

TYPE	BANK	HF35 Package
LVDS I/O	2K	48
HPS shared LVDS I/O	2L	48
HPS shared LVDS I/O	2M	48
HPS shared LVDS I/O	2N	48
LVDS I/O	3A	8
LVDS I/O	3B	48
LVDS I/O	3C	48
LVDS I/O	3D	8
Transceiver I/O	8A	114
HPS shared LVDS I/O	HPS	48
SDM shared LVDS I/O	SDM	29

- i. Total LVDS channels per bank supporting SERDES Non-DPA and DPA mode is equivalent to (LVDS I/O per bank)/2, inclusive of clock pair. Please refer to Dedicated Tx/Rx Channel column in the pin-out table for the channel availability.
- ii. Total LVDS channels supporting SERDES Soft-CDR mode is 12 pairs per bank. Please refer to Soft CDR column in the pin out table for the channel availability.

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
8A			GXEL8A_TX_CH0q					Yes	AM28				
8A			GXEL8A_TX_CH1p					Yes	AK28				
8A			GXEL8A_TX_CH2p					Yes	AN31				
8A			GXEL8A_TX_CH3p					Yes	AL31				
8A			GXEL8A_TX_CH4p					Yes	AJ31				
8A			GXEL8A_TX_CH5p					Yes	AM34				
8A			GXEL8A_TX_CH6p					Yes	AK34				
8A			GXEL8A_TX_CH7p					Yes	AH34				
8A			GXEL8A_TX_CH8p					Yes	AF34				
8A			GXEL8A_TX_CH9p					Yes	AD34				
8A			GXEL8A_TX_CH10p					Yes	AB34				
8A			GXEL8A_TX_CH11p					Yes	Y34				
8A			GXEL8A_TX_CH12p					Yes	V34				
8A			GXEL8A_TX_CH13p					Yes	T34				
8A			GXEL8A_TX_CH14p					Yes	P34				
8A			GXEL8A_TX_CH15p					Yes	M34				
8A			GXEL8A_TX_CH16p					Yes	K34				
8A			GXEL8A_TX_CH17p					Yes	H34				
8A			GXEL8A_TX_CH18p					Yes	F34				
8A			GXEL8A_TX_CH19p					Yes	D34				
8A			GXEL8A_TX_CH20p					Yes	C31				
8A			GXEL8A_TX_CH21p					Yes	A31				
8A			GXEL8A_TX_CH22p					Yes	D28				
8A			GXEL8A_TX_CH23p					Yes	B28				
8A			GXEL8A_TX_CH0n					Yes	AM27				
8A			GXEL8A_TX_CH1n					Yes	AK27				
8A			GXEL8A_TX_CH2n					Yes	AN30				
8A			GXEL8A_TX_CH3n					Yes	AL30				
8A			GXEL8A_TX_CH4n					Yes	AJ30				
8A			GXEL8A_TX_CH5n					Yes	AM33				
8A			GXEL8A_TX_CH6n					Yes	AK33				
8A			GXEL8A_TX_CH7n					Yes	AH33				
8A			GXEL8A_TX_CH8n					Yes	AF33				
8A			GXEL8A_TX_CH9n					Yes	AD33				
8A			GXEL8A_TX_CH10n					Yes	AB33				
8A			GXEL8A_TX_CH11n					Yes	Y33				
8A			GXEL8A_TX_CH12n					Yes	V33				
8A			GXEL8A_TX_CH13n					Yes	T33				
8A			GXEL8A_TX_CH14n					Yes	P33				
8A			GXEL8A_TX_CH15n					Yes	M33				
8A			GXEL8A_TX_CH16n					Yes	K33				
8A			GXEL8A_TX_CH17n					Yes	H33				
8A			GXEL8A_TX_CH18n					Yes	F33				
8A			GXEL8A_TX_CH19n					Yes	D33				
8A			GXEL8A_TX_CH20n					Yes	C30				
8A			GXEL8A_TX_CH21n					Yes	A30				
8A			GXEL8A_TX_CH22n					Yes	D27				
8A			GXEL8A_TX_CH23n					Yes	B27				
8A			GXEL8A_RX_CH0p					Yes	AH28				
8A			GXEL8A_RX_CH1p					Yes	AF28				
8A			GXEL8A_RX_CH2p					Yes	AD28				
8A			GXEL8A_RX_CH3p					Yes	AB28				
8A			GXEL8A_RX_CH4p					Yes	AG31				
8A			GXEL8A_RX_CH5p					Yes	AE31				
8A			GXEL8A_RX_CH6p					Yes	Y28				
8A			GXEL8A_RX_CH7p					Yes	AC31				
8A			GXEL8A_RX_CH8p					Yes	AA31				
8A			GXEL8A_RX_CH9p					Yes	W31				
8A			GXEL8A_RX_CH10p					Yes	U31				
8A			GXEL8A_RX_CH11p					Yes	R31				
8A			GXEL8A_RX_CH12p					Yes	V28				
8A			GXEL8A_RX_CH13p					Yes	N31				
8A			GXEL8A_RX_CH14p					Yes	L31				
8A			GXEL8A_RX_CH15p					Yes	J31				
8A			GXEL8A_RX_CH16p					Yes	G31				
8A			GXEL8A_RX_CH17p					Yes	E31				
8A			GXEL8A_RX_CH18p					Yes	T28				
8A			GXEL8A_RX_CH19p					Yes	P28				
8A			GXEL8A_RX_CH20p					Yes	M28				
8A			GXEL8A_RX_CH21p					Yes	K28				
8A			GXEL8A_RX_CH22p					Yes	H28				
8A			GXEL8A_RX_CH23p					Yes	F28				
8A			GXEL8A_RX_CH0n					Yes	AH27				
8A			GXEL8A_RX_CH1n					Yes	AF27				
8A			GXEL8A_RX_CH2n					Yes	AD27				
8A			GXEL8A_RX_CH3n					Yes	AB27				
8A			GXEL8A_RX_CH4n					Yes	AG30				
8A			GXEL8A_RX_CH5n					Yes	AE30				
8A			GXEL8A_RX_CH6n					Yes	Y27				
8A			GXEL8A_RX_CH7n					Yes	AC30				
8A			GXEL8A_RX_CH8n					Yes	AA30				
8A			GXEL8A_RX_CH9n					Yes	W30				
8A			GXEL8A_RX_CH10n					Yes	U30				
8A			GXEL8A_RX_CH11n					Yes	R30				
8A			GXEL8A_RX_CH12n					Yes	V27				
8A			GXEL8A_RX_CH13n					Yes	N30				
8A			GXEL8A_RX_CH14n					Yes	L30				
8A			GXEL8A_RX_CH15n					Yes	J30				

