



Bank Number	VREF	PinName/Function (3) (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DQ03 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0	
		DNU					R29										
		DNU					T29										
		DNU					T30										
GXB_L1		REFCLK2n					W23										
GXB_L1		REFCLK2p					W24										
GXB_L1		GXB_TX_L11n					U27										
GXB_L1		GXB_TX_L11p					U28										
GXB_L1		GXB_RX_L11n.GXB_REFCLK_L11n					V29										
GXB_L1		GXB_RX_L11p.GXB_REFCLK_L11p					V29										
GXB_L1		GXB_TX_L10n					W27										
GXB_L1		GXB_TX_L10p					W28										
GXB_L1		GXB_RX_L10p.GXB_REFCLK_L10p					Y30										
GXB_L1		GXB_RX_L10n.GXB_REFCLK_L10n					Y29										
GXB_L1		GXB_TX_L8n					AA27										
GXB_L1		GXB_TX_L8p					AA28										
GXB_L1		GXB_RX_L8p.GXB_REFCLK_L8p					AB30										
GXB_L1		GXB_RX_L8n.GXB_REFCLK_L8n					AB29										
GXB_L1		GXB_TX_L6n					AC27										
GXB_L1		GXB_TX_L6p					AC28										
GXB_L1		GXB_RX_L6p.GXB_REFCLK_L6p					AD30										
GXB_L1		GXB_RX_L6n.GXB_REFCLK_L6n					AD29										
GXB_L1		GXB_TX_L7n					AE27										
GXB_L1		GXB_TX_L7p					AE28										
GXB_L1		GXB_RX_L7p.GXB_REFCLK_L7p					AF29										
GXB_L1		GXB_RX_L7n.GXB_REFCLK_L7n					AF28										
GXB_L1		GXB_TX_L6n					AG27										
GXB_L1		GXB_TX_L6p					AG28										
GXB_L1		GXB_RX_L6p.GXB_REFCLK_L6p					AH29										
GXB_L1		GXB_RX_L6n.GXB_REFCLK_L6n					AH28										
GXB_L1		REFCLK2ln					AA23										
GXB_L1		REFCLK2lp					AA22										
		DNU					AJ28										
JA		TD0		TD0			AF25										
JA		TMS		TMS			AK28										
JA		TCK		TCK			AH25										
JA		TDI		TDI			AG25										
JA		DCLK		DCLK			AK27										
JA		AS0		DATA4			AJ27										
JA		AS_DATA3		DATA3			AK28										
JA		AS_DATA2		DATA2			AE25										
JA		AS_DATA1		DATA1			AC25										
JA		AS_DATA0ASD0		DATA0			AK28										
JA	VREFBAND	IO	RZD_0		DIFFIO_TX_B1n	DIFFOUT_B1n	AD25										
JA	VREFBAND	IO	CLK0n		DIFFIO_RX_B2n	DIFFOUT_B2n	AE24										
JA	VREFBAND	IO	CLK0p		DIFFIO_RX_B2p	DIFFOUT_B2p	AE24										
JA	VREFBAND	IO	CLK1n		DIFFIO_RX_B4n	DIFFOUT_B4n	AJ25										
JA	VREFBAND	IO	CLK1p		DIFFIO_RX_B4p	DIFFOUT_B4p	AK25										
JA	VREFBAND	IO	FPLL_B1_CLKOUT0.FPLL_B1_CLKOUT0		DIFFIO_TX_B5n	DIFFOUT_B5n	AD23										
JA	VREFBAND	IO	FPLL_B1_CLKOUT0.FPLL_B1_CLKOUT0		DIFFIO_TX_B5p	DIFFOUT_B5p	AE23										
JA	VREFBAND	IO	FPLL_B1_CLKOUT2.FPLL_B1_CLKOUT2		DIFFIO_RX_B6n	DIFFOUT_B6n	AG24										
JA	VREFBAND	IO	FPLL_B1_CLKOUT2.FPLL_B1_CLKOUT2		DIFFIO_RX_B6p	DIFFOUT_B6p	AH24										
JA	VREFBAND	IO	VREFBAND				AD24										
JA	VREFBAND	IO	CLK2n		DIFFIO_RX_B7n	DIFFOUT_B7n	AJ24										
JA	VREFBAND	IO	CLK2p		DIFFIO_RX_B7p	DIFFOUT_B7p	AK24										
JA	VREFBAND	IO	CLK3n		DIFFIO_TX_B8n	DIFFOUT_B8n	AC22										
JA	VREFBAND	IO	CLK3p		DIFFIO_TX_B8p	DIFFOUT_B8p	AC21	DG18									
JA	VREFBAND	IO	CLK3n		DIFFIO_RX_B8n	DIFFOUT_B8n	AG23	DG18									
JA	VREFBAND	IO	CLK3p		DIFFIO_RX_B8p	DIFFOUT_B8p	AH23	DG18									
JA	VREFBAND	IO	IO		DIFFIO_TX_B10n	DIFFOUT_B10n	AE21										
JA	VREFBAND	IO	IO		DIFFIO_TX_B10p	DIFFOUT_B10p	AD22	DG18									
JA	VREFBAND	IO	IO		DIFFIO_RX_B11n	DIFFOUT_B11n	AK23	DOS1B/QK1B									
JA	VREFBAND	IO	IO		DIFFIO_RX_B11p	DIFFOUT_B11p	AK22	DOS1B/CQ1B/CQn1B/QKn1B									
JA	VREFBAND	IO	IO		DIFFIO_TX_B12n	DIFFOUT_B12n	AJ22										
JA	VREFBAND	IO	IO		DIFFIO_TX_B12p	DIFFOUT_B12p	AJ21	DG18									
JA	VREFBAND	IO	IO		DIFFIO_RX_B13n	DIFFOUT_B13n	AG22	DG18									
JA	VREFBAND	IO	IO		DIFFIO_RX_B13p	DIFFOUT_B13p	AG22	DG18									
JA	VREFBAND	IO	IO		DIFFIO_TX_B14n	DIFFOUT_B14n	AE18										
JA	VREFBAND	IO	IO		DIFFIO_TX_B14p	DIFFOUT_B14p	AE18	DG18									
JA	VREFBAND	IO	IO		DIFFIO_RX_B15n	DIFFOUT_B15n	AK21	DG18									
JA	VREFBAND	IO	IO		DIFFIO_RX_B15p	DIFFOUT_B15p	AK20	DG18									
JA	VREFBAND	IO	IO		DIFFIO_TX_B16n	DIFFOUT_B16n	AH21										
JA	VREFBAND	IO	IO		DIFFIO_TX_B16p	DIFFOUT_B16p	AH20	DG28									
JA	VREFBAND	IO	IO		DIFFIO_RX_B17n	DIFFOUT_B17n	AF21	DG28									
JA	VREFBAND	IO	IO		DIFFIO_RX_B17p	DIFFOUT_B17p	AG21	DG28									
JA	VREFBAND	IO	IO		DIFFIO_TX_B18n	DIFFOUT_B18n	AD21										
JA	VREFBAND	IO	IO		DIFFIO_TX_B18p	DIFFOUT_B18p	AD20	DG28									
JA	VREFBAND	IO	IO		DIFFIO_RX_B19n	DIFFOUT_B19n	AJ19	DOS2B/QK2B									
JA	VREFBAND	IO	IO		DIFFIO_RX_B19p	DIFFOUT_B19p	AK19	DOS2B/CQ2B/CQn2B/QKn2B									
JA	VREFBAND	IO	IO		DIFFIO_TX_B20n	DIFFOUT_B20n	AG20										
JA	VREFBAND	IO	IO		DIFFIO_TX_B20p	DIFFOUT_B20p	AG19	DG28									
JA	VREFBAND	IO	IO		DIFFIO_RX_B21n	DIFFOUT_B21n	AG18	DG28									
JA	VREFBAND	IO	IO		DIFFIO_RX_B21p	DIFFOUT_B21p	AH18	DG28									
JA	VREFBAND	IO	IO		DIFFIO_TX_B22n	DIFFOUT_B22n	AD19										
JA	VREFBAND	IO	IO		DIFFIO_TX_B22p	DIFFOUT_B22p	AD18	DG28									
JA	VREFBAND	IO	IO		DIFFIO_RX_B23n	DIFFOUT_B23n	AF19	DG28									
JA	VREFBAND	IO	IO		DIFFIO_RX_B23p	DIFFOUT_B23p	AE20	DG28									
JB	VREFBAND	IO	IO		DIFFIO_TX_B24n	DIFFOUT_B24n	AE15										
JB	VREFBAND	IO	IO		DIFFIO_TX_B24p	DIFFOUT_B24p	AE14	DG38									
JB	VREFBAND	IO	IO		DIFFIO_RX_B25n	DIFFOUT_B25n	AJ18	DG38									
JB	VREFBAND	IO	IO		DIFFIO_RX_B25p	DIFFOUT_B25p	AK18	DG38									
JB	VREFBAND	IO	IO		DIFFIO_TX_B26n	DIFFOUT_B26n	AK15										
JB	VREFBAND	IO	IO		DIFFIO_TX_B26p	DIFFOUT_B26p	AK14	DG38									
JB	VREFBAND	IO	IO		DIFFIO_RX_B27n	DIFFOUT_B27n	AK17	DOS3B/QK3B									
JB	VREFBAND	IO	IO		DIFFIO_RX_B27p	DIFFOUT_B27p	AK16	DOS3B/CQ3B/CQn3B/QKn3B									
JB	VREFBAND	IO	IO		DIFFIO_TX_B28n	DIFFOUT_B28n	AC16										
JB	VREFBAND	IO	IO		DIFFIO_TX_B28p	DIFFOUT_B28p	AD15	DG38									
JB	VREFBAND	IO	IO		DIFFIO_RX_B29n	DIFFOUT_B29n	AJ16	DG38									
JB	VREFBAND	IO	IO		DIFFIO_RX_B29p	DIFFOUT_B29p	AJ15	DG38									
JB	VREFBAND	IO	VREFBAND				AD16										
JB	VREFBAND	IO	IO		DIFFIO_RX_B30n	DIFFOUT_B30n	AD17	DG38									
JB	VREFBAND	IO	IO		DIFFIO_RX_B30p	DIFFOUT_B30p	AH17	DG38									
JB	VREFBAND	IO	IO		DIFFIO_TX_B31p	DIFFOUT_B31p	AG17	DG48									
JB	VREFBAND	IO	IO		DIFFIO_RX_B32n	DIFFOUT_B32n	AD14	DG48									
JB	VREFBAND	IO	IO		DIFFIO_RX_B32p	DIFFOUT_B32p	AH14	DG48									
JB	VREFBAND	IO	IO		DIFFIO_TX_B33p	DIFFOUT_B33p	AE17	DG48									
JB	VREFBAND	IO	IO		DIFFIO_RX_B34n	DIFFOUT_B34n	AF16	DOS4B/QK4B									
JB	VREFBAND	IO	IO		DIFFIO_RX_B34p	DIFFOUT_B34p	AG16	DOS4B/CQ4B/CQn4B/QKn4B									
JB	VREFBAND	IO	IO		DIFFIO_TX_B35p	DIFFOUT_B35p	AD14	DG48									
JB	VREFBAND	IO	IO		DIFFIO_RX_B36n	DIFFOUT_B36n	AF15	DG48									
JB	VREFBAND	IO	IO		DIFFIO_RX_B36p	DIFFOUT_B36p	AG15	DG48									
JB	VREFBAND	IO	IO		DIFFIO_TX_B37p	DIFFOUT_B37p	AD13	DG48									
JB	VREFBAND	IO	IO		DIFFIO_RX_B38n	DIFFOUT_B38n	AB13	DG48									
JB	VREFBAND	IO	IO		DIFFIO_RX_B38p	DIFFOUT_B38p	AC13	DG48									
JD	VREFBAND	IO	CLK4n		DIFFIO_RX_B76n	DIFFOUT_B76n	AJ13										
JD	VREFBAND	IO	CLK4p		DIFFIO_RX_B76p	DIFFOUT_B76p	AK13										



Bank Number	VREF	PinName/Function (3, 2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DORS (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
3D	VREFB3ND0	IO	CLK5n		DIFFIO_RX_B78n	DIFFOUT_B78n	AH12									
3D	VREFB3ND0	IO	CLK5p		DIFFIO_RX_B78p	DIFFOUT_B78p	AJ12									
3D	VREFB3ND0	IO			DIFFIO_TX_B79n	DIFFOUT_B79n	AB12									
3D	VREFB3ND0	IO			DIFFIO_TX_B79p	DIFFOUT_B79p	AC12									
3D	VREFB3ND0	IO			DIFFIO_RX_B80n	DIFFOUT_B80n	AH13									
3D	VREFB3ND0	IO			DIFFIO_RX_B80p	DIFFOUT_B80p	AG12									
3D	VREFB3ND0	IO	CLK6n		DIFFIO_RX_B82n	DIFFOUT_B82n	AP13									
3D	VREFB3ND0	IO	CLK6p		DIFFIO_RX_B82p	DIFFOUT_B82p	AP12									
3D	VREFB3ND0	IO	CLK7n		DIFFIO_RX_B84n	DIFFOUT_B84n	AD12									
3D	VREFB3ND0	IO	CLK7p		DIFFIO_RX_B84p	DIFFOUT_B84p	AD11									
		VCC2_FPLL					AB15									
		VCCA_FPLL					AB16									
		DNJ					AC16									
4A	VREFB4ND0	IO		DATA10	DIFFIO_TX_B140p	DIFFOUT_B140p	AC10	DQ58								
4A	VREFB4ND0	IO		DATA11	DIFFIO_RX_B147n	DIFFOUT_B147n	AE10	DQ58								
4A	VREFB4ND0	IO		DATA5	DIFFIO_RX_B147p	DIFFOUT_B147p	AF10	DQ58								
4A	VREFB4ND0	IO		DATA6	DIFFIO_TX_B148p	DIFFOUT_B148p	AD10	DQ58								
4A	VREFB4ND0	IO		DATA12	DIFFIO_TX_B148n	DIFFOUT_B148n	AG11	DQS5B/CQ5B/QK5B								
4A	VREFB4ND0	IO		DATA13	DIFFIO_RX_B149p	DIFFOUT_B149p	AH11	DQS5B/CQ5B/CQ5B/QK5B								
4A	VREFB4ND0	IO		DATA7	DIFFIO_TX_B150n	DIFFOUT_B150n	AK12									
4A	VREFB4ND0	IO		DATA8	DIFFIO_TX_B150p	DIFFOUT_B150p	AK11	DQ58								
4A	VREFB4ND0	IO		DATA14	DIFFIO_RX_B151n	DIFFOUT_B151n	AG10	DQ58								
4A	VREFB4ND0	IO		DATA15	DIFFIO_RX_B151p	DIFFOUT_B151p	AH10	DQ58								
4A	VREFB4ND0	IO		DATA9	DIFFIO_TX_B152n	DIFFOUT_B152n	AE9									
4A	VREFB4ND0	IO		CLKUSR	DIFFIO_TX_B152p	DIFFOUT_B152p	AF9	DQ58								
4A	VREFB4ND0	IO			DIFFIO_RX_B153n	DIFFOUT_B153n	AK10	DQ58								
4A	VREFB4ND0	IO			DIFFIO_RX_B153p	DIFFOUT_B153p	AJ9	DQ58								
4A	VREFB4ND0	IO		PR_ERROR	DIFFIO_TX_B154n	DIFFOUT_B154n	AJ10									
4A	VREFB4ND0	IO		PR_READY	DIFFIO_TX_B154p	DIFFOUT_B154p	AJ9	DQ68								
4A	VREFB4ND0	IO		PR_DONE	DIFFIO_RX_B155n	DIFFOUT_B155n	AG9	DQ68								
4A	VREFB4ND0	IO		PR_REQUEST	DIFFIO_RX_B155p	DIFFOUT_B155p	AH9	DQ68								
4A	VREFB4ND0	IO			DIFFIO_TX_B156n	DIFFOUT_B156n	AD9									
4A	VREFB4ND0	IO			DIFFIO_TX_B156p	DIFFOUT_B156p	AC8	DQ68								
4A	VREFB4ND0	IO		CLP_CONF_DONE	DIFFIO_RX_B157n	DIFFOUT_B157n	AK8	DQS6B/CQ6B								
4A	VREFB4ND0	IO		CRC_ERROR	DIFFIO_TX_B157p	DIFFOUT_B157p	AK7	DQS6B/CQ6B/CQ6B/QK6B								
4A	VREFB4ND0	IO		DEV_DE	DIFFIO_TX_B158n	DIFFOUT_B158n	AK6									
4A	VREFB4ND0	IO		DEV_CLRn	DIFFIO_TX_B158p	DIFFOUT_B158p	AK5	DQ68								
4A	VREFB4ND0	IO		INT_DONE	DIFFIO_RX_B159n	DIFFOUT_B159n	AG8	DQ68								
4A	VREFB4ND0	IO		ICE0	DIFFIO_RX_B159p	DIFFOUT_B159p	AH8	DQ68								
4A	VREFB4ND0	IO		VREFB4ND0			AC9									
4A	VREFB4ND0	IO					AE8	DQ68								
4A	VREFB4ND0	IO	CLK11n		DIFFIO_RX_B160n	DIFFOUT_B160n	AJ4	DQ68								
4A	VREFB4ND0	IO	CLK11p		DIFFIO_RX_B160p	DIFFOUT_B160p	AK4	DQ68								
4A	VREFB4ND0	IO			DIFFIO_TX_B161n	DIFFOUT_B161n	AJ7									
4A	VREFB4ND0	IO			DIFFIO_TX_B161p	DIFFOUT_B161p	AJ6									
4A	VREFB4ND0	IO			DIFFIO_RX_B162n	DIFFOUT_B162n	AG6									
4A	VREFB4ND0	IO			DIFFIO_RX_B162p	DIFFOUT_B162p	AG6									
4A	VREFB4ND0	IO			DIFFIO_RX_B162p	DIFFOUT_B162p	AH6									
4A	VREFB4ND0	IO	CLK10n		DIFFIO_RX_B164n	DIFFOUT_B164n	AJ7									
4A	VREFB4ND0	IO	CLK10p		DIFFIO_RX_B164p	DIFFOUT_B164p	AG7									
4A	VREFB4ND0	IO	CLK9n		DIFFIO_RX_B166n	DIFFOUT_B166n	AE6									
4A	VREFB4ND0	IO	CLK9p		DIFFIO_RX_B166p	DIFFOUT_B166p	AF6									
4A	VREFB4ND0	IO			DIFFIO_TX_B167n	DIFFOUT_B167n	AC7									
4A	VREFB4ND0	IO	RZD_1		DIFFIO_TX_B167p	DIFFOUT_B167p	AD7									
4A	VREFB4ND0	IO	CLK8n		DIFFIO_RX_B168n	DIFFOUT_B168n	AC6									
4A	VREFB4ND0	IO	CLK8p		DIFFIO_RX_B168p	DIFFOUT_B168p	AD6									
		RREF_BR			DIFFIO_TX_B189p	DIFFOUT_B189p	AK2									
		DNJ					AJ3									
		DNJ					AK3									
GXB_R0		REFCLK0Rp					AA8									
GXB_R0		REFCLK0Rn					AA8									
GXB_R0	GXB_RX_R0n	GXB_REFCLK_R0n					AH2									
GXB_R0	GXB_RX_R0p	GXB_REFCLK_R0p					AH1									
GXB_R0	GXB_TX_R0n						AG3									
GXB_R0	GXB_TX_R0p						AG4									
GXB_R0	GXB_RX_R1n	GXB_REFCLK_R1n					AF2									
GXB_R0	GXB_RX_R1p	GXB_REFCLK_R1p					AF1									
GXB_R0	GXB_TX_R1n						AE3									
GXB_R0	GXB_TX_R1p						AE4									
GXB_R0	GXB_RX_R2n	GXB_REFCLK_R2n					AD2									
GXB_R0	GXB_RX_R2p	GXB_REFCLK_R2p					AD1									
GXB_R0	GXB_TX_R2n						AC3									
GXB_R0	GXB_TX_R2p						AC4									
		GND					AB2									
		GND					AB1									
		DNJ					AK3									
		DNJ					AA4									
		GND					Y2									
		GND					V1									
		DNJ					W3									
		DNJ					W4									
		GND					V2									
		DNJ					V1									
		DNJ					L3									
		DNJ					L4									
		GND					W9									
		GND					W8									
BB	VREFB8ND0	HPS_DDR					R4				HPS_DM_4		HPS_DM_4			
BB	VREFB8ND0	HPS_DDR					R5				HPS_DQ_39		HPS_DQ_39			
BB	VREFB8ND0	HPS_DDR					P7				HPS_DQ_37		HPS_DQ_37			
BB	VREFB8ND0	HPS_DDR					N7				HPS_DQ_38		HPS_DQ_38			
BB	VREFB8ND0	HPS_DDR					R7				HPS_DQ_38		HPS_DQ_38			
BB	VREFB8ND0	HPS_DDR					R3				HPS_DQS_4		HPS_DQS_4			
BB	VREFB8ND0	HPS_GPI13					T7									
BB	VREFB8ND0	HPS_DDR					R2				HPS_DQS#_4		HPS_DQS#_4			
BB	VREFB8ND0	HPS_DDR					R8				HPS_DQ_35		HPS_DQ_35			
BB	VREFB8ND0	HPS_DDR					R1				HPS_DQ_33		HPS_DQ_33			
BB	VREFB8ND0	HPS_DDR					M6				HPS_DQ_34		HPS_DQ_34			
BB	VREFB8ND0	HPS_DDR					T1				HPS_DQ_32		HPS_DQ_32			
BB	VREFB8ND0	HPS_GPI12					N6									
BB	VREFB8ND0	HPS_GPI11					N3									
BB	VREFB8ND0	HPS_DDR					P4				HPS_DM_3		HPS_DM_3			
BB	VREFB8ND0	HPS_GPI10					P3									
BB	VREFB8ND0	HPS_DDR					N5				HPS_DQ_31		HPS_DQ_31			
BB	VREFB8ND0	HPS_DDR					A2				HPS_DQ_29		HPS_DQ_29			
BB	VREFB8ND0	HPS_DDR					R6				HPS_DQ_30		HPS_DQ_30			
BB	VREFB8ND0	HPS_DDR					P1				HPS_DQ_28		HPS_DQ_28			
BB	VREFB8ND0	VREFB8ND0					T6									
BB	VREFB8ND0	HPS_DDR					M2				HPS_DQS_3		HPS_DQS_3			
BB	VREFB8ND0	HPS_GPI9					L1									
BB	VREFB8ND0	HPS_DDR					M3				HPS_DQS#_3		HPS_DQS#_3			
BB	VREFB8ND0	HPS_DDR					L1				HPS_DQ_27		HPS_DQ_27			
BB	VREFB8ND0	HPS_DDR					L4				HPS_DQ_25		HPS_DQ_25			
BB	VREFB8ND0	HPS_DDR					L9				HPS_DQ_26		HPS_DQ_26			
BB	VREFB8ND0	HPS_DDR					M4				HPS_DQ_24		HPS_DQ_24			
BB	VREFB8ND0	HPS_GPI8					T9									
BB	VREFB8ND0	HPS_GPI7					K1									
BB	VREFB8ND0	HPS_DDR					L3				HPS_DM_2		HPS_DM_2			



