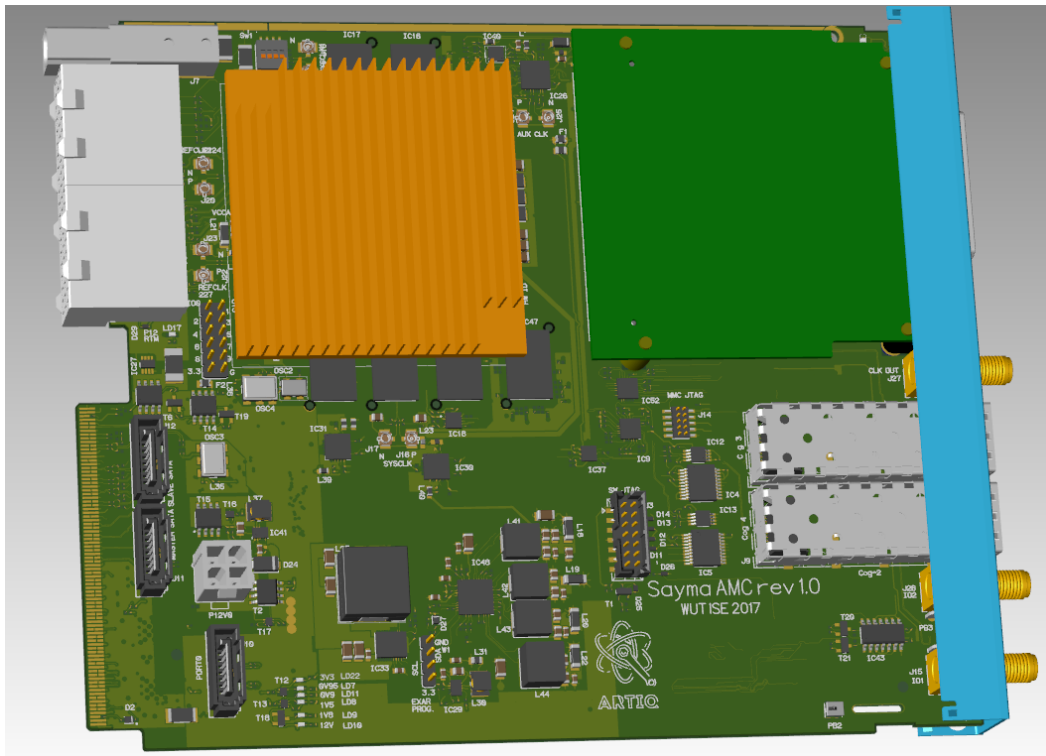


● SAYMA AMC  
● specification



v1.0(05.2017)

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## 1 Project description

The Sayma AMC is a Advanced Mezzanine Card carrier board to carry FMC cards and connect RTM modules.

## 2 Functional specifications

### Programmable resources:

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

### Memory:

- 512Mb DDR3 SDRAM (32-bit interface), 800MHz (clock)
- 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:
  - RTM x16
  - Fat\_Pipe1 x2
  - SFP x2
- Port 0 – possibility connected to SATA
- RTM connector compatible with Sayma RTM module

### 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
- UFL 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

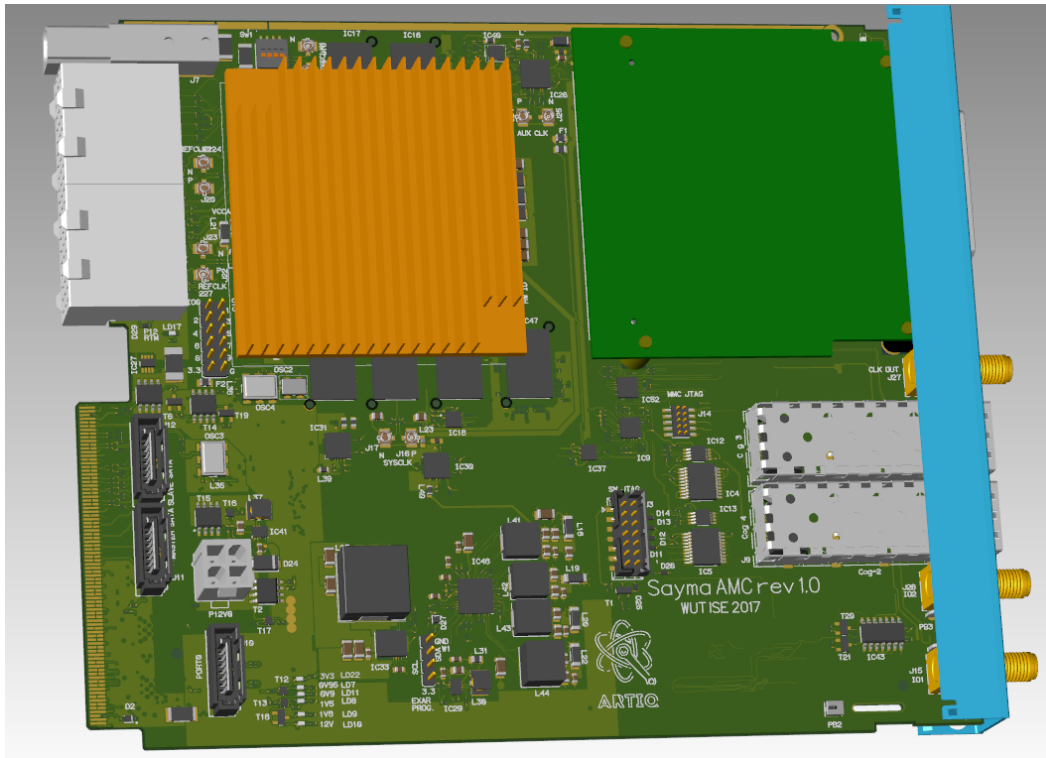


Figure 1: Top view

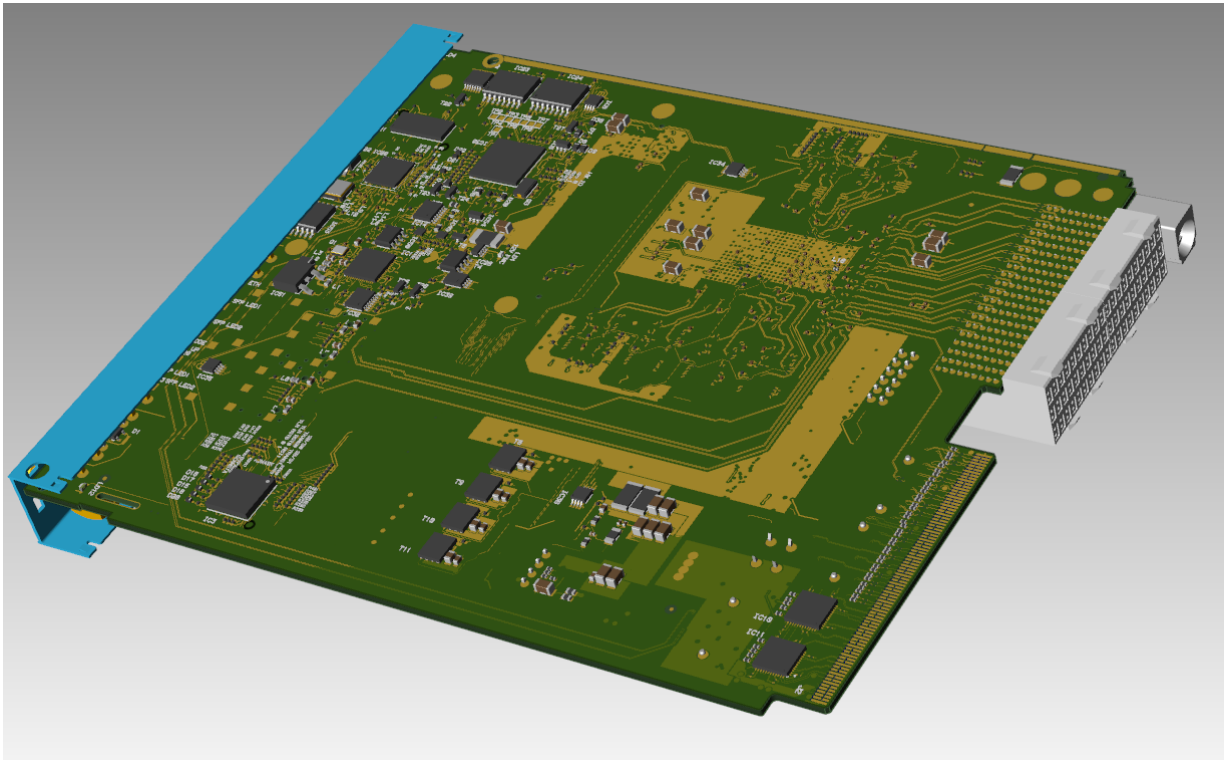


Figure 2: Bottom view

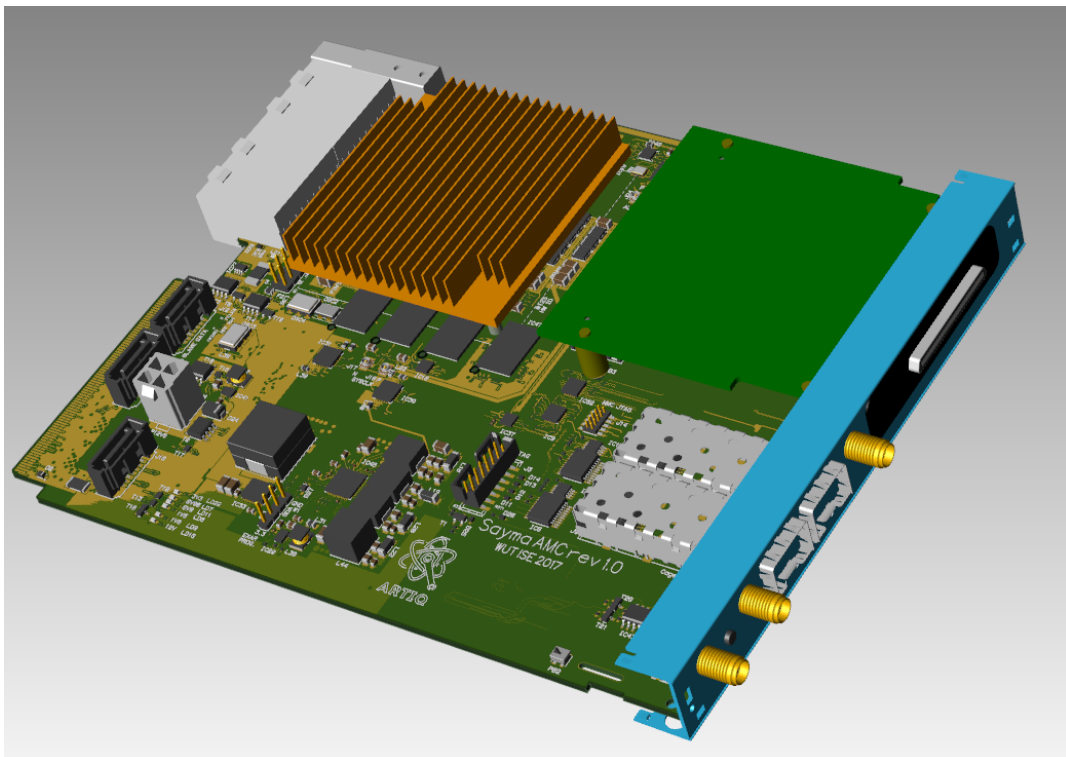


Figure 3: Front view

## 4 Routing

This section contain general bloch scheme of SAYMA AMC board and I2C map with addresses. General Block Scheme -figure 4 shows more importantd 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.

