



Bank Number	REF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F996	DQS for X8	DQS for X16	HMC Pin Assignment for DDR3/DDR2/3/1	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	
		GXB_TX_L8n					H3									
		GXB_TX_L8p					H4									
		GXB_RX_L8n					J2									
		GXB_RX_L8p					J1									
		GXB_TX_L7n					K3									
		GXB_TX_L7p					K4									
		GXB_RX_L7n					L2									
		GXB_RX_L7p					L1									
		GXB_TX_L6n					M3									
		GXB_TX_L6p					M4									
		GXB_RX_L6n					N2									
		GXB_RX_L6p					N1									
		REFCLK2Lp					P9									
		REFCLK2n					P8									
		REFCLK1Lp					T9									
		REFCLK1n					T8									
		GXB_TX_L5p					P3									
		GXB_TX_L5n					P4									
		GXB_RX_L5p					R2									
		GXB_RX_L5n					R1									
		GXB_TX_L4n					T3									
		GXB_TX_L4p					T4									
		GXB_RX_L4n					P3									
		GXB_RX_L4p					P4									
		GXB_RX_L3n					U1									
		GXB_RX_L3p					U3									
		GXB_TX_L3n					V4									
		GXB_TX_L3p					W2									
		GXB_RX_L3n					W1									
		GXB_TX_L2n					Y3									
		GXB_TX_L2p					Y4									
		GXB_RX_L2n					AA2									
		GXB_RX_L2p					AA1									
		GXB_RX_L1n					AB3									
		GXB_RX_L1p					AB4									
		GXB_RX_L0n					AC2									
		GXB_RX_L0p					AD3									
		GXB_TX_L0n					AD4									
		GXB_TX_L0p					AE2									
		GXB_RX_L0n					AE1									
		GXB_RX_L0p					WB									
		REFCLK0Lp					W2									
		REFCLK0n					WB									
		TDO		TDO			AB9									
		HCS0		DATA4			AB8									
		TMS		TMS			V9									
		AS_DATA3		DATA3			AC7									
		TKC		TKC			AC5									
		AS_DATA2		DATA2			AE8									
		TDI		TDI			U8									
		AS_DATA1		DATA1			AE5									
		CLKL		CLKL			U7									
		AS_DATA0		DATA0			AE6									
		VREFBAND0		DATA6	DIFFO_RX_B1n	DIFFOUT_B1n	AE12	DD1B								
		VREFBAND0		DATA6	DIFFO_TX_B2n	DIFFOUT_B2n	AE9									
		VREFBAND0		DATA8	DIFFO_RX_B1p	DIFFOUT_B1p	AD11	DD1B								
		VREFBAND0		DATA7	DIFFO_TX_B2p	DIFFOUT_B2p	AD9	DD1B								
		VREFBAND0		DATA10	DIFFO_RX_B3n	DIFFOUT_B3n	AD10	DQS1B								
		VREFBAND0		DATA9	DIFFO_TX_B3n	DIFFOUT_B3n	AF10	DQS1B								
		VREFBAND0		DATA12	DIFFO_RX_B3p	DIFFOUT_B3p	AC9	DQS1B								
		VREFBAND0		DATA11	DIFFO_TX_B3p	DIFFOUT_B3p	AE11									
		VREFBAND0		DATA14	DIFFO_RX_B5n	DIFFOUT_B5n	AE7	DD1B								
		VREFBAND0		DATA13	DIFFO_TX_B6n	DIFFOUT_B6n	AH4	DD1B								
		VREFBAND0		CLKUSR	DIFFO_RX_B5p	DIFFOUT_B5p	AD7	DD1B								
		VREFBAND0		DATA15	DIFFO_TX_B6p	DIFFOUT_B6p	AG3	DD1B								
		VREFBAND0		PR_DONE	DIFFO_RX_B7n	DIFFOUT_B7n	AF5									
		VREFBAND0		PR_READY	DIFFO_TX_B8n	DIFFOUT_B8n	AG8	DD1B								
		VREFBAND0		PR_ERROR	DIFFO_RX_B7p	DIFFOUT_B7p	AF4									
		VREFBAND0			DIFFO_TX_B8p	DIFFOUT_B8p	AF9	DD1B								
		VREFBAND0			DIFFO_TX_B9n	DIFFOUT_B9n	AG7									
		VREFBAND0			DIFFO_RX_B10n	DIFFOUT_B10n	AH2	DQ2B								
		VREFBAND0			DIFFO_TX_B9p	DIFFOUT_B9p	AF8	DQ2B								
		VREFBAND0			DIFFO_RX_B11n	DIFFOUT_B11n	AG1	DQ2B								
		VREFBAND0			DIFFO_TX_B12n	DIFFOUT_B12n	AG6	DQ2B								
		VREFBAND0			DIFFO_RX_B11p	DIFFOUT_B11p	AA2	DQS2B								
		VREFBAND0			DIFFO_TX_B13n	DIFFOUT_B13n	AH5	DQ2B								
		VREFBAND0			DIFFO_RX_B14n	DIFFOUT_B14n	AJ2	DQ2B								
		VREFBAND0			DIFFO_TX_B13p	DIFFOUT_B13p	AG5	DQ2B								
		VREFBAND0			DIFFO_RX_B14p	DIFFOUT_B14p	AJ1	DQ2B								
		VREFBAND0			DIFFO_RX_B15n	DIFFOUT_B15n	AD12									
		VREFBAND0			DIFFO_TX_B16n	DIFFOUT_B16n	AH3	DQ2B								
		VREFBAND0			DIFFO_RX_B16p	DIFFOUT_B16p	AC12	DQ2B								
		VREFBAND0			DIFFO_TX_B16p	DIFFOUT_B16p	AG2	DQ2B								
		VREFBAND0			DIFFO_TX_B17n	DIFFOUT_B17n	AH9									
		VREFBAND0			DIFFO_RX_B18n	DIFFOUT_B18n	AG11	DQ3B	DD1B							
		VREFBAND0			DIFFO_TX_B17p	DIFFOUT_B17p	AG10	DQ3B	DD1B							
		VREFBAND0			DIFFO_RX_B18p	DIFFOUT_B18p	AF11	DQ3B	DD1B							
		VREFBAND0			DIFFO_TX_B19n	DIFFOUT_B19n	AH13	DQS3B	DD1B							
		VREFBAND0			DIFFO_TX_B20n	DIFFOUT_B20n	AK3	DQ3B	DD1B							
		VREFBAND0			DIFFO_RX_B19p	DIFFOUT_B19p	AA13	DQS3B	DD1B							
		VREFBAND0			DIFFO_TX_B20p	DIFFOUT_B20p	AK2									
		VREFBAND0			DIFFO_TX_B21n	DIFFOUT_B21n	AK4	DQ3B	DD1B							
		VREFBAND0			DIFFO_RX_B22n	DIFFOUT_B22n	AF13	DQ3B	DD1B							
		VREFBAND0			DIFFO_TX_B21p	DIFFOUT_B21p	AJ4	DQ3B	DD1B							
		VREFBAND0			DIFFO_RX_B22p	DIFFOUT_B22p	AE13	DQ3B	DD1B							
		VREFBAND0			DIFFO_RX_B23n	DIFFOUT_B23n	AE14									
		VREFBAND0			DIFFO_TX_B24n	DIFFOUT_B24n	AK6	DQ3B	DD1B							
		VREFBAND0			DIFFO_RX_B23p	DIFFOUT_B23p	AD14									
		VREFBAND0			DIFFO_TX_B24p	DIFFOUT_B24p	AJ5	DQ3B	DD1B							
		VREFBAND0			DIFFO_RX_B25n	DIFFOUT_B25n	AJ1									
		VREFBAND0			DIFFO_RX_B26n	DIFFOUT_B26n	AG13	DQ4B	DD1B	GND						
		VREFBAND0			DIFFO_TX_B25p	DIFFOUT_B25p	AJ6	DQ4B	DD1B	B.A.15						
		VREFBAND0			DIFFO_RX_B26p	DIFFOUT_B26p	AG12	DQ4B	DD1B	B.WE#						
		VREFBAND0			DIFFO_RX_B27n	DIFFOUT_B27n	AC14	DQS4B	DD1B	B.A.14						
		VREFBAND0			DIFFO_TX_B27n	DIFFOUT_B27n	AC14	DQS4B	DD1B	B.CS#_1						
		VREFBAND0			DIFFO_TX_B28n	DIFFOUT_B28n	AK8	DQ4B	DD1B	B.A.13						
		VREFBAND0			DIFFO_RX_B27p	DIFFOUT_B27p	AE15	DQS4B	DD1B	B.CS#_0						
		VREFBAND0			DIFFO_TX_B28p	DIFFOUT_B28p	AK7									