Bank Number	VREF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DORS (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
GB	VREFBAND0_HPS	HPS_GPI6					J1									
GB	VREFBAND0_HPS	HPS_DDR					K3				HPS_DQ_23	HPS_DQ_23				
GB	VREFBAND0_HPS	HPS_DDR					N4				HPS_DQ_21	HPS_DQ_21				
GB	VREFBAND0_HPS	HPS_DDR					J8				HPS_DQ_22	HPS_DQ_22				
GB	VREFBAND0_HPS	HPS_DDR					M5				HPS_DQ_20	HPS_DQ_20				
GB	VREFBAND0_HPS	HPS_GPI6					K8									
GB	VREFBAND0_HPS	HPS_DDR					G8				HPS_DQS_2	HPS_DQS_2				
GB	VREFBAND0_HPS	HPS_DDR					J2				HPS_RESET#	HPS_RESET#				
GB	VREFBAND0_HPS	HPS_DDR					F8				HPS_DQS#_2	HPS_DQS#_2				
GB	VREFBAND0_HPS	HPS_DDR					K2				HPS_DQ_19	HPS_DQ_19				
GB	VREFBAND0_HPS	HPS_DDR					J4				HPS_DQ_17	HPS_DQ_17				
GB	VREFBAND0_HPS	HPS_DDR					R9				HPS_DQ_18	HPS_DQ_18				
GB	VREFBAND0_HPS	HPS_DDR					J3				HPS_DQ_16	HPS_DQ_16				
GB	VREFBAND0_HPS	HPS_GPI4					P9									
GB	VREFBAND0_HPS	HPS_GPI3					D1									
GB	VREFBAND0_HPS	HPS_DDR					E3				HPS_DM_1	HPS_DM_1				
GB	VREFBAND0_HPS	HPS_GPI2					C1									
GB	VREFBAND0_HPS	HPS_DDR					F3				HPS_DQ_15	HPS_DQ_15				
GB	VREFBAND0_HPS	HPS_DDR					F1				HPS_DQ_13	HPS_DQ_13				
GB	VREFBAND0_HPS	HPS_DDR					M7				HPS_DQ_14	HPS_DQ_14				
GB	VREFBAND0_HPS	HPS_DDR					G1				HPS_DQ_12	HPS_DQ_12				
GB	VREFBAND0_HPS	HPS_DDR					L7				HPS_CKE_0	HPS_CKE_0				
GB	VREFBAND0_HPS	HPS_DDR					D2				HPS_DQS_1	HPS_DQS_1				
GB	VREFBAND0_HPS	HPS_DDR					A2				HPS_CAS_1	HPS_CAS_1				
GB	VREFBAND0_HPS	HPS_DDR					E1				HPS_DQS#_1	HPS_DQS#_1				
GB	VREFBAND0_HPS	HPS_DDR					B1				HPS_DQ_11	HPS_DQ_11				
GB	VREFBAND0_HPS	HPS_DDR					A3				HPS_DQ_9	HPS_DQ_9				
GB	VREFBAND0_HPS	HPS_DDR					G2				HPS_DQ_10	HPS_DQ_10				
GB	VREFBAND0_HPS	HPS_DDR					B3				HPS_DQ_8	HPS_DQ_8				
GB	VREFBAND0_HPS	HPS_GPI1					H3									
GB	VREFBAND0_HPS	HPS_GPI0					A4									
GB	VREFBAND0_HPS	HPS_DDR					K5				HPS_DM_0	HPS_DM_0				
GB	VREFBAND0_HPS	HPS_DDR					K6				HPS_DQ_7	HPS_DQ_7				
GB	VREFBAND0_HPS	HPS_DDR					J3				HPS_DQ_5	HPS_DQ_5				
GB	VREFBAND0_HPS	HPS_DDR					A4				HPS_DQ_6	HPS_DQ_6				
GB	VREFBAND0_HPS	HPS_DDR					C3				HPS_DQ_4	HPS_DQ_4				
GB	VREFBAND0_HPS	HPS_DDR					B4				HPS_ODT_1	HPS_ODT_1				
GB	VREFBAND0_HPS	HPS_DDR					A5				HPS_DQS_0	HPS_DQS_0				
GB	VREFBAND0_HPS	HPS_DDR					G3				HPS_ODT_0	HPS_ODT_0				
GB	VREFBAND0_HPS	HPS_DDR					B6				HPS_DQS#_0	HPS_DQS#_0				
GB	VREFBAND0_HPS	HPS_DDR					G4				HPS_DQ_3	HPS_DQ_3				
GB	VREFBAND0_HPS	HPS_DDR					C4				HPS_DQ_1	HPS_DQ_1				
GB	VREFBAND0_HPS	HPS_DDR					E7				HPS_DQ_2	HPS_DQ_2				
GB	VREFBAND0_HPS	HPS_DDR					D4				HPS_DQ_0	HPS_DQ_0				
GB	VREFBAND0_HPS	VREFBAND0_HPS					K7									
GB	VREFBAND0_HPS	HPS_DDR					F5				HPS_A_0	HPS_CA_0				
GB	VREFBAND0_HPS	HPS_DDR					E4				HPS_A_1	HPS_CA_1				
GB	VREFBAND0_HPS	HPS_DDR					B7				HPS_A_4	HPS_CA_4				
GB	VREFBAND0_HPS	HPS_DDR					G5				HPS_A_2	HPS_CA_2				
GB	VREFBAND0_HPS	HPS_DDR					A6				HPS_A_5	HPS_CA_5				
GB	VREFBAND0_HPS	HPS_DDR					H6				HPS_A_3	HPS_CA_3				
GB	VREFBAND0_HPS	HPS_DDR					G6				HPS_CK	HPS_CK				
GB	VREFBAND0_HPS	HPS_DDR					A8				HPS_A_6	HPS_CA_6				
GB	VREFBAND0_HPS	HPS_DDR					G7				HPS_CK#	HPS_CK#				
GB	VREFBAND0_HPS	HPS_DDR					A7				HPS_CA_7	HPS_CA_7				
GB	VREFBAND0_HPS	HPS_DDR					A10				HPS_BA_1					
GB	VREFBAND0_HPS	HPS_DDR					H7				HPS_BA_0					
GB	VREFBAND0_HPS	HPS_DDR					A8				HPS_BA_2					
GB	VREFBAND0_HPS	HPS_DDR					E6				HPS_CAS#					
GB	VREFBAND0_HPS	HPS_DDR					D5				HPS_RAS#					
GB	VREFBAND0_HPS	HPS_DDR					D6				HPS_A_8	HPS_CA_8				
GB	VREFBAND0_HPS	HPS_DDR					J6				HPS_A_10					
GB	VREFBAND0_HPS	HPS_DDR					C6				HPS_A_9	HPS_CA_9				
GB	VREFBAND0_HPS	HPS_DDR					J7				HPS_A_11					
GB	VREFBAND0_HPS	HPS_DDR					C9				HPS_CSN_0	HPS_CSN_0				
GB	VREFBAND0_HPS	HPS_DDR					D7				HPS_A_12					
GB	VREFBAND0_HPS	HPS_DDR					C10				HPS_CSN_1	HPS_CSN_1				
GB	VREFBAND0_HPS	HPS_DDR					C7				HPS_A_13					
GB	VREFBAND0_HPS	HPS_DDR					D9				HPS_A_14					
GB	VREFBAND0_HPS	HPS_DDR					B9				HPS_WE#					
GB	VREFBAND0_HPS	HPS_DDR					D8				HPS_A_15					
GB	VREFBAND0_HPS	HPS_RZQ_0					B10									
		DNU					F7									
		DND					P9									
		GND					F10									
ZA		HPS_nRST					M8									
ZA		HPS_nPOR					H10									
ZA		HPS_TDO					H9									
ZA		VDDRSTCLK_HPS					L9									
ZA		HPS_TMS					L9									
ZA		HPS_TXC					J11									
ZA		HPS_TRST					K9									
ZA		HPS_TDI					J11									
		DND					A19									
ZA		HPS_PORSEL					A13									
ZA		HPS_CLK1					A11									
ZA		HPS_CLK2					A14									
ZA	VREFB7A7B7C7D7E0_HPS	TRACE_CLK					A15						TRACE_CLK			HPS_GPI048
ZA	VREFB7A7B7C7D7E0_HPS	TRACE_D0					K10						TRACE_D0	SPIS0_CLK	UART0_RX	HPS_GPI049
ZA	VREFB7A7B7C7D7E0_HPS	TRACE_D1					A16						TRACE_D1	SPIS0_MOSI	UART0_TX	HPS_GPI050
ZA	VREFB7A7B7C7D7E0_HPS	TRACE_D2					L10						TRACE_D2	SPIS0_MISO	IC21_SDA	HPS_GPI051
ZA	VREFB7A7B7C7D7E0_HPS	TRACE_D3					A18						TRACE_D3	SPIS0_SS0	IC21_SCL	HPS_GPI052
ZA	VREFB7A7B7C7D7E0_HPS	TRACE_D4					L11						TRACE_D4	SPIS1_CLK		HPS_GPI053
ZA	VREFB7A7B7C7D7E0_HPS	TRACE_D6					A17						TRACE_D6	SPIS1_MOSI		HPS_GPI054
ZA	VREFB7A7B7C7D7E0_HPS	TRACE_D6					M11						TRACE_D6	SPIS1_SS0	IC20_SDA	HPS_GPI055
ZA	VREFB7A7B7C7D7E0_HPS	TRACE_D7					B15						TRACE_D7	SPIS1_MISO	IC20_SCL	HPS_GPI056
ZA	VREFB7A7B7C7D7E0_HPS	SPIM0_CLK					A20						SPIM0_CLK	IC21_SDA	UART0_CTS	HPS_GPI057
ZA	VREFB7A7B7C7D7E0_HPS	SPIM0_MOSI					B16						SPIM0_MOSI	IC21_SCL	UART0_RTS	HPS_GPI058
ZA	VREFB7A7B7C7D7E0_HPS	SPIM0_MISO					A19						SPIM0_MISO	UART1_CTS		HPS_GPI059
ZA	VREFB7A7B7C7D7E0_HPS	SPIM0_SS0					B13						SPIM0_SS0	UART1_RTS		HPS_GPI060
ZA	VREFB7A7B7C7D7E0_HPS	UART0_RX					A12						UART0_RX	SPIM0_SS1		HPS_GPI061
ZA	VREFB7A7B7C7D7E0_HPS	UART0_TX					B12						UART0_TX	SPIM1_SS1		HPS_GPI062
ZA	VREFB7A7B7C7D7E0_HPS	IC20_SDA					N12						IC20_SDA	UART1_RX	SPIM1_CLK	HPS_GPI063
ZA	VREFB7A7B7C7D7E0_HPS	IC20_SCL					B18						IC20_SCL	UART1_TX	SPIM1_MISO	HPS_GPI064
ZA	VREFB7A7B7C7D7E0_HPS	UART0_RX*					C11						UART0_RX	SPIM1_MISO		HPS_GPI065
ZA	VREFB7A7B7C7D7E0_HPS	UART0_TX					B19						UART0_TX	SPIM1_SS0		HPS_GPI066
ZA	VREFB7A7B7C7D7E0_HPS	SPIS1_CLK					D10						SPIS1_CLK	SPIM1_CLK		HPS_GPI067
ZA	VREFB7A7B7C7D7E0_HPS	SPIS1_MOSI					F11						SPIS1_MOSI	SPIM1_MOSI		HPS_GPI068
ZA	VREFB7A7B7C7D7E0_HPS	SPIS1_MISO					J10						SPIS1_MISO	SPIM1_MISO		HPS_GPI069
ZA	VREFB7A7B7C7D7E0_HPS	SPIS1_SS0					G11						SPIS1_SS0	SPIM1_SS0		HPS_GPI070
ZA	VREFB7A7B7C7D7E0_HPS	UART1_RX					J8						UART1_RX	SPIM1_SS1		HPS_GPI071
ZA	VREFB7A7B7C7D7E0_HPS	UART1_TX					A21						UART1_TX	SPIM0_CLK		HPS_GPI072
ZA	VREFB7A7B7C7D7E0_HPS	IC21_SDA					F10						IC21_SDA	SPIM0_MOSI		HPS_GPI073
ZA	VREFB7A7B7C7D7E0_HPS	IC21_SCL					A22						IC21_SCL	SPIM0_MISO		HPS_GPI074
ZA	VREFB7A7B7C7D7E0_HPS	SPIM0_SS0					E9						SPIM0_SS0			HPS_GPI075
ZA	VREFB7A7B7C7D7E0_HPS	SPIS0_CLK					D11						SPIS0_CLK	SPIM0_SS1		HPS_GPI076
ZA	VREFB7A7B7C7D7E0_HPS	SPIS0_MOSI					P12						SPIS0_MOSI			HPS_GPI077



Bank Number	VREF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DQK3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
7A	VREFB7A7B7C7D7E0_HPS	SPIS0_MISO					E11						SPIS0_MISO			HPS_GPI069
7A	VREFB7A7B7C7D7E0_HPS	SPIS0_SSD					P13						SPIS0_SSD			HPS_GPI070
7B	VREFB7A7B7C7D7E0_HPS	NAND_ALE					A23						NAND_ALE	RGMI1_TX_CLK	GSPI_SS3	HPS_GPI014
7B	VREFB7A7B7C7D7E0_HPS	NAND_CE					B22						NAND_CE	RGMI1_TXD0	USBI_D9	HPS_GPI016
7B	VREFB7A7B7C7D7E0_HPS	NAND_GLE					D21						NAND_GLE	RGMI1_TXD1	USBI_D1	HPS_GPI016
7B	VREFB7A7B7C7D7E0_HPS	NAND_RE					D21						NAND_RE	RGMI1_TXD2	USBI_D2	HPS_GPI017
7B	VREFB7A7B7C7D7E0_HPS	NAND_RB					A24						NAND_RB	RGMI1_TXD3	USBI_D3	HPS_GPI018
7B	VREFB7A7B7C7D7E0_HPS	NAND_DQ0					C12						NAND_DQ0	RGMI1_RXD0		HPS_GPI018
7B	VREFB7A7B7C7D7E0_HPS	NAND_DQ1					B24						NAND_DQ1	RGMI1_MDC0	ZC2_SDA	HPS_GPI020
7B	VREFB7A7B7C7D7E0_HPS	NAND_DQ2					D12						NAND_DQ2	RGMI1_MDC	ZC2_SCL	HPS_GPI021
7B	VREFB7A7B7C7D7E0_HPS	NAND_DQ3					C16						NAND_DQ3	RGMI1_RX_CTL	USBI_D4	HPS_GPI022
7B	VREFB7A7B7C7D7E0_HPS	NAND_DQ4					C14						NAND_DQ4	RGMI1_TX_CTL	USBI_D5	HPS_GPI023
7B	VREFB7A7B7C7D7E0_HPS	NAND_DQ5					C16						NAND_DQ5	RGMI1_RX_CLK	USBI_D6	HPS_GPI024
7B	VREFB7A7B7C7D7E0_HPS	NAND_DQ6					C13						NAND_DQ6	RGMI1_RXD1	USBI_D7	HPS_GPI026
7B	VREFB7A7B7C7D7E0_HPS	NAND_DQ7					C18						NAND_DQ7	RGMI1_RXD2		HPS_GPI026
7B	VREFB7A7B7C7D7E0_HPS	NAND_WP					K12						NAND_WP	RGMI1_RXD3	GSPI_SS2	HPS_GPI027
7B	VREFB7A7B7C7D7E0_HPS	NAND_WE/BOOTSEL2					C17						NAND_WE	GSPI_SS1		HPS_GPI028
7B	VREFB7A7B7C7D7E0_HPS	QSPI_I00					H12						QSPI_I00		USBI_CLK	HPS_GPI029
7B	VREFB7A7B7C7D7E0_HPS	QSPI_I01					B21						QSPI_I01		USBI_STP	HPS_GPI030
7B	VREFB7A7B7C7D7E0_HPS	QSPI_I02					C20						QSPI_I02		USBI_DR	HPS_GPI031
7B	VREFB7A7B7C7D7E0_HPS	QSPI_I03					C21						QSPI_I03		USBI_NXT	HPS_GPI032
7B	VREFB7A7B7C7D7E0_HPS	QSPI_SS0/BOOTSEL1					C19						QSPI_SS0			HPS_GPI033
7B	VREFB7A7B7C7D7E0_HPS	QSPI_CLK					A26						QSPI_CLK			HPS_GPI034
7B	VREFB7A7B7C7D7E0_HPS	QSPI_SS1					B26						QSPI_SS1			HPS_GPI036
7C	VREFB7A7B7C7D7E0_HPS	SDMMC_CMD					D13						SDMMC_CMD	USBI_D0		HPS_GPI036
7C	VREFB7A7B7C7D7E0_HPS	SDMMC_PWRREN					K13						SDMMC_PWRREN	USBI_D1		HPS_GPI037
7C	VREFB7A7B7C7D7E0_HPS	SDMMC_D0					D14						SDMMC_D0	USBI_D2		HPS_GPI038
7C	VREFB7A7B7C7D7E0_HPS	SDMMC_D1					L13						SDMMC_D1	USBI_D3		HPS_GPI038
7C	VREFB7A7B7C7D7E0_HPS	SDMMC_D4					E13						SDMMC_D4	USBI_D4		HPS_GPI040
7C	VREFB7A7B7C7D7E0_HPS	SDMMC_D6					N13						SDMMC_D6	USBI_D6		HPS_GPI041
7C	VREFB7A7B7C7D7E0_HPS	SDMMC_D8					F13						SDMMC_D8	USBI_D8		HPS_GPI042
7C	VREFB7A7B7C7D7E0_HPS	SDMMC_D7					P14						SDMMC_D7	USBI_D7		HPS_GPI043
7C	VREFB7A7B7C7D7E0_HPS	HPS_GPI044					G13						USBI_CLK			HPS_GPI044
7C	VREFB7A7B7C7D7E0_HPS	SDMMC_CLK_OUT					J13						SDMMC_CLK_OUT	USBI_STP		HPS_GPI046
7C	VREFB7A7B7C7D7E0_HPS	SDMMC_D2					H13						SDMMC_D2	USBI_DR		HPS_GPI046
7C	VREFB7A7B7C7D7E0_HPS	SDMMC_D3					H12						SDMMC_D3	USBI_NXT		HPS_GPI047
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_TX_CLK					L15						RGMI0_TX_CLK			HPS_GPI01
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_TXD0					N15						RGMI0_TXD0	USBI_D0		HPS_GPI01
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_TXD1					K15						RGMI0_TXD1	USBI_D1		HPS_GPI02
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_TXD2					P16						RGMI0_TXD2	USBI_D2		HPS_GPI03
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_TXD3					D16						RGMI0_TXD3	USBI_D3		HPS_GPI04
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_RXD0					M15						RGMI0_RXD0	USBI_D4		HPS_GPI05
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_MDC0					E15						RGMI0_MDC0	USBI_D6	ZC2_SDA	HPS_GPI06
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_MDC					N16						RGMI0_MDC	USBI_D8	ZC2_SCL	HPS_GPI07
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_RX_CTL					D17						RGMI0_RX_CTL	USBI_D7		HPS_GPI08
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_TX_CTL					M14						RGMI0_TX_CTL			HPS_GPI09
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_RX_CLK					D16						RGMI0_RX_CLK	USBI_CLK		HPS_GPI10
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_RXD1					L14						RGMI0_RXD1	USBI_STP		HPS_GPI11
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_RXD2					F15						RGMI0_RXD2	USBI_DR		HPS_GPI12
7D	VREFB7A7B7C7D7E0_HPS	RGMI0_RXD3					D19						RGMI0_RXD3	USBI_NXT		HPS_GPI13
7D	VREFB7A7B7C7D7E0_HPS	RGMI1_TX_CLK					E16						RGMI1_TX_CLK			HPS_GPI048
7D	VREFB7A7B7C7D7E0_HPS	RGMI1_TXD0					D18						RGMI1_TXD0			HPS_GPI049
7D	VREFB7A7B7C7D7E0_HPS	RGMI1_TXD1					E19						RGMI1_TXD1			HPS_GPI050
7D	VREFB7A7B7C7D7E0_HPS	RGMI1_TX_CTL					H15						RGMI1_TX_CTL			HPS_GPI051
7D	VREFB7A7B7C7D7E0_HPS	RGMI1_RXD0					D20						RGMI1_RXD0			HPS_GPI052
7D	VREFB7A7B7C7D7E0_HPS	RGMI1_RXD1					H14						RGMI1_RXD1			HPS_GPI053
7E	VREFB7A7B7C7D7E0_HPS	RGMI1_MDC					F16						RGMI1_MDC	SPIM0_CLK	SPIS0_CLK	HPS_GPI054
7E	VREFB7A7B7C7D7E0_HPS	RGMI1_MDC					H16						RGMI1_MDC	SPIM0_MOSI	SPIS0_MOSI	HPS_GPI055
7E	VREFB7A7B7C7D7E0_HPS	RGMI1_TXD0					F17						RGMI1_TXD0	SPIM0_MISO	SPIS0_MISO	HPS_GPI056
7E	VREFB7A7B7C7D7E0_HPS	RGMI1_TXD3					H17						RGMI1_TXD3	SPIM0_SSD	SPIS0_SSD	HPS_GPI057
7E	VREFB7A7B7C7D7E0_HPS	RGMI1_RX_CLK					E16	DQS1TQK1T					RGMI1_RX_CLK	SPIS1_CLK	SPIM1_CLK	HPS_GPI058
7E	VREFB7A7B7C7D7E0_HPS	RGMI1_RX_CTL					R16						RGMI1_RX_CTL	SPIS1_MOSI	SPIM1_MOSI	HPS_GPI059
7E	VREFB7A7B7C7D7E0_HPS	RGMI1_RXD2					K16						RGMI1_RXD2	SPIS1_MISO	SPIM1_MISO	HPS_GPI060
7E	VREFB7A7B7C7D7E0_HPS	RGMI1_RXD3					F16						RGMI1_RXD3	SPIS1_SSD	SPIM1_SSD	HPS_GPI061
		VCCA_FPLL					F16									
		VCCD_FPLL					T15									
		INU					G19									
8D	VREFB8D0	IO	CLK19b		DIFFIO_RX_T31b	DIFFOUT_T31b	M17									DOIT
8D	VREFB8D0	IO	CLK19b		DIFFIO_RX_T31a	DIFFOUT_T31a	N17									DOIT
8D	VREFB8D0	IO	CLK19b		DIFFIO_RX_T33p	DIFFOUT_T33p	F18									DOIT
8D	VREFB8D0	IO	CLK19b		DIFFIO_RX_T33a	DIFFOUT_T33a	G18									DOIT
8D	VREFB8D0	IO	FPLL_TC_CLKOUT2/FPLL_TC_Fb0/FPLL_TC_FB1		DIFFIO_RX_T35p	DIFFOUT_T35p	F19									DOIT
8D	VREFB8D0	IO	FPLL_TC_CLKOUT3/FPLL_TC_FBn		DIFFIO_RX_T35a	DIFFOUT_T35a	G19									DOIT
8D	VREFB8D0	IO	FPLL_TC_CLKOUT3/FPLL_TC_CLKOUT4/FPLL_TC_FB0		DIFFIO_TX_T36p	DIFFOUT_T36p	J17									DOIT
8D	VREFB8D0	IO	FPLL_TC_CLKOUT3/FPLL_TC_CLKOUT4		DIFFIO_TX_T36a	DIFFOUT_T36a	H18									DOIT
8D	VREFB8D0	IO	CLK17p		DIFFIO_RX_T37p	DIFFOUT_T37p	H18									DOIT
8D	VREFB8D0	IO	CLK17p		DIFFIO_RX_T37a	DIFFOUT_T37a	H19									DOIT
8D	VREFB8D0	IO	CLK19b		DIFFIO_RX_T39p	DIFFOUT_T39p	F20									DOIT
8D	VREFB8D0	IO	CLK19b		DIFFIO_RX_T39a	DIFFOUT_T39a	G20									DOIT
8C	VREFB8C0	IO	VREFB8D0		DIFFIO_RX_T54p	DIFFOUT_T54p	G17									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T54a	DIFFOUT_T54a	K20									DOIT
8C	VREFB8C0	IO			DIFFIO_TX_T55p	DIFFOUT_T55p	P19									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T56p	DIFFOUT_T56p	J20									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T56a	DIFFOUT_T56a	H21									DOIT
8C	VREFB8C0	IO			DIFFIO_TX_T57p	DIFFOUT_T57p	N18									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T58p	DIFFOUT_T58p	D22	DQS1TCQ1T/CQn1T/QKn1T								DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T58a	DIFFOUT_T58a	E22	DQSn1TQK1T								DOIT
8C	VREFB8C0	IO			DIFFIO_TX_T59p	DIFFOUT_T59p	M18									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T60p	DIFFOUT_T60p	A29									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T60a	DIFFOUT_T60a	B30									DOIT
8C	VREFB8C0	IO			DIFFIO_TX_T61p	DIFFOUT_T61p	L18									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T62p	DIFFOUT_T62p	C23									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T62a	DIFFOUT_T62a	G23									DOIT
8C	VREFB8C0	IO					K18									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T63p	DIFFOUT_T63p	A28									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T63a	DIFFOUT_T63a	B29									DOIT
8C	VREFB8C0	IO			DIFFIO_TX_T64p	DIFFOUT_T64p	M19									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T65p	DIFFOUT_T65p	D24	DQS2TCQ2T/CQn2T/QKn2T								DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T65a	DIFFOUT_T65a	E24	DQSn2TQK2T								DOIT
8C	VREFB8C0	IO			DIFFIO_TX_T66p	DIFFOUT_T66p	N19									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T67p	DIFFOUT_T67p	B27									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T67a	DIFFOUT_T67a	C27									DOIT
8C	VREFB8C0	IO			DIFFIO_TX_T68p	DIFFOUT_T68p	A28									DOIT
8C	VREFB8C0	IO			DIFFIO_TX_T68a	DIFFOUT_T68a	A27									DOIT
8C	VREFB8C0	IO			DIFFIO_RX_T69p	DIFFOUT_T69p	F21									



Bank Number	VREF	PinName/Function (3, 2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	FB6 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DORS (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
0C	VREFBAND	IO			DIFPFO_TX_T76e	DIFFOUT_T76e	K21	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T77e	DIFFOUT_T77e	K22	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T77n	DIFFOUT_T77n	J22	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_TX_T78e	DIFFOUT_T78e	G23	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T78e	DIFFOUT_T78e	M23	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T79e	DIFFOUT_T79e	L22	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_TX_T80e	DIFFOUT_T80e	J23	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T81e	DIFFOUT_T81e	F23	DQ0S4T0K4T		DQ0S4T0K4T						
0B	VREFBAND	IO			DIFPFO_RX_T81n	DIFFOUT_T81n	F24	DQ0S4T0K4T		DQ0S4T0K4T						
0B	VREFBAND	IO			DIFPFO_TX_T82e	DIFFOUT_T82e	H24	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T83e	DIFFOUT_T83e	K21	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T83n	DIFFOUT_T83n	M21	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_TX_T84e	DIFFOUT_T84e	K24	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T85e	DIFFOUT_T85e	F26	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T85n	DIFFOUT_T85n	F27	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T86e	DIFFOUT_T86e	J24	DQ0T		DQ0T						
0B	VREFBAND	IO	VREFBAND				H22	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T86e	DIFFOUT_T86e	D26	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_TX_T87e	DIFFOUT_T87e	K25	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_TX_T87n	DIFFOUT_T87n	L24	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T88e	DIFFOUT_T88e	C28	DQ0S4T0K5T		DQ0S4T0K5T						
0B	VREFBAND	IO			DIFPFO_RX_T88n	DIFFOUT_T88n	C29	DQ0S4T0K5T		DQ0S4T0K5T						
0B	VREFBAND	IO			DIFPFO_TX_T89e	DIFFOUT_T89e	G24	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_TX_T89n	DIFFOUT_T89n	G25	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T90e	DIFFOUT_T90e	P21	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_RX_T90n	DIFFOUT_T90n	N22	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_TX_T91e	DIFFOUT_T91e	C30	DQ0T		DQ0T						
0B	VREFBAND	IO			DIFPFO_TX_T91n	DIFFOUT_T91n	C30	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T92e	DIFFOUT_T92e	E28	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T92n	DIFFOUT_T92n	D29	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T93e	DIFFOUT_T93e	G26	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T93n	DIFFOUT_T93n	G27	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T94e	DIFFOUT_T94e	F30	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T94e	DIFFOUT_T94e	E30	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T95e	DIFFOUT_T95e	G29	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T95n	DIFFOUT_T95n	G30	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T96e	DIFFOUT_T96e	C28	DQ0S4T0K6T		DQ0S4T0K6T						
0A	VREFBAND	IO			DIFPFO_RX_T96n	DIFFOUT_T96n	F28	DQ0S4T0K6T		DQ0S4T0K6T						
0A	VREFBAND	IO			DIFPFO_TX_T97e	DIFFOUT_T97e	H27	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T97n	DIFFOUT_T97n	H28	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T98e	DIFFOUT_T98e	J30	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T98n	DIFFOUT_T98n	H30	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T99e	DIFFOUT_T99e	K28	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T99n	DIFFOUT_T99n	J28	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T100e	DIFFOUT_T100e	L30	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T100n	DIFFOUT_T100n	K30	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T101e	DIFFOUT_T101e	M27	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T101n	DIFFOUT_T101n	L27	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T102e	DIFFOUT_T102e	L26	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T102n	DIFFOUT_T102n	K29	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T103e	DIFFOUT_T103e	N30	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T103n	DIFFOUT_T103n	M30	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T104e	DIFFOUT_T104e	T24	DQ0S4T0K7T		DQ0S4T0K7T						
0A	VREFBAND	IO			DIFPFO_RX_T104n	DIFFOUT_T104n	T23	DQ0S4T0K7T		DQ0S4T0K7T						
0A	VREFBAND	IO			DIFPFO_TX_T105e	DIFFOUT_T105e	K26	DQ0T		DQ0T						
0A	VREFBAND	IO	CLK23b		DIFPFO_TX_T105n	DIFFOUT_T105n	K27	DQ0T		DQ0T						
0A	VREFBAND	IO	CLK23n		DIFPFO_RX_T106e	DIFFOUT_T106e	P30	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_RX_T106n	DIFFOUT_T106n	N29	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T107e	DIFFOUT_T107e	R22	DQ0T		DQ0T						
0A	VREFBAND	IO			DIFPFO_TX_T107n	DIFFOUT_T107n	R23	DQ0T		DQ0T						
0A	VREFBAND	IO	CLK22b		DIFPFO_RX_T108e	DIFFOUT_T108e	R28	DQ0T		DQ0T						
0A	VREFBAND	IO	CLK22n		DIFPFO_RX_T108n	DIFFOUT_T108n	P28	DQ0T		DQ0T						
0A	VREFBAND	IO	VREFBAND				J26	DQ0T		DQ0T						
0A	VREFBAND	IO	FPLL_TL_CLKOUT2_FPLL_TL_FBp_FPLL_TL_FB1		DIFPFO_RX_T109e	DIFFOUT_T109e	N29	DQ0T		DQ0T						
0A	VREFBAND	IO	FPLL_TL_CLKOUT3_FPLL_TL_FBn		DIFPFO_RX_T109n	DIFFOUT_T109n	M28	DQ0T		DQ0T						
0A	VREFBAND	IO	FPLL_TL_CLKOUT0_FPLL_TL_CLKOUT0_FPLL_TL_FB0		DIFPFO_TX_T110e	DIFFOUT_T110e	T25	DQ0T		DQ0T						
0A	VREFBAND	IO	FPLL_TL_CLKOUT0_FPLL_TL_CLKOUT0_FPLL_TL_CLKOUT0n		DIFPFO_TX_T110n	DIFFOUT_T110n	R26	DQ0T		DQ0T						
0A	VREFBAND	IO	CLK31e		DIFPFO_RX_T111e	DIFFOUT_T111e	R27	DQ0T		DQ0T						
0A	VREFBAND	IO	CLK31n		DIFPFO_RX_T111n	DIFFOUT_T111n	P27	DQ0T		DQ0T						
0A	VREFBAND	IO	CLK20e		DIFPFO_RX_T113e	DIFFOUT_T113e	P25	DQ0T		DQ0T						
0A	VREFBAND	IO	CLK20n		DIFPFO_RX_T113n	DIFFOUT_T113n	R25	DQ0T		DQ0T						
0A	VREFBAND	IO	RZD_6		DIFPFO_TX_T114n	DIFFOUT_T114n	J25	DQ0T		DQ0T						
0A	MSEL0			MSEL0			P24									
0A	MSEL1			MSEL1			K26									
0A	MSEL2			MSEL2			M25									
0A	MSEL3			MSEL3			L25									
0A	MSEL4			MSEL4			N23									
0A	CONF_DONE			CONF_DONE			N25									
0A	hSTATUS			hSTATUS			M28									
0A	hCE			hCE			M24									
0A	hCONFIG			hCONFIG			M23									
GND							T26									
VCC_HPS							W11									
GND							W10									
GND							AA24									
GND							AA29									
GND							AA30									
GND							AB22									
GND							AB23									
GND							AB24									
GND							AB25									
GND							AB26									
GND							AB27									
GND							AB28									
GND							AC26									
GND							AC29									
GND							AC30									
GND							AD27									
GND							AD28									
GND							AE26									
GND							AE29									
GND							AE30									
GND							AF27									
GND							AF28									
GND							AG26									
GND							AG29									
GND							AG30									
GND							AH27									
GND							AH28									
GND							AJ26									
GND							AJ30									
GND							R30									
GND							T27									
GND							T28									
GND							U22									
GND							U23									



