



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		DNU					E29			
		DNU					F29			
		RREF_TL					F30			
GXB_L1		GXB_TX_L8n					G27			
GXB_L1		GXB_TX_L8p					G28			
GXB_L1		GXB_RX_L8p,GXB_REFCLK_L8p					H30			
GXB_L1		GXB_RX_L8n,GXB_REFCLK_L8n					H29			
GXB_L1		GXB_TX_L7n					J27			
GXB_L1		GXB_TX_L7p					J28			
GXB_L1		GXB_RX_L7p,GXB_REFCLK_L7p					K30			
GXB_L1		GXB_RX_L7n,GXB_REFCLK_L7n					K29			
GXB_L1		GXB_TX_L6n					L27			
GXB_L1		GXB_TX_L6p					L28			
GXB_L1		GXB_RX_L6p,GXB_REFCLK_L6p					M30			
GXB_L1		GXB_RX_L6n,GXB_REFCLK_L6n					M29			
GXB_L1		REFCLK2Ln					R23			
GXB_L1		REFCLK2Lp					R22			
GXB_L0		REFCLK1Ln					U23			
GXB_L0		REFCLK1Lp					U22			
GXB_L0		GXB_TX_L5n					N27			
GXB_L0		GXB_TX_L5p					N28			
GXB_L0		GXB_RX_L5p,GXB_REFCLK_L5p					P30			
GXB_L0		GXB_RX_L5n,GXB_REFCLK_L5n					P29			
GXB_L0		GXB_TX_L4n					R27			
GXB_L0		GXB_TX_L4p					R28			
GXB_L0		GXB_RX_L4p,GXB_REFCLK_L4p					T30			
GXB_L0		GXB_RX_L4n,GXB_REFCLK_L4n					T29			
GXB_L0		GXB_TX_L3n					U27			
GXB_L0		GXB_TX_L3p					U28			
GXB_L0		GXB_RX_L3p,GXB_REFCLK_L3p					V30			
GXB_L0		GXB_RX_L3n,GXB_REFCLK_L3n					V29			
GXB_L0		GXB_TX_L2n					W27			
GXB_L0		GXB_TX_L2p					W28			
GXB_L0		GXB_RX_L2p,GXB_REFCLK_L2p					Y30			
GXB_L0		GXB_RX_L2n,GXB_REFCLK_L2n					Y29			
GXB_L0		GXB_TX_L1n					AA27			
GXB_L0		GXB_TX_L1p					AA28			
GXB_L0		GXB_RX_L1p,GXB_REFCLK_L1p					AB30			
GXB_L0		GXB_RX_L1n,GXB_REFCLK_L1n					AB29			
GXB_L0		GXB_TX_L0n					AC27			
GXB_L0		GXB_TX_L0p					AC28			
GXB_L0		GXB_RX_L0p,GXB_REFCLK_L0p					AD30			
GXB_L0		GXB_RX_L0n,GXB_REFCLK_L0n					AD29			
GXB_L0		REFCLK0Ln					W23			
GXB_L0		REFCLK0Lp					W22			
		DNU					AB26			
3A		TDO		TDO			AF30			
3A		TMS		TMS			AG30			
3A		TCK		TCK			AG29			
3A		TDI		TDI			AF29			
3A		DCLK		DCLK			AJ28			
3A		nCS0		DATA4			AA25			
3A		AS_DATA3		DATA3			AH30			
3A		AS_DATA2		DATA2			AJ30			
3A		AS_DATA1		DATA1			AK29			
3A		AS_DATA0,ASDO		DATA0			AK28			
3A	VREFB3AN0	IO	RZQ_0		DIFFIO_TX_B1n	DIFFOUT_B1n	AF28			
3A	VREFB3AN0	IO			DIFFIO_TX_B1p	DIFFOUT_B1p	AG28	DQ1B		
3A	VREFB3AN0	IO	CLK0n		DIFFIO_RX_B2n	DIFFOUT_B2n	AF27	DQ1B		
3A	VREFB3AN0	IO	CLK0p		DIFFIO_RX_B2p	DIFFOUT_B2p	AG27	DQ1B		
3A	VREFB3AN0	IO			DIFFIO_TX_B3n	DIFFOUT_B3n	AE27			
3A	VREFB3AN0	IO			DIFFIO_TX_B3p	DIFFOUT_B3p	AE26	DQ1B		
3A	VREFB3AN0	IO	CLK1n		DIFFIO_RX_B4n	DIFFOUT_B4n	AH28	DQS1B/QK1B		
3A	VREFB3AN0	IO	CLK1p		DIFFIO_RX_B4p	DIFFOUT_B4p	AJ28	DQS1B/CQ1B/CQn1B/QKn1B		
3A	VREFB3AN0	IO	FPLL_B1_CLKOUT1,FPLL_B1_CLKOUTn		DIFFIO_TX_B5n	DIFFOUT_B5n	AJ27			
3A	VREFB3AN0	IO	FPLL_B1_CLKOUT0,FPLL_B1_CLKOUTp,FPLL_B1_FB0		DIFFIO_TX_B5p	DIFFOUT_B5p	AK27	DQ1B		
3A	VREFB3AN0	IO	FPLL_B1_CLKOUT3,FPLL_B1_FBn		DIFFIO_RX_B6n	DIFFOUT_B6n	AB25	DQ1B		
3A	VREFB3AN0	IO	FPLL_B1_CLKOUT2,FPLL_B1_FBp,FPLL_B1_FB1		DIFFIO_RX_B6p	DIFFOUT_B6p	AC25	DQ1B		
3A	VREFB3AN0	IO	VREFB3AN0				AD25			
3A	VREFB3AN0	IO					AE25	DQ1B		
3A	VREFB3AN0	IO	CLK2n		DIFFIO_RX_B7n	DIFFOUT_B7n	AG26	DQ1B		
3A	VREFB3AN0	IO	CLK2p		DIFFIO_RX_B7p	DIFFOUT_B7p	AH26	DQ1B		
3A	VREFB3AN0	IO			DIFFIO_TX_B8n	DIFFOUT_B8n	AK26			
3A	VREFB3AN0	IO			DIFFIO_TX_B8p	DIFFOUT_B8p	AK25	DQ2B		
3A	VREFB3AN0	IO	CLK3n		DIFFIO_RX_B9n	DIFFOUT_B9n	AF25	DQ2B		
3A	VREFB3AN0	IO	CLK3p		DIFFIO_RX_B9p	DIFFOUT_B9p	AG25	DQ2B		
3A	VREFB3AN0	IO			DIFFIO_TX_B10n	DIFFOUT_B10n	AB23			
3A	VREFB3AN0	IO			DIFFIO_TX_B10p	DIFFOUT_B10p	AB24	DQ2B		



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3A	VREFB3AN0	IO			DIFFIO_RX_B11n	DIFFOUT_B11n	AH25	DQSn2B/QK2B		
3A	VREFB3AN0	IO			DIFFIO_RX_B11p	DIFFOUT_B11p	AJ25	DQS2B/CQ2B/CQn2B/QKn2B		
3A	VREFB3AN0	IO			DIFFIO_TX_B12n	DIFFOUT_B12n	AC24			
3A	VREFB3AN0	IO			DIFFIO_TX_B12p	DIFFOUT_B12p	AD24	DQ2B		
3A	VREFB3AN0	IO			DIFFIO_RX_B13n	DIFFOUT_B13n	AF24	DQ2B		
3A	VREFB3AN0	IO			DIFFIO_RX_B13p	DIFFOUT_B13p	AG24	DQ2B		
3A	VREFB3AN0	IO			DIFFIO_TX_B14n	DIFFOUT_B14n	AD23			
3A	VREFB3AN0	IO			DIFFIO_TX_B14p	DIFFOUT_B14p	AE23	DQ2B		
3A	VREFB3AN0	IO			DIFFIO_RX_B15n	DIFFOUT_B15n	AJ24	DQ2B		
3A	VREFB3AN0	IO			DIFFIO_RX_B15p	DIFFOUT_B15p	AK24	DQ2B		
3D	VREFB3DN0	IO			DIFFIO_TX_B70n	DIFFOUT_B70n	AC22			
3D	VREFB3DN0	IO			DIFFIO_TX_B70p	DIFFOUT_B70p	AD22	DQ3B	DQ1B	
3D	VREFB3DN0	IO			DIFFIO_RX_B71n	DIFFOUT_B71n	AA22	DQ3B	DQ1B	
3D	VREFB3DN0	IO			DIFFIO_RX_B71p	DIFFOUT_B71p	AB22	DQ3B	DQ1B	
3D	VREFB3DN0	IO			DIFFIO_TX_B72n	DIFFOUT_B72n	AB21			
3D	VREFB3DN0	IO			DIFFIO_TX_B72p	DIFFOUT_B72p	AC21	DQ3B	DQ1B	
3D	VREFB3DN0	IO			DIFFIO_RX_B73n	DIFFOUT_B73n	AG23	DQSn3B/QK3B	DQ1B	
3D	VREFB3DN0	IO			DIFFIO_RX_B73p	DIFFOUT_B73p	AH23	DQS3B/CQ3B/CQn3B/QKn3B	DQ1B	
3D	VREFB3DN0	IO			DIFFIO_TX_B74n	DIFFOUT_B74n	AD21			
3D	VREFB3DN0	IO			DIFFIO_TX_B74p	DIFFOUT_B74p	AE22	DQ3B	DQ1B	
3D	VREFB3DN0	IO			DIFFIO_RX_B75n	DIFFOUT_B75n	AF22	DQ3B	DQ1B	
3D	VREFB3DN0	IO			DIFFIO_RX_B75p	DIFFOUT_B75p	AG22	DQ3B	DQ1B	
3D	VREFB3DN0	IO	VREFB3DN0				AA21			
3D	VREFB3DN0	IO					Y20	DQ3B	DQ1B	
3D	VREFB3DN0	IO	CLK4n		DIFFIO_RX_B76n	DIFFOUT_B76n	AH22	DQ3B	DQ1B	
3D	VREFB3DN0	IO	CLK4p		DIFFIO_RX_B76p	DIFFOUT_B76p	AJ22	DQ3B	DQ1B	
3D	VREFB3DN0	IO			DIFFIO_TX_B77n	DIFFOUT_B77n	AD20			
3D	VREFB3DN0	IO			DIFFIO_TX_B77p	DIFFOUT_B77p	AE20	DQ4B	DQ1B	
3D	VREFB3DN0	IO	CLK5n		DIFFIO_RX_B78n	DIFFOUT_B78n	AF21	DQ4B	DQ1B	
3D	VREFB3DN0	IO	CLK5p		DIFFIO_RX_B78p	DIFFOUT_B78p	AG21	DQ4B	DQ1B	
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT1,FPLL_BC_CLKOUTn		DIFFIO_TX_B79n	DIFFOUT_B79n	AA19			
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT0,FPLL_BC_CLKOUTp,FPLL_BC_FB0		DIFFIO_TX_B79p	DIFFOUT_B79p	AB19	DQ4B	DQ1B	
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT3,FPLL_BC_FBn		DIFFIO_RX_B80n	DIFFOUT_B80n	AG20	DQSn4B/QK4B	DQSn1B/QK1B	
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT2,FPLL_BC_FBp,FPLL_BC_FB1		DIFFIO_RX_B80p	DIFFOUT_B80p	AH20	DQS4B/CQ4B/CQn4B/QKn4B	DQS1B/CQ1B/CQn1B/QKn1B	
3D	VREFB3DN0	IO			DIFFIO_TX_B81n	DIFFOUT_B81n	AA20			
3D	VREFB3DN0	IO			DIFFIO_TX_B81p	DIFFOUT_B81p	AB20	DQ4B	DQ1B	
3D	VREFB3DN0	IO	CLK6n		DIFFIO_RX_B82n	DIFFOUT_B82n	AJ21	DQ4B	DQ1B	
3D	VREFB3DN0	IO	CLK6p		DIFFIO_RX_B82p	DIFFOUT_B82p	AK22	DQ4B	DQ1B	
3D	VREFB3DN0	IO			DIFFIO_TX_B83n	DIFFOUT_B83n	AC19			
3D	VREFB3DN0	IO			DIFFIO_TX_B83p	DIFFOUT_B83p	AD19	DQ4B	DQ1B	
3D	VREFB3DN0	IO	CLK7n		DIFFIO_RX_B84n	DIFFOUT_B84n	AK20	DQ4B	DQ1B	
3D	VREFB3DN0	IO	CLK7p		DIFFIO_RX_B84p	DIFFOUT_B84p	AK21	DQ4B	DQ1B	
		VCCD_FPLL					W15			
		VCCA_FPLL					W16			
		DNU					Y16			
4D	VREFB4DN0	IO			DIFFIO_TX_B93n	DIFFOUT_B93n	AJ19			
4D	VREFB4DN0	IO			DIFFIO_TX_B93p	DIFFOUT_B93p	AK19	DQ5B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B94n	DIFFOUT_B94n	AF19	DQ5B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B94p	DIFFOUT_B94p	AG19	DQ5B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_TX_B95n	DIFFOUT_B95n	AC18			
4D	VREFB4DN0	IO			DIFFIO_TX_B95p	DIFFOUT_B95p	AD18	DQ5B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B96n	DIFFOUT_B96n	AH19	DQSn5B/QK5B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B96p	DIFFOUT_B96p	AH18	DQS5B/CQ5B/CQn5B/QKn5B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_TX_B97n	DIFFOUT_B97n	AA18			
4D	VREFB4DN0	IO			DIFFIO_TX_B97p	DIFFOUT_B97p	AB18	DQ5B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B98n	DIFFOUT_B98n	AE18	DQ5B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B98p	DIFFOUT_B98p	AF18	DQ5B	DQ2B	
4D	VREFB4DN0	IO	VREFB4DN0				AD17			
4D	VREFB4DN0	IO					AE17	DQ5B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B99n	DIFFOUT_B99n	AA17	DQ5B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B99p	DIFFOUT_B99p	AB17	DQ5B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_TX_B100n	DIFFOUT_B100n	AA16			
4D	VREFB4DN0	IO			DIFFIO_TX_B100p	DIFFOUT_B100p	AB16	DQ6B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B101n	DIFFOUT_B101n	AG17	DQ6B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B101p	DIFFOUT_B101p	AH17	DQ6B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_TX_B102n	DIFFOUT_B102n	AC16			
4D	VREFB4DN0	IO			DIFFIO_TX_B102p	DIFFOUT_B102p	AD16	DQ6B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B103n	DIFFOUT_B103n	AJ18	DQSn6B/QK6B	DQSn2B/QK2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B103p	DIFFOUT_B103p	AK17	DQS6B/CQ6B/CQn6B/QKn6B	DQS2B/CQ2B/CQn2B/QKn2B	
4D	VREFB4DN0	IO			DIFFIO_TX_B104n	DIFFOUT_B104n	AF16			
4D	VREFB4DN0	IO			DIFFIO_TX_B104p	DIFFOUT_B104p	AG16	DQ6B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B105n	DIFFOUT_B105n	AA15	DQ6B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B105p	DIFFOUT_B105p	AB15	DQ6B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_TX_B106n	DIFFOUT_B106n	AC15			
4D	VREFB4DN0	IO			DIFFIO_TX_B106p	DIFFOUT_B106p	AD15	DQ6B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B107n	DIFFOUT_B107n	AJ16	DQ6B	DQ2B	
4D	VREFB4DN0	IO			DIFFIO_RX_B107p	DIFFOUT_B107p	AK16	DQ6B	DQ2B	
4C	VREFB4CN0	IO			DIFFIO_TX_B108n	DIFFOUT_B108n	AA14			



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
4C	VREFB4CN0	IO			DIFFIO_TX_B108p	DIFFOUT_B108p	AB14	DQ7B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B109n	DIFFOUT_B109n	AG15	DQ7B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B109p	DIFFOUT_B109p	AH15	DQ7B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_TX_B110n	DIFFOUT_B110n	AE15			
4C	VREFB4CN0	IO			DIFFIO_TX_B110p	DIFFOUT_B110p	AF15	DQ7B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B111n	DIFFOUT_B111n	AJ15	DQSn7B/QK7B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B111p	DIFFOUT_B111p	AK14	DQS7B/CQ7B/CQn7B/QKn7B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_TX_B112n	DIFFOUT_B112n	AG14			
4C	VREFB4CN0	IO			DIFFIO_TX_B112p	DIFFOUT_B112p	AH14	DQ7B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B113n	DIFFOUT_B113n	AD13	DQ7B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B113p	DIFFOUT_B113p	AE13	DQ7B	DQ3B	DQ1B
4C	VREFB4CN0	IO	VREFB4CN0				AD14			
4C	VREFB4CN0	IO					AE14	DQ7B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B114n	DIFFOUT_B114n	AH13	DQ7B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B114p	DIFFOUT_B114p	AJ13	DQ7B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_TX_B115n	DIFFOUT_B115n	AC13			
4C	VREFB4CN0	IO			DIFFIO_TX_B115p	DIFFOUT_B115p	AD12	DQ8B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B116n	DIFFOUT_B116n	AF12	DQ8B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B116p	DIFFOUT_B116p	AF13	DQ8B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_TX_B117n	DIFFOUT_B117n	AA13			
4C	VREFB4CN0	IO			DIFFIO_TX_B117p	DIFFOUT_B117p	AB13	DQ8B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B118n	DIFFOUT_B118n	AG12	DQSn8B/QK8B	DQSn3B/QK3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B118p	DIFFOUT_B118p	AH12	DQS8B/CQ8B/CQn8B/QKn8B	DQS3B/CQ3B/CQn3B/QKn3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_TX_B119n	DIFFOUT_B119n	AJ12			
4C	VREFB4CN0	IO			DIFFIO_TX_B119p	DIFFOUT_B119p	AK12	DQ8B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B120n	DIFFOUT_B120n	AB12	DQ8B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B120p	DIFFOUT_B120p	AC12	DQ8B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_TX_B121n	DIFFOUT_B121n	Y12			
4C	VREFB4CN0	IO			DIFFIO_TX_B121p	DIFFOUT_B121p	Y13	DQ8B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B122n	DIFFOUT_B122n	AG11	DQ8B	DQ3B	DQ1B
4C	VREFB4CN0	IO			DIFFIO_RX_B122p	DIFFOUT_B122p	AH11	DQ8B	DQ3B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_TX_B123n	DIFFOUT_B123n	AD11			
4B	VREFB4BN0	IO			DIFFIO_TX_B123p	DIFFOUT_B123p	AE11	DQ9B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B124n	DIFFOUT_B124n	AA12	DQ9B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B124p	DIFFOUT_B124p	AB11	DQ9B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_TX_B125n	DIFFOUT_B125n	AA11			
4B	VREFB4BN0	IO			DIFFIO_TX_B125p	DIFFOUT_B125p	AA10	DQ9B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B126n	DIFFOUT_B126n	AK11	DQSn9B/QK9B	DQ4B	DQSn1B/QK1B
4B	VREFB4BN0	IO			DIFFIO_RX_B126p	DIFFOUT_B126p	AK10	DQS9B/CQ9B/CQn9B/QKn9B	DQ4B	DQS1B/CQ1B/CQn1B/QKn1B
4B	VREFB4BN0	IO			DIFFIO_TX_B127n	DIFFOUT_B127n	AF10			
4B	VREFB4BN0	IO			DIFFIO_TX_B127p	DIFFOUT_B127p	AG10	DQ9B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B128n	DIFFOUT_B128n	AB10	DQ9B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B128p	DIFFOUT_B128p	AB9	DQ9B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_TX_B129n	DIFFOUT_B129n	AC10			
4B	VREFB4BN0	IO			DIFFIO_TX_B129p	DIFFOUT_B129p	AD10	DQ9B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B130n	DIFFOUT_B130n	AH9	DQ9B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B130p	DIFFOUT_B130p	AJ10	DQ9B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_TX_B131n	DIFFOUT_B131n	AE9			
4B	VREFB4BN0	IO			DIFFIO_TX_B131p	DIFFOUT_B131p	AF9	DQ10B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B132n	DIFFOUT_B132n	AJ9	DQ10B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B132p	DIFFOUT_B132p	AK8	DQ10B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_TX_B133n	DIFFOUT_B133n	AC9			
4B	VREFB4BN0	IO			DIFFIO_TX_B133p	DIFFOUT_B133p	AD9	DQ10B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B134n	DIFFOUT_B134n	AA9	DQSn10B/QK10B	DQSn4B/QK4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B134p	DIFFOUT_B134p	AB8	DQS10B/CQ10B/CQn10B/QKn10B	DQS4B/CQ4B/CQn4B/QKn4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_TX_B135n	DIFFOUT_B135n	AG8			
4B	VREFB4BN0	IO			DIFFIO_TX_B135p	DIFFOUT_B135p	AH8	DQ10B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B136n	DIFFOUT_B136n	AJ7	DQ10B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B136p	DIFFOUT_B136p	AK7	DQ10B	DQ4B	DQ1B
4B	VREFB4BN0	IO	VREFB4BN0				AD8			
4B	VREFB4BN0	IO					AE8	DQ10B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B137n	DIFFOUT_B137n	AG7	DQ10B	DQ4B	DQ1B
4B	VREFB4BN0	IO			DIFFIO_RX_B137p	DIFFOUT_B137p	AH7	DQ10B	DQ4B	DQ1B
4A	VREFB4AN0	IO		DATA10	DIFFIO_TX_B154n	DIFFOUT_B154n	AF7			
4A	VREFB4AN0	IO		DATA11	DIFFIO_TX_B154p	DIFFOUT_B154p	AG6	DQ11B	DQ5B	
4A	VREFB4AN0	IO		DATA5	DIFFIO_RX_B155n	DIFFOUT_B155n	AJ6	DQ11B	DQ5B	
4A	VREFB4AN0	IO		DATA6	DIFFIO_RX_B155p	DIFFOUT_B155p	AK6	DQ11B	DQ5B	
4A	VREFB4AN0	IO		DATA12	DIFFIO_TX_B156n	DIFFOUT_B156n	AA8			
4A	VREFB4AN0	IO		DATA13	DIFFIO_TX_B156p	DIFFOUT_B156p	AB7	DQ11B	DQ5B	
4A	VREFB4AN0	IO		DATA7	DIFFIO_RX_B157n	DIFFOUT_B157n	AK5	DQSn11B/QK11B	DQ5B	
4A	VREFB4AN0	IO		DATA8	DIFFIO_RX_B157p	DIFFOUT_B157p	AK4	DQS11B/CQ11B/CQn11B/QKn11B	DQ5B	
4A	VREFB4AN0	IO		DATA14	DIFFIO_TX_B158n	DIFFOUT_B158n	AD7			
4A	VREFB4AN0	IO		DATA15	DIFFIO_TX_B158p	DIFFOUT_B158p	AE7	DQ11B	DQ5B	
4A	VREFB4AN0	IO		DATA9	DIFFIO_RX_B159n	DIFFOUT_B159n	AA6	DQ11B	DQ5B	
4A	VREFB4AN0	IO		CLKUSR	DIFFIO_RX_B159p	DIFFOUT_B159p	AB6	DQ11B	DQ5B	
4A	VREFB4AN0	IO	VREFB4AN0				AC6			
4A	VREFB4AN0	IO					AC7	DQ11B	DQ5B	
4A	VREFB4AN0	IO	CLK11n		DIFFIO_RX_B160n	DIFFOUT_B160n	AE6	DQ11B	DQ5B	