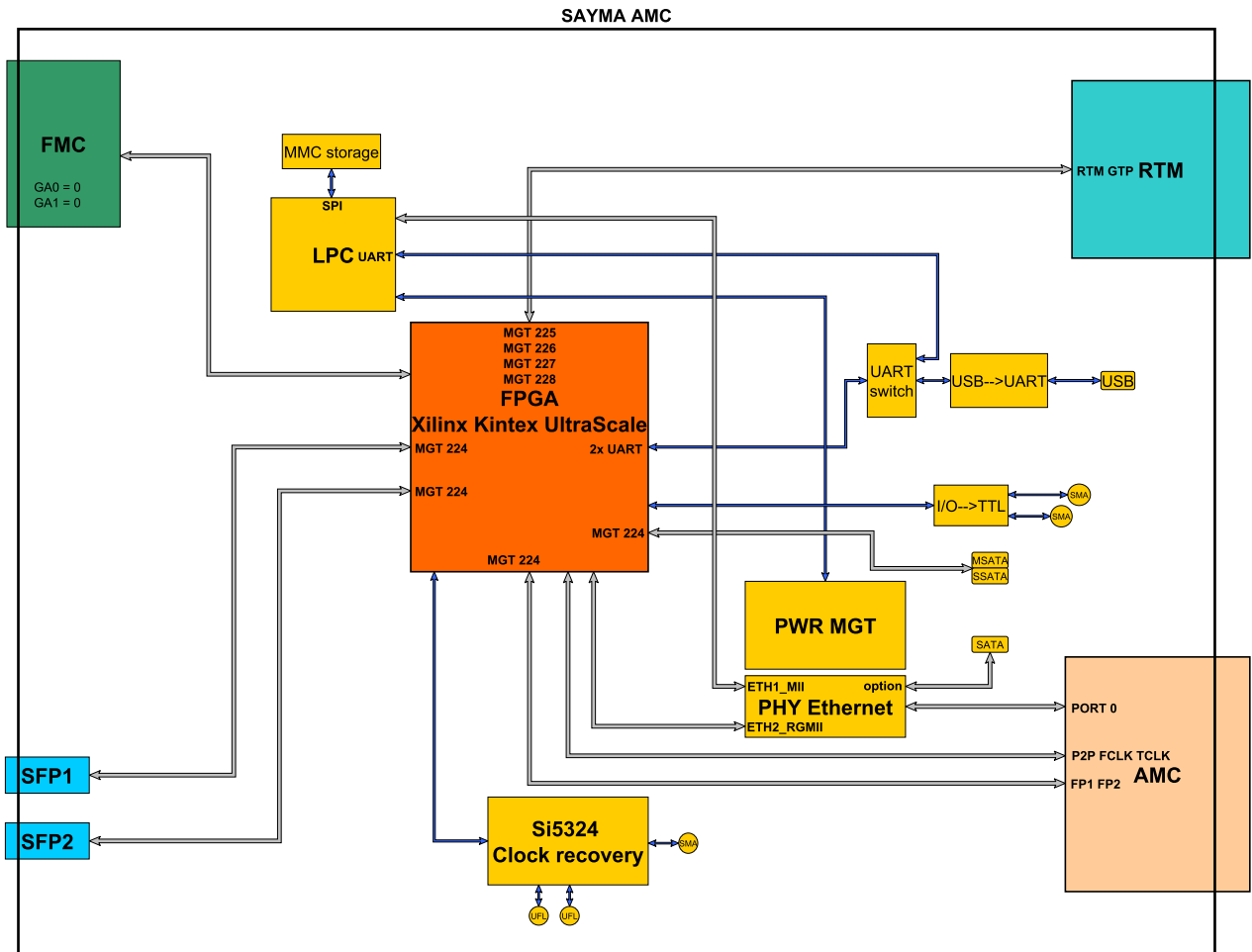


Figure 4: General Block Scheme



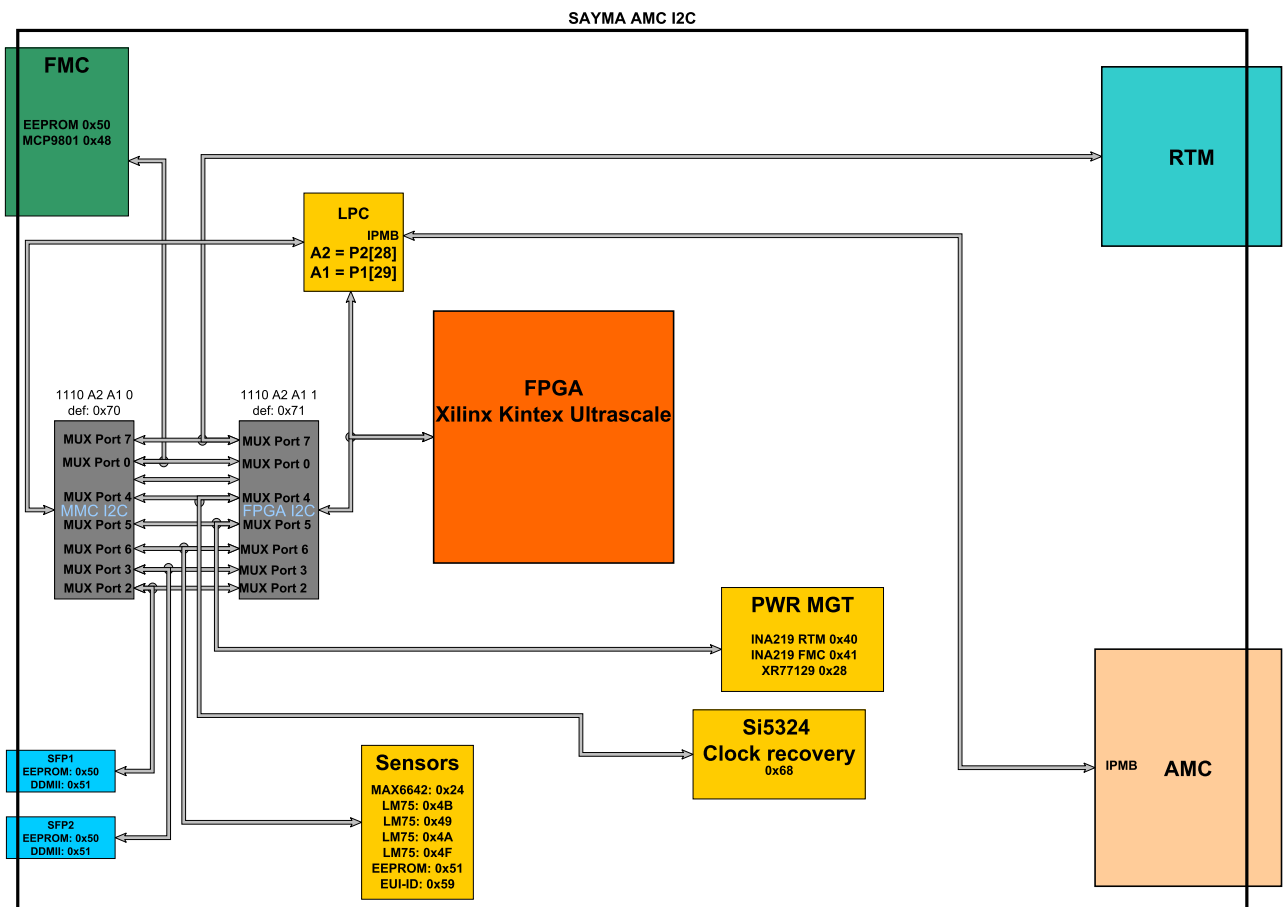


Figure 5: I2C

## 5 Clocking

This section describes how and where clock signals are routed.

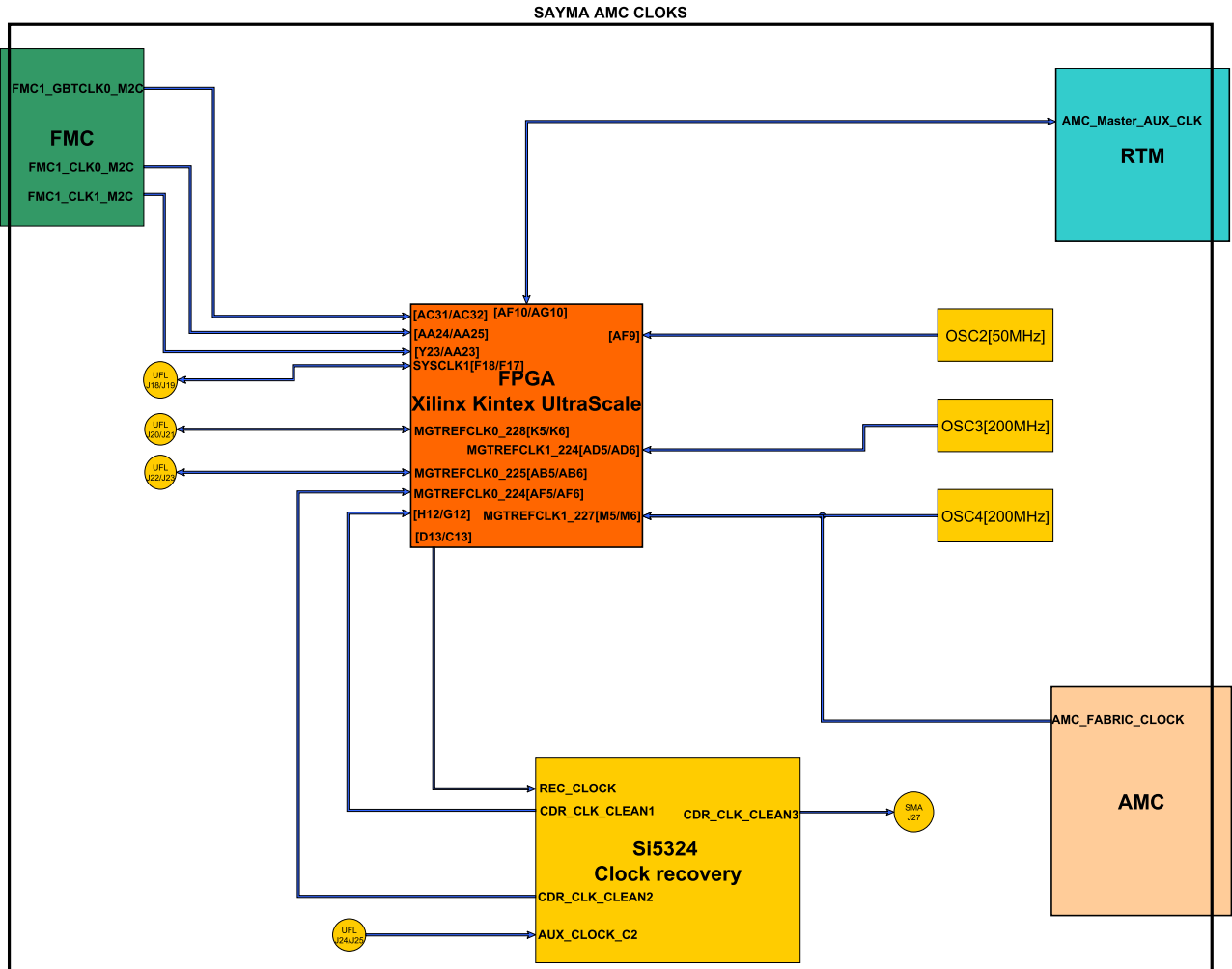


Figure 6: Clocks

## 6 Signal tables

In this section the more important signals tables are presented. The total signal table is in Appendix section.

SFP1		
MGTHTXN0_224	AN3	SFP1TX_N
MGTHTXP0_224	AN4	SFP1TX_P
MGTHRNX0_224	AP1	SFP1RX_N
MGTHRXP0_224	AP2	SFP1RX_P
IO_L14N_T2L_N3_GC_64	AG9	SFP1_LED1
IO_T2U_N12_64	AJ10	SFP1_LED2
IO_L3P_T0L_N4_AD15P_64	AM11	SFP1_LOS
IO_L2N_T0L_N3_64	AP13	SFP1_MOD_DEF2
IO_L2P_T0L_N2_64	AN13	SFP1_MOD_DEF1
IO_L3N_T0L_N5_AD15N_64	AN11	SFP1_MOD_DEF0
IO_T0U_N12_64	AK11	SFP1_RATE_SELECT
IO_L1P_T0L_N0_DBC_64	AP11	SFP1_TX_DISABLE
IO_L1N_T0L_N1_DBC_64	AP10	SFP1_TX_FAULT

SFP2		
MGTHTXN1_224	AM5	SFP2TX_N
MGTHTXP1_224	AM6	SFP2TX_P
MGTHRNX1_224	AM1	SFP2RX_N
MGTHRXP1_224	AM2	SFP2RX_P
IO_L8N_T1L_N3_AD5N_64	AJ13	SFP2_LED1
IO_L7P_T1L_N0_QBC_AD13P_64	AE13	SFP2_LED2
IO_L7N_T1L_N1_QBC_AD13N_64	AF13	SFP2_LOS
IO_L5P_T0U_N8_AD14P_64	AK12	SFP2_MOD_DEF2
IO_L6N_T0U_N11_AD6N_64	AL13	SFP2_MOD_DEF1
IO_L6P_T0U_N10_AD6P_64	AK13	SFP2_MOD_DEF0
IO_L5N_T0U_N9_AD14N_64	AL12	SFP2_RATE_SELECT
IO_L4P_T0U_N6_DBC_AD7P_64	AM12	SFP2_TX_DISABLE
IO_L4N_T0U_N7_DBC_AD7N_64	AN12	SFP2_TX_FAULT

FMC1		
IO_L12P_T1U_N10_GC_47	AA24	FMC1_CLK0_M2C_P
IO_L12N_T1U_N11_GC_47	AA25	FMC1_CLK0_M2C_N
IO_L11P_T1U_N8_GC_47	Y23	FMC1_CLK1_M2C_P
IO_L11N_T1U_N9_GC_47	AA23	FMC1_CLK1_M2C_N
IO_L12P_T1U_N10_GC_48	AC31	FMC1_GBTCLK0_M2C_P
IO_L12N_T1U_N11_GC_48	AC32	FMC1_GBTCLK0_M2C_N
IO_L1P_T0L_N0_DBC_48	AE27	FMC1_DP0_M2C_P
IO_L1N_T0L_N1_DBC_48	AF27	FMC1_DP0_M2C_N
IO_L2P_T0L_N2_48	AE28	FMC1_DP0_C2M_P
IO_L2N_T0L_N3_48	AF28	FMC1_DP0_C2M_N
IO_L13P_T2L_N0_GC_QBC_48	AA32	FMC1_LA00_CC_P
IO_L13N_T2L_N1_GC_QBC_48	AB32	FMC1_LA00_CC_N