		VREFBAND0			DIFFO_TX_B29n	DIFFOUT_B29n	AK9	DQ4B	DD1B	B.A.12						
		VREFBAND0			DIFFO_RX_B30n	DIFFOUT_B30n	AH14	DQ4B	DD1B	B.A.11						
		VREFBAND0			DIFFO_TX_B29p	DIFFOUT_B29p	AJ8	DQ4B	DD1B	B.A.9						
		VREFBAND0			DIFFO_RX_B30p	DIFFOUT_B30p	AH13	DQ4B	DD1B	B.A.10						
		VREFBAND0			DIFFO_RX_B31n	DIFFOUT_B31n	AF15									
		VREFBAND0		CLK0n/PPLL_BL_F0n	DIFFO_TX_B32n	DIFFOUT_B32n	AH8	DQ4B	DD1B	B.A.8						
		VREFBAND0		CLK0p/PPLL_BL_F0p	DIFFO_RX_B31p	DIFFOUT_B31p	AF14									
		VREFBAND0			DIFFO_TX_B32p	DIFFOUT_B32p	AH7	DQ4B	DD1B	B.CAS#						
		VREFBAND0			DIFFO_TX_B33n	DIFFOUT_B33n	AJ10									
		VREFBAND0			DIFFO_TX_B34n	DIFFOUT_B34n	AK11	DQ6B	DD1B	B.BA.2						
		VREFBAND0			DIFFO_TX_B33p	DIFFOUT_B33p	AH10	DQS6B	DD1B	B.BA.0						
		VREFBAND0			DIFFO_RX_B34p	DIFFOUT_B34p	AJ11									
		VREFBAND0			DIFFO_RX_B35n	DIFFOUT_B35n	AA15	DQS6B	DD1B	B.CK#						



Bank Number	REF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F996	DQS for X8	DQS for X16	HMC Pin Assignment for DDR3/DDR2 (3)	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	VREFB38N0	IO			DIFFO_TX_B38n	DIFFOUT_B38n	AK13	DQS8		B_7					
3B	VREFB38N0	IO			DIFFO_RX_B38p	DIFFOUT_B38p	AA14	DQS8B							
3B	VREFB38N0	IO			DIFFO_TX_B39p	DIFFOUT_B39p	AK12			B_A_6	B_CA_6				
3B	VREFB38N0	IO	FPLL_BL_CLKOUT1;FPLL_BL_CLKOUT1n		DIFFO_TX_B39n	DIFFOUT_B39n	AJ13	DQS8			B_A_3	B_CA_3			
3B	VREFB38N0	IO			DIFFO_RX_B38n	DIFFOUT_B38n	AH15	DQS8			B_A_5	B_CA_5			
3B	VREFB38N0	IO	FPLL_BL_CLKOUT0;FPLL_BL_CLKOUT0;FPLL_BL_FB		DIFFO_TX_B37p	DIFFOUT_B37p	AH12	DQS8			B_A_2	B_CA_2			
3B	VREFB38N0	IO			DIFFO_RX_B38p	DIFFOUT_B38p	AG15	DQS8			B_A_4	B_CA_4			
3B	VREFB38N0	IO	CLK1n		DIFFO_TX_B38n	DIFFOUT_B38n	Y16								
3B	VREFB38N0	IO			DIFFO_TX_B40n	DIFFOUT_B40n	AK14	DQS8				B_A_1	B_CA_1		
3B	VREFB38N0	IO	CLK1p		DIFFO_RX_B39p	DIFFOUT_B39p	W15								
3B	VREFB38N0	IO			DIFFO_TX_B40p	DIFFOUT_B40p	AJ14	DQS8				B_A_0	B_CA_0		
4A	VREFB40N0	IO	RZQ_0		DIFFO_TX_B41n	DIFFOUT_B41n	AG17								
4A	VREFB40N0	IO			DIFFO_RX_B42n	DIFFOUT_B42n	AF18	DQS8		B_DD_0	B_DDS_0				
4A	VREFB40N0	IO			DIFFO_TX_B41p	DIFFOUT_B41p	AG16	DQS8				B_DD_2			
4A	VREFB40N0	IO			DIFFO_RX_B42p	DIFFOUT_B42p	AE17	DQS8				B_DD_1			
4A	VREFB40N0	IO			DIFFO_RX_B43n	DIFFOUT_B43n	W16	DQS+8B		B_DDS8_0	B_DDS8_0				
4A	VREFB40N0	IO			DIFFO_TX_B44n	DIFFOUT_B44n	AF16	DQS8				B_DD_3			
4A	VREFB40N0	IO			DIFFO_RX_B43p	DIFFOUT_B43p	V16	DQS8B				B_DDS_0			
4A	VREFB40N0	IO			DIFFO_TX_B44p	DIFFOUT_B44p	AE18					B_DD_0			
4A	VREFB40N0	IO			DIFFO_RX_B44p	DIFFOUT_B44p	AK16	DQS8				B_DD_1			
4A	VREFB40N0	IO			DIFFO_RX_B45n	DIFFOUT_B45n	AH20	DQS8				B_DD_4			
4A	VREFB40N0	IO			DIFFO_TX_B45p	DIFFOUT_B45p	AJ16	DQS8				B_DD_6			
4A	VREFB40N0	IO			DIFFO_RX_B45p	DIFFOUT_B45p	AG21	DQS8				B_DD_5			
4A	VREFB40N0	IO	CLK2n		DIFFO_RX_B47n	DIFFOUT_B47n	AB17								
4A	VREFB40N0	IO			DIFFO_RX_B47p	DIFFOUT_B47p	AH18	DQS8				B_DD_7			
4A	VREFB40N0	IO	CLK2p		DIFFO_TX_B47p	DIFFOUT_B47p	AA16								
4A	VREFB40N0	IO			DIFFO_TX_B48p	DIFFOUT_B48p	AH17	DQS8				B_DM_0			
4A	VREFB40N0	IO			DIFFO_TX_B49n	DIFFOUT_B49n	AH19			GND	GND				
4A	VREFB40N0	IO			DIFFO_RX_B50n	DIFFOUT_B50n	AK18	DQ2B	DQ2B			B_DD_8			
4A	VREFB40N0	IO			DIFFO_TX_B49p	DIFFOUT_B49p	AG18	DQ2B	DQ2B			B_DD_10			
4A	VREFB40N0	IO			DIFFO_RX_B50p	DIFFOUT_B50p	AJ17	DQ2B	DQ2B			B_DD_9			
4A	VREFB40N0	IO			DIFFO_RX_B51n	DIFFOUT_B51n	W17	DQS+8B	DQ2B			B_DDS8_1			
4A	VREFB40N0	IO			DIFFO_TX_B52n	DIFFOUT_B52n	AK19	DQ2B	DQ2B			B_DD_11			
4A	VREFB40N0	IO			DIFFO_RX_B51p	DIFFOUT_B51p	V17	DQS+8B	DQ2B			B_DDS_1			
4A	VREFB40N0	IO			DIFFO_TX_B52p	DIFFOUT_B52p	AJ19		DQ2B			B_DDS_1			
4A	VREFB40N0	IO			DIFFO_TX_B53n	DIFFOUT_B53n	AJ21	DQ2B	DQ2B			B_DDS_2			
4A	VREFB40N0	IO			DIFFO_RX_B54n	DIFFOUT_B54n	AG20	DQ2B	DQ2B			B_DD_12			
4A	VREFB40N0	IO			DIFFO_TX_B53p	DIFFOUT_B53p	AJ20	DQ2B	DQ2B			B_DD_14			
4A	VREFB40N0	IO			DIFFO_RX_B54p	DIFFOUT_B54p	AF19	DQ2B	DQ2B			B_DD_13			
4A	VREFB40N0	IO	CLK3n		DIFFO_RX_B55n	DIFFOUT_B55n	AD17		DQ2B						
4A	VREFB40N0	IO			DIFFO_TX_B55p	DIFFOUT_B55p	AH24	DQ2B	DQ2B			B_DD_15			
4A	VREFB40N0	IO	CLK3p		DIFFO_RX_B55p	DIFFOUT_B55p	AG18		DQ2B						
4A	VREFB40N0	IO			DIFFO_TX_B56p	DIFFOUT_B56p	AG23	DQ2B	DQ2B			B_DM_1			
4A	VREFB40N0	IO			DIFFO_TX_B57n	DIFFOUT_B57n	AH22		DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_RX_B58n	DIFFOUT_B58n	AE19	DQS8	DQ2B			B_DD_16			
4A	VREFB40N0	IO			DIFFO_TX_B57p	DIFFOUT_B57p	AG22	DQS8	DQ2B			B_DD_18			
4A	VREFB40N0	IO			DIFFO_RX_B58p	DIFFOUT_B58p	AE18	DQS8	DQ2B			B_DD_17			
4A	VREFB40N0	IO			DIFFO_RX_B59n	DIFFOUT_B59n	AA18	DQS+8B	DQ2B			B_DDS8_2			
4A	VREFB40N0	IO			DIFFO_TX_B60n	DIFFOUT_B60n	AK22	DQS8	DQ2B			B_DD_19			
4A	VREFB40N0	IO			DIFFO_RX_B59p	DIFFOUT_B59p	V17	DQS8B	DQ2B			B_DDS_2			
4A	VREFB40N0	IO			DIFFO_TX_B60p	DIFFOUT_B60p	AK21		DQ2B			B_DDS8_1			
4A	VREFB40N0	IO			DIFFO_TX_B61n	DIFFOUT_B61n	AJ22	DQS8	DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_RX_B62n	DIFFOUT_B62n	AF21	DQS8	DQ2B			B_DD_20			
4A	VREFB40N0	IO			DIFFO_TX_B61p	DIFFOUT_B61p	AH23	DQS8	DQ2B			B_DD_22			
4A	VREFB40N0	IO			DIFFO_RX_B62p	DIFFOUT_B62p	AF20	DQS8	DQ2B			B_DD_21			
