | IO_L8P_T1L_N2_AD5P_A16_65 | SFP2_LOS |
| L24 | IO_L8N_T1L_N3_AD5N_A17_65 | SFP2_MOD_DEF0 |
| L25 | IO_L9P_T1L_N4_AD12P_A14_D30 | SFP2_LED2 |
| L26 | VCCO_65-3 | P3V3 |
| L27 | IO_L7N_T1L_N1_QBC_AD13N_A19 | SFP2_MOD_DEF2 |
| L28 | GND-84 | GND |
| L29 | NC-37 | NC |

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| L30 | NC-38 | NC |
| L31 | GND-85 | GND |
| L32 | MGTAVTT_L-6 | GND |
| L33 | NC-8 | NC |
| L34 | NC-9 | NC |
| M1 | MGTHRXN0_227 | FMC1_DP0_M2C_N |
| M2 | MGTHRXP0_227 | FMC1_DP0_M2C_P |
| M3 | MGTAVTT_R-5 | MGTAVTT |
| M4 | GND-86 | GND |
| M5 | MGTREFCLK1N_227 | FMC1_GBTCLK0_M2C_N |
| M6 | MGTREFCLK1P_227 | FMC1_GBTCLK0_M2C_P |
| M7 | M2_0 | FPGA_M2 |
| M8 | GND-87 | GND |
| M9 | VCCINT-17 | VCCINT |
| M10 | GND-88 | GND |
| M11 | VCCINT-18 | VCCINT |
| M12 | GND-89 | GND |
| M13 | VCCINT-15 | VCCINT |
| M14 | GND-90 | GND |
| M15 | VCCINT-19 | VCCINT |
| M16 | GND-91 | GND |
| M17 | VCCINT_IO-2 | VCCINT |
| M18 | GND-92 | GND |
| M19 | VCCAUX_IO-1 | VCCAUX |
| M20 | IO_L22P_T3U_N6_DBC_AD0P_D04 | QSPI1_IO0 |
| M21 | IO_L23N_T3U_N9_I2C_SDA_65 | FPGA_I2C_SDA |
| M22 | IO_L19N_T3L_N1_DBC_AD9N_D11 | RCMII2_TXD3 |
| M23 | VCCO_65-4 | P3V3 |
| M24 | IO_L12N_T1U_N11_GC_A09_D25_65 | SFP3_MOD_DEF1 |
| M25 | IO_L11P_T1U_N8_GC_A10_D26_65 | SFP3_LED2 |
| M26 | IO_L11N_T1U_N9_GC_A11_D27_65 | SFP3_LED1 |
| M27 | IO_L7P_T1L_N0_QBC_AD13P_A18 | SFP2_MOD_DEF1 |
| M28 | GND-93 | GND |
| M29 | MGTVCCAUX_L-2 | GND |
| M30 | GND-94 | GND |
| M31 | NC-7 | NC |
| M32 | NC-10 | NC |
| M33 | GND-95 | GND |
| M34 | GND-96 | GND |
| N1 | GND-97 | GND |
| N2 | GND-98 | GND |
| N3 | MGHTTXN0_227 | FMC1_DP0_C2M_N |
| N4 | MGHTTXP0_227 | FMC1_DP0_C2M_P |
| N5 | GND-99 | GND |
| N6 | MGTAVCC_R-6 | MGTAVCC |
| N7 | DONE_0 | FPGA_DONE |
| N8 | VCCINT-38 | VCCINT |
| N9 | GND-100 | GND |
| N10 | VCCINT-12 | VCCINT |
| N11 | GND-101 | GND |
| N12 | VCCINT-20 | VCCINT |
| N13 | GND-102 | GND |
| N14 | VCCINT-10 | VCCINT |

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| N15 | GND-103 | GND |
| N16 | VCCINT-39 | VCCINT |