Bank Number	Index within I/O Bank	REF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HFS3	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
8A			GXELBA_RX_CH16n					Yes	G30				
8A			GXELBA_RX_CH17n					Yes	E30				
8A			GXELBA_RX_CH18n					Yes	T27				
8A			GXELBA_RX_CH19n					Yes	P27				
8A			GXELBA_RX_CH20n					Yes	M27				
8A			GXELBA_RX_CH21n					Yes	K27				
8A			GXELBA_RX_CH22n					Yes	H27				
8A			GXELBA_RX_CH23n					Yes	F27				
8A			REFCLK_GXELBA_CH0p						AL25				
8A			REFCLK_GXELBA_CH0n						AL24				
8A			REFCLK_GXELBA_CH1p						AK25				
8A			REFCLK_GXELBA_CH1n						AK24				
8A			REFCLK_GXELBA_CH2p						AF25				
8A			REFCLK_GXELBA_CH2n						AF24				
8A			REFCLK_GXELBA_CH3p						AC25				
8A			REFCLK_GXELBA_CH3n						AC24				
8A			REFCLK_GXELBA_CH4p						AJ25				
8A			REFCLK_GXELBA_CH4n						AJ24				
8A			REFCLK_GXELBA_CH5p						AG25				
8A			REFCLK_GXELBA_CH5n						AG24				
8A			REFCLK_GXELBA_CH6p						AD25				
8A			REFCLK_GXELBA_CH6n						AD24				
8A			REFCLK_GXELBA_CH7p						AH25				
8A			REFCLK_GXELBA_CH7n						AH24				
8A			REFCLK_GXELBA_CH8p						AE25				
8A			REFCLK_GXELBA_CH8n						AE24				
2N	47	VREFB2NND	IO			LVDS2N_1n	No		D14	DQ0	DQ0	DQ0	DQ0
2N	46	VREFB2NND	IO			LVDS2N_1p	No		C14	DQ0	DQ0	DQ0	DQ0
2N	45	VREFB2NND	IO			LVDS2N_2n	Yes		K15	DQS#0	DQ0	DQ0	DQ0
2N	44	VREFB2NND	IO			LVDS2N_2p	Yes		K14	DQS0	DQ0	DQ0	DQ0
2N	43	VREFB2NND	IO			LVDS2N_3n	No		A13	DQ0	DQ0	DQ0	DQ0
2N	42	VREFB2NND	IO			LVDS2N_3p	No		B13	DQ0	DQ0	DQ0	DQ0
2N	41	VREFB2NND	IO			LVDS2N_4n	Yes		J14	DQS#1	DQS#0/CO#0	DQ0	DQ0
2N	40	VREFB2NND	IO			LVDS2N_4p	Yes		H14	DQS1	DQS0/CO0	DQ0	DQ0
2N	39	VREFB2NND	IO			LVDS2N_5n	No		D13	DQ1	DQ0	DQ0	DQ0
2N	38	VREFB2NND	IO			LVDS2N_5p	No		C13	DQ1	DQ0	DQ0	DQ0
2N	37	VREFB2NND	IO			LVDS2N_6n	Yes		E14	DQ1	DQ0	DQ0	DQ0
2N	36	VREFB2NND	IO			LVDS2N_6p	Yes		F14	DQ1	DQ0	DQ0	DQ0
2N	35	VREFB2NND	IO			LVDS2N_7n	No		B11	DQ2	DQ1	DQ0	DQ0
2N	34	VREFB2NND	IO			LVDS2N_7p	No		C11	DQ2	DQ1	DQ0	DQ0
2N	33	VREFB2NND	IO			LVDS2N_8n	Yes		A12	DQS#2	DQ1	DQS#0/CO#0	DQ0
2N	32	VREFB2NND	IO			LVDS2N_8p	Yes		B12	DQS2	DQ1	DQS0/CO0	DQ0
2N	31	VREFB2NND	IO			LVDS2N_9n	No		D12	DQ2	DQ1	DQ0	DQ0
2N	30	VREFB2NND	IO			LVDS2N_9p	No		E12	DQ2	DQ1	DQ0	DQ0
2N	29	VREFB2NND	IO	PLL_2N_CLKOUT1n		LVDS2N_10n	Yes		F13	DQS#3	DQS#1/CO#1	DQ0	DQ0
2N	28	VREFB2NND	IO	PLL_2N_CLKOUT1p,PLL_2N_CLKOUT1,PLL_2N_FB1		LVDS2N_10p	Yes		G13	DQS3	DQS1/CO1	DQ0	DQ0
2N	27	VREFB2NND	IO			LVDS2N_11n	No		F12	DQ3	DQ1	DQ0	DQ0
2N	26	VREFB2NND	IO	RZQ_2N		LVDS2N_11p	No		G12	DQ3	DQ1	DQ0	DQ0
2N	25	VREFB2NND	IO	CLK_2N_1n		LVDS2N_12n	Yes		H13	DQ3	DQ1	DQ0	DQ0
2N	24	VREFB2NND	IO	CLK_2N_1p		LVDS2N_12p	Yes		J13	DQ3	DQ1	DQ0	DQ0
2N	23	VREFB2NND	IO	CLK_2N_0n		LVDS2N_13n	No		E11	DQ4	DQ2	DQ1	DQ0
2N	22	VREFB2NND	IO	CLK_2N_0p		LVDS2N_13p	No		D11	DQ4	DQ2	DQ1	DQ0
2N	21	VREFB2NND	IO			LVDS2N_14n	Yes		A9	DQS#4	DQ2	DQ1	DQS#0/CO#0
2N	20	VREFB2NND	IO			LVDS2N_14p	Yes		A10	DQS4	DQ2	DQ1	DQS0/CO0
2N	19	VREFB2NND	IO	PLL_2N_CLKOUT0n		LVDS2N_15n	No		D9	DQ4	DQ2	DQ1	DQ0
2N	18	VREFB2NND	IO	PLL_2N_CLKOUT0p,PLL_2N_CLKOUT0,PLL_2N_FB0		LVDS2N_15p	No		C9	DQ4	DQ2	DQ1	DQ0
2N	17	VREFB2NND	IO			LVDS2N_16n	Yes		B8	DQS#5	DQS#2/CO#2	DQ1	DQ0
2N	16	VREFB2NND	IO			LVDS2N_16p	Yes		A8	DQS5	DQS2/CO2	DQ1	DQ0
2N	15	VREFB2NND	IO			LVDS2N_17n	No		D8	DQ5	DQ2	DQ1	DQ0
2N	14	VREFB2NND	IO			LVDS2N_17p	No		C8	DQ5	DQ2	DQ1	DQ0
2N	13	VREFB2NND	IO			LVDS2N_18n	Yes		C10	DQ5	DQ2	DQ1	DQ0
2N	12	VREFB2NND	IO			LVDS2N_18p	Yes		B10	DQ5	DQ2	DQ1	DQ0
2N	11	VREFB2NND	IO			LVDS2N_19n	No		H11	DQ6	DQ3	DQ1	DQ0
2N	10	VREFB2NND	IO			LVDS2N_19p	No		G11	DQ6	DQ3	DQ1	DQ0
2N	9	VREFB2NND	IO			LVDS2N_20n	Yes		J12	DQS#6	DQ3	DQS#1/CO#1	DQ0
2N	8	VREFB2NND	IO			LVDS2N_20p	Yes		K12	DQS6	DQ3	DQS1/CO1	DQ0
2N	7	VREFB2NND	IO			LVDS2N_21n	No		E10	DQ6	DQ3	DQ1	DQ0
2N	6	VREFB2NND	IO			LVDS2N_21p	No		F10	DQ6	DQ3	DQ1	DQ0
2N	5	VREFB2NND	IO			LVDS2N_22n	Yes		H11	DQS#7	DQS#3/CO#3	DQ1	DQ0
2N	4	VREFB2NND	IO			LVDS2N_22p	Yes		K11	DQS7	DQS3/CO3	DQ1	DQ0
2N	3	VREFB2NND	IO			LVDS2N_23n	No		E9	DQ7	DQ3	DQ1	DQ0
2N	2	VREFB2NND	IO			LVDS2N_23p	No		F9	DQ7	DQ3	DQ1	DQ0
2N	1	VREFB2NND	IO			LVDS2N_24n	Yes		L13	DQ7	DQ3	DQ1	DQ0
2N	0	VREFB2NND	IO			LVDS2N_24p	Yes		L12	DQ7	DQ3	DQ1	DQ0
2M	47	VREFB2MND	IO			LVDS2M_1n	No		E15	DQ8	DQ4	DQ2	DQ1
2M	46	VREFB2MND	IO			LVDS2M_1p	No		F15	DQ8	DQ4	DQ2	DQ1
2M	45	VREFB2MND	IO			LVDS2M_2n	Yes		A14	DQS#8	DQ4	DQ2	DQ1
2M	44	VREFB2MND	IO			LVDS2M_2p	Yes		A15	DQS8	DQ4	DQ2	DQ1
2M	43	VREFB2MND	IO			LVDS2M_3n	No		D16	DQ8	DQ4	DQ2	DQ1
2M	42	VREFB2MND	IO			LVDS2M_3p	No		E16	DQ8	DQ4	DQ2	DQ1
2M	41	VREFB2MND	IO			LVDS2M_4n	Yes		B15	DQS#9	DQS#4/CO#4	DQ2	DQ1
2M	40	VREFB2MND	IO			LVDS2M_4p	Yes		C15	DQS9	DQS4/CO4	DQ2	DQ1
2M	39	VREFB2MND	IO			LVDS2M_5n	No		E17	DQ9	DQ4	DQ2	DQ1
2M	38	VREFB2MND	IO			LVDS2M_5p	No		D17	DQ9	DQ4	DQ2	DQ1
2M	37	VREFB2MND	IO			LVDS2M_6n	Yes		C16	DQ9	DQ4	DQ2	DQ1
2M	36	VREFB2MND	IO			LVDS2M_6p	Yes		B16	DQ9	DQ4	DQ2	DQ1
2M	35	VREFB2MND	IO			LVDS2M_7n	No		B17	DQ10	DQ5	DQ2	DQ1
2M	34	VREFB2MND	IO			LVDS2M_7p	No		A17	DQ10	DQ5	DQ2	DQ1