4A	VREFB40N0	IO			DIFFO_RX_B63n	DIFFOUT_B63n	AA19		DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_TX_B64n	DIFFOUT_B64n	AK24	DQS8	DQ2B			B_DD_23			
4A	VREFB40N0	IO			DIFFO_RX_B63p	DIFFOUT_B63p	Y18		DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_TX_B64p	DIFFOUT_B64p	AK23	DQS8	DQ2B			B_DM_2			
4A	VREFB40N0	IO			DIFFO_TX_B65n	DIFFOUT_B65n	AJ26		DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_RX_B66n	DIFFOUT_B66n	AF24	DQS8	DQ2B			B_DD_24			
4A	VREFB40N0	IO			DIFFO_TX_B65p	DIFFOUT_B65p	AJ24	DQS8	DQ2B			B_DD_26			
4A	VREFB40N0	IO			DIFFO_RX_B66p	DIFFOUT_B66p	AF23	DQS8	DQ2B			B_DD_25			
4A	VREFB40N0	IO			DIFFO_RX_B67n	DIFFOUT_B67n	AD19	DQS+8B	DQ2B			B_DDS8_3			
4A	VREFB40N0	IO			DIFFO_TX_B68n	DIFFOUT_B68n	AK26	DQS8	DQ2B			B_DD_27			
4A	VREFB40N0	IO			DIFFO_RX_B67p	DIFFOUT_B67p	AC20	DQS+8B	DQ2B			B_DDS_3			
4A	VREFB40N0	IO			DIFFO_TX_B68p	DIFFOUT_B68p	AJ28		DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_TX_B69n	DIFFOUT_B69n	AH25	DQS8	DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_RX_B70n	DIFFOUT_B70n	AE23	DQS8	DQ2B			B_DD_28			
4A	VREFB40N0	IO			DIFFO_TX_B69p	DIFFOUT_B69p	AG25	DQS8	DQ2B			B_DD_30			
4A	VREFB40N0	IO			DIFFO_RX_B70p	DIFFOUT_B70p	AE22	DQS8	DQ2B			B_DD_29			
4A	VREFB40N0	IO			DIFFO_RX_B71n	DIFFOUT_B71n	W19		DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_TX_B72n	DIFFOUT_B72n	AK27	DQS8	DQ2B			B_DD_31			
4A	VREFB40N0	IO			DIFFO_RX_B71p	DIFFOUT_B71p	V18		DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_TX_B72p	DIFFOUT_B72p	AJ27	DQS8	DQ2B			B_DM_3			
4A	VREFB40N0	IO			DIFFO_TX_B73n	DIFFOUT_B73n	AK28		DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_RX_B73p	DIFFOUT_B73p	AK28	DQ10B	DQ2B			B_DD_32			
4A	VREFB40N0	IO			DIFFO_RX_B74p	DIFFOUT_B74p	AD30	DQ10B	DQ2B			B_DD_33			
4A	VREFB40N0	IO			DIFFO_RX_B75n	DIFFOUT_B75n	AA20	DQS+10B	DQS+10B			B_DDS8_4			
4A	VREFB40N0	IO			DIFFO_TX_B76n	DIFFOUT_B76n	AH27	DQ10B	DQ2B			B_DD_35			
4A	VREFB40N0	IO			DIFFO_RX_B75p	DIFFOUT_B75p	V19	DQS+10B	DQS+10B			B_DDS_4			
4A	VREFB40N0	IO			DIFFO_TX_B76p	DIFFOUT_B76p	AG26		DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_TX_B77n	DIFFOUT_B77n	AF26	DQ10B	DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_RX_B77p	DIFFOUT_B77p	AF26	DQ10B	DQ2B			B_DD_36			
4A	VREFB40N0	IO			DIFFO_TX_B77p	DIFFOUT_B77p	AF25	DQ10B	DQ2B			B_DD_38			
4A	VREFB40N0	IO			DIFFO_RX_B78p	DIFFOUT_B78p	AC22	DQ10B	DQ2B			B_DD_37			
4A	VREFB40N0	IO			DIFFO_RX_B78n	DIFFOUT_B78n	AB21		DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_TX_B80n	DIFFOUT_B80n	AE24	DQ10B	DQ2B			B_DD_39			
4A	VREFB40N0	IO			DIFFO_RX_B79p	DIFFOUT_B79p	AA21		DQ2B			GND			
4A	VREFB40N0	IO			DIFFO_TX_B80p	DIFFOUT_B80p	AD24	DQ10B	DQ2B			B_DM_4			
5A	VREFB50N0	IO	RZQ_1		DIFFO_TX_R1p	DIFFOUT_R1p	AG27	DQ1R	DQ2B						
5A	VREFB50N0	IO		INT_DONE	DIFFO_RX_R2p	DIFFOUT_R2p	AD25								
5A	VREFB50N0	IO		PR_REQUEST	DIFFO_TX_R1n	DIFFOUT_R1n	AH28	DQ1R							
5A	VREFB50N0	IO		CRIC_ERROR											



Bank Number	REF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8	DQS for X16	HMC Pin Assignment for DDR3/DDR2/3	HMC Pin Assignment for LPDDR2	HPS Pin Max Select 3	HPS Pin Max Select 2	HPS Pin Max Select 1	HPS Pin Max Select 0
5A	VREFB5A0	IO			DIFFIO_RX_R15a	DIFFOUT_R15a	AC37	DQ2R							
5A	VREFB5A0	IO			DIFFIO_TX_R15a	DIFFOUT_R15a	AG30								
5B	VREFB5B0	IO			DIFFIO_RX_R17b	DIFFOUT_R17b	W25								
5B	VREFB5B0	IO			DIFFIO_TX_R17b	DIFFOUT_R17b	AC38	DQ3R							
5B	VREFB5B0	IO			DIFFIO_RX_R17c	DIFFOUT_R17c	V25								
5B	VREFB5B0	IO			DIFFIO_TX_R18a	DIFFOUT_R18a	AC29	DQ3R							
5B	VREFB5B0	IO			DIFFIO_RX_R18a	DIFFOUT_R18a	AB30	DQ3R							
5B	VREFB5B0	IO			DIFFIO_TX_R18b	DIFFOUT_R18b	AB31	DQ3R							
5B	VREFB5B0	IO			DIFFIO_RX_R18b	DIFFOUT_R18b	AA30	DQ3R							
5B	VREFB5B0	IO			DIFFIO_TX_R20a	DIFFOUT_R20a	AA28	DQ3R							
5B	VREFB5B0	IO	CLK50		DIFFIO_RX_R20a	DIFFOUT_R20a	AA30	DQ3R							
5B	VREFB5B0	IO	FPLL_BR_CLKOUT0;FPLL_BR_CLKOUT1;FPLL_BR_FB		DIFFIO_TX_R22a	DIFFOUT_R22a	AE29	DQ53R							
5B	VREFB5B0	IO	CLK50		DIFFIO_RX_R22a	DIFFOUT_R22a	AD27	DQ53R							
5B	VREFB5B0	IO	FPLL_BR_CLKOUT1;FPLL_BR_CLKOUT0		DIFFIO_TX_R22b	DIFFOUT_R22b	AD29	DQ3R							
5B	VREFB5B0	IO	CLK4c;FPLL_BR_FBp		DIFFIO_RX_R23a	DIFFOUT_R23a	Y26	DQ3R							
5B	VREFB5B0	IO			DIFFIO_TX_R23a	DIFFOUT_R23a	AD30	DQ3R							
5B	VREFB5B0	IO	CLK4c;FPLL_BR_FBn		DIFFIO_RX_R23b	DIFFOUT_R23b	Y27	DQ3R							
5B	VREFB5B0	IO	RZQ_2		DIFFIO_TX_R24a	DIFFOUT_R24a	AC30								
5B	VREFB5B0	HPS_DDR					U27			HPS_DM_4	HPS_DM_4				
5B	VREFB5B0	HPS_DDR					U28			HPS_DQ_38	HPS_DQ_38				
5B	VREFB5B0	HPS_DDR					U25			HPS_DQ_37	HPS_DQ_37				
5B	VREFB5B0	HPS_DDR					V27			HPS_DQ_38	HPS_DQ_38				
5B	VREFB5B0	HPS_DDR					T25			HPS_DQ_36	HPS_DQ_36				
5B	VREFB5B0	HPS_DDR					T24			HPS_DQ5_4	HPS_DQ5_4				
5B	VREFB5B0	HPS_DDR					Y28								
5B	VREFB5B0	HPS_DDR					T23			HPS_DQ5_4	HPS_DQ5_4				
5B	VREFB5B0	HPS_DDR					V28			HPS_DQ_35	HPS_DQ_35				
5B	VREFB5B0	HPS_DDR					R24			HPS_DQ_33	HPS_DQ_33				
5B	VREFB5B0	HPS_DDR					U27			HPS_DQ_34	HPS_DQ_34				
5B	VREFB5B0	HPS_DDR					W28			HPS_DQ_32	HPS_DQ_32				
5B	VREFB5B0	HPS_GPT12					V29								
5B	VREFB5B0	HPS_GPT1					U20								