Bank Number	VREF	PinName/Function (3), (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	R896 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		GND					U24									
		GND					U25									
		GND					U26									
		GND					U29									
		GND					U30									
		GND					V23									
		GND					V27									
		GND					V28									
		GND					W24									
		GND					W29									
		GND					W35									
		GND					Y23									
		GND					Y25									
		GND					Y26									
		GND					Y27									
		GND					Y28									
		GND					AA1									
		GND					AA2									
		GND					AA7									
		GND					AB3									
		GND					AB4									
		GND					AB5									
		GND					AB6									
		GND					AC1									
		GND					AC2									
		GND					AC5									
		GND					AD3									
		GND					AD4									
		GND					AE1									
		GND					AE2									
		GND					AE5									
		GND					AF3									
		GND					AF4									
		GND					AG1									
		GND					AG2									
		GND					AG5									
		GND					AH3									
		GND					AH4									
		GND					AJ1									
		GND					AJ2									
		GND					TI									
		GND					T4									
		GND					LJ1									
		GND					LJ2									
		GND					LU5									
		GND					LU6									
		GND					V3									
		GND					V4									
		GND					V8									
		GND					W1									
		GND					W2									
		GND					W5									
		GND					W7									
		GND					Y3									
		GND					Y4									
		GND					Y6									
		GND					Y8									
		VCCP					AB10									
		VCCP					AB14									
		VCCP					AB17									
		VCCP					AB20									
		VCCP					AC19									
		VCCP					P10									
		VCCP					RI7									
		VCCP					R21									
		VCCP					T10									
		VCCA_FPLL					V9									
		VCCA_FPLL					V22									
		VCCPLL_HPS					LU0									
		VCCBAT					H25									
		VCC_AUX					AB11									
		VCC_AUX					AB18									
		VCC_AUX					R20									
		VCC_AUX_SHARED					R13									
		VCCD_FPLL					V9									
		VCCD_FPLL					Y22									
		VCCA_GXBR0					W6									
		VCCA_GXBL1					W20									
		VCCD_GXBR0					V7									
		VCCD_GXBL1					V24									
		VCCD_GXBR0					V5									
		VCCD_GXBL1					V6									
		VCCD_GXBL1					V25									
		VCCD_GXBL1					V26									
		VCCR_GXBL					AA25									
		VCCR_GXBL					AA26									
		VCCR_GXBL					AA5									
		VCCR_GXBR					AA6									
		VCCD_GXBR0					V5									
		VCCD_GXBL1					V7									
		VCCD_GXBL1					W25									
		VCCD_GXBL1					V24									
		VCC					AA10									
		VCC					AA13									
		VCC					AA14									
		VCC					AA16									
		VCC					AA18									
		VCC					AA19									
		VCC					AA20									
		VCC					T17									
		VCC					T19									
		VCC					T21									
		VCC					T22									
		VCC					U16									
		VCC					U18									
		VCC					U20									
		VCC					V15									
		VCC					V17									
		VCC					V19									
		VCC					V21									
		VCC					W12									
		VCC					W14									
		VCC					W18									
		VCC					W20									
		VCC					Y11									
		VCC					Y13									
		VCC					Y15									



Bank Number	VREF	PinName/Function (3), (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	R96 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		VCC					Y16									
		VCC					Y17									
		VCC					Y19									
		VCC					Y21									
		VCC					W16									
		VCC_HPS					R12									
		VCC_HPS					T11									
		VCC_HPS					T13									
		VCC_HPS					U12									
		VCC_HPS					U13									
		VCC_HPS					U14									
		VCC_HPS					V11									
		VCC_HPS					V13									
		VCCD0A					AE19									
		VCCD0A					AE22									
		VCCD0A					AF26									
		VCCD0A					AH19									
		VCCD0A					AH22									
		VCCD0A					AH26									
		VCCD0B					AE13									
		VCCD0B					AE16									
		VCCD0B					AH15									
		VCCD0B					AE11									
		VCCD0B					AD19									
		VCCD0A					AD5									
		VCCD0A					AE7									
		VCCD0A					AP5									
		VCCD0A					AM5									
		VCCD0A					AH7									
		VCCD0A_HPS					C2									
		VCCD0A_HPS					C5									
		VCCD0A_HPS					C8									
		VCCD0A_HPS					F2									
		VCCD0A_HPS					F4									
		VCCD0A_HPS					F6									
		VCCD0A_HPS					H1									
		VCCD0A_HPS					J5									
		VCCD0B_HPS					L4									
		VCCD0B_HPS					M4									
		VCCD0B_HPS					N1									
		VCCD0B_HPS					N6									
		VCCD0B_HPS					T2									
		VCCD0B_HPS					T5									
		VCCD0A_HPS					B14									
		VCCD0A_HPS					B17									
		VCCD0A_HPS					G10									
		VCCD0A_HPS					M10									
		VCCD0B_HPS					R20									
		VCCD0B_HPS					E12									
		VCCD0C_HPS					E14									
		VCCD0D_HPS					E18									
		VCCD0D_HPS					J14									
		VCCD0E_HPS					G15									
		VCCD0A					F29									
		VCCD0A					J27									
		VCCD0A					J29									
		VCCD0A					M29									
		VCCD0A					N24									
		VCCD0A					N27									
		VCCD0B					E27									
		VCCD0B					F25									
		VCCD0B					K23									
		VCCD0C					D25									
		VCCD0C					F29									
		VCCD0C					J1									
		VCCD0C					L19									
		VCCD0D					E21									
		VCCD0D					K17									
		VCCP03					AB21									
		VCCP03					AC18									
		VCCP03					AC24									
		VCCP04					AB7									
		VCCP06A6B_HPS					MB									
		VCCP06A6B_HPS					MB									
		VCCP06A6B_HPS					OB									
		VCCP06A6B_HPS					UB									
		VCCP07A_HPS					N11									
		VCCP07B_HPS					L12									
		VCCP07C_HPS					M13									
		VCCP07D_HPS					M16									
		VCCP07E_HPS					J15									
		VCCP08					P18									
		VCCP08					P22									
		VCCD0B					R19									
		VCCP09					R24									
		VCCP0M					F12									
		VCCP0M					AD26									
		VCCP0TCLK_HPS					OB									
		VCC_HPS					R10									
		VCC_HPS					R11									
		VCC_HPS					R14									
		VCC_HPS					R15									
		VREFB7A/B7C7D7E0_HPS					F14									
		GND					AA11									
		GND					AA13									
		GND					AA15									
		GND					AA17									
		GND					AA21									
		GND					AB19									
		GND					AB8									
		GND					AB9									
		GND					AC11									
		GND					AC14									
		GND					AC17									
		GND					AC20									
		GND					AC23									
		GND					AD8									
		GND					AF11									
		GND					AF14									
		GND					AF17									
		GND					AF20									
		GND					AF23									
		GND					AF8									
		GND					AJ14									
		GND					AJ14									
		GND					AJ17									
		GND					AJ20									



Bank Number	VREF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	FB96 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		GND					A123									
		GND					A126									
		GND					A15									
		GND					A16									
		GND					B1									
		GND					B2									
		GND					B23									
		GND					B26									
		GND					B29									
		GND					B5									
		GND					B8									
		GND					E17									
		GND					E2									
		GND					E20									
		GND					E23									
		GND					E26									
		GND					E29									
		GND					E5									
		GND					E8									
		GND					G12									
		GND					G14									
		GND					H17									
		GND					H2									
		GND					H20									
		GND					H23									
		GND					H26									
		GND					H29									
		GND					H5									
		GND					H8									
		GND					K11									
		GND					K14									
		GND					L17									
		GND					L2									
		GND					L20									
		GND					L23									
		GND					L26									
		GND					L29									
		GND					L5									
		GND					L8									
		GND					N10									
		GND					N14									
		GND					P11									
		GND					P17									
		GND					P16									
		GND					P2									
		GND					P20									
		GND					P23									
		GND					P26									
		GND					P29									
		GND					P5									
		GND					P8									
		GND					R18									
		GND					T12									
		GND					T14									
		GND					T18									
		GND					T20									
		GND					U11									
		GND					U15									
		GND					U17									
		GND					U19									
		GND					U21									
		GND					U7									
		GND					V10									
		GND					V12									
		GND					V14									
		GND					V18									
		GND					V20									
		GND					V14									
		GND					W13									
		GND					W15									
		GND					W17									
		GND					W19									
		GND					W21									
		GND					X10									
		GND					Y12									
		GND					Y18									
		GND					Y20									

Notes:
 (1) For more information about pin definitions and pin connection guidelines, refer to the [Arria V Device Family Pin Connection Guidelines](#).
 (2) GAB, REFCLK pin is not supported in current Quartus II version, but will be supported in future Quartus II release version.
 (3) Pins with * contains similar name with other pins in the same column. For the selection of the HPS pins, refer to the "HPS Pin Mux Select x" columns.
 (4) Pins with ~ are the 10 Gbps transceiver channels. For more information about the 10 Gbps transceiver channels clocking recommendation, refer to the [Transceiver Clocking in Arria V Devices chapter](#).
 (5) RESET pin is only applicable for DDR3 device.



Bank Number	REF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152 (4)	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		DNU					E33									
		DNU					F33									
		RREF_IL					F34									
		GND					R27									
		GND					R28									
		DNU					G31									
		DNU					G32									
		GND					H34									
		GND					H33									
		DNU					L31									
		DNU					J32									
		GND					K34									
		GND					K33									
		DNU					L31									
		DNU					L32									
		GND					M34									
		GND					M33									
		GXB TX L8n					N31									
		GXB TX L8p					N32									
		GXB RX L8p_GXB_REFCLK_L8p					P34									
		GXB RX L8n_GXB_REFCLK_L8n					P33									
		GXB TX L7n					R31									
		GXB TX L7p					R32									
		GXB RX L7p_GXB_REFCLK_L7p					T34									
		GXB RX L7n_GXB_REFCLK_L7n					T33									
		GXB TX L6n					U31									
		GXB TX L6p					U32									
		GXB RX L6p_GXB_REFCLK_L6p					V34									
		GXB RX L6n_GXB_REFCLK_L6n					V33									
		REFCLK0Lp					W27									
		REFCLK0Lp					W26									
		REFCLK1Lp					W27									
		REFCLK1Lp					W26									
		GXB TX L5n					W31									
		GXB TX L5p					W32									
		GXB RX L5p_GXB_REFCLK_L5p					Y34									
		GXB RX L5n_GXB_REFCLK_L5n					Y33									
		GXB TX L4n					AA31									
		GXB TX L4p					AA32									
		GXB RX L4p_GXB_REFCLK_L4p					AB34									
		GXB RX L4n_GXB_REFCLK_L4n					AB33									
		GXB TX L3n					AC31									
		GXB TX L3p					AC32									
		GXB RX L3p_GXB_REFCLK_L3p					AD34									
		GXB RX L3n_GXB_REFCLK_L3n					AD33									
		GXB TX L2n					AE31									
		GXB TX L2p					AE32									
		GXB RX L2p_GXB_REFCLK_L2p					AF34									
		GXB RX L2n_GXB_REFCLK_L2n					AF33									
		GXB TX L1n					AG31									
		GXB TX L1p					AG32									
		GXB RX L1p_GXB_REFCLK_L1p					AH34									
		GXB RX L1n_GXB_REFCLK_L1n					AH33									
		GXB TX L0n					AJ31									
		GXB TX L0p					AJ32									
		GXB RX L0p_GXB_REFCLK_L0p					AK34									
		GXB RX L0n_GXB_REFCLK_L0n					AK33									
		REFCLK0Ln					AA38									
		REFCLK0Lp					AA27									
		DNU					AL32									
		TDO		TDO			AM33									
		TMS		TMS			AD30									
		TDK		TDK			AM34									
		TDI		TDI			AN34									
		DCLK		DCLK			AP33									
		ASDO		ASDO			AC06									
		AS_DATA3		AS_DATA3			AL31									
		AS_DATA2		AS_DATA2			AM32									
		AS_DATA1		AS_DATA1			AN33									
		AS_DATA0_ASDO		AS_DATA0			AL30									
	VREFB3A00	I0	RZ0_0		DIFF0_TX_B1n	DIFF0UT_B1n	AM30									
	VREFB3A00	I0	CLK0n		DIFF0_RX_B2n	DIFF0UT_B2n	AP29									
	VREFB3A00	I0	CLK0p		DIFF0_RX_B2p	DIFF0UT_B2p	AG29									
	VREFB3A00	I0	CLK1n		DIFF0_RX_B4n	DIFF0UT_B4n	AH29									
	VREFB3A00	I0	CLK1p		DIFF0_RX_B4p	DIFF0UT_B4p	AH28									
	VREFB3A00	I0	FPLL_B1_CLKOUT1_FPLL_B1_CLKOUTn		DIFF0_TX_B5n	DIFF0UT_B5n	AJ29									
	VREFB3A00	I0	FPLL_B1_CLKOUT0_FPLL_B1_CLKOUTp		DIFF0_TX_B5p	DIFF0UT_B5p	AK29									
	VREFB3A00	I0	FPLL_B1_CLKOUT3_FPLL_B1_FBI		DIFF0_RX_B6n	DIFF0UT_B6n	AM31									
	VREFB3A00	I0	FPLL_B1_CLKOUT2_FPLL_B1_FBI		DIFF0_RX_B6p	DIFF0UT_B6p	AN32									
	VREFB3A00	I0	VREFB3A00		DIFF0_RX_B6p	DIFF0UT_B6p	AC27									
	VREFB3A00	I0	CLK2n		DIFF0_RX_B7n	DIFF0UT_B7n	AG27									
	VREFB3A00	I0	CLK2p		DIFF0_RX_B7p	DIFF0UT_B7p	AH27									
	VREFB3A00	I0			DIFF0_TX_B8n	DIFF0UT_B8n	AP32									
	VREFB3A00	I0			DIFF0_TX_B8p	DIFF0UT_B8p	AP31	DQ1B								
	VREFB3A00	I0	CLK3n		DIFF0_RX_B9n	DIFF0UT_B9n	AG26	DQ1B								
	VREFB3A00	I0	CLK3p		DIFF0_RX_B9p	DIFF0UT_B9p	AH26	DQ1B								
	VREFB3A00	I0			DIFF0_TX_B10n	DIFF0UT_B10n	AE26									
	VREFB3A00	I0			DIFF0_TX_B10p	DIFF0UT_B10p	AF26	DQ1B								
	VREFB3A00	I0			DIFF0_RX_B11n	DIFF0UT_B11n	AL29	DQS1B/CQ1B								
	VREFB3A00	I0			DIFF0_RX_B11p	DIFF0UT_B11p	AL28	DQS1B/CQ1B/CQn1B/CQn1B								
	VREFB3A00	I0			DIFF0_TX_B12n	DIFF0UT_B12n	AN30									
	VREFB3A00	I0			DIFF0_TX_B12p	DIFF0UT_B12p	AP30	DQ1B								
	VREFB3A00	I0			DIFF0_RX_B13n	DIFF0UT_B13n	AM28	DQ1B								
	VREFB3A00	I0			DIFF0_RX_B13p	DIFF0UT_B13p	AM29	DQ1B								
	VREFB3A00	I0			DIFF0_TX_B14n	DIFF0UT_B14n	AD27									
	VREFB3A00	I0			DIFF0_TX_B14p	DIFF0UT_B14p	AE27	DQ1B								
	VREFB3A00	I0			DIFF0_RX_B15n	DIFF0UT_B15n	AJ27	DQ1B								
	VREFB3A00	I0			DIFF0_RX_B15p	DIFF0UT_B15p	AK27	DQ1B								
	VREFB3A00	I0			DIFF0_TX_B16n	DIFF0UT_B16n	AP29									
	VREFB3A00	I0			DIFF0_TX_B16p	DIFF0UT_B16p	AP28	DQ2B								
	VREFB3A00	I0			DIFF0_RX_B17n	DIFF0UT_B17n	AL27	DQ2B								
	VREFB3A00	I0			DIFF0_RX_B17p	DIFF0UT_B17p	AM27	DQ2B								
	VREFB3A00	I0			DIFF0_TX_B18n	DIFF0UT_B18n	AE28									
	VREFB3A00	I0			DIFF0_TX_B18p	DIFF0UT_B18p	AF28	DQ2B								
	VREFB3A00	I0			DIFF0_RX_B19n	DIFF0UT_B19n	AL26	DQS2B/CQ2B								
	VREFB3A00	I0			DIFF0_RX_B19p	DIFF0UT_B19p	AK26	DQS2B/CQ2B/CQn2B/CQn2B								
	VREFB3A00	I0			DIFF0_TX_B20n	DIFF0UT_B20n	AN27									
	VREFB3A00	I0			DIFF0_TX_B20p	DIFF0UT_B20p	AP27	DQ2B								
	VREFB3A00	I0			DIFF0_RX_B21n	DIFF0UT_B21n	AL26	DQ2B								
	VREFB3A00	I0			DIFF0_RX_B21p	DIFF0UT_B21p	AM26	DQ2B								
	VREFB3A00	I0			DIFF0_TX_B22n	DIFF0UT_B22n	AD29									
	VREFB3A00	I0			DIFF0_TX_B22p	DIFF0UT_B22p	AE29	DQ2B								
	VREFB3A00	I0			DIFF0_RX_B23n	DIFF0UT_B23n	AN26	DQ2B								
	VREFB3A00	I0			DIFF0_RX_B23p	DIFF0UT_B23p	AP26	DQ2B								
	VREFB3A00	I0			DIFF0_TX_B24n	DIFF0UT_B24n	AD26									
	VREFB3A00	I0			DIFF0_TX_B24p	DIFF0UT_B24p	AE26	DQ2B	DQ1B							
	VREFB3A00	I0			DIFF0_RX_B25n	DIFF0UT_B25n	AL24	DQ2B								
	VREFB3A00	I0			DIFF0_RX_B25p	DIFF0UT_B25p	AF24	DQ2B	DQ1B							
	VREFB3A00	I0			DIFF0_TX_B26n	DIFF0UT_B26n	AB24									
	VREFB3A00	I0			DIFF0_TX_B26p	DIFF0UT_B26p	AB25	DQ3B	DQ2B	DQ1B						