| N17 | GND-104 | GND |
| N18 | VCCAUX_IO-4 | VCCAUX |
| N19 | GND-105 | GND |
| N20 | VCCO_65-5 | P3V3 |
| N21 | IO_L23P_T3U_N8_I2C_SCLK_65 | FPGA_I2C_SCL |
| N22 | IO_L19P_T3L_N0_DBC_AD9P_D10 | RGMII2_TXD2 |
| N23 | IO_T1U_N12_PERSTN1_65 | SFP3_LOS |
| N24 | IO_L12P_T1U_N10_GC_A08_D24_65 | NC |
| N25 | GND-106 | GND |
| N26 | IO_L13N_T2L_N1_GC_QBC_A07_D21_65 | SFP3_MOD_DEF0 |
| N27 | IO_T2U_N12_CSI_ADV_B_65 | SFP3_TX_DISABLE |
| N28 | GND-107 | GND |
| N29 | NC-5 | NC |
| N30 | NC-6 | NC |
| N31 | MGTAVCC_L-4 | GND |
| N32 | GND-108 | GND |
| N33 | NC-14 | NC |
| N34 | NC-15 | NC |
| P1 | MGTHRXP3_226 | RxFD_12_N |
| P2 | MGTHRXP3_226 | RxFD_12_P |
| P3 | GND-109 | GND |
| P4 | GND-110 | GND |
| P5 | MGTREFCLK0N_227 | NC |
| P6 | MGTREFCLK0P_227 | NC |
| P7 | POR_OVERRIDE | NC |
| P8 | GND-48 | GND |
| P9 | VCCINT-21 | VCCINT |
| P10 | GND-111 | GND |
| P11 | VCCINT-9 | VCCINT |
| P12 | GND-112 | GND |
| P13 | VCCINT-22 | VCCINT |
| P14 | GND-113 | GND |
| P15 | VCCINT-23 | VCCINT |
| P16 | GND-114 | GND |
| P17 | VCCINT_IO-3 | VCCINT |
| P18 | GND-115 | GND |
| P19 | VCCAUX_IO-3 | VCCAUX |
| P20 | IO_L20P_T3L_N2_AD1P_D08_65 | RGMII2_TXD0 |
| P21 | IO_L20N_T3L_N3_AD1N_D09_65 | RGMII2_TXD1 |
| P22 | GND-116 | GND |
| P23 | IO_L18N_T2U_N11_AD2N_D13_65 | RGMII2_RXD0 |
| P24 | IO_L14P_T2L_N2_GC_A04_D20_65 | RGMII2_MDIO |
| P25 | IO_L14N_T2L_N3_GC_A05_D21_65 | RGMII2_TX_CLK |
| P26 | IO_L13P_T2L_N0_GC_QBC_A06_D21_65 | SFP3_TX_FAULT |
| P27 | VCCO_65-1 | P3V3 |
| P28 | GND-117 | GND |
| P29 | MGTAVCC_L-5 | GND |
| P30 | GND-118 | GND |
| P31 | NC-13 | NC |
| P32 | NC-16 | NC |
| P33 | MGTAVTT_L-7 | GND |

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| P34 | GND-119 | GND |
| R1 | GND-120 | GND |
| R2 | MGTAVTT_R-1 | MGTAVTT |
| R3 | MGTHTXN3_226 | NC |
| R4 | MGTHTXP3_226 | NC |
| R5 | GND-121 | GND |
| R6 | MGTVCCAUX_R-2 | MGTVCCAUX |
| R7 | PUDC_B_0 | NC |
| R8 | VCCINT-16 | VCCINT |
| R9 | GND-122 | GND |
| R10 | VCCINT-13 | VCCINT |
| R11 | GND-123 | GND |
| R12 | VCCINT-24 | VCCINT |
| R13 | GND-124 | GND |