5B	VREFB5B0	HPS_DDR					W30			HPS_DM_3	HPS_DM_3				
5B	VREFB5B0	HPS_GPT10					T21								
5B	VREFB5B0	HPS_DDR					W29			HPS_DQ_31	HPS_DQ_31				
5B	VREFB5B0	HPS_DDR					R28			HPS_DQ_29	HPS_DQ_29				
5B	VREFB5B0	HPS_DDR					V30			HPS_DQ_30	HPS_DQ_30				
5B	VREFB5B0	HPS_DDR					R27			HPS_DQ_28	HPS_DQ_28				
5B	VREFB5B0	HPS_DDR	VREFB5B00 HPS				U30								
5B	VREFB5B0	HPS_DDR					R22			HPS_DQ8_3	HPS_DQ8_3				
5B	VREFB5B0	HPS_GPIB					U28								
5B	VREFB5B0	HPS_DDR					R21			HPS_DQ5_3	HPS_DQ5_3				
5B	VREFB5B0	HPS_DDR					T28			HPS_DQ_27	HPS_DQ_27				
5B	VREFB5B0	HPS_DDR					P25			HPS_DQ_25	HPS_DQ_25				
5B	VREFB5B0	HPS_DDR					T29			HPS_DQ_26	HPS_DQ_26				
5B	VREFB5B0	HPS_DDR					P24			HPS_DQ_24	HPS_DQ_24				
5B	VREFB5B0	HPS_GPIB					T30								
5B	VREFB5B0	HPS_GPI7					V30								
5B	VREFB5B0	HPS_DDR					R28			HPS_DM_2	HPS_DM_2				
5B	VREFB5B0	HPS_DDR					P22								
5B	VREFB5B0	HPS_DDR					D29			HPS_DQ_23	HPS_DQ_23				
5B	VREFB5B0	HPS_DDR					P27			HPS_DQ_21	HPS_DQ_21				
5B	VREFB5B0	HPS_DDR					N27			HPS_DQ_22	HPS_DQ_22				
5B	VREFB5B0	HPS_DDR					P28			HPS_DQ_20	HPS_DQ_20				
5B	VREFB5B0	HPS_GPI5					P29								
5B	VREFB5B0	HPS_DDR					R19			HPS_DQ5_2	HPS_DQ5_2				
5B	VREFB5B0	HPS_DDR					P26			HPS_RESE16	HPS_RESE16				
5B	VREFB5B0	HPS_DDR					R18			HPS_DQ5_2	HPS_DQ5_2				
5B	VREFB5B0	HPS_DDR					N28			HPS_DQ_19	HPS_DQ_19				
5B	VREFB5B0	HPS_DDR					T26			HPS_DQ_17	HPS_DQ_17				
5B	VREFB5B0	HPS_DDR					N29			HPS_DQ_18	HPS_DQ_18				
5B	VREFB5B0	HPS_DDR					U26			HPS_DQ_16	HPS_DQ_16				
5B	VREFB5B0	HPS_GPI4					N30								
5A	VREFB5A0	HPS_GPI3					M22								
5A	VREFB5A0	HPS_DDR					M28			HPS_DM_1	HPS_DM_1				
5A	VREFB5A0	HPS_GPI2					N23								
5A	VREFB5A0	HPS_DDR					M30			HPS_DQ_15	HPS_DQ_15				
5A	VREFB5A0	HPS_DDR					M27			HPS_DQ_13	HPS_DQ_13				
5A	VREFB5A0	HPS_DDR					L28			HPS_DQ_14	HPS_DQ_14				
5A	VREFB5A0	HPS_DDR					M26			HPS_DQ_12	HPS_DQ_12				
5A	VREFB5A0	HPS_DDR					L29			HPS_CKE_0	HPS_CKE_0				
5A	VREFB5A0	HPS_DDR					N25			HPS_DQ5_1	HPS_DQ5_1				
5A	VREFB5A0	HPS_DDR					L30			HPS_CKE_1	HPS_CKE_1				
5A	VREFB5A0	HPS_DDR					N24			HPS_DQ5_1	HPS_DQ5_1				
5A	VREFB5A0	HPS_DDR					K27			HPS_DQ_11	HPS_DQ_11				
5A	VREFB5A0	HPS_DDR					L28			HPS_DQ_9	HPS_DQ_9				
5A	VREFB5A0	HPS_DDR					K29			HPS_DQ_10	HPS_DQ_10				
5A	VREFB5A0	HPS_DDR					K28			HPS_DQ_8	HPS_DQ_8				
5A	VREFB5A0	HPS_GPI1					J28								
5A	VREFB5A0	HPS_GPI0					M25								
5A	VREFB5A0	HPS_DDR					K28			HPS_DM_0	HPS_DM_0				
5A	VREFB5A0	HPS_DDR					J29			HPS_DQ_7	HPS_DQ_7				
5A	VREFB5A0	HPS_DDR					L24			HPS_DQ_5	HPS_DQ_5				
5A	VREFB5A0	HPS_DDR					J30			HPS_DQ_6	HPS_DQ_6				
5A	VREFB5A0	HPS_DDR					L25			HPS_DQ_4	HPS_DQ_4				
5A	VREFB5A0	HPS_DDR					M29			HPS_ODT_1	HPS_ODT_1				
5A	VREFB5A0	HPS_DDR					N18			HPS_DQ5_0	HPS_DQ5_0				
5A	VREFB5A0	HPS_DDR					H28			HPS_ODT_0	HPS_ODT_0				
5A	VREFB5A0	HPS_DDR					M19			HPS_DQ5_0	HPS_DQ5_0				
5A	VREFB5A0	HPS_DDR					G28			HPS_DQ_3	HPS_DQ_3				
5A	VREFB5A0	HPS_DDR					K22			HPS_DQ_1	HPS_DQ_1				
5A	VREFB5A0	HPS_DDR					H30			HPS_DQ_2	HPS_DQ_2				
5A	VREFB5A0	HPS_DDR					K29			HPS_DQ_0	HPS_DQ_0				
5A	VREFB5A0	VREFB5A00 HPS					G27								
5A	VREFB5A0	HPS_DDR					F28			HPS_A_0	HPS_CA_0				
5A	VREFB5A0	HPS_DDR					G30			HPS_A_1	HPS_CA_1				
5A	VREFB5A0	HPS_DDR					J25			HPS_A_4	HPS_CA_4				
5A	VREFB5A0	HPS_DDR					F28			HPS_A_2	HPS_CA_2				
5A	VREFB5A0	HPS_DDR					J27			HPS_A_5	HPS_CA_5				
5A	VREFB5A0	HPS_DDR					F30			HPS_A_3	HPS_CA_3				
5A	VREFB5A0	HPS_DDR					M23			HPS_CK	HPS_CK				
5A	VREFB5A0	HPS_DDR					F29			HPS_A_6	HPS_CA_6				
5A	VREFB5A0	HPS_DDR					L33			HPS_CK#	HPS_CK#				
5A	VREFB5A0	HPS_DDR					E28			HPS_A_7	HPS_CA_7				
5A	VREFB5A0	HPS_DDR					J24			HPS_BA_1					
5A	VREFB5A0	HPS_DDR					E29			HPS_BA_0					
5A	VREFB5A0	HPS_DDR					L27			HPS_BA_2					
5A	VREFB5A0	HPS_DDR					E27			HPS_CAS#					
5A	VREFB5A0	HPS_DDR					D30			HPS_RAS#					
5A	VREFB5A0	HPS_DDR					H27			HPS_A_8					
5A	VREFB5A0	HPS_DDR					D29			HPS_A_10	HPS_CA_8				
5A	VREFB5A0	HPS_DDR					G28			HPS_A_9	HPS_CA_9				
5A	VREFB5A0	HPS_DDR					C30			HPS_A_11					
5A	VREFB5A0	HPS_DDR					H24			HPS_CSE_0	HPS_CSE_0				
5A	VREFB5A0	HPS_DDR					B30			HPS_A_12					
5A	VREFB5A0	HPS_DDR					K21			HPS_CSE_1	HPS_CSE_1				
5A	VREFB5A0	HPS_DDR					C29			HPS_A_13					
5A	VREFB5A0	HPS_DDR					H26			HPS_A_14					
5A	VREFB5A0	HPS_DDR					C28			HPS_WE#					
5A	VREFB5A0	HPS_DDR					C25			HPS_A_15					
5A	VREFB5A0	HPS_RZQ_0					D27								



Bank Number	REF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8	DQS for X16	HMC Pin Assignment for DDR3/DDR2/3/1	HMC Pin Assignment for LPDDR2	HPS Pin Max Select 3	HPS Pin Max Select 2	HPS Pin Max Select 1	HPS Pin Max Select 0
		GND					J23								
		GND					J25								
7A		HPS_ASRST					C27								
7A		HPS_ASPDN					F23								
7A		HPS_IDO					B08								
7A		VCCRSTCLK_HPS					C23								
7A		HPS_TRS					A20								
7A		HPS_TRK					H52								
7A		HPS_TRST					A28								
7A		HPS_TDI					B27								
7A		LDNO					A96								
7A		HPS_PORSEL					F24								
7A		HPS_CLK1					D25								
7A		HPS_CLK2					F25								