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
4A	VREFB4AN0	IO	CLK11p		DIFFIO_RX_B160p	DIFFOUT_B160p	AF6	DQ11B	DQ5B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT1,FPLL_BR_CLKOUTn		DIFFIO_TX_B161n	DIFFOUT_B161n	AG5			
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT0,FPLL_BR_CLKOUTp,FPLL_BR_FB0		DIFFIO_TX_B161p	DIFFOUT_B161p	AH5	DQ12B	DQ5B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT3,FPLL_BR_FBn		DIFFIO_RX_B162n	DIFFOUT_B162n	AH4	DQ12B	DQ5B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT2,FPLL_BR_FBp,FPLL_BR_FB1		DIFFIO_RX_B162p	DIFFOUT_B162p	AJ4	DQ12B	DQ5B	
4A	VREFB4AN0	IO			DIFFIO_TX_B163n	DIFFOUT_B163n	AD6			
4A	VREFB4AN0	IO			DIFFIO_TX_B163p	DIFFOUT_B163p	AE5	DQ12B	DQ5B	
4A	VREFB4AN0	IO	CLK10n		DIFFIO_RX_B164n	DIFFOUT_B164n	AJ3	DQSn12B/QK12B	DQSn5B/QK5B	
4A	VREFB4AN0	IO	CLK10p		DIFFIO_RX_B164p	DIFFOUT_B164p	AK3	DQS12B/CQ12B/CQn12B/QKn12B	DQSn5B/CQn5B/QKn5B	
4A	VREFB4AN0	IO			DIFFIO_TX_B165n	DIFFOUT_B165n	AG4			
4A	VREFB4AN0	IO			DIFFIO_TX_B165p	DIFFOUT_B165p	AG3	DQ12B	DQ5B	
4A	VREFB4AN0	IO	CLK9n		DIFFIO_RX_B166n	DIFFOUT_B166n	AJ1	DQ12B	DQ5B	
4A	VREFB4AN0	IO	CLK9p		DIFFIO_RX_B166p	DIFFOUT_B166p	AK2	DQ12B	DQ5B	
4A	VREFB4AN0	IO			DIFFIO_TX_B167n	DIFFOUT_B167n	AE4			
4A	VREFB4AN0	IO	RZQ_1		DIFFIO_TX_B167p	DIFFOUT_B167p	AF4	DQ12B	DQ5B	
4A	VREFB4AN0	IO	CLK8n		DIFFIO_RX_B168n	DIFFOUT_B168n	AH2	DQ12B	DQ5B	
4A	VREFB4AN0	IO	CLK8p		DIFFIO_RX_B168p	DIFFOUT_B168p	AH1	DQ12B	DQ5B	
		RREF_BR					AF1			
		DNU					AF2			
		DNU					AG2			
		GND					W9			
		GND					W8			
		GND					AD2			
		GND					AD1			
		DNU					AC3			
		DNU					AC4			
		GND					AB2			
		GND					AB1			
		DNU					AA3			
		DNU					AA4			
		GND					Y2			
		GND					Y1			
		DNU					W3			
		DNU					W4			
		GND					U9			
		GND					U8			
		GND					V2			
		GND					V1			
		DNU					U3			
		DNU					U4			
		GND					T2			
		GND					T1			
		DNU					R3			
		DNU					R4			
		GND					P2			
		GND					P1			
		DNU					N3			
		DNU					N4			
		GND					M2			
		GND					M1			
		DNU					L3			
		DNU					L4			
		GND					K2			
		GND					K1			
		DNU					J3			
		DNU					J4			
		GND					H2			
		GND					H1			
		DNU					G3			
		DNU					G4			
		GND					R9			
		GND					R8			
		DNU					H5			
7A		GND					F5			
7A	VREFB7AN0	IO	CLK12p		DIFFIO_RX_T1p	DIFFOUT_T1p	E1	DQ1T	DQ1T	
7A	VREFB7AN0	IO	CLK12n		DIFFIO_RX_T1n	DIFFOUT_T1n	F1	DQ1T	DQ1T	
7A	VREFB7AN0	IO	RZQ_5		DIFFIO_TX_T2p	DIFFOUT_T2p	E4	DQ1T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO_TX_T2n	DIFFOUT_T2n	E3			
7A	VREFB7AN0	IO	CLK13p		DIFFIO_RX_T3p	DIFFOUT_T3p	D2	DQ1T	DQ1T	
7A	VREFB7AN0	IO	CLK13n		DIFFIO_RX_T3n	DIFFOUT_T3n	D1	DQ1T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO_TX_T4p	DIFFOUT_T4p	D4	DQ1T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO_TX_T4n	DIFFOUT_T4n	D3			
7A	VREFB7AN0	IO	CLK14p		DIFFIO_RX_T5p	DIFFOUT_T5p	A2	DQS1T/CQ1T/CQn1T/QKn1T	DQS1T/CQ1T/CQn1T/QKn1T	
7A	VREFB7AN0	IO	CLK14n		DIFFIO_RX_T5n	DIFFOUT_T5n	B1	DQSn1T/QK1T	DQSn1T/QK1T	
7A	VREFB7AN0	IO			DIFFIO_TX_T6p	DIFFOUT_T6p	C2	DQ1T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO_TX_T6n	DIFFOUT_T6n	C1			
7A	VREFB7AN0	IO	FPLL_TR_CLKOUT2,FPLL_TR_FBp,FPLL_TR_FB1		DIFFIO_RX_T7p	DIFFOUT_T7p	A3	DQ1T	DQ1T	
7A	VREFB7AN0	IO	FPLL_TR_CLKOUT3,FPLL_TR_FBn		DIFFIO_RX_T7n	DIFFOUT_T7n	B3	DQ1T	DQ1T	



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
7A	VREFB7A0	IO	FPLL_TR_CLKOUT0,FPLL_TR_CLKOUTp,FPLL_TR_FB0		DIFFIO_TX_T8p	DIFFOUT_T8p	B4	DQ1T	DQ1T	
7A	VREFB7A0	IO	FPLL_TR_CLKOUT1,FPLL_TR_CLKOUTn		DIFFIO_TX_T8n	DIFFOUT_T8n	C4			
7A	VREFB7A0	IO	CLK15p		DIFFIO_RX_T9p	DIFFOUT_T9p	C5	DQ2T	DQ1T	
7A	VREFB7A0	IO	CLK15n		DIFFIO_RX_T9n	DIFFOUT_T9n	D5	DQ2T	DQ1T	
7A	VREFB7A0	IO					J6	DQ2T	DQ1T	
7A	VREFB7A0	IO	VREFB7A0				K6			
7A	VREFB7A0	IO		DEV_OE	DIFFIO_RX_T10p	DIFFOUT_T10p	A5	DQ2T	DQ1T	
7A	VREFB7A0	IO		DEV_CLRn	DIFFIO_RX_T10n	DIFFOUT_T10n	A4	DQ2T	DQ1T	
7A	VREFB7A0	IO			DIFFIO_TX_T11p	DIFFOUT_T11p	J7	DQ2T	DQ1T	
7A	VREFB7A0	IO			DIFFIO_TX_T11n	DIFFOUT_T11n	K7			
7A	VREFB7A0	IO		CvP_CONFDONE	DIFFIO_RX_T12p	DIFFOUT_T12p	D6	DQS2T/CQ2T/CQn2T/QKn2T	DQ1T	
7A	VREFB7A0	IO		CRC_ERROR	DIFFIO_RX_T12n	DIFFOUT_T12n	E6	DQSn2T/QK2T	DQ1T	
7A	VREFB7A0	IO		PR_DONE	DIFFIO_TX_T13p	DIFFOUT_T13p	G6	DQ2T	DQ1T	
7A	VREFB7A0	IO		PR_REQUEST	DIFFIO_TX_T13n	DIFFOUT_T13n	H6			
7A	VREFB7A0	IO		INIT_DONE	DIFFIO_RX_T14p	DIFFOUT_T14p	A6	DQ2T	DQ1T	
7A	VREFB7A0	IO		nCEO	DIFFIO_RX_T14n	DIFFOUT_T14n	B6	DQ2T	DQ1T	
7A	VREFB7A0	IO		PR_ERROR	DIFFIO_TX_T15p	DIFFOUT_T15p	G7	DQ2T	DQ1T	
7A	VREFB7A0	IO		PR_READY	DIFFIO_TX_T15n	DIFFOUT_T15n	H7			
7B	VREFB7B0	IO			DIFFIO_RX_T32p	DIFFOUT_T32p	F8	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_RX_T32n	DIFFOUT_T32n	G8	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO					J8	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO	VREFB7B0				K8			
7B	VREFB7B0	IO			DIFFIO_RX_T33p	DIFFOUT_T33p	E7	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_RX_T33n	DIFFOUT_T33n	F7	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T34p	DIFFOUT_T34p	G9	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T34n	DIFFOUT_T34n	H9			
7B	VREFB7B0	IO			DIFFIO_RX_T35p	DIFFOUT_T35p	A7	DQS3T/CQ3T/CQn3T/QKn3T	DQS2T/CQ2T/CQn2T/QKn2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_RX_T35n	DIFFOUT_T35n	A8	DQSn3T/QK3T	DQS2T/CQ2T/QKn2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T36p	DIFFOUT_T36p	B7	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T36n	DIFFOUT_T36n	C7			
7B	VREFB7B0	IO			DIFFIO_RX_T37p	DIFFOUT_T37p	C8	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_RX_T37n	DIFFOUT_T37n	D8	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T38p	DIFFOUT_T38p	J9	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T38n	DIFFOUT_T38n	K9			
7B	VREFB7B0	IO			DIFFIO_RX_T39p	DIFFOUT_T39p	D9	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_RX_T39n	DIFFOUT_T39n	E9	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T40p	DIFFOUT_T40p	B10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T40n	DIFFOUT_T40n	B9			
7B	VREFB7B0	IO			DIFFIO_RX_T41p	DIFFOUT_T41p	A11	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_RX_T41n	DIFFOUT_T41n	A10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T42p	DIFFOUT_T42p	J10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T42n	DIFFOUT_T42n	K10			
7B	VREFB7B0	IO			DIFFIO_RX_T43p	DIFFOUT_T43p	C10	DQS4T/CQ4T/CQn4T/QKn4T	DQ2T	DQS1T/CQ1T/CQn1T/QKn1T
7B	VREFB7B0	IO			DIFFIO_RX_T43n	DIFFOUT_T43n	D10	DQSn4T/QK4T	DQ2T	DQS1T/CQ1T/QKn1T
7B	VREFB7B0	IO			DIFFIO_TX_T44p	DIFFOUT_T44p	E10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T44n	DIFFOUT_T44n	F10			
7B	VREFB7B0	IO			DIFFIO_RX_T45p	DIFFOUT_T45p	C11	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_RX_T45n	DIFFOUT_T45n	D11	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T46p	DIFFOUT_T46p	G10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T46n	DIFFOUT_T46n	H10			
7C	VREFB7C0	IO			DIFFIO_RX_T47p	DIFFOUT_T47p	J11	DQ5T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_RX_T47n	DIFFOUT_T47n	K11	DQ5T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T48p	DIFFOUT_T48p	F11	DQ5T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T48n	DIFFOUT_T48n	G11			
7C	VREFB7C0	IO			DIFFIO_RX_T49p	DIFFOUT_T49p	B13	DQ5T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_RX_T49n	DIFFOUT_T49n	B12	DQ5T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T50p	DIFFOUT_T50p	D12	DQ5T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T50n	DIFFOUT_T50n	E12			
7C	VREFB7C0	IO			DIFFIO_RX_T51p	DIFFOUT_T51p	J12	DQS5T/CQ5T/CQn5T/QKn5T	DQS3T/CQ3T/CQn3T/QKn3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_RX_T51n	DIFFOUT_T51n	K12	DQS5T/QK5T	DQS3T/CQ3T/QKn3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T52p	DIFFOUT_T52p	G12	DQ5T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T52n	DIFFOUT_T52n	H12			
7C	VREFB7C0	IO			DIFFIO_RX_T53p	DIFFOUT_T53p	C13	DQ5T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_RX_T53n	DIFFOUT_T53n	D13	DQ5T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T54p	DIFFOUT_T54p	E13	DQ5T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T54n	DIFFOUT_T54n	F13			
7C	VREFB7C0	IO			DIFFIO_RX_T55p	DIFFOUT_T55p	J14	DQ6T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_RX_T55n	DIFFOUT_T55n	K14	DQ6T	DQ3T	DQ1T
7C	VREFB7C0	IO					J13	DQ6T	DQ3T	DQ1T
7C	VREFB7C0	IO	VREFB7C0				K13			
7C	VREFB7C0	IO			DIFFIO_RX_T56p	DIFFOUT_T56p	A14	DQ6T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_RX_T56n	DIFFOUT_T56n	A13	DQ6T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T57p	DIFFOUT_T57p	F14	DQ6T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T57n	DIFFOUT_T57n	G14			
7C	VREFB7C0	IO			DIFFIO_RX_T58p	DIFFOUT_T58p	C14	DQS6T/CQ6T/CQn6T/QKn6T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_RX_T58n	DIFFOUT_T58n	D14	DQS6T/QK6T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T59p	DIFFOUT_T59p	G13	DQ6T	DQ3T	DQ1T
7C	VREFB7C0	IO			DIFFIO_TX_T59n	DIFFOUT_T59n	H13			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
7C	VREFB7CNO	IO			DIFFIO_RX_T60p	DIFFOUT_T60p	A15	DQ6T	DQ3T	DQ1T
7C	VREFB7CNO	IO			DIFFIO_RX_T60n	DIFFOUT_T60n	B15	DQ6T	DQ3T	DQ1T
7C	VREFB7CNO	IO			DIFFIO_TX_T61p	DIFFOUT_T61p	D15	DQ6T	DQ3T	DQ1T
7C	VREFB7CNO	IO			DIFFIO_TX_T61n	DIFFOUT_T61n	E15			
7D	VREFB7DNO	IO			DIFFIO_RX_T62p	DIFFOUT_T62p	F15	DQ7T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_RX_T62n	DIFFOUT_T62n	G15	DQ7T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T63p	DIFFOUT_T63p	J16	DQ7T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T63n	DIFFOUT_T63n	K16			
7D	VREFB7DNO	IO			DIFFIO_RX_T64p	DIFFOUT_T64p	H15	DQ7T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_RX_T64n	DIFFOUT_T64n	J15	DQ7T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T65p	DIFFOUT_T65p	D16	DQ7T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T65n	DIFFOUT_T65n	E16			
7D	VREFB7DNO	IO			DIFFIO_RX_T66p	DIFFOUT_T66p	B16	DQS7T/CQ7T/CQn7T/QKn7T	DQS4T/CQ4T/CQn4T/QKn4T	
7D	VREFB7DNO	IO			DIFFIO_RX_T66n	DIFFOUT_T66n	C16	DQSn7T/QK7T	DQSn4T/QK4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T67p	DIFFOUT_T67p	G16	DQ7T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T67n	DIFFOUT_T67n	H16			
7D	VREFB7DNO	IO			DIFFIO_RX_T68p	DIFFOUT_T68p	A17	DQ7T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_RX_T68n	DIFFOUT_T68n	A16	DQ7T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T69p	DIFFOUT_T69p	C17	DQ7T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T69n	DIFFOUT_T69n	D17			
7D	VREFB7DNO	IO			DIFFIO_RX_T70p	DIFFOUT_T70p	J17	DQ8T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_RX_T70n	DIFFOUT_T70n	K17	DQ8T	DQ4T	
7D	VREFB7DNO	IO					J18	DQ8T	DQ4T	
7D	VREFB7DNO	IO	VREFB7DNO				K18			
7D	VREFB7DNO	IO			DIFFIO_RX_T71p	DIFFOUT_T71p	D18	DQ8T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_RX_T71n	DIFFOUT_T71n	E18	DQ8T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T72p	DIFFOUT_T72p	F17	DQ8T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T72n	DIFFOUT_T72n	G17			
7D	VREFB7DNO	IO			DIFFIO_RX_T73p	DIFFOUT_T73p	B18	DQS8T/CQ8T/CQn8T/QKn8T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_RX_T73n	DIFFOUT_T73n	C19	DQSn8T/QK8T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T74p	DIFFOUT_T74p	G18	DQ8T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T74n	DIFFOUT_T74n	H18			
7D	VREFB7DNO	IO			DIFFIO_RX_T75p	DIFFOUT_T75p	A19	DQ8T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_RX_T75n	DIFFOUT_T75n	B19	DQ8T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T76p	DIFFOUT_T76p	D19	DQ8T	DQ4T	
7D	VREFB7DNO	IO			DIFFIO_TX_T76n	DIFFOUT_T76n	E19			
		VCCA_FPLL					M16			
		VCCD_FPLL					M15			
		DNU					K15			
8D	VREFB8DNO	IO	CLK19p		DIFFIO_RX_T85p	DIFFOUT_T85p	F19	DQ9T	DQ5T	
8D	VREFB8DNO	IO	CLK19n		DIFFIO_RX_T85n	DIFFOUT_T85n	G20	DQ9T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T86p	DIFFOUT_T86p	J19	DQ9T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T86n	DIFFOUT_T86n	K19			
8D	VREFB8DNO	IO	CLK18p		DIFFIO_RX_T87p	DIFFOUT_T87p	J20	DQ9T	DQ5T	
8D	VREFB8DNO	IO	CLK18n		DIFFIO_RX_T87n	DIFFOUT_T87n	K20	DQ9T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T88p	DIFFOUT_T88p	F20	DQ9T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T88n	DIFFOUT_T88n	F21			
8D	VREFB8DNO	IO	FPLL_TC_CLKOUT2;FPLL_TC_FBp;FPLL_TC_FB1		DIFFIO_RX_T89p	DIFFOUT_T89p	C20	DQS9T/CQ9T/CQn9T/QKn9T	DQS5T/CQ5T/CQn5T/QKn5T	
8D	VREFB8DNO	IO	FPLL_TC_CLKOUT3;FPLL_TC_FBn		DIFFIO_RX_T89n	DIFFOUT_T89n	D20	DQSn9T/QK9T	DQSn5T/QK5T	
8D	VREFB8DNO	IO	FPLL_TC_CLKOUT0;FPLL_TC_CLKOUTp;FPLL_TC_FB0		DIFFIO_TX_T90p	DIFFOUT_T90p	G19	DQ9T	DQ5T	
8D	VREFB8DNO	IO	FPLL_TC_CLKOUT1;FPLL_TC_CLKOUTn		DIFFIO_TX_T90n	DIFFOUT_T90n	H19			
8D	VREFB8DNO	IO	CLK17p		DIFFIO_RX_T91p	DIFFOUT_T91p	A21	DQ9T	DQ5T	
8D	VREFB8DNO	IO	CLK17n		DIFFIO_RX_T91n	DIFFOUT_T91n	B21	DQ9T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T92p	DIFFOUT_T92p	D21	DQ9T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T92n	DIFFOUT_T92n	E21			
8D	VREFB8DNO	IO	CLK16p		DIFFIO_RX_T93p	DIFFOUT_T93p	D22	DQ10T	DQ5T	
8D	VREFB8DNO	IO	CLK16n		DIFFIO_RX_T93n	DIFFOUT_T93n	E22	DQ10T	DQ5T	
8D	VREFB8DNO	IO					J21	DQ10T	DQ5T	
8D	VREFB8DNO	IO	VREFB8DNO				K21			
8D	VREFB8DNO	IO			DIFFIO_RX_T94p	DIFFOUT_T94p	J22	DQ10T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_RX_T94n	DIFFOUT_T94n	K22	DQ10T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T95p	DIFFOUT_T95p	G22	DQ10T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T95n	DIFFOUT_T95n	H22			
8D	VREFB8DNO	IO			DIFFIO_RX_T96p	DIFFOUT_T96p	B22	DQS10T/CQ10T/CQn10T/QKn10T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_RX_T96n	DIFFOUT_T96n	C22	DQSn10T/QK10T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T97p	DIFFOUT_T97p	G21	DQ10T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T97n	DIFFOUT_T97n	H21			
8D	VREFB8DNO	IO			DIFFIO_RX_T98p	DIFFOUT_T98p	F23	DQ10T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_RX_T98n	DIFFOUT_T98n	G23	DQ10T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T99p	DIFFOUT_T99p	C23	DQ10T	DQ5T	
8D	VREFB8DNO	IO			DIFFIO_TX_T99n	DIFFOUT_T99n	D23			
8A	VREFB8ANO	IO			DIFFIO_RX_T154p	DIFFOUT_T154p	A23	DQ11T		
8A	VREFB8ANO	IO			DIFFIO_RX_T154n	DIFFOUT_T154n	A24	DQ11T		
8A	VREFB8ANO	IO			DIFFIO_TX_T155p	DIFFOUT_T155p	L22	DQ11T		
8A	VREFB8ANO	IO			DIFFIO_TX_T155n	DIFFOUT_T155n	K23			
8A	VREFB8ANO	IO			DIFFIO_RX_T156p	DIFFOUT_T156p	D24	DQ11T		
8A	VREFB8ANO	IO			DIFFIO_RX_T156n	DIFFOUT_T156n	E24	DQ11T		
8A	VREFB8ANO	IO			DIFFIO_TX_T157p	DIFFOUT_T157p	B24	DQ11T		



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
8A	VREFB8A0	IO			DIFFIO_TX_T157n	DIFFOUT_T157n	B25			
8A	VREFB8A0	IO			DIFFIO_RX_T158p	DIFFOUT_T158p	A26	DQS11T/CQ11T/CQn11T/QKn11T		
8A	VREFB8A0	IO			DIFFIO_RX_T158n	DIFFOUT_T158n	A27	DQSn11T/QK11T		
8A	VREFB8A0	IO			DIFFIO_TX_T159p	DIFFOUT_T159p	K24	DQ11T		
8A	VREFB8A0	IO			DIFFIO_TX_T159n	DIFFOUT_T159n	J23			
8A	VREFB8A0	IO	CLK23p		DIFFIO_RX_T160p	DIFFOUT_T160p	C25	DQ11T		
8A	VREFB8A0	IO	CLK23n		DIFFIO_RX_T160n	DIFFOUT_T160n	D25	DQ11T		
8A	VREFB8A0	IO			DIFFIO_TX_T161p	DIFFOUT_T161p	J25	DQ11T		
8A	VREFB8A0	IO			DIFFIO_TX_T161n	DIFFOUT_T161n	K25			
8A	VREFB8A0	IO	CLK22p		DIFFIO_RX_T162p	DIFFOUT_T162p	D26	DQ12T		
8A	VREFB8A0	IO	CLK22n		DIFFIO_RX_T162n	DIFFOUT_T162n	E25	DQ12T		
8A	VREFB8A0	IO					G24	DQ12T		
8A	VREFB8A0	IO	VREFB8A0				H25			
8A	VREFB8A0	IO	FPLL_TL_CLKOUT2.FPLL_TL_FBp.FPLL_TL_FB1		DIFFIO_RX_T163p	DIFFOUT_T163p	C27	DQ12T		
8A	VREFB8A0	IO	FPLL_TL_CLKOUT3.FPLL_TL_FBn		DIFFIO_RX_T163n	DIFFOUT_T163n	C26	DQ12T		
8A	VREFB8A0	IO	FPLL_TL_CLKOUT0.FPLL_TL_CLKOUTp.FPLL_TL_FB0		DIFFIO_TX_T164p	DIFFOUT_T164p	A28	DQ12T		
8A	VREFB8A0	IO	FPLL_TL_CLKOUT1.FPLL_TL_CLKOUTn		DIFFIO_TX_T164n	DIFFOUT_T164n	B27			
8A	VREFB8A0	IO	CLK21p		DIFFIO_RX_T165p	DIFFOUT_T165p	A29	DQS12T/CQ12T/CQn12T/QKn12T		
8A	VREFB8A0	IO	CLK21n		DIFFIO_RX_T165n	DIFFOUT_T165n	B28	DQSn12T/QK12T		
8A	VREFB8A0	IO			DIFFIO_TX_T166p	DIFFOUT_T166p	H24	DQ12T		
8A	VREFB8A0	IO			DIFFIO_TX_T166n	DIFFOUT_T166n	J24			
8A	VREFB8A0	IO	CLK20p		DIFFIO_RX_T167p	DIFFOUT_T167p	C28	DQ12T		
8A	VREFB8A0	IO	CLK20n		DIFFIO_RX_T167n	DIFFOUT_T167n	D27	DQ12T		
8A	VREFB8A0	IO			DIFFIO_TX_T168p	DIFFOUT_T168p	F25	DQ12T		
8A	VREFB8A0	IO	RZQ_6		DIFFIO_TX_T168n	DIFFOUT_T168n	G25			
8A		MSEL0		MSEL0			C30			
8A		MSEL1		MSEL1			D30			
8A		MSEL2		MSEL2			C29			
8A		MSEL3		MSEL3			D29			
8A		MSEL4		MSEL4			F26			
8A		CONF_DONE		CONF_DONE			B30			
8A		nSTATUS		nSTATUS			D28			
8A		nCE		nCE			E28			
8A		nCONFIG		nCONFIG			E27			
8A		GND					H26			
		GND					AA26			
		GND					AA29			
		GND					AA30			
		GND					AB27			
		GND					AB28			
		GND					AC26			
		GND					AC29			
		GND					AC30			
		GND					AD27			
		GND					AD28			
		GND					AE28			
		GND					AE29			
		GND					AE30			
		GND					E30			
		GND					F27			
		GND					F28			
		GND					G26			
		GND					G29			
		GND					G30			
		GND					H27			
		GND					H28			
		GND					J26			
		GND					J29			
		GND					J30			
		GND					K27			
		GND					K28			
		GND					L25			
		GND					L26			
		GND					L29			
		GND					L30			
		GND					M24			
		GND					M27			
		GND					M28			
		GND					N23			
		GND					N24			
		GND					N26			
		GND					N29			
		GND					N30			
		GND					P23			
		GND					P25			
		GND					P27			
		GND					P28			
		GND					R24			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					R29			
		GND					R30			
		GND					T23			
		GND					T27			
		GND					T28			
		GND					U24			
		GND					U26			
		GND					U29			
		GND					U30			
		GND					V23			
		GND					V25			
		GND					V27			
		GND					V28			
		GND					W24			
		GND					W29			
		GND					W30			
		GND					Y22			
		GND					Y23			
		GND					Y24			
		GND					Y25			
		GND					Y26			
		GND					Y27			
		GND					Y28			
		GND					AA1			
		GND					AA2			
		GND					AA5			
		GND					AB3			
		GND					AB4			
		GND					AC1			
		GND					AC2			
		GND					AC5			
		GND					AD3			
		GND					AD4			
		GND					AE1			
		GND					AE2			
		GND					AE3			
		GND					AG1			
		GND					F3			
		GND					F4			
		GND					G1			
		GND					G2			
		GND					G5			
		GND					H3			
		GND					H4			
		GND					J1			
		GND					J2			
		GND					J5			
		GND					K3			
		GND					K4			
		GND					L1			
		GND					L2			
		GND					L5			
		GND					L6			
		GND					L8			
		GND					M3			
		GND					M4			
		GND					M7			
		GND					N1			
		GND					N2			
		GND					N5			
		GND					N8			
		GND					N9			
		GND					P3			
		GND					P4			
		GND					P6			
		GND					P8			
		GND					R1			
		GND					R2			
		GND					R5			
		GND					R7			
		GND					T3			
		GND					T4			
		GND					T8			
		GND					U1			
		GND					U2			
		GND					U5			
		GND					U7			
		GND					V3			
		GND					V4			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					V6			
		GND					V8			
		GND					W1			
		GND					W2			
		GND					W7			
		GND					Y3			
		GND					Y4			
		GND					Y5			
		GND					Y6			
		GND					Y7			
		GND					Y8			
		GND					Y9			
		VCCP					L11			
		VCCP					L15			
		VCCP					L19			
		VCCP					L20			
		VCCP					L9			
		VCCP					W11			
		VCCP					W13			
		VCCP					W17			
		VCCP					W19			
		VCCP					W21			
		VCCA FPLL					T22			
		VCCA FPLL					T9			
		VCCA FPLL					P22			
		VCCA FPLL					P9			
		VCCBAT					K26			
		VCC_AUX					M12			
		VCC_AUX					M18			
		VCC_AUX					W12			
		VCC_AUX					W18			
		VCCD FPLL					V22			
		VCCD FPLL					V9			
		VCCD FPLL					N22			
		VCCD FPLL					M8			
		VCCA GXBL0					V24			
		VCCA GXBR0					V7			
		VCCA GXBL1					P24			
		VCCA GXBR1					P7			
		VCCH GXBL0					T24			
		VCCH GXBR0					T7			
		VCCH GXBL1					N25			
		VCCH GXBR1					N7			
		VCCL GXBL0					T25			
		VCCL GXBL0					T26			
		VCCL GXBR0					L6			
		VCCL GXBL1					M25			
		VCCL GXBR1					M6			
		VCCL GXBR1					N6			
		VCCR GXBL					M26			
		VCCR GXBL					R25			
		VCCR GXBL					R26			
		VCCR GXBL					W25			
		VCCR GXBL					W26			
		VCCR GXBR					M5			
		VCCR GXBR					T5			
		VCCR GXBR					T6			
		VCCR GXBR					W5			
		VCCR GXBR					W6			
		VCCT GXBL0					U25			
		VCCT GXBL0					V26			
		VCCT GXBR0					V5			
		VCCT GXBL1					P26			
		VCCT GXBR1					P5			
		VCCT GXBR1					R6			
		VCC					M10			
		VCC					M14			
		VCC					M20			
		VCC					N11			
		VCC					N13			
		VCC					N15			
		VCC					N17			
		VCC					N19			
		VCC					N21			
		VCC					P10			
		VCC					P12			
		VCC					P14			
		VCC					P16			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		VCC					P18			
		VCC					P20			
		VCC					R11			
		VCC					R13			
		VCC					R15			
		VCC					R17			
		VCC					R19			
		VCC					R21			
		VCC					T10			
		VCC					T12			
		VCC					T14			
		VCC					T18			
		VCC					T20			
		VCC					U11			
		VCC					U13			
		VCC					U15			
		VCC					U17			
		VCC					U19			
		VCC					U21			
		VCC					V10			
		VCC					V12			
		VCC					V14			
		VCC					V16			
		VCC					V18			
		VCC					V20			
		VCC					T16			
		VCCIO3A					AD26			
		VCCIO3A					AE24			
		VCCIO3A					AH24			
		VCCIO3A					AH27			
		VCCIO3D					AE19			
		VCCIO3D					AE21			
		VCCIO3D					AH21			
		VCCIO3D					AK23			
		VCCIO4A					AB5			
		VCCIO4A					AD5			
		VCCIO4A					AH3			
		VCCIO4A					AH6			
		VCCIO4B					AE10			
		VCCIO4B					AG9			
		VCCIO4B					AH10			
		VCCIO4B					AK9			
		VCCIO4C					AE12			
		VCCIO4C					AG13			
		VCCIO4C					AK13			
		VCCIO4C					AK15			
		VCCIO4D					AE16			
		VCCIO4D					AG18			
		VCCIO4D					AH16			
		VCCIO4D					AK18			
		VCCIO7A					C3			
		VCCIO7A					C6			
		VCCIO7A					F2			
		VCCIO7A					F6			
		VCCIO7B					A9			
		VCCIO7B					C9			
		VCCIO7B					D7			
		VCCIO7B					F9			
		VCCIO7C					A12			
		VCCIO7C					C12			
		VCCIO7C					C15			
		VCCIO7C					F12			
		VCCIO7D					A18			
		VCCIO7D					C18			
		VCCIO7D					F16			
		VCCIO7D					F18			
		VCCIO8A					A25			
		VCCIO8A					C24			
		VCCIO8A					F24			
		VCCIO8A					L23			
		VCCIO8D					A20			
		VCCIO8D					A22			
		VCCIO8D					C21			
		VCCIO8D					F22			
		VCCPD3					AA23			
		VCCPD3					Y21			
		VCCPD4A					AA7			
		VCCPD4BCD					Y10			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		VCCPD4BCD					Y15			
		VCCPD4BCD					Y18			
		VCCPD7A					L8			
		VCCPD7BCD					L13			
		VCCPD7BCD					L17			
		VCCPD7BCD					M9			
		VCCPD8					M22			
		VCCPD8					M23			
		VCCPGM					K5			
		VCCPGM					AA24			
		GND					AC11			
		GND					AC14			
		GND					AC17			
		GND					AC20			
		GND					AC23			
		GND					AC8			
		GND					AF11			
		GND					AF14			
		GND					AF17			
		GND					AF20			
		GND					AF23			
		GND					AF26			
		GND					AF3			
		GND					AF5			
		GND					AF8			
		GND					AH29			
		GND					AJ11			
		GND					AJ14			
		GND					AJ17			
		GND					AJ2			
		GND					AJ20			
		GND					AJ23			
		GND					AJ26			
		GND					AJ5			
		GND					AJ8			
		GND					B11			
		GND					B14			
		GND					B17			
		GND					B2			
		GND					B20			
		GND					B23			
		GND					B26			
		GND					B29			
		GND					B5			
		GND					B8			
		GND					E11			
		GND					E14			
		GND					E17			
		GND					E2			
		GND					E20			
		GND					E23			
		GND					E26			
		GND					E5			
		GND					E8			
		GND					H11			
		GND					H14			
		GND					H17			
		GND					H20			
		GND					H23			
		GND					H8			
		GND					L10			
		GND					L12			
		GND					L14			
		GND					L16			
		GND					L18			
		GND					L21			
		GND					L24			
		GND					L7			
		GND					M11			
		GND					M13			
		GND					M17			
		GND					M19			
		GND					M21			
		GND					N10			
		GND					N12			
		GND					N14			
		GND					N16			
		GND					N18			