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
2M	33	VREFB2MND	IO			LVDS2M_8n	Yes		C18	DQSn10	DQ5	DQSn2/CQn2	DQ1
2M	32	VREFB2MND	IO			LVDS2M_8p	Yes		D18	DQ510	DQ5	DQ52/CQ2	DQ1
2M	31	VREFB2MND	IO			LVDS2M_9n	No		A18	DQ10	DQ5	DQ2	DQ1
2M	30	VREFB2MND	IO			LVDS2M_9p	No		B18	DQ10	DQ5	DQ2	DQ1
2M	29	VREFB2MND	IO	PLL_2M_CLKOUT1n		LVDS2M_10n	Yes		C19	DQSn11	DQSn5/CQn5	DQ2	DQ1
2M	28	VREFB2MND	IO	PLL_2M_CLKOUT1p,PLL_2M_CLKOUT1,PLL_2M_FB1		LVDS2M_10p	Yes		D19	DQ511	DQ55/CQ5	DQ2	DQ1
2M	27	VREFB2MND	IO			LVDS2M_11n	No		A19	DQ11	DQ5	DQ2	DQ1
2M	26	VREFB2MND	IO	RZQ_2M		LVDS2M_11p	No		A20	DQ11	DQ5	DQ2	DQ1
2M	25	VREFB2MND	IO	CLK_2M_1n		LVDS2M_12n	Yes		B20	DQ11	DQ5	DQ2	DQ1
2M	24	VREFB2MND	IO	CLK_2M_1p		LVDS2M_12p	Yes		C20	DQ11	DQ5	DQ2	DQ1
2M	23	VREFB2MND	IO	CLK_2M_0n		LVDS2M_13n	No		K16	DQ12	DQ6	DQ3	DQ1
2M	22	VREFB2MND	IO	CLK_2M_0p		LVDS2M_13p	No		J16	DQ12	DQ6	DQ3	DQ1
2M	21	VREFB2MND	IO			LVDS2M_14n	Yes		G16	DQ5n12	DQ6	DQ3	DQ5n1/CQn1
2M	20	VREFB2MND	IO			LVDS2M_14p	Yes		H16	DQ512	DQ6	DQ3	DQ51/CQ1
2M	19	VREFB2MND	IO	PLL_2M_CLKOUT0n		LVDS2M_15n	No		K17	DQ12	DQ6	DQ3	DQ1
2M	18	VREFB2MND	IO	PLL_2M_CLKOUT0p,PLL_2M_CLKOUT0,PLL_2M_FB0		LVDS2M_15p	No		J17	DQ12	DQ6	DQ3	DQ1
2M	17	VREFB2MND	IO			LVDS2M_16n	Yes		F17	DQ5n13	DQ5n6/CQn6	DQ3	DQ1
2M	16	VREFB2MND	IO			LVDS2M_16p	Yes		G17	DQ513	DQ56/CQ6	DQ3	DQ1
2M	15	VREFB2MND	IO			LVDS2M_17n	No		H15	DQ13	DQ6	DQ3	DQ1
2M	14	VREFB2MND	IO			LVDS2M_17p	No		G15	DQ13	DQ6	DQ3	DQ1
2M	13	VREFB2MND	IO			LVDS2M_18n	Yes		J18	DQ13	DQ6	DQ3	DQ1
2M	12	VREFB2MND	IO			LVDS2M_18p	Yes		H18	DQ13	DQ6	DQ3	DQ1
2M	11	VREFB2MND	IO			LVDS2M_19n	No		F18	DQ14	DQ7	DQ3	DQ1
2M	10	VREFB2MND	IO			LVDS2M_19p	No		G18	DQ14	DQ7	DQ3	DQ1
2M	9	VREFB2MND	IO			LVDS2M_20n	Yes		G20	DQ5n14	DQ7	DQ5n3/CQn3	DQ1
2M	8	VREFB2MND	IO			LVDS2M_20p	Yes		H20	DQ514	DQ7	DQ53/CQ3	DQ1
2M	7	VREFB2MND	IO			LVDS2M_21n	No		E19	DQ14	DQ7	DQ3	DQ1
2M	6	VREFB2MND	IO			LVDS2M_21p	No		F19	DQ14	DQ7	DQ3	DQ1
2M	5	VREFB2MND	IO			LVDS2M_22n	Yes		H19	DQ5n15	DQ5n7/CQn7	DQ3	DQ1
2M	4	VREFB2MND	IO			LVDS2M_22p	Yes		J19	DQ515	DQ57/CQ7	DQ3	DQ1
2M	3	VREFB2MND	IO			LVDS2M_23n	No		E20	DQ15	DQ7	DQ3	DQ1
2M	2	VREFB2MND	IO			LVDS2M_23p	No		F20	DQ15	DQ7	DQ3	DQ1
2M	1	VREFB2MND	IO			LVDS2M_24n	Yes		K19	DQ15	DQ7	DQ3	DQ1
2M	0	VREFB2MND	IO			LVDS2M_24p	Yes		K20	DQ15	DQ7	DQ3	DQ1
2L	47	VREFB2LND	IO			LVDS2L_1n	No		B21	DQ16	DQ8	DQ4	DQ2
2L	46	VREFB2LND	IO			LVDS2L_1p	No		C21	DQ16	DQ8	DQ4	DQ2
2L	45	VREFB2LND	IO			LVDS2L_2n	Yes		D22	DQ5n16	DQ8	DQ4	DQ2
2L	44	VREFB2LND	IO			LVDS2L_2p	Yes		E22	DQ516	DQ8	DQ4	DQ2
2L	43	VREFB2LND	IO			LVDS2L_3n	No		A22	DQ16	DQ8	DQ4	DQ2
2L	42	VREFB2LND	IO			LVDS2L_3p	No		B22	DQ16	DQ8	DQ4	DQ2
2L	41	VREFB2LND	IO			LVDS2L_4n	Yes		F22	DQ5n17	DQ5n8/CQn8	DQ4	DQ2
2L	40	VREFB2LND	IO			LVDS2L_4p	Yes		G22	DQ517	DQ58/CQ8	DQ4	DQ2
2L	39	VREFB2LND	IO			LVDS2L_5n	No		E21	DQ17	DQ8	DQ4	DQ2
2L	38	VREFB2LND	IO			LVDS2L_5p	No		D21	DQ17	DQ8	DQ4	DQ2
2L	37	VREFB2LND	IO			LVDS2L_6n	Yes		H21	DQ17	DQ8	DQ4	DQ2
2L	36	VREFB2LND	IO			LVDS2L_6p	Yes		G21	DQ17	DQ8	DQ4	DQ2
2L	35	VREFB2LND	IO			LVDS2L_7n	No		C23	DQ18	DQ9	DQ4	DQ2
2L	34	VREFB2LND	IO			LVDS2L_7p	No		D23	DQ18	DQ9	DQ4	DQ2
2L	33	VREFB2LND	IO			LVDS2L_8n	Yes		L22	DQ5n18	DQ9	DQ5n4/CQn4	DQ2
2L	32	VREFB2LND	IO			LVDS2L_8p	Yes		M21	DQ518	DQ9	DQ54/CQ4	DQ2
2L	31	VREFB2LND	IO			LVDS2L_9n	No		F23	DQ18	DQ9	DQ4	DQ2
2L	30	VREFB2LND	IO			LVDS2L_9p	No		G23	DQ18	DQ9	DQ4	DQ2
2L	29	VREFB2LND	IO	PLL_2L_CLKOUT1n		LVDS2L_10n	Yes		H23	DQ5n19	DQ5n9/CQn9	DQ4	DQ2
2L	28	VREFB2LND	IO	PLL_2L_CLKOUT1p,PLL_2L_CLKOUT1,PLL_2L_FB1		LVDS2L_10p	Yes		J23	DQ519	DQ59/CQ9	DQ4	DQ2
2L	27	VREFB2LND	IO			LVDS2L_11n	No		J21	DQ19	DQ9	DQ4	DQ2
2L	26	VREFB2LND	IO	RZQ_2L		LVDS2L_11p	No		K21	DQ19	DQ9	DQ4	DQ2
2L	25	VREFB2LND	IO	CLK_2L_1n		LVDS2L_12n	Yes		J22	DQ19	DQ9	DQ4	DQ2
2L	24	VREFB2LND	IO	CLK_2L_1p		LVDS2L_12p	Yes		K22	DQ19	DQ9	DQ4	DQ2
2L	23	VREFB2LND	IO	CLK_2L_0n		LVDS2L_13n	No		B23	DQ20	DQ10	DQ5	DQ2
2L	22	VREFB2LND	IO	CLK_2L_0p		LVDS2L_13p	No		A23	DQ20	DQ10	DQ5	DQ2
2L	21	VREFB2LND	IO			LVDS2L_14n	Yes		D24	DQ5n20	DQ10	DQ5	DQ5n2/CQn2
2L	20	VREFB2LND	IO			LVDS2L_14p	Yes		C24	DQ520	DQ10	DQ5	DQ52/CQ2
2L	19	VREFB2LND	IO	PLL_2L_CLKOUT0n		LVDS2L_15n	No		A24	DQ20	DQ10	DQ5	DQ2
2L	18	VREFB2LND	IO	PLL_2L_CLKOUT0p,PLL_2L_CLKOUT0,PLL_2L_FB0		LVDS2L_15p	No		A25	DQ20	DQ10	DQ5	DQ2
2L	17	VREFB2LND	IO			LVDS2L_16n	Yes		F24	DQ5n21	DQ5n10/CQn10	DQ5	DQ2
2L	16	VREFB2LND	IO			LVDS2L_16p	Yes		E24	DQ521	DQ510/CQ10	DQ5	DQ2
2L	15	VREFB2LND	IO			LVDS2L_17n	No		B25	DQ21	DQ10	DQ5	DQ2
2L	14	VREFB2LND	IO			LVDS2L_17p	No		C25	DQ21	DQ10	DQ5	DQ2
2L	13	VREFB2LND	IO			LVDS2L_18n	Yes		F25	DQ21	DQ10	DQ5	DQ2
2L	12	VREFB2LND	IO			LVDS2L_18p	Yes		E25	DQ21	DQ10	DQ5	DQ2
2L	11	VREFB2LND	IO			LVDS2L_19n	No		G25	DQ22	DQ11	DQ5	DQ2
2L	10	VREFB2LND	IO			LVDS2L_19p	No		H25	DQ22	DQ11	DQ5	DQ2
2L	9	VREFB2LND	IO			LVDS2L_20n	Yes		K24	DQ5n22	DQ11	DQ5n5/CQn5	DQ2
2L	8	VREFB2LND	IO			LVDS2L_20p	Yes		L24	DQ522	DQ11	DQ55/CQ5	DQ2
2L	7	VREFB2LND	IO			LVDS2L_21n	No		H24	DQ22	DQ11	DQ5	DQ2
2L	6	VREFB2LND	IO			LVDS2L_21p	No		J24	DQ22	DQ11	DQ5	DQ2
2L	5	VREFB2LND	IO			LVDS2L_22n	Yes		K25	DQ5n23	DQ5n11/CQn11	DQ5	DQ2
2L	4	VREFB2LND	IO			LVDS2L_22p	Yes		L25	DQ523	DQ511/CQ11	DQ5	DQ2
2L	3	VREFB2LND	IO			LVDS2L_23n	No		L23	DQ23	DQ11	DQ5	DQ2
2L	2	VREFB2LND	IO			LVDS2L_23p	No		M22	DQ23	DQ11	DQ5	DQ2
2L	1	VREFB2LND	IO			LVDS2L_24n	Yes		M24	DQ23	DQ11	DQ5	DQ2
2L	0	VREFB2LND	IO			LVDS2L_24p	Yes		M23	DQ23	DQ11	DQ5	DQ2
2K	47	VREFB2KN0	IO			LVDS2K_1n	No		AL22	DQ24	DQ12	DQ6	DQ3
2K	46	VREFB2KN0	IO			LVDS2K_1p	No		AM22	DQ24	DQ12	DQ6	DQ3
2K	45	VREFB2KN0	IO			LVDS2K_2n	Yes		AF22	DQ5n24	DQ12	DQ6	DQ3
2K	44	VREFB2KN0	IO			LVDS2K_2p	Yes		AG22	DQ524	DQ12	DQ6	DQ3
2K	43	VREFB2KN0	IO			LVDS2K_3n	No		AF22	DQ24	DQ12	DQ6	DQ3
2K	42	VREFB2KN0	IO			LVDS2K_3p	No		AF21	DQ24	DQ12	DQ6	DQ3