| R14 | VCCINT-11 | VCCINT |
| R15 | GND-125 | GND |
| R16 | VCCINT-43 | VCCINT |
| R17 | GND-126 | GND |
| R18 | VCCINT_IO-1 | VCCINT |
| R19 | GND-127 | GND |
| R20 | VCCAUX_IO-2 | VCCAUX |
| R21 | IO_L21P_T3L_N4_AD8P_D06_65 | QSPI1_IO2 |
| R22 | IO_L21N_T3L_N5_AD8N_D07_65 | QSPI1_IO3 |
| R23 | IO_L18P_T2U_N10_AD2P_D12_65 | RGMI2_TX_CTL |
| R24 | VCCO_65-6 | P3V3 |
| R25 | IO_L17P_T2U_N8_AD10P_D14_65 | RGMI2_RXD1 |
| R26 | IO_L17N_T2U_N9_AD10N_D15_65 | RGMI2_RXD2 |
| R27 | IO_L15N_T2L_N5_AD11N_A03_D19 | RGMI2_MDC |
| R28 | GND-128 | GND |
| R29 | NC-17 | NC |
| R30 | NC-18 | NC |
| R31 | GND-129 | GND |
| R32 | MGTAVTT_L-3 | GND |
| R33 | NC-20 | NC |
| R34 | NC-21 | NC |
| T1 | MGTHRXP2_226 | RxFD_11_N |
| T2 | MGTHRXP2_226 | RxFD_11_P |
| T3 | MGTAVTT_R-2 | MGTAVTT |
| T4 | GND-130 | GND |
| T5 | MGTREFCLK1N_226 | NC |
| T6 | MGTREFCLK1P_226 | NC |
| T7 | PROGRAM_B_0 | FPGA_PROG_B |
| T8 | GND-131 | GND |
| T9 | VCCINT-25 | VCCINT |
| T10 | GND-132 | GND |
| T11 | VCCINT-6 | VCCINT |
| T12 | GND-133 | GND |
| T13 | VCCINT-26 | VCCINT |
| T14 | GND-134 | GND |
| T15 | VCCINT-1 | VCCINT |
| T16 | GND-135 | GND |
| T17 | VCCINT-37 | VCCINT |
| T18 | GND-136 | GND |

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| T19 | VCCAUX_IO-6 | VCCAUX |
| T20 | GND-1 | GND |
| T21 | VCCO_47-4 | P1V8 |
| T22 | IO_L17P_T2U_N8_AD10P_47 | VHDCI2_31_P |
| T23 | IO_L17N_T2U_N9_AD10N_47 | VHDCI2_31_N |
| T24 | IO_L16P_T2U_N6_QBC_AD3P_A00 | RGMII2_RXD3 |
| T25 | IO_L16N_T2U_N7_QBC_AD3N_A01 | RGMII2_RX_CTL |
| T26 | GND-2 | GND |
| T27 | IO_L15P_T2L_N4_AD11P_A02_D18 | RGMII2_RX_CLK |
| T28 | GND-3 | GND |
| T29 | GND-4 | GND |
| T30 | GND-5 | GND |
| T31 | NC-19 | NC |
| T32 | NC-22 | NC |
| T33 | GND-6 | GND |
| T34 | GND-7 | GND |
| U1 | GND-8 | GND |
| U2 | GND-9 | GND |
| U3 | MGTHTXN2_226 | NC |
| U4 | MGTHTXP2_226 | NC |
| U5 | GND-10 | GND |
| U6 | MGTAVCC_R-7 | MGTAVCC |
| U7 | RDWR_FCS_B_0 | QSPI0_CS_B |
| U8 | VCCAUX-3 | VCCAUX |
| U9 | TDO_0 | FPGA_TDO |
| U10 | VCCINT-27 | VCCINT |
| U11 | GNDADC | GND |
| U12 | VCCADC | ADC_VCC |