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F896	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					N20			
		GND					P11			
		GND					P13			
		GND					P15			
		GND					P17			
		GND					P19			
		GND					P21			
		GND					R10			
		GND					R12			
		GND					R14			
		GND					R18			
		GND					R20			
		GND					T11			
		GND					T13			
		GND					T15			
		GND					T17			
		GND					T19			
		GND					T21			
		GND					U10			
		GND					U12			
		GND					U14			
		GND					U16			
		GND					U18			
		GND					U20			
		GND					V11			
		GND					V13			
		GND					V15			
		GND					V17			
		GND					V19			
		GND					V21			
		GND					W10			
		GND					W14			
		GND					W20			
		GND					Y11			
		GND					Y14			
		GND					Y17			
		GND					Y19			
		GND					R16			

Notes:

(1) For more information about pin definitions and pin connection guidelines, refer to the

[Arria V Device Family Pin Connection Guidelines](#).

(2) GXB_REFCLK pin is not supported in current Quartus II version, but will be supported in future Quartus II release version.



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		DNU					E33			
		DNU					F33			
		RREF TL					F34			
		GND					R27			
		GND					R26			
		DNU					G31			
		DNU					G32			
		GND					H34			
		GND					H33			
		DNU					J31			
		DNU					J32			
		GND					K34			
		GND					K33			
		DNU					L31			
		DNU					L32			
		GND					M34			
		GND					M33			
GXB_L1		GXB TX L8n					N31			
GXB_L1		GXB TX L8p					N32			
GXB_L1		GXB RX L8p,GXB_REFCLK_L8p					P34			
GXB_L1		GXB RX L8n,GXB_REFCLK_L8n					P33			
GXB_L1		GXB TX L7n					R31			
GXB_L1		GXB TX L7p					R32			
GXB_L1		GXB RX L7p,GXB_REFCLK_L7p					T34			
GXB_L1		GXB RX L7n,GXB_REFCLK_L7n					T33			
GXB_L1		GXB TX L6n					U31			
GXB_L1		GXB TX L6p					U32			
GXB_L1		GXB RX L6p,GXB_REFCLK_L6p					V34			
GXB_L1		GXB RX L6n,GXB_REFCLK_L6n					V33			
GXB_L1		REFCLK2Ln					U27			
GXB_L1		REFCLK2Lp					U26			
GXB_L0		REFCLK1Ln					W27			
GXB_L0		REFCLK1Lp					W26			
GXB_L0		GXB TX L5n					W31			
GXB_L0		GXB TX L5p					W32			
GXB_L0		GXB RX L5p,GXB_REFCLK_L5p					Y34			
GXB_L0		GXB RX L5n,GXB_REFCLK_L5n					Y33			
GXB_L0		GXB TX L4n					AA31			
GXB_L0		GXB TX L4p					AA32			
GXB_L0		GXB RX L4p,GXB_REFCLK_L4p					AB34			
GXB_L0		GXB RX L4n,GXB_REFCLK_L4n					AB33			
GXB_L0		GXB TX L3n					AC31			
GXB_L0		GXB TX L3p					AC32			
GXB_L0		GXB RX L3p,GXB_REFCLK_L3p					AD34			
GXB_L0		GXB RX L3n,GXB_REFCLK_L3n					AD33			
GXB_L0		GXB TX L2n					AE31			
GXB_L0		GXB TX L2p					AE32			
GXB_L0		GXB RX L2p,GXB_REFCLK_L2p					AF34			
GXB_L0		GXB RX L2n,GXB_REFCLK_L2n					AF33			
GXB_L0		GXB TX L1n					AG31			
GXB_L0		GXB TX L1p					AG32			
GXB_L0		GXB RX L1p,GXB_REFCLK_L1p					AH34			
GXB_L0		GXB RX L1n,GXB_REFCLK_L1n					AH33			
GXB_L0		GXB TX L0n					AJ31			
GXB_L0		GXB TX L0p					AJ32			
GXB_L0		GXB RX L0p,GXB_REFCLK_L0p					AK34			
GXB_L0		GXB RX L0n,GXB_REFCLK_L0n					AK33			
GXB_L0		REFCLK0Ln					AA28			
GXB_L0		REFCLK0Lp					AA27			
		DNU					AL32			
3A		TDO		TDO			AC28			
3A		TMS		TMS			AF30			
3A		TCK		TCK			AN32			
3A		TDI		TDI			AC29			
3A		DCLK		DCLK			AM32			
3A		nCS0		DATA4			AM34			
3A		AS_DATA3		DATA3			AM33			
3A		AS_DATA2		DATA2			AP33			
3A		AS_DATA1		DATA1			AN33			
3A		AS_DATA0,ASDO		DATA0			AN34			
3A	VREFB3AN0	IO	RZQ_0		DIFFIO_TX_B1n	DIFFOUT_B1n	AL31			
3A	VREFB3AN0	IO			DIFFIO_TX_B1p	DIFFOUT_B1p	AM31	DQ1B		
3A	VREFB3AN0	IO	CLK0n		DIFFIO_RX_B2n	DIFFOUT_B2n	AP31	DQ1B		
3A	VREFB3AN0	IO	CLK0p		DIFFIO_RX_B2p	DIFFOUT_B2p	AP32	DQ1B		



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3A	VREFB3A0	IO			DIFFIO_TX_B3n	DIFFOUT_B3n	AD27			
3A	VREFB3A0	IO			DIFFIO_TX_B3p	DIFFOUT_B3p	AD26	DQ1B		
3A	VREFB3A0	IO	CLK1n		DIFFIO_RX_B4n	DIFFOUT_B4n	AJ29	DQSn1B/QK1B		
3A	VREFB3A0	IO	CLK1p		DIFFIO_RX_B4p	DIFFOUT_B4p	AK29	DQS1B/CQ1B/CQn1B/QKn1B		
3A	VREFB3A0	IO	FPLL_BL_CLKOUT1,FPLL_BL_CLKOUTn		DIFFIO_TX_B5n	DIFFOUT_B5n	AL30			
3A	VREFB3A0	IO	FPLL_BL_CLKOUT0,FPLL_BL_CLKOUTp,FPLL_BL_FB0		DIFFIO_TX_B5p	DIFFOUT_B5p	AM30	DQ1B		
3A	VREFB3A0	IO	FPLL_BL_CLKOUT3,FPLL_BL_FBn		DIFFIO_RX_B6n	DIFFOUT_B6n	AN30	DQ1B		
3A	VREFB3A0	IO	FPLL_BL_CLKOUT2,FPLL_BL_FBp,FPLL_BL_FB1		DIFFIO_RX_B6p	DIFFOUT_B6p	AP30	DQ1B		
3A	VREFB3A0	IO	VREFB3A0				AE27			
3A	VREFB3A0	IO					AF28	DQ1B		
3A	VREFB3A0	IO	CLK2n		DIFFIO_RX_B7n	DIFFOUT_B7n	AH28	DQ1B		
3A	VREFB3A0	IO	CLK2p		DIFFIO_RX_B7p	DIFFOUT_B7p	AJ28	DQ1B		
3A	VREFB3A0	IO			DIFFIO_TX_B8n	DIFFOUT_B8n	AL29			
3A	VREFB3A0	IO			DIFFIO_TX_B8p	DIFFOUT_B8p	AM29	DQ2B	DQ1B	
3A	VREFB3A0	IO	CLK3n		DIFFIO_RX_B9n	DIFFOUT_B9n	AN29	DQ2B	DQ1B	
3A	VREFB3A0	IO	CLK3p		DIFFIO_RX_B9p	DIFFOUT_B9p	AP29	DQ2B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_TX_B10n	DIFFOUT_B10n	AE29			
3A	VREFB3A0	IO			DIFFIO_TX_B10p	DIFFOUT_B10p	AF29	DQ2B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B11n	DIFFOUT_B11n	AG27	DQSn2B/QK2B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B11p	DIFFOUT_B11p	AH27	DQS2B/CQ2B/CQn2B/QKn2B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_TX_B12n	DIFFOUT_B12n	AL28			
3A	VREFB3A0	IO			DIFFIO_TX_B12p	DIFFOUT_B12p	AM28	DQ2B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B13n	DIFFOUT_B13n	AP27	DQ2B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B13p	DIFFOUT_B13p	AP28	DQ2B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_TX_B14n	DIFFOUT_B14n	AG29			
3A	VREFB3A0	IO			DIFFIO_TX_B14p	DIFFOUT_B14p	AH29	DQ2B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B15n	DIFFOUT_B15n	AK27	DQ2B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B15p	DIFFOUT_B15p	AL27	DQ2B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_TX_B16n	DIFFOUT_B16n	AG26			
3A	VREFB3A0	IO			DIFFIO_TX_B16p	DIFFOUT_B16p	AH26	DQ3B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B17n	DIFFOUT_B17n	AJ26	DQ3B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B17p	DIFFOUT_B17p	AK26	DQ3B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_TX_B18n	DIFFOUT_B18n	AD29			
3A	VREFB3A0	IO			DIFFIO_TX_B18p	DIFFOUT_B18p	AE28	DQ3B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B19n	DIFFOUT_B19n	AL26	DQSn3B/QK3B	DQSn1B/QK1B	
3A	VREFB3A0	IO			DIFFIO_RX_B19p	DIFFOUT_B19p	AM26	DQS3B/CQ3B/CQn3B/QKn3B	DQS1B/CQ1B/CQn1B/QKn1B	
3A	VREFB3A0	IO			DIFFIO_TX_B20n	DIFFOUT_B20n	AN27			
3A	VREFB3A0	IO			DIFFIO_TX_B20p	DIFFOUT_B20p	AN26	DQ3B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B21n	DIFFOUT_B21n	AP25	DQ3B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B21p	DIFFOUT_B21p	AP26	DQ3B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_TX_B22n	DIFFOUT_B22n	AE26			
3A	VREFB3A0	IO			DIFFIO_TX_B22p	DIFFOUT_B22p	AF26	DQ3B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B23n	DIFFOUT_B23n	AL25	DQ3B	DQ1B	
3A	VREFB3A0	IO			DIFFIO_RX_B23p	DIFFOUT_B23p	AM25	DQ3B	DQ1B	
3B	VREFB3B0	IO			DIFFIO_TX_B24n	DIFFOUT_B24n	AE23			
3B	VREFB3B0	IO			DIFFIO_TX_B24p	DIFFOUT_B24p	AE24	DQ4B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B25n	DIFFOUT_B25n	AC24	DQ4B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B25p	DIFFOUT_B25p	AC25	DQ4B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_TX_B26n	DIFFOUT_B26n	AA25			
3B	VREFB3B0	IO			DIFFIO_TX_B26p	DIFFOUT_B26p	AB25	DQ4B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B27n	DIFFOUT_B27n	AD24	DQSn4B/QK4B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B27p	DIFFOUT_B27p	AE25	DQS4B/CQ4B/CQn4B/QKn4B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_TX_B28n	DIFFOUT_B28n	AF25			
3B	VREFB3B0	IO			DIFFIO_TX_B28p	DIFFOUT_B28p	AG24	DQ4B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B29n	DIFFOUT_B29n	AH24	DQ4B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B29p	DIFFOUT_B29p	AH25	DQ4B	DQ2B	DQ1B
3B	VREFB3B0	IO	VREFB3B0				Y23			
3B	VREFB3B0	IO					AB24	DQ4B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B30n	DIFFOUT_B30n	AJ25	DQ4B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B30p	DIFFOUT_B30p	AK24	DQ4B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_TX_B31n	DIFFOUT_B31n	AK23			
3B	VREFB3B0	IO			DIFFIO_TX_B31p	DIFFOUT_B31p	AL24	DQ5B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B32n	DIFFOUT_B32n	AF23	DQ5B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B32p	DIFFOUT_B32p	AG23	DQ5B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_TX_B33n	DIFFOUT_B33n	AC23			
3B	VREFB3B0	IO			DIFFIO_TX_B33p	DIFFOUT_B33p	AD23	DQ5B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B34n	DIFFOUT_B34n	AH23	DQSn5B/QK5B	DQSn2B/QK2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B34p	DIFFOUT_B34p	AJ23	DQS5B/CQ5B/CQn5B/QKn5B	DQS2B/CQ2B/CQn2B/QKn2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_TX_B35n	DIFFOUT_B35n	AL23			
3B	VREFB3B0	IO			DIFFIO_TX_B35p	DIFFOUT_B35p	AM23	DQ5B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B36n	DIFFOUT_B36n	AN23	DQ5B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_RX_B36p	DIFFOUT_B36p	AN24	DQ5B	DQ2B	DQ1B
3B	VREFB3B0	IO			DIFFIO_TX_B37n	DIFFOUT_B37n	AA23			
3B	VREFB3B0	IO			DIFFIO_TX_B37p	DIFFOUT_B37p	AB23	DQ5B	DQ2B	DQ1B



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3B	VREFB3BN0	IO			DIFFIO_RX_B38n	DIFFOUT_B38n	AP22	DQ5B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO_RX_B38p	DIFFOUT_B38p	AP23	DQ5B	DQ2B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_TX_B39n	DIFFOUT_B39n	AE21			
3C	VREFB3CN0	IO			DIFFIO_TX_B39p	DIFFOUT_B39p	AE22	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B40n	DIFFOUT_B40n	AL21	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B40p	DIFFOUT_B40p	AL22	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_TX_B41n	DIFFOUT_B41n	AB22			
3C	VREFB3CN0	IO			DIFFIO_TX_B41p	DIFFOUT_B41p	AC22	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B42n	DIFFOUT_B42n	AH21	DQSn6B/QK6B	DQ3B	DQSn1B/QK1B
3C	VREFB3CN0	IO			DIFFIO_RX_B42p	DIFFOUT_B42p	AH22	DQSn6B/CQ6B/CQn6B/QKn6B	DQ3B	DQSn1B/CQ1B/CQn1B/QKn1B
3C	VREFB3CN0	IO			DIFFIO_TX_B43n	DIFFOUT_B43n	AF22			
3C	VREFB3CN0	IO			DIFFIO_TX_B43p	DIFFOUT_B43p	AG21	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B44n	DIFFOUT_B44n	AJ22	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B44p	DIFFOUT_B44p	AK21	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_TX_B45n	DIFFOUT_B45n	AA21			
3C	VREFB3CN0	IO			DIFFIO_TX_B45p	DIFFOUT_B45p	AB21	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B46n	DIFFOUT_B46n	AM22	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B46p	DIFFOUT_B46p	AN21	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_TX_B47n	DIFFOUT_B47n	AC21			
3C	VREFB3CN0	IO			DIFFIO_TX_B47p	DIFFOUT_B47p	AD21	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B48n	DIFFOUT_B48n	AN20	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B48p	DIFFOUT_B48p	AP20	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_TX_B49n	DIFFOUT_B49n	AA20			
3C	VREFB3CN0	IO			DIFFIO_TX_B49p	DIFFOUT_B49p	AB20	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B50n	DIFFOUT_B50n	AL20	DQSn7B/QK7B	DQSn3B/QK3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B50p	DIFFOUT_B50p	AM20	DQSn7B/CQ7B/CQn7B/QKn7B	DQSn3B/CQ3B/CQn3B/QKn3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_TX_B51n	DIFFOUT_B51n	AJ20			
3C	VREFB3CN0	IO			DIFFIO_TX_B51p	DIFFOUT_B51p	AK20	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B52n	DIFFOUT_B52n	AG20	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B52p	DIFFOUT_B52p	AH20	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO	VREFB3CN0				AC20			
3C	VREFB3CN0	IO					AD20	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B53n	DIFFOUT_B53n	AE20	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B53p	DIFFOUT_B53p	AF20	DQ7B	DQ3B	DQ1B
3D	VREFB3DN0	IO			DIFFIO_TX_B70n	DIFFOUT_B70n	AH19			
3D	VREFB3DN0	IO			DIFFIO_TX_B70p	DIFFOUT_B70p	AJ19	DQ8B	DQ4B	
3D	VREFB3DN0	IO			DIFFIO_RX_B71n	DIFFOUT_B71n	AL19	DQ8B	DQ4B	
3D	VREFB3DN0	IO			DIFFIO_RX_B71p	DIFFOUT_B71p	AM19	DQ8B	DQ4B	
3D	VREFB3DN0	IO			DIFFIO_TX_B72n	DIFFOUT_B72n	AB19			
3D	VREFB3DN0	IO			DIFFIO_TX_B72p	DIFFOUT_B72p	AC19	DQ8B	DQ4B	
3D	VREFB3DN0	IO			DIFFIO_RX_B73n	DIFFOUT_B73n	AN18	DQSn8B/QK8B	DQ4B	
3D	VREFB3DN0	IO			DIFFIO_RX_B73p	DIFFOUT_B73p	AP19	DQSn8B/CQ8B/CQn8B/QKn8B	DQ4B	
3D	VREFB3DN0	IO			DIFFIO_TX_B74n	DIFFOUT_B74n	AE19			
3D	VREFB3DN0	IO			DIFFIO_TX_B74p	DIFFOUT_B74p	AF19	DQ8B	DQ4B	
3D	VREFB3DN0	IO			DIFFIO_RX_B75n	DIFFOUT_B75n	AK18	DQ8B	DQ4B	
3D	VREFB3DN0	IO			DIFFIO_RX_B75p	DIFFOUT_B75p	AL18	DQ8B	DQ4B	
3D	VREFB3DN0	IO	VREFB3DN0				AB18			
3D	VREFB3DN0	IO					AA18	DQ8B	DQ4B	
3D	VREFB3DN0	IO	CLK4n		DIFFIO_RX_B76n	DIFFOUT_B76n	AG18	DQ8B	DQ4B	
3D	VREFB3DN0	IO	CLK4p		DIFFIO_RX_B76p	DIFFOUT_B76p	AH18	DQ8B	DQ4B	
3D	VREFB3DN0	IO			DIFFIO_TX_B77n	DIFFOUT_B77n	AN17			
3D	VREFB3DN0	IO			DIFFIO_TX_B77p	DIFFOUT_B77p	AP17	DQ9B	DQ4B	
3D	VREFB3DN0	IO	CLK5n		DIFFIO_RX_B78n	DIFFOUT_B78n	AG17	DQ9B	DQ4B	
3D	VREFB3DN0	IO	CLK5p		DIFFIO_RX_B78p	DIFFOUT_B78p	AH17	DQ9B	DQ4B	
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT1,FPLL_BC_CLKOUTn		DIFFIO_TX_B79n	DIFFOUT_B79n	AA17			
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT0,FPLL_BC_CLKOUTp,FPLL_BC_FB0		DIFFIO_TX_B79p	DIFFOUT_B79p	AB17	DQ9B	DQ4B	
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT3,FPLL_BC_FBn		DIFFIO_RX_B80n	DIFFOUT_B80n	AJ17	DQSn9B/QK9B	DQSn4B/QK4B	
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT2,FPLL_BC_FBp,FPLL_BC_FB1		DIFFIO_RX_B80p	DIFFOUT_B80p	AK17	DQSn9B/CQ9B/CQn9B/QKn9B	DQSn4B/CQ4B/CQn4B/QKn4B	
3D	VREFB3DN0	IO			DIFFIO_TX_B81n	DIFFOUT_B81n	AL17			
3D	VREFB3DN0	IO			DIFFIO_TX_B81p	DIFFOUT_B81p	AM17	DQ9B	DQ4B	
3D	VREFB3DN0	IO	CLK6n		DIFFIO_RX_B82n	DIFFOUT_B82n	AE17	DQ9B	DQ4B	
3D	VREFB3DN0	IO	CLK6p		DIFFIO_RX_B82p	DIFFOUT_B82p	AF17	DQ9B	DQ4B	
3D	VREFB3DN0	IO			DIFFIO_TX_B83n	DIFFOUT_B83n	AC17			
3D	VREFB3DN0	IO			DIFFIO_TX_B83p	DIFFOUT_B83p	AC18	DQ9B	DQ4B	
3D	VREFB3DN0	IO	CLK7n		DIFFIO_RX_B84n	DIFFOUT_B84n	AD17	DQ9B	DQ4B	
3D	VREFB3DN0	IO	CLK7p		DIFFIO_RX_B84p	DIFFOUT_B84p	AE18	DQ9B	DQ4B	
	VCCD_FPLL						Y17			
	VCCA_FPLL						Y18			
	DNU						AD18			
4D	VREFB4DN0	IO			DIFFIO_TX_B93n	DIFFOUT_B93n	AP16			
4D	VREFB4DN0	IO			DIFFIO_TX_B93p	DIFFOUT_B93p	AN15	DQ10B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B94n	DIFFOUT_B94n	AH16	DQ10B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B94p	DIFFOUT_B94p	AJ16	DQ10B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_TX_B95n	DIFFOUT_B95n	AE16			