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
2K		41	VREFB2KNO	IO		LVDS2K_4n	Yes		AJ22	DQ5n25	DQ5n12/CQn12	DO6	DO3
2K		40	VREFB2KNO	IO		LVDS2K_4p	Yes		AK22	DQ525	DQ512/CQ12	DO6	DO3
2K		39	VREFB2KNO	IO		LVDS2K_5n	No		AM21	DQ25	DQ12	DO6	DO3
2K		38	VREFB2KNO	IO		LVDS2K_5p	No		AN21	DQ25	DQ12	DO6	DO3
2K		37	VREFB2KNO	IO		LVDS2K_6n	Yes		AG21	DQ25	DQ12	DO6	DO3
2K		36	VREFB2KNO	IO		LVDS2K_6p	Yes		AH21	DQ25	DQ12	DO6	DO3
2K		35	VREFB2KNO	IO		LVDS2K_7n	No		AD19	DQ26	DQ13	DO6	DO3
2K		34	VREFB2KNO	IO		LVDS2K_7p	No		AD18	DQ26	DQ13	DO6	DO3
2K		33	VREFB2KNO	IO		LVDS2K_8n	Yes		AE20	DQ5n26	DQ13	DQ5n6/CO6	DO3
2K		32	VREFB2KNO	IO		LVDS2K_8p	Yes		AF20	DQ526	DQ13	DQ56/CO6	DO3
2K		31	VREFB2KNO	IO		LVDS2K_9n	No		AE19	DQ26	DQ13	DO6	DO3
2K		30	VREFB2KNO	IO		LVDS2K_9p	No		AF19	DQ26	DQ13	DO6	DO3
2K		29	VREFB2KNO	IO	PLL_2K_CLKOUT1n	LVDS2K_10n	Yes		AJ21	DQ5n27	DQ5n13/CQn13	DO6	DO3
2K		28	VREFB2KNO	IO	PLL_2K_CLKOUT1p,PLL_2K_CLKOUT1,PLL_2K_FB1	LVDS2K_10p	Yes		AK21	DQ527	DQ513/CQ13	DO6	DO3
2K		27	VREFB2KNO	IO		LVDS2K_11n	No		AF18	DQ27	DQ13	DO6	DO3
2K		26	VREFB2KNO	IO	RZQ_2K	LVDS2K_11p	No		AG18	DQ27	DQ13	DO6	DO3
2K		25	VREFB2KNO	IO	CLK_2K_1n	LVDS2K_12n	Yes		AG20	DQ27	DQ13	DO6	DO3
2K		24	VREFB2KNO	IO	CLK_2K_1p	LVDS2K_12p	Yes		AH20	DQ27	DQ13	DO6	DO3
2K		23	VREFB2KNO	IO	CLK_2K_0n	LVDS2K_13n	No		AK19	DQ28	DQ14	DO7	DO3
2K		22	VREFB2KNO	IO	CLK_2K_0p	LVDS2K_13p	No		AL19	DQ28	DQ14	DO7	DO3
2K		21	VREFB2KNO	IO		LVDS2K_14n	Yes		AJ19	DQ5n28	DQ14	DO7	DQ5n3/CO3
2K		20	VREFB2KNO	IO		LVDS2K_14p	Yes		AH19	DQ528	DQ14	DO7	DQ53/CO3
2K		19	VREFB2KNO	IO	PLL_2K_CLKOUT0n	LVDS2K_15n	No		AM20	DQ28	DQ14	DO7	DO3
2K		18	VREFB2KNO	IO	PLL_2K_CLKOUT0p,PLL_2K_CLKOUT0,PLL_2K_FB0	LVDS2K_15p	No		AN20	DQ28	DQ14	DO7	DO3
2K		17	VREFB2KNO	IO		LVDS2K_16n	Yes		AL20	DQ5n29	DQ5n14/CQn14	DO7	DO3
2K		16	VREFB2KNO	IO		LVDS2K_16p	Yes		AK20	DQ529	DQ514/CO14	DO7	DO3
2K		15	VREFB2KNO	IO		LVDS2K_17n	No		AM19	DQ29	DQ14	DO7	DO3
2K		14	VREFB2KNO	IO		LVDS2K_17p	No		AP19	DQ29	DQ14	DO7	DO3
2K		13	VREFB2KNO	IO		LVDS2K_18n	Yes		AJ18	DQ29	DQ14	DO7	DO3
2K		12	VREFB2KNO	IO		LVDS2K_18p	Yes		AH18	DQ29	DQ14	DO7	DO3
2K		11	VREFB2KNO	IO		LVDS2K_19n	No		AL18	DQ30	DQ15	DO7	DO3
2K		10	VREFB2KNO	IO		LVDS2K_19p	No		AM18	DQ30	DQ15	DO7	DO3
2K		9	VREFB2KNO	IO		LVDS2K_20n	Yes		AD17	DQ5n30	DQ15	DQ5n7/CO7	DO3
2K		8	VREFB2KNO	IO		LVDS2K_20p	Yes		AE17	DQ530	DQ15	DQ57/CO7	DO3
2K		7	VREFB2KNO	IO		LVDS2K_21n	No		AL17	DQ30	DQ15	DO7	DO3
2K		6	VREFB2KNO	IO		LVDS2K_21p	No		AM17	DQ30	DQ15	DO7	DO3
2K		5	VREFB2KNO	IO		LVDS2K_22n	Yes		AF17	DQ5n31	DQ5n15/CQn15	DO7	DO3
2K		4	VREFB2KNO	IO		LVDS2K_22p	Yes		AG17	DQ531	DQ515/CO15	DO7	DO3
2K		3	VREFB2KNO	IO		LVDS2K_23n	No		AN18	DQ31	DQ15	DO7	DO3
2K		2	VREFB2KNO	IO		LVDS2K_23p	No		AP18	DQ31	DQ15	DO7	DO3
2K		1	VREFB2KNO	IO		LVDS2K_24n	Yes		AJ17	DQ31	DQ15	DO7	DO3
2K		0	VREFB2KNO	IO		LVDS2K_24p	Yes		AK17	DQ31	DQ15	DO7	DO3
3D			VREFB3DNO	IO	DIFF_3D_1n				L8				
3D			VREFB3DNO	IO	DIFF_3D_1p				L7				
3D			VREFB3DNO	IO	DIFF_3D_2n				J7				
3D			VREFB3DNO	IO	DIFF_3D_2p				K7				
3D			VREFB3DNO	IO	DIFF_3D_3n				M8				
3D			VREFB3DNO	IO	DIFF_3D_3p				M7				
3D			VREFB3DNO	IO	DIFF_3D_4n				I6				
3D			VREFB3DNO	IO	DIFF_3D_4p				K6				
3D			VREFB3DNO	IO	DIFF_3D_5n				N6				
3D			VREFB3DNO	IO	DIFF_3D_5p				M6				
3D			VREFB3DNO	IO	DIFF_3D_6n				L5				
3D			VREFB3DNO	IO	DIFF_3D_6p				K5				
3D			VREFB3DNO	IO	DIFF_3D_7n				H4				
3D			VREFB3DNO	IO	DIFF_3D_7p				J4				
3D			VREFB3DNO	IO	DIFF_3D_8n				G1				
3D			VREFB3DNO	IO	DIFF_3D_8p				H1				
3D			VREFB3DNO	IO	DIFF_3D_9n				H3				
3D			VREFB3DNO	IO	DIFF_3D_9p				J3				
3D			VREFB3DNO	IO	PLL_3D_CLKOUT1n	LVDS3D_10n	Yes		J2				
3D			VREFB3DNO	IO	PLL_3D_CLKOUT1p,PLL_3D_CLKOUT1,PLL_3D_FB1	LVDS3D_10p	Yes		K2				
3D			VREFB3DNO	IO	DIFF_3D_11n				K4				
3D			VREFB3DNO	IO	RZQ_3D,DIFF_3D_11p				L4				
3D			VREFB3DNO	IO	CLK_3D_1n	LVDS3D_12n	Yes		J1				
3D			VREFB3DNO	IO	CLK_3D_1p	LVDS3D_12p	Yes		K1				
3D			VREFB3DNO	IO	CLK_3D_0n	LVDS3D_13n	No		N5				
3D			VREFB3DNO	IO	CLK_3D_0p	LVDS3D_13p	No		M5				
3D			VREFB3DNO	IO	DIFF_3D_14n				M2				
3D			VREFB3DNO	IO	DIFF_3D_14p				L2				
3D			VREFB3DNO	IO	PLL_3D_CLKOUT0n	LVDS3D_15n	No		M3				
3D			VREFB3DNO	IO	PLL_3D_CLKOUT0p,PLL_3D_CLKOUT0,PLL_3D_FB0	LVDS3D_15p	No		L3				
3D			VREFB3DNO	IO	DIFF_3D_16n				N1				
3D			VREFB3DNO	IO	DIFF_3D_16p				M1				
3D			VREFB3DNO	IO	DIFF_3D_17n				N3				
3D			VREFB3DNO	IO	DIFF_3D_17p				N4				
3D			VREFB3DNO	IO	DIFF_3D_18n				P2				
3D			VREFB3DNO	IO	DIFF_3D_18p				P1				
3D			VREFB3DNO	IO	DIFF_3D_19n				P7				
3D			VREFB3DNO	IO	DIFF_3D_19p				P6				
3D			VREFB3DNO	IO	DIFF_3D_20n				P4				
3D			VREFB3DNO	IO	DIFF_3D_20p				P3				
3D			VREFB3DNO	IO	DIFF_3D_21n				R4				
3D			VREFB3DNO	IO	DIFF_3D_21p				R5				
3D			VREFB3DNO	IO	DIFF_3D_22n				R1				
3D			VREFB3DNO	IO	DIFF_3D_22p				R2				
3D			VREFB3DNO	IO	DIFF_3D_23n				R6				
3D			VREFB3DNO	IO	DIFF_3D_23p				R7				