IO_L14P_T2L_N2_GC_48	AB30	FMC1_LA01_CC_P
IO_L14N_T2L_N3_GC_48	AB31	FMC1_LA01_CC_N
IO_L8P_T1L_N2_AD5P_48	AF33	FMC1_LA02_P
IO_L8N_T1L_N3_AD5N_48	AG34	FMC1_LA02_N
IO_L21P_T3L_N4_AD8P_48	V33	FMC1_LA03_P
IO_L21N_T3L_N5_AD8N_48	W34	FMC1_LA03_N
IO_L7P_T1L_N0_QBC_AD13P_48	AG31	FMC1_LA04_P
IO_L7N_T1L_N1_QBC_AD13N_48	AG32	FMC1_LA04_N
IO_L10P_T1U_N6_QBC_AD4P_48	AE33	FMC1_LA05_P
IO_L10N_T1U_N7_QBC_AD4N_48	AF34	FMC1_LA05_N
IO_L15P_T2L_N4_AD11P_48	AC34	FMC1_LA06_P
IO_L15N_T2L_N5_AD11N_48	AD34	FMC1_LA06_N
IO_L18P_T2U_N10_AD2P_48	AC33	FMC1_LA07_P
IO_L18N_T2U_N11_AD2N_48	AD33	FMC1_LA07_N
IO_L11P_T1U_N8_GC_48	AD30	FMC1_LA08_P
IO_L11N_T1U_N9_GC_48	AD31	FMC1_LA08_N
IO_L9P_T1L_N4_AD12P_48	AE32	FMC1_LA09_P
IO_L9N_T1L_N5_AD12N_48	AF32	FMC1_LA09_N
IO_L17P_T2U_N8_AD10P_48	AA34	FMC1_LA10_P
IO_L17N_T2U_N9_AD10N_48	AB34	FMC1_LA10_N
IO_L16P_T2U_N6_QBC_AD3P_48	AA29	FMC1_LA11_P
IO_L16N_T2U_N7_QBC_AD3N_48	AB29	FMC1_LA11_N
IO_L24P_T3U_N10_48	V31	FMC1_LA12_P
IO_L24N_T3U_N11_48	W31	FMC1_LA12_N
IO_L19P_T3L_N0_DBC_AD9P_48	W33	FMC1_LA13_P
IO_L19N_T3L_N1_DBC_AD9N_48	Y33	FMC1_LA13_N
IO_L23P_T3U_N8_48	U34	FMC1_LA14_P
IO_L23N_T3U_N9_48	V34	FMC1_LA14_N
IO_L22P_T3U_N6_DBC_AD0P_48	Y31	FMC1_LA15_P
IO_L22N_T3U_N7_DBC_AD0N_48	Y32	FMC1_LA15_N
IO_L20P_T3L_N2_AD1P_48	W30	FMC1_LA16_P
IO_L20N_T3L_N3_AD1N_48	Y30	FMC1_LA16_N
IO_L13P_T2L_N0_GC_QBC_47	W23	FMC1_LA17_CC_P
IO_L13N_T2L_N1_GC_QBC_47	W24	FMC1_LA17_CC_N
IO_L14P_T2L_N2_GC_47	W25	FMC1_LA18_CC_P
IO_L14N_T2L_N3_GC_47	Y25	FMC1_LA18_CC_N
IO_L16P_T2U_N6_QBC_AD3P_47	V22	FMC1_LA19_P
IO_L16N_T2U_N7_QBC_AD3N_47	V23	FMC1_LA19_N
IO_L17P_T2U_N8_AD10P_47	T22	FMC1_LA20_P
IO_L17N_T2U_N9_AD10N_47	T23	FMC1_LA20_N
IO_L18P_T2U_N10_AD2P_47	V21	FMC1_LA21_P
IO_L18N_T2U_N11_AD2N_47	W21	FMC1_LA21_N
IO_L15P_T2L_N4_AD11P_47	U21	FMC1_LA22_P
IO_L15N_T2L_N5_AD11N_47	U22	FMC1_LA22_N
IO_L10P_T1U_N6_QBC_AD4P_47	AB21	FMC1_LA23_P
IO_L10N_T1U_N7_QBC_AD4N_47	AC21	FMC1_LA23_N
IO_L8P_T1L_N2_AD5P_47	AC22	FMC1_LA24_P
IO_L8N_T1L_N3_AD5N_47	AC23	FMC1_LA24_N
IO_L9P_T1L_N4_AD12P_47	AA20	FMC1_LA25_P
IO_L9N_T1L_N5_AD12N_47	AB20	FMC1_LA25_N
IO_L7P_T1L_N0_QBC_AD13P_47	AA22	FMC1_LA26_P
IO_L7N_T1L_N1_QBC_AD13N_47	AB22	FMC1_LA26_N
IO_L6P_T0U_N10_AD6P_47	AB25	FMC1_LA27_P

IO_L6N_T0U_N11_AD6N_47	AB26	FMC1_LA27_N
IO_L24P_T3U_N10_47	V26	FMC1_LA28_P
IO_L24N_T3U_N11_47	W26	FMC1_LA28_N
IO_L23P_T3U_N8_47	V29	FMC1_LA29_P
IO_L23N_T3U_N9_47	W29	FMC1_LA29_N
IO_L22P_T3U_N6_DBC_AD0P_47	U26	FMC1_LA30_P
IO_L22N_T3U_N7_DBC_AD0N_47	U27	FMC1_LA30_N
IO_L21P_T3L_N4_AD8P_47	W28	FMC1_LA31_P
IO_L21N_T3L_N5_AD8N_47	Y28	FMC1_LA31_N
IO_L20P_T3L_N2_AD1P_47	U24	FMC1_LA32_P
IO_L20N_T3L_N3_AD1N_47	U25	FMC1_LA32_N
IO_L19P_T3L_N0_DBC_AD9P_47	V27	FMC1_LA33_P
IO_L19N_T3L_N1_DBC_AD9N_47	V28	FMC1_LA33_N
VREF_48	AA30	FMC1_VREF_A_M2C
VREF_47	V24	FMC1_VREF_A_M2C

AMC		
FP1		
MGTHTXN2_224	AL3	TX4C_N
MGTHTXP2_224	AL4	TX4C_P
MGTHRXN2_224	AK1	RX4_N
MGTHRXP2_224	AK2	RX4_P
MGTHTXN3_224	AK5	TX5C_N
MGTHTXP3_224	AK6	TX5C_P
MGTHRXN3_224	AJ3	RX5_N
MGTHRXP3_224	AJ4	RX5_P
IO_L13N_T2L_N1_GC_QBC_45	AH17	TXC6_N
IO_L13P_T2L_N0_GC_QBC_45	AH18	TXC6_P
IO_L14N_T2L_N3_GC_45	AJ16	RXC6_N
IO_L14P_T2L_N2_GC_45	AH16	RXC6_P
IO_L6N_T0U_N11_AD6N_45	AP15	TXC7_N
IO_L6P_T0U_N10_AD6P_45	AP16	TXC7_P
IO_L7N_T1L_N1_QBC_AD13N_45	AM14	RXC7_N
IO_L7P_T1L_N0_QBC_AD13P_45	AL14	RXC7_P
FP2		
IO_L17N_T2U_N9_AD10N_66	K12	TXC8_N
IO_L17P_T2U_N8_AD10P_66	L12	TXC8_P
IO_L18N_T2U_N11_AD2N_66	H13	RXC8_N
IO_L18P_T2U_N10_AD2P_66	J13	RXC8_P
IO_L15P_T2L_N4_AD11P_66	K11	TXC9_N
IO_L15N_T2L_N5_AD11N_66	J11	TXC9_P
IO_L16N_T2U_N7_QBC_AD3N_66	K13	RXC9_N
IO_L16P_T2U_N6_QBC_AD3P_66	L13	RXC9_P
IO_L4N_T0U_N7_DBC_AD7N_45	AN17	TXC10_N
IO_L4P_T0U_N6_DBC_AD7P_45	AN18	TXC10_P
IO_L5N_T0U_N9_AD14N_45	AM15	RXC10_N
IO_L5P_T0U_N8_AD14P_45	AM16	RXC10_P
IO_L2N_T0L_N3_45	AP18	TXC11_N
IO_L2P_T0L_N2_45	AN19	TXC11_P
IO_L3N_T0L_N5_AD15N_45	AN16	RXC11_N
IO_L3P_T0L_N4_AD15P_45	AM17	RXC11_P

<b>P2P</b>		
IO_L4N_T0U_N7_DBC_AD7N_47	AC27	TXC12_N
IO_L4P_T0U_N6_DBC_AD7P_47	AC26	TXC12_P
IO_L5N_T0U_N9_AD14N_47	AB27	RXC12_N
IO_L5P_T0U_N8_AD14P_47	AA27	RXC12_P
IO_L2N_T0L_N3_47	AD26	TXC13_N
IO_L2P_T0L_N2_47	AD25	TXC13_P
IO_L3N_T0L_N5_AD15N_47	AC24	RXC13_N
IO_L3P_T0L_N4_AD15P_47	AB24	RXC13_P
IO_L5N_T0U_N9_AD14N_48	AE30	TXC14_N
IO_L5P_T0U_N8_AD14P_48	AD29	TXC14_P
IO_L6N_T0U_N11_AD6N_48	AG30	RXC14_N
IO_L6P_T0U_N10_AD6P_48	AF30	RXC14_P
IO_L3N_T0L_N5_AD15N_48	AD28	TXC15_N
IO_L3P_T0L_N4_AD15P_48	AC28	TXC15_P
IO_L4N_T0U_N7_DBC_AD7N_48	AG29	RXC15_N
IO_L4P_T0U_N6_DBC_AD7P_48	AF29	RXC15_P

<b>RTM</b>		
MGTHTXP2_228	C4	GTP1TXC_P
MGTHRXN2_228	B1	GTP1RX_N
MGTHRXP2_228	B2	GTP1RX_P
MGTHTXN1_228	D5	GTP2TXC_N
MGTHTXP1_228	D6	GTP2TXC_P
MGTHRXN1_228	D1	GTP2RX_N
MGTHRXP1_228	D2	GTP2RX_P
MGTHTXN0_228	F5	GTP3TXC_N
MGTHTXP0_228	F6	GTP3TXC_P
MGTHRXN0_228	E3	GTP3RX_N
MGTHRXP0_228	E4	GTP3RX_P
MGTHTXN3_227	G3	GTP4TXC_N
MGTHTXP3_227	G4	GTP4TXC_P
MGTHRXN3_227	F1	GTP4RX_N
MGTHRXP3_227	F2	GTP4RX_P
MGTHTXN2_227	J3	GTP5TXC_N
MGTHTXP2_227	J4	GTP5TXC_P
MGTHRXN2_227	H1	GTP5RX_N
MGTHRXP2_227	H2	GTP5RX_P
MGTHTXN1_227	L3	GTP6TXC_N
MGTHTXP1_227	L4	GTP6TXC_P
MGTHRXN1_227	K1	GTP6RX_N
MGTHRXP1_227	K2	GTP6RX_P
MGTHTXN0_227	N3	GTP7TXC_N
MGTHTXP0_227	N4	GTP7TXC_P
MGTHRXN0_227	M1	GTP7RX_N
MGTHRXP0_227	M2	GTP7RX_P
MGTHTXN3_226	R3	GTP8TXC_N
MGTHTXP3_226	R4	GTP8TXC_P
MGTHRXN3_226	P1	GTP8RX_N
MGTHRXP3_226	P2	GTP8RX_P
MGTHTXN2_226	U3	GTP9TXC_N
MGTHTXP2_226	U4	GTP9TXC_P

MGTHRXN2_226	T1	GTP9RX_N
MGTHRXP2_226	T2	GTP9RX_P
MGTHTXN1_226	W3	GTP10TXC_N
MGTHTXP1_226	W4	GTP10TXC_P
MGTHRXN1_226	V1	GTP10RX_N
MGTHRXP1_226	V2	GTP10RX_P
MGTHTXN0_226	AA3	GTP11TXC_N
MGTHTXP0_226	AA4	GTP11TXC_P
MGTHTXN3_225	AC3	GTP12TXC_N
MGTHTXP3_225	AC4	GTP12TXC_P
MGTHRXN3_225	AB1	GTP12RX_N
MGTHRXP3_225	AB2	GTP12RX_P
MGTHTXN2_225	AE3	GTP13TXC_N
MGTHTXP2_225	AE4	GTP13TXC_P
MGTHRXN2_225	AD1	GTP13RX_N
MGTHRXP2_225	AD2	GTP13RX_P
MGTHTXN1_225	AG3	GTP14TXC_N
MGTHTXP1_225	AG4	GTP14TXC_P
MGTHRXN1_225	AF1	GTP14RX_N
MGTHRXP1_225	AF2	GTP14RX_P
MGTHTXN0_225	AH5	GTP15TXC_N
MGTHTXP0_225	AH6	GTP15TXC_P
MGTHRXN0_225	AH1	GTP15RX_N
MGTHRXP0_225	AH2	GTP15RX_P

## A Appendix

FPGA signal	FPGA ball	Signal on the board
CCLK_0	AA9	FPGA_CCLK
CFGBVS_0	W7	P3V3
D00_MOSI_0	AC7	QSPI0_IO0
D01_DIN_0	AB7	QSPI0_IO1
D02_0	AA7	QSPI0_IO2
D03_0	Y7	QSPI0_IO3
DONE_0	N7	FPGA_DONE
DXN	Y11	DXN
DXP	Y12	DXP
GND-1	A2	GND
GND-1	T20	GND
GND-10	A32	GND
GND-10	U5	GND
GND-100	AJ1	GND
GND-100	N9	GND
GND-101	AJ2	GND
GND-101	N11	GND
GND-102	AJ5	GND
GND-102	N13	GND
GND-103	AJ7	GND
GND-103	N15	GND
GND-104	AJ17	GND
GND-104	N17	GND
GND-105	AJ27	GND
GND-105	N19	GND
GND-106	AK3	GND
GND-106	N25	GND
GND-107	AK4	GND
GND-107	N28	GND
GND-108	AK7	GND
GND-108	N32	GND
GND-109	AK14	GND
GND-109	P3	GND
GND-11	B3	GND
GND-11	Y8	GND
GND-110	AK24	GND
GND-110	P4	GND
GND-111	AK34	GND
GND-111	P10	GND
GND-112	AL1	GND
GND-112	P12	GND
GND-113	AL5	GND
GND-113	P14	GND
GND-114	AL7	GND
GND-114	P16	GND
GND-115	AL11	GND
GND-115	P18	GND
GND-116	AL21	GND
GND-116	P22	GND