Bank Number	REF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152 (4)	QDS for X8/X9	QDS for X16/X18	QDS for X32/X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0	
3B	VREFB3N0	IO			DIFFIO_RX_B27n	DIFFOUT_B27n	AC24	DQS#3B/QK3B	DQ2B	DQ1B							
3B	VREFB3N0	IO			DIFFIO_RX_B27p	DIFFOUT_B27p	AD24	DQS#3B/CQ#3B/QK#3B	DQ2B	DQ1B							
3B	VREFB3N0	IO			DIFFIO_TX_B28n	DIFFOUT_B28n	AE25										
3B	VREFB3N0	IO			DIFFIO_TX_B28p	DIFFOUT_B28p	AF25	DQ3B	DQ2B								
3B	VREFB3N0	IO			DIFFIO_RX_B29n	DIFFOUT_B29n	AG24	DQ3B	DQ2B								
3B	VREFB3N0	IO	VREFB3N0		DIFFIO_RX_B29p	DIFFOUT_B29p	AH24	DQ3B	DQ2B								
3B	VREFB3N0	IO					AI25										
3B	VREFB3N0	IO					AC23	DQ3B	DQ2B								
3B	VREFB3N0	IO			DIFFIO_RX_B30n	DIFFOUT_B30n	AL25	DQ3B	DQ2B								
3B	VREFB3N0	IO			DIFFIO_RX_B30p	DIFFOUT_B30p	AM24	DQ3B	DQ2B								
3B	VREFB3N0	IO			DIFFIO_TX_B31p	DIFFOUT_B31p	AJ24	DQ4B	DQ3B								
3B	VREFB3N0	IO			DIFFIO_RX_B32n	DIFFOUT_B32n	AE23	DQ4B	DQ3B								
3B	VREFB3N0	IO			DIFFIO_RX_B32p	DIFFOUT_B32p	AF23	DQ4B	DQ3B								
3B	VREFB3N0	IO			DIFFIO_TX_B33p	DIFFOUT_B33p	AD23	DQ4B	DQ3B								
3B	VREFB3N0	IO			DIFFIO_RX_B34n	DIFFOUT_B34n	AP25	DQS#4B/QK4B	DQS#2B/QK2B	DQ1B							
3B	VREFB3N0	IO			DIFFIO_RX_B34p	DIFFOUT_B34p	AP24	DQS#4B/CQ#4B/QK#4B	DQS#2B/CQ#2B/QK#2B	DQ1B							
3B	VREFB3N0	IO			DIFFIO_TX_B35p	DIFFOUT_B35p	AM25	DQ4B	DQ3B								
3B	VREFB3N0	IO			DIFFIO_RX_B36n	DIFFOUT_B36n	AM23	DQ4B	DQ3B								
3B	VREFB3N0	IO			DIFFIO_RX_B36p	DIFFOUT_B36p	AM24	DQ4B	DQ3B								
3B	VREFB3N0	IO			DIFFIO_TX_B37p	DIFFOUT_B37p	AB23	DQ4B	DQ3B								
3B	VREFB3N0	IO			DIFFIO_RX_B38n	DIFFOUT_B38n	AN23	DQ4B	DQ3B								
3B	VREFB3N0	IO			DIFFIO_RX_B38p	DIFFOUT_B38p	AP23	DQ4B	DQ3B								
3B	VREFB3N0	IO			DIFFIO_TX_B39p	DIFFOUT_B39p	AF25	DQ5B	DQ4B								
3C	VREFB3C0	IO			DIFFIO_RX_B40n	DIFFOUT_B40n	AS23	DQ5B	DQ4B								
3C	VREFB3C0	IO			DIFFIO_RX_B40p	DIFFOUT_B40p	AH23	DQ5B	DQ4B								
3C	VREFB3C0	IO			DIFFIO_TX_B41p	DIFFOUT_B41p	AE22	DQ5B	DQ4B								
3C	VREFB3C0	IO			DIFFIO_RX_B42n	DIFFOUT_B42n	AJ23	DQS#6B/QK5B	DQ3B	DQ2B							
3C	VREFB3C0	IO			DIFFIO_RX_B42p	DIFFOUT_B42p	AJ22	DQS#6B/CQ#6B/QK#6B	DQ3B	DQ2B							
3C	VREFB3C0	IO			DIFFIO_TX_B43p	DIFFOUT_B43p	AK22	DQ5B	DQ4B								
3C	VREFB3C0	IO			DIFFIO_RX_B44n	DIFFOUT_B44n	AG21	DQ5B	DQ4B								
3C	VREFB3C0	IO			DIFFIO_RX_B44p	DIFFOUT_B44p	AG21	DQ5B	DQ4B								
3C	VREFB3C0	IO			DIFFIO_TX_B45p	DIFFOUT_B45p	AK22	DQ5B	DQ4B								
3C	VREFB3C0	IO			DIFFIO_RX_B46n	DIFFOUT_B46n	AK23	DQ5B	DQ4B								
3C	VREFB3C0	IO			DIFFIO_RX_B46p	DIFFOUT_B46p	AK23	DQ5B	DQ4B								
3C	VREFB3C0	IO			DIFFIO_TX_B47p	DIFFOUT_B47p	AM22	DQ6B	DQ5B								
3C	VREFB3C0	IO			DIFFIO_RX_B48n	DIFFOUT_B48n	AN21	DQ6B	DQ5B								
3C	VREFB3C0	IO			DIFFIO_RX_B48p	DIFFOUT_B48p	AN22	DQ6B	DQ5B								
3C	VREFB3C0	IO			DIFFIO_TX_B49p	DIFFOUT_B49p	AB21	DQ6B	DQ5B								
3C	VREFB3C0	IO			DIFFIO_RX_B50n	DIFFOUT_B50n	AE21	DQS#8B/QK8B	DQS#6B/QK6B	DQ1B							
3C	VREFB3C0	IO			DIFFIO_RX_B50p	DIFFOUT_B50p	AE20	DQS#8B/CQ#8B/QK#8B	DQS#6B/CQ#6B/QK#6B	DQ1B							
3C	VREFB3C0	IO			DIFFIO_TX_B51p	DIFFOUT_B51p	AL20	DQ6B	DQ5B								
3C	VREFB3C0	IO			DIFFIO_RX_B52n	DIFFOUT_B52n	AF20	DQ6B	DQ5B								
3C	VREFB3C0	IO			DIFFIO_RX_B52p	DIFFOUT_B52p	AG20	DQ6B	DQ5B								
3C	VREFB3C0	IO	VREFB3C0				AB22										
3C	VREFB3C0	IO			DIFFIO_RX_B53n	DIFFOUT_B53n	AB20	DQ6B	DQ5B								
3C	VREFB3C0	IO			DIFFIO_RX_B53p	DIFFOUT_B53p	AL21	DQ6B	DQ5B								
3C	VREFB3C0	IO			DIFFIO_TX_B54p	DIFFOUT_B54p	AH20	DQ7B	DQ6B								
3C	VREFB3C0	IO			DIFFIO_RX_B55n	DIFFOUT_B55n	AJ20	DQ7B	DQ6B								
3C	VREFB3C0	IO			DIFFIO_RX_B55p	DIFFOUT_B55p	AK20	DQ7B	DQ6B								
3C	VREFB3C0	IO			DIFFIO_TX_B56p	DIFFOUT_B56p	AC21	DQ7B	DQ6B								
3C	VREFB3C0	IO			DIFFIO_RX_B57n	DIFFOUT_B57n	AP21	DQS#7B/QK7B									
3C	VREFB3C0	IO			DIFFIO_RX_B57p	DIFFOUT_B57p	AP20	DQS#7B/CQ#7B/QK#7B									
3C	VREFB3C0	IO			DIFFIO_TX_B58p	DIFFOUT_B58p	AM20	DQ7B	DQ6B								
3C	VREFB3C0	IO			DIFFIO_RX_B59n	DIFFOUT_B59n	AN20	DQ7B	DQ6B								
3C	VREFB3C0	IO			DIFFIO_RX_B59p	DIFFOUT_B59p	AP19	DQ7B	DQ6B								
3C	VREFB3C0	IO			DIFFIO_TX_B60p	DIFFOUT_B60p	AC19	DQ7B	DQ6B								
3C	VREFB3C0	IO			DIFFIO_RX_B61n	DIFFOUT_B61n	AC20	DQ7B	DQ6B								
3C	VREFB3C0	IO			DIFFIO_RX_B61p	DIFFOUT_B61p	AD20	DQ7B	DQ6B								
3D	VREFB3D0	IO	VREFB3D0				AD18										
3D	VREFB3D0	IO	CLK4n		DIFFIO_RX_B76n	DIFFOUT_B76n	AH19										
3D	VREFB3D0	IO	CLK4p		DIFFIO_RX_B76p	DIFFOUT_B76p	AJ19										
3D	VREFB3D0	IO	CLK5n		DIFFIO_RX_B78n	DIFFOUT_B78n	AL19										
3D	VREFB3D0	IO	CLK5p		DIFFIO_RX_B78p	DIFFOUT_B78p	AM19										
3D	VREFB3D0	IO	FPLL_BC_CLKOUT1/FPLL_BC_CLKOUT1n		DIFFIO_TX_B79n	DIFFOUT_B79n	AE19										
3D	VREFB3D0	IO	FPLL_BC_CLKOUT2/FPLL_BC_CLKOUT2n		DIFFIO_TX_B79p	DIFFOUT_B79p	AF19										
3D	VREFB3D0	IO	FPLL_BC_CLKOUT3/FPLL_BC_CLKOUT3n		DIFFIO_RX_B80n	DIFFOUT_B80n	AM18										
3D	VREFB3D0	IO	FPLL_BC_CLKOUT4/FPLL_BC_CLKOUT4n		DIFFIO_RX_B80p	DIFFOUT_B80p	AN18										
3D	VREFB3D0	IO	CLK6n		DIFFIO_RX_B82n	DIFFOUT_B82n	AJ18										
3D	VREFB3D0	IO	CLK6p		DIFFIO_RX_B82p	DIFFOUT_B82p	AK18										
3D	VREFB3D0	IO	CLK7n		DIFFIO_RX_B84n	DIFFOUT_B84n	AF18										
3D	VREFB3D0	IO	CLK7p		DIFFIO_RX_B84p	DIFFOUT_B84p	AG18										
3E	VREFB3E0	IO	VCCD_FPLL				AA17										
3E	VREFB3E0	IO	VCCA_FPLL				AA18										
3E	VREFB3E0	IO	DN1				AB19										
4D	VREFB4D0	IO			DIFFIO_TX_B99n	DIFFOUT_B99n	AD17										
4D	VREFB4D0	IO			DIFFIO_TX_B99p	DIFFOUT_B99p	AE17	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B94n	DIFFOUT_B94n	AE16	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B94p	DIFFOUT_B94p	AF16	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_TX_B95n	DIFFOUT_B95n	AB18										
4D	VREFB4D0	IO			DIFFIO_RX_B96n	DIFFOUT_B96n	AC18	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B96n	DIFFOUT_B96n	AF17	DQS#8B/QK8B	DQ4B	DQ3B							
4D	VREFB4D0	IO			DIFFIO_RX_B96p	DIFFOUT_B96p	AG17	DQS#8B/CQ#8B/QK#8B	DQ4B	DQ3B							
4D	VREFB4D0	IO			DIFFIO_TX_B97n	DIFFOUT_B97n	AH17	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_TX_B97p	DIFFOUT_B97p	AH16	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B98n	DIFFOUT_B98n	AJ16	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B98p	DIFFOUT_B98p	AJ17	DQ8B	DQ7B								
4D	VREFB4D0	IO	VREFB4D0				AB17										
4D	VREFB4D0	IO			DIFFIO_RX_B98n	DIFFOUT_B98n	AC17	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B98p	DIFFOUT_B98p	AK17	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_TX_B100n	DIFFOUT_B100n	AL17	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_TX_B100p	DIFFOUT_B100p	AM17	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B101n	DIFFOUT_B101n	AP17	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B101p	DIFFOUT_B101p	AP18	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_TX_B102n	DIFFOUT_B102n	AB16	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_TX_B102p	DIFFOUT_B102p	AC16	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B103n	DIFFOUT_B103n	AP16	DQS#8B/QK8B	DQS#6B/QK6B	DQ1B							
4D	VREFB4D0	IO			DIFFIO_RX_B103p	DIFFOUT_B103p	AP15	DQS#8B/CQ#8B/QK#8B	DQS#6B/CQ#6B/QK#6B	DQ1B							
4D	VREFB4D0	IO			DIFFIO_TX_B104n	DIFFOUT_B104n	AG15	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_TX_B104p	DIFFOUT_B104p	AH15	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B105n	DIFFOUT_B105n	AK15	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B105p	DIFFOUT_B105p	AL15	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_TX_B106p	DIFFOUT_B106p	AD15	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_TX_B107n	DIFFOUT_B107n	AE15	DQ8B	DQ7B								
4D	VREFB4D0	IO			DIFFIO_RX_B107n	DIFFOUT_B107n	AM16	DQ8B	DQ7B		</						



Bank Number	REF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152 (4)	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		GND					Y1									
		DNU					W3									
		DNU					W4									
		GND					W6									
		GND					W7									
06	VREFB6N0	HPS	HPS_DDR				T7				HPS_DM_4	HPS_DM_4				
06	VREFB6N0	HPS	HPS_DDR				T8				HPS_DO_29	HPS_DO_29				
06	VREFB6N0	HPS	HPS_DDR				U2				HPS_DO_37	HPS_DO_37				
06	VREFB6N0	HPS	HPS_DDR				V1				HPS_DO_38	HPS_DO_38				
06	VREFB6N0	HPS	HPS_DDR				U3				HPS_DO_36	HPS_DO_36				
06	VREFB6N0	HPS	HPS_DDR				T3				HPS_DQS_4	HPS_DQS_4				
06	VREFB6N0	HPS	HPS_GP13				T1									
06	VREFB6N0	HPS	HPS_DDR				T4				HPS_DQS#_4	HPS_DQS#_4				
06	VREFB6N0	HPS	HPS_DDR				U1				HPS_DO_35	HPS_DO_35				
06	VREFB6N0	HPS	HPS_DDR				R1				HPS_DO_33	HPS_DO_33				
06	VREFB6N0	HPS	HPS_DDR				T6				HPS_DO_34	HPS_DO_34				
06	VREFB6N0	HPS	HPS_DDR				R2				HPS_DO_32	HPS_DO_32				
06	VREFB6N0	HPS	HPS_GP12				T6									
06	VREFB6N0	HPS	HPS_GP11				P1									
06	VREFB6N0	HPS	HPS_DDR				P2				HPS_DM_3	HPS_DM_3				
06	VREFB6N0	HPS	HPS_GP10				N1									
06	VREFB6N0	HPS	HPS_DDR				R3				HPS_DO_31	HPS_DO_31				
06	VREFB6N0	HPS	HPS_DDR				N4				HPS_DO_29	HPS_DO_29				
06	VREFB6N0	HPS	HPS_DDR				P7				HPS_DO_30	HPS_DO_30				
06	VREFB6N0	HPS	HPS_DDR				P4				HPS_DO_28	HPS_DO_28				
06	VREFB6N0	HPS	VREFB6N0_HPS				R7									
06	VREFB6N0	HPS	HPS_DDR				L1				HPS_DQS_3	HPS_DQS_3				
06	VREFB6N0	HPS	HPS_GP9				M3									
06	VREFB6N0	HPS	HPS_DDR				M2				HPS_DQS#_3	HPS_DQS#_3				
06	VREFB6N0	HPS	HPS_DDR				N3				HPS_DO_27	HPS_DO_27				
06	VREFB6N0	HPS	HPS_DDR				K1				HPS_DO_25	HPS_DO_25				
06	VREFB6N0	HPS	HPS_DDR				R4				HPS_DO_26	HPS_DO_26				
06	VREFB6N0	HPS	HPS_DDR				L2				HPS_DO_24	HPS_DO_24				
06	VREFB6N0	HPS	HPS_GP8				P5									
06	VREFB6N0	HPS	HPS_GP7				H2									
06	VREFB6N0	HPS	HPS_DDR				H1				HPS_DM_2	HPS_DM_2				
06	VREFB6N0	HPS	HPS_GP6				J2									
06	VREFB6N0	HPS	HPS_DDR				J1				HPS_DO_23	HPS_DO_23				
06	VREFB6N0	HPS	HPS_DDR				J3				HPS_DO_21	HPS_DO_21				
06	VREFB6N0	HPS	HPS_DDR				N5				HPS_DO_22	HPS_DO_22				
06	VREFB6N0	HPS	HPS_DDR				K3				HPS_DO_20	HPS_DO_20				
06	VREFB6N0	HPS	HPS_GP5				P6									
06	VREFB6N0	HPS	HPS_DDR				K4				HPS_DQS_2	HPS_DQS_2				
06	VREFB6N0	HPS	HPS_DDR				L3				HPS_DQS#_2	HPS_DQS#_2				
06	VREFB6N0	HPS	HPS_DDR				L5				HPS_DQS#_2	HPS_DQS#_2				
06	VREFB6N0	HPS	HPS_DDR				M4				HPS_DO_19	HPS_DO_19				
06	VREFB6N0	HPS	HPS_DDR				L6				HPS_DO_17	HPS_DO_17				
06	VREFB6N0	HPS	HPS_DDR				N6				HPS_DO_18	HPS_DO_18				
06	VREFB6N0	HPS	HPS_DDR				M6				HPS_DO_16	HPS_DO_16				
06	VREFB6N0	HPS	HPS_GP4				N7									
06	VREFB6N0	HPS	HPS_GP3				G3									
06	VREFB6N0	HPS	HPS_DDR				F1				HPS_DM_1	HPS_DM_1				
06	VREFB6N0	HPS	HPS_GP2				H3									
06	VREFB6N0	HPS	HPS_DDR				G1				HPS_DO_15	HPS_DO_15				
06	VREFB6N0	HPS	HPS_DDR				H4				HPS_DO_13	HPS_DO_13				
06	VREFB6N0	HPS	HPS_DDR				K5				HPS_DO_14	HPS_DO_14				
06	VREFB6N0	HPS	HPS_DDR				J4				HPS_DO_12	HPS_DO_12				
06	VREFB6N0	HPS	HPS_DDR				K6				HPS_CKE_0	HPS_CKE_0				
06	VREFB6N0	HPS	HPS_DDR				D1				HPS_DQS_1	HPS_DQS_1				
06	VREFB6N0	HPS	HPS_DDR				E1				HPS_CKE_1	HPS_CKE_1				
06	VREFB6N0	HPS	HPS_DDR				C1				HPS_DQS#_1	HPS_DQS#_1				
06	VREFB6N0	HPS	HPS_DDR				E2				HPS_DO_11	HPS_DO_11				
06	VREFB6N0	HPS	HPS_DDR				F3				HPS_DO_9	HPS_DO_9				
06	VREFB6N0	HPS	HPS_DDR				J6				HPS_DO_10	HPS_DO_10				
06	VREFB6N0	HPS	HPS_DDR				F4				HPS_DO_8	HPS_DO_8				
06	VREFB6N0	HPS	HPS_GP1				J7									
06	VREFB6N0	HPS	HPS_GP0				C2									
06	VREFB6N0	HPS	HPS_DDR				G4				HPS_DM_0	HPS_DM_0				
06	VREFB6N0	HPS	HPS_DDR				G6				HPS_DO_7	HPS_DO_7				
06	VREFB6N0	HPS	HPS_DDR				A2				HPS_DO_5	HPS_DO_5				
06	VREFB6N0	HPS	HPS_DDR				K7				HPS_DO_6	HPS_DO_6				
06	VREFB6N0	HPS	HPS_DDR				B1				HPS_DO_4	HPS_DO_4				
06	VREFB6N0	HPS	HPS_DDR				L7				HPS_ODT_1	HPS_ODT_1				
06	VREFB6N0	HPS	HPS_DDR				C3				HPS_DQS_0	HPS_DQS_0				
06	VREFB6N0	HPS	HPS_DDR				E3				HPS_ODT_0	HPS_ODT_0				
06	VREFB6N0	HPS	HPS_DDR				D4				HPS_DQS#_0	HPS_DQS#_0				
06	VREFB6N0	HPS	HPS_DDR				E4				HPS_DO_3	HPS_DO_3				
06	VREFB6N0	HPS	HPS_DDR				A4				HPS_DO_1	HPS_DO_1				
06	VREFB6N0	HPS	HPS_DDR				M8				HPS_DO_2	HPS_DO_2				
06	VREFB6N0	HPS	HPS_DDR				A3				HPS_DO_0	HPS_DO_0				
06	VREFB6N0	HPS	VREFB6N0_HPS				N9									
06	VREFB6N0	HPS	HPS_DDR				B4				HPS_A_0	HPS_CA_0				
06	VREFB6N0	HPS	HPS_DDR				C4				HPS_A_1	HPS_CA_1				
06	VREFB6N0	HPS	HPS_DDR				D5				HPS_A_4	HPS_CA_4				
06	VREFB6N0	HPS	HPS_DDR				J8				HPS_A_2	HPS_CA_2				
06	VREFB6N0	HPS	HPS_DDR				E5				HPS_A_5	HPS_CA_5				
06	VREFB6N0	HPS	HPS_DDR				K8				HPS_A_3	HPS_CA_3				
06	VREFB6N0	HPS	HPS_DDR				A6				HPS_CK#	HPS_CK#				
06	VREFB6N0	HPS	HPS_DDR				B5				HPS_A_6	HPS_CA_6				
06	VREFB6N0	HPS	HPS_DDR				R7				HPS_CK#	HPS_CK#				
06	VREFB6N0	HPS	HPS_DDR				B6				HPS_A_7	HPS_CA_7				
06	VREFB6N0	HPS	HPS_DDR				C7				HPS_BA_1					
06	VREFB6N0	HPS	HPS_DDR				G7				HPS_BA_0					
06	VREFB6N0	HPS	HPS_DDR				D6				HPS_BA_3					
06	VREFB6N0	HPS	HPS_DDR				G6				HPS_CAS#					
06	VREFB6N0	HPS	HPS_DDR				H6				HPS_RAS#					
06	VREFB6N0	HPS	HPS_DDR				F5				HPS_A_9					
06	VREFB6N0	HPS	HPS_DDR				G8				HPS_A_10					
06	VREFB6N0	HPS	HPS_DDR				F7				HPS_A_8	HPS_CA_8				
06	VREFB6N0	HPS	HPS_DDR				G9				HPS_A_11					
06	VREFB6N0	HPS	HPS_DDR				C8				HPS_CS#_0					
06	VREFB6N0	HPS	HPS_DDR				E7				HPS_A_12					
06	VREFB6N0	HPS	HPS_DDR				D7				HPS_CS#_1	HPS_CS#_1				
06	VREFB6N0	HPS	HPS_DDR				F9				HPS_A_13					
06	VREFB6N0	HPS	HPS_DDR				A8				HPS_A_14					
06	VREFB6N0	HPS	HPS_DDR				J9				HPS_W#E					
06	VREFB6N0	HPS	HPS_DDR				A7				HPS_A_15					
06	VREFB6N0	HPS	HPS_R20_0				K9									
		DNU					J4									
		GND					G10									
		GND					H10									
7A		HPS_ARST					P11									
7A		HPS_A0R					E9									
7A		HPS_TD0					P10									
7A		VCCRSTCLK_HPS					E9									
7A		HPS_TMS					A8									
7A		HPS_TCK					C9									
7A		HPS_TRST					B10									
7A		HPS_TDI					D9									
		GND					N10									



Bank Number	VREF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152 (4)	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
7A		HPS_PORSEL					C10									
7A		HPS_CLKI					L9									
7A		HPS_CLKO					D10									
7A	VREFB7A/B7C/D7END	HPS_TRACE_CLK					A10						TRACE_CLK			HPS GPIO48
7A	VREFB7A/B7C/D7END	HPS_TRACE_D0					K10						TRACE_D0	SPIS0_CLK	UART0_RX	HPS GPIO49
7A	VREFB7A/B7C/D7END	HPS_TRACE_D1					A11						TRACE_D1	SPIS0_MOSI	UART0_TX	HPS GPIO50
7A	VREFB7A/B7C/D7END	HPS_TRACE_D2					I10						TRACE_D2	SPIS0_MISO	IC21_SDA	HPS GPIO51
7A	VREFB7A/B7C/D7END	HPS_TRACE_D3					A13						TRACE_D3	SPIS0_SS0	IC21_SCL	HPS GPIO52
7A	VREFB7A/B7C/D7END	HPS_TRACE_D4					B12						TRACE_D4	SPIS1_CLK	IC20_SCL	HPS GPIO53
7A	VREFB7A/B7C/D7END	HPS_TRACE_D5					A12						TRACE_D5	SPIS1_MOSI	IC20_SDA	HPS GPIO54
7A	VREFB7A/B7C/D7END	HPS_TRACE_D6					C13						TRACE_D6	SPIS1_SS0	IC20_SDA	HPS GPIO55
7A	VREFB7A/B7C/D7END	HPS_TRACE_D7					C11						TRACE_D7	SPIS1_MISO	IC20_SCL	HPS GPIO56
7A	VREFB7A/B7C/D7END	HPS_SPIM0_CLK					I10						SPIM0_CLK	IC21_SDA	UART0_CTS	HPS GPIO57
7A	VREFB7A/B7C/D7END	HPS_SPIM0_MOSI					C12						SPIM0_MOSI	IC21_SCL	UART0_RTS	HPS GPIO58
7A	VREFB7A/B7C/D7END	HPS_SPIM0_MISO					L11						SPIM0_MISO	UART0_CTS	UART0_CTS	HPS GPIO59
7A	VREFB7A/B7C/D7END	HPS_SPIM0_SS0/BOOTSEL0					E10						SPIM0_SS0	UART0_RTS	UART0_RTS	HPS GPIO60
7A	VREFB7A/B7C/D7END	HPS_UART0_RX					E11						UART0_RX	SPIM0_SS1	UART0_CTS	HPS GPIO61
7A	VREFB7A/B7C/D7END	HPS_UART0_TX_CLKSEL1					F10						UART0_TX	SPIM0_SS1	UART0_CTS	HPS GPIO62
7A	VREFB7A/B7C/D7END	HPS_IC21_SDA					F11						IC21_SDA	UART0_RX	SPIM0_CLK	HPS GPIO63
7A	VREFB7A/B7C/D7END	HPS_IC21_SCL					H11						IC21_SCL	UART0_TX	SPIM0_MOSI	HPS GPIO64
7A	VREFB7A/B7C/D7END	HPS_UART0_RX'					M10						UART0_RX	SPIM0_MISO	SPIM0_MISO	HPS GPIO65
7A	VREFB7A/B7C/D7END	HPS_UART0_TX_CLKSEL0					J11						UART0_TX	SPIM0_SS0	SPIM0_SS0	HPS GPIO66
7A	VREFB7A/B7C/D7END	HPS_SPIS1_CLK					M11						SPIS1_CLK	SPIM0_CLK	SPIM0_CLK	HPS GPIO67
7A	VREFB7A/B7C/D7END	HPS_SPIS1_MOSI					D12						SPIS1_MOSI	SPIM0_MOSI	SPIM0_MOSI	HPS GPIO68
7A	VREFB7A/B7C/D7END	HPS_SPIS1_MISO					E12						SPIS1_MISO	SPIM0_MISO	SPIM0_MISO	HPS GPIO69
7A	VREFB7A/B7C/D7END	HPS_SPIS1_SS0					D13						SPIS1_SS0	SPIM0_SS0	SPIS1_SS0	HPS GPIO70
7A	VREFB7A/B7C/D7END	HPS_UART1_RX					F12						UART1_RX	SPIM0_SS1	SPIM0_SS1	HPS GPIO71
7A	VREFB7A/B7C/D7END	HPS_UART1_TX					J12						UART1_TX	SPIM0_CLK	IC20_SCL	HPS GPIO72
7A	VREFB7A/B7C/D7END	HPS_IC21_SDA					I12						IC21_SDA	SPIM0_MOSI	SPIM0_MOSI	HPS GPIO73
7A	VREFB7A/B7C/D7END	HPS_IC21_SCL					K12						IC21_SCL	SPIM0_MISO	SPIM0_MISO	HPS GPIO74
7A	VREFB7A/B7C/D7END	HPS_SPIM0_SS0					M12						SPIM0_SS0	SPIM0_SS0	SPIM0_SS0	HPS GPIO75
7A	VREFB7A/B7C/D7END	HPS_SPIS0_CLK					F13						SPIS0_CLK	SPIM0_SS1	UART0_CTS	HPS GPIO76
7A	VREFB7A/B7C/D7END	HPS_SPIS0_MOSI					G12						SPIS0_MOSI	SPIM0_SS1	UART0_CTS	HPS GPIO77
7A	VREFB7A/B7C/D7END	HPS_SPIS0_MISO					G13						SPIS0_MISO	SPIM0_SS0	SPIM0_SS0	HPS GPIO78
7A	VREFB7A/B7C/D7END	HPS_SPIS0_SS0					H12						SPIS0_SS0	SPIM0_SS1	UART0_CTS	HPS GPIO79
7B	VREFB7A/B7C/D7END	HPS_NAND_ALE					A14						NAND_ALE	RGMIH_TX_CLK	QSPI_SS3	HPS GPIO14
7B	VREFB7A/B7C/D7END	HPS_NAND_CE					M13						NAND_CE	RGMIH_TXD0	USB1_D0	HPS GPIO15
7B	VREFB7A/B7C/D7END	HPS_NAND_CLE					B14						NAND_CLE	RGMIH_TXD1	USB1_D1	HPS GPIO16
7B	VREFB7A/B7C/D7END	HPS_NAND_BE					N13						NAND_BE	RGMIH_TXD2	USB1_D2	HPS GPIO17
7B	VREFB7A/B7C/D7END	HPS_NAND_RB					B15						NAND_RB	RGMIH_TXD3	USB1_D3	HPS GPIO18
7B	VREFB7A/B7C/D7END	HPS_NAND_DQ0					C14						NAND_DQ0	RGMIH_TXD4	USB1_D4	HPS GPIO19
7B	VREFB7A/B7C/D7END	HPS_NAND_DQ1					C15						NAND_DQ1	RGMIH_MDIO	IC23_SDA	HPS GPIO20
7B	VREFB7A/B7C/D7END	HPS_NAND_DQ2					D14						NAND_DQ2	RGMIH_MDC	IC23_SCL	HPS GPIO21
7B	VREFB7A/B7C/D7END	HPS_NAND_DQ3					O14						NAND_DQ3	RGMIH_RX_CTL	USB1_D4	HPS GPIO22
7B	VREFB7A/B7C/D7END	HPS_NAND_DQ4					N12						NAND_DQ4	RGMIH_TX_CTL	USB1_D5	HPS GPIO23
7B	VREFB7A/B7C/D7END	HPS_NAND_DQ5					H14						NAND_DQ5	RGMIH_RX_CLK	USB1_D6	HPS GPIO24
7B	VREFB7A/B7C/D7END	HPS_NAND_DQ6					P15						NAND_DQ6	RGMIH_RD0	USB1_D7	HPS GPIO25
7B	VREFB7A/B7C/D7END	HPS_NAND_DQ7					K13						NAND_DQ7	RGMIH_RXD2	USB1_D7	HPS GPIO26
7B	VREFB7A/B7C/D7END	HPS_NAND_WP					J14						NAND_WP	RGMIH_RXD3	QSPI_SS2	HPS GPIO27
7B	VREFB7A/B7C/D7END	HPS_NAND_WT/BOOTSEL2					L14						NAND_WT	QSPI_SS1	USB1_CLK	HPS GPIO28
7B	VREFB7A/B7C/D7END	HPS_QSPI_I00					K14						QSPI_I00	USB1_CTS	USB1_CTS	HPS GPIO29
7B	VREFB7A/B7C/D7END	HPS_QSPI_I01					M14						QSPI_I01	USB1_STP	USB1_STP	HPS GPIO30
7B	VREFB7A/B7C/D7END	HPS_QSPI_I02					P14						QSPI_I02	USB1_DWR	USB1_DWR	HPS GPIO31
7B	VREFB7A/B7C/D7END	HPS_QSPI_I03					N14						QSPI_I03	USB1_NXT	USB1_NXT	HPS GPIO32
7B	VREFB7A/B7C/D7END	HPS_QSPI_SS0/BOOTSEL1					R15						QSPI_SS0	USB1_NXT	USB1_NXT	HPS GPIO33
7B	VREFB7A/B7C/D7END	HPS_QSPI_CLK					F14						QSPI_CLK	USB1_D0	USB1_D0	HPS GPIO34
7B	VREFB7A/B7C/D7END	HPS_QSPI_SS1					D15						QSPI_SS1	USB1_D1	USB1_D1	HPS GPIO35
7C	VREFB7A/B7C/D7END	HPS_SDMMC_CMD					E15						SDMMC_CMD	USB0_D0	USB0_D0	HPS GPIO36
7C	VREFB7A/B7C/D7END	HPS_SDMMC_PWREN					J15						SDMMC_PWREN	USB0_D1	USB0_D1	HPS GPIO37
7C	VREFB7A/B7C/D7END	HPS_SDMMC_D0					F16						SDMMC_D0	USB0_D2	USB0_D2	HPS GPIO38
7C	VREFB7A/B7C/D7END	HPS_SDMMC_D1					K15						SDMMC_D1	USB0_D3	USB0_D3	HPS GPIO39
7C	VREFB7A/B7C/D7END	HPS_SDMMC_D4					E16						SDMMC_D4	USB0_D4	USB0_D4	HPS GPIO40
7C	VREFB7A/B7C/D7END	HPS_SDMMC_D5					G15						SDMMC_D5	USB0_D5	USB0_D5	HPS GPIO41
7C	VREFB7A/B7C/D7END	HPS_SDMMC_D6					F16						SDMMC_D6	USB0_D6	USB0_D6	HPS GPIO42
7C	VREFB7A/B7C/D7END	HPS_SDMMC_D7					G16						SDMMC_D7	USB0_D7	USB0_D7	HPS GPIO43
7C	VREFB7A/B7C/D7END	HPS_HPS_GPIO44					H16						SDMMC_D7	USB0_CLK	USB1_D1	HPS GPIO44
7C	VREFB7A/B7C/D7END	HPS_SDMMC_CCLK_OUT					M15						SDMMC_CCLK_OUT	USB0_STP	USB0_STP	HPS GPIO45
7C	VREFB7A/B7C/D7END	HPS_SDMMC_D2					L16						SDMMC_D2	USB0_DIR	USB0_DIR	HPS GPIO46
7C	VREFB7A/B7C/D7END	HPS_SDMMC_D3					L16						SDMMC_D3	USB0_NXT	USB0_NXT	HPS GPIO47
7D	VREFB7A/B7C/D7END	HPS_RGMI0_TX_CLK					A16						RGMI0_TX_CLK	USB1_D0	USB1_D0	HPS GPIO0
7D	VREFB7A/B7C/D7END	HPS_RGMI0_TXD0					A17						RGMI0_TXD0	USB1_D1	USB1_D1	HPS GPIO1
7D	VREFB7A/B7C/D7END	HPS_RGMI0_TXD1					A15						RGMI0_TXD1	USB1_D2	USB1_D2	HPS GPIO2
7D	VREFB7A/B7C/D7END	HPS_RGMI0_TXD2					B17						RGMI0_TXD2	USB1_D3	USB1_D3	HPS GPIO3
7D	VREFB7A/B7C/D7END	HPS_RGMI0_TXD3					C16						RGMI0_TXD3	USB1_D4	USB1_D4	HPS GPIO4
7D	VREFB7A/B7C/D7END	HPS_RGMI0_RXD0					L16						RGMI0_RXD0	USB1_D5	USB1_D5	HPS GPIO5
7D	VREFB7A/B7C/D7END	HPS_RGMI0_MDI0					C17						RGMI0_MDI0	IC22_SDA	IC22_SDA	HPS GPIO6
7D	VREFB7A/B7C/D7END	HPS_RGMI0_MDC					M16						RGMI0_MDC	IC22_SCL	IC22_SCL	HPS GPIO7
7D	VREFB7A/B7C/D7END	HPS_RGMI0_RX_CTL					D17						RGMI0_RX_CTL	USB1_D7	USB1_D7	HPS GPIO8
7D	VREFB7A/B7C/D7END	HPS_RGMI0_TX_CTL					E18						RGMI0_TX_CTL	USB1_CLK	USB1_CLK	HPS GPIO9
7D	VREFB7A/B7C/D7END	HPS_RGMI0_RX_CLK					D16						RGMI0_RX_CLK	USB1_CLK	USB1_CLK	HPS GPIO10
7D	VREFB7A/B7C/D7END	HPS_RGMI0_RXD1					F18						RGMI0_RXD1	USB1_STP	USB1_STP	HPS GPIO11
7D	VREFB7A/B7C/D7END	HPS_RGMI0_RXD2					F17						RGMI0_RXD2	USB1_DWR	USB1_DWR	HPS GPIO12
7D	VREFB7A/B7C/D7END	HPS_RGMI0_RXD3					P16						RGMI0_RXD3	USB1_NXT	USB1_NXT	HPS GPIO13
7D	VREFB7A/B7C/D7END	HPS_RGMIH_TX_CLK					G17						RGMIH_TX_CLK	USB1_D0	USB1_D0	HPS GPIO48
7D	VREFB7A/B7C/D7END	HPS_RGMIH_TXD1					N16						RGMIH_TXD1	USB1_D1	USB1_D1	HPS GPIO49
7D	VREFB7A/B7C/D7END	HPS_RGMIH_TXD2					J17						RGMIH_TXD2	USB1_D2	USB1_D2	HPS GPIO50
7D	VREFB7A/B7C/D7END	HPS_RGMIH_TXD3					G18						RGMIH_TXD3	USB1_D3	USB1_D3	HPS GPIO51
7D	VREFB7A/B7C/D7END	HPS_RGMIH_TXD4					H17						RGMIH_TXD4	USB1_D4	USB1_D4	HPS GPIO52
7D	VREFB7A/B7C/D7END	HPS_RGMIH_TXD5					H17						RGMIH_TXD5	USB1_D5	USB1_D5	HPS GPIO53
7E	VREFB7A/B7C/D7END	HPS_RGMIH_MDIO					L17						RGMIH_MDIO	SPIM0_CLK	SPIS0_CLK	HPS GPIO54
7E	VREFB7A/B7C/D7END	HPS_RGMIH_MDC					N18						RGMIH_MDC	SPIM0_MOSI	SPIS0_MOSI	HPS GPIO55
7E	VREFB7A/B7C/D7END	HPS_RGMIH_TXD2					M17						RGMIH_TXD2	SPIM0_MISO	SPIS0_MISO	HPS GPIO56
7E	VREFB7A/B7C/D7END	HPS_RGMIH_TXD3					N18						RGMIH_TXD3	SPIM0_SS0	SPIS0_SS0	HPS GPIO57
7E	VREFB7A/B7C/D7END	HPS_RGMIH_RX_CLK					M18						RGMIH_RX_CLK	SPIM0_MOSI	SPIM0_CLK	HPS GPIO58
7E	VREFB7A/B7C/D7END	HPS_RGMIH_RX_CTL					J18						RGMIH_RX_CTL	SPIS1_MOSI	SPIM0_MOSI	HPS GPIO59
7E	VREFB7A/B7C/D7END	HPS_RGMIH_RXD2					N17						RGMIH_RXD2	SPIS1_MISO	SPIM0_MISO	HPS GPIO60
7E	VREFB7A/B7C/D7END	HPS_RGMIH_RXD3					L18						RGMIH_RXD3	SPIS1_SS0	SPIM0_SS0	HPS GPIO61
		VCC0_FPLL					T17									
		VCC0_FPLL					T16									
8D	VREFB8D0	IO	CLK19b					DIFF0_RX_T31p	DIFFOUT_T31p							
8D	VREFB8D0	IO	CLK19a					DIFF0_RX_T31n	DIFFOUT_T31n							
8D	VREFB8D0	IO	CLK18b					DIFF0_RX_T33p	DIFFOUT_T33p							
8D	VREFB8D0	IO	CLK18a					DIFF0_RX_T33n	DIFFOUT_T33n							
8D	VREFB8D0	IO	FPLL_TC_CLKOUT2/FPLL_TC_FBP/FPLL_TC_FB1					DIFF0_RX_T35p	DIFFOUT_T35p		</					