| U13 | GND-12 | GND |
| U14 | VCCINT-2 | VCCINT |
| U15 | GND-13 | GND |
| U16 | VCCINT-40 | VCCINT |
| U17 | GND-14 | GND |
| U18 | VCCINT_IO-4 | VCCINT |
| U19 | GND-15 | GND |
| U20 | VCCAUX_IO-5 | VCCAUX |
| U21 | IO_L15P_T2L_N4_AD11P_47 | NC |
| U22 | IO_L15N_T2L_N5_AD11N_47 | NC |
| U23 | GND-16 | GND |
| U24 | IO_L20P_T3L_N2_AD1P_47 | VHDCI2_29_P |
| U25 | IO_L20N_T3L_N3_AD1N_47 | VHDCI2_29_N |
| U26 | IO_L22P_T3U_N6_DBC_AD0P_47 | VHDCI2_27_P |
| U27 | IO_L22N_T3U_N7_DBC_AD0N_47 | VHDCI2_27_N |
| U28 | VCCO_47-1 | P1V8 |
| U29 | IO_T3U_N12_47 | NC |
| U30 | GND-17 | GND |
| U31 | GND-18 | GND |
| U32 | GND-19 | GND |
| U33 | GND-20 | GND |
| U34 | IO_L23P_T3U_N8_48 | VHDCI1_3_P |
| V1 | MGTHRXN1_226 | RxFD_10_N |
| V2 | MGTHRXP1_226 | RxFD_10_P |
| V3 | GND-21 | GND |

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| V4 | GND-22 | GND |
| V5 | MGTREFCLK0N_226 | CDR_CLK_CLEAN2_N |
| V6 | MGTREFCLK0P_226 | CDR_CLK_CLEAN2_P |
| V7 | INIT_B_0 | FPGA_INIT_B |
| V8 | GND-66 | GND |
| V9 | TDI_0 | FPGA_TDI |
| V10 | GND-23 | GND |
| V11 | VREFN | GND |
| V12 | VP | SYSMON_VP_R |
| V13 | VCCINT-28 | VCCINT |
| V14 | GND-24 | GND |
| V15 | VCCINT-3 | VCCINT |
| V16 | GND-25 | GND |
| V17 | VCCBRAM-3 | VCCBRAM |
| V18 | GND-26 | GND |
| V19 | VCCAUX_IO-11 | VCCAUX |
| V20 | GND-27 | GND |
| V21 | IO_L18P_T2U_N10_AD2P_47 | VHDCI2_30_P |
| V22 | IO_L16P_T2U_N6_QBC_AD3P_47 | NC |
| V23 | IO_L16N_T2U_N7_QBC_AD3N_47 | NC |
| V24 | VREF_47 | FMC1_VREF_A_M2C |
| V25 | VCCO_47-2 | P1V8 |
| V26 | IO_L24P_T3U_N10_47 | VHDCI2_25_P |
| V27 | IO_L19P_T3L_N0_DBC_AD9P_47 | VHDCI2_2_P |
| V28 | IO_L19N_T3L_N1_DBC_AD9N_47 | VHDCI2_2_N |
| V29 | IO_L23P_T3U_N8_47 | VHDCI2_26_P |
| V30 | GND-28 | GND |
| V31 | IO_L24P_T3U_N10_48 | VHDCI1_32_P |
| V32 | IO_T3U_N12_48 | NC |
| V33 | IO_L21P_T3L_N4_AD8P_48 | VHDCI1_5_P |
| V34 | IO_L23N_T3U_N9_48 | VHDCI1_3_N |
| W1 | GND-29 | GND |
| W2 | MGTAVTT_R-3 | MGTAVTT |
| W3 | MGTHTXN1_226 | NC |
| W4 | MGTHTXP1_226 | NC |
| W5 | GND-30 | GND |
| W6 | MGTAVCC_R-8 | MGTAVCC |