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Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
4D	VREFB4DN0	IO			DIFFIO_TX_B95p	DIFFOUT_B95p	AF16	DQ10B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B96n	DIFFOUT_B96n	Y15	DQSn10B/QK10B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B96p	DIFFOUT_B96p	AA15	DQS10B/CQ10B/CQn10B/QKn10B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_TX_B97n	DIFFOUT_B97n	AB16			
4D	VREFB4DN0	IO			DIFFIO_TX_B97p	DIFFOUT_B97p	AC16	DQ10B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B98n	DIFFOUT_B98n	AL16	DQ10B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B98p	DIFFOUT_B98p	AM16	DQ10B	DQ5B	
4D	VREFB4DN0	IO	VREFB4DN0				AJ14			
4D	VREFB4DN0	IO					AK14	DQ10B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B99n	DIFFOUT_B99n	AL14	DQ10B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B99p	DIFFOUT_B99p	AM14	DQ10B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_TX_B100n	DIFFOUT_B100n	AA14			
4D	VREFB4DN0	IO			DIFFIO_TX_B100p	DIFFOUT_B100p	AB15	DQ11B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B101n	DIFFOUT_B101n	AK15	DQ11B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B101p	DIFFOUT_B101p	AL15	DQ11B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_TX_B102n	DIFFOUT_B102n	AG14			
4D	VREFB4DN0	IO			DIFFIO_TX_B102p	DIFFOUT_B102p	AH14	DQ11B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B103n	DIFFOUT_B103n	AG15	DQSn11B/QK11B	DQSn5B/QK5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B103p	DIFFOUT_B103p	AH15	DQS11B/CQ11B/CQn11B/QKn11B	DQSn5B/CQ5B/CQn5B/QKn5B	
4D	VREFB4DN0	IO			DIFFIO_TX_B104n	DIFFOUT_B104n	AD15			
4D	VREFB4DN0	IO			DIFFIO_TX_B104p	DIFFOUT_B104p	AE15	DQ11B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B105n	DIFFOUT_B105n	AE14	DQ11B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B105p	DIFFOUT_B105p	AF14	DQ11B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_TX_B106n	DIFFOUT_B106n	AB14			
4D	VREFB4DN0	IO			DIFFIO_TX_B106p	DIFFOUT_B106p	AC15	DQ11B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B107n	DIFFOUT_B107n	AC14	DQ11B	DQ5B	
4D	VREFB4DN0	IO			DIFFIO_RX_B107p	DIFFOUT_B107p	AD14	DQ11B	DQ5B	
4C	VREFB4CN0	IO			DIFFIO_TX_B108n	DIFFOUT_B108n	AB13			
4C	VREFB4CN0	IO			DIFFIO_TX_B108p	DIFFOUT_B108p	AC13	DQ12B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B109n	DIFFOUT_B109n	AN14	DQ12B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B109p	DIFFOUT_B109p	AP14	DQ12B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_TX_B110n	DIFFOUT_B110n	AN12			
4C	VREFB4CN0	IO			DIFFIO_TX_B110p	DIFFOUT_B110p	AP13	DQ12B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B111n	DIFFOUT_B111n	AL13	DQSn12B/QK12B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B111p	DIFFOUT_B111p	AM13	DQS12B/CQ12B/CQn12B/QKn12B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_TX_B112n	DIFFOUT_B112n	Y11			
4C	VREFB4CN0	IO			DIFFIO_TX_B112p	DIFFOUT_B112p	AA12	DQ12B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B113n	DIFFOUT_B113n	AK12	DQ12B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B113p	DIFFOUT_B113p	AL12	DQ12B	DQ6B	DQ2B
4C	VREFB4CN0	IO	VREFB4CN0				AK11			
4C	VREFB4CN0	IO					AL11	DQ12B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B114n	DIFFOUT_B114n	AH13	DQ12B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B114p	DIFFOUT_B114p	AJ13	DQ12B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_TX_B115n	DIFFOUT_B115n	AB11			
4C	VREFB4CN0	IO			DIFFIO_TX_B115p	DIFFOUT_B115p	AB12	DQ13B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B116n	DIFFOUT_B116n	AG12	DQ13B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B116p	DIFFOUT_B116p	AH12	DQ13B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_TX_B117n	DIFFOUT_B117n	AH11			
4C	VREFB4CN0	IO			DIFFIO_TX_B117p	DIFFOUT_B117p	AJ11	DQ13B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B118n	DIFFOUT_B118n	AE13	DQSn13B/QK13B	DQSn6B/QK6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B118p	DIFFOUT_B118p	AF13	DQS13B/CQ13B/CQn13B/QKn13B	DQSn6B/CQ6B/CQn6B/QKn6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_TX_B119n	DIFFOUT_B119n	AC11			
4C	VREFB4CN0	IO			DIFFIO_TX_B119p	DIFFOUT_B119p	AC12	DQ13B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B120n	DIFFOUT_B120n	AD12	DQ13B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B120p	DIFFOUT_B120p	AE12	DQ13B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_TX_B121n	DIFFOUT_B121n	AD11			
4C	VREFB4CN0	IO			DIFFIO_TX_B121p	DIFFOUT_B121p	AE11	DQ13B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B122n	DIFFOUT_B122n	AF11	DQ13B	DQ6B	DQ2B
4C	VREFB4CN0	IO			DIFFIO_RX_B122p	DIFFOUT_B122p	AG11	DQ13B	DQ6B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_TX_B123n	DIFFOUT_B123n	AD9			
4B	VREFB4BN0	IO			DIFFIO_TX_B123p	DIFFOUT_B123p	AE9	DQ14B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B124n	DIFFOUT_B124n	AM11	DQ14B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B124p	DIFFOUT_B124p	AN11	DQ14B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_TX_B125n	DIFFOUT_B125n	AL10			
4B	VREFB4BN0	IO			DIFFIO_TX_B125p	DIFFOUT_B125p	AM10	DQ14B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B126n	DIFFOUT_B126n	AP10	DQSn14B/QK14B	DQ7B	DQSn2B/QK2B
4B	VREFB4BN0	IO			DIFFIO_RX_B126p	DIFFOUT_B126p	AP11	DQS14B/CQ14B/CQn14B/QKn14B	DQ7B	DQS2B/CQ2B/CQn2B/QKn2B
4B	VREFB4BN0	IO			DIFFIO_TX_B127n	DIFFOUT_B127n	AA10			
4B	VREFB4BN0	IO			DIFFIO_TX_B127p	DIFFOUT_B127p	AB10	DQ14B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B128n	DIFFOUT_B128n	AH10	DQ14B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B128p	DIFFOUT_B128p	AJ10	DQ14B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_TX_B129n	DIFFOUT_B129n	AK9			
4B	VREFB4BN0	IO			DIFFIO_TX_B129p	DIFFOUT_B129p	AL9	DQ14B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B130n	DIFFOUT_B130n	AN9	DQ14B	DQ7B	DQ2B



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Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
4B	VREFB4BN0	IO			DIFFIO_RX_B130p	DIFFOUT_B130p	AN8	DQ14B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_TX_B131n	DIFFOUT_B131n	AC9			
4B	VREFB4BN0	IO			DIFFIO_TX_B131p	DIFFOUT_B131p	AC10	DQ15B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B132n	DIFFOUT_B132n	AG9	DQ15B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B132p	DIFFOUT_B132p	AH9	DQ15B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_TX_B133n	DIFFOUT_B133n	AE10			
4B	VREFB4BN0	IO			DIFFIO_TX_B133p	DIFFOUT_B133p	AF10	DQ15B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B134n	DIFFOUT_B134n	AL8	DQSn15B/QK15B	DQSn7B/QK7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B134p	DIFFOUT_B134p	AM8	DQSn15B/CQ15B/CQn15B/QKn15B	DQSn7B/CQ7B/CQn7B/QKn7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_TX_B135n	DIFFOUT_B135n	AC8			
4B	VREFB4BN0	IO			DIFFIO_TX_B135p	DIFFOUT_B135p	AD8	DQ15B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B136n	DIFFOUT_B136n	AJ8	DQ15B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B136p	DIFFOUT_B136p	AK8	DQ15B	DQ7B	DQ2B
4B	VREFB4BN0	IO	VREFB4BN0				AE8			
4B	VREFB4BN0	IO					AF8	DQ15B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B137n	DIFFOUT_B137n	AG8	DQ15B	DQ7B	DQ2B
4B	VREFB4BN0	IO			DIFFIO_RX_B137p	DIFFOUT_B137p	AH8	DQ15B	DQ7B	DQ2B
4A	VREFB4AN0	IO		DATA10	DIFFIO_TX_B154n	DIFFOUT_B154n	AP8			
4A	VREFB4AN0	IO		DATA11	DIFFIO_TX_B154p	DIFFOUT_B154p	AP7	DQ16B	DQ8B	
4A	VREFB4AN0	IO		DATA5	DIFFIO_RX_B155n	DIFFOUT_B155n	AL7	DQ16B	DQ8B	
4A	VREFB4AN0	IO		DATA6	DIFFIO_RX_B155p	DIFFOUT_B155p	AM7	DQ16B	DQ8B	
4A	VREFB4AN0	IO		DATA12	DIFFIO_TX_B156n	DIFFOUT_B156n	AM6			
4A	VREFB4AN0	IO		DATA13	DIFFIO_TX_B156p	DIFFOUT_B156p	AN6	DQ16B	DQ8B	
4A	VREFB4AN0	IO		DATA7	DIFFIO_RX_B157n	DIFFOUT_B157n	AP6	DQSn16B/QK16B	DQ8B	
4A	VREFB4AN0	IO		DATA8	DIFFIO_RX_B157p	DIFFOUT_B157p	AP5	DQSn16B/CQ16B/CQn16B/QKn16B	DQ8B	
4A	VREFB4AN0	IO		DATA14	DIFFIO_TX_B158n	DIFFOUT_B158n	AE7			
4A	VREFB4AN0	IO		DATA15	DIFFIO_TX_B158p	DIFFOUT_B158p	AF7	DQ16B	DQ8B	
4A	VREFB4AN0	IO		DATA9	DIFFIO_RX_B159n	DIFFOUT_B159n	AM5	DQ16B	DQ8B	
4A	VREFB4AN0	IO		CLKUSR	DIFFIO_RX_B159p	DIFFOUT_B159p	AN5	DQ16B	DQ8B	
4A	VREFB4AN0	IO	VREFB4AN0				AK6			
4A	VREFB4AN0	IO					AL6	DQ16B	DQ8B	
4A	VREFB4AN0	IO	CLK11n		DIFFIO_RX_B160n	DIFFOUT_B160n	AH7	DQ16B	DQ8B	
4A	VREFB4AN0	IO	CLK11p		DIFFIO_RX_B160p	DIFFOUT_B160p	AJ7	DQ16B	DQ8B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT1,FPLL_BR_CLKOUTn		DIFFIO_TX_B161n	DIFFOUT_B161n	AD6			
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT0,FPLL_BR_CLKOUTp,FPLL_BR_FB0		DIFFIO_TX_B161p	DIFFOUT_B161p	AE6	DQ17B	DQ8B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT3,FPLL_BR_FBn		DIFFIO_RX_B162n	DIFFOUT_B162n	AP3	DQ17B	DQ8B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT2,FPLL_BR_FBp,FPLL_BR_FB1		DIFFIO_RX_B162p	DIFFOUT_B162p	AP4	DQ17B	DQ8B	
4A	VREFB4AN0	IO			DIFFIO_TX_B163n	DIFFOUT_B163n	AH6			
4A	VREFB4AN0	IO			DIFFIO_TX_B163p	DIFFOUT_B163p	AJ6	DQ17B	DQ8B	
4A	VREFB4AN0	IO	CLK10n		DIFFIO_RX_B164n	DIFFOUT_B164n	AP2	DQSn17B/QK17B	DQSn8B/QK8B	
4A	VREFB4AN0	IO	CLK10p		DIFFIO_RX_B164p	DIFFOUT_B164p	AN3	DQSn17B/CQ17B/CQn17B/QKn17B	DQSn8B/CQ8B/CQn8B/QKn8B	
4A	VREFB4AN0	IO			DIFFIO_TX_B165n	DIFFOUT_B165n	AC7			
4A	VREFB4AN0	IO			DIFFIO_TX_B165p	DIFFOUT_B165p	AC6	DQ17B	DQ8B	
4A	VREFB4AN0	IO	CLK9n		DIFFIO_RX_B166n	DIFFOUT_B166n	AL4	DQ17B	DQ8B	
4A	VREFB4AN0	IO	CLK9p		DIFFIO_RX_B166p	DIFFOUT_B166p	AL5	DQ17B	DQ8B	
4A	VREFB4AN0	IO			DIFFIO_TX_B167n	DIFFOUT_B167n	AM3			
4A	VREFB4AN0	IO	RZQ_1		DIFFIO_TX_B167p	DIFFOUT_B167p	AM4	DQ17B	DQ8B	
4A	VREFB4AN0	IO	CLK8n		DIFFIO_RX_B168n	DIFFOUT_B168n	AF6	DQ17B	DQ8B	
4A	VREFB4AN0	IO	CLK8p		DIFFIO_RX_B168p	DIFFOUT_B168p	AG6	DQ17B	DQ8B	
		RREF_BR					AM1			
		DNU					AM2			
		DNU					AN2			
		GND					AA8			
		GND					AA7			
		GND					AK2			
		GND					AK1			
		DNU					AJ3			
		DNU					AJ4			
		GND					AH2			
		GND					AH1			
		DNU					AG3			
		DNU					AG4			
		GND					AF2			
		GND					AF1			
		DNU					AE3			
		DNU					AE4			
		GND					AD2			
		GND					AD1			
		DNU					AC3			
		DNU					AC4			
		GND					AB2			
		GND					AB1			
		DNU					AA3			
		DNU					AA4			



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Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					Y2			
		GND					Y1			
		DNU					W3			
		DNU					W4			
		GND					W9			
		GND					W8			
		GND					U9			
		GND					U8			
		GND					V2			
		GND					V1			
		DNU					U3			
		DNU					U4			
		GND					T2			
		GND					T1			
		DNU					R3			
		DNU					R4			
		GND					P2			
		GND					P1			
		DNU					N3			
		DNU					N4			
		GND					M2			
		GND					M1			
		DNU					L3			
		DNU					L4			
		GND					K2			
		GND					K1			
		DNU					J3			
		DNU					J4			
		GND					H2			
		GND					H1			
		DNU					G3			
		DNU					G4			
		GND					R9			
		GND					R8			
		DNU					K5			
7A		GND					H5			
7A	VREFB7A0	IO	CLK12p		DIFFIO_RX_T1p	DIFFOUT_T1p	E3	DQ1T	DQ1T	
7A	VREFB7A0	IO	CLK12n		DIFFIO_RX_T1n	DIFFOUT_T1n	E4	DQ1T	DQ1T	
7A	VREFB7A0	IO	RZQ_5		DIFFIO_TX_T2p	DIFFOUT_T2p	E1	DQ1T	DQ1T	
7A	VREFB7A0	IO			DIFFIO_TX_T2n	DIFFOUT_T2n	F1			
7A	VREFB7A0	IO	CLK13p		DIFFIO_RX_T3p	DIFFOUT_T3p	D1	DQ1T	DQ1T	
7A	VREFB7A0	IO	CLK13n		DIFFIO_RX_T3n	DIFFOUT_T3n	E2	DQ1T	DQ1T	
7A	VREFB7A0	IO			DIFFIO_TX_T4p	DIFFOUT_T4p	G6	DQ1T	DQ1T	
7A	VREFB7A0	IO			DIFFIO_TX_T4n	DIFFOUT_T4n	H6			
7A	VREFB7A0	IO	CLK14p		DIFFIO_RX_T5p	DIFFOUT_T5p	C1	DQS1T/CQ1T/CQn1T/QKn1T	DQS1T/CQ1T/CQn1T/QKn1T	
7A	VREFB7A0	IO	CLK14n		DIFFIO_RX_T5n	DIFFOUT_T5n	C2	DQSn1T/QK1T	DQSn1T/QK1T	
7A	VREFB7A0	IO			DIFFIO_TX_T6p	DIFFOUT_T6p	E5	DQ1T	DQ1T	
7A	VREFB7A0	IO			DIFFIO_TX_T6n	DIFFOUT_T6n	F6			
7A	VREFB7A0	IO	FPLL_TR_CLKOUT2,FPLL_TR_FBp,FPLL_TR_FB1		DIFFIO_RX_T7p	DIFFOUT_T7p	G3	DQ1T	DQ1T	
7A	VREFB7A0	IO	FPLL_TR_CLKOUT3,FPLL_TR_FBn		DIFFIO_RX_T7n	DIFFOUT_T7n	D3	DQ1T	DQ1T	
7A	VREFB7A0	IO	FPLL_TR_CLKOUT0,FPLL_TR_CLKOUTp,FPLL_TR_FB0		DIFFIO_TX_T8p	DIFFOUT_T8p	J6	DQ1T	DQ1T	
7A	VREFB7A0	IO	FPLL_TR_CLKOUT1,FPLL_TR_CLKOUTn		DIFFIO_TX_T8n	DIFFOUT_T8n	K6			
7A	VREFB7A0	IO	CLK15p		DIFFIO_RX_T9p	DIFFOUT_T9p	A3	DQ2T	DQ1T	
7A	VREFB7A0	IO	CLK15n		DIFFIO_RX_T9n	DIFFOUT_T9n	B3	DQ2T	DQ1T	
7A	VREFB7A0	IO					L6	DQ2T	DQ1T	
7A	VREFB7A0	IO	VREFB7A0				M7			
7A	VREFB7A0	IO		DEV OE	DIFFIO_RX_T10p	DIFFOUT_T10p	C6	DQ2T	DQ1T	
7A	VREFB7A0	IO		DEV CLRn	DIFFIO_RX_T10n	DIFFOUT_T10n	D5	DQ2T	DQ1T	
7A	VREFB7A0	IO			DIFFIO_TX_T11p	DIFFOUT_T11p	A2	DQ2T	DQ1T	
7A	VREFB7A0	IO			DIFFIO_TX_T11n	DIFFOUT_T11n	B2			
7A	VREFB7A0	IO		CvP CONFDONE	DIFFIO_RX_T12p	DIFFOUT_T12p	B5	DQS2T/CQ2T/CQn2T/QKn2T	DQ1T	
7A	VREFB7A0	IO		CRC ERROR	DIFFIO_RX_T12n	DIFFOUT_T12n	C4	DQSn2T/QK2T	DQ1T	
7A	VREFB7A0	IO		PR DONE	DIFFIO_TX_T13p	DIFFOUT_T13p	A5	DQ2T	DQ1T	
7A	VREFB7A0	IO		PR REQUEST	DIFFIO_TX_T13n	DIFFOUT_T13n	A4			
7A	VREFB7A0	IO		INIT DONE	DIFFIO_RX_T14p	DIFFOUT_T14p	D6	DQ2T	DQ1T	
7A	VREFB7A0	IO		nCEO	DIFFIO_RX_T14n	DIFFOUT_T14n	E6	DQ2T	DQ1T	
7A	VREFB7A0	IO		PR ERROR	DIFFIO_TX_T15p	DIFFOUT_T15p	J7	DQ2T	DQ1T	
7A	VREFB7A0	IO		PR READY	DIFFIO_TX_T15n	DIFFOUT_T15n	K7			
7B	VREFB7B0	IO			DIFFIO_RX_T32p	DIFFOUT_T32p	K9	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_RX_T32n	DIFFOUT_T32n	K8	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO	VREFB7B0				M10	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO					P11			
7B	VREFB7B0	IO			DIFFIO_RX_T33p	DIFFOUT_T33p	C8	DQ3T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_RX_T33n	DIFFOUT_T33n	D7	DQ3T	DQ2T	DQ1T



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
7B	VREFB7BN0	IO			DIFFIO_TX_T34p	DIFFOUT_T34p	E8	DQ3T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T34n	DIFFOUT_T34n	F7			
7B	VREFB7BN0	IO			DIFFIO_RX_T35p	DIFFOUT_T35p	M10	DQS3T/CQ3T/CQn3T/QKn3T	DQS2T/CQ2T/CQn2T/QKn2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_RX_T35n	DIFFOUT_T35n	N11	DQSn3T/QK3T	DQSn2T/QK2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T36p	DIFFOUT_T36p	G8	DQ3T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T36n	DIFFOUT_T36n	G7			
7B	VREFB7BN0	IO			DIFFIO_RX_T37p	DIFFOUT_T37p	H8	DQ3T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_RX_T37n	DIFFOUT_T37n	J8	DQ3T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T38p	DIFFOUT_T38p	L9	DQ3T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T38n	DIFFOUT_T38n	M8			
7B	VREFB7BN0	IO			DIFFIO_RX_T39p	DIFFOUT_T39p	B6	DO4T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_RX_T39n	DIFFOUT_T39n	C7	DO4T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T40p	DIFFOUT_T40p	E9	DO4T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T40n	DIFFOUT_T40n	F8			
7B	VREFB7BN0	IO			DIFFIO_RX_T41p	DIFFOUT_T41p	A7	DO4T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_RX_T41n	DIFFOUT_T41n	A6	DO4T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T42p	DIFFOUT_T42p	G9	DO4T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T42n	DIFFOUT_T42n	H9			
7B	VREFB7BN0	IO			DIFFIO_RX_T43p	DIFFOUT_T43p	D8	DQS4T/CQ4T/CQn4T/QKn4T	DQ2T	DQS1T/CQ1T/CQn1T/QKn1T
7B	VREFB7BN0	IO			DIFFIO_RX_T43n	DIFFOUT_T43n	D9	DQSn4T/QK4T	DQ2T	DQSn1T/QK1T
7B	VREFB7BN0	IO			DIFFIO_TX_T44p	DIFFOUT_T44p	A8	DO4T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T44n	DIFFOUT_T44n	B8			
7B	VREFB7BN0	IO			DIFFIO_RX_T45p	DIFFOUT_T45p	A10	DO4T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_RX_T45n	DIFFOUT_T45n	B9	DO4T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T46p	DIFFOUT_T46p	J10	DO4T	DQ2T	DQ1T
7B	VREFB7BN0	IO			DIFFIO_TX_T46n	DIFFOUT_T46n	K10			
7C	VREFB7CN0	IO			DIFFIO_RX_T47p	DIFFOUT_T47p	F10	DQ5T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_RX_T47n	DIFFOUT_T47n	G10	DO5T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T48p	DIFFOUT_T48p	J11	DQ5T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T48n	DIFFOUT_T48n	K11			
7C	VREFB7CN0	IO			DIFFIO_RX_T49p	DIFFOUT_T49p	G11	DQ5T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_RX_T49n	DIFFOUT_T49n	H11	DQ5T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T50p	DIFFOUT_T50p	K12	DQ5T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T50n	DIFFOUT_T50n	L11			
7C	VREFB7CN0	IO			DIFFIO_RX_T51p	DIFFOUT_T51p	E11	DQS5T/CQ5T/CQn5T/QKn5T	DQS3T/CQ3T/CQn3T/QKn3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_RX_T51n	DIFFOUT_T51n	F11	DQSn5T/QK5T	DQSn3T/QK3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T52p	DIFFOUT_T52p	C10	DQ5T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T52n	DIFFOUT_T52n	D10			
7C	VREFB7CN0	IO			DIFFIO_RX_T53p	DIFFOUT_T53p	G12	DQ5T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_RX_T53n	DIFFOUT_T53n	H12	DQ5T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T54p	DIFFOUT_T54p	L12	DO5T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T54n	DIFFOUT_T54n	M12			
7C	VREFB7CN0	IO			DIFFIO_RX_T55p	DIFFOUT_T55p	A11	DO6T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_RX_T55n	DIFFOUT_T55n	B11	DO6T	DQ3T	DQ1T
7C	VREFB7CN0	IO					N13	DQ6T	DQ3T	DQ1T
7C	VREFB7CN0	IO	VREFB7CN0				M13			
7C	VREFB7CN0	IO			DIFFIO_RX_T56p	DIFFOUT_T56p	C11	DO6T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_RX_T56n	DIFFOUT_T56n	D11	DO6T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T57p	DIFFOUT_T57p	J13	DO6T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T57n	DIFFOUT_T57n	K13			
7C	VREFB7CN0	IO			DIFFIO_RX_T58p	DIFFOUT_T58p	A13	DQS6T/CQ6T/CQn6T/QKn6T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_RX_T58n	DIFFOUT_T58n	B12	DQSn6T/QK6T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T59p	DIFFOUT_T59p	D12	DO6T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T59n	DIFFOUT_T59n	E12			
7C	VREFB7CN0	IO			DIFFIO_RX_T60p	DIFFOUT_T60p	F13	DO6T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_RX_T60n	DIFFOUT_T60n	G13	DO6T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T61p	DIFFOUT_T61p	M11	DO6T	DQ3T	DQ1T
7C	VREFB7CN0	IO			DIFFIO_TX_T61n	DIFFOUT_T61n	N12			
7D	VREFB7DN0	IO			DIFFIO_RX_T62p	DIFFOUT_T62p	H14	DQ7T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_RX_T62n	DIFFOUT_T62n	J14	DQ7T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T63p	DIFFOUT_T63p	K14	DQ7T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T63n	DIFFOUT_T63n	L14			
7D	VREFB7DN0	IO			DIFFIO_RX_T64p	DIFFOUT_T64p	F14	DO7T	DO4T	
7D	VREFB7DN0	IO			DIFFIO_RX_T64n	DIFFOUT_T64n	G14	DO7T	DO4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T65p	DIFFOUT_T65p	M14	DO7T	DO4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T65n	DIFFOUT_T65n	M15			
7D	VREFB7DN0	IO			DIFFIO_RX_T66p	DIFFOUT_T66p	G15	DQS7T/CQ7T/CQn7T/QKn7T	DQS4T/CQ4T/CQn4T/QKn4T	
7D	VREFB7DN0	IO			DIFFIO_RX_T66n	DIFFOUT_T66n	H15	DQSn7T/QK7T	DQSn4T/QK4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T67p	DIFFOUT_T67p	C13	DO7T	DO4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T67n	DIFFOUT_T67n	D13			
7D	VREFB7DN0	IO			DIFFIO_RX_T68p	DIFFOUT_T68p	D14	DO7T	DO4T	
7D	VREFB7DN0	IO			DIFFIO_RX_T68n	DIFFOUT_T68n	E14	DO7T	DO4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T69p	DIFFOUT_T69p	K15	DO7T	DO4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T69n	DIFFOUT_T69n	L15			