GND-117	AL31	GND
GND-117	P28	GND
GND-118	AM4	GND
GND-118	P30	GND
GND-119	AM7	GND
GND-119	P34	GND
GND-12	B4	GND
GND-12	U13	GND
GND-120	AM8	GND
GND-120	R1	GND
GND-121	AM18	GND
GND-121	R5	GND
GND-122	AM28	GND
GND-122	R9	GND
GND-123	AN1	GND
GND-123	R11	GND
GND-124	AN2	GND
GND-124	R13	GND
GND-125	AN5	GND
GND-125	R15	GND
GND-126	AN7	GND
GND-126	R17	GND
GND-127	AN15	GND
GND-127	R19	GND
GND-128	AN25	GND
GND-128	R28	GND
GND-129	AP3	GND
GND-129	R31	GND
GND-13	B7	GND
GND-13	U15	GND
GND-130	AP4	GND
GND-130	T4	GND
GND-131	AP7	GND
GND-131	T8	GND
GND-132	AP12	GND
GND-132	T10	GND
GND-133	AP22	GND
GND-133	T12	GND
GND-134	AP32	GND
GND-134	T14	GND
GND-135	T16	GND
GND-136	T18	GND
GND-14	B8	GND
GND-14	U17	GND
GND-15	B18	GND
GND-15	U19	GND
GND-16	B28	GND
GND-16	U23	GND
GND-17	B30	GND
GND-17	U30	GND
GND-18	B33	GND
GND-18	U31	GND
GND-19	B34	GND

GND-19	U32	GND
GND-2	A1	GND
GND-2	T26	GND
GND-20	C1	GND
GND-20	U33	GND
GND-21	C5	GND
GND-21	V3	GND
GND-22	C7	GND
GND-22	V4	GND
GND-23	C15	GND
GND-23	V10	GND
GND-24	C25	GND
GND-24	V14	GND
GND-25	C30	GND
GND-25	V16	GND
GND-26	C31	GND
GND-26	V18	GND
GND-27	D4	GND
GND-27	V20	GND
GND-28	D7	GND
GND-28	V30	GND
GND-29	D12	GND
GND-29	W1	GND
GND-3	A5	GND
GND-3	T28	GND
GND-30	D22	GND
GND-30	W5	GND
GND-31	AB8	GND
GND-31	D30	GND
GND-32	D34	GND
GND-32	W13	GND
GND-33	E1	GND
GND-33	W15	GND
GND-34	E2	GND
GND-34	W17	GND
GND-35	E5	GND
GND-35	W19	GND
GND-36	E7	GND
GND-36	W27	GND
GND-37	E9	GND
GND-37	Y4	GND
GND-38	E19	GND
GND-38	Y10	GND
GND-39	E29	GND
GND-39	Y14	GND
GND-4	A6	GND
GND-4	T29	GND
GND-40	E30	GND
GND-40	Y16	GND
GND-41	E32	GND
GND-41	Y18	GND
GND-42	F3	GND
GND-42	Y20	GND

GND-43	F4	GND
GND-43	Y24	GND
GND-44	F7	GND
GND-44	Y34	GND
GND-45	AA1	GND
GND-45	F16	GND
GND-46	AA2	GND
GND-46	F26	GND
GND-47	AA5	GND
GND-47	F28	GND
GND-48	F29	GND
GND-48	P8	GND
GND-49	AA11	GND
GND-49	F33	GND
GND-5	A7	GND
GND-5	T30	GND
GND-50	AA13	GND
GND-50	F34	GND
GND-51	AA15	GND
GND-51	G1	GND
GND-52	AA17	GND
GND-52	G5	GND
GND-53	AA19	GND
GND-53	G7	GND
GND-54	AA21	GND
GND-54	G13	GND
GND-55	AA31	GND
GND-55	G23	GND
GND-56	AB3	GND
GND-56	G28	GND
GND-57	AB4	GND
GND-57	G31	GND
GND-58	AB10	GND
GND-58	H4	GND
GND-59	AB12	GND
GND-59	H7	GND
GND-6	A11	GND
GND-6	T33	GND
GND-60	AB14	GND
GND-60	H10	GND
GND-61	AB16	GND
GND-61	H20	GND
GND-62	AB18	GND
GND-62	H28	GND
GND-63	AB28	GND
GND-63	H30	GND
GND-64	AC1	GND
GND-64	H34	GND
GND-65	AC5	GND
GND-65	J1	GND
GND-66	J2	GND
GND-66	V8	GND
GND-67	AC11	GND

GND-67	J5	GND
GND-68	AC13	GND
GND-68	J7	GND
GND-69	AC15	GND
GND-69	J17	GND
GND-7	A21	GND
GND-7	T34	GND
GND-70	AC17	GND
GND-70	J27	GND
GND-71	AC19	GND
GND-71	J28	GND
GND-72	AC25	GND
GND-72	J32	GND
GND-73	AD4	GND
GND-73	K3	GND
GND-74	AD12	GND
GND-74	K4	GND
GND-75	AD22	GND
GND-75	K14	GND
GND-76	AD32	GND
GND-76	K24	GND
GND-77	AE1	GND
GND-77	K28	GND
GND-78	AE2	GND
GND-78	K30	GND
GND-79	AE5	GND
GND-79	K34	GND
GND-8	A30	GND
GND-8	U1	GND
GND-80	AE7	GND
GND-80	L1	GND
GND-81	AE9	GND
GND-81	L5	GND
GND-82	AE19	GND
GND-82	L11	GND
GND-83	AE29	GND
GND-83	L21	GND
GND-84	AF3	GND
GND-84	L28	GND
GND-85	AF4	GND
GND-85	L31	GND
GND-86	AF7	GND
GND-86	M4	GND
GND-87	AF16	GND
GND-87	M8	GND
GND-88	AF26	GND
GND-88	M10	GND
GND-89	AG1	GND
GND-89	M12	GND
GND-9	A31	GND
GND-9	U2	GND
GND-90	AG5	GND
GND-90	M14	GND

GND-91	AG7	GND
GND-91	M16	GND
GND-92	AG13	GND
GND-92	M18	GND
GND-93	AG23	GND
GND-93	M28	GND
GND-94	AG33	GND
GND-94	M30	GND
GND-95	AH4	GND
GND-95	M33	GND
GND-96	AH7	GND
GND-96	M34	GND
GND-97	AH10	GND
GND-97	N1	GND
GND-98	AH20	GND
GND-98	N2	GND
GND-99	AH30	GND
GND-99	N5	GND
GNDADC	U11	GND
INIT_B_0	V7	FPGA_INIT_B
IO_L10N_T1U_N7_QBC_AD4N_44	AJ25	DDR3_64_DQS1_N
IO_L10N_T1U_N7_QBC_AD4N_45	AL17	DDR3_64_A1
IO_L10N_T1U_N7_QBC_AD4N_46	AP30	DDR3_64_DQS5_N
IO_L10N_T1U_N7_QBC_AD4N_47	AC21	FMC1_LA23_N
IO_L10N_T1U_N7_QBC_AD4N_48	AF34	FMC1_LA05_N
IO_L10N_T1U_N7_QBC_AD4N_64	AE11	DIO6
IO_L10N_T1U_N7_QBC_AD4N_66	J10	SYNCOUT21_N
IO_L10N_T1U_N7_QBC_AD4N_67	A24	DDR3_32_DQS1_N
IO_L10N_T1U_N7_QBC_AD4N_68	D18	DDR3_32_A10
IO_L10N_T1U_N7_QBC_AD4N_A13_D29	K23	SMA_IO1
IO_L10P_T1U_N6_QBC_AD4P_44	AH24	DDR3_64_DQS1_P
IO_L10P_T1U_N6_QBC_AD4P_45	AL18	DDR3_64_A10
IO_L10P_T1U_N6_QBC_AD4P_46	AN29	DDR3_64_DQS5_P
IO_L10P_T1U_N6_QBC_AD4P_47	AB21	FMC1_LA23_P
IO_L10P_T1U_N6_QBC_AD4P_48	AE33	FMC1_LA05_P
IO_L10P_T1U_N6_QBC_AD4P_64	AD11	DIO5
IO_L10P_T1U_N6_QBC_AD4P_66	K10	SYNCOUT21_P
IO_L10P_T1U_N6_QBC_AD4P_67	B24	DDR3_32_DQS1_P
IO_L10P_T1U_N6_QBC_AD4P_68	D19	NC
IO_L10P_T1U_N6_QBC_AD4P_A12_D28	K22	SI5324_INT_ALM
IO_L11N_T1U_N9_GC_44	AJ24	DDR3_64_DQ8
IO_L11N_T1U_N9_GC_45	AK18	DDR3_64_CAS_N
IO_L11N_T1U_N9_GC_46	AM29	DDR3_64_DQ46
IO_L11N_T1U_N9_GC_47	AA23	FMC1_CLK1_M2C_N
IO_L11N_T1U_N9_GC_48	AD31	FMC1_LA08_N
IO_L11N_T1U_N9_GC_64	AH12	DIO4
IO_L11N_T1U_N9_GC_66	F9	ADC1_SYNC_N
IO_L11N_T1U_N9_GC_67	D25	DDR3_32_DQ8
IO_L11N_T1U_N9_GC_68	D16	DDR3_32_WE_N
IO_L11N_T1U_N9_GC_A11_D27_65	M26	TCKC_D_N
IO_L11P_T1U_N8_GC_44	AJ23	DDR3_64_DQ10
IO_L11P_T1U_N8_GC_45	AJ18	DDR3_64_ODT
IO_L11P_T1U_N8_GC_46	AL29	DDR3_64_DQ44

IO_L11P_T1U_N8_GC_47	Y23	FMC1_CLK1_M2C_P
IO_L11P_T1U_N8_GC_48	AD30	FMC1_LA08_P
IO_L11P_T1U_N8_GC_64	AG12	DIO3
IO_L11P_T1U_N8_GC_66	G9	ADC1_SYNC_P
IO_L11P_T1U_N8_GC_67	E25	DDR3_32_DQ10
IO_L11P_T1U_N8_GC_68	E16	DDR3_32_CAS_N
IO_L11P_T1U_N8_GC_A10_D26_65	M25	TCKC_D_P
IO_L12N_T1U_N11_GC_44	AH23	DDR3_64_DQ12
IO_L12N_T1U_N11_GC_45	AK16	SYSCLK_300_N
IO_L12N_T1U_N11_GC_46	AM30	DDR3_64_DQ42
IO_L12N_T1U_N11_GC_47	AA25	FMC1_CLK0_M2C_N
IO_L12N_T1U_N11_GC_48	AC32	FMC1_GBTCLK0_M2C_N
IO_L12N_T1U_N11_GC_64	AH11	DIO1
IO_L12N_T1U_N11_GC_66	F10	NC
IO_L12N_T1U_N11_GC_67	C24	DDR3_32_DQ12
IO_L12N_T1U_N11_GC_68	E17	NC
IO_L12N_T1U_N11_GC_A09_D25_65	M24	TCKC_C_N
IO_L12P_T1U_N10_GC_44	AH22	DDR3_64_DQ14
IO_L12P_T1U_N10_GC_45	AK17	SYSCLK_300_P
IO_L12P_T1U_N10_GC_46	AL30	DDR3_64_DQ40
IO_L12P_T1U_N10_GC_47	AA24	FMC1_CLK0_M2C_P
IO_L12P_T1U_N10_GC_48	AC31	FMC1_GBTCLK0_M2C_P
IO_L12P_T1U_N10_GC_64	AG11	DIO0
IO_L12P_T1U_N10_GC_66	G10	NC
IO_L12P_T1U_N10_GC_67	D24	DDR3_32_DQ14
IO_L12P_T1U_N10_GC_68	E18	DDR3_32_RAS_N
IO_L12P_T1U_N10_GC_A08_D24_65	N24	TCKC_C_P
IO_L13N_T2L_N1_GC_QBC_44	AK21	HW_ID3
IO_L13N_T2L_N1_GC_QBC_45	AH17	TXC6_N
IO_L13N_T2L_N1_GC_QBC_46	AK30	NC
IO_L13N_T2L_N1_GC_QBC_47	W24	FMC1_LA17_CC_N
IO_L13N_T2L_N1_GC_QBC_48	AB32	FMC1_LA00_CC_N
IO_L13N_T2L_N1_GC_QBC_64	AG10	AMC_MASTER_AUX_CLK_N
IO_L13N_T2L_N1_GC_QBC_66	G11	SYNCOUT11_N
IO_L13N_T2L_N1_GC_QBC_67	C23	NC
IO_L13N_T2L_N1_GC_QBC_68	G16	DDR3_32_BA2
IO_L13N_T2L_N1_GC_QBC_A07_D23_65	N26	TCKC_B_N
IO_L13P_T2L_N0_GC_QBC_44	AJ21	DDR3_64_DM2
IO_L13P_T2L_N0_GC_QBC_45	AH18	TXC6_P
IO_L13P_T2L_N0_GC_QBC_46	AJ29	DDR3_64_DM6
IO_L13P_T2L_N0_GC_QBC_47	W23	FMC1_LA17_CC_P
IO_L13P_T2L_N0_GC_QBC_48	AA32	FMC1_LA00_CC_P
IO_L13P_T2L_N0_GC_QBC_64	AF10	AMC_MASTER_AUX_CLK_P
IO_L13P_T2L_N0_GC_QBC_66	H11	SYNCOUT11_P
IO_L13P_T2L_N0_GC_QBC_67	D23	DDR3_32_DM2
IO_L13P_T2L_N0_GC_QBC_68	G17	NC
IO_L13P_T2L_N0_GC_QBC_A06_D22_65	P26	TCKC_B_P
IO_L14N_T2L_N3_GC_44	AK23	DDR3_64_DQ19
IO_L14N_T2L_N3_GC_45	AJ16	RXC6_N
IO_L14N_T2L_N3_GC_46	AK32	DDR3_64_DQ55
IO_L14N_T2L_N3_GC_47	Y25	FMC1_LA18_CC_N
IO_L14N_T2L_N3_GC_48	AB31	FMC1_LA01_CC_N
IO_L14N_T2L_N3_GC_64	AG9	SFP1_LED1