| W7 | CFGBVS_0 | P3V3 |
| W8 | VCCAUX-4 | VCCAUX |
| W9 | TMS_0 | FPGA_TMS |
| W10 | VCCINT-29 | VCCINT |
| W11 | VN | SYSMON_VN_R |
| W12 | VREFP | NC |
| W13 | GND-32 | GND |
| W14 | VCCINT-30 | VCCINT |
| W15 | GND-33 | GND |
| W16 | VCCINT-41 | VCCINT |
| W17 | GND-34 | GND |
| W18 | VCCINT_IO-5 | VCCINT |
| W19 | GND-35 | GND |
| W20 | VCCAUX_IO-7 | VCCAUX |
| W21 | IO_L18N_T2U_N11_AD2N_47 | VHDCI2_30_N |
| W22 | VCCO_47-7 | P1V8 |

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| W23 | IO_L13P_T2L_N0_GC_QBC_47 | NC |
| W24 | IO_L13N_T2L_N1_GC_QBC_47 | NC |
| W25 | IO_L14P_T2L_N2_GC_47 | CDR_CLK_CLEAN1_P |
| W26 | IO_L24N_T3U_N11_47 | VHDCI2_25_N |
| W27 | GND-36 | GND |
| W28 | IO_L21P_T3L_N4_AD8P_47 | VHDCI2_28_P |
| W29 | IO_L23N_T3U_N9_47 | VHDCI2_26_N |
| W30 | IO_L20P_T3L_N2_AD1P_48 | VHDCI1_6_P |
| W31 | IO_L24N_T3U_N11_48 | VHDCI1_32_N |
| W32 | VCCO_48-3 | P1V8 |
| W33 | IO_L19P_T3L_N0_DBC_AD9P_48 | VHDCI1_7_P |
| W34 | IO_L21N_T3L_N5_AD8N_48 | VHDCI1_5_N |
| Y1 | MGTHRXP0_226 | RxFD_9_N |
| Y2 | MGTHRXP0_226 | RxFD_9_P |
| Y3 | MGTAVTT_R-4 | MGTAVTT |
| Y4 | GND-37 | GND |
| Y5 | MGTREFCLK1N_225 | NC |
| Y6 | MGTREFCLK1P_225 | NC |
| Y7 | D03_0 | QSPI0_IO3 |
| Y8 | GND-11 | GND |
| Y9 | VCCO_0-1 | P3V3 |
| Y10 | GND-38 | GND |
| Y11 | DXN | DXN |
| Y12 | DXP | DXP |
| Y13 | VCCINT-8 | VCCINT |
| Y14 | GND-39 | GND |
| Y15 | VCCINT-31 | VCCINT |
| Y16 | GND-40 | GND |
| Y17 | VCCBRAM-1 | VCCBRAM |
| Y18 | GND-41 | GND |
| Y19 | VCCAUX_IO-10 | VCCAUX |
| Y20 | GND-42 | GND |
| Y21 | IO_T2U_N12_47 | NC |
| Y22 | IO_T1U_N12_47 | NC |
| Y23 | IO_L11P_T1U_N8_GC_47 | VHDCI2_32_P |
| Y24 | GND-43 | GND |
| Y25 | IO_L14N_T2L_N3_GC_47 | CDR_CLK_CLEAN1_N |
| Y26 | IO_L1P_T0L_N0_DBC_47 | NC |
| Y27 | IO_L1N_T0L_N1_DBC_47 | NC |
| Y28 | IO_L21N_T3L_N5_AD8N_47 | VHDCI2_28_N |
| Y29 | VCCO_48-4 | P1V8 |
| Y30 | IO_L20N_T3L_N3_AD1N_48 | VHDCI1_6_N |
| Y31 | IO_L22P_T3U_N6_DBC_AD0P_48 | VHDCI1_4_P |
| Y32 | IO_L22N_T3U_N7_DBC_AD0N_48 | VHDCI1_4_N |
| Y33 | IO_L19N_T3L_N1_DBC_AD9N_48 | VHDCI1_7_N |
| Y34 | GND-44 | GND |