7A		VREFB7A/B/N TRACE_CLK					B06					TRACE_CLK			HPS_GP1048
7A		VREFB7A/B/N TRACE_D0					B25					TRACE_D0	SPIS0_CLK	UART0_RX	HPS_GP1049
7A		VREFB7A/B/N TRACE_D1					C25					TRACE_D1	SPIS0_MISO	UART0_TX	HPS_GP1050
7A		VREFB7A/B/N TRACE_D2					A06					TRACE_D2	SPIS0_MISO	I2C1_SDA	HPS_GP1051
7A		VREFB7A/B/N TRACE_D3					H23					TRACE_D3	SPIS0_SSD0	I2C1_SCL	HPS_GP1052
7A		VREFB7A/B/N TRACE_D4					A24					TRACE_D4	SPIS1_CLK	CAN1_RX	HPS_GP1053
7A		VREFB7A/B/N TRACE_D5					G21					TRACE_D5	SPIS1_MOSI	CAN1_TX	HPS_GP1054
7A		VREFB7A/B/N TRACE_D6					C24					TRACE_D6	SPIS1_SSD0	I2C0_SDA	HPS_GP1055
7A		VREFB7A/B/N TRACE_D7					E23					TRACE_D7	SPIS1_MISO	I2C0_SCL	HPS_GP1056
7A		VREFB7A/B/N SPMM0_CLK					A23					SPMM0_CLK	I2C1_SDA	UART0_CTS	HPS_GP1057
7A		VREFB7A/B/N SPMM0_MOSI					C22					SPMM0_MOSI	I2C1_SCL	UART0_RTS	HPS_GP1058
7A		VREFB7A/B/N SPMM0_MISO					B23					SPMM0_MISO	CAN1_RX	SPMM0_CTS	HPS_GP1059
7A		VREFB7A/B/N SPMM0_SSD0_BOOTSEL0					H50					SPMM0_SSD0	CAN1_TX	UART1_RTS	HPS_GP1060
7A		VREFB7A/B/N UART0_RX					B22					UART0_RX	CAN0_RX	SPMM0_SS1	HPS_GP1061
7A		VREFB7A/B/N UART0_TX_CLKSEL1					G23					UART0_TX	CAN0_TX	SPMM1_SS1	HPS_GP1062
7A		VREFB7A/B/N I2C0_SDA					C23					I2C0_SDA	UART1_RX	SPM1_CLK	HPS_GP1063
7A		VREFB7A/B/N I2C0_SCL					D22					I2C0_SCL	UART1_TX	SPM1_MOSI	HPS_GP1064
7A		VREFB7A/B/N CAN0_RX					E24					CAN0_RX	UART0_RX	SPMM0_MISO	HPS_GP1065
7A		VREFB7A/B/N CAN0_TX_CLKSEL0					D24					CAN0_TX	UART0_TX	SPMM1_SSD0	HPS_GP1066
7B		VREFB7A/B/N NAND_ALE					H19					NAND_ALE	RGMI1_TX_CLK	GSPI_SS3	HPS_GP1014
7B		VREFB7A/B/N NAND_CE					F20					NAND_CE	RGMI1_TXD0	USB1_D0	HPS_GP1015
7B		VREFB7A/B/N NAND_CLE					J18					NAND_CLE	RGMI1_TXD1	USB1_D1	HPS_GP1016
7B		VREFB7A/B/N NAND_RE					F21					NAND_RE	RGMI1_TXD2	USB1_D2	HPS_GP1017
7B		VREFB7A/B/N NAND_RB					F19					NAND_RB	RGMI1_TXD3	USB1_D3	HPS_GP1018
7B		VREFB7A/B/N NAND_D00					A21					NAND_D00	RGMI1_RXD0	GSPI_SS0	HPS_GP1019
7B		VREFB7A/B/N NAND_D01					E21					NAND_D01	RGMI1_MDIO	I2C3_SDA	HPS_GP1020
7B		VREFB7A/B/N NAND_D02					B21					NAND_D02	RGMI1_MDC	I2C3_SCL	HPS_GP1021
7B		VREFB7A/B/N NAND_D03					H13					NAND_D03	RGMI1_RX_CTL	USB1_D4	HPS_GP1022
7B		VREFB7A/B/N NAND_D04					A00					NAND_D04	RGMI1_TX_CTL	USB1_D5	HPS_GP1023
7B		VREFB7A/B/N NAND_D05					G20					NAND_D05	RGMI1_RX_CTL	USB1_D6	HPS_GP1024
7B		VREFB7A/B/N NAND_D06					B00					NAND_D06	RGMI1_RXD0	USB1_D7	HPS_GP1025
7B		VREFB7A/B/N NAND_D07					B18					NAND_D07	RGMI1_RXD2		HPS_GP1026
7B		VREFB7A/B/N NAND_WP					D21					NAND_WP	RGMI1_RXD3	GSPI_SS2	HPS_GP1027
7B		VREFB7A/B/N NAND_VIE_BOOTSEL2					C20					NAND_VIE	GSPI_SS1		HPS_GP1028
7B		VREFB7A/B/N GSPI_I00					C20					GSPI_I00		USB1_CLK	HPS_GP1029
7B		VREFB7A/B/N GSPI_D01					H18					GSPI_D01		USB1_STP	HPS_GP1030
7B		VREFB7A/B/N GSPI_D02					A18					GSPI_D02		USB1_DR	HPS_GP1031
7B		VREFB7A/B/N GSPI_D03					E19					GSPI_D03		USB1_NXT	HPS_GP1032
7B		VREFB7A/B/N GSPI_SSD0_BOOTSEL1					A18					GSPI_SSD0			HPS_GP1033
7B		VREFB7A/B/N GSPI_CLK					D19					GSPI_CLK			HPS_GP1034
7B		VREFB7A/B/N GSPI_SS1					C19					GSPI_SS1			HPS_GP1035
7C		VREFB7A/B/N SDMMC_CMD					F18					SDMMC_CMD	USB0_D0		HPS_GP1036
7C		VREFB7A/B/N SDMMC_PWREN					B17					SDMMC_PWREN	USB0_D1		HPS_GP1037
7C		VREFB7A/B/N SDMMC_D0					B16					SDMMC_D0	USB0_D2		HPS_GP1038
7C		VREFB7A/B/N SDMMC_D1					C17					SDMMC_D1	USB0_D3		HPS_GP1039
7C		VREFB7A/B/N SDMMC_D4					H17					SDMMC_D4	USB0_D4		HPS_GP1040
7C		VREFB7A/B/N SDMMC_D5					C18					SDMMC_D5	USB0_D5		HPS_GP1041
7C		VREFB7A/B/N SDMMC_D6					G17					SDMMC_D6	USB0_D6		HPS_GP1042
7C		VREFB7A/B/N SDMMC_D7					E18					SDMMC_D7	USB0_D7		HPS_GP1043
7C		VREFB7A/B/N HPS_GPO04					E17					SDMMC_CTL	RGMI1_CLK		HPS_GP1044
7C		VREFB7A/B/N SDMMC_CCLK_OUT					A16					SDMMC_CCLK_OUT	USB0_STP		HPS_GP1045
7C		VREFB7A/B/N SDMMC_D2					D17					SDMMC_D2	USB0_DIR		HPS_GP1046
7C		VREFB7A/B/N SDMMC_D3					B15					SDMMC_D3	RGMI1_NXT		HPS_GP1047
7D		VREFB7A/B/N RGMI0_TX_CLK					F16					RGMI0_TX_CLK			HPS_GP100
7D		VREFB7A/B/N RGMI0_TXD0					E16					RGMI0_TXD0	USB0_D0		HPS_GP101
7D		VREFB7A/B/N RGMI0_TXD1					C16					RGMI0_TXD1	USB1_D1		HPS_GP102
7D		VREFB7A/B/N RGMI0_TXD2					D16					RGMI0_TXD2	USB1_D2		HPS_GP103
7D		VREFB7A/B/N RGMI0_TXD3					D14					RGMI0_TXD3	USB1_D3		HPS_GP104
7D		VREFB7A/B/N RGMI0_RXD0					A15					RGMI0_RXD0	USB1_D4		HPS_GP105
7D		VREFB7A/B/N RGMI0_MDIO					C14					RGMI0_MDIO	USB1_D5	I2C2_SDA	HPS_GP106
7D		VREFB7A/B/N RGMI0_MDC					D15					RGMI0_MDC	USB1_D6	I2C2_SCL	HPS_GP107
7D		VREFB7A/B/N RGMI0_RX_CTL					M17					RGMI0_RX_CTL	USB1_D7		HPS_GP108
7D		VREFB7A/B/N RGMI0_TX_CTL					B15					RGMI0_TX_CTL			HPS_GP109
7D		VREFB7A/B/N RGMI0_RX_CLK					N16					RGMI0_RX_CLK	USB1_CLK		HPS_GP110
7D		VREFB7A/B/N RGMI0_RXD1					C15					RGMI0_RXD1	USB1_STP		HPS_GP111
7D		VREFB7A/B/N RGMI0_RXD2					E14					RGMI0_RXD2	USB1_DR		HPS_GP112
7D		VREFB7A/B/N RGMI0_RXD3					A14					RGMI0_RXD3	USB1_NXT		HPS_GP113
8A		VREFB8A0 IO				CLK0p									
8A		VREFB8A0 IO				CLK1p									
8A		VREFB8A0 IO				CLK7n									
8A		VREFB8A0 IO				CLK7p									
8A		VREFB8A0 IO				FPLL_TL_CLKOUT0,FPLL_TL_CLKOUTp,FPLL_TL_FB									