IO_L14N_T2L_N3_GC_66	G12	CDR_CLK_CLEAN1_N
IO_L14N_T2L_N3_GC_67	E23	DDR3_32_DQ19
IO_L14N_T2L_N3_GC_68	F17	SYSCLK1_300_N
IO_L14N_T2L_N3_GC_A05_D21_65	P25	TCKC_A_N
IO_L14P_T2L_N2_GC_44	AK22	DDR3_64_DQ20
IO_L14P_T2L_N2_GC_45	AH16	RXC6_P
IO_L14P_T2L_N2_GC_46	AK31	DDR3_64_DQ51
IO_L14P_T2L_N2_GC_47	W25	FMC1_LA18_CC_P
IO_L14P_T2L_N2_GC_48	AB30	FMC1_LA01_CC_P
IO_L14P_T2L_N2_GC_64	AF9	CLK_50M
IO_L14P_T2L_N2_GC_66	H12	CDR_CLK_CLEAN1_P
IO_L14P_T2L_N2_GC_67	E22	DDR3_32_DQ20
IO_L14P_T2L_N2_GC_68	F18	SYSCLK1_300_P
IO_L14P_T2L_N2_GC_A04_D20_65	P24	TCKC_A_P
IO_L15N_T2L_N5_AD11N_44	AM20	DDR3_64_DQ18
IO_L15N_T2L_N5_AD11N_45	AG16	DDR3_64_A2
IO_L15N_T2L_N5_AD11N_46	AJ31	DDR3_64_DQ52
IO_L15N_T2L_N5_AD11N_47	U22	FMC1_LA22_N
IO_L15N_T2L_N5_AD11N_48	AD34	FMC1_LA06_N
IO_L15N_T2L_N5_AD11N_64	AF8	NC
IO_L15N_T2L_N5_AD11N_66	J11	TXC9_P
IO_L15N_T2L_N5_AD11N_67	B22	DDR3_32_DQ18
IO_L15N_T2L_N5_AD11N_68	G14	DDR3_32_A13
IO_L15N_T2L_N5_AD11N_A03_D19_65	R27	RGMI2_MDIO
IO_L15P_T2L_N4_AD11P_44	AL20	DDR3_64_DQ22
IO_L15P_T2L_N4_AD11P_45	AG17	DDR3_64_A3
IO_L15P_T2L_N4_AD11P_46	AJ30	DDR3_64_DQ53
IO_L15P_T2L_N4_AD11P_47	U21	FMC1_LA22_P
IO_L15P_T2L_N4_AD11P_48	AC34	FMC1_LA06_P
IO_L15P_T2L_N4_AD11P_64	AE8	MLVDS_FSEN
IO_L15P_T2L_N4_AD11P_66	K11	TXC9_N
IO_L15P_T2L_N4_AD11P_67	B21	DDR3_32_DQ22
IO_L15P_T2L_N4_AD11P_68	G15	DDR3_32_A11
IO_L15P_T2L_N4_AD11P_A02_D18_65	T27	RGMI2_MDC
IO_L16N_T2U_N7_QBC_AD3N_44	AK20	DDR3_64_DQS2_N
IO_L16N_T2U_N7_QBC_AD3N_45	AJ14	DDR3_64_RST_N
IO_L16N_T2U_N7_QBC_AD3N_46	AJ33	DDR3_64_DQS6_N
IO_L16N_T2U_N7_QBC_AD3N_47	V23	FMC1_LA19_N
IO_L16N_T2U_N7_QBC_AD3N_48	AB29	FMC1_LA11_N
IO_L16N_T2U_N7_QBC_AD3N_64	AE10	NC
IO_L16N_T2U_N7_QBC_AD3N_66	K13	RXC9_N
IO_L16N_T2U_N7_QBC_AD3N_67	C22	DDR3_32_DQS2_N
IO_L16N_T2U_N7_QBC_AD3N_68	F19	DDR3_32_ODT
IO_L16N_T2U_N7_QBC_AD3N_A01_D17_65	P25	RGMI2_RX_CLK
IO_L16P_T2U_N6_QBC_AD3P_44	AJ20	DDR3_64_DQS2_P
IO_L16P_T2U_N6_QBC_AD3P_45	AJ15	DDR3_64_A13
IO_L16P_T2U_N6_QBC_AD3P_46	AH33	DDR3_64_DQS6_P
IO_L16P_T2U_N6_QBC_AD3P_47	V22	FMC1_LA19_P
IO_L16P_T2U_N6_QBC_AD3P_48	AA29	FMC1_LA11_P
IO_L16P_T2U_N6_QBC_AD3P_64	AD10	RE_DE_RX_P20
IO_L16P_T2U_N6_QBC_AD3P_66	L13	RXC9_P
IO_L16P_T2U_N6_QBC_AD3P_67	C21	DDR3_32_DQS2_P
IO_L16P_T2U_N6_QBC_AD3P_68	G19	DDR3_32_CS_N

IO_L16P_T2U_N6_QBC_AD3P_A00_D16	U24	RGMII2_RX_CTL
IO_L17N_T2U_N9_AD10N_44	AL23	DDR3_64_DQ23
IO_L17N_T2U_N9_AD10N_45	AH19	DDR3_64_RAS_N
IO_L17N_T2U_N9_AD10N_46	AH32	DDR3_64_DQ49
IO_L17N_T2U_N9_AD10N_47	T23	FMC1_LA20_N
IO_L17N_T2U_N9_AD10N_48	AB34	FMC1_LA10_N
IO_L17N_T2U_N9_AD10N_64	AD8	RE_DE_RX_P19
IO_L17N_T2U_N9_AD10N_66	K12	TXC8_N
IO_L17N_T2U_N9_AD10N_67	A20	DDR3_32_DQ23
IO_L17N_T2U_N9_AD10N_68	H16	DDR3_32_A4
IO_L17N_T2U_N9_AD10N_D15_65	R26	RGMII2_RXD3
IO_L17P_T2U_N8_AD10P_44	AL22	DDR3_64_DQ16
IO_L17P_T2U_N8_AD10P_45	AG19	DDR3_64_WE_N
IO_L17P_T2U_N8_AD10P_46	AH31	DDR3_64_DQ48
IO_L17P_T2U_N8_AD10P_47	T22	FMC1_LA20_P
IO_L17P_T2U_N8_AD10P_48	AA34	FMC1_LA10_P
IO_L17P_T2U_N8_AD10P_64	AD9	RE_DE_RX_P18
IO_L17P_T2U_N8_AD10P_66	L12	TXC8_P
IO_L17P_T2U_N8_AD10P_67	B20	DDR3_32_DQ16
IO_L17P_T2U_N8_AD10P_68	H17	DDR3_32_BA1
IO_L17P_T2U_N8_AD10P_D14_65	R25	RGMII2_RXD2
IO_L18N_T2U_N11_AD2N_44	AL25	DDR3_64_DQ17
IO_L18N_T2U_N11_AD2N_45	AG14	DDR3_64_A14
IO_L18N_T2U_N11_AD2N_46	AJ34	DDR3_64_DQ50
IO_L18N_T2U_N11_AD2N_47	W21	FMC1_LA21_N
IO_L18N_T2U_N11_AD2N_48	AD33	FMC1_LA07_N
IO_L18N_T2U_N11_AD2N_64	AH8	RE_DE_RX_P17
IO_L18N_T2U_N11_AD2N_66	H13	RXC8_N
IO_L18N_T2U_N11_AD2N_67	D21	DDR3_32_DQ17
IO_L18N_T2U_N11_AD2N_68	H18	DDR3_32_CKE
IO_L18N_T2U_N11_AD2N_D13_65	P23	RGMII2_RXD1
IO_L18P_T2U_N10_AD2P_44	AL24	DDR3_64_DQ21
IO_L18P_T2U_N10_AD2P_45	AG15	NC
IO_L18P_T2U_N10_AD2P_46	AH34	DDR3_64_DQ54
IO_L18P_T2U_N10_AD2P_47	V21	FMC1_LA21_P
IO_L18P_T2U_N10_AD2P_48	AC33	FMC1_LA07_P
IO_L18P_T2U_N10_AD2P_64	AH9	RE_DE_TX_P20
IO_L18P_T2U_N10_AD2P_66	J13	RXC8_P
IO_L18P_T2U_N10_AD2P_67	D20	DDR3_32_DQ21
IO_L18P_T2U_N10_AD2P_68	H19	NC
IO_L18P_T2U_N10_AD2P_D12_65	R23	RGMII2_RXD0
IO_L19N_T3L_N1_DBC_AD9N_44	AN21	HW_ID1
IO_L19N_T3L_N1_DBC_AD9N_45	AD18	DDR3_64_BA2
IO_L19N_T3L_N1_DBC_AD9N_46	AL33	NC
IO_L19N_T3L_N1_DBC_AD9N_47	V28	FMC1_LA33_N
IO_L19N_T3L_N1_DBC_AD9N_48	Y33	FMC1_LA13_N
IO_L19N_T3L_N1_DBC_AD9N_64	AM10	RE_DE_TX_P19
IO_L19N_T3L_N1_DBC_AD9N_66	D11	NC
IO_L19N_T3L_N1_DBC_AD9N_67	F25	NC
IO_L19N_T3L_N1_DBC_AD9N_68	J14	NC
IO_L19N_T3L_N1_DBC_AD9N_D11_65	M22	RGMII2_TX_CLK
IO_L19P_T3L_N0_DBC_AD9P_44	AM21	DDR3_64_DM3
IO_L19P_T3L_N0_DBC_AD9P_45	AD19	DDR3_64_BA1



IO_L19P_T3L_N0_DBC_AD9P_46	AL32	DDR3_64_DM7
IO_L19P_T3L_N0_DBC_AD9P_47	V27	FMC1_LA33_P
IO_L19P_T3L_N0_DBC_AD9P_48	W33	FMC1_LA13_P
IO_L19P_T3L_N0_DBC_AD9P_64	AL10	RE_DE_TX_P18
IO_L19P_T3L_N0_DBC_AD9P_66	E11	NC
IO_L19P_T3L_N0_DBC_AD9P_67	G24	DDR3_32_DM3
IO_L19P_T3L_N0_DBC_AD9P_68	J15	DDR3_32_A7
IO_L19P_T3L_N0_DBC_AD9P_D10_65	N22	RGMI2_TX_CTL
IO_L1N_T0L_N1_DBC_44	AE21	NC
IO_L1N_T0L_N1_DBC_45	AP14	NC
IO_L1N_T0L_N1_DBC_46	AJ26	NC
IO_L1N_T0L_N1_DBC_47	Y27	NC
IO_L1N_T0L_N1_DBC_48	AF27	FMC1_DP0_M2C_N
IO_L1N_T0L_N1_DBC_64	AP10	SFP1_TX_FAULT
IO_L1N_T0L_N1_DBC_66	E8	RTM_FPGA_GTP_RxC1_N
IO_L1N_T0L_N1_DBC_67	E27	NC
IO_L1N_T0L_N1_DBC_68	A14	NC
IO_L1N_T0L_N1_DBC_RS1_65	G27	USR_UART_N
IO_L1P_T0L_N0_DBC_44	AD21	DDR3_64_DM0
IO_L1P_T0L_N0_DBC_45	AN14	NC
IO_L1P_T0L_N0_DBC_46	AH26	DDR3_64_DM4
IO_L1P_T0L_N0_DBC_47	Y26	NC
IO_L1P_T0L_N0_DBC_48	AE27	FMC1_DP0_M2C_P
IO_L1P_T0L_N0_DBC_64	AP11	SFP1_TX_DISABLE
IO_L1P_T0L_N0_DBC_66	F8	RTM_FPGA_GTP_RxC1_P
IO_L1P_T0L_N0_DBC_67	F27	DDR3_32_DM0
IO_L1P_T0L_N0_DBC_68	B14	NC
IO_L1P_T0L_N0_DBC_RS0_65	H27	USR_UART_P
IO_L20N_T3L_N3_AD1N_44	AN22	DDR3_64_DQ29
IO_L20N_T3L_N3_AD1N_45	AF14	DDR3_64_A8
IO_L20N_T3L_N3_AD1N_46	AP33	DDR3_64_DQ57
IO_L20N_T3L_N3_AD1N_47	U25	FMC1_LA32_N
IO_L20N_T3L_N3_AD1N_48	Y30	FMC1_LA16_N
IO_L20N_T3L_N3_AD1N_64	AP9	RE_DE_TX_P17
IO_L20N_T3L_N3_AD1N_66	B12	RTM_FPGA_LVDS2_N
IO_L20N_T3L_N3_AD1N_67	E21	DDR3_32_DQ29
IO_L20N_T3L_N3_AD1N_68	K17	DDR3_32_A5
IO_L20N_T3L_N3_AD1N_D09_65	P21	RGMI2_TXD3
IO_L20P_T3L_N2_AD1P_44	AM22	DDR3_64_DQ31
IO_L20P_T3L_N2_AD1P_45	AF15	DDR3_64_A9
IO_L20P_T3L_N2_AD1P_46	AN33	DDR3_64_DQ56
IO_L20P_T3L_N2_AD1P_47	U24	FMC1_LA32_P
IO_L20P_T3L_N2_AD1P_48	W30	FMC1_LA16_P
IO_L20P_T3L_N2_AD1P_64	AN9	IO_RX_P20
IO_L20P_T3L_N2_AD1P_66	C12	RTM_FPGA_LVDS2_P
IO_L20P_T3L_N2_AD1P_67	E20	DDR3_32_DQ31
IO_L20P_T3L_N2_AD1P_68	K18	DDR3_32_A3
IO_L20P_T3L_N2_AD1P_D08_65	P20	RGMI2_TXD2
IO_L21N_T3L_N5_AD8N_44	AN24	DDR3_64_DQ26
IO_L21N_T3L_N5_AD8N_45	AF18	DDR3_64_CE0_N
IO_L21N_T3L_N5_AD8N_46	AP31	DDR3_64_DQ59
IO_L21N_T3L_N5_AD8N_47	Y28	FMC1_LA31_N
IO_L21N_T3L_N5_AD8N_48	W34	FMC1_LA03_N