Bank Number	REF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152 (4)	QDS for X8/X9	QDS for X16/X18	QDS for X32/X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
8C	VREFB3CND	IO			DIFFIO_RX_T58b	DIFFOUT_T58b	B21	DQS1TCQ1TCQn1TQKx1T								
8C	VREFB3CND	IO			DIFFIO_RX_T58n	DIFFOUT_T58n	E21	DQSs1TQK1T								
8C	VREFB3CND	IO			DIFFIO_RX_T59b	DIFFOUT_T59b	M20	DQ1T								
8C	VREFB3CND	IO			DIFFIO_RX_T59n	DIFFOUT_T59n	H41	DQ1T								
8C	VREFB3CND	IO			DIFFIO_RX_T60b	DIFFOUT_T60b	J20	DQ1T								
8C	VREFB3CND	IO			DIFFIO_TX_T61b	DIFFOUT_T61b	E21	DQ1T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T62b	DIFFOUT_T62b	J21	DQ2T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T62n	DIFFOUT_T62n	K21	DQ2T					DQ1T			
8C	VREFB3CND	IO	VREFB3CND				N21	DQ2T					DQ1T			
8C	VREFB3CND	IO					F21									
8C	VREFB3CND	IO			DIFFIO_RX_T63b	DIFFOUT_T63b	M21	DQ2T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T63n	DIFFOUT_T63n	M20	DQ2T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_TX_T64b	DIFFOUT_T64b	F21	DQ2T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T65b	DIFFOUT_T65b	D22	DQS2TCQ2TCQn2TQKx2T					DQS1TCQ1TCQn1TQKx1T			
8C	VREFB3CND	IO			DIFFIO_RX_T65n	DIFFOUT_T65n	E22	DQSs2TQK2T					DQSs1TQK1T			
8C	VREFB3CND	IO			DIFFIO_RX_T67b	DIFFOUT_T67b	A24	DQ2T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T67n	DIFFOUT_T67n	A23	DQ2T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_TX_T68b	DIFFOUT_T68b	F23	DQ2T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_TX_T68n	DIFFOUT_T68n	F23	DQ2T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T69b	DIFFOUT_T69b	G23	DQ3T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T69n	DIFFOUT_T69n	H23	DQ3T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_TX_T70b	DIFFOUT_T70b	F23	DQ3T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T71b	DIFFOUT_T71b	G22	DQ3T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T71n	DIFFOUT_T71n	H22	DQ3T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_TX_T72b	DIFFOUT_T72b	J23	DQ3T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T73b	DIFFOUT_T73b	K22	DQS3TCQ3TCQn3TQKx3T					DQS1TCQ1TCQn1TQKx1T			
8C	VREFB3CND	IO			DIFFIO_RX_T73n	DIFFOUT_T73n	L22	DQSs3TQK3T					DQSs1TQK1T			
8C	VREFB3CND	IO			DIFFIO_TX_T74b	DIFFOUT_T74b	H23	DQ3T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T75b	DIFFOUT_T75b	L23	DQ3T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_RX_T75n	DIFFOUT_T75n	M23	DQ3T					DQ1T			
8C	VREFB3CND	IO			DIFFIO_TX_T76b	DIFFOUT_T76b	K23	DQ4T					DQ1T			
8B	VREFB3BND	IO			DIFFIO_RX_T77b	DIFFOUT_T77b	B23	DQ4T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T77n	DIFFOUT_T77n	C24	DQ4T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_TX_T78b	DIFFOUT_T78b	M24	DQ4T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T79b	DIFFOUT_T79b	C23	DQ4T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T79n	DIFFOUT_T79n	D23	DQ4T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_TX_T80b	DIFFOUT_T80b	C24	DQ4T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T81b	DIFFOUT_T81b	C25	DQS4TCQ4TCQn4TQKx4T					DQS2TCQ2TCQn2TQKx2T			
8B	VREFB3BND	IO			DIFFIO_RX_T81n	DIFFOUT_T81n	D24	DQSs4TQK4T					DQSs2TQK2T			
8B	VREFB3BND	IO			DIFFIO_TX_T82b	DIFFOUT_T82b	E24	DQ4T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T83b	DIFFOUT_T83b	E24	DQ4T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T83n	DIFFOUT_T83n	D25	DQ4T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_TX_T84b	DIFFOUT_T84b	H24	DQ4T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T85b	DIFFOUT_T85b	A25	DQ5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T85n	DIFFOUT_T85n	A26	DQ5T					DQ2T			
8B	VREFB3BND	IO					M25	DQ5T					DQ2T			
8B	VREFB3BND	IO	VREFB3BND				N25	DQ5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T86b	DIFFOUT_T86b	B26	DQ5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T86n	DIFFOUT_T86n	C26	DQ5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_TX_T87b	DIFFOUT_T87b	A27	DQ5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_TX_T87n	DIFFOUT_T87n	A28	DQ5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T88b	DIFFOUT_T88b	D26	DQS5TCQ5TCQn5TQKx5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T88n	DIFFOUT_T88n	E26	DQSs5TQK5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_TX_T89b	DIFFOUT_T89b	K24	DQ5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_TX_T89n	DIFFOUT_T89n	L24	DQ5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T90b	DIFFOUT_T90b	F26	DQ5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_RX_T90n	DIFFOUT_T90n	F25	DQ5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_TX_T91b	DIFFOUT_T91b	G26	DQ5T					DQ2T			
8B	VREFB3BND	IO			DIFFIO_TX_T91n	DIFFOUT_T91n	G25	DQ5T					DQ2T			
8A	VREFB3AND	IO			DIFFIO_RX_T92b	DIFFOUT_T92b	B27	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T92n	DIFFOUT_T92n	C28	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T93b	DIFFOUT_T93b	J26	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T94b	DIFFOUT_T94b	K25	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T94n	DIFFOUT_T94n	B29	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T96b	DIFFOUT_T96b	C29	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T95b	DIFFOUT_T95b	A29	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T95n	DIFFOUT_T95n	A30	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T96n	DIFFOUT_T96n	A31	DQS6TCQ6TCQn6TQKx6T					DQS3TCQ3TCQn3TQKx3T			
8A	VREFB3AND	IO			DIFFIO_RX_T96n	DIFFOUT_T96n	B30	DQSs6TQK6T					DQSs3TQK3T			
8A	VREFB3AND	IO			DIFFIO_TX_T97b	DIFFOUT_T97b	J26	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T97n	DIFFOUT_T97n	K26	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T98b	DIFFOUT_T98b	A33	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T98n	DIFFOUT_T98n	A32	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T99b	DIFFOUT_T99b	C33	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T99n	DIFFOUT_T99n	B32	DQ6T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T100b	DIFFOUT_T100b	D27	DQ7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T100n	DIFFOUT_T100n	D28	DQ7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T101b	DIFFOUT_T101b	L26	DQ7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T101n	DIFFOUT_T101n	M26	DQ7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T102b	DIFFOUT_T102b	E27	DQ7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T102n	DIFFOUT_T102n	F27	DQ7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T103b	DIFFOUT_T103b	F28	DQ7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T103n	DIFFOUT_T103n	G28	DQ7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T104b	DIFFOUT_T104b	C32	DQS7TCQ7TCQn7TQKx7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T104n	DIFFOUT_T104n	C31	DQSs7TQK7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T105b	DIFFOUT_T105b	L27	DQ7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_RX_T106b	DIFFOUT_T106b	M28	DQ7T					DQ3T			
8A	VREFB3AND	IO	CLK23p		DIFFIO_RX_T106n	DIFFOUT_T106n	D31	DQ7T					DQ3T			
8A	VREFB3AND	IO	CLK23n		DIFFIO_RX_T106n	DIFFOUT_T106n	E31	DQ7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T107b	DIFFOUT_T107b	F30	DQ7T					DQ3T			
8A	VREFB3AND	IO			DIFFIO_TX_T107n	DIFFOUT_T107n	F29	DQ7T					DQ3T			
8A	VREFB3AND	IO	CLK23p		DIFFIO_RX_T108b	DIFFOUT_T108b	G29	DQ7T					DQ3T			
8A	VREFB3AND	IO	CLK23n		DIFFIO_RX_T108n	DIFFOUT_T108n	H29	DQ7T					DQ3T			
8A	VREFB3AND	IO	VREFB3AND				N28									
8A	VREFB3AND	IO	FPLL_TL_CLKOUT0_FPLL_TL_FB0_FPLL_TL_FB1		DIFFIO_RX_T109b	DIFFOUT_T109b	J29									
8A	VREFB3AND	IO	FPLL_TL_CLKOUT0_FPLL_TL_FB0		DIFFIO_RX_T109n	DIFFOUT_T109n	J28									
8A	VREFB3AND	IO	FPLL_TL_CLKOUT0_FPLL_TL_CLKOUT0_FPLL_TL_FB0		DIFFIO_TX_T110b	DIFFOUT_T110b	K29									
8A	VREFB3AND	IO	FPLL_TL_CLKOUT1_FPLL_TL_CLKOUT1		DIFFIO_TX_T110n	DIFFOUT_T110n	L29									
8A	VREFB3AND	IO	CLK21p		DIFFIO_RX_T111b	DIFFOUT_T111b	J27									
8A	VREFB3AND	IO	CLK21n		DIFFIO_RX_T111n	DIFFOUT_T111n	K28									
8A	VREFB3AND	IO	CLK20p		DIFFIO_RX_T113b	DIFFOUT_T113b	H26									
8A	VREFB3AND	IO	CLK20n		DIFFIO_RX_T113n	DIFFOUT_T113n	H27									
8A	VREFB3AND	IO	SD0_0		DIFFIO_TX_T114n	DIFFOUT_T114n	D29									
8A	MSEL0			MSEL0			B34									
8A	MSEL1			MSEL1			C34									
8A	MSEL2			MSEL2			D34									
8A	MSEL3			MSEL3			K30									
8A	MSEL4			MSEL4			D32									
8A	CONF_DONE			CONF_DONE			D33									



Bank Number	VREF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152 (4)	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		GND					AB27									
		GND					AB28									
		GND					AB30									
		GND					AB31									
		GND					AB32									
		GND					AC30									
		GND					AC33									
		GND					AC34									
		GND					AD31									
		GND					AD32									
		GND					AE30									
		GND					AE33									
		GND					AE34									
		GND					AF31									
		GND					AF32									
		GND					AG30									
		GND					AG33									
		GND					AG34									
		GND					AH31									
		GND					AH32									
		GND					AJ30									
		GND					AJ33									
		GND					AJ34									
		GND					AK31									
		GND					AK32									
		GND					AL33									
		GND					AL34									
		GND					E34									
		GND					F31									
		GND					F32									
		GND					G30									
		GND					G33									
		GND					G34									
		GND					H31									
		GND					H32									
		GND					J30									
		GND					J33									
		GND					J34									
		GND					K31									
		GND					K32									
		GND					L30									
		GND					L33									
		GND					L34									
		GND					M30									
		GND					M31									
		GND					M32									
		GND					N28									
		GND					N29									
		GND					N33									
		GND					N34									
		GND					P27									
		GND					P31									
		GND					P32									
		GND					P28									
		GND					R30									
		GND					R33									
		GND					R34									
		GND					T27									
		GND					T29									
		GND					T31									
		GND					T32									
		GND					U28									
		GND					U33									
		GND					U34									
		GND					V27									
		GND					V31									
		GND					V32									
		GND					W28									
		GND					W30									
		GND					W33									
		GND					W34									
		GND					Y27									
		GND					Y29									
		GND					Y31									
		GND					Y32									
		GND					AA1									
		GND					AA2									
		GND					AB3									
		GND					AB4									
		GND					AC1									
		GND					AC2									
		GND					AC5									
		GND					AD3									
		GND					AD4									
		GND					AE1									
		GND					AE2									
		GND					AE5									
		GND					AF3									
		GND					AF4									
		GND					AG1									
		GND					AG2									
		GND					AG5									
		GND					AH3									
		GND					AH4									
		GND					AJ1									
		GND					AJ2									
		GND					AJ5									
		GND					AK3									
		GND					AK4									
		GND					AL1									
		GND					AL2									
		GND					AL3									
		GND					AN1									
		GND					V3									
		GND					V4									
		GND					V7									
		GND					W1									
		GND					W2									
		GND					W6									
		GND					Y3									
		GND					Y4									
		GND					Y8									
		GND					Y8									
		VCCP					R18									
		VCCP					T21									
		VCCP					U5									
		VCCP					W10									
		VCCP					Y10									
		VCCP					Y12									
		VCCP					Y22									



Bank Number	VREF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152 (4)	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		VCCP					Y24									
		VCCP					Y25									
		VCCA_FPLL					V26									
		VCCA_FPLL					V9									
		VCCA_FPLL					T26									
		VCCPLL_HPS					M9									
		VCCBATT					M27									
		VCC_AUX					AA24									
		VCC_AUX					F11									
		VCC_AUX					E24									
		VCC_AUX_SHARED					R12									
		VCCD_FPLL					Y26									
		VCCD_FPLL					V9									
		VCCD_FPLL					P26									
		VCCA_GXBLO					Y28									
		VCCA_GXBRO					V7									
		VCCA_GXBL1					T28									
		VCOH_GXBLO					V28									
		VCOH_GXBRO					V16									
		VCOH_GXBL1					P28									
		VDCL_GXBLO					V29									
		VDCL_GXBLO					V30									
		VDCL_GXBRO					V5									
		VDCL_GXBL1					V5									
		VDCL_GXBL1					P29									
		VDCL_GXBL1					P30									
		VDCR_GXBL					AA30									
		VDCR_GXBL					AB29									
		VDCR_GXBL					N30									
		VDCR_GXBL					R29									
		VDCR_GXBR					AA5									
		VDCR_GXBR					AB6									
		VDCR_GXBR					AB6									
		VDCT_GXBLO					T30									
		VDCT_GXBLO					U29									
		VDCT_GXBLO					U30									
		VDCT_GXBRO					W6									
		VDCT_GXBRO					A8									
		VDCT_GXBL1					W29									
		VDCT_GXBL1					V30									
		VCC					AA30									
		VCC					T19									
		VCC					T23									
		VCC					T26									
		VCC					V24									
		VCC					U18									
		VCC					U20									
		VCC					U22									
		VCC					U24									
		VCC					V15									
		VCC					V17									
		VCC					V19									
		VCC					V20									
		VCC					V21									
		VCC					V22									
		VCC					V23									
		VCC					W16									
		VCC					W14									
		VCC					W20									
		VCC					W22									
		VCC					W24									
		VCC					Y13									
		VCC					Y14									
		VCC					Y15									
		VCC					Y16									
		VCC					Y17									
		VCC					Y19									
		VCC					Y21									
		VCC					Y23									
		VCC					W18									
		VCC_HPS					T11									
		VCC_HPS					U10									
		VCC_HPS					U12									
		VCC_HPS					U14									
		VCC_HPS					V11									
		VCC_HPS					V12									
		VCC_HPS					V13									
		VCC_HPS					W12									
		VCC_HPS					W27									
		VCC00A					AF30									
		VCC00A					AH30									
		VCC00A					AJ29									
		VCC00A					AK30									
		VCC00A					AN29									
		VCC00B					AF25									
		VCC00B					AK24									
		VCC00B					AN24									
		VCC00C					AD21									
		VCC00C					AF21									
		VCC00C					AJ21									
		VCC00C					AM21									
		VCC00D					AE18									
		VCC00D					AH18									
		VCC00D					AL18									
		VCC00A					AD5									
		VCC00A					AEB									
		VCC00A					AF5									
		VCC00A					AH5									
		VCC00A					AK5									
		VCC00B					AD11									
		VCC00B					AF10									
		VCC00B					AJ10									
		VCC00B					AM10									
		VCC00C					AE13									
		VCC00C					AH12									
		VCC00C					AL12									
		VCC00D					AF16									
		VCC00D					AJ16									
		VCC00D					AM15									
		VCC00D					AN17									
		VCC00A_HPS					B3									
		VCC00A_HPS					CB									
		VCC00A_HPS					DB									
		VCC00A_HPS					EB									
		VCC00A_HPS					FB									
		VCC00A_HPS					H5									
		VCC00A_HPS					H7									
		VCC00A_HPS					M7									
		VCC00B_HPS					L4									



Bank Number	VREF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152 (4)	DQS for X8/X9	DQS for X16/X18	DQS for X32/X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		VCC0B8 HPS					M1									
		VCC0B8 HPS					N8									
		VCC0B8 HPS					P3									
		VCC0B8 HPS					RE									
		VCC0B8 HPS					U5									
		VCC0B8 HPS					V2									
		VCC07A HPS					B9									
		VCC07A HPS					D11									
		VCC07A HPS					E13									
		VCC07A HPS					K11									
		VCC07B HPS					B13									
		VCC07B HPS					L13									
		VCC07C HPS					H15									
		VCC07D HPS					E17									
		VCC07D HPS					H18									
		VCC07E HPS					L18									
		VCC08A					C27									
		VCC08A					C30									
		VCC08A					F29									
		VCC08A					E32									
		VCC08A					G27									
		VCC08B					K27									
		VCC08B					B24									
		VCC08B					F24									
		VCC08B					Z24									
		VCC08C					B22									
		VCC08C					D21									
		VCC08C					G21									
		VCC08C					L21									
		VCC08D					B18									
		VCC08D					B20									
		VCC08D					H20									
		VCCPD3					AA21									
		VCCPD3					AA23									
		VCCPD3					AB26									
		VCCPD3					AC28									
		VCCPD4					AB8									
		VCCPD4BCD					AA11									
		VCCPD4BCD					AA14									
		VCCPD4BCD					AA15									
		VCCPD4BCD					AB8									
		VCCPD6A8B HPS					P9									
		VCCPD6A8B HPS					R8									
		VCCPD6A8B HPS					U7									
		VCCPD6A8B HPS					UR									
		VCCPD7A HPS					R11									
		VCCPD7B HPS					R13									
		VCCPD7C HPS					T15									
		VCCPD7D HPS					R16									
		VCCPD7E HPS					P17									
		VCCPD8					P23									
		VCCPD8					P25									
		VCCPD8					R20									
		VCCPD8					R22									
		VCCPGM					H13									
		VCCPGM					AC29									
		VCCRSTDLK HPS					H8									
		VCC HPS					R10									
		VCC HPS					R14									
		VCC HPS					T13									
		VCC HPS					T9									
	VREFB7A/B7C/D7E/0 HPS	VREFB7A/B7C/D7E/0 HPS					P15									
		GND					A18									
		GND					A22									
		GND					A5									
		GND					AA10									
		GND					AA13									
		GND					AA16									
		GND					AA19									
		GND					AA22									
		GND					AA26									
		GND					AA8									
		GND					AB7									
		GND					AC6									
		GND					AD10									
		GND					AD13									
		GND					AD16									
		GND					AD19									
		GND					AD22									
		GND					AD26									
		GND					AD28									
		GND					AD7									
		GND					AG10									
		GND					AG13									
		GND					AG16									
		GND					AG19									
		GND					AG22									
		GND					AG26									
		GND					AG28									
		GND					AG7									
		GND					AK10									
		GND					AK13									
		GND					AK16									
		GND					AK19									
		GND					AK22									
		GND					AK26									
		GND					AK28									
		GND					AK7									
		GND					AN10									
		GND					AN13									
		GND					AN16									
		GND					AN19									
		GND					AN22									
		GND					AN26									
		GND					AN28									
		GND					AN31									
		GND					AN4									
		GND					AN7									
		GND					B11									
		GND					B16									
		GND					B2									
		GND					B26									
		GND					B28									
		GND					B31									
		GND					B33									
		GND					B8									
		GND					C19									
		GND					C22									
		GND					C5									
		GND					D2									



Bank Number	VREF	PinName/Function (2), (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		GND					D30									
		GND					E14									
		GND					E25									
		GND					E28									
		GND					E8									
		GND					F19									
		GND					F22									
		GND					F5									
		GND					G11									
		GND					G2									
		GND					H25									
		GND					H28									
		GND					H8									
		GND					J13									
		GND					J19									
		GND					J22									
		GND					J5									
		GND					K16									
		GND					K2									
		GND					L25									
		GND					L28									
		GND					L8									
		GND					M18									
		GND					M22									
		GND					M5									
		GND					N11									
		GND					N15									
		GND					N2									
		GND					N24									
		GND					P13									
		GND					P18									
		GND					P8									
		GND					V18									
		GND					V14									
		GND					V16									
		GND					V8									
		GND					W11									
		GND					W13									
		GND					W15									
		GND					W17									
		GND					W19									
		GND					W21									
		GND					W23									
		GND					W28									
		GND					W9									
		GND					Y18									
		GND					Z20									
		GND					Z17									
		GND					R19									
		GND					R21									
		GND					R23									
		GND					R25									
		GND					R5									
		GND					R8									
		GND					T10									
		GND					T12									
		GND					T14									
		GND					T18									
		GND					T2									
		GND					T20									
		GND					T22									
		GND					T24									
		GND					U11									
		GND					U13									
		GND					U17									
		GND					U19									
		GND					U21									
		GND					U23									
		GND					U25									
		GND					U6									
		GND					U9									
		GND					V10									

Notes:
(1) For more information about pin definitions and pin connection guidelines, refer to the [Altera V Device Family Pin Connection Guidelines](#).
(2) GND, REFCLK pin is not supported in current Quartus II version, but will be supported in future Quartus II release version.
(3) Pins with * contains similar name with other pins in the same column. For the selection of the HPS pins, refer to the "HPS Pin Mux Select x" columns.
(4) Pins with * are the 10 Gbps transceiver channels. For more information about the 10 Gbps transceiver channels clocking recommendation, refer to the [Transceiver Clocking in Arria V Devices chapter](#).
(5) RESET pin is only applicable for DDR3 device.