8A		VREFB8A0 IO				FPLL_TL_CLKOUT1,FPLL_TL_CLKOUTn									
8A		VREFB8A0 IO				DIFF0_RX_T1p		DIFF0UT_T1p							
8A		VREFB8A0 IO				DIFF0_RX_T2p		DIFF0UT_T2p							
8A		VREFB8A0 IO				DIFF0_RX_T1n		DIFF0UT_T1n							
8A		VREFB8A0 IO				DIFF0_RX_T2n		DIFF0UT_T2n							
8A		VREFB8A0 IO				DIFF0_RX_T3p		DIFF0UT_T3p							
8A		VREFB8A0 IO				DIFF0_RX_T4p		DIFF0UT_T4p							
8A		VREFB8A0 IO				DIFF0_RX_T5p		DIFF0UT_T5p							
8A		VREFB8A0 IO				DIFF0_RX_T6p		DIFF0UT_T6p							
8A		VREFB8A0 IO				DIFF0_RX_T7p		DIFF0UT_T7p							
8A		VREFB8A0 IO				DIFF0_RX_T8p		DIFF0UT_T8p							
8A		VREFB8A0 IO				DIFF0_RX_T9p		DIFF0UT_T9p							
8A		VREFB8A0 IO				DIFF0_RX_T10p		DIFF0UT_T10p							
8A		VREFB8A0 IO				DIFF0_RX_T11n		DIFF0UT_T11n							
8A		VREFB8A0 IO				DIFF0_RX_T12n		DIFF0UT_T12n							
8A		VREFB8A0 IO				DIFF0_RX_T13p		DIFF0UT_T13p							
8A		VREFB8A0 IO				DIFF0_RX_T14n		DIFF0UT_T14n							
8A		VREFB8A0 IO				DIFF0_RX_T15p		DIFF0UT_T15p							
8A		VREFB8A0 IO				DIFF0_RX_T16p		DIFF0UT_T16p							
8A		VREFB8A0 IO				DIFF0_RX_T17n		DIFF0UT_T17n							
8A		VREFB8A0 IO				DIFF0_RX_T18p		DIFF0UT_T18p							
8A		VREFB8A0 IO				DIFF0_RX_T19n		DIFF0UT_T19n							
8A		VREFB8A0 IO				DIFF0_RX_T20p		DIFF0UT_T20p							
8A		VREFB8A0 IO				DIFF0_RX_T21n		DIFF0UT_T21n							
8A		VREFB8A0 IO				DIFF0_RX_T22p		DIFF0UT_T22p							
8A		VREFB8A0 IO				DIFF0_RX_T23n		DIFF0UT_T23n							
8A		VREFB8A0 IO				DIFF0_RX_T24n		DIFF0UT_T24n							



Bank Number	WREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F996	DQS for X8	DQS for X16	HMC Pin Assignment for DDR3/DDR2/3	HMC Pin Assignment for LPDDR2	HPS Pin Max Select 3	HPS Pin Max Select 2	HPS Pin Max Select 1	HPS Pin Max Select 0
BA	WREFBAND	IO			DIFFIO_RX_T21a	DIFFOUT_T21a	H13	DQS3T	DQ3T						
BA	WREFBAND	IO			DIFFIO_TX_T22a	DIFFOUT_T22a	D5								
BA	WREFBAND	IO			DIFFIO_RX_T21a	DIFFOUT_T21a	H12	DQS3T	DQ3T						
BA	WREFBAND	IO			DIFFIO_TX_T22a	DIFFOUT_T22a	C4	DQ3T							
BA	WREFBAND	IO			DIFFIO_RX_T23a	DIFFOUT_T23a	F11	DQ3T							
BA	WREFBAND	IO			DIFFIO_TX_T24a	DIFFOUT_T24a	E8	DQ3T							
BA	WREFBAND	IO			DIFFIO_RX_T23a	DIFFOUT_T23a	E11	DQ3T							
BA	WREFBAND	IO			DIFFIO_TX_T24a	DIFFOUT_T24a	D7								
BA	WREFBAND	IO			DIFFIO_RX_T25a	DIFFOUT_T25a	J7								
BA	WREFBAND	IO			DIFFIO_TX_T26a	DIFFOUT_T26a	B2	DQ4T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T25a	DIFFOUT_T25a	H7								
BA	WREFBAND	IO			DIFFIO_TX_T26a	DIFFOUT_T26a	B1	DQ4T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T27a	DIFFOUT_T27a	B6	DQ4T	DQ2T						
BA	WREFBAND	IO			DIFFIO_TX_T28a	DIFFOUT_T28a	C3	DQ4T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T27a	DIFFOUT_T27a	B5	DQ4T	DQ2T						
BA	WREFBAND	IO			DIFFIO_TX_T28a	DIFFOUT_T28a	B3	DQ4T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T29a	DIFFOUT_T29a	K12	DQS4T	DQS2T						
BA	WREFBAND	IO			DIFFIO_TX_T30a	DIFFOUT_T30a	D9								
BA	WREFBAND	IO			DIFFIO_RX_T29a	DIFFOUT_T29a	J12	DQS4T	DQS2T						
BA	WREFBAND	IO			DIFFIO_TX_T30a	DIFFOUT_T30a	C2	DQ4T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T31a	DIFFOUT_T31a	G12	DQ4T	DQ2T						
BA	WREFBAND	IO			DIFFIO_TX_T32a	DIFFOUT_T32a	E4	DQ4T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T31a	DIFFOUT_T31a	G11	DQ4T	DQ2T						
BA	WREFBAND	IO			DIFFIO_TX_T32a	DIFFOUT_T32a	D4								
BA	WREFBAND	IO			DIFFIO_RX_T33a	DIFFOUT_T33a	K7	DQS5T							
BA	WREFBAND	IO			DIFFIO_TX_T34a	DIFFOUT_T34a	E3	DQS5T							
BA	WREFBAND	IO			DIFFIO_RX_T33a	DIFFOUT_T33a	K8								
BA	WREFBAND	IO			DIFFIO_TX_T34a	DIFFOUT_T34a	E2	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T35a	DIFFOUT_T35a	G10	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_TX_T36a	DIFFOUT_T36a	E1	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T35a	DIFFOUT_T35a	F10	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_TX_T36a	DIFFOUT_T36a	D1	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T37a	DIFFOUT_T37a	J10	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_TX_T38a	DIFFOUT_T38a	E7	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T37a	DIFFOUT_T37a	J9	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_TX_T38a	DIFFOUT_T38a	E6	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T39a	DIFFOUT_T39a	F9	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_TX_T40a	DIFFOUT_T40a	G7	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_RX_T39a	DIFFOUT_T39a	F8	DQS5T	DQ2T						
BA	WREFBAND	IO			DIFFIO_TX_T40a	DIFFOUT_T40a	F6								
BA		MSEL0		MSEL0			L8								
BA		CONF_DONE		CONF_DONE			F3								
BA		MSEL1		MSEL1			K6								
BA		MSEL1		MSEL1			F4								
BA		!STATUS		!STATUS			C6								
BA		HCE		HCE			G6								
BA		MSEL2		MSEL2			L5								
BA		MSEL3		MSEL3			L7								
BA		HCONFIG		HCONFIG			L6								
BA		MSEL4		MSEL4			L9								
BA		GND					J6								
BA		GND					A13								
BA		GND					A17								
BA		GND					A2								
BA		GND					A23								
BA		GND					A27								
BA		GND					AA11								
BA		GND					AA2								
BA		GND					AA3								
BA		GND					AA4								
BA		GND					AA6								
BA		GND					AA8								
BA		GND					AB1								
BA		GND					AB19								
BA		GND					AB2								