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
7D	VREFB7DN0	IO			DIFFIO_RX_T70p	DIFFOUT_T70p	B14	DQ8T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_RX_T70n	DIFFOUT_T70n	C14	DQ8T	DQ4T	
7D	VREFB7DN0	IO					N15	DQ8T	DQ4T	
7D	VREFB7DN0	IO	VREFB7DN0				N14			
7D	VREFB7DN0	IO			DIFFIO_RX_T71p	DIFFOUT_T71p	A14	DQ8T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_RX_T71n	DIFFOUT_T71n	B15	DQ8T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T72p	DIFFOUT_T72p	D15	DQ8T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T72n	DIFFOUT_T72n	E15			
7D	VREFB7DN0	IO			DIFFIO_RX_T73p	DIFFOUT_T73p	F16	DQS8T/CQ8T/CQn8T/QKn8T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_RX_T73n	DIFFOUT_T73n	G16	DQSn8T/QK8T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T74p	DIFFOUT_T74p	J16	DQ8T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T74n	DIFFOUT_T74n	K16			
7D	VREFB7DN0	IO			DIFFIO_RX_T75p	DIFFOUT_T75p	C16	DQ8T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_RX_T75n	DIFFOUT_T75n	D16	DQ8T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T76p	DIFFOUT_T76p	M16	DQ8T	DQ4T	
7D	VREFB7DN0	IO			DIFFIO_TX_T76n	DIFFOUT_T76n	N16			
		VCCA_FPLL					R17			
		VCCD_FPLL					R16			
		DNU					L18			
8D	VREFB8DN0	IO	CLK19p		DIFFIO_RX_T85p	DIFFOUT_T85p	A16	DQ9T	DQ5T	
8D	VREFB8DN0	IO	CLK19n		DIFFIO_RX_T85n	DIFFOUT_T85n	A17	DQ9T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T86p	DIFFOUT_T86p	K17	DQ9T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T86n	DIFFOUT_T86n	L17			
8D	VREFB8DN0	IO	CLK18p		DIFFIO_RX_T87p	DIFFOUT_T87p	K18	DQ9T	DQ5T	
8D	VREFB8DN0	IO	CLK18n		DIFFIO_RX_T87n	DIFFOUT_T87n	K19	DQ9T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T88p	DIFFOUT_T88p	D17	DQ9T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T88n	DIFFOUT_T88n	E17			
8D	VREFB8DN0	IO	FPLL_TC_CLKOUT2,FPLL_TC_FBp,FPLL_TC_FB1		DIFFIO_RX_T89p	DIFFOUT_T89p	F17	DQS9T/CQ9T/CQn9T/QKn9T	DQS5T/CQ5T/CQn5T/QKn5T	
8D	VREFB8DN0	IO	FPLL_TC_CLKOUT3,FPLL_TC_FBn		DIFFIO_RX_T89n	DIFFOUT_T89n	G17	DQSn9T/QK9T	DQSn5T/QK5T	
8D	VREFB8DN0	IO	FPLL_TC_CLKOUT0,FPLL_TC_CLKOUTp,FPLL_TC_FB0		DIFFIO_TX_T90p	DIFFOUT_T90p	M17	DQ9T	DQ5T	
8D	VREFB8DN0	IO	FPLL_TC_CLKOUT1,FPLL_TC_CLKOUTn		DIFFIO_TX_T90n	DIFFOUT_T90n	N17			
8D	VREFB8DN0	IO	CLK17p		DIFFIO_RX_T91p	DIFFOUT_T91p	H17	DQ9T	DQ5T	
8D	VREFB8DN0	IO	CLK17n		DIFFIO_RX_T91n	DIFFOUT_T91n	J17	DQ9T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T92p	DIFFOUT_T92p	B17	DQ9T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T92n	DIFFOUT_T92n	C17			
8D	VREFB8DN0	IO	CLK16p		DIFFIO_RX_T93p	DIFFOUT_T93p	A19	DQ10T	DQ5T	
8D	VREFB8DN0	IO	CLK16n		DIFFIO_RX_T93n	DIFFOUT_T93n	A20	DQ10T	DQ5T	
8D	VREFB8DN0	IO					M18	DQ10T	DQ5T	
8D	VREFB8DN0	IO	VREFB8DN0				N18			
8D	VREFB8DN0	IO			DIFFIO_RX_T94p	DIFFOUT_T94p	C19	DQ10T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_RX_T94n	DIFFOUT_T94n	B18	DQ10T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T95p	DIFFOUT_T95p	G18	DQ10T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T95n	DIFFOUT_T95n	G19			
8D	VREFB8DN0	IO			DIFFIO_RX_T96p	DIFFOUT_T96p	H18	DQS10T/CQ10T/CQn10T/QKn10T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_RX_T96n	DIFFOUT_T96n	J19	DQSn10T/QK10T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T97p	DIFFOUT_T97p	M19	DQ10T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T97n	DIFFOUT_T97n	N19			
8D	VREFB8DN0	IO			DIFFIO_RX_T98p	DIFFOUT_T98p	D19	DQ10T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_RX_T98n	DIFFOUT_T98n	D18	DQ10T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T99p	DIFFOUT_T99p	E18	DQ10T	DQ5T	
8D	VREFB8DN0	IO			DIFFIO_TX_T99n	DIFFOUT_T99n	F19			
8C	VREFB8CN0	IO			DIFFIO_RX_T116p	DIFFOUT_T116p	K20	DQ11T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_RX_T116n	DIFFOUT_T116n	L20	DQ11T	DQ6T	DQ2T
8C	VREFB8CN0	IO					M20	DQ11T	DQ6T	DQ2T
8C	VREFB8CN0	IO	VREFB8CN0				N20			
8C	VREFB8CN0	IO			DIFFIO_RX_T117p	DIFFOUT_T117p	A22	DQ11T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_RX_T117n	DIFFOUT_T117n	B21	DQ11T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T118p	DIFFOUT_T118p	B20	DQ11T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T118n	DIFFOUT_T118n	C20			
8C	VREFB8CN0	IO			DIFFIO_RX_T119p	DIFFOUT_T119p	D20	DQS11T/CQ11T/CQn11T/QKn11T	DQS6T/CQ6T/CQn6T/QKn6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_RX_T119n	DIFFOUT_T119n	E20	DQSn11T/QK11T	DQSn6T/QK6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T120p	DIFFOUT_T120p	K21	DQ11T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T120n	DIFFOUT_T120n	L21			
8C	VREFB8CN0	IO			DIFFIO_RX_T121p	DIFFOUT_T121p	F20	DQ11T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_RX_T121n	DIFFOUT_T121n	G20	DQ11T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T122p	DIFFOUT_T122p	H20	DQ11T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T122n	DIFFOUT_T122n	J20			
8C	VREFB8CN0	IO			DIFFIO_RX_T123p	DIFFOUT_T123p	D21	DQ12T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_RX_T123n	DIFFOUT_T123n	E21	DQ12T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T124p	DIFFOUT_T124p	M21	DQ12T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T124n	DIFFOUT_T124n	N21			
8C	VREFB8CN0	IO			DIFFIO_RX_T125p	DIFFOUT_T125p	C22	DQ12T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_RX_T125n	DIFFOUT_T125n	D22	DQ12T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T126p	DIFFOUT_T126p	G21	DQ12T	DQ6T	DQ2T



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
8C	VREFB8CN0	IO			DIFFIO_TX_T126n	DIFFOUT_T126n	H21			
8C	VREFB8CN0	IO			DIFFIO_RX_T127p	DIFFOUT_T127p	F22	DQS12T/CQ12T/CQn12T/QKn12T	DQ6T	DQS2T/CQ2T/CQn2T/QKn2T
8C	VREFB8CN0	IO			DIFFIO_RX_T127n	DIFFOUT_T127n	G22	DQSn12T/QK12T	DQ6T	DQSn2T/QK2T
8C	VREFB8CN0	IO			DIFFIO_TX_T128p	DIFFOUT_T128p	M22	DQ12T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T128n	DIFFOUT_T128n	N22			
8C	VREFB8CN0	IO			DIFFIO_RX_T129p	DIFFOUT_T129p	A23	DQ12T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_RX_T129n	DIFFOUT_T129n	B23	DQ12T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T130p	DIFFOUT_T130p	J22	DQ12T	DQ6T	DQ2T
8C	VREFB8CN0	IO			DIFFIO_TX_T130n	DIFFOUT_T130n	K22			
8B	VREFB8BN0	IO			DIFFIO_RX_T131p	DIFFOUT_T131p	H23	DQ13T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_RX_T131n	DIFFOUT_T131n	J23	DQ13T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T132p	DIFFOUT_T132p	K24	DQ13T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T132n	DIFFOUT_T132n	L24			
8B	VREFB8BN0	IO			DIFFIO_RX_T133p	DIFFOUT_T133p	B24	DQ13T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_RX_T133n	DIFFOUT_T133n	C23	DQ13T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T134p	DIFFOUT_T134p	D23	DQ13T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T134n	DIFFOUT_T134n	E23			
8B	VREFB8BN0	IO			DIFFIO_RX_T135p	DIFFOUT_T135p	F23	DQS13T/CQ13T/CQn13T/QKn13T	DQS7T/CQ7T/CQn7T/QKn7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_RX_T135n	DIFFOUT_T135n	G23	DQSn13T/QK13T	DQSn7T/QK7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T136p	DIFFOUT_T136p	M23	DQ13T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T136n	DIFFOUT_T136n	N23			
8B	VREFB8BN0	IO			DIFFIO_RX_T137p	DIFFOUT_T137p	D24	DQ13T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_RX_T137n	DIFFOUT_T137n	E24	DQ13T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T138p	DIFFOUT_T138p	K23	DQ13T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T138n	DIFFOUT_T138n	L23			
8B	VREFB8BN0	IO			DIFFIO_RX_T139p	DIFFOUT_T139p	G24	DQ14T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_RX_T139n	DIFFOUT_T139n	H24	DQ14T	DQ7T	DQ2T
8B	VREFB8BN0	IO					M24	DQ14T	DQ7T	DQ2T
8B	VREFB8BN0	IO	VREFB8BN0				N24			
8B	VREFB8BN0	IO			DIFFIO_RX_T140p	DIFFOUT_T140p	A26	DQ14T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_RX_T140n	DIFFOUT_T140n	A25	DQ14T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T141p	DIFFOUT_T141p	C25	DQ14T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T141n	DIFFOUT_T141n	D25			
8B	VREFB8BN0	IO			DIFFIO_RX_T142p	DIFFOUT_T142p	F25	DQS14T/CQ14T/CQn14T/QKn14T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_RX_T142n	DIFFOUT_T142n	G25	DQSn14T/QK14T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T143p	DIFFOUT_T143p	M25	DQ14T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T143n	DIFFOUT_T143n	N25			
8B	VREFB8BN0	IO			DIFFIO_RX_T144p	DIFFOUT_T144p	B26	DQ14T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_RX_T144n	DIFFOUT_T144n	C26	DQ14T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T145p	DIFFOUT_T145p	J25	DQ14T	DQ7T	DQ2T
8B	VREFB8BN0	IO			DIFFIO_TX_T145n	DIFFOUT_T145n	K25			
8A	VREFB8AN0	IO			DIFFIO_RX_T146p	DIFFOUT_T146p	E26	DQ15T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_RX_T146n	DIFFOUT_T146n	F26	DQ15T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T147p	DIFFOUT_T147p	K29	DQ15T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T147n	DIFFOUT_T147n	L29			
8A	VREFB8AN0	IO			DIFFIO_RX_T148p	DIFFOUT_T148p	D26	DQ15T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_RX_T148n	DIFFOUT_T148n	E27	DQ15T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T149p	DIFFOUT_T149p	A27	DQ15T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T149n	DIFFOUT_T149n	B27			
8A	VREFB8AN0	IO			DIFFIO_RX_T150p	DIFFOUT_T150p	G26	DQS15T/CQ15T/CQn15T/QKn15T	DQS8T/CQ8T/CQn8T/QKn8T	
8A	VREFB8AN0	IO			DIFFIO_RX_T150n	DIFFOUT_T150n	H26	DQSn15T/QK15T	DQSn8T/QK8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T151p	DIFFOUT_T151p	K27	DQ15T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T151n	DIFFOUT_T151n	L27			
8A	VREFB8AN0	IO			DIFFIO_RX_T152p	DIFFOUT_T152p	D27	DQ15T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_RX_T152n	DIFFOUT_T152n	C28	DQ15T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T153p	DIFFOUT_T153p	C29	DQ15T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T153n	DIFFOUT_T153n	D28			
8A	VREFB8AN0	IO			DIFFIO_RX_T154p	DIFFOUT_T154p	G27	DQ16T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_RX_T154n	DIFFOUT_T154n	G28	DQ16T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T155p	DIFFOUT_T155p	J26	DQ16T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T155n	DIFFOUT_T155n	K26			
8A	VREFB8AN0	IO			DIFFIO_RX_T156p	DIFFOUT_T156p	A29	DQ16T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_RX_T156n	DIFFOUT_T156n	A28	DQ16T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T157p	DIFFOUT_T157p	B29	DQ16T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T157n	DIFFOUT_T157n	B30			
8A	VREFB8AN0	IO			DIFFIO_RX_T158p	DIFFOUT_T158p	F28	DQS16T/CQ16T/CQn16T/QKn16T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_RX_T158n	DIFFOUT_T158n	F29	DQSn16T/QK16T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T159p	DIFFOUT_T159p	H27	DQ16T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T159n	DIFFOUT_T159n	J27			
8A	VREFB8AN0	IO	CLK23p		DIFFIO_RX_T160p	DIFFOUT_T160p	D29	DQ16T	DQ8T	
8A	VREFB8AN0	IO	CLK23n		DIFFIO_RX_T160n	DIFFOUT_T160n	E29	DQ16T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T161p	DIFFOUT_T161p	D30	DQ16T	DQ8T	
8A	VREFB8AN0	IO			DIFFIO_TX_T161n	DIFFOUT_T161n	E30			
8A	VREFB8AN0	IO	CLK22p		DIFFIO_RX_T162p	DIFFOUT_T162p	G29	DQ17T		



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
8A	VREFB8A0	IO	CLK22n		DIFFIO_RX_T162n	DIFFOUT_T162n	H29	DQ17T		
8A	VREFB8A0	IO					L26	DQ17T		
8A	VREFB8A0	IO	VREFB8A0				M27			
8A	VREFB8A0	IO	FPLL_TL_CLKOUT2,FPLL_TL_FBp,FPLL_TL_FB1		DIFFIO_RX_T163p	DIFFOUT_T163p	A31	DQ17T		
8A	VREFB8A0	IO	FPLL_TL_CLKOUT3,FPLL_TL_FBn		DIFFIO_RX_T163n	DIFFOUT_T163n	A30	DQ17T		
8A	VREFB8A0	IO	FPLL_TL_CLKOUT0,FPLL_TL_CLKOUTp,FPLL_TL_FB0		DIFFIO_TX_T164p	DIFFOUT_T164p	C31	DQ17T		
8A	VREFB8A0	IO	FPLL_TL_CLKOUT1,FPLL_TL_CLKOUTn		DIFFIO_TX_T164n	DIFFOUT_T164n	D31			
8A	VREFB8A0	IO	CLK21p		DIFFIO_RX_T165p	DIFFOUT_T165p	A32	DQS17T/CQ17T/CQn17T/QKn17T		
8A	VREFB8A0	IO	CLK21n		DIFFIO_RX_T165n	DIFFOUT_T165n	B32	DQSn17T/QK17T		
8A	VREFB8A0	IO			DIFFIO_TX_T166p	DIFFOUT_T166p	J28	DQ17T		
8A	VREFB8A0	IO			DIFFIO_TX_T166n	DIFFOUT_T166n	K28			
8A	VREFB8A0	IO	CLK20p		DIFFIO_RX_T167p	DIFFOUT_T167p	D33	DQ17T		
8A	VREFB8A0	IO	CLK20n		DIFFIO_RX_T167n	DIFFOUT_T167n	C32	DQ17T		
8A	VREFB8A0	IO			DIFFIO_TX_T168p	DIFFOUT_T168p	D32	DQ17T		
8A	VREFB8A0	IO	RZQ_6		DIFFIO_TX_T168n	DIFFOUT_T168n	E32			
8A		MSEL0		MSEL0			D34			
8A		MSEL1		MSEL1			H30			
8A		MSEL2		MSEL2			K30			
8A		MSEL3		MSEL3			M29			
8A		MSEL4		MSEL4			M30			
8A		CONF_DONE		CONF_DONE			C34			
8A		nSTATUS		nSTATUS			B34			
8A		nCE		nCE			A33			
8A		nCONFIG		nCONFIG			C33			
8A		GND					B33			
		GND					AA26			
		GND					AA33			
		GND					AA34			
		GND					AB27			
		GND					AB28			
		GND					AB29			
		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					M31			
		GND					M32			



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Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					N28			
		GND					N29			
		GND					N33			
		GND					N34			
		GND					P27			
		GND					P31			
		GND					P32			
		GND					R28			
		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					AA9			
		GND					AB3			
		GND					AB4			
		GND					AB5			
		GND					AB7			
		GND					AB8			
		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					F3			
		GND					F4			
		GND					G1			
		GND					G2			
		GND					G5			
		GND					H3			
		GND					H4			
		GND					J1			
		GND					J2			
		GND					J5			
		GND					K3			
		GND					K4			
		GND					L1			



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Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					L2			
		GND					L5			
		GND					M3			
		GND					M4			
		GND					M5			
		GND					N1			
		GND					N2			
		GND					N6			
		GND					P3			
		GND					P4			
		GND					P8			
		GND					R1			
		GND					R2			
		GND					R5			
		GND					R7			
		GND					T3			
		GND					T4			
		GND					T6			
		GND					T8			
		GND					U1			
		GND					U2			
		GND					U7			
		GND					V3			
		GND					V4			
		GND					V8			
		GND					W1			
		GND					W2			
		GND					W5			
		GND					W7			
		GND					Y3			
		GND					Y4			
		GND					Y6			
		GND					Y8			
		VCCP					P18			
		VCCP					R13			
		VCCP					R21			
		VCCP					T10			
		VCCP					U25			
		VCCP					V10			
		VCCP					W25			
		VCCP					Y12			
		VCCP					Y19			
		VCCP					Y22			
		VCCA_FPLL					V26			
		VCCA_FPLL					V9			
		VCCA_FPLL					T26			
		VCCA_FPLL					T9			
		VCCBAT					M28			
		VCC_AUX					P12			
		VCC_AUX					P24			
		VCC_AUX					W11			
		VCC_AUX					Y24			
		VCCD_FPLL					Y26			
		VCCD_FPLL					Y9			
		VCCD_FPLL					P26			
		VCCD_FPLL					P9			
		VCCA_GXBL0					Y28			
		VCCA_GXBR0					Y7			
		VCCA_GXBL1					T28			
		VCCA_GXBR1					T7			
		VCCH_GXBL0					V28			
		VCCH_GXBR0					V7			
		VCCH_GXBL1					P28			
		VCCH_GXBR1					P7			
		VCCL_GXBL0					V29			
		VCCL_GXBL0					V30			
		VCCL_GXBR0					V5			
		VCCL_GXBR0					V6			
		VCCL_GXBL1					P29			
		VCCL_GXBL1					P30			
		VCCL_GXBR1					P5			
		VCCL_GXBR1					P6			
		VCCR_GXBL					AA29			
		VCCR_GXBL					AA30			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		VCCR_GXBL					N30			
		VCCR_GXBL					U29			
		VCCR_GXBL					U30			
		VCCR_GXBR					AA5			
		VCCR_GXBR					AA6			
		VCCR_GXBR					N5			
		VCCR_GXBR					U5			
		VCCR_GXBR					U6			
		VCCT_GXBL0					W29			
		VCCT_GXBL0					Y30			
		VCCT_GXBR0					W6			
		VCCT_GXBR0					Y5			
		VCCT_GXBL1					R29			
		VCCT_GXBL1					T30			
		VCCT_GXBR1					R6			
		VCCT_GXBR1					T5			
		VCC					R14			
		VCC					R15			
		VCC					R19			
		VCC					R23			
		VCC					R25			
		VCC					T12			
		VCC					T14			
		VCC					T16			
		VCC					T18			
		VCC					T20			
		VCC					T22			
		VCC					T24			
		VCC					U11			
		VCC					U12			
		VCC					U13			
		VCC					U15			
		VCC					U17			
		VCC					U19			
		VCC					U20			
		VCC					U21			
		VCC					U22			
		VCC					U23			
		VCC					V12			
		VCC					V14			
		VCC					V16			
		VCC					V20			
		VCC					V22			
		VCC					V24			
		VCC					W13			
		VCC					W15			
		VCC					W17			
		VCC					W19			
		VCC					W21			
		VCC					W23			
		VCC					Y13			
		VCC					Y20			
		VCC					V18			
		VCCIO3A					AD30			
		VCCIO3A					AF27			
		VCCIO3A					AH30			
		VCCIO3A					AJ27			
		VCCIO3A					AK30			
		VCCIO3A					AM27			
		VCCIO3B					AF24			
		VCCIO3B					AJ24			
		VCCIO3B					AM24			
		VCCIO3B					AP24			
		VCCIO3C					AF21			
		VCCIO3C					AJ21			
		VCCIO3C					AM21			
		VCCIO3C					AP21			
		VCCIO3D					AF18			
		VCCIO3D					AJ18			
		VCCIO3D					AM18			
		VCCIO3D					AP18			
		VCCIO4A					AD5			
		VCCIO4A					AF5			
		VCCIO4A					AH5			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		VCCIO4A					AK5			
		VCCIO4B					AF9			
		VCCIO4B					AJ9			
		VCCIO4B					AM9			
		VCCIO4B					AP9			
		VCCIO4C					AF12			
		VCCIO4C					AJ12			
		VCCIO4C					AM12			
		VCCIO4C					AP12			
		VCCIO4D					AF15			
		VCCIO4D					AJ15			
		VCCIO4D					AM15			
		VCCIO4D					AP15			
		VCCIO7A					C5			
		VCCIO7A					F2			
		VCCIO7A					F5			
		VCCIO7A					L7			
		VCCIO7B					A9			
		VCCIO7B					C9			
		VCCIO7B					F9			
		VCCIO7B					J9			
		VCCIO7C					A12			
		VCCIO7C					C12			
		VCCIO7C					F12			
		VCCIO7C					J12			
		VCCIO7D					A15			
		VCCIO7D					C15			
		VCCIO7D					F15			
		VCCIO7D					J15			
		VCCIO8A					C27			
		VCCIO8A					C30			
		VCCIO8A					F27			
		VCCIO8A					F30			
		VCCIO8A					J29			
		VCCIO8A					M26			
		VCCIO8B					A24			
		VCCIO8B					C24			
		VCCIO8B					F24			
		VCCIO8B					J24			
		VCCIO8C					A21			
		VCCIO8C					C21			
		VCCIO8C					F21			
		VCCIO8C					J21			
		VCCIO8D					A18			
		VCCIO8D					C18			
		VCCIO8D					F18			
		VCCIO8D					J18			
		VCCPD3					AB26			
		VCCPD3					AC27			
		VCCPD3					Y21			
		VCCPD3					Y25			
		VCCPD4A					AB6			
		VCCPD4A					AB9			
		VCCPD4BCD					Y10			
		VCCPD4BCD					Y14			
		VCCPD4BCD					Y16			
		VCCPD7A					N8			
		VCCPD7A					N9			
		VCCPD7BCD					P14			
		VCCPD7BCD					P16			
		VCCPD7BCD					R11			
		VCCPD8					N26			
		VCCPD8					N27			
		VCCPD8					P20			
		VCCPD8					P22			
		VCCPGM					M9			
		VCCPGM					AC26			
		GND					AA11			
		GND					AA13			
		GND					AA16			
		GND					AA19			
		GND					AA22			
		GND					AA24			
		GND					AD10			



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					AD13			
		GND					AD16			
		GND					AD19			
		GND					AD22			
		GND					AD25			
		GND					AD28			
		GND					AD7			
		GND					AG10			
		GND					AG13			
		GND					AG16			
		GND					AG19			
		GND					AG22			
		GND					AG25			
		GND					AG28			
		GND					AG7			
		GND					AK10			
		GND					AK13			
		GND					AK16			
		GND					AK19			
		GND					AK22			
		GND					AK25			
		GND					AK28			
		GND					AK7			
		GND					AN10			
		GND					AN13			
		GND					AN16			
		GND					AN19			
		GND					AN22			
		GND					AN25			
		GND					AN28			
		GND					AN31			
		GND					AN4			
		GND					AN7			
		GND					B1			
		GND					B10			
		GND					B13			
		GND					B16			
		GND					B19			
		GND					B22			
		GND					B25			
		GND					B28			
		GND					B31			
		GND					B4			
		GND					B7			
		GND					D2			
		GND					D4			
		GND					E10			
		GND					E13			
		GND					E16			
		GND					E19			
		GND					E22			
		GND					E25			
		GND					E28			
		GND					E31			
		GND					E7			
		GND					H10			
		GND					H13			
		GND					H16			
		GND					H19			
		GND					H22			
		GND					H25			
		GND					H28			
		GND					H7			
		GND					L10			
		GND					L13			
		GND					L16			
		GND					L19			
		GND					L22			
		GND					L25			
		GND					L28			
		GND					L8			
		GND					M6			
		GND					N7			
		GND					P10			



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1152	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					P13			
		GND					P15			
		GND					P17			
		GND					P19			
		GND					P21			
		GND					P23			
		GND					P25			
		GND					R10			
		GND					R12			
		GND					R18			
		GND					R20			
		GND					R22			
		GND					R24			
		GND					T11			
		GND					T13			
		GND					T15			
		GND					T17			
		GND					T19			
		GND					T21			
		GND					T23			
		GND					T25			
		GND					U10			
		GND					U14			
		GND					U16			
		GND					U24			
		GND					V11			
		GND					V13			
		GND					V15			
		GND					V17			
		GND					V19			
		GND					V21			
		GND					V23			
		GND					V25			
		GND					W10			
		GND					W12			
		GND					W14			
		GND					W16			
		GND					W18			
		GND					W20			
		GND					W22			
		GND					W24			
		GND					U18			

Notes:

(1) For more information about pin definitions and pin connection guidelines, refer to the [Arria V Device Family Pin Connection Guidelines](#).