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36	
3B		9	VREFB3BNO	IO		LVDS3B_20n	Yes		AH6	DQS54	DQ27	DQ5n13/CQn13	DQ6	
3B		8	VREFB3BNO	IO		LVDS3B_20p	Yes		AG6	DQ54	DQ27	DQ5n13/CQn13	DQ6	
3B		7	VREFB3BNO	IO		LVDS3B_21n	No		AD6	DQ54	DQ27	DQ13	DQ6	
3B		6	VREFB3BNO	IO		LVDS3B_21p	No		AE6	DQ54	DQ27	DQ13	DQ6	
3B		5	VREFB3BNO	IO		LVDS3B_22n	Yes		AG7	DQS55	DQS27/CQ27	DQ13	DQ6	
3B		4	VREFB3BNO	IO		LVDS3B_22p	Yes		AF7	DQS55	DQS27/CQ27	DQ13	DQ6	
3B		3	VREFB3BNO	IO		LVDS3B_23n	No		AA7	DQ55	DQ27	DQ13	DQ6	
3B		2	VREFB3BNO	IO		LVDS3B_23p	No		AB7	DQ55	DQ27	DQ13	DQ6	
3B		1	VREFB3BNO	IO		LVDS3B_24n	Yes		AE7	DQS55	DQ27	DQ13	DQ6	
3B		0	VREFB3BNO	IO		LVDS3B_24p	Yes		AD7	DQS55	DQ27	DQ13	DQ6	
3A			VREFB3ANO	IO	DIFF_3A_1n	AVST_DATA0			AL7					
3A			VREFB3ANO	IO	DIFF_3A_1p	AVST_DATA1			AM7					
3A			VREFB3ANO	IO	DIFF_3A_2n	AVST_DATA2			AP6					
3A			VREFB3ANO	IO	DIFF_3A_2p	AVST_DATA3			AF7					
3A			VREFB3ANO	IO	DIFF_3A_3n	AVST_DATA4			AM8					
3A			VREFB3ANO	IO	DIFF_3A_3p	AVST_DATA5			AL8					
3A			VREFB3ANO	IO	DIFF_3A_4n	AVST_DATA6			AP8					
3A			VREFB3ANO	IO	DIFF_3A_4p	AVST_DATA7			AN8					
3A			VREFB3ANO	IO	DIFF_3A_5n	AVST_DATA8			AK9					
3A			VREFB3ANO	IO	DIFF_3A_5p	AVST_DATA9			AL9					
3A			VREFB3ANO	IO	DIFF_3A_6n	AVST_DATA10			AN9					
3A			VREFB3ANO	IO	DIFF_3A_6p	AVST_DATA11			AP9					
3A			VREFB3ANO	IO	DIFF_3A_7n	AVST_DATA12			AL10					
3A			VREFB3ANO	IO	DIFF_3A_7p	AVST_DATA13			AK10					
3A			VREFB3ANO	IO	DIFF_3A_8n	AVST_DATA14			AN10					
3A			VREFB3ANO	IO	DIFF_3A_8p	AVST_DATA15			AM10					
3A			VREFB3ANO	IO	DIFF_3A_9n	AVST_DATA16			AK11					
3A			VREFB3ANO	IO	DIFF_3A_9p	AVST_DATA17			AJ11					
3A			VREFB3ANO	IO	PLL_3A_CLKOUT1n	AVST_DATA18			AP11					
3A			VREFB3ANO	IO	PLL_3A_CLKOUT1p,PLL_3A_CLKOUT1n,PLL_3A_FB1	AVST_DATA19	LVDS3A_10n	Yes	AF12					
3A			VREFB3ANO	IO	DIFF_3A_11n	AVST_VALID	LVDS3A_10p	Yes	AH10					
3A			VREFB3ANO	IO	RZQ_3A,DIFF_3A_11p				AG10					
3A			VREFB3ANO	IO	CLK_3A_1n	AVST_DATA20	LVDS3A_12n	Yes	AM11					
3A			VREFB3ANO	IO	CLK_3A_1p	AVST_DATA21	LVDS3A_12p	Yes	AM11					
3A			VREFB3ANO	IO	CLK_3A_0n	AVST_DATA22	LVDS3A_13n	No	AD8					
3A			VREFB3ANO	IO	CLK_3A_0p	AVST_DATA23	LVDS3A_13p	No	AC8					
3A			VREFB3ANO	IO	DIFF_3A_14n	AVST_DATA24			AG8					
3A			VREFB3ANO	IO	DIFF_3A_14p	AVST_DATA25			AF8					
3A			VREFB3ANO	IO	PLL_3A_CLKOUT0n	AVST_DATA26	LVDS3A_15n	No	AE9					
3A			VREFB3ANO	IO	PLL_3A_CLKOUT0p,PLL_3A_CLKOUT0n,PLL_3A_FB0	AVST_DATA27	LVDS3A_15p	No	AF9					
3A			VREFB3ANO	IO	DIFF_3A_16n	AVST_DATA28			AJ8					
3A			VREFB3ANO	IO	DIFF_3A_16p	AVST_DATA29			AH8					
3A			VREFB3ANO	IO	DIFF_3A_17n	AVST_DATA30			AC9					
3A			VREFB3ANO	IO	DIFF_3A_17p	AVST_DATA31			AD9					
3A			VREFB3ANO	IO	DIFF_3A_18n				AH9					
3A			VREFB3ANO	IO	DIFF_3A_18p				AJ9					
3A			VREFB3ANO	IO	DIFF_3A_19n				AF10					
3A			VREFB3ANO	IO	DIFF_3A_19p				AE10					
3A			VREFB3ANO	IO	DIFF_3A_20n				AM11					
3A			VREFB3ANO	IO	DIFF_3A_20p				AG11					
3A			VREFB3ANO	IO	DIFF_3A_21n				AE11					
3A			VREFB3ANO	IO	DIFF_3A_21p				AD11					
3A			VREFB3ANO	IO	DIFF_3A_22n				AG12					
3A			VREFB3ANO	IO	DIFF_3A_22p				AF12					
3A			VREFB3ANO	IO	DIFF_3A_23n				AC11					
3A			VREFB3ANO	IO	DIFF_3A_23p				AC10					
3A			VREFB3ANO	IO	DIFF_3A_24n,e3	AVST_CLK			AD12					
HPS			HPS_IOA_1		GPIO0_I00,SPIM0_SS1_N,SPIS0_CLK,UART0_CTS_N,NAND_ADOQ0,USB0_CLK,SDMMC_CCLK				A4					
HPS			HPS_IOA_2		GPIO0_I01,SPIM1_SS1_N,SPIS0_MOSI,UART0_RTS_N,NAND_ADOQ1,USB0_STP,SDMMC_CMD				C3					
HPS			HPS_IOA_3		GPIO0_I02,SPIS0_SS0_N,UART0_TX,I2C1_SDA,NAND_WE_N,USB0_DIR,SDMMC_DATA0				B5					
HPS			HPS_IOA_4		GPIO0_I03,SPIS0_MISO,UART0_RX,I2C1_SCL,NAND_RE_N,USB0_DATA0,SDMMC_DATA1				A3					
HPS			HPS_IOA_5		GPIO0_I04,SPIM0_CLK,UART1_CTS_N,I2C0_SDA,NAND_WP_N,USB0_DATA1,SDMMC_DATA2				D2					
HPS			HPS_IOA_6		GPIO0_I05,SPIM0_MOSI,UART1_RTS_N,I2C0_SCL,NAND_ADOQ2,USB0_NXT,SDMMC_DATA3				A5					
HPS			HPS_IOA_7		GPIO0_I06,SPIM0_MISO,MIDIO2_MIDIO,UART1_TX,I2C0_EMAC2_SDA,NAND_ADOQ3,USB0_DATA2,SDMMC_DATA4				D3					
HPS			HPS_IOA_8		GPIO0_I07,SPIM0_SS0_N,MIDIO2_MDC,UART1_RX,I2C0_EMAC2_SCL,NAND_CLE,USB0_DATA3,SDMMC_DATA5				D6					
HPS			HPS_IOA_9		GPIO0_I08,SPIM1_CLK,SPIS1_CLK,MIDIO1_MIDIO,I2C0_EMAC1_SDA,NAND_ADO4,USB0_DATA4,SDMMC_DATA6				D4					
HPS			HPS_IOA_10		GPIO0_I09,SPIM1_MOSI,SPIS1_MOSI,MIDIO1_MDC,I2C0_EMAC1_SCL,NAND_ADO5,USB0_DATA5,SDMMC_DATA7				B6					
HPS			HPS_IOA_11		GPIO0_I010,SPIM1_MISO,SPIS1_SS0_N,MIDIO1_MIDIO,I2C0_EMAC0_SDA,NAND_ADO6,USB0_DATA6				C5					
HPS			HPS_IOA_12		GPIO0_I011,SPIM1_SS0_N,SPIS1_MISO,MIDIO1_MDC,I2C0_EMAC0_SCL,NAND_ADO7,USB0_DATA7				B2					
HPS			HPS_IOA_13		GPIO0_I012,NAND_ALE,USB1_CLK,EMAC0_TX_CLK				D7					
HPS			HPS_IOA_14		GPIO0_I013,NAND_RB,USB1_STP,EMAC0_TX_CTL				E6					
HPS			HPS_IOA_15		GPIO0_I014,NAND_CE_N,USB1_DIR,EMAC0_RX_CLK				C1					
HPS			HPS_IOA_16		GPIO0_I015,USB1_DATA0,EMAC0_RX_CTL				B7					
HPS			HPS_IOA_17		GPIO0_I016,NAND_ADO8,USB1_DATA1,EMAC0_TXD0				B3					
HPS			HPS_IOA_18		GPIO0_I017,NAND_ADO9,USB1_NXT,EMAC0_TXD1				C6					
HPS			HPS_IOA_19		GPIO0_I018,NAND_ADO10,USB1_DATA2,EMAC0_RXD0				F3					
HPS			HPS_IOA_20		GPIO0_I019,SPIM1_SS1_N,NAND_ADO11,USB1_DATA3,EMAC0_RXD1				E7					
HPS			HPS_IOA_21		GPIO0_I020,SPIM1_CLK,SPIS0_CLK,UART0_CTS_N,I2C1_SDA,NAND_ADO12,USB1_DATA4,EMAC0_TXD2				C4					
HPS			HPS_IOA_22		GPIO0_I021,SPIM1_MOSI,SPIS0_MOSI,UART0_RTS_N,I2C1_SCL,NAND_ADO13,USB1_DATA5,EMAC0_TXD3				J8					
HPS			HPS_IOA_23		GPIO0_I022,SPIM1_MISO,SPIS0_SS0_N,UART0_TX,I2C0_SDA,NAND_ADO14,USB1_DATA6,EMAC0_RXD2				A7					
HPS			HPS_IOA_24		GPIO0_I023,SPIM1_SS0_N,SPIS0_MISO,UART0_RX,I2C0_SCL,NAND_ADO15,USB1_DATA7,EMAC0_RXD3				G5					
HPS			HPS_IOB_1		GPIO1_I00,SPIM1_CLK,UART0_CTS_N,NAND_ADO0,EMAC1_TX_CLK				H8					
HPS			HPS_IOB_2		GPIO1_I01,SPIM1_MOSI,UART0_RTS_N,NAND_ADO1,EMAC1_TX_CTL				G6					
HPS			HPS_IOB_3		GPIO1_I02,SPIM1_MISO,UART0_TX,I2C0_SDA,NAND_WE_N,EMAC1_RX_CLK				F7					
HPS			HPS_IOB_4		GPIO1_I03,SPIM1_SS0_N,UART0_RX,I2C0_SCL,NAND_RE_N,EMAC1_RX_CTL				E2					
HPS			HPS_IOB_5		GPIO1_I04,SPIM1_SS1_N,SPIS1_CLK,UART1_CTS_N,NAND_WP_N,EMAC1_TXD0				G3					
HPS			HPS_IOB_6		GPIO1_I05,SPIS1_MOSI,UART1_RTS_N,NAND_ADO2,EMAC1_TXD1				H9					