BA		GND					AB29								
BA		GND					AB5								
BA		GND					AB7								
BA		GND					AC16								
BA		GND					AC26								
BA		GND					AC3								
BA		GND					AC4								
BA		GND					AC6								
BA		GND					AC8								
BA		GND					AD1								
BA		GND					AD2								
BA		GND					AD33								
BA		GND					AD5								
BA		GND					AE10								
BA		GND					AE30								
BA		GND					AE3								
BA		GND					AE4								
BA		GND					AF1								
BA		GND					AF12								
BA		GND					AF17								
BA		GND					AF2								
BA		GND					AF27								
BA		GND					AF3								
BA		GND					AG14								
BA		GND					AG24								
BA		GND					AG9								
BA		GND					AH1								
BA		GND					AH11								
BA		GND					AH21								
BA		GND					AH6								
BA		GND					AJ18								
BA		GND					AJ28								
BA		GND					AJ3								
BA		GND					AJ30								
BA		GND					AK15								
BA		GND					AK25								
BA		GND					AK6								
BA		GND					B14								
BA		GND					B19								
BA		GND					B24								
BA		GND					B29								
BA		GND					B9								
BA		GND					C1								
BA		GND					C16								
BA		GND					C21								
BA		GND					C26								
BA		GND					C6								
BA		GND					D13								
BA		GND					D23								
BA		GND					D9								
BA		GND					E10								
BA		GND					E25								
BA		GND					E30								
BA		GND					F17								
BA		GND					F2								
BA		GND					F27								
BA		GND					F5								



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F996	DQS for X8	DQS for X16	HMC Pin Assignment for DDR3/DDR2 /3/	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					F7									
		GND					G24									
		GND					G3									
		GND					G4									
		GND					H1									
		GND					H11									
		GND					H2									
		GND					H5									
		GND					J18									
		GND					J28									
		GND					J8									
		GND					J4									
		GND					J8									
		GND					K1									
		GND					K10									
		GND					K15									
		GND					K2									
		GND					K20									
		GND					K25									
		GND					K5									
		GND					L11									
		GND					L13									
		GND					L15									
		GND					L17									
		GND					L19									
		GND					L22									
		GND					L3									
		GND					L4									
		GND					L6									
		GND					M1									
		GND					M10									
		GND					M12									
		GND					M14									
		GND					M16									
		GND					M18									
		GND					M5									
		GND					M20									
		GND					M29									
		GND					M6									
		GND					M7									
		GND					M8									
		GND					M11									
		GND					M13									
		GND					M15									
		GND					M17									
		GND					M19									
		GND					M26									
		GND					M3									
		GND					M4									
		GND					M6									
		GND					M8									
		GND					M9									
		GND					M9									
		GND					P1									
		GND					P10									
		GND					P12									
		GND					P14									
		GND					P16									
		GND					P18									
		GND					P2									
		GND					P20									
		GND					P5									
		GND					P7									
		GND					R11									
		GND					R13									
		GND					R15									
		GND					R17									
		GND					R3									
		GND					R30									
		GND					R4									
		GND					R6									
		GND					R8									
		GND					R9									
		GND					T1									
		GND					T10									
		GND					T12									
		GND					T14									
		GND					T15									
		GND					T16									
		GND					T2									
		GND					T20									
		GND					T27									
		GND					T5									
		GND					T7									
		GND					U11									
		GND					U13									
		GND					U15									
		GND					U17									
		GND					U24									
		GND					U29									
		GND					U3									
		GND					U4									
		GND					U6									
		GND					U9									
		GND					V1									
		GND					V10									
		GND					V12									
		GND					V14									
		GND					V19									
		GND					V2									
		GND					V21									
		GND					V5									
		GND					V7									
		GND					W11									
		GND					W13									
		GND					W18									
		GND					W28									
		GND					W3									
		GND					W4									
		GND					W6									
		GND					W9									
		GND					Y1									
		GND					Y10									
		GND					Y12									
		GND					Y14									
		GND					Y15									
		GND					Y2									
		GND					Y20									
		GND					Y26									
		GND					Y30									
		GND					Y5									
		GND					Y7									



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F996	DQS for X8	DQS for X16	HMC Pin Assignment for DD3/DD2 /3/	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					Y8								
		GND					U22								
		GND					T18								
		VCC					M11								
		VCC					M13								
		VCC					M9								
		VCC					N10								
		VCC					N12								
		VCC					N14								
		VCC					P11								
		VCC					P13								
		VCC					R10								
		VCC					R12								
		VCC					R14								
		VCC					T11								
		VCC					T13								
		VCC					U10								
		VCC					U12								
		VCC					U14								
		VCC					V11								
		VCC					V13								
		VCC					V15								
		VCC					W10								
		VCC					W12								
		VCC					W14								
		VCC					Y11								
		VCC					Y13								