Bank Number	VREF	PinName/Function (Z1, Z3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for BDK3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		DNU					A38									
		DNU					B38									
		DNU					B39									
GXB L2		REFCLK9n					U32									
GXB L2		REFCLK9p					U31									
GXB L2		GXB_TX_L17n					C38									
GXB L2		GXB_TX_L17p					C37									
GXB L2		GXB_RX_L17p.GXB_REFCLK_L17p					D39									
GXB L2		GXB_RX_L17n.GXB_REFCLK_L17n					D38									
GXB L2		GXB_TX_L16p					E38									
GXB L2		GXB_TX_L16p					E37									
GXB L2		GXB_RX_L16p.GXB_REFCLK_L16p					F39									
GXB L2		GXB_RX_L16n.GXB_REFCLK_L16n					F38									
GXB L2		GXB_TX_L15p					G38									
GXB L2		GXB_TX_L15p					G37									
GXB L2		GXB_RX_L15p.GXB_REFCLK_L15p					H39									
GXB L2		GXB_RX_L15n.GXB_REFCLK_L15n					H38									
GXB L2		GXB_TX_L14n					J38									
GXB L2		GXB_TX_L14p					J37									
GXB L2		GXB_RX_L14p.GXB_REFCLK_L14p					K39									
GXB L2		GXB_RX_L14n.GXB_REFCLK_L14n					K38									
GXB L2		GXB_TX_L13n					L38									
GXB L2		GXB_TX_L13p					L37									
GXB L2		GXB_RX_L13p.GXB_REFCLK_L13p					M39									
GXB L2		GXB_RX_L13n.GXB_REFCLK_L13n					M38									
GXB L2		GXB_TX_L12n					N38									
GXB L2		GXB_TX_L12p					N37									
GXB L2		GXB_RX_L12p.GXB_REFCLK_L12p					P39									
GXB L2		GXB_RX_L12n.GXB_REFCLK_L12n					P38									
GXB L2		REFCLK4n					W32									
GXB L2		REFCLK4p					W31									
GXB L1		REFCLK3p					AA32									
GXB L1		REFCLK3n					AA31									
GXB L1		GXB_TX_L11n					R36									
GXB L1		GXB_TX_L11p					R37									
GXB L1		GXB_RX_L11p.GXB_REFCLK_L11p					T39									
GXB L1		GXB_RX_L11n.GXB_REFCLK_L11n					T38									
GXB L1		GXB_TX_L10p					U38									
GXB L1		GXB_TX_L10p					U37									
GXB L1		GXB_RX_L10p.GXB_REFCLK_L10p					V39									
GXB L1		GXB_RX_L10n.GXB_REFCLK_L10n					V38									
GXB L1		GXB_TX_L9p					W36									
GXB L1		GXB_TX_L9p					W37									
GXB L1		GXB_RX_L9p.GXB_REFCLK_L9p					Y39									
GXB L1		GXB_RX_L9n.GXB_REFCLK_L9n					Y38									
		DNU					AA36									
		DNU					AA37									
		GND					AR39									
		GND					AR38									
		DNU					AC36									
		DNU					AC37									
		GND					AD39									
		DNU					AE38									
		DNU					AE37									
		GND					AF39									
		GND					AF38									
		GND					AG32									
		GND					AG31									
		GND					AE32									
		GND					AE31									
		DNU					AG36									
		DNU					AG37									
		GND					AH39									
		GND					AH38									
		DNU					AJ36									
		DNU					AJ37									
		GND					AK39									
		GND					AK38									
		DNU					AL36									
		DNU					AL37									
		GND					AM39									
		DNU					AM38									
		DNU					AN36									
		DNU					AN37									
		GND					AP39									
		GND					AP38									
		DNU					AR36									
		GND					AR37									
		DNU					AT39									
		GND					AT38									
		DNU					AU36									
		DNU					AU37									
		GND					AW37									
		GND					AW36									
		GND					AG33									
		GND					AG32									
		DNU					AN31									
3A		TDO		TDO			AT34									
3A		TMS		TMS			AM35									
3A		TCK		TCK			AX34									
3A		TDI		TDI			AT33									
3A		DCLK		DCLK			AW34									
3A		HCK0		HCK0			AR34									
3A		AS_DATA3		DATA3			AL34									
3A		AS_DATA2		DATA2			AR33									
3A		AS_DATA1		DATA1			AU33									
3A		AS_DATA0/ASD0		DATA0			AV33									
3A	VREFBIANO	IO	RZQ_0				AN33									
3A	VREFBIANO	IO					DIFFIO_TX_B1p	DIFFOUT_B1p	AP33				DD1B			
3A	VREFBIANO	IO	CLK0n				DIFFIO_RX_B2n	DIFFOUT_B2n	AN34				DD1B			
3A	VREFBIANO	IO	CLK0p				DIFFIO_RX_B2p	DIFFOUT_B2p	AP34				DD1B			
3A	VREFBIANO	IO					DIFFIO_TX_B3n	DIFFOUT_B3n	AK32							
3A	VREFBIANO	IO					DIFFIO_TX_B3p	DIFFOUT_B3p	AL32				DD1B			
3A	VREFBIANO	IO	CLK1n				DIFFIO_RX_B4n	DIFFOUT_B4n	AJ34				DD1n1B/QK1B			
3A	VREFBIANO	IO	CLK1p				DIFFIO_RX_B4p	DIFFOUT_B4p	AK34				DQS1B/QO1B/CO1B/QK1B			
3A	VREFBIANO	IO	FPLL_B1_CLKOUT0.FPLL_B1_CLKOUTn				DIFFIO_TX_B5n	DIFFOUT_B5n	AL34							
3A	VREFBIANO	IO	FPLL_B1_CLKOUT0.FPLL_B1_CLKOUTp.FPLL_B1_FB0				DIFFIO_TX_B5p	DIFFOUT_B5p	AM34				DD1B			
3A	VREFBIANO	IO	FPLL_B1_CLKOUT3.FPLL_B1_FBn				DIFFIO_RX_B6n	DIFFOUT_B6n	AJ33				DD1B			
3A	VREFBIANO	IO	FPLL_B1_CLKOUT3.FPLL_B1_FBp.FPLL_B1_FB1				DIFFIO_RX_B6p	DIFFOUT_B6p	AK33				DD1B			
3A	VREFBIANO	IO	VREFBIANO				AJ31									
3A	VREFBIANO	IO	CLK2n				DIFFIO_RX_B7n	DIFFOUT_B7n	AL33				DD1B			
3A	VREFBIANO	IO	CLK2p				DIFFIO_RX_B7p	DIFFOUT_B7p	AM33				DD1B			
3A	VREFBIANO	IO					DIFFIO_TX_B8n	DIFFOUT_B8n	AN32							
3A	VREFBIANO	IO					DIFFIO_TX_B8p	DIFFOUT_B8p	AP32				DD2B			
3A	VREFBIANO	IO	CLK3n				DIFFIO_RX_B9n	DIFFOUT_B9n	AT32				DD2B			
3A	VREFBIANO	IO	CLK3p				DIFFIO_RX_B9p	DIFFOUT_B9p	AU32				DD2B			
3A	VREFBIANO	IO					DIFFIO_TX_B10n	DIFFOUT_B10n	AL31							
3A	VREFBIANO	IO					DIFFIO_TX_B10p	DIFFOUT_B10p	AM31				DD2B			



Bank Number	VREF	PinName/Function (Z1, Z3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DQS3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
5A	VREFBAND	I0			DIFFO_RX_B11n	DIFFOUT_B11n	AW33	DQS2B/QK2B	DQ1B							
5A	VREFBAND	I0			DIFFO_RX_B11p	DIFFOUT_B11p	AW32	DQS2B/Q22B/Co2B/QK2B	DQ1B							
5A	VREFBAND	I0			DIFFO_TX_B12n	DIFFOUT_B12n	AK31									
5A	VREFBAND	I0			DIFFO_TX_B12p	DIFFOUT_B12p	AK31	DQ2B								
5A	VREFBAND	I0			DIFFO_RX_B13n	DIFFOUT_B13n	AK31	DQ2B								
5A	VREFBAND	I0			DIFFO_RX_B13p	DIFFOUT_B13p	AK31	DQ2B								
5A	VREFBAND	I0			DIFFO_TX_B14n	DIFFOUT_B14n	AK29									
5A	VREFBAND	I0			DIFFO_TX_B14p	DIFFOUT_B14p	AK29	DQ2B								
5A	VREFBAND	I0			DIFFO_RX_B15n	DIFFOUT_B15n	AK30	DQ2B								
5A	VREFBAND	I0			DIFFO_RX_B15p	DIFFOUT_B15p	AK30	DQ2B								
5A	VREFBAND	I0			DIFFO_TX_B16n	DIFFOUT_B16n	AK31									
5A	VREFBAND	I0			DIFFO_TX_B16p	DIFFOUT_B16p	AK31	DQ2B								
5A	VREFBAND	I0			DIFFO_RX_B17n	DIFFOUT_B17n	AK30	DQ2B								
5A	VREFBAND	I0			DIFFO_RX_B17p	DIFFOUT_B17p	AK30	DQ2B								
5A	VREFBAND	I0			DIFFO_TX_B18n	DIFFOUT_B18n	AK30									
5A	VREFBAND	I0			DIFFO_TX_B18p	DIFFOUT_B18p	AK30	DQ2B								
5A	VREFBAND	I0			DIFFO_RX_B19n	DIFFOUT_B19n	AK30	DQS2B/QK2B	DQS1B/QK1B							
5A	VREFBAND	I0			DIFFO_RX_B19p	DIFFOUT_B19p	AK30	DQS2B/Q22B/Co2B/QK2B	DQS1B/QK1B/Co1B/QK1B							
5A	VREFBAND	I0			DIFFO_TX_B20n	DIFFOUT_B20n	AK30									
5A	VREFBAND	I0			DIFFO_TX_B20p	DIFFOUT_B20p	AK30	DQ2B								
5A	VREFBAND	I0			DIFFO_RX_B21n	DIFFOUT_B21n	AK29	DQ2B								
5A	VREFBAND	I0			DIFFO_RX_B21p	DIFFOUT_B21p	AK29	DQ2B								
5A	VREFBAND	I0			DIFFO_TX_B22n	DIFFOUT_B22n	AK30									
5A	VREFBAND	I0			DIFFO_TX_B22p	DIFFOUT_B22p	AK30	DQ2B								
5A	VREFBAND	I0			DIFFO_RX_B23n	DIFFOUT_B23n	AK29	DQ2B								
5A	VREFBAND	I0			DIFFO_RX_B23p	DIFFOUT_B23p	AK29	DQ2B								
5B	VREFBAND	I0			DIFFO_TX_B24n	DIFFOUT_B24n	AK29									
5B	VREFBAND	I0			DIFFO_TX_B24p	DIFFOUT_B24p	AK29	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B25n	DIFFOUT_B25n	AK29	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B25p	DIFFOUT_B25p	AK29	DQ2B								
5B	VREFBAND	I0			DIFFO_TX_B26n	DIFFOUT_B26n	AK29									
5B	VREFBAND	I0			DIFFO_TX_B26p	DIFFOUT_B26p	AK29	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B27n	DIFFOUT_B27n	AK28	DQS2B/QK2B	DQ2B							
5B	VREFBAND	I0			DIFFO_RX_B27p	DIFFOUT_B27p	AK28	DQS2B/Q22B/Co2B/QK2B	DQ2B							
5B	VREFBAND	I0			DIFFO_TX_B28n	DIFFOUT_B28n	AK29									
5B	VREFBAND	I0			DIFFO_TX_B28p	DIFFOUT_B28p	AK28	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B29n	DIFFOUT_B29n	AK27	DQ2B								
5B	VREFBAND	I0		VREFBAND	DIFFO_RX_B29p	DIFFOUT_B29p	AK28	DQ2B								
5B	VREFBAND	I0					AK28	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B30n	DIFFOUT_B30n	AK27	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B30p	DIFFOUT_B30p	AK27	DQ2B								
5B	VREFBAND	I0			DIFFO_TX_B31n	DIFFOUT_B31n	AK28									
5B	VREFBAND	I0			DIFFO_TX_B31p	DIFFOUT_B31p	AK28	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B32n	DIFFOUT_B32n	AK28	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B32p	DIFFOUT_B32p	AK28	DQ2B								
5B	VREFBAND	I0			DIFFO_TX_B33n	DIFFOUT_B33n	AK27									
5B	VREFBAND	I0			DIFFO_TX_B33p	DIFFOUT_B33p	AK27	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B34n	DIFFOUT_B34n	AK29	DQS2B/QK2B	DQ2B							
5B	VREFBAND	I0			DIFFO_RX_B34p	DIFFOUT_B34p	AK29	DQS2B/Q22B/Co2B/QK2B	DQ2B							
5B	VREFBAND	I0			DIFFO_TX_B35n	DIFFOUT_B35n	AK27									
5B	VREFBAND	I0			DIFFO_TX_B35p	DIFFOUT_B35p	AK27	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B36n	DIFFOUT_B36n	AK27	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B36p	DIFFOUT_B36p	AK27	DQ2B								
5B	VREFBAND	I0			DIFFO_TX_B37n	DIFFOUT_B37n	AK27									
5B	VREFBAND	I0			DIFFO_TX_B37p	DIFFOUT_B37p	AK27	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B38n	DIFFOUT_B38n	AK27	DQ2B								
5B	VREFBAND	I0			DIFFO_RX_B38p	DIFFOUT_B38p	AK27	DQ2B								
5B	VREFBAND	I0			DIFFO_TX_B39n	DIFFOUT_B39n	AK27									
5B	VREFBAND	I0			DIFFO_TX_B39p	DIFFOUT_B39p	AK27	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B40n	DIFFOUT_B40n	AK25	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B40p	DIFFOUT_B40p	AK25	DQ2B								
5C	VREFBAND	I0			DIFFO_TX_B41n	DIFFOUT_B41n	AK27									
5C	VREFBAND	I0			DIFFO_TX_B41p	DIFFOUT_B41p	AK27	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B42n	DIFFOUT_B42n	AK25	DQS2B/QK2B	DQ2B							
5C	VREFBAND	I0			DIFFO_RX_B42p	DIFFOUT_B42p	AK25	DQS2B/Q22B/Co2B/QK2B	DQ2B							
5C	VREFBAND	I0			DIFFO_TX_B43n	DIFFOUT_B43n	AK24									
5C	VREFBAND	I0			DIFFO_TX_B43p	DIFFOUT_B43p	AK25	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B44n	DIFFOUT_B44n	AK26	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B44p	DIFFOUT_B44p	AK26	DQ2B								
5C	VREFBAND	I0			DIFFO_TX_B45n	DIFFOUT_B45n	AK26									
5C	VREFBAND	I0			DIFFO_TX_B45p	DIFFOUT_B45p	AK26	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B46n	DIFFOUT_B46n	AK25	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B46p	DIFFOUT_B46p	AK25	DQ2B								
5C	VREFBAND	I0			DIFFO_TX_B47n	DIFFOUT_B47n	AK26									
5C	VREFBAND	I0			DIFFO_TX_B47p	DIFFOUT_B47p	AK26	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B48n	DIFFOUT_B48n	AK25	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B48p	DIFFOUT_B48p	AK25	DQ2B								
5C	VREFBAND	I0			DIFFO_TX_B49n	DIFFOUT_B49n	AK25									
5C	VREFBAND	I0			DIFFO_TX_B49p	DIFFOUT_B49p	AK25	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B50n	DIFFOUT_B50n	AK26	DQS2B/QK2B	DQS1B/QK1B							
5C	VREFBAND	I0			DIFFO_RX_B50p	DIFFOUT_B50p	AK26	DQS2B/Q22B/Co2B/QK2B	DQS1B/QK1B/Co1B/QK1B							
5C	VREFBAND	I0			DIFFO_TX_B51n	DIFFOUT_B51n	AK25									
5C	VREFBAND	I0			DIFFO_TX_B51p	DIFFOUT_B51p	AK25	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B52n	DIFFOUT_B52n	AK25	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B52p	DIFFOUT_B52p	AK26	DQ2B								
5C	VREFBAND	I0					AK26									
5C	VREFBAND	I0					AK26	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B53n	DIFFOUT_B53n	AK25	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B53p	DIFFOUT_B53p	AK24	DQ2B								
5C	VREFBAND	I0			DIFFO_TX_B54n	DIFFOUT_B54n	AK23									
5C	VREFBAND	I0			DIFFO_TX_B54p	DIFFOUT_B54p	AK24	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B55n	DIFFOUT_B55n	AK24	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B55p	DIFFOUT_B55p	AK24	DQ2B								
5C	VREFBAND	I0			DIFFO_TX_B56n	DIFFOUT_B56n	AK24									
5C	VREFBAND	I0			DIFFO_TX_B56p	DIFFOUT_B56p	AK24	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B57n	DIFFOUT_B57n	AK24	DQS2B/QK2B	DQ2B							
5C	VREFBAND	I0			DIFFO_RX_B57p	DIFFOUT_B57p	AK24	DQS2B/Q22B/Co2B/QK2B	DQ2B							
5C	VREFBAND	I0			DIFFO_TX_B58n	DIFFOUT_B58n	AK24									
5C	VREFBAND	I0			DIFFO_TX_B58p	DIFFOUT_B58p	AK24	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B59n	DIFFOUT_B59n	AK23	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B59p	DIFFOUT_B59p	AK24	DQ2B								
5C	VREFBAND	I0			DIFFO_TX_B60n	DIFFOUT_B60n	AK24									
5C	VREFBAND	I0			DIFFO_TX_B60p	DIFFOUT_B60p	AK24	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B61n	DIFFOUT_B61n	AK23	DQ2B								
5C	VREFBAND	I0			DIFFO_RX_B61p	DIFFOUT_B61p	AK23	DQ2B								
5D	VREFBAND	I0			DIFFO_TX_B62n	DIFFOUT_B62n	AK23									
5D	VREFBAND	I0			DIFFO_TX_B62p	DIFFOUT_B62p	AK23	DQ2B								
5D	VREFBAND	I0			DIFFO_RX_B63n	DIFFOUT_B63n	AK22	DQ2B								
5D	VREFBAND	I0			DIFFO_RX_B63p	DIFFOUT_B63p	AK23	DQ2B								
5D	VREFBAND	I0			DIFFO_TX_B64n	DIFFOUT_B64n	AK23									
5D	VREFBAND	I0			DIFFO_TX_B64p	DIFFOUT_B64p	AK23	DQ2B								
5D	VREFBAND	I0			DIFFO_RX_B65n	DIFFOUT_B65n	AK22	DQS2B/QK2B	DQS1B/QK1B							
5D	VREFBAND	I0			DIFFO_RX_B65p	DIFFOUT_B65p	AK22	DQS2B/Q22B/Co2B/QK2B	DQS1B/QK1B/Co1B/Q							



Pin Information for the Arria® V 5ASXBB3 Device
Version 1.3
Note (1)

Bank Number	VREF	PinName/Function (Z1, Z3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DQS3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
4B	VREFB4N0	IO			DFFDO_RX_B124b	DFFDOUT_B124b	AE13	DQ17B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_TX_B125a	DFFDOUT_B125a	AT12									
4B	VREFB4N0	IO			DFFDO_TX_B125b	DFFDOUT_B125b	AU12	DQ17B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_RX_B126a	DFFDOUT_B126a	AV12	DQS17B/QK17B	DQ8B	DQ3B			DQS3B/QK3B			
4B	VREFB4N0	IO			DFFDO_RX_B126b	DFFDOUT_B126b	AW12	DQS17B/QC17B/QK17B	DQ8B	DQ3B			DQS3B/QC3B/QK3B			
4B	VREFB4N0	IO			DFFDO_TX_B127a	DFFDOUT_B127a	AL13									
4B	VREFB4N0	IO			DFFDO_TX_B127b	DFFDOUT_B127b	AM13	DQ17B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_RX_B128a	DFFDOUT_B128a	AW10	DQ17B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_RX_B128b	DFFDOUT_B128b	AW11	DQ17B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_TX_B129a	DFFDOUT_B129a	AN12									
4B	VREFB4N0	IO			DFFDO_TX_B129b	DFFDOUT_B129b	AP12	DQ17B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_RX_B130a	DFFDOUT_B130a	AH13	DQ17B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_RX_B130b	DFFDOUT_B130b	AJ13	DQ17B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_TX_B131a	DFFDOUT_B131a	AH12									
4B	VREFB4N0	IO			DFFDO_TX_B131b	DFFDOUT_B131b	AJ12	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_RX_B132a	DFFDOUT_B132a	AF13	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_RX_B132b	DFFDOUT_B132b	AG13	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_TX_B133a	DFFDOUT_B133a	AU10									
4B	VREFB4N0	IO			DFFDO_TX_B133b	DFFDOUT_B133b	AV10	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_RX_B134a	DFFDOUT_B134a	AT11	DQS18B/QK18B	DQS18B/QK18B	DQ3B						
4B	VREFB4N0	IO			DFFDO_RX_B134b	DFFDOUT_B134b	AU11	DQS18B/CQ18B/CQn18B/QK18B	DQS18B/CQ18B/CQn18B/QK18B	DQ3B						
4B	VREFB4N0	IO			DFFDO_TX_B135a	DFFDOUT_B135a	AK12									
4B	VREFB4N0	IO			DFFDO_TX_B135b	DFFDOUT_B135b	AL12	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_RX_B136a	DFFDOUT_B136a	AC13	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO			DFFDO_RX_B136b	DFFDOUT_B136b	AD13	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO	VREFB4N0				AN11									
4B	VREFB4N0	IO					AP11	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AV9	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AW9	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AC12									
4B	VREFB4N0	IO					AD11	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AF12	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AG12	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AT9									
4B	VREFB4N0	IO					AU9	DQ18B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AG11	DQS19B/QK19B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AH11	DQS19B/CQ19B/CQn19B/QK19B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AD12									
4B	VREFB4N0	IO					AE12	DQ19B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AF10	DQ19B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AM10	DQ19B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AK11									
4B	VREFB4N0	IO					AL11	DQ19B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AV8	DQ19B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AW8	DQ19B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AW7	DQ19B	DQ8B	DQ3B						
4B	VREFB4N0	IO					AW8	DQ20B	DQ8B	DQ3B						
4A	VREFB4N0	IO					AV6	DQ20B	DQ8B	DQ3B						
4A	VREFB4N0	IO					AW6	DQS20B/QK20B	DQS19B/CQ19B/CQn19B/QK19B	DQ3B						
4A	VREFB4N0	IO					AW5	DQS20B/CQ20B/CQn20B/QK20B	DQS19B/CQ19B/CQn19B/QK19B	DQ3B						
4A	VREFB4N0	IO					AK9									
4A	VREFB4N0	IO					AK10	DQ20B	DQ8B	DQ3B						
4A	VREFB4N0	IO					AL7	DQ20B	DQ8B	DQ3B						
4A	VREFB4N0	IO					AL8	DQ20B	DQ8B	DQ3B						
4A	VREFB4N0	IO					AN9									
4A	VREFB4N0	IO					AN9	DQ20B	DQ8B	DQ3B						
4A	VREFB4N0	IO					AT9	DQ20B	DQ8B	DQ3B						
4A	VREFB4N0	IO					AH10									
4A	VREFB4N0	IO					AV9	DQ21B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AF10	DQ21B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AE11	DQ21B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AK8									
4A	VREFB4N0	IO					AL6	DQ21B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AH6	DQS21B/QK21B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AJ6	DQS21B/CQ21B/CQn21B/QK21B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AN9									
4A	VREFB4N0	IO					AJ9	DQ21B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AN6	DQ21B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AN6	DQ21B	DQ10B	DQ4B						
4A	VREFB4N0	IO	VREFB4N0				AH7									
4A	VREFB4N0	IO					AN6	DQ21B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AJ7	DQ21B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AK7	DQ21B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AL7	DQ22B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AK7	DQ22B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AK7	DQ22B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AT6									
4A	VREFB4N0	IO					AL6	DQ22B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AR7	DQS22B/CQ22B	DQS19B/CQ19B/CQn19B/QK19B	DQ4B						
4A	VREFB4N0	IO					AT7	DQS22B/CQ22B/CQn22B/QK22B	DQS19B/CQ19B/CQn19B/QK19B	DQ4B						
4A	VREFB4N0	IO					AK8									
4A	VREFB4N0	IO					AL8	DQ22B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AW4	DQ22B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AN7									
4A	VREFB4N0	IO					AP7	DQ22B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AP6	DQ22B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AR6	DQ22B	DQ10B	DQ4B						
4A	VREFB4N0	IO					AV2									
4A	VREFB4N0	IO					AV3									
4A	VREFB4N0	IO					AW3									
4A	VREFB4N0	IO					AP9									
4A	VREFB4N0	IO					AP7									
4A	VREFB4N0	IO					AL2									
4A	VREFB4N0	IO					AT3									
4A	VREFB4N0	IO					AT4									
4A	VREFB4N0	IO					AR2									
4A	VREFB4N0	IO					AR1									
4A	VREFB4N0	IO					AP3									
4A	VREFB4N0	IO					AP4									
4A	VREFB4N0	IO					AN2									
4A	VREFB4N0	IO					AN1									
4A	VREFB4N0	IO					AM3									
4A	VREFB4N0	IO					AM4									
4A	VREFB4N0	IO					AL2									
4A	VREFB4N0	IO					AL1									
4A	VREFB4N0	IO					AK3									
4A	VREFB4N0	IO					AK4									
4A	VREFB4N0	IO					AJ2									
4A	VREFB4N0	IO					AJ1									
4A	VREFB4N0	IO					AH3									
4A	VREFB4N0	IO					AH4									
4A	VREFB4N0	IO					AG2									
4A	VREFB4N0	IO					AG1									