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
HPS			HPS_I0B_7	GPIO1_I06.SPI51_S50_N,UART1_TX,I2C1_SDA,NAND_ADO3,EMAC1_RXD0					F2				
HPS			HPS_I0B_8	GPIO1_I07.SPI51_MISO,UART1_RX,I2C1_SCL,NAND_CLE,EMAC1_RXD1					F4				
HPS			HPS_I0B_9	GPIO1_I08.ITAG_TCK,SPI50_CLK,MIO2_MDIO,I2C_EMAC2_SDA,NAND_ADO4,EMAC1_TXD2					E5				
HPS			HPS_I0B_10	GPIO1_I09.ITAG_TMS,SPI50_MOSI,MIO2_MDC,I2C_EMAC2_SCL,NAND_ADO5,EMAC1_TXD3					K10				
HPS			HPS_I0B_11	GPIO1_I010.ITAG_TDO,SPI50_S50_N,MIO0_MDIO,I2C_EMAC0_SDA,NAND_ADO6,EMAC1_RXD2					H10				
HPS			HPS_I0B_12	GPIO1_I011.ITAG_TDI,SPI50_MISO,MIO0_MDC,I2C_EMAC0_SCL,NAND_ADO7,EMAC1_RXD3					E4				
HPS			HPS_I0B_13	GPIO1_I012.I2C1_SDA,NAND_ALE,SDMMC_DATA0,EMAC2_TX_CLK					G2				
HPS			HPS_I0B_14	GPIO1_I013.I2C1_SCL,NAND_RB,SDMMC_CMD,EMAC2_TX_CTL					G10				
HPS			HPS_I0B_15	GPIO1_I014.UART1_TX,NAND_CE_N,SDMMC_CLK,EMAC2_RX_CLK					F4				
HPS			HPS_I0B_16	GPIO1_I015.UART1_RX,SDMMC_DATA1,EMAC2_RX_CTL					H5				
HPS			HPS_I0B_17	GPIO1_I016.UART1_CTS_N,NAND_ADO8,SDMMC_DATA2,EMAC2_TXD0					G8				
HPS			HPS_I0B_18	GPIO1_I017.SPIM0_S51_N,UART1_RTS_N,NAND_ADO9,SDMMC_DATA3,EMAC2_TXD1					L10				
HPS			HPS_I0B_19	GPIO1_I018.SPIM0_MISO,MIO1_MDIO,I2C_EMAC1_SDA,NAND_ADO10,SDMMC_DATA4,EMAC2_RXD0					G7				
HPS			HPS_I0B_20	GPIO1_I019.SPIM0_S50_N,MIO1_MDC,I2C_EMAC1_SCL,NAND_ADO11,SDMMC_DATA5,EMAC2_RXD1					H6				
HPS			HPS_I0B_21	GPIO1_I020.SPIM0_CLK,SPI51_CLK,I2C_EMAC2_SDA,NAND_ADO12,SDMMC_DATA6,EMAC2_TXD2					F8				
HPS			HPS_I0B_22	GPIO1_I021.SPIM0_MOSI,SPI51_MOSI,I2C_EMAC2_SCL,NAND_ADO13,SDMMC_DATA7,EMAC2_TXD3					J9				
HPS			HPS_I0B_23	GPIO1_I022.SPIM0_MISO,SPI51_S50_N,MIO0_MDIO,I2C_EMAC0_SDA,NAND_ADO14,EMAC2_RXD2					L9				
HPS			HPS_I0B_24	GPIO1_I023.SPIM0_S50_N,SPI51_MISO,MIO0_MDC,I2C_EMAC0_SCL,NAND_ADO15,EMAC2_RXD3					F5				
SDM			TD0						K5				
SDM			TMS						AL12				
SDM			TCK						AM12				
SDM			TDI						AJ13				
SDM			OSC_CLK_1						AJ14				
SDM			SDM_I00	PWRMGT_SCL					AE15				
SDM			SDM_I01	AVSTX8_DATA2,AS_DATA1					AJ12				
SDM			SDM_I05	AS_nCS00,MSEL0					AE14				
SDM			SDM_I03	AVSTX8_DATA3,AS_DATA2					AE16				
SDM			hCONFG						AF14				
SDM			SDM_I04	AVSTX8_DATA1,AS_DATA0					AG13				
SDM			SDM_I02	AVSTX8_DATA0,AS_CLK					AD13				
SDM			SDM_I07	AS_nCS02,MSEL1					AH13				
SDM			SDM_I011	AVSTX8_VALID,PWRMGT_SDA					AD16				
SDM			nSTATUS						AF15				
SDM			SDM_I016	PWRMGT_SDA					AH16				
SDM			SDM_I013	AVSTX8_DATA5					AP17				
SDM			SDM_I09	AS_nCS01,MSEL2					AG15				
SDM			SDM_I06	AVSTX8_DATA4,AS_DATA3					AG16				
SDM			SDM_I010	AVSTX8_DATA7					AD14				
SDM			SDM_I08	AVST_READY,AS_nCS03					AH15				
SDM			SDM_I012	PWRMGT_SDA					AJ16				
SDM			SDM_I015	AVSTX8_DATA6					AH14				
SDM			SDM_I014	AVSTX8_CLK,PWRMGT_SCL					AF13				
SDM			RREF_SDM						AP16				
SDM			VSIGP_0						AP14				
SDM			VSIGN_0						AM13				
SDM			VSIGP_1						AL13				
SDM			VSIGN_1						AM15				
			GND						AL15				
			GND						AL14				
			GND						AK14				
			GND						Y8				
			GND						Y32				
			GND						Y31				
			GND						Y30				
			GND						Y3				
			GND						Y29				
			GND						Y26				
			GND						Y23				
			GND						Y21				
			GND						Y18				
			GND						Y16				
			GND						Y14				
			GND						Y12				
			GND						W5				
			GND						W34				
			GND						W33				
			GND						W32				
			GND						W29				
			GND						W28				
			GND						W27				
			GND						W26				
			GND						W23				
			GND						W21				
			GND						W19				
			GND						W17				
			GND						W15				
			GND						W13				
			GND						W11				
			GND						V7				
			GND						V32				
			GND						V31				
			GND						V30				
			GND						V29				
			GND						V26				
			GND						V24				
			GND						V22				
			GND						V20				
			GND						V2				
			GND						V18				