IO_L21N_T3L_N5_AD8N_64	AL9	IO_RX_P19
IO_L21N_T3L_N5_AD8N_66	B11	FPGA_ADC_SYSREF_N
IO_L21N_T3L_N5_AD8N_67	F24	DDR3_32_DQ26
IO_L21N_T3L_N5_AD8N_68	K15	DDR3_32_A8
IO_L21N_T3L_N5_AD8N_D07_65	R22	QSPI1_IO3
IO_L21P_T3L_N4_AD8P_44	AM24	DDR3_64_DQ24
IO_L21P_T3L_N4_AD8P_45	AE18	DDR3_64_A12
IO_L21P_T3L_N4_AD8P_46	AN31	DDR3_64_DQ61
IO_L21P_T3L_N4_AD8P_47	W28	FMC1_LA31_P
IO_L21P_T3L_N4_AD8P_48	V33	FMC1_LA03_P
IO_L21P_T3L_N4_AD8P_64	AK10	IO_RX_P18
IO_L21P_T3L_N4_AD8P_66	C11	FPGA_ADC_SYSREF_P
IO_L21P_T3L_N4_AD8P_67	F23	DDR3_32_DQ24
IO_L21P_T3L_N4_AD8P_68	L15	DDR3_32_A14
IO_L21P_T3L_N4_AD8P_D06_65	R21	QSPI1_IO2
IO_L22N_T3U_N7_DBC_AD0N_44	AP21	DDR3_64_DQS3_N
IO_L22N_T3U_N7_DBC_AD0N_45	AE15	DDR3_64_CK_N
IO_L22N_T3U_N7_DBC_AD0N_46	AP34	DDR3_64_DQS7_N
IO_L22N_T3U_N7_DBC_AD0N_47	U27	FMC1_LA30_N
IO_L22N_T3U_N7_DBC_AD0N_48	Y32	FMC1_LA15_N
IO_L22N_T3U_N7_DBC_AD0N_64	AP8	IO_RX_P17
IO_L22N_T3U_N7_DBC_AD0N_66	E13	NC
IO_L22N_T3U_N7_DBC_AD0N_67	F20	DDR3_32_DQS3_N
IO_L22N_T3U_N7_DBC_AD0N_68	J18	DDR3_32_CK_N
IO_L22N_T3U_N7_DBC_AD0N_D05_65	L20	QSPI1_IO1
IO_L22P_T3U_N6_DBC_AD0P_44	AP20	DDR3_64_DQS3_P
IO_L22P_T3U_N6_DBC_AD0P_45	AE16	DDR3_64_CK_P
IO_L22P_T3U_N6_DBC_AD0P_46	AN34	DDR3_64_DQS7_P
IO_L22P_T3U_N6_DBC_AD0P_47	U26	FMC1_LA30_P
IO_L22P_T3U_N6_DBC_AD0P_48	Y31	FMC1_LA15_P
IO_L22P_T3U_N6_DBC_AD0P_64	AN8	IO_TX_P20
IO_L22P_T3U_N6_DBC_AD0P_66	F13	NC
IO_L22P_T3U_N6_DBC_AD0P_67	G20	DDR3_32_DQS3_P
IO_L22P_T3U_N6_DBC_AD0P_68	J19	DDR3_32_CK_P
IO_L22P_T3U_N6_DBC_AD0P_D04_65	M20	QSPI1_IO0
IO_L23N_T3U_N9_44	AP25	DDR3_64_DQ28
IO_L23N_T3U_N9_45	AF17	DDR3_64_BA0
IO_L23N_T3U_N9_46	AN32	DDR3_64_DQ63
IO_L23N_T3U_N9_47	W29	FMC1_LA29_N
IO_L23N_T3U_N9_48	V34	FMC1_LA14_N
IO_L23N_T3U_N9_64	AJ8	IO_TX_P19
IO_L23N_T3U_N9_66	A12	RTM_FPGA_LVDS1_N
IO_L23N_T3U_N9_67	F22	DDR3_32_DQ28
IO_L23N_T3U_N9_68	J16	DDR3_32_A2
IO_L23N_T3U_N9_I2C_SDA_65	M21	FPGA_I2C_SDA
IO_L23P_T3U_N8_44	AP24	DDR3_64_DQ30
IO_L23P_T3U_N8_45	AE17	DDR3_64_A0
IO_L23P_T3U_N8_46	AM32	DDR3_64_DQ60
IO_L23P_T3U_N8_47	V29	FMC1_LA29_P
IO_L23P_T3U_N8_48	U34	FMC1_LA14_P
IO_L23P_T3U_N8_64	AJ9	IO_TX_P18
IO_L23P_T3U_N8_66	A13	RTM_FPGA_LVDS1_P
IO_L23P_T3U_N8_67	G22	DDR3_32_DQ30

IO_L23P_T3U_N8_68	K16	DDR3_32_A6
IO_L23P_T3U_N8_I2C_SCLK_65	N21	FPGA_I2C_SCL
IO_L24N_T3U_N11_44	AP23	DDR3_64_DQ27
IO_L24N_T3U_N11_45	AD15	DDR3_64_A6
IO_L24N_T3U_N11_46	AM34	DDR3_64_DQ58
IO_L24N_T3U_N11_47	W26	FMC1_LA28_N
IO_L24N_T3U_N11_48	W31	FMC1_LA12_N
IO_L24N_T3U_N11_64	AL8	PRI_UART_RxD
IO_L24N_T3U_N11_66	C13	REC_CLOCK_N
IO_L24N_T3U_N11_67	G21	DDR3_32_DQ27
IO_L24N_T3U_N11_68	L18	DDR3_32_A12
IO_L24N_T3U_N11_DOUT_CSO_B_65	K21	FPGA_CFG_DOUT
IO_L24P_T3U_N10_44	AN23	DDR3_64_DQ25
IO_L24P_T3U_N10_45	AD16	DDR3_64_A4
IO_L24P_T3U_N10_46	AL34	DDR3_64_DQ62
IO_L24P_T3U_N10_47	V26	FMC1_LA28_P
IO_L24P_T3U_N10_48	V31	FMC1_LA12_P
IO_L24P_T3U_N10_64	AK8	PRI_UART_TxD
IO_L24P_T3U_N10_66	D13	REC_CLOCK_P
IO_L24P_T3U_N10_67	H21	DDR3_32_DQ25
IO_L24P_T3U_N10_68	L19	DDR3_32_BA0
IO_L24P_T3U_N10_EMCCLK_65	K20	RGMI2_TXD0
IO_L2N_T0L_N3_44	AG20	DDR3_64_DQ1
IO_L2N_T0L_N3_45	AP18	TXC11_N
IO_L2N_T0L_N3_46	AM27	DDR3_64_DQ35
IO_L2N_T0L_N3_47	AD26	TXC13_N
IO_L2N_T0L_N3_48	AF28	FMC1_DP0_C2M_N
IO_L2N_T0L_N3_64	AP13	SFP1_MOD_DEF2
IO_L2N_T0L_N3_66	A9	RTM_FPGA_GTP_Tx0_N
IO_L2N_T0L_N3_67	B27	DDR3_32_DQ1
IO_L2N_T0L_N3_68	A18	NC
IO_L2N_T0L_N3_FWE_FCS2_B_65	G26	NC
IO_L2P_T0L_N2_44	AF20	DDR3_64_DQ3
IO_L2P_T0L_N2_45	AN19	TXC11_P
IO_L2P_T0L_N2_46	AM26	DDR3_64_DQ39
IO_L2P_T0L_N2_47	AD25	TXC13_P
IO_L2P_T0L_N2_48	AE28	FMC1_DP0_C2M_P
IO_L2P_T0L_N2_64	AN13	SFP1_MOD_DEF1
IO_L2P_T0L_N2_66	B9	RTM_FPGA_GTP_Tx0_P
IO_L2P_T0L_N2_67	C27	DDR3_32_DQ3
IO_L2P_T0L_N2_68	A19	NC
IO_L2P_T0L_N2_FOE_B_65	G25	NC
IO_L3N_T0L_N5_AD15N_44	AE20	DDR3_64_DQ7
IO_L3N_T0L_N5_AD15N_45	AN16	RXC11_N
IO_L3N_T0L_N5_AD15N_46	AK27	DDR3_64_DQ38
IO_L3N_T0L_N5_AD15N_47	AC24	RXC13_N
IO_L3N_T0L_N5_AD15N_48	AD28	TXC15_N
IO_L3N_T0L_N5_AD15N_64	AN11	SFP1_MOD_DEF0
IO_L3N_T0L_N5_AD15N_66	C8	RTM_FPGA_GTP_Tx1_N
IO_L3N_T0L_N5_AD15N_67	D29	DDR3_32_DQ7
IO_L3N_T0L_N5_AD15N_68	A15	NC
IO_L3N_T0L_N5_AD15N_A27_65	K27	NC
IO_L3P_T0L_N4_AD15P_44	AD20	DDR3_64_DQ5

IO_L3P_T0L_N4_AD15P_45	AM17	RXC11_P
IO_L3P_T0L_N4_AD15P_46	AK26	DDR3_64_DQ33
IO_L3P_T0L_N4_AD15P_47	AB24	RXC13_P
IO_L3P_T0L_N4_AD15P_48	AC28	TXC15_P
IO_L3P_T0L_N4_AD15P_64	AM11	SFP1_LOS
IO_L3P_T0L_N4_AD15P_66	D8	RTM_FPGA_GTP_Tx1_P
IO_L3P_T0L_N4_AD15P_67	E28	DDR3_32_DQ5
IO_L3P_T0L_N4_AD15P_68	B15	NC
IO_L3P_T0L_N4_AD15P_A26_65	K26	NC
IO_L4N_T0U_N7_DBC_AD7N_44	AH21	DDR3_64_DQS0_N
IO_L4N_T0U_N7_DBC_AD7N_45	AN17	TXC10_N
IO_L4N_T0U_N7_DBC_AD7N_46	AL28	DDR3_64_DQS4_N
IO_L4N_T0U_N7_DBC_AD7N_47	AC27	TXC12_N
IO_L4N_T0U_N7_DBC_AD7N_48	AG29	RXC15_N
IO_L4N_T0U_N7_DBC_AD7N_64	AN12	SFP2_TX_FAULT
IO_L4N_T0U_N7_DBC_AD7N_66	A10	FPGA_DAC_SYSREF_N
IO_L4N_T0U_N7_DBC_AD7N_67	A29	DDR3_32_DQS0_N
IO_L4N_T0U_N7_DBC_AD7N_68	B19	NC
IO_L4N_T0U_N7_DBC_AD7N_A25_65	J25	NC
IO_L4P_T0U_N6_DBC_AD7P_44	AG21	DDR3_64_DQS0_P
IO_L4P_T0U_N6_DBC_AD7P_45	AN18	TXC10_P
IO_L4P_T0U_N6_DBC_AD7P_46	AL27	DDR3_64_DQS4_P
IO_L4P_T0U_N6_DBC_AD7P_47	AC26	TXC12_P
IO_L4P_T0U_N6_DBC_AD7P_48	AF29	RXC15_P
IO_L4P_T0U_N6_DBC_AD7P_64	AM12	SFP2_TX_DISABLE
IO_L4P_T0U_N6_DBC_AD7P_66	B10	FPGA_DAC_SYSREF_P
IO_L4P_T0U_N6_DBC_AD7P_67	B29	DDR3_32_DQS0_P
IO_L4P_T0U_N6_DBC_AD7P_68	C19	NC
IO_L4P_T0U_N6_DBC_AD7P_A24_65	J24	MMC_MOSI1
IO_L5N_T0U_N9_AD14N_44	AE23	DDR3_64_DQ0
IO_L5N_T0U_N9_AD14N_45	AM15	RXC10_N
IO_L5N_T0U_N9_AD14N_46	AH28	DDR3_64_DQ32
IO_L5N_T0U_N9_AD14N_47	AB27	RXC12_N
IO_L5N_T0U_N9_AD14N_48	AE30	TXC14_N
IO_L5N_T0U_N9_AD14N_64	AL12	SFP2_RATE_SELECT
IO_L5N_T0U_N9_AD14N_66	C9	RTM_FPGA_GTP_RxC0_N
IO_L5N_T0U_N9_AD14N_67	C28	DDR3_32_DQ0
IO_L5N_T0U_N9_AD14N_68	B16	NC
IO_L5N_T0U_N9_AD14N_A23_65	H26	MMC_MISO1
IO_L5P_T0U_N8_AD14P_44	AE22	DDR3_64_DQ4
IO_L5P_T0U_N8_AD14P_45	AM16	RXC10_P
IO_L5P_T0U_N8_AD14P_46	AH27	DDR3_64_DQ37
IO_L5P_T0U_N8_AD14P_47	AA27	RXC12_P
IO_L5P_T0U_N8_AD14P_48	AD29	TXC14_P
IO_L5P_T0U_N8_AD14P_64	AK12	SFP2_MOD_DEF2
IO_L5P_T0U_N8_AD14P_66	D9	RTM_FPGA_GTP_RxC0_P
IO_L5P_T0U_N8_AD14P_67	D28	DDR3_32_DQ4
IO_L5P_T0U_N8_AD14P_68	B17	NC
IO_L5P_T0U_N8_AD14P_A22_65	J26	MMC_SSEL1
IO_L6N_T0U_N11_AD6N_44	AG22	DDR3_64_DQ6
IO_L6N_T0U_N11_AD6N_45	AP15	TXC7_N
IO_L6N_T0U_N11_AD6N_46	AK28	DDR3_64_DQ34
IO_L6N_T0U_N11_AD6N_47	AB26	FMC1_LA27_N