(2) GXB_REFCLK pin is not supported in current Quartus II version, but will be supported in future Quartus II release version.



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		DNU					A38			
		DNU					B38			
		RREF_TL					B39			
		GND					AA32			
		GND					AA31			
		DNU					R36			
		DNU					R37			
		GND					T39			
		GND					T38			
		DNU					U36			
		DNU					U37			
		GND					V39			
		GND					V38			
		DNU					W36			
		DNU					W37			
		GND					Y39			
		GND					Y38			
GXB_L1		GXB_TX_L8n					AA36			
GXB_L1		GXB_TX_L8p					AA37			
GXB_L1		GXB_RX_L8p,GXB_REFCLK_L8p					AB39			
GXB_L1		GXB_RX_L8n,GXB_REFCLK_L8n					AB38			
GXB_L1		GXB_TX_L7n					AC36			
GXB_L1		GXB_TX_L7p					AC37			
GXB_L1		GXB_RX_L7p,GXB_REFCLK_L7p					AD39			
GXB_L1		GXB_RX_L7n,GXB_REFCLK_L7n					AD38			
GXB_L1		GXB_TX_L6n					AE36			
GXB_L1		GXB_TX_L6p					AE37			
GXB_L1		GXB_RX_L6p,GXB_REFCLK_L6p					AF39			
GXB_L1		GXB_RX_L6n,GXB_REFCLK_L6n					AF38			
GXB_L1		REFCLK2Ln					AC32			
GXB_L1		REFCLK2Lp					AC31			
GXB_L0		REFCLK1Ln					AE32			
GXB_L0		REFCLK1Lp					AE31			
GXB_L0		GXB_TX_L5n					AG36			
GXB_L0		GXB_TX_L5p					AG37			
GXB_L0		GXB_RX_L5p,GXB_REFCLK_L5p					AH39			
GXB_L0		GXB_RX_L5n,GXB_REFCLK_L5n					AH38			
GXB_L0		GXB_TX_L4n					AJ36			
GXB_L0		GXB_TX_L4p					AJ37			
GXB_L0		GXB_RX_L4p,GXB_REFCLK_L4p					AK39			
GXB_L0		GXB_RX_L4n,GXB_REFCLK_L4n					AK38			
GXB_L0		GXB_TX_L3n					AL36			
GXB_L0		GXB_TX_L3p					AL37			
GXB_L0		GXB_RX_L3p,GXB_REFCLK_L3p					AM39			
GXB_L0		GXB_RX_L3n,GXB_REFCLK_L3n					AM38			
GXB_L0		GXB_TX_L2n					AN36			
GXB_L0		GXB_TX_L2p					AN37			
GXB_L0		GXB_RX_L2p,GXB_REFCLK_L2p					AP39			
GXB_L0		GXB_RX_L2n,GXB_REFCLK_L2n					AP38			
GXB_L0		GXB_TX_L1n					AR36			
GXB_L0		GXB_TX_L1p					AR37			
GXB_L0		GXB_RX_L1p,GXB_REFCLK_L1p					AT39			
GXB_L0		GXB_RX_L1n,GXB_REFCLK_L1n					AT38			
GXB_L0		GXB_TX_L0n					AU36			
GXB_L0		GXB_TX_L0p					AU37			
GXB_L0		GXB_RX_L0p,GXB_REFCLK_L0p					AW37			
GXB_L0		GXB_RX_L0n,GXB_REFCLK_L0n					AW36			
GXB_L0		REFCLK0Ln					AG33			
GXB_L0		REFCLK0Lp					AG32			
3A		DNU					AH31			
3A		TDO		TDO			AT34			
3A		TMS		TMS			AM35			
3A		TCK		TCK			AV34			
3A		TDI		TDI			AT33			
3A		DCLK		DCLK			AV34			
3A		nCS0		DATA4			AR34			
3A		AS_DATA3		DATA3			AU34			
3A		AS_DATA2		DATA2			AR33			
3A		AS_DATA1		DATA1			AU33			
3A		AS_DATA0,ASDO		DATA0			AV33			
3A	VREFB3AN0	IO	RZQ_0		DIFFIO_TX_B1n	DIFFOUT_B1n	AN33			
3A	VREFB3AN0	IO			DIFFIO_TX_B1p	DIFFOUT_B1p	AP33	DQ1B		
3A	VREFB3AN0	IO	CLK0n		DIFFIO_RX_B2n	DIFFOUT_B2n	AN34	DQ1B		
3A	VREFB3AN0	IO	CLK0p		DIFFIO_RX_B2p	DIFFOUT_B2p	AP34	DQ1B		
3A	VREFB3AN0	IO			DIFFIO_TX_B3n	DIFFOUT_B3n	AK32			
3A	VREFB3AN0	IO			DIFFIO_TX_B3p	DIFFOUT_B3p	AL32	DQ1B		
3A	VREFB3AN0	IO	CLK1n		DIFFIO_RX_B4n	DIFFOUT_B4n	AJ34	DQS1B/QK1B		
3A	VREFB3AN0	IO	CLK1p		DIFFIO_RX_B4p	DIFFOUT_B4p	AK34	DQS1B/CQ1B/CQn1B/QKn1B		



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3A	VREFB3AN0	IO	FPLL_BL_CLKOUT1,FPLL_BL_CLKOUTn		DIFFIO TX B5n	DIFFOUT B5n	AL34			
3A	VREFB3AN0	IO	FPLL_BL_CLKOUT0,FPLL_BL_CLKOUTp,FPLL_BL_FB0		DIFFIO TX B5p	DIFFOUT B5p	AM34	DQ1B		
3A	VREFB3AN0	IO	FPLL_BL_CLKOUT3,FPLL_BL_FBn		DIFFIO RX B6n	DIFFOUT B6n	AJ33	DQ1B		
3A	VREFB3AN0	IO	FPLL_BL_CLKOUT2,FPLL_BL_FBp,FPLL_BL_FB1		DIFFIO RX B6p	DIFFOUT B6p	AK33	DQ1B		
3A	VREFB3AN0	IO	VREFB3AN0				AJ31			
3A	VREFB3AN0	IO					AK31	DQ1B		
3A	VREFB3AN0	IO	CLK2n		DIFFIO RX B7n	DIFFOUT B7n	AL33	DQ1B		
3A	VREFB3AN0	IO	CLK2p		DIFFIO RX B7p	DIFFOUT B7p	AM33	DQ1B		
3A	VREFB3AN0	IO			DIFFIO TX B8n	DIFFOUT B8n	AN32			
3A	VREFB3AN0	IO			DIFFIO TX B8p	DIFFOUT B8p	AP32	DQ2B	DQ1B	
3A	VREFB3AN0	IO	CLK3n		DIFFIO RX B9n	DIFFOUT B9n	AT32	DQ2B	DQ1B	
3A	VREFB3AN0	IO	CLK3p		DIFFIO RX B9p	DIFFOUT B9p	AU32	DQ2B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO TX B10n	DIFFOUT B10n	AL31			
3A	VREFB3AN0	IO			DIFFIO TX B10p	DIFFOUT B10p	AM31	DQ2B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B11n	DIFFOUT B11n	AW33	DQSn2B/QK2B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B11p	DIFFOUT B11p	AW32	DQS2B/CQ2B/CQn2B/QKn2B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO TX B12n	DIFFOUT B12n	AN31			
3A	VREFB3AN0	IO			DIFFIO TX B12p	DIFFOUT B12p	AP31	DQ2B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B13n	DIFFOUT B13n	AR31	DQ2B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B13p	DIFFOUT B13p	AT31	DQ2B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO TX B14n	DIFFOUT B14n	AD29			
3A	VREFB3AN0	IO			DIFFIO TX B14p	DIFFOUT B14p	AE29	DQ2B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B15n	DIFFOUT B15n	AG30	DQ2B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B15p	DIFFOUT B15p	AH30	DQ2B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO TX B16n	DIFFOUT B16n	AU31			
3A	VREFB3AN0	IO			DIFFIO TX B16p	DIFFOUT B16p	AV31	DQ3B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B17n	DIFFOUT B17n	AW30	DQ3B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B17p	DIFFOUT B17p	AW31	DQ3B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO TX B18n	DIFFOUT B18n	AK30			
3A	VREFB3AN0	IO			DIFFIO TX B18p	DIFFOUT B18p	AL30	DQ3B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B19n	DIFFOUT B19n	AR30	DQSn3B/QK3B	DQSn1B/QK1B	
3A	VREFB3AN0	IO			DIFFIO RX B19p	DIFFOUT B19p	AT30	DQS3B/CQ3B/CQn3B/QKn3B	DQS1B/CQ1B/CQn1B/QKn1B	
3A	VREFB3AN0	IO			DIFFIO TX B20n	DIFFOUT B20n	AU30			
3A	VREFB3AN0	IO			DIFFIO TX B20p	DIFFOUT B20p	AV30	DQ3B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B21n	DIFFOUT B21n	AT29	DQ3B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B21p	DIFFOUT B21p	AU29	DQ3B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO TX B22n	DIFFOUT B22n	AN30			
3A	VREFB3AN0	IO			DIFFIO TX B22p	DIFFOUT B22p	AP30	DQ3B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B23n	DIFFOUT B23n	AN29	DQ3B	DQ1B	
3A	VREFB3AN0	IO			DIFFIO RX B23p	DIFFOUT B23p	AP29	DQ3B	DQ1B	
3B	VREFB3BN0	IO			DIFFIO TX B24n	DIFFOUT B24n	AB29			
3B	VREFB3BN0	IO			DIFFIO TX B24p	DIFFOUT B24p	AC29	DQ4B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B25n	DIFFOUT B25n	AF28	DQ4B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B25p	DIFFOUT B25p	AG28	DQ4B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B26n	DIFFOUT B26n	AK29			
3B	VREFB3BN0	IO			DIFFIO TX B26p	DIFFOUT B26p	AL29	DQ4B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B27n	DIFFOUT B27n	AH28	DQSn4B/QK4B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B27p	DIFFOUT B27p	AJ28	DQS4B/CQ4B/CQn4B/QKn4B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B28n	DIFFOUT B28n	AD28			
3B	VREFB3BN0	IO			DIFFIO TX B28p	DIFFOUT B28p	AE28	DQ4B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B29n	DIFFOUT B29n	AB27	DQ4B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B29p	DIFFOUT B29p	AB28	DQ4B	DQ2B	DQ1B
3B	VREFB3BN0	IO	VREFB3BN0				AL28			
3B	VREFB3BN0	IO			DIFFIO RX B30n	DIFFOUT B30n	AC27	DQ4B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B30p	DIFFOUT B30p	AD27	DQ4B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B31n	DIFFOUT B31n	AP28			
3B	VREFB3BN0	IO			DIFFIO TX B31p	DIFFOUT B31p	AR28	DQ5B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B32n	DIFFOUT B32n	AU28	DQ5B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B32p	DIFFOUT B32p	AV28	DQ5B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B33n	DIFFOUT B33n	AJ27			
3B	VREFB3BN0	IO			DIFFIO TX B33p	DIFFOUT B33p	AK27	DQ5B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B34n	DIFFOUT B34n	AW29	DQSn5B/QK5B	DQSn2B/QK2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B34p	DIFFOUT B34p	AW28	DQS5B/CQ5B/CQn5B/QKn5B	DQS2B/CQ2B/CQn2B/QKn2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B35n	DIFFOUT B35n	AP27			
3B	VREFB3BN0	IO			DIFFIO TX B35p	DIFFOUT B35p	AR27	DQ5B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B36n	DIFFOUT B36n	AT27	DQ5B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B36p	DIFFOUT B36p	AU27	DQ5B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B37n	DIFFOUT B37n	AM27			
3B	VREFB3BN0	IO			DIFFIO TX B37p	DIFFOUT B37p	AN27	DQ5B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B38n	DIFFOUT B38n	AV27	DQ5B	DQ2B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B38p	DIFFOUT B38p	AW27	DQ5B	DQ2B	DQ1B
3C	VREFB3CN0	IO			DIFFIO TX B39n	DIFFOUT B39n	AG27			
3C	VREFB3CN0	IO			DIFFIO TX B39p	DIFFOUT B39p	AH27	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO RX B40n	DIFFOUT B40n	AB25	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO RX B40p	DIFFOUT B40p	AC25	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO TX B41n	DIFFOUT B41n	AE27			
3C	VREFB3CN0	IO			DIFFIO TX B41p	DIFFOUT B41p	AF27	DQ6B	DQ3B	DQ1B



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3C	VREFB3CN0	IO			DIFFIO_RX_B42n	DIFFOUT_B42n	AE25	DQSn6B/QK6B	DQ3B	DQSn1B/QK1B
3C	VREFB3CN0	IO			DIFFIO_RX_B42p	DIFFOUT_B42p	AF25	DQS6B/CQ6B/CQn6B/QKn6B	DQ3B	DQSn1B/CQ1B/CQn1B/QKn1B
3C	VREFB3CN0	IO			DIFFIO_TX_B43n	DIFFOUT_B43n	AC24			
3C	VREFB3CN0	IO			DIFFIO_TX_B43p	DIFFOUT_B43p	AD25	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B44n	DIFFOUT_B44n	AG26	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B44p	DIFFOUT_B44p	AH26	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_TX_B45n	DIFFOUT_B45n	AD26			
3C	VREFB3CN0	IO			DIFFIO_TX_B45p	DIFFOUT_B45p	AE26	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B46n	DIFFOUT_B46n	AG26	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B46p	DIFFOUT_B46p	AH26	DQ6B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_TX_B47n	DIFFOUT_B47n	AN26			
3C	VREFB3CN0	IO			DIFFIO_TX_B47p	DIFFOUT_B47p	AP26	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B48n	DIFFOUT_B48n	AM26	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B48p	DIFFOUT_B48p	AN25	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_TX_B49n	DIFFOUT_B49n	AJ25			
3C	VREFB3CN0	IO			DIFFIO_TX_B49p	DIFFOUT_B49p	AK25	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B50n	DIFFOUT_B50n	AT26	DQSn7B/QK7B		DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B50p	DIFFOUT_B50p	AU26	DQS7B/CQ7B/CQn7B/QKn7B	DQSn3B/CQ3B/CQn3B/QKn3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_TX_B51n	DIFFOUT_B51n	AR25			
3C	VREFB3CN0	IO			DIFFIO_TX_B51p	DIFFOUT_B51p	AT25	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B52n	DIFFOUT_B52n	AW25	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B52p	DIFFOUT_B52p	AW26	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO	VREFB3CN0				AK26			
3C	VREFB3CN0	IO					AL26	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B53n	DIFFOUT_B53n	AV25	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_RX_B53p	DIFFOUT_B53p	AV24	DQ7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO_TX_B54n	DIFFOUT_B54n	AD23			
3C	VREFB3CN0	IO			DIFFIO_TX_B54p	DIFFOUT_B54p	AD24	DQ8B	DQ4B	DQ2B
3C	VREFB3CN0	IO			DIFFIO_RX_B55n	DIFFOUT_B55n	AT24	DQ8B	DQ4B	DQ2B
3C	VREFB3CN0	IO			DIFFIO_RX_B55p	DIFFOUT_B55p	AU24	DQ8B	DQ4B	DQ2B
3C	VREFB3CN0	IO			DIFFIO_TX_B56n	DIFFOUT_B56n	AK24			
3C	VREFB3CN0	IO			DIFFIO_TX_B56p	DIFFOUT_B56p	AL24	DQ8B	DQ4B	DQ2B
3C	VREFB3CN0	IO			DIFFIO_RX_B57n	DIFFOUT_B57n	AE24	DQSn8B/QK8B	DQ4B	DQ2B
3C	VREFB3CN0	IO			DIFFIO_RX_B57p	DIFFOUT_B57p	AF24	DQS8B/CQ8B/CQn8B/QKn8B	DQ4B	DQ2B
3C	VREFB3CN0	IO			DIFFIO_TX_B58n	DIFFOUT_B58n	AG24			
3C	VREFB3CN0	IO			DIFFIO_TX_B58p	DIFFOUT_B58p	AH24	DQ8B	DQ4B	DQ2B
3C	VREFB3CN0	IO			DIFFIO_RX_B59n	DIFFOUT_B59n	AW23	DQ8B	DQ4B	DQ2B
3C	VREFB3CN0	IO			DIFFIO_RX_B59p	DIFFOUT_B59p	AW24	DQ8B	DQ4B	DQ2B
3C	VREFB3CN0	IO			DIFFIO_TX_B60n	DIFFOUT_B60n	AN24			
3C	VREFB3CN0	IO			DIFFIO_TX_B60p	DIFFOUT_B60p	AP24	DQ8B	DQ4B	DQ2B
3C	VREFB3CN0	IO			DIFFIO_RX_B61n	DIFFOUT_B61n	AT23	DQ8B	DQ4B	DQ2B
3C	VREFB3CN0	IO			DIFFIO_RX_B61p	DIFFOUT_B61p	AU23	DQ8B	DQ4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_TX_B62n	DIFFOUT_B62n	AN23			
3D	VREFB3DN0	IO			DIFFIO_TX_B62p	DIFFOUT_B62p	AP23	DQ9B	DQ4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B63n	DIFFOUT_B63n	AD22	DQ9B	DQ4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B63p	DIFFOUT_B63p	AE23	DQ9B	DQ4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_TX_B64n	DIFFOUT_B64n	AK23			
3D	VREFB3DN0	IO			DIFFIO_TX_B64p	DIFFOUT_B64p	AL23	DQ9B	DQ4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B65n	DIFFOUT_B65n	AT22	DQSn9B/QK9B		DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B65p	DIFFOUT_B65p	AU22	DQS9B/CQ9B/CQn9B/QKn9B	DQSn4B/CQ4B/CQn4B/QKn4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_TX_B66n	DIFFOUT_B66n	AV22			
3D	VREFB3DN0	IO			DIFFIO_TX_B66p	DIFFOUT_B66p	AW22	DQ9B	DQ4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B67n	DIFFOUT_B67n	AV21	DQ9B	DQ4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B67p	DIFFOUT_B67p	AW21	DQ9B	DQ4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_TX_B68n	DIFFOUT_B68n	AG23			
3D	VREFB3DN0	IO			DIFFIO_TX_B68p	DIFFOUT_B68p	AH23	DQ9B	DQ4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B69n	DIFFOUT_B69n	AE22	DQ9B	DQ4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B69p	DIFFOUT_B69p	AF22	DQ9B	DQ4B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_TX_B70n	DIFFOUT_B70n	AN22			
3D	VREFB3DN0	IO			DIFFIO_TX_B70p	DIFFOUT_B70p	AP22	DQ10B	DQ5B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B71n	DIFFOUT_B71n	AV19	DQ10B	DQ5B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B71p	DIFFOUT_B71p	AW20	DQ10B	DQ5B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_TX_B72n	DIFFOUT_B72n	AK22			
3D	VREFB3DN0	IO			DIFFIO_TX_B72p	DIFFOUT_B72p	AL22	DQ10B	DQ5B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B73n	DIFFOUT_B73n	AR21	DQSn10B/QK10B	DQ5B	DQSn2B/QK2B
3D	VREFB3DN0	IO			DIFFIO_RX_B73p	DIFFOUT_B73p	AT21	DQS10B/CQ10B/CQn10B/QKn10B	DQ5B	DQS2B/CQ2B/CQn2B/QKn2B
3D	VREFB3DN0	IO			DIFFIO_TX_B74n	DIFFOUT_B74n	AG22			
3D	VREFB3DN0	IO			DIFFIO_TX_B74p	DIFFOUT_B74p	AH22	DQ10B	DQ5B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B75n	DIFFOUT_B75n	AT20	DQ10B	DQ5B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_RX_B75p	DIFFOUT_B75p	AU20	DQ10B	DQ5B	DQ2B
3D	VREFB3DN0	IO	VREFB3DN0				AJ21			
3D	VREFB3DN0	IO					AK21	DQ10B	DQ5B	DQ2B
3D	VREFB3DN0	IO	CLK4n		DIFFIO_RX_B76n	DIFFOUT_B76n	AU19	DQ10B	DQ5B	DQ2B
3D	VREFB3DN0	IO	CLK4p		DIFFIO_RX_B76p	DIFFOUT_B76p	AV19	DQ10B	DQ5B	DQ2B
3D	VREFB3DN0	IO			DIFFIO_TX_B77n	DIFFOUT_B77n	AM21			
3D	VREFB3DN0	IO			DIFFIO_TX_B77p	DIFFOUT_B77p	AN21	DQ11B	DQ5B	DQ2B
3D	VREFB3DN0	IO	CLK5n		DIFFIO_RX_B78n	DIFFOUT_B78n	AE21	DQ11B	DQ5B	DQ2B
3D	VREFB3DN0	IO	CLK5p		DIFFIO_RX_B78p	DIFFOUT_B78p	AF21	DQ11B	DQ5B	DQ2B