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
			GND						V16				
			GND						V12				
			GND						V10				
			GND						U9				
			GND						U4				
			GND						U34				
			GND						U33				
			GND						U32				
			GND						U29				
			GND						U28				
			GND						U27				
			GND						U26				
			GND						U23				
			GND						U21				
			GND						U19				
			GND						U17				
			GND						U13				
			GND						U11				
			GND						T6				
			GND						T32				
			GND						T31				
			GND						T30				
			GND						T29				
			GND						T26				
			GND						T24				
			GND						T22				
			GND						T18				
			GND						T16				
			GND						T14				
			GND						T12				
			GND						T1				
			GND						R8				
			GND						R34				
			GND						R33				
			GND						R32				
			GND						R3				
			GND						R29				
			GND						R28				
			GND						R27				
			GND						R26				
			GND						R23				
			GND						R21				
			GND						R19				
			GND						R15				
			GND						R13				
			GND						R11				
			GND						P5				
			GND						P32				
			GND						P31				
			GND						P30				
			GND						P29				
			GND						P26				
			GND						P23				
			GND						P21				
			GND						P16				
			GND						P14				
			GND						P12				
			GND						P10				
			GND						N7				
			GND						N34				
			GND						N33				
			GND						N32				
			GND						N29				
			GND						N28				
			GND						N27				
			GND						N26				
			GND						N25				
			GND						N24				
			GND						N23				
			GND						N22				
			GND						N21				
			GND						N2				
			GND						N19				
			GND						N17				
			GND						N11				
			GND						M9				
			GND						M4				
			GND						M32				
			GND						M31				
			GND						M30				
			GND						M29				
			GND						M26				
			GND						M25				
			GND						M14				
			GND						L6				
			GND						L34				
			GND						L33				
			GND						L32				

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
			GND						L29				
			GND						L28				
			GND						L27				
			GND						L26				
			GND						L21				
			GND						L16				
			GND						L11				
			GND						L1				
			GND						K8				
			GND						K32				
			GND						K31				
			GND						K30				
			GND						K3				
			GND						K29				
			GND						K26				
			GND						K23				
			GND						K18				
			GND						K13				
			GND						J5				
			GND						J34				
			GND						J33				
			GND						J32				
			GND						J29				
			GND						J28				
			GND						J27				
			GND						J26				
			GND						J25				
			GND						J20				
			GND						J15				
			GND						J10				
			GND						H7				
			GND						H32				
			GND						H31				
			GND						H30				
			GND						H29				
			GND						H26				
			GND						H22				
			GND						H2				
			GND						H17				
			GND						H12				
			GND						G9				
			GND						G4				
			GND						G34				
			GND						G33				
			GND						G32				
			GND						G29				
			GND						G28				
			GND						G27				
			GND						G26				
			GND						G24				
			GND						G19				
			GND						G14				
			GND						F6				
			GND						F32				
			GND						F31				
			GND						F30				
			GND						F29				
			GND						F26				
			GND						F21				
			GND						F16				
			GND						F11				
			GND						F1				
			GND						E8				
			GND						E34				
			GND						E33				
			GND						E32				
			GND						E3				
			GND						E29				
			GND						E28				
			GND						E27				
			GND						E26				
			GND						E23				
			GND						E18				
			GND						E13				
			GND						D5				
			GND						D32				
			GND						D31				
			GND						D30				
			GND						D29				
			GND						D26				
			GND						D25				
			GND						D20				
			GND						D15				
			GND						D10				
			GND						C7				
			GND						C34				
			GND						C33				
			GND						C32				

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
			GND						C29				
			GND						C28				
			GND						C27				
			GND						C26				
			GND						C22				
			GND						C2				
			GND						C17				
			GND						C12				
			GND						B9				
			GND						B4				
			GND						B34				
			GND						B33				
			GND						B32				
			GND						B31				
			GND						B30				
			GND						B29				
			GND						B26				
			GND						B24				
			GND						B19				
			GND						B14				
			GND						B1				
			GND						AP5				
			GND						AP33				
			GND						AP32				
			GND						AP31				
			GND						AP30				
			GND						AP29				
			GND						AP25				
			GND						AP20				
			GND						AP2				
			GND						AP15				
			GND						AP13				
			GND						AP10				
			GND						AN7				
			GND						AN34				
			GND						AN33				
			GND						AN32				
			GND						AN29				
			GND						AN28				
			GND						AN27				
			GND						AN26				
			GND						AN22				
			GND						AN2				
			GND						AN17				
			GND						AN13				
			GND						AN12				
			GND						AN1				
			GND						AM9				
			GND						AM4				
			GND						AM32				
			GND						AM31				
			GND						AM30				
			GND						AM29				
			GND						AM26				
			GND						AM25				
			GND						AM24				
			GND						AM23				
			GND						AM19				
			GND						AM14				
			GND						AM1				
			GND						AL6				
			GND						AL34				
			GND						AL33				
			GND						AL32				
			GND						AL29				
			GND						AL28				
			GND						AL27				
			GND						AL26				
			GND						AL23				
			GND						AL21				
			GND						AL16				
			GND						AL11				
			GND						AL1				
			GND						AK8				
			GND						AK32				
			GND						AK31				
			GND						AK30				
			GND						AK3				
			GND						AK29				
			GND						AK26				
			GND						AK23				
			GND						AK18				
			GND						AK13				
			GND						AK12				
			GND						AJ5				
			GND						AJ34				
			GND						AJ33				
			GND						AJ32				