IO_L6N_T0U_N11_AD6N_48	AG30	RXC14_N
IO_L6N_T0U_N11_AD6N_64	AL13	SFP2_MOD_DEF1
IO_L6N_T0U_N11_AD6N_66	D10	ADC2_SYNC_N
IO_L6N_T0U_N11_AD6N_67	A28	DDR3_32_DQ6
IO_L6N_T0U_N11_AD6N_68	C17	NC
IO_L6N_T0U_N11_AD6N_A21_65	H24	MMC_SCK1
IO_L6P_T0U_N10_AD6P_44	AF22	DDR3_64_DQ2
IO_L6P_T0U_N10_AD6P_45	AP16	TXC7_P
IO_L6P_T0U_N10_AD6P_46	AJ28	DDR3_64_DQ36
IO_L6P_T0U_N10_AD6P_47	AB25	FMC1_LA27_P
IO_L6P_T0U_N10_AD6P_48	AF30	RXC14_P
IO_L6P_T0U_N10_AD6P_64	AK13	SFP2_MOD_DEF0
IO_L6P_T0U_N10_AD6P_66	E10	ADC2_SYNC_P
IO_L6P_T0U_N10_AD6P_67	A27	DDR3_32_DQ2
IO_L6P_T0U_N10_AD6P_68	C18	NC
IO_L6P_T0U_N10_AD6P_A20_65	J23	FPGA_STATUS
IO_L7N_T1L_N1_QBC_AD13N_44	AE26	NC
IO_L7N_T1L_N1_QBC_AD13N_45	AM14	RXC7_N
IO_L7N_T1L_N1_QBC_AD13N_46	AP26	NC
IO_L7N_T1L_N1_QBC_AD13N_47	AB22	FMC1_LA26_N
IO_L7N_T1L_N1_QBC_AD13N_48	AG32	FMC1_LA04_N
IO_L7N_T1L_N1_QBC_AD13N_64	AF13	SFP2_LOS
IO_L7N_T1L_N1_QBC_AD13N_66	K8	SYNCOUT10_N
IO_L7N_T1L_N1_QBC_AD13N_67	D26	NC
IO_L7N_T1L_N1_QBC_AD13N_68	C14	NC
IO_L7N_T1L_N1_QBC_AD13N_A19_65	L27	AUX_UART_RxD
IO_L7P_T1L_N0_QBC_AD13P_44	AE25	DDR3_64_DM1
IO_L7P_T1L_N0_QBC_AD13P_45	AL14	RXC7_P
IO_L7P_T1L_N0_QBC_AD13P_46	AN26	DDR3_64_DM5
IO_L7P_T1L_N0_QBC_AD13P_47	AA22	FMC1_LA26_P
IO_L7P_T1L_N0_QBC_AD13P_48	AG31	FMC1_LA04_P
IO_L7P_T1L_N0_QBC_AD13P_64	AE13	SFP2_LED2
IO_L7P_T1L_N0_QBC_AD13P_66	L8	SYNCOUT10_P
IO_L7P_T1L_N0_QBC_AD13P_67	E26	DDR3_32_DM1
IO_L7P_T1L_N0_QBC_AD13P_68	D14	DDR3_32_A9
IO_L7P_T1L_N0_QBC_AD13P_A18_65	M27	AUX_UART_TxD
IO_L8N_T1L_N3_AD5N_44	AF24	DDR3_64_DQ13
IO_L8N_T1L_N3_AD5N_45	AM19	NC
IO_L8N_T1L_N3_AD5N_46	AP29	DDR3_64_DQ41
IO_L8N_T1L_N3_AD5N_47	AC23	FMC1_LA24_N
IO_L8N_T1L_N3_AD5N_48	AG34	FMC1_LA02_N
IO_L8N_T1L_N3_AD5N_64	AJ13	SFP2_LED1
IO_L8N_T1L_N3_AD5N_66	H9	SYNCOUT20_N
IO_L8N_T1L_N3_AD5N_67	A25	DDR3_32_DQ13
IO_L8N_T1L_N3_AD5N_68	D15	DDR3_32_A1
IO_L8N_T1L_N3_AD5N_A17_65	L24	SI5324_RST
IO_L8P_T1L_N2_AD5P_44	AF23	DDR3_64_DQ11
IO_L8P_T1L_N2_AD5P_45	AL19	DDR3_64_CKE
IO_L8P_T1L_N2_AD5P_46	AP28	DDR3_64_DQ45
IO_L8P_T1L_N2_AD5P_47	AC22	FMC1_LA24_P
IO_L8P_T1L_N2_AD5P_48	AF33	FMC1_LA02_P
IO_L8P_T1L_N2_AD5P_64	AH13	DIO9
IO_L8P_T1L_N2_AD5P_66	J9	SYNCOUT20_P

IO_L8P_T1L_N2_AD5P_67	B25	DDR3_32_DQ11
IO_L8P_T1L_N2_AD5P_68	E15	DDR3_32_A0
IO_L8P_T1L_N2_AD5P_A16_65	L23	SMA_IO2_DIR
IO_L9N_T1L_N5_AD12N_44	AG25	DDR3_64_DQ15
IO_L9N_T1L_N5_AD12N_45	AL15	DDR3_64_A11
IO_L9N_T1L_N5_AD12N_46	AN28	DDR3_64_DQ43
IO_L9N_T1L_N5_AD12N_47	AB20	FMC1_LA25_N
IO_L9N_T1L_N5_AD12N_48	AF32	FMC1_LA09_N
IO_L9N_T1L_N5_AD12N_64	AF12	DIO8
IO_L9N_T1L_N5_AD12N_66	H8	RTM_FPGA_USR_IO_N
IO_L9N_T1L_N5_AD12N_67	B26	DDR3_32_DQ15
IO_L9N_T1L_N5_AD12N_68	F14	DDR3_32_RST_N
IO_L9N_T1L_N5_AD12N_A15_D31_65	K25	SMA_IO1_DIR
IO_L9P_T1L_N4_AD12P_44	AG24	DDR3_64_DQ9
IO_L9P_T1L_N4_AD12P_45	AK15	DDR3_64_A7
IO_L9P_T1L_N4_AD12P_46	AN27	DDR3_64_DQ47
IO_L9P_T1L_N4_AD12P_47	AA20	FMC1_LA25_P
IO_L9P_T1L_N4_AD12P_48	AE32	FMC1_LA09_P
IO_L9P_T1L_N4_AD12P_64	AE12	DIO7
IO_L9P_T1L_N4_AD12P_66	J8	RTM_FPGA_USR_IO_P
IO_L9P_T1L_N4_AD12P_67	C26	DDR3_32_DQ9
IO_L9P_T1L_N4_AD12P_68	F15	NC
IO_L9P_T1L_N4_AD12P_A14_D30_65	L25	SMA_IO2
IO_T0U_N12_64	AK11	SFP1_RATE_SELECT
IO_T0U_N12_A28_65	H23	FPGA_RESETh
IO_T0U_N12_VRP_44	AD24	VRP_44
IO_T0U_N12_VRP_45	AP19	VRP_45
IO_T0U_N12_VRP_46	AG26	VRP_46
IO_T0U_N12_VRP_47	AA28	VRP_47
IO_T0U_N12_VRP_48	AC29	VRP_48
IO_T0U_N12_VRP_66	A8	VRP_68
IO_T0U_N12_VRP_67	C29	VRP_67
IO_T0U_N12_VRP_68	A17	VRP_66
IO_T1U_N12_44	AF25	NC
IO_T1U_N12_45	AJ19	NC
IO_T1U_N12_46	AM31	NC
IO_T1U_N12_47	Y22	NC
IO_T1U_N12_48	AE31	NC
IO_T1U_N12_64	AJ11	DIO2
IO_T1U_N12_66	L9	NC
IO_T1U_N12_67	A23	NC
IO_T1U_N12_68	C16	NC
IO_T1U_N12_PERSTN1_65	N23	NC
IO_T2U_N12_44	AK25	HW_ID2
IO_T2U_N12_45	AH14	DDR3_64_A5
IO_T2U_N12_46	AH29	NC
IO_T2U_N12_47	Y21	NC
IO_T2U_N12_48	AA33	NC
IO_T2U_N12_64	AJ10	SFP1_LED2
IO_T2U_N12_66	F12	NC
IO_T2U_N12_67	A22	NC
IO_T2U_N12_68	H14	NC
IO_T2U_N12_CSI_ADV_B_65	N27	NC

IO_T3U_N12_44	AM25	HW_ID0
IO_T3U_N12_45	AD14	NC
IO_T3U_N12_46	AK33	NC
IO_T3U_N12_47	U29	NC
IO_T3U_N12_48	V32	NC
IO_T3U_N12_64	AM9	IO_TX_P17
IO_T3U_N12_66	E12	NC
IO_T3U_N12_67	H22	NC
IO_T3U_N12_68	L17	NC
IO_T3U_N12_PERSTN0_65	K22	RGMII2_TXD1
M0_0	K7	FPGA_M0
M1_0	L7	FPGA_M1
M2_0	M7	FPGA_M2
MGTAVCC_L-1	F30	GND
MGTAVCC_L-2	H29	GND
MGTAVCC_L-3	J31	GND
MGTAVCC_L-4	N31	GND
MGTAVCC_L-5	P29	GND
MGTAVCC_L-6	E31	GND
MGTAVCC_R-1	C6	MGTAVCC
MGTAVCC_R-10	AE6	MGTAVCC
MGTAVCC_R-11	AJ6	MGTAVCC
MGTAVCC_R-12	AL6	MGTAVCC
MGTAVCC_R-13	AN6	MGTAVCC
MGTAVCC_R-14	AG6	MGTAVCC
MGTAVCC_R-2	E6	MGTAVCC
MGTAVCC_R-3	G6	MGTAVCC
MGTAVCC_R-4	J6	MGTAVCC
MGTAVCC_R-5	L6	MGTAVCC
MGTAVCC_R-6	N6	MGTAVCC
MGTAVCC_R-7	U6	MGTAVCC
MGTAVCC_R-8	W6	MGTAVCC
MGTAVCC_R-9	AC6	MGTAVCC
MGTAVTT_L-1	G32	GND
MGTAVTT_L-2	D33	GND
MGTAVTT_L-3	R32	GND
MGTAVTT_L-4	C32	GND
MGTAVTT_L-5	K33	GND
MGTAVTT_L-6	L32	GND
MGTAVTT_L-7	P33	GND
MGTAVTT_L-8	H33	GND
MGTAVTT_R-1	R2	MGTAVTT
MGTAVTT_R-10	AM3	MGTAVTT
MGTAVTT_R-11	AL2	MGTAVTT
MGTAVTT_R-12	AH3	MGTAVTT
MGTAVTT_R-13	AG2	MGTAVTT
MGTAVTT_R-14	AD3	MGTAVTT
MGTAVTT_R-15	AC2	MGTAVTT
MGTAVTT_R-16	C2	MGTAVTT
MGTAVTT_R-2	T3	MGTAVTT
MGTAVTT_R-3	W2	MGTAVTT
MGTAVTT_R-4	Y3	MGTAVTT
MGTAVTT_R-5	M3	MGTAVTT