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT1,FPLL_BC_CLKOUTn		DIFFIO TX B79n	DIFFOUT B79n	AD21			
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT0,FPLL_BC_CLKOUTp,FPLL_BC_FB0		DIFFIO TX B79p	DIFFOUT B79p	AC22	DQ11B	DQ5B	DQ2B
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT3,FPLL_BC_FBn		DIFFIO RX B80n	DIFFOUT B80n	AG21	DQS11B/QK11B	DQS5B/QK5B	DQ2B
3D	VREFB3DN0	IO	FPLL_BC_CLKOUT2,FPLL_BC_FBp,FPLL_BC_FB1		DIFFIO RX B80p	DIFFOUT B80p	AH21	DQS11B/CQ11B/CQn11B/QKn11B	DQS5B/CQ5B/CQn5B/QKn5B	DQ2B
3D	VREFB3DN0	IO			DIFFIO TX B81n	DIFFOUT B81n	AN20			
3D	VREFB3DN0	IO			DIFFIO TX B81p	DIFFOUT B81p	AP20	DQ11B	DQ5B	DQ2B
3D	VREFB3DN0	IO	CLK6n		DIFFIO RX B82n	DIFFOUT B82n	AC21	DQ11B	DQ5B	DQ2B
3D	VREFB3DN0	IO	CLK6p		DIFFIO RX B82p	DIFFOUT B82p	AD20	DQ11B	DQ5B	DQ2B
3D	VREFB3DN0	IO			DIFFIO TX B83n	DIFFOUT B83n	AG20			
3D	VREFB3DN0	IO			DIFFIO TX B83p	DIFFOUT B83p	AH20	DQ11B	DQ5B	DQ2B
3D	VREFB3DN0	IO	CLK7n		DIFFIO RX B84n	DIFFOUT B84n	AK20	DQ11B	DQ5B	DQ2B
3D	VREFB3DN0	IO	CLK7p		DIFFIO RX B84p	DIFFOUT B84p	AL20	DQ11B	DQ5B	DQ2B
			VCCD_FPLL				AB20			
			VCCA_FPLL				AB21			
			DNU				AE20			
4D	VREFB4DN0	IO			DIFFIO TX B85n	DIFFOUT B85n	AV18			
4D	VREFB4DN0	IO			DIFFIO TX B85p	DIFFOUT B85p	AW18	DQ12B		
4D	VREFB4DN0	IO			DIFFIO RX B86n	DIFFOUT B86n	AG19	DQ12B		
4D	VREFB4DN0	IO			DIFFIO RX B86p	DIFFOUT B86p	AH19	DQ12B		
4D	VREFB4DN0	IO			DIFFIO TX B87n	DIFFOUT B87n	AN19			
4D	VREFB4DN0	IO			DIFFIO TX B87p	DIFFOUT B87p	AP19	DQ12B		
4D	VREFB4DN0	IO			DIFFIO RX B88n	DIFFOUT B88n	AK19	DQS12B/QK12B		
4D	VREFB4DN0	IO			DIFFIO RX B88p	DIFFOUT B88p	AL19	DQS12B/CQ12B/CQn12B/QKn12B		
4D	VREFB4DN0	IO			DIFFIO TX B89n	DIFFOUT B89n	AH18			
4D	VREFB4DN0	IO			DIFFIO TX B89p	DIFFOUT B89p	AJ18	DQ12B		
4D	VREFB4DN0	IO			DIFFIO RX B90n	DIFFOUT B90n	AU18	DQ12B		
4D	VREFB4DN0	IO			DIFFIO RX B90p	DIFFOUT B90p	AT19	DQ12B		
4D	VREFB4DN0	IO			DIFFIO TX B91n	DIFFOUT B91n	AE19			
4D	VREFB4DN0	IO			DIFFIO TX B91p	DIFFOUT B91p	AF19	DQ12B		
4D	VREFB4DN0	IO			DIFFIO RX B92n	DIFFOUT B92n	AW17	DQ12B		
4D	VREFB4DN0	IO			DIFFIO RX B92p	DIFFOUT B92p	AW16	DQ12B		
4D	VREFB4DN0	IO			DIFFIO TX B93n	DIFFOUT B93n	AK17			
4D	VREFB4DN0	IO			DIFFIO TX B93p	DIFFOUT B93p	AL17	DQ13B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B94n	DIFFOUT B94n	AT17	DQ13B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B94p	DIFFOUT B94p	AU17	DQ13B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO TX B95n	DIFFOUT B95n	AC19			
4D	VREFB4DN0	IO			DIFFIO TX B95p	DIFFOUT B95p	AD19	DQ13B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B96n	DIFFOUT B96n	AP18	DQS13B/QK13B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B96p	DIFFOUT B96p	AR18	DQS13B/CQ13B/CQn13B/QKn13B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO TX B97n	DIFFOUT B97n	AD17			
4D	VREFB4DN0	IO			DIFFIO TX B97p	DIFFOUT B97p	AC18	DQ13B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B98n	DIFFOUT B98n	AD18	DQ13B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B98p	DIFFOUT B98p	AE18	DQ13B	DQ6B	
4D	VREFB4DN0	IO	VREFB4DN0				AF18			
4D	VREFB4DN0	IO					AG18	DQ13B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B99n	DIFFOUT B99n	AL18	DQ13B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B99p	DIFFOUT B99p	AM18	DQ13B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO TX B100n	DIFFOUT B100n	AG17			
4D	VREFB4DN0	IO			DIFFIO TX B100p	DIFFOUT B100p	AH17	DQ14B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B101n	DIFFOUT B101n	AN17	DQ14B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B101p	DIFFOUT B101p	AP17	DQ14B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO TX B102n	DIFFOUT B102n	AR16			
4D	VREFB4DN0	IO			DIFFIO TX B102p	DIFFOUT B102p	AT16	DQ14B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B103n	DIFFOUT B103n	AU16	DQS14B/QK14B	DQS6B/QK6B	
4D	VREFB4DN0	IO			DIFFIO RX B103p	DIFFOUT B103p	AV16	DQS14B/CQ14B/CQn14B/QKn14B	DQS6B/CQ6B/CQn6B/QKn6B	
4D	VREFB4DN0	IO			DIFFIO TX B104n	DIFFOUT B104n	AJ16			
4D	VREFB4DN0	IO			DIFFIO TX B104p	DIFFOUT B104p	AK16	DQ14B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B105n	DIFFOUT B105n	AN16	DQ14B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B105p	DIFFOUT B105p	AP16	DQ14B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO TX B106n	DIFFOUT B106n	AL16			
4D	VREFB4DN0	IO			DIFFIO TX B106p	DIFFOUT B106p	AM16	DQ14B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B107n	DIFFOUT B107n	AE17	DQ14B	DQ6B	
4D	VREFB4DN0	IO			DIFFIO RX B107p	DIFFOUT B107p	AF16	DQ14B	DQ6B	
4C	VREFB4CN0	IO			DIFFIO TX B108n	DIFFOUT B108n	AN15			
4C	VREFB4CN0	IO			DIFFIO TX B108p	DIFFOUT B108p	AP15	DQ15B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO RX B109n	DIFFOUT B109n	AW14	DQ15B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO RX B109p	DIFFOUT B109p	AW15	DQ15B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO TX B110n	DIFFOUT B110n	AC16			
4C	VREFB4CN0	IO			DIFFIO TX B110p	DIFFOUT B110p	AD16	DQ15B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO RX B111n	DIFFOUT B111n	AG16	DQS15B/QK15B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO RX B111p	DIFFOUT B111p	AH16	DQS15B/CQ15B/CQn15B/QKn15B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO TX B112n	DIFFOUT B112n	AK15			
4C	VREFB4CN0	IO			DIFFIO TX B112p	DIFFOUT B112p	AL15	DQ15B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO RX B113n	DIFFOUT B113n	AV13	DQ15B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO RX B113p	DIFFOUT B113p	AW13	DQ15B	DQ7B	DQ3B
4C	VREFB4CN0	IO	VREFB4CN0				AG15			
4C	VREFB4CN0	IO					AH15	DQ15B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO RX B114n	DIFFOUT B114n	AT15	DQ15B	DQ7B	DQ3B



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
4C	VREFB4CN0	IO			DIFFIO_RX_B114p	DIFFOUT_B114p	AU15	DQ15B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_TX_B115n	DIFFOUT_B115n	AC15			
4C	VREFB4CN0	IO			DIFFIO_TX_B115p	DIFFOUT_B115p	AU14	DQ16B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_RX_B116n	DIFFOUT_B116n	AT14	DQ16B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_RX_B116p	DIFFOUT_B116p	AU14	DQ16B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_TX_B117n	DIFFOUT_B117n	AT13			
4C	VREFB4CN0	IO			DIFFIO_TX_B117p	DIFFOUT_B117p	AU13	DQ16B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_RX_B118n	DIFFOUT_B118n	AE16	DQSn16B/QK16B	DQSn7B/QK7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_RX_B118p	DIFFOUT_B118p	AF15	DQS16B/CQ16B/CQn16B/QKn16B	DQS7B/CQ7B/CQn7B/QKn7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_TX_B119n	DIFFOUT_B119n	AK14			
4C	VREFB4CN0	IO			DIFFIO_TX_B119p	DIFFOUT_B119p	AL14	DQ16B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_RX_B120n	DIFFOUT_B120n	AN14	DQ16B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_RX_B120p	DIFFOUT_B120p	AP14	DQ16B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_TX_B121n	DIFFOUT_B121n	AG14			
4C	VREFB4CN0	IO			DIFFIO_TX_B121p	DIFFOUT_B121p	AH14	DQ16B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_RX_B122n	DIFFOUT_B122n	AD15	DQ16B	DQ7B	DQ3B
4C	VREFB4CN0	IO			DIFFIO_RX_B122p	DIFFOUT_B122p	AE15	DQ16B	DQ7B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_TX_B123n	DIFFOUT_B123n	AP13			
4B	VREFB4BN0	IO			DIFFIO_TX_B123p	DIFFOUT_B123p	AR13	DQ17B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B124n	DIFFOUT_B124n	AE14	DQ17B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B124p	DIFFOUT_B124p	AE13	DQ17B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_TX_B125n	DIFFOUT_B125n	AT12			
4B	VREFB4BN0	IO			DIFFIO_TX_B125p	DIFFOUT_B125p	AU12	DQ17B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B126n	DIFFOUT_B126n	AW12	DQSn17B/QK17B	DQ8B	DQSn3B/QK3B
4B	VREFB4BN0	IO			DIFFIO_RX_B126p	DIFFOUT_B126p	AW12	DQS17B/CQ17B/CQn17B/QKn17B	DQ8B	DQS3B/CQ3B/CQn3B/QKn3B
4B	VREFB4BN0	IO			DIFFIO_TX_B127n	DIFFOUT_B127n	AL13			
4B	VREFB4BN0	IO			DIFFIO_TX_B127p	DIFFOUT_B127p	AM13	DQ17B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B128n	DIFFOUT_B128n	AW10	DQ17B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B128p	DIFFOUT_B128p	AW11	DQ17B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_TX_B129n	DIFFOUT_B129n	AN12			
4B	VREFB4BN0	IO			DIFFIO_TX_B129p	DIFFOUT_B129p	AP12	DQ17B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B130n	DIFFOUT_B130n	AH13	DQ17B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B130p	DIFFOUT_B130p	AJ13	DQ17B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_TX_B131n	DIFFOUT_B131n	AH12			
4B	VREFB4BN0	IO			DIFFIO_TX_B131p	DIFFOUT_B131p	AJ12	DQ18B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B132n	DIFFOUT_B132n	AF13	DQ18B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B132p	DIFFOUT_B132p	AG13	DQ18B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_TX_B133n	DIFFOUT_B133n	AU10			
4B	VREFB4BN0	IO			DIFFIO_TX_B133p	DIFFOUT_B133p	AV10	DQ18B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B134n	DIFFOUT_B134n	AT11	DQSn18B/QK18B	DQSn8B/QK8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B134p	DIFFOUT_B134p	AU11	DQS18B/CQ18B/CQn18B/QKn18B	DQS8B/CQ8B/CQn8B/QKn8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_TX_B135n	DIFFOUT_B135n	AK12			
4B	VREFB4BN0	IO			DIFFIO_TX_B135p	DIFFOUT_B135p	AL12	DQ18B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B136n	DIFFOUT_B136n	AC13	DQ18B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B136p	DIFFOUT_B136p	AD13	DQ18B	DQ8B	DQ3B
4B	VREFB4BN0	IO	VREFB4BN0				AN11			
4B	VREFB4BN0	IO					AP11	DQ18B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B137n	DIFFOUT_B137n	AV9	DQ18B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_RX_B137p	DIFFOUT_B137p	AW9	DQ18B	DQ8B	DQ3B
4B	VREFB4BN0	IO			DIFFIO_TX_B138n	DIFFOUT_B138n	AC12			
4B	VREFB4BN0	IO			DIFFIO_TX_B138p	DIFFOUT_B138p	AD11	DQ19B	DQ9B	DQ4B
4B	VREFB4BN0	IO			DIFFIO_RX_B139n	DIFFOUT_B139n	AF12	DQ19B	DQ9B	DQ4B
4B	VREFB4BN0	IO			DIFFIO_RX_B139p	DIFFOUT_B139p	AG12	DQ19B	DQ9B	DQ4B
4B	VREFB4BN0	IO			DIFFIO_TX_B140n	DIFFOUT_B140n	AT9			
4B	VREFB4BN0	IO			DIFFIO_TX_B140p	DIFFOUT_B140p	AU9	DQ19B	DQ9B	DQ4B
4B	VREFB4BN0	IO			DIFFIO_RX_B141n	DIFFOUT_B141n	AG11	DQSn19B/QK19B	DQ9B	DQ4B
4B	VREFB4BN0	IO			DIFFIO_RX_B141p	DIFFOUT_B141p	AH11	DQS19B/CQ19B/CQn19B/QKn19B	DQ9B	DQ4B
4B	VREFB4BN0	IO			DIFFIO_TX_B142n	DIFFOUT_B142n	AD12			
4B	VREFB4BN0	IO			DIFFIO_TX_B142p	DIFFOUT_B142p	AE12	DQ19B	DQ9B	DQ4B
4B	VREFB4BN0	IO			DIFFIO_RX_B143n	DIFFOUT_B143n	AP10	DQ19B	DQ9B	DQ4B
4B	VREFB4BN0	IO			DIFFIO_RX_B143p	DIFFOUT_B143p	AR10	DQ19B	DQ9B	DQ4B
4B	VREFB4BN0	IO			DIFFIO_TX_B144n	DIFFOUT_B144n	AK11			
4B	VREFB4BN0	IO			DIFFIO_TX_B144p	DIFFOUT_B144p	AL11	DQ19B	DQ9B	DQ4B
4B	VREFB4BN0	IO			DIFFIO_RX_B145n	DIFFOUT_B145n	AL10	DQ19B	DQ9B	DQ4B
4B	VREFB4BN0	IO			DIFFIO_RX_B145p	DIFFOUT_B145p	AM10	DQ19B	DQ9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_TX_B146n	DIFFOUT_B146n	AL9			
4A	VREFB4AN0	IO			DIFFIO_TX_B146p	DIFFOUT_B146p	AM9	DQ20B	DQ9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_RX_B147n	DIFFOUT_B147n	AW7	DQ20B	DQ9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_RX_B147p	DIFFOUT_B147p	AW8	DQ20B	DQ9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_TX_B148n	DIFFOUT_B148n	AV7			
4A	VREFB4AN0	IO			DIFFIO_TX_B148p	DIFFOUT_B148p	AV6	DQ20B	DQ9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_RX_B149n	DIFFOUT_B149n	AW6	DQSn20B/QK20B	DQSn9B/QK9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_RX_B149p	DIFFOUT_B149p	AW5	DQS20B/CQ20B/CQn20B/QKn20B	DQS9B/CQ9B/CQn9B/QKn9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_TX_B150n	DIFFOUT_B150n	AK9			
4A	VREFB4AN0	IO			DIFFIO_TX_B150p	DIFFOUT_B150p	AK10	DQ20B	DQ9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_RX_B151n	DIFFOUT_B151n	AU7	DQ20B	DQ9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_RX_B151p	DIFFOUT_B151p	AU8	DQ20B	DQ9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_TX_B152n	DIFFOUT_B152n	AN9			



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
4A	VREFB4AN0	IO			DIFFIO_TX_B152p	DIFFOUT_B152p	AP9	DQ20B	DQ9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_RX_B153n	DIFFOUT_B153n	AT8	DQ20B	DQ9B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_RX_B153p	DIFFOUT_B153p	AR9	DQ20B	DQ9B	DQ4B
4A	VREFB4AN0	IO		DATA10	DIFFIO_TX_B154n	DIFFOUT_B154n	AH10			
4A	VREFB4AN0	IO		DATA11	DIFFIO_TX_B154p	DIFFOUT_B154p	AJ10	DQ21B	DQ10B	DQ4B
4A	VREFB4AN0	IO		DATA5	DIFFIO_RX_B155n	DIFFOUT_B155n	AF10	DQ21B	DQ10B	DQ4B
4A	VREFB4AN0	IO		DATA6	DIFFIO_RX_B155p	DIFFOUT_B155p	AE11	DQ21B	DQ10B	DQ4B
4A	VREFB4AN0	IO		DATA12	DIFFIO_TX_B156n	DIFFOUT_B156n	AK6			
4A	VREFB4AN0	IO		DATA13	DIFFIO_TX_B156p	DIFFOUT_B156p	AL6	DQ21B	DQ10B	DQ4B
4A	VREFB4AN0	IO		DATA7	DIFFIO_RX_B157n	DIFFOUT_B157n	AH6	DQSn21B/QK21B	DQ10B	DQSn4B/QK4B
4A	VREFB4AN0	IO		DATA8	DIFFIO_RX_B157p	DIFFOUT_B157p	AJ6	DQSn21B/CQn21B/CQn21B/QKn21B	DQ10B	DQSn4B/CQn4B/CQn4B/QKn4B
4A	VREFB4AN0	IO		DATA14	DIFFIO_TX_B158n	DIFFOUT_B158n	AH9			
4A	VREFB4AN0	IO		DATA15	DIFFIO_TX_B158p	DIFFOUT_B158p	AJ9	DQ21B	DQ10B	DQ4B
4A	VREFB4AN0	IO		DATA9	DIFFIO_RX_B159n	DIFFOUT_B159n	AM6	DQ21B	DQ10B	DQ4B
4A	VREFB4AN0	IO		CLKUSR	DIFFIO_RX_B159p	DIFFOUT_B159p	AN6	DQ21B	DQ10B	DQ4B
4A	VREFB4AN0	IO	VREFB4AN0				AH7			
4A	VREFB4AN0	IO					AH8	DQ21B	DQ10B	DQ4B
4A	VREFB4AN0	IO	CLK11n		DIFFIO_RX_B160n	DIFFOUT_B160n	AJ7	DQ21B	DQ10B	DQ4B
4A	VREFB4AN0	IO	CLK11p		DIFFIO_RX_B160p	DIFFOUT_B160p	AK7	DQ21B	DQ10B	DQ4B
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT1,FPLL_BR_CLKOUTn		DIFFIO_TX_B161n	DIFFOUT_B161n	AL7			
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT0,FPLL_BR_CLKOUTp,FPLL_BR_FB0		DIFFIO_TX_B161p	DIFFOUT_B161p	AM7	DQ22B	DQ10B	DQ4B
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT3,FPLL_BR_FBn		DIFFIO_RX_B162n	DIFFOUT_B162n	AN8	DQ22B	DQ10B	DQ4B
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT2,FPLL_BR_FBp,FPLL_BR_FB1		DIFFIO_RX_B162p	DIFFOUT_B162p	AP8	DQ22B	DQ10B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_TX_B163n	DIFFOUT_B163n	AT6			
4A	VREFB4AN0	IO			DIFFIO_TX_B163p	DIFFOUT_B163p	AU6	DQ22B	DQ10B	DQ4B
4A	VREFB4AN0	IO	CLK10n		DIFFIO_RX_B164n	DIFFOUT_B164n	AR7	DQSn22B/QK22B	DQSn10B/QK10B	DQ4B
4A	VREFB4AN0	IO	CLK10p		DIFFIO_RX_B164p	DIFFOUT_B164p	AT7	DQSn22B/CQn22B/CQn22B/QKn22B	DQSn10B/CQn10B/CQn10B/QKn10B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_TX_B165n	DIFFOUT_B165n	AK8			
4A	VREFB4AN0	IO			DIFFIO_TX_B165p	DIFFOUT_B165p	AL8	DQ22B	DQ10B	DQ4B
4A	VREFB4AN0	IO	CLK9n		DIFFIO_RX_B166n	DIFFOUT_B166n	AV4	DQ22B	DQ10B	DQ4B
4A	VREFB4AN0	IO	CLK9p		DIFFIO_RX_B166p	DIFFOUT_B166p	AW4	DQ22B	DQ10B	DQ4B
4A	VREFB4AN0	IO			DIFFIO_TX_B167n	DIFFOUT_B167n	AN7			
4A	VREFB4AN0	IO	RZQ_1		DIFFIO_TX_B167p	DIFFOUT_B167p	AP7	DQ22B	DQ10B	DQ4B
4A	VREFB4AN0	IO	CLK8n		DIFFIO_RX_B168n	DIFFOUT_B168n	AP6	DQ22B	DQ10B	DQ4B
4A	VREFB4AN0	IO	CLK8p		DIFFIO_RX_B168p	DIFFOUT_B168p	AR6	DQ22B	DQ10B	DQ4B
		RREF BR					AW2			
		DNU					AV3			
		DNU					AW3			
		GND					AF8			
		GND					AF7			
		GND					AU2			
		GND					AU1			
		DNU					AT3			
		DNU					AT4			
		GND					AR2			
		GND					AR1			
		DNU					AP3			
		DNU					AP4			
		GND					AN2			
		GND					AN1			
		DNU					AM3			
		DNU					AM4			
		GND					AL2			
		GND					AL1			
		DNU					AK3			
		DNU					AK4			
		GND					AJ2			
		DNU					AJ1			
		DNU					AH3			
		DNU					AH4			
		GND					AG2			
		DNU					AG1			
		DNU					AF3			
		DNU					AF4			
		GND					AD9			
		GND					AD8			
		GND					AB9			
		GND					AB8			
		GND					AE2			
		DNU					AE1			
		DNU					AD3			
		DNU					AD4			
		GND					AC2			
		DNU					AC1			
		DNU					AB3			
		DNU					AB4			
		GND					AA2			
		GND					AA1			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		DNU					Y3			
		DNU					Y4			
		GND					W2			
		GND					W1			
		DNU					V3			
		DNU					V4			
		GND					U2			
		GND					U1			
		DNU					T3			
		DNU					T4			
		GND					R2			
		GND					R1			
		DNU					P3			
		DNU					P4			
		GND					Y9			
		GND					Y8			
		DNU					C5			
7A		GND					N6			
7A	VREFB7A0	IO	CLK12p		DIFFIO RX T1p	DIFFOUT T1p	C6	DQ1T	DQ1T	DQ1T
7A	VREFB7A0	IO	CLK12n		DIFFIO RX T1n	DIFFOUT T1n	D6	DQ1T	DQ1T	DQ1T
7A	VREFB7A0	IO	RZO_5		DIFFIO TX T2p	DIFFOUT T2p	F6	DQ1T	DQ1T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T2n	DIFFOUT T2n	G6			
7A	VREFB7A0	IO	CLK13p		DIFFIO RX T3p	DIFFOUT T3p	A6	DQ1T	DQ1T	DQ1T
7A	VREFB7A0	IO	CLK13n		DIFFIO RX T3n	DIFFOUT T3n	B6	DQ1T	DQ1T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T4p	DIFFOUT T4p	F7	DQ1T	DQ1T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T4n	DIFFOUT T4n	G7			
7A	VREFB7A0	IO	CLK14p		DIFFIO RX T5p	DIFFOUT T5p	E6	DQS1T/CQ1T/CQn1T/QKn1T	DQS1T/CQ1T/CQn1T/QKn1T	DQ1T
7A	VREFB7A0	IO	CLK14n		DIFFIO RX T5n	DIFFOUT T5n	E7	DQS1T/CQ1T/QK1T	DQS1T/CQ1T/QK1T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T6p	DIFFOUT T6p	C7	DQ1T	DQ1T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T6n	DIFFOUT T6n	D7			
7A	VREFB7A0	IO	FPLL_TR_CLKOUT2.FPLL_TR_FBp.FPLL_TR_FB1		DIFFIO RX T7p	DIFFOUT T7p	F8	DQ1T	DQ1T	DQ1T
7A	VREFB7A0	IO	FPLL_TR_CLKOUT3.FPLL_TR_FBn		DIFFIO RX T7n	DIFFOUT T7n	G8	DQ1T	DQ1T	DQ1T
7A	VREFB7A0	IO	FPLL_TR_CLKOUT0.FPLL_TR_CLKOUTp.FPLL_TR_FB0		DIFFIO TX T8p	DIFFOUT T8p	J8	DQ1T	DQ1T	DQ1T
7A	VREFB7A0	IO	FPLL_TR_CLKOUT1.FPLL_TR_CLKOUTn		DIFFIO TX T8n	DIFFOUT T8n	K8			
7A	VREFB7A0	IO	CLK15p		DIFFIO RX T9p	DIFFOUT T9p	H6	DQ2T	DQ1T	DQ1T
7A	VREFB7A0	IO	CLK15n		DIFFIO RX T9n	DIFFOUT T9n	J6	DQ2T	DQ1T	DQ1T
7A	VREFB7A0	IO					K7	DQ2T	DQ1T	DQ1T
7A	VREFB7A0	IO	VREFB7A0				J7			
7A	VREFB7A0	IO		DEV OE	DIFFIO RX T10p	DIFFOUT T10p	K6	DQ2T	DQ1T	DQ1T
7A	VREFB7A0	IO		DEV CLRn	DIFFIO RX T10n	DIFFOUT T10n	L6	DQ2T	DQ1T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T11p	DIFFOUT T11p	M8	DQ2T	DQ1T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T11n	DIFFOUT T11n	N9			
7A	VREFB7A0	IO		CvP CONF DONE	DIFFIO RX T12p	DIFFOUT T12p	P10	DQS2T/CQ2T/CQn2T/QKn2T	DQ1T	DQS1T/CQ1T/CQn1T/QKn1T
7A	VREFB7A0	IO		CRC ERROR	DIFFIO RX T12n	DIFFOUT T12n	P9	DQS2T/QK2T	DQ1T	DQS1T/QK1T
7A	VREFB7A0	IO		PR DONE	DIFFIO TX T13p	DIFFOUT T13p	L7	DQ2T	DQ1T	DQ1T
7A	VREFB7A0	IO		PR REQUEST	DIFFIO TX T13n	DIFFOUT T13n	M6			
7A	VREFB7A0	IO		INIT DONE	DIFFIO RX T14p	DIFFOUT T14p	M7	DQ2T	DQ1T	DQ1T
7A	VREFB7A0	IO		nCEO	DIFFIO RX T14n	DIFFOUT T14n	N7	DQ2T	DQ1T	DQ1T
7A	VREFB7A0	IO		PR ERROR	DIFFIO TX T15p	DIFFOUT T15p	L10	DQ2T	DQ1T	DQ1T
7A	VREFB7A0	IO		PR READY	DIFFIO TX T15n	DIFFOUT T15n	M10			
7A	VREFB7A0	IO			DIFFIO RX T16p	DIFFOUT T16p	D9	DQ3T	DQ2T	DQ1T
7A	VREFB7A0	IO			DIFFIO RX T16n	DIFFOUT T16n	E9	DQ3T	DQ2T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T17p	DIFFOUT T17p	F9	DQ3T	DQ2T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T17n	DIFFOUT T17n	G9			
7A	VREFB7A0	IO			DIFFIO RX T18p	DIFFOUT T18p	C8	DQ3T	DQ2T	DQ1T
7A	VREFB7A0	IO			DIFFIO RX T18n	DIFFOUT T18n	D8	DQ3T	DQ2T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T19p	DIFFOUT T19p	K9	DQ3T	DQ2T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T19n	DIFFOUT T19n	L9			
7A	VREFB7A0	IO			DIFFIO RX T20p	DIFFOUT T20p	A7	DQS3T/CQ3T/CQn3T/QKn3T	DQS2T/CQ2T/CQn2T/QKn2T	DQ1T
7A	VREFB7A0	IO			DIFFIO RX T20n	DIFFOUT T20n	B7	DQS3T/QK3T	DQS2T/QK2T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T21p	DIFFOUT T21p	B9	DQ3T	DQ2T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T21n	DIFFOUT T21n	C9			
7A	VREFB7A0	IO			DIFFIO RX T22p	DIFFOUT T22p	A9	DQ3T	DQ2T	DQ1T
7A	VREFB7A0	IO			DIFFIO RX T22n	DIFFOUT T22n	A8	DQ3T	DQ2T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T23p	DIFFOUT T23p	H9	DQ3T	DQ2T	DQ1T
7A	VREFB7A0	IO			DIFFIO TX T23n	DIFFOUT T23n	J9			
7B	VREFB7B0	IO			DIFFIO RX T24p	DIFFOUT T24p	E10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO RX T24n	DIFFOUT T24n	F10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO TX T25p	DIFFOUT T25p	N10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO TX T25n	DIFFOUT T25n	M11			
7B	VREFB7B0	IO			DIFFIO RX T26p	DIFFOUT T26p	B10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO RX T26n	DIFFOUT T26n	C10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO TX T27p	DIFFOUT T27p	H10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO TX T27n	DIFFOUT T27n	J10			
7B	VREFB7B0	IO			DIFFIO RX T28p	DIFFOUT T28p	P12	DQS4T/CQ4T/CQn4T/QKn4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO RX T28n	DIFFOUT T28n	R12	DQS4T/QK4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO TX T29p	DIFFOUT T29p	R11	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO TX T29n	DIFFOUT T29n	T11			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
7B	VREFB7B0	IO			DIFFIO_RX_T30p	DIFFOUT_T30p	A11	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_RX_T30n	DIFFOUT_T30n	A10	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T31p	DIFFOUT_T31p	J11	DQ4T	DQ2T	DQ1T
7B	VREFB7B0	IO			DIFFIO_TX_T31n	DIFFOUT_T31n	K11			
7B	VREFB7B0	IO			DIFFIO_RX_T32p	DIFFOUT_T32p	M12	DQ5T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_RX_T32n	DIFFOUT_T32n	N12	DQ5T	DQ3T	DQ2T
7B	VREFB7B0	IO					F11	DQ5T	DQ3T	DQ2T
7B	VREFB7B0	IO	VREFB7B0				G11			
7B	VREFB7B0	IO			DIFFIO_RX_T33p	DIFFOUT_T33p	C11	DQ5T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_RX_T33n	DIFFOUT_T33n	D11	DQ5T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T34p	DIFFOUT_T34p	K12	DQ5T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T34n	DIFFOUT_T34n	L12			
7B	VREFB7B0	IO			DIFFIO_RX_T35p	DIFFOUT_T35p	D12	DQS5T/CQ5T/CQn5T/QKn5T	DQS3T/CQ3T/CQn3T/QKn3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_RX_T35n	DIFFOUT_T35n	E12	DQSn5T/QK5T	DQSn3T/QK3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T36p	DIFFOUT_T36p	F12	DQ5T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T36n	DIFFOUT_T36n	G12			
7B	VREFB7B0	IO			DIFFIO_RX_T37p	DIFFOUT_T37p	P13	DQ5T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_RX_T37n	DIFFOUT_T37n	R13	DQ5T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T38p	DIFFOUT_T38p	H12	DQ5T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T38n	DIFFOUT_T38n	J12			
7B	VREFB7B0	IO			DIFFIO_RX_T39p	DIFFOUT_T39p	B12	DQ6T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_RX_T39n	DIFFOUT_T39n	C12	DQ6T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T40p	DIFFOUT_T40p	M13	DQ6T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T40n	DIFFOUT_T40n	N13			
7B	VREFB7B0	IO			DIFFIO_RX_T41p	DIFFOUT_T41p	A13	DQ6T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_RX_T41n	DIFFOUT_T41n	A12	DQ6T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T42p	DIFFOUT_T42p	J13	DQ6T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T42n	DIFFOUT_T42n	K13			
7B	VREFB7B0	IO			DIFFIO_RX_T43p	DIFFOUT_T43p	D13	DQS6T/CQ6T/CQn6T/QKn6T	DQ3T	DQS2T/CQ2T/CQn2T/QKn2T
7B	VREFB7B0	IO			DIFFIO_RX_T43n	DIFFOUT_T43n	E13	DQSn6T/QK6T	DQ3T	DQSn2T/QK2T
7B	VREFB7B0	IO			DIFFIO_TX_T44p	DIFFOUT_T44p	A14	DQ6T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T44n	DIFFOUT_T44n	B13			
7B	VREFB7B0	IO			DIFFIO_RX_T45p	DIFFOUT_T45p	C14	DQ6T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_RX_T45n	DIFFOUT_T45n	D14	DQ6T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T46p	DIFFOUT_T46p	G13	DQ6T	DQ3T	DQ2T
7B	VREFB7B0	IO			DIFFIO_TX_T46n	DIFFOUT_T46n	H13			
7C	VREFB7C0	IO			DIFFIO_RX_T47p	DIFFOUT_T47p	R14	DQ7T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_RX_T47n	DIFFOUT_T47n	T14	DQ7T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T48p	DIFFOUT_T48p	M14	DQ7T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T48n	DIFFOUT_T48n	N14			
7C	VREFB7C0	IO			DIFFIO_RX_T49p	DIFFOUT_T49p	F14	DQ7T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_RX_T49n	DIFFOUT_T49n	G14	DQ7T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T50p	DIFFOUT_T50p	L15	DQ7T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T50n	DIFFOUT_T50n	M15			
7C	VREFB7C0	IO			DIFFIO_RX_T51p	DIFFOUT_T51p	R15	DQS7T/CQ7T/CQn7T/QKn7T	DQS4T/CQ4T/CQn4T/QKn4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_RX_T51n	DIFFOUT_T51n	T15	DQSn7T/QK7T	DQSn4T/QK4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T52p	DIFFOUT_T52p	N15	DQ7T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T52n	DIFFOUT_T52n	P15			
7C	VREFB7C0	IO			DIFFIO_RX_T53p	DIFFOUT_T53p	E15	DQ7T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_RX_T53n	DIFFOUT_T53n	F15	DQ7T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T54p	DIFFOUT_T54p	J14	DQ7T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T54n	DIFFOUT_T54n	K14			
7C	VREFB7C0	IO			DIFFIO_RX_T55p	DIFFOUT_T55p	P16	DQ8T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_RX_T55n	DIFFOUT_T55n	R16	DQ8T	DQ4T	DQ2T
7C	VREFB7C0	IO					C15	DQ8T	DQ4T	DQ2T
7C	VREFB7C0	IO	VREFB7C0				D15			
7C	VREFB7C0	IO			DIFFIO_RX_T56p	DIFFOUT_T56p	M16	DQ8T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_RX_T56n	DIFFOUT_T56n	N16	DQ8T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T57p	DIFFOUT_T57p	H15	DQ8T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T57n	DIFFOUT_T57n	J15			
7C	VREFB7C0	IO			DIFFIO_RX_T58p	DIFFOUT_T58p	G16	DQS8T/CQ8T/CQn8T/QKn8T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_RX_T58n	DIFFOUT_T58n	H16	DQSn8T/QK8T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T59p	DIFFOUT_T59p	A15	DQ8T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T59n	DIFFOUT_T59n	B15			
7C	VREFB7C0	IO			DIFFIO_RX_T60p	DIFFOUT_T60p	D16	DQ8T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_RX_T60n	DIFFOUT_T60n	E16	DQ8T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T61p	DIFFOUT_T61p	J16	DQ8T	DQ4T	DQ2T
7C	VREFB7C0	IO			DIFFIO_TX_T61n	DIFFOUT_T61n	K16			
7D	VREFB7D0	IO			DIFFIO_RX_T62p	DIFFOUT_T62p	N18	DQ9T	DQ5T	
7D	VREFB7D0	IO			DIFFIO_RX_T62n	DIFFOUT_T62n	P18	DQ9T	DQ5T	
7D	VREFB7D0	IO			DIFFIO_TX_T63p	DIFFOUT_T63p	M17	DQ9T	DQ5T	
7D	VREFB7D0	IO			DIFFIO_TX_T63n	DIFFOUT_T63n	N17			
7D	VREFB7D0	IO			DIFFIO_RX_T64p	DIFFOUT_T64p	B16	DQ9T	DQ5T	
7D	VREFB7D0	IO			DIFFIO_RX_T64n	DIFFOUT_T64n	C16	DQ9T	DQ5T	
7D	VREFB7D0	IO			DIFFIO_TX_T65p	DIFFOUT_T65p	J17	DQ9T	DQ5T	
7D	VREFB7D0	IO			DIFFIO_TX_T65n	DIFFOUT_T65n	K17			
7D	VREFB7D0	IO			DIFFIO_RX_T66p	DIFFOUT_T66p	F17	DQS9T/CQ9T/CQn9T/QKn9T	DQS5T/CQ5T/CQn5T/QKn5T	
7D	VREFB7D0	IO			DIFFIO_RX_T66n	DIFFOUT_T66n	G17	DQSn9T/QK9T	DQSn5T/QK5T	