Bank Number	VREF	PinName/Function (Z1, Z3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DQS3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		DN1					AF3									
		DN1					AF4									
		GND					AB9									
		GND					AB8									
		GND					AB9									
		GND					AB8									
		GND					AE2									
		GND					AE1									
		DN1					AD3									
		DN1					AD4									
		GND					AC2									
		GND					AC1									
		DN1					AB9									
		DN1					AB4									
		GND					AA2									
		DN1					AA1									
		DN1					Y3									
		DN1					Y4									
		GND					W3									
		GND					W1									
		DN1					V3									
		DN1					V4									
		GND					U3									
		GND					U1									
		DN1					T3									
		GND					T4									
		GND					R2									
		GND					R1									
		DN1					P3									
		DN1					P4									
		GND					Y9									
		GND					Y8									
GB	VREFB0	HPS_DDR					T7				HPS_DM_4	HPS_DM_4				
GB	VREFB0	HPS_DDR					R6				HPS_DQ_39	HPS_DQ_39				
GB	VREFB0	HPS_DDR					M1				HPS_DQ_37	HPS_DQ_37				
GB	VREFB0	HPS_DDR					N1				HPS_DQ_38	HPS_DQ_38				
GB	VREFB0	HPS_DDR					M2				HPS_DQ_36	HPS_DQ_36				
GB	VREFB0	HPS_DDR					J1				HPS_DQS_4	HPS_DQS_4				
GB	VREFB0	HPS_GPI13					K1									
GB	VREFB0	HPS_DDR					H1				HPS_DQS#_4	HPS_DQS#_4				
GB	VREFB0	HPS_DDR					L4				HPS_DQ_35	HPS_DQ_35				
GB	VREFB0	HPS_DDR					F1				HPS_DQ_33	HPS_DQ_33				
GB	VREFB0	HPS_DDR					P6				HPS_DQ_34	HPS_DQ_34				
GB	VREFB0	HPS_DDR					G1				HPS_DQ_32	HPS_DQ_32				
GB	VREFB0	HPS_GPI12					R7									
GB	VREFB0	HPS_GPI11					J2									
GB	VREFB0	HPS_DDR					D1				HPS_DM_3	HPS_DM_3				
GB	VREFB0	HPS_GPI10					K2									
GB	VREFB0	HPS_DDR					E1				HPS_DQ_31	HPS_DQ_31				
GB	VREFB0	HPS_DDR					F2				HPS_DQ_29	HPS_DQ_29				
GB	VREFB0	HPS_DDR					M3				HPS_DQ_30	HPS_DQ_30				
GB	VREFB0	HPS_DDR					G2				HPS_DQ_28	HPS_DQ_28				
GB	VREFB0	VREFB0					MA									
GB	VREFB0	HPS_DDR					C2				HPS_DQS_3	HPS_DQS_3				
GB	VREFB0	HPS_GPI9					B1									
GB	VREFB0	HPS_DDR					D2				HPS_DQS#_3	HPS_DQS#_3				
GB	VREFB0	HPS_DDR					C1				HPS_DQ_27	HPS_DQ_27				
GB	VREFB0	HPS_DDR					A3				HPS_DQ_25	HPS_DQ_25				
GB	VREFB0	HPS_DDR					P7				HPS_DQ_26	HPS_DQ_26				
GB	VREFB0	HPS_DDR					A2				HPS_DQ_24	HPS_DQ_24				
GB	VREFB0	HPS_GPI8					N6									
GB	VREFB0	HPS_GPI7					K3									
GB	VREFB0	HPS_DDR					D3				HPS_DM_2	HPS_DM_2				
GB	VREFB0	HPS_GPI6					K4									
GB	VREFB0	HPS_DDR					C3				HPS_DQ_23	HPS_DQ_23				
GB	VREFB0	HPS_DDR					A4				HPS_DQ_21	HPS_DQ_21				
GB	VREFB0	HPS_DDR					M5				HPS_DQ_22	HPS_DQ_22				
GB	VREFB0	HPS_DDR					H3				HPS_DQ_20	HPS_DQ_20				
GB	VREFB0	HPS_GPI5					L4									
GB	VREFB0	HPS_DDR					G4				HPS_DQS_2	HPS_DQS_2				
GB	VREFB0	HPS_DDR					E3				HPS_RESET#	HPS_RESET#				
GB	VREFB0	HPS_DDR					H5				HPS_DQS#_2	HPS_DQS#_2				
GB	VREFB0	HPS_DDR					F3				HPS_DQ_19	HPS_DQ_19				
GB	VREFB0	HPS_DDR					K5				HPS_DQ_17	HPS_DQ_17				
GB	VREFB0	HPS_DDR					N7				HPS_DQ_18	HPS_DQ_18				
GB	VREFB0	HPS_DDR					J5				HPS_DQ_16	HPS_DQ_16				
GB	VREFB0	HPS_GPI4					M6									
GA	VREFB0	HPS_GPI3					C4									
GA	VREFB0	HPS_DDR					E4				HPS_DM_1	HPS_DM_1				
GA	VREFB0	HPS_GPI2					B4									
GA	VREFB0	HPS_DDR					F4				HPS_DQ_15	HPS_DQ_15				
GA	VREFB0	HPS_DDR					K5				HPS_DQ_13	HPS_DQ_13				
GA	VREFB0	HPS_DDR					R9				HPS_DQ_14	HPS_DQ_14				
GA	VREFB0	HPS_DDR					A4				HPS_DQ_12	HPS_DQ_12				
GA	VREFB0	HPS_DDR					R8				HPS_CKE_0	HPS_CKE_0				
GA	VREFB0	HPS_DDR					D5				HPS_DQS_1	HPS_DQS_1				
GA	VREFB0	HPS_DDR					F5				HPS_CKE_1	HPS_CKE_1				
GA	VREFB0	HPS_DDR					E6				HPS_DQS#_1	HPS_DQS#_1				
GA	VREFB0	HPS_DDR					G5				HPS_DQ_11	HPS_DQ_11				
GA	VREFB0	HPS_DDR					G6				HPS_DQ_9	HPS_DQ_9				
GA	VREFB0	HPS_DDR					N8				HPS_DQ_10	HPS_DQ_10				
GA	VREFB0	HPS_DDR					H6				HPS_DQ_8	HPS_DQ_8				
GA	VREFB0	HPS_GPI1					M7									
GA	VREFB0	HPS_GPI0					B8									
GA	VREFB0	HPS_DDR					C6				HPS_DM_0	HPS_DM_0				
GA	VREFB0	HPS_DDR					D6				HPS_DQ_7	HPS_DQ_7				
GA	VREFB0	HPS_DDR					A7				HPS_DQ_5	HPS_DQ_5				
GA	VREFB0	HPS_DDR					L6				HPS_DQ_6	HPS_DQ_6				
GA	VREFB0	HPS_DDR					L6				HPS_DQ_4	HPS_DQ_4				
GA	VREFB0	HPS_DDR					K6				HPS_ODT_1	HPS_ODT_1				
GA	VREFB0	HPS_DDR					F7				HPS_DQS_0	HPS_DQS_0				
GA	VREFB0	HPS_DDR					H7				HPS_ODT_0	HPS_ODT_0				
GA	VREFB0	HPS_DDR					E7				HPS_DQS#_0	HPS_DQS#_0				
GA	VREFB0	HPS_DDR					C7				HPS_DQ_3	HPS_DQ_3				
GA	VREFB0	HPS_DDR					C7				HPS_DQ_1	HPS_DQ_1				
GA	VREFB0	HPS_DDR					R10				HPS_DQ_2	HPS_DQ_2				
GA	VREFB0	HPS_DDR					D7				HPS_DQ_0	HPS_DQ_0				
GA	VREFB0	VREFB0					P10									
GA	VREFB0	HPS_DDR					N9				HPS_A_0	HPS_CA_0				
GA	VREFB0	HPS_DDR					M9				HPS_A_1	HPS_CA_1				
GA	VREFB0	HPS_DDR					A8				HPS_A_4	HPS_CA_4				
GA	VREFB0	HPS_DDR					N10				HPS_A_2	HPS_CA_2				
GA	VREFB0	HPS_DDR					B7				HPS_A_5	HPS_CA_5				
GA	VREFB0	HPS_DDR					B7				HPS_A_3	HPS_CA_3				
GA	VREFB0	HPS_DDR					M10				HPS_A_3	HPS_CA_3				
GA	VREFB0	HPS_DDR					A11				HPS_CK	HPS_CK				
GA	VREFB0	HPS_DDR					B9				HPS_A_4	HPS_CA_4				
GA	VREFB0	HPS_DDR					B10				HPS_CK#	HPS_CK#				
GA	VREFB0	HPS_DDR					A9				HPS_A_7	HPS_CA_7				
GA	VREFB0	HPS_DDR					C9				HPS_BA_1	HPS_BA_1				
GA	VREFB0	HPS_DDR					L7				HPS_BA_0	HPS_BA_0				



Pin Information for the Arria® V 5ASXBB3 Device
Version 1.3
Note (1)

Bank Number	VREF	PinName/Function (Z1, Z)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for BDR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
6A	VREFB6A00	HPS_DDR					D8									
6A	VREFB6A00	HPS_DDR					S9									
6A	VREFB6A00	HPS_DDR					S8									
6A	VREFB6A00	HPS_DDR					K7									
6A	VREFB6A00	HPS_DDR					C10									
6A	VREFB6A00	HPS_DDR					J7									
6A	VREFB6A00	HPS_DDR					H9									
6A	VREFB6A00	HPS_DDR					F9									
6A	VREFB6A00	HPS_DDR					J9									
6A	VREFB6A00	HPS_DDR					E9									
6A	VREFB6A00	HPS_DDR					D11									
6A	VREFB6A00	HPS_DDR					J8									
6A	VREFB6A00	HPS_DDR					D10									
6A	VREFB6A00	HPS_RZQ_0					K9									
		GND1					B12									
		GND					C11									
		GND					A12									
		HPS_HRST					R11									
7A		HPS_IPOR					K10									
7A		HPS_TDO					T11									
		ICCRSTCLK_HPS					J10									
		HPS_TMS					F10									
7A		HPS_TCK					G10									
7A		HPS_IRST					P11									
7A		HPS_TA					H10									
		GND					M11									
7A		HPS_PORSEL					C12									
7A		HPS_CLK1					N11									
7A		HPS_CLK2					D12									
7A	VREFB7A78	TRACE_CLK					J11						TRACE_CLK			HPS_GPIO48
7A	VREFB7A78	TRACE_D0					K12						TRACE_D0			HPS_GPIO49
7A	VREFB7A78	TRACE_D1					K11						SPIS0_CLK	UART0_RX		HPS_GPIO50
7A	VREFB7A78	TRACE_D2					J12						SPIS0_MISO	DCI_SDA		HPS_GPIO51
7A	VREFB7A78	TRACE_D3					H12						SPIS0_SSI	DCI_SCL		HPS_GPIO52
7A	VREFB7A78	TRACE_D4					E12						TRACE_D4	SPIS1_CLK		HPS_GPIO53
7A	VREFB7A78	TRACE_D5					G11						TRACE_D5	SPIS1_MOSI		HPS_GPIO54
7A	VREFB7A78	TRACE_D6					F12						TRACE_D6	SPIS1_SSI		HPS_GPIO55
7A	VREFB7A78	TRACE_D7					A13						TRACE_D7	SPIS1_MISO	EC0_SDA	HPS_GPIO56
7A	VREFB7A78	SPIM0_CLK					P12						SPIM0_CLK	DCI_SDA	UART0_CTS	HPS_GPIO57
7A	VREFB7A78	SPIM0_MOSI					A14						SPIM0_MOSI	DCI_SCL	UART0_RTS	HPS_GPIO58
7A	VREFB7A78	SPIM0_MISO					N12						SPIM0_MISO	UART1_CTS		HPS_GPIO59
7A	VREFB7A78	SPIM0_SSD_BOOTSEL0					B15						SPIM0_SSD	UART1_RTS		HPS_GPIO60
7A	VREFB7A78	UART0_RX					B14						UART0_RX	SPIM0_SSI		HPS_GPIO61
7A	VREFB7A78	UART0_TX_CLKSEL1					A15						UART0_TX	SPM1_SSI		HPS_GPIO62
7A	VREFB7A78	DC0_SDA					C13						DC0_SDA	UART1_RX	SPM1_CLK	HPS_GPIO63
7A	VREFB7A78	DC0_SCL					L13						DC0_SCL	UART1_TX	SPM1_MOSI	HPS_GPIO64
7A	VREFB7A78	UART0_RX*					M12						UART0_RX	SPM1_MISO		HPS_GPIO65
7A	VREFB7A78	UART0_TX* CLKSEL0					M13						UART0_TX	SPM1_SSD		HPS_GPIO66
7A	VREFB7A78	SPIS1_CLK					L12						SPIS1_CLK	SPM1_CLK		HPS_GPIO67
7A	VREFB7A78	SPIS1_MOSI					K13						SPIS1_MOSI	SPM1_MOSI		HPS_GPIO68
7A	VREFB7A78	SPIS1_MISO					F13						SPIS1_MISO	SPM1_MISO		HPS_GPIO69
7A	VREFB7A78	SPIS1_SSD					D13						SPIS1_SSD	SPM1_SSD		HPS_GPIO70
7A	VREFB7A78	UART1_RX					K13						UART1_RX	SPM1_SSI		HPS_GPIO71
7A	VREFB7A78	UART1_TX					G13						UART1_TX	SPM1_CLK		HPS_GPIO72
7A	VREFB7A78	DC1_SDA					R13						DC1_SDA	SPM0_MOSI		HPS_GPIO73
7A	VREFB7A78	DC1_SCL					M14						DC1_SCL	SPM0_MISO		HPS_GPIO74
7A	VREFB7A78	SPIM0_SSD					H13						SPIM0_SSD	SPM0_SSD		HPS_GPIO75
7A	VREFB7A78	SPIS0_CLK					P13						SPIS0_CLK	SPM0_SSI		HPS_GPIO76
7A	VREFB7A78	SPIS0_MOSI					C14						SPIS0_MOSI	SPM0_SSI		HPS_GPIO77
7A	VREFB7A78	SPIS0_MISO					J13						SPIS0_MISO			HPS_GPIO78
7A	VREFB7A78	SPIS0_SSD					D14						SPIS0_SSD			HPS_GPIO79
7B	VREFB7A78	NAND_A1E					A16							RGMI1_TX_CLK	OSPI_S3	HPS_GPIO14
7B	VREFB7A78	NAND_CE					P16							RGMI1_TXD0	USB1_D0	HPS_GPIO15
7B	VREFB7A78	NAND_C1E					A17							RGMI1_TXD1	USB1_D1	HPS_GPIO16
7B	VREFB7A78	NAND_RE					R16							RGMI1_TXD2	USB1_D2	HPS_GPIO17
7B	VREFB7A78	NAND_RB					C16							RGMI1_TXD3	USB1_D3	HPS_GPIO18
7B	VREFB7A78	NAND_DQ0					G14							RGMI1_RXD0		HPS_GPIO19
7B	VREFB7A78	NAND_DQ1					C17							NAND_A1D0	EC3_SDA	HPS_GPIO20
7B	VREFB7A78	NAND_DQ2					H14							RGMI1_MDC	EC3_SCL	HPS_GPIO21
7B	VREFB7A78	NAND_DQ3					L15							RGMI1_RX_CTL	USB1_D4	HPS_GPIO22
7B	VREFB7A78	NAND_DQ4					P14							RGMI1_TX_CTL	USB1_D5	HPS_GPIO23
7B	VREFB7A78	NAND_DQ6					K15							RGMI1_RX_CLK	USB1_D6	HPS_GPIO24
7B	VREFB7A78	NAND_DQ6					R14							RGMI1_RXD1	USB1_D7	HPS_GPIO25
7B	VREFB7A78	NAND_DQ7					K14							NAND_DQ7	RGMI1_RXD2	HPS_GPIO26
7B	VREFB7A78	NAND_WP					C15							NAND_WP	RGMI1_RXD3	HPS_GPIO27
7B	VREFB7A78	NAND_WE_BOOTSEL2					L14							NAND_WE	OSPI_S1	HPS_GPIO28
7B	VREFB7A78	OSPI_I0					D15							OSPI_I0	USB1_CLK	HPS_GPIO29
7B	VREFB7A78	OSPI_I1					S15							OSPI_I1	USB1_STP	HPS_GPIO30
7B	VREFB7A78	OSPI_I02					M15							OSPI_I2	USB1_DR	HPS_GPIO31
7B	VREFB7A78	OSPI_I03					H15							OSPI_I3	USB1_NXT	HPS_GPIO32
7B	VREFB7A78	OSPI_SSD_BOOTSEL1					N15							OSPI_SSD		HPS_GPIO33
7B	VREFB7A78	OSPI_CLK					F16							OSPI_CLK		HPS_GPIO34
7B	VREFB7A78	OSPI_S1					E15							OSPI_S1		HPS_GPIO35
7C	VREFB7A78	SDMMC_CMD					D16							SDMMC_CMD	USB0_D0	HPS_GPIO36
7C	VREFB7A78	SDMMC_PWREN					P16							SDMMC_PWREN	USB0_D1	HPS_GPIO37
7C	VREFB7A78	SDMMC_D0					C17							SDMMC_D0	USB0_D2	HPS_GPIO38
7C	VREFB7A78	SDMMC_D1					N16							SDMMC_D1	USB0_D3	HPS_GPIO39
7C	VREFB7A78	SDMMC_D4					F16							SDMMC_D4	USB0_D4	HPS_GPIO40
7C	VREFB7A78	SDMMC_D5					G16							SDMMC_D5	USB0_D5	HPS_GPIO41
7C	VREFB7A78	SDMMC_D6					H16							SDMMC_D6	USB0_D6	HPS_GPIO42
7C	VREFB7A78	SDMMC_D7					E16							SDMMC_D7	USB0_D7	HPS_GPIO43
7C	VREFB7A78	HPS_GPIO44					K16							USB0_CLK		HPS_GPIO44
7C	VREFB7A78	SDMMC_CK1_OUT					L16							SDMMC_CK1_OUT	USB0_STP	HPS_GPIO45
7C	VREFB7A78	SDMMC_D2					J16							SDMMC_D2	USB0_DR	HPS_GPIO46
7C	VREFB7A78	SDMMC_D3					M16							SDMMC_D3	USB0_NXT	HPS_GPIO47
7D	VREFB7A78	RGMI1_TX_CLK					R17							RGMI1_TX_CLK		HPS_GPIO48
7D	VREFB7A78	RGMI1_TXD0					F17							RGMI1_TXD0	USB1_D0	HPS_GPIO1
7D	VREFB7A78	RGMI1_TXD1					P17							RGMI1_TXD1	USB1_D1	HPS_GPIO2
7D	VREFB7A78	RGMI1_TXD2					F18							RGMI1_TXD2	USB1_D2	HPS_GPIO3
7D	VREFB7A78	RGMI1_TXD3					E17							RGMI1_TXD3	USB1_D3	HPS_GPIO4
7D	VREFB7A78	RGMI1_RXD0					J17							RGMI1_RXD0	USB1_D4	HPS_GPIO5
7D	VREFB7A78	RGMI1_MDO					D18							RGMI1_MDO	USB1_D5	HPS_GPIO6
7D	VREFB7A78	RGMI1_MDC					C17							RGMI1_MDC	EC2_SDA	HPS_GPIO7
7D	VREFB7A78	RGMI1_RX_CTL					B19							RGMI1_RX_CTL	EC2_SCL	HPS_GPIO8
7D	VREFB7A78	RGMI1_TX_CTL					A18							RGMI1_TX_CTL		HPS_GPIO9
7D	VREFB7A78	RGMI1_RX_CLK					C18							RGMI1_RX_CLK	USB1_D7	HPS_GPIO10
7D	VREFB7A78	RGMI1_RXD1					A19							RGMI1_RXD1	USB1_STP	HPS_GPIO11
7D	VREFB7A78	RGMI1_RXD2					C19							RGMI1_RXD2	USB1_DR	HPS_GPIO12
7D	VREFB7A78	RGMI1_RXD3					D19							RGMI1_RXD3	USB1_NXT	HPS_GPIO13
7D	VREFB7A78	RGMI1_TX_CLK					D19							RGMI1_TX_CLK		HPS_GPIO48
7D	VREFB7A78	RGMI1_TXD0					H18							RGMI1_TXD0		HPS_GPIO49
7D	VREFB7A78	RGMI1_TXD1					F19							RGMI1_TXD1		HPS_GPIO50
7D	VREFB7A78	RGMI1_TX_CTL					N18							RGMI1_TX_CTL		HPS_GPIO51
7D	VREFB7A78	RGMI1_RXD0					E19							RGMI1_RXD0		HPS_GPIO52
7D	VREFB7A78	RGMI1_RXD1					M17							RGMI1_RXD1		HPS_GPIO53
7E	VREFB7A78	RGMI1_MDO					J18							RGMI1_MDO	SPIM0_CLK	HPS_GPIO54
7E	VREFB7A78	RGMI1_MDC					L18							RGMI1_MDC	SPIM0_MOSI	HPS_GPIO55
7E	VREFB7A78	RGMI1_TXD0					K18							RGMI1_TXD0	SPIM0_MISO	HPS_GPIO56
7E																



Bank Number	VREF	PinName/Function (Z1, Z3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DQS3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
ZE		VREFB7A/B7C/D7E/N0_HPS	RGMIH1_RX_CLK				G21						RGMIH1_RX_CLK	SPIS1_CLK	SPIM1_CLK	HPS_GP0D8
ZE		VREFB7A/B7C/D7E/N0_HPS	RGMIH1_RX_CTL				H19						RGMIH1_RX_CTL	SPIS1_MOSI	SPIM1_MOSI	HPS_GP0D9
ZE		VREFB7A/B7C/D7E/N0_HPS	RGMIH1_RXD2				G19						RGMIH1_RXD2	SPIS1_MISO	SPIM1_MISO	HPS_GP0D0
ZE		VREFB7A/B7C/D7E/N0_HPS	RGMIH1_RXD3				G19						RGMIH1_RXD3	SPIS1_SS0	SPIM1_SS0	HPS_GP0D1
ZG		VREFB7G/N0	ID		DIFFRO_RX_T16p	DIFFOUT_T16p	R19									
ZG		VREFB7G/N0	ID		DIFFRO_RX_T16n	DIFFOUT_T16n	T19									
ZG		VREFB7G/N0	ID				N19									
ZG		VREFB7G/N0	ID	VREFB7G/N0			P19									
ZG		VREFB7G/N0	ID		DIFFRO_RX_T17p	DIFFOUT_T17p	U19									
ZG		VREFB7G/N0	ID		DIFFRO_RX_T17n	DIFFOUT_T17n	L20									
ZG		VREFB7G/N0	ID		DIFFRO_TX_T18p	DIFFOUT_T18p	L19									
ZG		VREFB7G/N0	ID		DIFFRO_RX_T19p	DIFFOUT_T19p	P20									
ZG		VREFB7G/N0	ID		DIFFRO_RX_T19n	DIFFOUT_T19n	R20									
ZG		VREFB7G/N0	ID		DIFFRO_TX_T20p	DIFFOUT_T20p	M19									
ZG		VREFB7G/N0	ID		DIFFRO_RX_T21p	DIFFOUT_T21p	L20									
ZG		VREFB7G/N0	ID		DIFFRO_RX_T21n	DIFFOUT_T21n	M20									
ZG		VREFB7G/N0	ID		DIFFRO_RX_T21n	DIFFOUT_T21n	V20									
ZG		VREFB7G/N0	ID				V19									
ZG		VREFB7G/N0	ID				F20									
SD		VREFB8D/N0	ID	CLK19p	DIFFRO_RX_T31p	DIFFOUT_T31p	C20	DQ1T								DQ1T
SD		VREFB8D/N0	ID	CLK19n	DIFFRO_RX_T31n	DIFFOUT_T31n	D20	DQ1T								DQ1T
SD		VREFB8D/N0	ID		DIFFRO_TX_T32p	DIFFOUT_T32p	N21	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T32n	DIFFOUT_T32n	P21	DQ2T								DQ2T
SD		VREFB8D/N0	ID	CLK18p	DIFFRO_RX_T33p	DIFFOUT_T33p	H21	DQ2T								DQ2T
SD		VREFB8D/N0	ID	CLK18n	DIFFRO_RX_T33n	DIFFOUT_T33n	J21	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T34p	DIFFOUT_T34p	D21	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T34n	DIFFOUT_T34n	E21	DQ2T								DQ2T
SD		VREFB8D/N0	ID	FPLL_TC_CLKOUT12_FPLL_TC_FBp_FPLL_TC_FB1	DIFFRO_RX_T35p	DIFFOUT_T35p	A20	DQS1TCQ1TCQn1TQKx1T					DQS1TCQ1TCQn1TQKx1T			DQ2T
SD		VREFB8D/N0	ID	FPLL_TC_CLKOUT3_FPLL_TC_FBn	DIFFRO_RX_T35n	DIFFOUT_T35n	R21	DQS1TCQ1TCQn1TQKx1T					DQS1TCQ1TCQn1TQKx1T			DQ2T
SD		VREFB8D/N0	ID	FPLL_TC_CLKOUT0_FPLL_TC_CLKOUTp_FPLL_TC_FB0	DIFFRO_TX_T36p	DIFFOUT_T36p	K21	DQ2T								DQ2T
SD		VREFB8D/N0	ID	FPLL_TC_CLKOUT1_FPLL_TC_CLKOUTn	DIFFRO_TX_T36n	DIFFOUT_T36n	L21	DQ2T								DQ2T
SD		VREFB8D/N0	ID	CLK17p	DIFFRO_RX_T37p	DIFFOUT_T37p	A22	DQ2T								DQ2T
SD		VREFB8D/N0	ID	CLK17n	DIFFRO_RX_T37n	DIFFOUT_T37n	A21	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T38p	DIFFOUT_T38p	R21	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T38n	DIFFOUT_T38n	T21	DQ2T								DQ2T
SD		VREFB8D/N0	ID	CLK16p	DIFFRO_RX_T39p	DIFFOUT_T39p	B22	DQ2T								DQ2T
SD		VREFB8D/N0	ID	CLK16n	DIFFRO_RX_T39n	DIFFOUT_T39n	C22	DQ2T								DQ2T
SD		VREFB8D/N0	ID				J22	DQ2T								DQ2T
SD		VREFB8D/N0	ID	VREFB8D/N0			H22	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T40p	DIFFOUT_T40p	E22	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T40n	DIFFOUT_T40n	F22	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T41p	DIFFOUT_T41p	A23	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T41n	DIFFOUT_T41n	A24	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T42p	DIFFOUT_T42p	C23	DQS2TCQ2TCQn2TQKx2T					DQS2TCQ2TCQn2TQKx2T			DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T42n	DIFFOUT_T42n	D23	DQS2TCQ2TCQn2TQKx2T					DQS2TCQ2TCQn2TQKx2T			DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T43p	DIFFOUT_T43p	L22	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T43n	DIFFOUT_T43n	M22	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T44p	DIFFOUT_T44p	N22	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T44n	DIFFOUT_T44n	P22	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T45p	DIFFOUT_T45p	B22	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T45n	DIFFOUT_T45n	T22	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T46p	DIFFOUT_T46p	F23	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T46n	DIFFOUT_T46n	G23	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T47p	DIFFOUT_T47p	R23	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T47n	DIFFOUT_T47n	T23	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T48p	DIFFOUT_T48p	B24	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T48n	DIFFOUT_T48n	C24	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T49p	DIFFOUT_T49p	M23	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T49n	DIFFOUT_T49n	N23	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T49p	DIFFOUT_T49p	M23	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T49n	DIFFOUT_T49n	N23	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T50p	DIFFOUT_T50p	E24	DQS2TCQ2TCQn2TQKx2T					DQS2TCQ2TCQn2TQKx2T			DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T51p	DIFFOUT_T51p	J23	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T51n	DIFFOUT_T51n	K23	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T52p	DIFFOUT_T52p	F24	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_RX_T52n	DIFFOUT_T52n	G24	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T53p	DIFFOUT_T53p	H24	DQ2T								DQ2T
SD		VREFB8D/N0	ID		DIFFRO_TX_T53n	DIFFOUT_T53n	J24	DQ2T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T54p	DIFFOUT_T54p	T26	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T54n	DIFFOUT_T54n	T26	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T55p	DIFFOUT_T55p	G25	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T55n	DIFFOUT_T55n	H25	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T56p	DIFFOUT_T56p	N24	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T56n	DIFFOUT_T56n	P24	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T57p	DIFFOUT_T57p	R24	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T57n	DIFFOUT_T57n	T24	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T58p	DIFFOUT_T58p	A25	DQS4TCQ4TCQn4TQKx4T					DQS4TCQ4TCQn4TQKx4T			DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T58n	DIFFOUT_T58n	B25	DQS4TCQ4TCQn4TQKx4T					DQS4TCQ4TCQn4TQKx4T			DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T59p	DIFFOUT_T59p	K24	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T59n	DIFFOUT_T59n	L24	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T60p	DIFFOUT_T60p	D25	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T60n	DIFFOUT_T60n	E25	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T61p	DIFFOUT_T61p	P25	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T61n	DIFFOUT_T61n	R25	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T62p	DIFFOUT_T62p	C26	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T62n	DIFFOUT_T62n	D26	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T62n	DIFFOUT_T62n	K25	DQ4T								DQ2T
SC		VREFB8C/N0	ID	VREFB8C/N0			L25	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T63p	DIFFOUT_T63p	R26	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T63n	DIFFOUT_T63n	T27	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T64p	DIFFOUT_T64p	A26	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T64n	DIFFOUT_T64n	A27	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T65p	DIFFOUT_T65p	M26	DQS5TCQ5TCQn5TQKx5T					DQS5TCQ5TCQn5TQKx5T			DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T65n	DIFFOUT_T65n	N26	DQS5TCQ5TCQn5TQKx5T					DQS5TCQ5TCQn5TQKx5T			DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T66p	DIFFOUT_T66p	J26	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T66n	DIFFOUT_T66n	K26	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T67p	DIFFOUT_T67p	F26	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T67n	DIFFOUT_T67n	G26	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T68p	DIFFOUT_T68p	M25	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T68n	DIFFOUT_T68n	N25	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T69p	DIFFOUT_T69p	P27	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T69n	DIFFOUT_T69n	R27	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T70p	DIFFOUT_T70p	H27	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T70n	DIFFOUT_T70n	J27	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T71p	DIFFOUT_T71p	R27	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_RX_T71n	DIFFOUT_T71n	C27	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T72p	DIFFOUT_T72p	E27	DQ4T								DQ2T
SC		VREFB8C/N0	ID		DIFFRO_TX_T72n	DIFFOUT_T72n	F27	DQ4T								DQ2T