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
			GND						AJ29				
			GND						AJ28				
			GND						AJ27				
			GND						AJ26				
			GND						AJ23				
			GND						AJ20				
			GND						AJ15				
			GND						AJ10				
			GND						AH17				
			GND						AH32				
			GND						AH31				
			GND						AH30				
			GND						AH29				
			GND						AH26				
			GND						AH23				
			GND						AH22				
			GND						AH2				
			GND						AH17				
			GND						AH12				
			GND						AG9				
			GND						AG4				
			GND						AG34				
			GND						AG33				
			GND						AG32				
			GND						AG29				
			GND						AG28				
			GND						AG27				
			GND						AG26				
			GND						AG23				
			GND						AG19				
			GND						AG14				
			GND						AF6				
			GND						AF32				
			GND						AF31				
			GND						AF30				
			GND						AF29				
			GND						AF26				
			GND						AF23				
			GND						AF21				
			GND						AF16				
			GND						AF11				
			GND						AF1				
			GND						AE8				
			GND						AE34				
			GND						AE33				
			GND						AE32				
			GND						AE3				
			GND						AE29				
			GND						AE28				
			GND						AE27				
			GND						AE26				
			GND						AE23				
			GND						AE22				
			GND						AE21				
			GND						AE18				
			GND						AE13				
			GND						AD5				
			GND						AD32				
			GND						AD31				
			GND						AD30				
			GND						AD29				
			GND						AD26				
			GND						AD23				
			GND						AD21				
			GND						AD20				
			GND						AD15				
			GND						AD10				
			GND						AC7				
			GND						AC34				
			GND						AC33				
			GND						AC32				
			GND						AC29				
			GND						AC28				
			GND						AC27				
			GND						AC26				
			GND						AC23				
			GND						AC22				
			GND						AC21				
			GND						AC2				
			GND						AC17				
			GND						AC12				
			GND						AB9				
			GND						AB4				
			GND						AB32				
			GND						AB31				
			GND						AB30				
			GND						AB29				
			GND						AB26				

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
			GND						AB25				
			GND						AB24				
			GND						AB23				
			GND						AB21				
			GND						AB18				
			GND						AB16				
			GND						AB14				
			GND						AA6				
			GND						AA34				
			GND						AA33				
			GND						AA32				
			GND						AA29				
			GND						AA28				
			GND						AA27				
			GND						AA26				
			GND						AA23				
			GND						AA22				
			GND						AA19				
			GND						AA13				
			GND						AA11				
			GND						AA1				
			GND						A6				
			GND						A33				
			GND						A32				
			GND						A29				
			GND						A28				
			GND						A27				
			GND						A26				
			GND						A21				
			GND						A2				
			GND						A16				
			GND						A11				
			GNDSENSE						U14				
			VCC						Y19				
			VCC						Y15				
			VCC						Y13				
			VCC						Y11				
			VCC						W20				
			VCC						W18				
			VCC						W16				
			VCC						W14				
			VCC						W12				
			VCC						W10				
			VCC						V19				
			VCC						U20				
			VCC						T19				
			VCC						T15				
			VCC						T13				
			VCC						T11				
			VCC						R18				
			VCC						R16				
			VCC						P19				
			VCC						P17				
			VCC						P15				
			VCC						P13				
			VCC						P11				
			VCC						N18				
			VCC						N16				
			VCC						N12				
			VCC						N10				
			VCC						AB19				
			VCC						AB15				
			VCC						AB11				
			VCC						AA16				
			VCC						AA14				
			VCCPT						V17				
			VCCPT						V15				
			VCCPT						V11				
			VCCPT						U18				
			VCCPT						U16				
			VCCPT						U12				
			VCCPT						U10				
			DNU						AP24				
			DNU						AP27				
			DNU						AP26				
			DNU						AP28				
			DNU						AN23				
			DNU						AP23				
			DNU						E1				
			DNU						D1				
			DNU						AN14				
			DNU						AN15				
			DNU						AN16				
			DNU						AK16				
			TEMPDIODE0n						AM16				
			TEMPDIODE0p						AK15				
			TEMPDIODE1n						AN24				
			TEMPDIODE1p						AN25				

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
			VCCBAT							AC14			
			VCCA_PLL							V14			
			VCCA_PLL							V13			
			VCCIO2K							AC20			
			VCCIO2K							AC19			
			VCCIO2K							AC18			
			VCCIO2L							M20			
			VCCIO2L							M19			
			VCCIO2L							L19			
			VCCIO2M							M18			
			VCCIO2M							M17			
			VCCIO2M							L18			
			VCCIO2N							M16			
			VCCIO2N							M15			
			VCCIO2N							L15			
			VCCIO3A							AB8			
			VCCIO3A							AA9			
			VCCIO3A							AA8			
			VCCIO3B							W9			
			VCCIO3B							W8			
			VCCIO3B							V9			
			VCCIO3C							U8			
			VCCIO3C							T9			
			VCCIO3C							T8			
			VCCIO3D							R9			
			VCCIO3D							P9			
			VCCIO3D							P8			
			VCCIO_HPS							M12			
			VCCIO_HPS							M11			
			VCCIO_SDM							AB13			
2K		VREFB2KNO	VREFB2KNO							AB17			
2L		VREFB2LNO	VREFB2LNO							L20			
2M		VREFB2MNO	VREFB2MNO							L17			
2N		VREFB2NNO	VREFB2NNO							L14			
3A		VREFB3ANO	VREFB3ANO							AB10			
3B		VREFB3BNO	VREFB3BNO							Y9			
3C		VREFB3CNO	VREFB3CNO							V8			
3D		VREFB3DNO	VREFB3DNO							N8			
			VCCRTPLL_GXEL1							V23			
			VCCRTPLL_GXEL1							T23			
			VCCRT_GXEL1							Y25			
			VCCRT_GXEL1							Y24			
			VCCRT_GXEL1							W25			
			VCCRT_GXEL1							W24			
			VCCRT_GXEL1							V25			
			VCCRT_GXEL1							U25			
			VCCRT_GXEL1							U24			
			VCCRT_GXEL1							T25			
			VCCRT_GXEL1							R25			
			VCCRT_GXEL1							R24			
			VCCRT_GXEL1							P25			
			VCCRT_GXEL1							P24			
			VCCRT_GXEL1							AA25			
			VCCRT_GXEL1							AA24			
			IO_AUX_RREF10							AD22			
			VCCADC							AB12			
			VCCCLK_GXEL1							AB22			
			VCCERAM							T20			
			VCCERAM							V21			
			VCCERAM							T21			
			VCCERAM							T20			
			VCCERAM							R20			
			VCCERAM							R14			
			VCCERAM							R12			
			VCCERAM							P20			
			VCCERAM							P18			
			VCCERAM							N20			
			VCCERAM							AB20			
			VCCERAM							AA21			
			VCCERAM							AA20			
			VCCERAM							AA18			
			VCCERAM							AA15			
			VCCERAM							AA12			
			VCCFUSEWR_SDM							AC13			
			VCCCH_GXEL1							Y22			
			VCCCH_GXEL1							W22			
			VCCCH_GXEL1							U22			
			VCCCH_GXEL1							R22			
			VCCCH_GXEL1							P22			
			VCCCLSENSE							U15			
			VCCCL_HPS							N15			
			VCCCL_HPS							N14			
			VCCCL_HPS							N13			
			VCCCL_HPS							M13			
			VCCCP							Y17			
			VCCCP							Y10			
			VCCCP							T17			
			VCCCP							T10			

Bank Number	Index within I/O Bank	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Soft CDR Support	GT support	HF35	DQS for X4	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36
			VCCP						R17				
			VCCP						R10				
			VCCP						AA17				
			VCCP						AA10				
			VCCPLLDIG_HPS						M10				
			VCCPLLDIG_SDM						AC15				
			VCCPLL_HPS						N9				
			VCCPLL_SDM						AC16				

July 2019	2019.07.12	Initial release.
October 2019	2019.10.30	- Removed LVDS and EMIF on Banks 3A and 3D in Pin List HF35. - Removed INIT_DONE, CONF_DONE, NAND*, and PWRMGT_PWM0 on SDM banks in Pin List HF35.
January 2020	2020.01.06	Added note (iii) to the I/O Resource Count tab.
October 2020	2020.10.27	Removed SD/MMC configuration mode support from Intel Stratix 10 devices.

(1) For more information about pin definition and pin connection guidelines, refer to the [Intel® Stratix® 10 Device Family Pin Connection Guidelines](#)