MGTAVTT_R-6	L2	MGTAVTT
MGTAVTT_R-7	H3	MGTAVTT
MGTAVTT_R-8	G2	MGTAVTT
MGTAVTT_R-9	D3	MGTAVTT
MGTAVTTRCAL_R	AP6	MGTAVTT
MGTHRXN0_224	AP1	SFP1RX_N
MGTHRXN0_225	AH1	GTP15RX_N
MGTHRXN0_226	Y1	GTP11RX_N
MGTHRXN0_227	M1	GTP7RX_N
MGTHRXN0_228	E3	GTP3RX_N
MGTHRXN1_224	AM1	SFP2RX_N
MGTHRXN1_225	AF1	GTP14RX_N
MGTHRXN1_226	V1	GTP10RX_N
MGTHRXN1_227	K1	GTP6RX_N
MGTHRXN1_228	D1	GTP2RX_N
MGTHRXN2_224	AK1	RX4_N
MGTHRXN2_225	AD1	GTP13RX_N
MGTHRXN2_226	T1	GTP9RX_N
MGTHRXN2_227	H1	GTP5RX_N
MGTHRXN2_228	B1	GTP1RX_N
MGTHRXN3_224	AJ3	RX5_N
MGTHRXN3_225	AB1	GTP12RX_N
MGTHRXN3_226	P1	GTP8RX_N
MGTHRXN3_227	F1	GTP4RX_N
MGTHRXN3_228	A3	GTP0RX_N
MGTHRXP0_224	AP2	SFP1RX_P
MGTHRXP0_225	AH2	GTP15RX_P
MGTHRXP0_226	Y2	GTP11RX_P
MGTHRXP0_227	M2	GTP7RX_P
MGTHRXP0_228	E4	GTP3RX_P
MGTHRXP1_224	AM2	SFP2RX_P
MGTHRXP1_225	AF2	GTP14RX_P
MGTHRXP1_226	V2	GTP10RX_P
MGTHRXP1_227	K2	GTP6RX_P
MGTHRXP1_228	D2	GTP2RX_P
MGTHRXP2_224	AK2	RX4_P
MGTHRXP2_225	AD2	GTP13RX_P
MGTHRXP2_226	T2	GTP9RX_P
MGTHRXP2_227	H2	GTP5RX_P
MGTHRXP2_228	B2	GTP1RX_P
MGTHRXP3_224	AJ4	RX5_P
MGTHRXP3_225	AB2	GTP12RX_P
MGTHRXP3_226	P2	GTP8RX_P
MGTHRXP3_227	F2	GTP4RX_P
MGTHRXP3_228	A4	GTP0RX_P
MGTHTXN0_224	AN3	SFP1TX_N
MGTHTXN0_225	AH5	GTP15TXC_N
MGTHTXN0_226	AA3	GTP11TXC_N
MGTHTXN0_227	N3	GTP7TXC_N
MGTHTXN0_228	F5	GTP3TXC_N
MGTHTXN1_224	AM5	SFP2TX_N
MGTHTXN1_225	AG3	GTP14TXC_N
MGTHTXN1_226	W3	GTP10TXC_N



MGTHTXN1_227	L3	GTP6TXC_N
MGTHTXN1_228	D5	GTP2TXC_N
MGTHTXN2_224	AL3	TX4C_N
MGTHTXN2_225	AE3	GTP13TXC_N
MGTHTXN2_226	U3	GTP9TXC_N
MGTHTXN2_227	J3	GTP5TXC_N
MGTHTXN2_228	C3	GTP1TXC_N
MGTHTXN3_224	AK5	TX5C_N
MGTHTXN3_225	AC3	GTP12TXC_N
MGTHTXN3_226	R3	GTP8TXC_N
MGTHTXN3_227	G3	GTP4TXC_N
MGTHTXN3_228	B5	GTP0TXC_N
MGTHTXP0_224	AN4	SFP1TX_P
MGTHTXP0_225	AH6	GTP15TXC_P
MGTHTXP0_226	AA4	GTP11TXC_P
MGTHTXP0_227	N4	GTP7TXC_P
MGTHTXP0_228	F6	GTP3TXC_P
MGTHTXP1_224	AM6	SFP2TX_P
MGTHTXP1_225	AG4	GTP14TXC_P
MGTHTXP1_226	W4	GTP10TXC_P
MGTHTXP1_227	L4	GTP6TXC_P
MGTHTXP1_228	D6	GTP2TXC_P
MGTHTXP2_224	AL4	TX4C_P
MGTHTXP2_225	AE4	GTP13TXC_P
MGTHTXP2_226	U4	GTP9TXC_P
MGTHTXP2_227	J4	GTP5TXC_P
MGTHTXP2_228	C4	GTP1TXC_P
MGTHTXP3_224	AK6	TX5C_P
MGTHTXP3_225	AC4	GTP12TXC_P
MGTHTXP3_226	R4	GTP8TXC_P
MGTHTXP3_227	G4	GTP4TXC_P
MGTHTXP3_228	B6	GTP0TXC_P
MGTREFCLK0N_224	AF5	CDR_CLK_CLEAN2_N
MGTREFCLK0N_225	AB5	REFCLK227_C_N
MGTREFCLK0N_226	V5	GTP_CLK1_IN_N
MGTREFCLK0N_227	P5	GTP_CLK2_IN_N
MGTREFCLK0N_228	K5	REFCLK224_C_N
MGTREFCLK0P_224	AF6	CDR_CLK_CLEAN2_P
MGTREFCLK0P_225	AB6	REFCLK227_C_P
MGTREFCLK0P_226	V6	GTP_CLK1_IN_P
MGTREFCLK0P_227	P6	GTP_CLK2_IN_P
MGTREFCLK0P_228	K6	REFCLK224_C_P
MGTREFCLK1N_224	AD5	FCLKAC_N
MGTREFCLK1N_225	Y5	NC
MGTREFCLK1N_226	T5	NC
MGTREFCLK1N_227	M5	CLK_RFU_N
MGTREFCLK1N_228	H5	NC
MGTREFCLK1P_224	AD6	FCLKAC_P
MGTREFCLK1P_225	Y6	NC
MGTREFCLK1P_226	T6	NC
MGTREFCLK1P_227	M6	CLK_RFU_P
MGTREFCLK1P_228	H6	NC
MGTREF_R	AP5	MGTREF

MGTVCCAUX_L-1	K29	GND
MGTVCCAUX_L-2	M29	GND
MGTVCCAUX_R-1	AA6	MGTVCCAUX
MGTVCCAUX_R-2	R6	MGTVCCAUX
NC-1	K31	NC
NC-10	M32	NC
NC-11	A34	NC
NC-12	A33	NC
NC-13	P31	NC
NC-14	N33	NC
NC-15	N34	NC
NC-16	P32	NC
NC-17	R29	NC
NC-18	R30	NC
NC-19	T31	NC
NC-2	J33	NC
NC-20	R33	NC
NC-21	R34	NC
NC-22	T32	NC
NC-23	B31	NC
NC-24	C33	NC
NC-25	C34	NC
NC-26	B32	NC
NC-27	J29	NC
NC-28	J30	NC
NC-29	D31	NC
NC-3	J34	NC
NC-30	E33	NC
NC-31	E34	NC
NC-32	D32	NC
NC-33	G29	NC
NC-34	F31	NC
NC-35	F32	NC
NC-36	G30	NC
NC-37	L29	NC
NC-38	L30	NC
NC-39	H31	NC
NC-4	K32	NC
NC-40	G33	NC
NC-41	G34	NC
NC-42	H32	NC
NC-5	N29	NC
NC-6	N30	NC
NC-7	M31	NC
NC-8	L33	NC
NC-9	L34	NC
POR_OVERRIDE	P7	POR_override
PROGRAM_B_0	T7	FPGA_PROG_B
PUDC_B_0	R7	PUDC
RDWR_FCS_B_0	U7	QSPI0_CS_B
TCK_0	AC9	FPGA_TCK
TDI_0	V9	FPGA_TDI
TDO_0	U9	FPGA_TDO

TMS_0	W9	FPGA_TMS
VBATT	AD7	FPGA_VBATT
VCCADC	U12	ADC_VCC
VCCAUX_IO-1	M19	VCCAUX
VCCAUX_IO-10	Y19	VCCAUX
VCCAUX_IO-11	V19	VCCAUX
VCCAUX_IO-2	R20	VCCAUX
VCCAUX_IO-3	P19	VCCAUX
VCCAUX_IO-4	N18	VCCAUX
VCCAUX_IO-5	U20	VCCAUX
VCCAUX_IO-6	T19	VCCAUX
VCCAUX_IO-7	W20	VCCAUX
VCCAUX_IO-8	AB19	VCCAUX
VCCAUX_IO-9	AC18	VCCAUX
VCCAUX-1	AA8	VCCAUX
VCCAUX-2	AC8	VCCAUX
VCCAUX-3	U8	VCCAUX
VCCAUX-4	W8	VCCAUX
VCCBRAM-1	Y17	VCCBRAM
VCCBRAM-2	AB17	VCCBRAM
VCCBRAM-3	V17	VCCBRAM
VCCBRAM-4	AA18	VCCBRAM
VCCINT_IO-1	R18	VCCINT
VCCINT_IO-2	M17	VCCINT
VCCINT_IO-3	P17	VCCINT
VCCINT_IO-4	U18	VCCINT
VCCINT_IO-5	W18	VCCINT
VCCINT-1	T15	VCCINT
VCCINT-10	N14	VCCINT
VCCINT-11	R14	VCCINT
VCCINT-12	N10	VCCINT
VCCINT-13	R10	VCCINT
VCCINT-14	AC16	VCCINT
VCCINT-15	M13	VCCINT
VCCINT-16	R8	VCCINT
VCCINT-17	M9	VCCINT
VCCINT-18	M11	VCCINT
VCCINT-19	M15	VCCINT
VCCINT-2	U14	VCCINT
VCCINT-20	N12	VCCINT
VCCINT-21	P9	VCCINT
VCCINT-22	P13	VCCINT
VCCINT-23	P15	VCCINT
VCCINT-24	R12	VCCINT
VCCINT-25	T9	VCCINT
VCCINT-26	T13	VCCINT
VCCINT-27	U10	VCCINT
VCCINT-28	V13	VCCINT
VCCINT-29	W10	VCCINT
VCCINT-3	V15	VCCINT
VCCINT-30	W14	VCCINT
VCCINT-31	Y15	VCCINT
VCCINT-32	AA12	VCCINT

VCCINT-33	AB11	VCCINT
VCCINT-34	AB13	VCCINT
VCCINT-35	AC10	VCCINT
VCCINT-36	AC14	VCCINT
VCCINT-37	T17	VCCINT
VCCINT-38	N8	VCCINT
VCCINT-39	N16	VCCINT
VCCINT-4	AB15	VCCINT
VCCINT-40	U16	VCCINT
VCCINT-41	W16	VCCINT
VCCINT-42	AA16	VCCINT
VCCINT-43	R16	VCCINT
VCCINT-44	AA14	VCCINT
VCCINT-5	AC12	VCCINT
VCCINT-6	T11	VCCINT
VCCINT-7	AA10	VCCINT
VCCINT-8	Y13	VCCINT
VCCINT-9	P11	VCCINT
VCCO_0-1	Y9	P3V3
VCCO_0-2	AB9	P3V3
VCCO_44-1	AM23	P1V5
VCCO_44-2	AF21	P1V5
VCCO_44-3	AH25	P1V5
VCCO_44-4	AJ22	P1V5
VCCO_44-5	AN20	P1V5
VCCO_44-6	AE24	P1V5
VCCO_45-1	AG18	P1V5
VCCO_45-2	AH15	P1V5
VCCO_45-3	AE14	P1V5
VCCO_45-4	AD17	P1V5
VCCO_45-5	AL16	P1V5
VCCO_45-6	AP17	P1V5
VCCO_45-7	AK19	P1V5
VCCO_46-1	AL26	P1V5
VCCO_46-2	AJ32	P1V5
VCCO_46-3	AK29	P1V5
VCCO_46-4	AM33	P1V5
VCCO_46-5	AP27	P1V5
VCCO_46-6	AN30	P1V5
VCCO_46-7	AG28	P1V5
VCCO_47-1	U28	P1V8
VCCO_47-2	V25	P1V8
VCCO_47-3	AA26	P1V8
VCCO_47-4	T21	P1V8
VCCO_47-5	AB23	P1V8
VCCO_47-6	AC20	P1V8
VCCO_47-7	W22	P1V8
VCCO_48-1	AC30	P1V8
VCCO_48-2	AE34	P1V8
VCCO_48-3	W32	P1V8
VCCO_48-4	Y29	P1V8
VCCO_48-5	AB33	P1V8
VCCO_48-6	AF31	P1V8

VCCO_48-7	AD27	P1V8
VCCO_64-1	AN10	P3V3
VCCO_64-2	AM13	P3V3
VCCO_64-3	AJ12	P3V3
VCCO_64-4	AF11	P3V3
VCCO_64-5	AG8	P3V3
VCCO_64-6	AK9	P3V3
VCCO_65-1	P27	P3V3
VCCO_65-2	J22	P3V3
VCCO_65-3	L26	P3V3
VCCO_65-4	M23	P3V3
VCCO_65-5	N20	P3V3
VCCO_65-6	R24	P3V3
VCCO_65-7	H25	P3V3
VCCO_66-1	C10	P1V8
VCCO_66-2	B13	P1V8
VCCO_66-3	F11	P1V8
VCCO_66-4	J12	P1V8
VCCO_66-5	K9	P1V8
VCCO_66-6	G8	P1V8
VCCO_67-1	B23	P1V5
VCCO_67-2	A26	P1V5
VCCO_67-3	F21	P1V5
VCCO_67-4	D27	P1V5
VCCO_67-5	E24	P1V5
VCCO_67-6	C20	P1V5
VCCO_68-1	K19	P1V5
VCCO_68-2	H15	P1V5
VCCO_68-3	G18	P1V5
VCCO_68-4	E14	P1V5
VCCO_68-5	D17	P1V5
VCCO_68-6	A16	P1V5
VCCO_68-7	L16	P1V5
VN	W11	SYSMON_VN_R
VP	V12	SYSMON_VP_R
VREF_44	AD23	DDR3_64_VREF
VREF_45	AF19	DDR3_64_VREF
VREF_46	AG27	DDR3_64_VREF
VREF_47	V24	FMC1_VREF_A_M2C
VREF_48	AA30	FMC1_VREF_A_M2C
VREF_64	AD13	Vref64
VREF_65	J21	Vref65
VREF_66	L10	DDR32_VREF
VREF_67	J20	DDR32_VREF
VREF_68	L14	Vref68
VREFN	V11	GND
VREFP	W12	Vrefp