		VCC					Y9								
		VCC					U91								
		DNU					F1								
		DNU					G2								
		DNU					AA7								
		DNU					AD15								
		DNU					E26								
		DNU					J18								
		VCCP9M					AB10								
		VCCP9M					AA23								
		VCCP9M					J11								
		VCC9A1					H8								
		VCC9A3					AC11								
		VCC9A3					AD8								
		VCC9A3					AF7								
		VCC9A3					AG4								
		VCC9A3B					AB14								
		VCC9A3B					AD13								
		VCC9A3B					AE15								
		VCC9A3B					AJ13								
		VCC9A3B					AJ8								
		VCC9A3B					AK10								
		VCC9A4					AA17								
		VCC9A4					AC21								
		VCC9A4					AD18								
		VCC9A4					AE25								
		VCC9A4					AF22								
		VCC9A4					AG19								
		VCC9A4					AH16								
		VCC9A4					AI26								
		VCC9A4					AJ23								
		VCC9A4					AK20								
		VCC9A5					AB24								
		VCC9A5					AD28								
		VCC9A5					AG29								
		VCC9A5					W23								
		VCC9A5B					AA27								
		VCC9A5B					AE30								
		VCC9A5B HPS					O28								
		VCC9A5B HPS					O29								
		VCC9A5B HPS					H06								
		VCC9A5B HPS					K24								
		VCC9A5B HPS					K30								
		VCC9A5B HPS					L27								
		VCC9A5B HPS					M24								
		VCC9A5B HPS					N21								
		VCC9A5B HPS					P23								
		VCC9A5B HPS					P28								
		VCC9A5B HPS					R26								
		VCC9A5B HPS					T22								
		VCC9A5B HPS					U19								
		VCC9A5B HPS					V26								
		VCC9A7A HPS					F22								
		VCC9A7A HPS					H21								
		VCC9A7B HPS					E20								
		VCC9A7B HPS					G19								
		VCC9A7C HPS					D18								
		VCC9A7D HPS					E16								
		VCC9A7D HPS					H16								
		VCC9A8A					A7								
		VCC9A8A					B4								
		VCC9A8A					G11								
		VCC9A8A					D8								
		VCC9A8A					E5								
		VCC9A8A					F12								
		VCC9A8A					G14								
		VCC9A8A					G9								
		VCC9A8A					H6								
		VCC9A8A					J13								
		VCC9A3A					AA10								
		VCC9A3A					AC10								
		VCC9A3A4A					AB18								
		VCC9A3A4A					AB20								
		VCC9A3A4A					AC13								
		VCC9A3A4A					AC15								
		VCC9A3A4A					AC17								
		VCC9A3A4A					AC19								
		VCC9A3A4A					AD16								
		VCC9A3A4A					AE21								
		VCC9A5A					V22								
		VCC9A5A					V24								
		VCC9A5B					U23								
		VCC9A6A HPS					M21								
		VCC9A6A HPS					N22								
		VCC9A6A HPS					P21								
		VCC9A6A HPS					R20								
		VCC9A6A HPS					R23								
		VCC9A7A HPS					K19								
		VCC9A7B HPS					K18								
		VCC9A7C HPS					J17								
		VCC9A7D HPS					K16								
		VCC9A8A					K11								
		VCC9A8A					K13								
		VCC9A8A					L10								



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F996	DQS for X8	DQS for X16	HMC Pin Assignment for DDR3/DDR2/3/3	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
		VCCPDBA					L12								
		VCCPDBA					L14								
3A	VREFB3AN0	VREFB3AN0					AD6								
3B	VREFB3AN0	VREFB3AN0					AJ15								
4A	VREFB4AN0	VREFB4AN0					AK17								
5A	VREFB5AN0	VREFB5AN0					AC24								
5B	VREFB5AN0	VREFB5AN0					AK29								
		VREFB7A7B1	VREFB7A7B1C7DNO	HPS			E22								
8A	VREFB8AN0	VREFB8AN0					B10								
		VCOH GXBL					AB6								
		VCOH GXBL					P6								
		VCOH GXBL					V6								
		VCCL GXBL					L5								
		VCCL GXBL					R5								
		VCCL GXBL					W5								
		VCCRSCLK	HPS				J20								
		RREF TL					C1								
		VCCA PLL					N7								
		VCCA PLL					R7								
		VCCA PLL					V8								
		VCCA PLL					AA8								
		VCCA PLL					K9								
		VCCA PLL					Y22								
		VCC AUX					AB11								
		VCC AUX					AB16								
		VCC AUX					AD22								
		VCC AUX					H10								
		VCC AUX					J16								
		VCC AUX SHARED					J21								
		VCC GXBL					AA5								
		VCC GXBL					M6								
		VCC GXBL					N6								
		VCC GXBL					T6								
		VCC GXBL					U5								
		VCC GXBL					V6								
		VCC HPS					L21								
		VCC HPS					U18								
		VCC HPS					L16								
		VCC HPS					L18								
		VCC HPS					L20								
		VCC HPS					M15								
		VCC HPS					N20								
		VCC HPS					P15								
		VCC HPS					P17								
		VCC HPS					P19								
		VCC HPS					R16								
		VCC HPS					T17								
		VCC HPS					T19								
		VCC HPS					U16								

Notes:
 (1) For more information about pin definitions and pin connection guidelines, refer to the [Cyclone V Device Family Pin Connection Guidelines](#).
 (2) HPS_DDR pins are for memory interface only. For the dedicated pin function corresponding with the respective memory interfaces, refer to the HMC columns.
 (3) RESET pin is only applicable for DDR3 device.



Pin Information for the Cyclone® V 5CSTFD6 Device
Version 1.4

Version Number	Date	Changes Made
1.0	10/18/2012	Initial release.
1.1	1/17/2013	A pin that was marked as VCC_HPS has been corrected to VCCRSTCLK_HPS
1.2	3/25/2013	Updated the following pin names: - Changed SDMMC_CLK_IN to SDMMC_FB_CLK_IN - Changed SDMMC_CLK to SDMMC_CCLK_OUT
1.3	9/30/2014	- Remove corresponding bank number from VCCRSTCLK_HPS pin. - Changed HMC Pin Assignment for DDR3 to HMC Pin Assignment for DDR3/DDR2. - Added note 3.
1.4	12/23/2016	-Renamed SDMMC_FB_CLK_IN to HPS_GPIO44.