Bank Number	VREF	PinName/Function (Z1, Z3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Output Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DQS3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0	
SB	VREFBAND	IO			DIFFIO_RX_T78n	DFFOUT_T78n	D28	DQ7T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T80p	DFFOUT_T80p	F28	DQ7T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T81n	DFFOUT_T81n	G28	DQ7T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T83p	DFFOUT_T83p	R29	DQS8T/CQ8T/CQn+1TQKxH7	DQS4T/CQ4T/CQn+4TQKxH7	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T81n	DFFOUT_T81n	T29	DQ8n7TQK7T	DQ8n4TQK4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T82p	DFFOUT_T82p	J29	DQ7T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T82p	DFFOUT_T82p	K29	DQ7T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T83p	DFFOUT_T83p	M29	DQ7T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T83p	DFFOUT_T83p	N29	DQ7T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T84p	DFFOUT_T84p	F29	DQ7T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T84n	DFFOUT_T84n	G29	DQ7T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T85p	DFFOUT_T85p	B28	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T85n	DFFOUT_T85n	C29	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO	VREFBAND				R30	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T86p	DFFOUT_T86p	A29	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T86n	DFFOUT_T86n	A28	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T87p	DFFOUT_T87p	L30	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T87n	DFFOUT_T87n	M30	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T88p	DFFOUT_T88p	N30	DQS8T/CQ8T/CQn+8TQKx8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T88n	DFFOUT_T88n	P30	DQS8T/CQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T89p	DFFOUT_T89p	J30	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T89n	DFFOUT_T89n	K30	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T90p	DFFOUT_T90p	D30	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T90n	DFFOUT_T90n	D29	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T91p	DFFOUT_T91p	F30	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T91n	DFFOUT_T91n	G30	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T92p	DFFOUT_T92p	B30	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T92n	DFFOUT_T92n	C30	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T93p	DFFOUT_T93p	E31	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T93n	DFFOUT_T93n	F31	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T94p	DFFOUT_T94p	B31	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T94n	DFFOUT_T94n	A30	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T95p	DFFOUT_T95p	A31	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T95n	DFFOUT_T95n	A32	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T96p	DFFOUT_T96p	A33	DQS8T/CQ8T/CQn+8TQKx8T	DQS4T/CQ4T/CQn+4TQKx4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T96n	DFFOUT_T96n	B33	DQS8T/CQ8T	DQS4T/CQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T97p	DFFOUT_T97p	H31	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T97n	DFFOUT_T97n	J31	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T98p	DFFOUT_T98p	C31	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T98n	DFFOUT_T98n	D31	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T99p	DFFOUT_T99p	C32	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T99n	DFFOUT_T99n	D32	DQ8T	DQ4T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T100p	DFFOUT_T100p	N31	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T100n	DFFOUT_T100n	P31	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T101p	DFFOUT_T101p	J32	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T101n	DFFOUT_T101n	K32	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T102p	DFFOUT_T102p	M32	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T102n	DFFOUT_T102n	N32	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T103p	DFFOUT_T103p	J34	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T103n	DFFOUT_T103n	K34	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T104p	DFFOUT_T104p	L33	DQS10T/CQ10T/CQn+10TQKx10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_RX_T104n	DFFOUT_T104n	M33	DQS10T/CQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T105p	DFFOUT_T105p	L31	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T105n	DFFOUT_T105n	M31	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO	CLK23p		DIFFIO_RX_T106p	DFFOUT_T106p	N34	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO	CLK23n		DIFFIO_RX_T106n	DFFOUT_T106n	N33	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO			DIFFIO_TX_T107p	DFFOUT_T107p	L34	DQ10T	DQ5T	DQ2T							
SB	VREFBAND	IO	CLK22p		DIFFIO_TX_T107n	DFFOUT_T107n	M34	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO	CLK22n		DIFFIO_RX_T108p	DFFOUT_T108p	E34	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO	CLK22n		DIFFIO_RX_T108n	DFFOUT_T108n	F34	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO					J33	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO	VREFBAND				H33	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO	FPLL_TL_CLKOUT2_FPLL_TL_FBn_FPLL_TL_FB1		DIFFIO_RX_T109p	DFFOUT_T109p	B34	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO	FPLL_TL_CLKOUT3_FPLL_TL_FBn		DIFFIO_RX_T109n	DFFOUT_T109n	A35	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO	FPLL_TL_CLKOUT0_FPLL_TL_CLKOUT5_FPLL_TL_FB0		DIFFIO_TX_T110p	DFFOUT_T110p	C33	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO	FPLL_TL_CLKOUT1_FPLL_TL_CLKOUT6		DIFFIO_TX_T110n	DFFOUT_T110n	D33	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO	CLK21p		DIFFIO_RX_T111p	DFFOUT_T111p	G34	DQS11T/CQ11T/CQn+11TQKx11T	DQ6T	DQ3T							
SB	VREFBAND	IO	CLK21n		DIFFIO_RX_T111n	DFFOUT_T111n	H34	DQS11T/CQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO			DIFFIO_TX_T112p	DFFOUT_T112p	F32	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO			DIFFIO_TX_T112n	DFFOUT_T112n	G32	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO	CLK20p		DIFFIO_RX_T113p	DFFOUT_T113p	D34	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO	CLK20n		DIFFIO_RX_T113n	DFFOUT_T113n	D34	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO		R20_6	DIFFIO_TX_T114p	DFFOUT_T114p	E33	DQ11T	DQ6T	DQ3T							
SB	VREFBAND	IO			DIFFIO_TX_T114n	DFFOUT_T114n	F33	DQ11T	DQ6T	DQ3T							
SB	MSEL0			MSEL0			H35										
SB	MSEL1			MSEL1			A34										
SB	MSEL2			MSEL2			D35										
SB	MSEL3			MSEL3			A37										
SB	MSEL4			MSEL4			P34										
SB	CONF_DONE			CONF_DONE			K35										
SB	STATUS			STATUS			F35										
SB	HCE			HCE			M35										
SB	ACONFIG			ACONFIG			A36										
SB							P35										
SB	VCC_HPS						V16										
SB	GND						W16										
SB	GND						AA33										
SB	GND						AA35										
SB	GND						AA38										
SB	GND						AA39										
SB	GND						AB31										
SB	GND						AB32										
SB	GND						AB34										
SB	GND						AB36										
SB	GND						AB37										
SB	GND						AC33										
SB	GND						AC38										
SB	GND						AC39										
SB	GND						AD32										
SB	GND						AD36										
SB	GND						AD37										
SB	GND						AE33										
SB	GND						AE35										
SB	GND						AE38										
SB	GND						AE39										
SB	GND						AF31										
SB	GND						AF32										
SB	GND						AF34										
SB	GND						AF36										
SB	GND						AF37										
SB	GND						AG38										
SB	GND						AG39										



Bank Number	VREF	PinName/Function (Z1) (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for BDRK3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		GND					AJ38									
		GND					AJ99									
		GND					AK36									
		GND					AK37									
		GND					AL35									
		GND					AL38									
		GND					AL39									
		GND					AM36									
		GND					AM37									
		GND					AN35									
		GND					AN38									
		GND					AN39									
		GND					AP36									
		GND					AP37									
		GND					AR35									
		GND					AR38									
		GND					AR39									
		GND					AT36									
		GND					AT37									
		GND					AL35									
		GND					AU38									
		GND					AU39									
		GND					AV36									
		GND					AV37									
		GND					AV38									
		GND					AV39									
		GND					AW35									
		GND					AW38									
		GND					B36									
		GND					B37									
		GND					C36									
		GND					C38									
		GND					C39									
		GND					D36									
		GND					D37									
		GND					E35									
		GND					E38									
		GND					E39									
		GND					F36									
		GND					F37									
		GND					G35									
		GND					G38									
		GND					G39									
		GND					H36									
		GND					H37									
		GND					J35									
		GND					J38									
		GND					J39									
		GND					K36									
		GND					K37									
		GND					L35									
		GND					L38									
		GND					L39									
		GND					M36									
		GND					M37									
		GND					N35									
		GND					N38									
		GND					N39									
		GND					P36									
		GND					P37									
		GND					R34									
		GND					R38									
		GND					R39									
		GND					T32									
		GND					T36									
		GND					T37									
		GND					U33									
		GND					U36									
		GND					U38									
		GND					U39									
		GND					V36									
		GND					V34									
		GND					V38									
		GND					V39									
		GND					W33									
		GND					W38									
		GND					W39									
		GND					Y31									
		GND					Y32									
		GND					Y36									
		GND					Y37									
		GND					AA3									
		GND					AA4									
		GND					AA6									
		GND					AA8									
		GND					AB1									
		GND					AB2									
		GND					AB7									
		GND					AC3									
		GND					AC4									
		GND					AC5									
		GND					AD1									
		GND					AD2									
		GND					AD5									
		GND					AD7									
		GND					AE3									
		GND					AE4									
		GND					AE6									
		GND					AE8									
		GND					AF1									
		GND					AF2									
		GND					AF9									
		GND					AG3									
		GND					AG4									
		GND					AG5									
		GND					AG6									
		GND					AG7									
		GND					AG8									
		GND					AH1									
		GND					AH2									
		GND					AH5									
		GND					AJ3									
		GND					AJ4									
		GND					AK1									
		GND					AK2									
		GND					AK5									
		GND					AL3									
		GND					AL4									
		GND					AM1									



Bank Number	VREF	PinName/Function (2) (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for BDRK3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		GND					AM2									
		GND					AM5									
		GND					AN3									
		GND					AN4									
		GND					AP1									
		GND					AP2									
		GND					AP5									
		GND					AR3									
		GND					AR4									
		GND					AT1									
		GND					AT2									
		GND					AT5									
		GND					AU3									
		GND					AU4									
		GND					AV1									
		GND					AV2									
		GND					N3									
		GND					N4									
		GND					P1									
		GND					P2									
		GND					P5									
		GND					R3									
		GND					R4									
		GND					R5									
		GND					T1									
		GND					T2									
		GND					T5									
		GND					U3									
		GND					U4									
		GND					U5									
		GND					U6									
		GND					V1									
		GND					V2									
		GND					V7									
		GND					W3									
		GND					W4									
		GND					W8									
		GND					Y1									
		GND					Y2									
		GND					Y5									
		GND					Y7									
		VCCP					AA21									
		VCCP					AA25									
		VCCP					AB15									
		VCCP					U70									
		VCCP					U16									
		VCCP					V26									
		VCCP					V27									
		VCCP					W10									
		VCCP					V27									
		VCCA_FPLL					AC30									
		VCCA_FPLL					AC9									
		VCCA_FPLL					Y30									
		VCCA_FPLL					AA9									
		VCCA_FPLL					V31									
		VCCPLL_HPS					U8									
		VCCBAT					RS3									
		VCC_AUX					AB14									
		VCC_AUX					AB26									
		VCC_AUX					U9									
		VCC_AUX_SHARED					U15									
		VCCD_FPLL					AD31									
		VCCD_FPLL					AE9									
		VCCD_FPLL					W30									
		VCCD_FPLL					W9									
		VCCD_FPLL					T31									
		VCCA_GXBL0					AF33									
		VCCA_GXBR0					AE7									
		VCCA_GXBL1					AB33									
		VCCA_GXBR1					AA7									
		VCCA_GXBL2					V33									
		VCCM_GXBL0					AD33									
		VCCM_GXBR0					AC7									
		VCCM_GXBL1					Y33									
		VCCM_GXBR1					W7									
		VCCM_GXBL2					T33									
		VCCM_GXBR2					AD34									
		VCCM_GXBL0					AD35									
		VCCM_GXBR0					AC5									
		VCCM_GXBR0					AC6									
		VCCM_GXBL1					V34									
		VCCM_GXBR1					Y35									
		VCCM_GXBR1					W5									
		VCCM_GXBR1					W6									
		VCCM_GXBL2					T34									
		VCCM_GXBL2					T35									
		VCCR_GXBL					U34									
		VCCR_GXBL					W34									
		VCCR_GXBL					AA34									
		VCCR_GXBL					AB35									
		VCCR_GXBL					AC35									
		VCCR_GXBL					AE34									
		VCCR_GXBL					AF35									
		VCCR_GXBR					V5									
		VCCR_GXBR					V6									
		VCCR_GXBR					Y5									
		VCCR_GXBR					AA5									
		VCCR_GXBR					AB5									
		VCCR_GXBR					AB6									
		VCCM_GXBL0					AG35									
		VCCM_GXBL0					AG34									
		VCCM_GXBR0					AD6									
		VCCM_GXBR0					AE5									
		VCCM_GXBL1					W35									
		VCCM_GXBL1					V35									
		VCCM_GXBR1					AF5									
		VCCM_GXBR1					AF6									
		VCCM_GXBL2					R35									
		VCCM_GXBL2					AC34									
		VCC					AA10									
		VCC					AA12									
		VCC					AA14									
		VCC					AA16									
		VCC					AA18									
		VCC					AA20									
		VCC					AA22									
		VCC					AA24									
		VCC					AA26									
		VCC					AB11									
		VCC					AB17									



Bank Number	VREF	PinName/Function (Z1 (3))	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for BDK3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		VCC					U18									
		VCC					V17									
		VCC					V22									
		VCC					V23									
		VCC					V29									
		VCC					W20									
		VCC					W18									
		VCC					W22									
		VCC					W24									
		VCC					W26									
		VCC					W28									
		VCC					Y11									
		VCC					Y16									
		VCC					Y17									
		VCC					Y19									
		VCC					Y28									
		VCC					Y26									
		VCC					Y29									
		VCC					Y21									
		VCC_HPS					U12									
		VCC_HPS					V11									
		VCC_HPS					V12									
		VCC_HPS					V13									
		VCC_HPS					V15									
		VCC_HPS					W12									
		VCC_HPS					W14									
		VCC_HPS					Y13									
		VCCIO3A					AK29									
		VCCIO3A					AJ30									
		VCCIO3A					AK35									
		VCCIO3A					AM30									
		VCCIO3A					AP35									
		VCCIO3A					AT35									
		VCCIO3B					AK28									
		VCCIO3B					AL27									
		VCCIO3B					AN28									
		VCCIO3B					AT28									
		VCCIO3C					AL24									
		VCCIO3C					AL25									
		VCCIO3C					AM24									
		VCCIO3C					AP25									
		VCCIO3C					AS24									
		VCCIO3C					AL25									
		VCCIO3D					AJ22									
		VCCIO3D					AL21									
		VCCIO3D					AM22									
		VCCIO3D					AP21									
		VCCIO3D					AS22									
		VCCIO3D					AL21									
		VCCIO4A					AG10									
		VCCIO4A					AJ5									
		VCCIO4A					AL5									
		VCCIO4A					AN5									
		VCCIO4A					AS5									
		VCCIO4A					AL5									
		VCCIO4B					AK13									
		VCCIO4B					AK12									
		VCCIO4B					AN10									
		VCCIO4B					AN13									
		VCCIO4B					AR12									
		VCCIO4C					AT10									
		VCCIO4C					AJ15									
		VCCIO4C					AM15									
		VCCIO4C					AR15									
		VCCIO4C					AV15									
		VCCIO4D					AJ18									
		VCCIO4D					AK18									
		VCCIO4D					AM19									
		VCCIO4D					AN18									
		VCCIO4D					AR19									
		VCCIO4D					AT18									
		VCCIO6A_HPS					AT0									
		VCCIO6A_HPS					CS									
		VCCIO6A_HPS					CS									
		VCCIO6A_HPS					F6									
		VCCIO6A_HPS					F8									
		VCCIO6A_HPS					J6									
		VCCIO6A_HPS					K6									
		VCCIO6A_HPS					M6									
		VCCIO6A_HPS					P6									
		VCCIO6B_HPS					B3									
		VCCIO6B_HPS					D4									
		VCCIO6B_HPS					G3									
		VCCIO6B_HPS					J3									
		VCCIO6B_HPS					L3									
		VCCIO6B_HPS					N2									
		VCCIO6B_HPS					N5									
		VCCIO7A_HPS					B13									
		VCCIO7A_HPS					E10									
		VCCIO7A_HPS					G12									
		VCCIO7A_HPS					K13									
		VCCIO7B_HPS					E14									
		VCCIO7B_HPS					J15									
		VCCIO7B_HPS					D17									
		VCCIO7B_HPS					B18									
		VCCIO7B_HPS					G17									
		VCCIO7B_HPS					J20									
		VCCIO7B_HPS					K19									
		VCCIO8A					B35									
		VCCIO8A					G31									
		VCCIO8A					G33									
		VCCIO8A					K31									
		VCCIO8A					K33									
		VCCIO8A					P33									
		VCCIO8B					E28									
		VCCIO8B					E30									
		VCCIO8B					H30									
		VCCIO8B					K28									
		VCCIO8C					C25									
		VCCIO8C					D27									
		VCCIO8C					F25									
		VCCIO8C					G27									
		VCCIO8C					H25									
		VCCIO8C					M24									
		VCCIO8D					C21									
		VCCIO8D					D23									
		VCCIO8D					F21									
		VCCIO8D					G22									
		VCCIO8D					K22									
		VCCIO8D					M21									



Bank Number	VREF	PinName/Function (Z1 (3))	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for BDRK3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		VCCPD3					AA27									
		VCCPD3					AA28									
		VCCPD3					AA29									
		VCCPD3					AB22									
		VCCPD3					AB23									
		VCCPD3					AB24									
		VCCPD3					AB30									
		VCCPD4A					AC10									
		VCCPD4A					AE10									
		VCCPD4BCD					AB12									
		VCCPD4BCD					AB13									
		VCCPD4BCD					AB16									
		VCCPD4BCD					AB18									
		VCCPD4BCD					AB19									
		VCCPD4AB6_HPS					L9									
		VCCPD4AB6_HPS					T10									
		VCCPD4AB6_HPS					T5									
		VCCPD4AB6_HPS					T8									
		VCCPD7A_HPS					R12									
		VCCPD7B_HPS					T14									
		VCCPD7C_HPS					R16									
		VCCPD7D_HPS					T17									
		VCCPD7E_HPS					R18									
		VCCPD7FG					U21									
		VCCPD8					B32									
		VCCPD8					T30									
		VCCPD8					U22									
		VCCPD8					U24									
		VCCPD8					U26									
		VCCPD8					U29									
		VCCPD8M					J19									
		VCCPD8M					AG29									
		VCCPD8M_HPS					L10									
		VCC_HPS					T13									
		VCC_HPS					L14									
		VCC_HPS					U9									
		VCC_HPS					V10									
	VREFB/A/B/C/D/END_HPS	VREFB/A/B/C/D/END_HPS					F18									
		GND					AA11									
		GND					AA13									
		GND					AA15									
		GND					AA17									
		GND					AA19									
		GND					AA23									
		GND					AA30									
		GND					AB10									
		GND					AC11									
		GND					AC14									
		GND					AC17									
		GND					AC20									
		GND					AC23									
		GND					AC26									
		GND					AC28									
		GND					AD10									
		GND					AD30									
		GND					AE30									
		GND					AF11									
		GND					AF14									
		GND					AF17									
		GND					AF20									
		GND					AF23									
		GND					AF26									
		GND					AF28									
		GND					AF30									
		GND					AG31									
		GND					AG9									
		GND					AJ11									
		GND					AJ14									
		GND					AJ17									
		GND					AJ20									
		GND					AJ23									
		GND					AJ26									
		GND					AJ29									
		GND					AJ32									
		GND					AJ8									
		GND					AM11									
		GND					AM14									
		GND					AM17									
		GND					AM20									
		GND					AM23									
		GND					AM26									
		GND					AM29									
		GND					AM32									
		GND					AM8									
		GND					AR11									
		GND					AR14									
		GND					AR17									
		GND					AR20									
		GND					AR23									
		GND					AR26									
		GND					AR29									
		GND					AR32									
		GND					AR8									
		GND					AV11									
		GND					AV14									
		GND					AV17									
		GND					AV20									
		GND					AV23									
		GND					AV26									
		GND					AV29									
		GND					AV32									
		GND					AV5									
		GND					AV8									
		GND					B11									
		GND					B16									
		GND					B2									
		GND					B20									
		GND					B23									
		GND					B26									
		GND					B29									
		GND					B32									
		GND					B5									
		GND					B8									
		GND					E11									
		GND					E17									
		GND					E2									
		GND					E20									
		GND					E23									
		GND					E26									
		GND					E29									



Bank Number	VREF	PinName/Function (2) (3)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517 (4)	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36	HMC pin assignment for DQR3 (5)	HMC pin assignment for LPDDR2	HPS Pin Mux Select 3	HPS Pin Mux Select 2	HPS Pin Mux Select 1	HPS Pin Mux Select 0
		GND					E32									
		GND					E5									
		GND					E9									
		GND					F14									
		GND					H11									
		GND					H17									
		GND					H5									
		GND					H20									
		GND					H23									
		GND					H26									
		GND					H29									
		GND					H32									
		GND					H5									
		GND					H8									
		GND					J14									
		GND					K20									
		GND					L11									
		GND					L17									
		GND					L2									
		GND					L23									
		GND					L26									
		GND					L29									
		GND					L32									
		GND					L5									
		GND					L8									
		GND					N14									
		GND					N17									
		GND					N20									
		GND					P11									
		GND					P23									
		GND					P26									
		GND					P29									
		GND					P32									
		GND					P8									
		GND					W21									
		GND					T12									
		GND					T15									
		GND					T16									
		GND					T18									
		GND					T20									
		GND					T8									
		GND					U11									
		GND					U13									
		GND					U17									
		GND					U23									
		GND					U25									
		GND					U27									
		GND					U30									
		GND					U7									
		GND					V14									
		GND					V8									
		GND					V18									
		GND					V21									
		GND					V24									
		GND					V26									
		GND					V28									
		GND					V30									
		GND					V8									
		GND					W27									
		GND					W11									
		GND					W13									
		GND					W15									
		GND					W17									
		GND					W19									
		GND					W23									
		GND					W25									
		GND					W29									
		GND					Y10									
		GND					Y12									
		GND					Y14									
		GND					Y16									
		GND					Y18									
		GND					Y20									
		GND					Y22									
		GND					Y24									
		GND					Y26									
		GND					Y28									

Notes:
 (1) For more information about pin definitions and pin connection guidelines, refer to the [Arria V Device Family Pin Connection Guidelines](#).
 (2) GNB_REFLCK pin is not supported in current Quartus II version, but will be supported in future Quartus II release version.
 (3) Pins with * contains similar name with other pins in the same column. For the selection of the HPS pins, refer to the "HPS Pin Mux Select x" columns.
 (4) Pins with # are the 10 Gbps transceiver channels. For more information about the 10 Gbps transceiver channels clocking recommendation, refer to the [Transceiver Clocking in Arria V Devices chapter](#).
 (5) RESET pin is only applicable for DQR3 device.



**Pin Information for the Arria® V 5ASXBB3 Device
Version 1.3**

Version Number	Date	Changes Made
1.0	4/19/2013	Initial release.
1.1	9/30/2014	Remove corresponding bank number from VCCRSTCLK_HPS pin.
1.2	7/31/2015	Renamed the following columns: - Renamed "DDR3/DDR2 hard memory PHY" to "HMC pin assignment for DDR3". - Renamed "LPDDR2 hard memory PHY" to "HMC pin assignment for LPDDR2".
1.3	12/23/2016	-Renamed SDMMC_FB_CLK_IN to HPS_GPIO44.