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
7D	VREFB7DN0	IO			DIFFIO TX T67p	DIFFOUT T67p	R17	DQ9T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO TX T67n	DIFFOUT T67n	T17			
7D	VREFB7DN0	IO			DIFFIO RX T68p	DIFFOUT T68p	C17	DQ9T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO RX T68n	DIFFOUT T68n	D17	DQ9T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO TX T69p	DIFFOUT T69p	K18	DQ9T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO TX T69n	DIFFOUT T69n	L18			
7D	VREFB7DN0	IO			DIFFIO RX T70p	DIFFOUT T70p	R19	DQ10T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO RX T70n	DIFFOUT T70n	T19	DQ10T	DQ5T	
7D	VREFB7DN0	IO					R18	DQ10T	DQ5T	
7D	VREFB7DN0	IO	VREFB7DN0				T18			
7D	VREFB7DN0	IO			DIFFIO RX T71p	DIFFOUT T71p	E18	DQ10T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO RX T71n	DIFFOUT T71n	F18	DQ10T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO TX T72p	DIFFOUT T72p	H18	DQ10T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO TX T72n	DIFFOUT T72n	J18			
7D	VREFB7DN0	IO			DIFFIO RX T73p	DIFFOUT T73p	N19	DQS10T/CQ10T/CQn10T/QKn10T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO RX T73n	DIFFOUT T73n	P19	DQSn10T/QK10T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO TX T74p	DIFFOUT T74p	B18	DQ10T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO TX T74n	DIFFOUT T74n	C18			
7D	VREFB7DN0	IO			DIFFIO RX T75p	DIFFOUT T75p	A17	DQ10T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO RX T75n	DIFFOUT T75n	A16	DQ10T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO TX T76p	DIFFOUT T76p	L19	DQ10T	DQ5T	
7D	VREFB7DN0	IO			DIFFIO TX T76n	DIFFOUT T76n	M19			
7D	VREFB7DN0	IO			DIFFIO RX T77p	DIFFOUT T77p	F19	DQ11T		
7D	VREFB7DN0	IO			DIFFIO RX T77n	DIFFOUT T77n	G19	DQ11T		
7D	VREFB7DN0	IO			DIFFIO TX T78p	DIFFOUT T78p	J19	DQ11T		
7D	VREFB7DN0	IO			DIFFIO TX T78n	DIFFOUT T78n	K19			
7D	VREFB7DN0	IO			DIFFIO RX T79p	DIFFOUT T79p	C19	DQ11T		
7D	VREFB7DN0	IO			DIFFIO RX T79n	DIFFOUT T79n	D19	DQ11T		
7D	VREFB7DN0	IO			DIFFIO TX T80p	DIFFOUT T80p	J20	DQ11T		
7D	VREFB7DN0	IO			DIFFIO TX T80n	DIFFOUT T80n	K20			
7D	VREFB7DN0	IO			DIFFIO RX T81p	DIFFOUT T81p	A18	DQS11T/CQ11T/CQn11T/QKn11T		
7D	VREFB7DN0	IO			DIFFIO RX T81n	DIFFOUT T81n	A19	DQSn11T/QK11T		
7D	VREFB7DN0	IO			DIFFIO TX T82p	DIFFOUT T82p	R20	DQ11T		
7D	VREFB7DN0	IO			DIFFIO TX T82n	DIFFOUT T82n	T20			
7D	VREFB7DN0	IO			DIFFIO RX T83p	DIFFOUT T83p	F20	DQ11T		
7D	VREFB7DN0	IO			DIFFIO RX T83n	DIFFOUT T83n	G20	DQ11T		
7D	VREFB7DN0	IO			DIFFIO TX T84p	DIFFOUT T84p	M20	DQ11T		
7D	VREFB7DN0	IO			DIFFIO TX T84n	DIFFOUT T84n	N20			
		YCCA_FPLL					V20			
		YCCD_FPLL					V19			
		DNU					P21			
8D	VREFB8DN0	IO	CLK19p		DIFFIO RX T85p	DIFFOUT T85p	C20	DQ12T	DQ6T	DQ3T
8D	VREFB8DN0	IO	CLK19n		DIFFIO RX T85n	DIFFOUT T85n	D20	DQ12T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T86p	DIFFOUT T86p	M21	DQ12T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T86n	DIFFOUT T86n	N21			
8D	VREFB8DN0	IO	CLK18p		DIFFIO RX T87p	DIFFOUT T87p	G21	DQ12T	DQ6T	DQ3T
8D	VREFB8DN0	IO	CLK18n		DIFFIO RX T87n	DIFFOUT T87n	H21	DQ12T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T88p	DIFFOUT T88p	D21	DQ12T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T88n	DIFFOUT T88n	E21			
8D	VREFB8DN0	IO	FPLL_TC_CLKOUT2,FPLL_TC_FBp,FPLL_TC_FB1		DIFFIO RX T89p	DIFFOUT T89p	A20	DQS12T/CQ12T/CQn12T/QKn12T	DQS6T/CQ6T/CQn6T/QKn6T	DQ3T
8D	VREFB8DN0	IO	FPLL_TC_CLKOUT3,FPLL_TC_FBn		DIFFIO RX T89n	DIFFOUT T89n	B21	DQSn12T/QK12T	DQSn6T/QK6T	DQ3T
8D	VREFB8DN0	IO	FPLL_TC_CLKOUT0,FPLL_TC_CLKOUTp,FPLL_TC_FB0		DIFFIO TX T90p	DIFFOUT T90p	J21	DQ12T	DQ6T	DQ3T
8D	VREFB8DN0	IO	FPLL_TC_CLKOUT1,FPLL_TC_CLKOUTn		DIFFIO TX T90n	DIFFOUT T90n	K21			
8D	VREFB8DN0	IO	CLK17p		DIFFIO RX T91p	DIFFOUT T91p	A22	DQ12T	DQ6T	DQ3T
8D	VREFB8DN0	IO	CLK17n		DIFFIO RX T91n	DIFFOUT T91n	A21	DQ12T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T92p	DIFFOUT T92p	R21	DQ12T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T92n	DIFFOUT T92n	T21			
8D	VREFB8DN0	IO	CLK16p		DIFFIO RX T93p	DIFFOUT T93p	B22	DQ13T	DQ6T	DQ3T
8D	VREFB8DN0	IO	CLK16n		DIFFIO RX T93n	DIFFOUT T93n	C22	DQ13T	DQ6T	DQ3T
8D	VREFB8DN0	IO					J22	DQ13T	DQ6T	DQ3T
8D	VREFB8DN0	IO	VREFB8DN0				H22			
8D	VREFB8DN0	IO			DIFFIO RX T94p	DIFFOUT T94p	E22	DQ13T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO RX T94n	DIFFOUT T94n	F22	DQ13T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T95p	DIFFOUT T95p	A23	DQ13T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T95n	DIFFOUT T95n	A24			
8D	VREFB8DN0	IO			DIFFIO RX T96p	DIFFOUT T96p	C23	DQS13T/CQ13T/CQn13T/QKn13T	DQ6T	DQS3T/CQ3T/CQn3T/QKn3T
8D	VREFB8DN0	IO			DIFFIO RX T96n	DIFFOUT T96n	D23	DQSn13T/QK13T	DQ6T	DQSn3T/QK3T
8D	VREFB8DN0	IO			DIFFIO TX T97p	DIFFOUT T97p	L22	DQ13T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T97n	DIFFOUT T97n	M22			
8D	VREFB8DN0	IO			DIFFIO RX T98p	DIFFOUT T98p	N22	DQ13T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO RX T98n	DIFFOUT T98n	P22	DQ13T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T99p	DIFFOUT T99p	R22	DQ13T	DQ6T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T99n	DIFFOUT T99n	T22			
8D	VREFB8DN0	IO			DIFFIO RX T100p	DIFFOUT T100p	F23	DQ14T	DQ7T	DQ3T
8D	VREFB8DN0	IO			DIFFIO RX T100n	DIFFOUT T100n	G23	DQ14T	DQ7T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T101p	DIFFOUT T101p	R23	DQ14T	DQ7T	DQ3T
8D	VREFB8DN0	IO			DIFFIO TX T101n	DIFFOUT T101n	T23			
8D	VREFB8DN0	IO			DIFFIO RX T102p	DIFFOUT T102p	B24	DQ14T	DQ7T	DQ3T



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
8D	VREFB8D0	IO			DIFFIO_RX_T102n	DIFFOUT_T102n	C24	DQ14T	DQ7T	DQ3T
8D	VREFB8D0	IO			DIFFIO_TX_T103p	DIFFOUT_T103p	M23	DQ14T	DQ7T	DQ3T
8D	VREFB8D0	IO			DIFFIO_TX_T103n	DIFFOUT_T103n	N23			
8D	VREFB8D0	IO			DIFFIO_RX_T104p	DIFFOUT_T104p	D24	DQS14T/CQ14T/CQn14T/QKn14T	DQS7T/CQ7T/CQn7T/QKn7T	DQ3T
8D	VREFB8D0	IO			DIFFIO_RX_T104n	DIFFOUT_T104n	E24	DQSn14T/QK14T	DQSn7T/QK7T	DQ3T
8D	VREFB8D0	IO			DIFFIO_TX_T105p	DIFFOUT_T105p	J23	DQ14T	DQ7T	DQ3T
8D	VREFB8D0	IO			DIFFIO_TX_T105n	DIFFOUT_T105n	K23			
8D	VREFB8D0	IO			DIFFIO_RX_T106p	DIFFOUT_T106p	F24	DQ14T	DQ7T	DQ3T
8D	VREFB8D0	IO			DIFFIO_RX_T106n	DIFFOUT_T106n	G24	DQ14T	DQ7T	DQ3T
8D	VREFB8D0	IO			DIFFIO_TX_T107p	DIFFOUT_T107p	H24	DQ14T	DQ7T	DQ3T
8D	VREFB8D0	IO			DIFFIO_TX_T107n	DIFFOUT_T107n	J24			
8C	VREFB8C0	IO			DIFFIO_RX_T108p	DIFFOUT_T108p	T26	DQ15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_RX_T108n	DIFFOUT_T108n	T25	DQ15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_TX_T109p	DIFFOUT_T109p	G25	DQ15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_TX_T109n	DIFFOUT_T109n	H25			
8C	VREFB8C0	IO			DIFFIO_RX_T110p	DIFFOUT_T110p	N24	DQ15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_RX_T110n	DIFFOUT_T110n	P24	DQ15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_TX_T111p	DIFFOUT_T111p	R24	DQ15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_TX_T111n	DIFFOUT_T111n	T24			
8C	VREFB8C0	IO			DIFFIO_RX_T112p	DIFFOUT_T112p	A25	DQS15T/CQ15T/CQn15T/QKn15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_RX_T112n	DIFFOUT_T112n	B25	DQSn15T/QK15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_TX_T113p	DIFFOUT_T113p	K24	DQ15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_TX_T113n	DIFFOUT_T113n	L24			
8C	VREFB8C0	IO			DIFFIO_RX_T114p	DIFFOUT_T114p	D25	DQ15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_RX_T114n	DIFFOUT_T114n	E25	DQ15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_TX_T115p	DIFFOUT_T115p	P25	DQ15T	DQ7T	DQ3T
8C	VREFB8C0	IO			DIFFIO_TX_T115n	DIFFOUT_T115n	R25			
8C	VREFB8C0	IO			DIFFIO_RX_T116p	DIFFOUT_T116p	C26	DQ16T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_RX_T116n	DIFFOUT_T116n	D26	DQ16T	DQ8T	DQ4T
8C	VREFB8C0	IO					K25	DQ16T	DQ8T	DQ4T
8C	VREFB8C0	IO	VREFB8C0				L25			
8C	VREFB8C0	IO			DIFFIO_RX_T117p	DIFFOUT_T117p	R26	DQ16T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_RX_T117n	DIFFOUT_T117n	T27	DQ16T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T118p	DIFFOUT_T118p	A26	DQ16T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T118n	DIFFOUT_T118n	A27			
8C	VREFB8C0	IO			DIFFIO_RX_T119p	DIFFOUT_T119p	M26	DQS16T/CQ16T/CQn16T/QKn16T	DQS8T/CQ8T/CQn8T/QKn8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_RX_T119n	DIFFOUT_T119n	N26	DQSn16T/QK16T	DQSn8T/QK8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T120p	DIFFOUT_T120p	J26	DQ16T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T120n	DIFFOUT_T120n	K26			
8C	VREFB8C0	IO			DIFFIO_RX_T121p	DIFFOUT_T121p	F26	DQ16T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_RX_T121n	DIFFOUT_T121n	G26	DQ16T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T122p	DIFFOUT_T122p	M25	DQ16T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T122n	DIFFOUT_T122n	N25			
8C	VREFB8C0	IO			DIFFIO_RX_T123p	DIFFOUT_T123p	P27	DQ17T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_RX_T123n	DIFFOUT_T123n	R27	DQ17T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T124p	DIFFOUT_T124p	H27	DQ17T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T124n	DIFFOUT_T124n	J27			
8C	VREFB8C0	IO			DIFFIO_RX_T125p	DIFFOUT_T125p	B27	DQ17T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_RX_T125n	DIFFOUT_T125n	C27	DQ17T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T126p	DIFFOUT_T126p	E27	DQ17T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T126n	DIFFOUT_T126n	F27			
8C	VREFB8C0	IO			DIFFIO_RX_T127p	DIFFOUT_T127p	R28	DQS17T/CQ17T/CQn17T/QKn17T	DQ8T	DQS4T/CQ4T/CQn4T/QKn4T
8C	VREFB8C0	IO			DIFFIO_RX_T127n	DIFFOUT_T127n	T28	DQSn17T/QK17T	DQ8T	DQSn4T/QK4T
8C	VREFB8C0	IO			DIFFIO_TX_T128p	DIFFOUT_T128p	K27	DQ17T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T128n	DIFFOUT_T128n	L27			
8C	VREFB8C0	IO			DIFFIO_RX_T129p	DIFFOUT_T129p	M27	DQ17T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_RX_T129n	DIFFOUT_T129n	N27	DQ17T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T130p	DIFFOUT_T130p	N28	DQ17T	DQ8T	DQ4T
8C	VREFB8C0	IO			DIFFIO_TX_T130n	DIFFOUT_T130n	P28			
8B	VREFB8B0	IO			DIFFIO_RX_T131p	DIFFOUT_T131p	L28	DQ18T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_RX_T131n	DIFFOUT_T131n	M28	DQ18T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T132p	DIFFOUT_T132p	H28	DQ18T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T132n	DIFFOUT_T132n	J28			
8B	VREFB8B0	IO			DIFFIO_RX_T133p	DIFFOUT_T133p	C28	DQ18T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_RX_T133n	DIFFOUT_T133n	D28	DQ18T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T134p	DIFFOUT_T134p	F28	DQ18T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T134n	DIFFOUT_T134n	G28			
8B	VREFB8B0	IO			DIFFIO_RX_T135p	DIFFOUT_T135p	R29	DQS18T/CQ18T/CQn18T/QKn18T	DQS9T/CQ9T/CQn9T/QKn9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_RX_T135n	DIFFOUT_T135n	T29	DQSn18T/QK18T	DQSn9T/QK9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T136p	DIFFOUT_T136p	J29	DQ18T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T136n	DIFFOUT_T136n	K29			
8B	VREFB8B0	IO			DIFFIO_RX_T137p	DIFFOUT_T137p	M29	DQ18T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_RX_T137n	DIFFOUT_T137n	N29	DQ18T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T138p	DIFFOUT_T138p	F29	DQ18T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T138n	DIFFOUT_T138n	G29			
8B	VREFB8B0	IO			DIFFIO_RX_T139p	DIFFOUT_T139p	B28	DQ19T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_RX_T139n	DIFFOUT_T139n	C29	DQ19T	DQ9T	DQ4T
8B	VREFB8B0	IO					R30	DQ19T	DQ9T	DQ4T



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
8B	VREFB8B0	IO	VREFB8B0				R31			
8B	VREFB8B0	IO			DIFFIO_RX_T140p	DIFFOUT_T140p	A29	DQ19T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_RX_T140n	DIFFOUT_T140n	A28	DQ19T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T141p	DIFFOUT_T141p	L30	DQ19T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T141n	DIFFOUT_T141n	M30			
8B	VREFB8B0	IO			DIFFIO_RX_T142p	DIFFOUT_T142p	N30	DQS19T/CQ19T/CQn19T/QKn19T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_RX_T142n	DIFFOUT_T142n	P30	DQS19T/QK19T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T143p	DIFFOUT_T143p	J30	DQ19T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T143n	DIFFOUT_T143n	K30			
8B	VREFB8B0	IO			DIFFIO_RX_T144p	DIFFOUT_T144p	D30	DQ19T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_RX_T144n	DIFFOUT_T144n	D29	DQ19T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T145p	DIFFOUT_T145p	F30	DQ19T	DQ9T	DQ4T
8B	VREFB8B0	IO			DIFFIO_TX_T145n	DIFFOUT_T145n	G30			
8A	VREFB8A0	IO			DIFFIO_RX_T146p	DIFFOUT_T146p	B30	DQ20T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_RX_T146n	DIFFOUT_T146n	C30	DQ20T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T147p	DIFFOUT_T147p	E31	DQ20T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T147n	DIFFOUT_T147n	F31			
8A	VREFB8A0	IO			DIFFIO_RX_T148p	DIFFOUT_T148p	B31	DQ20T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_RX_T148n	DIFFOUT_T148n	A30	DQ20T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T149p	DIFFOUT_T149p	A31	DQ20T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T149n	DIFFOUT_T149n	A32			
8A	VREFB8A0	IO			DIFFIO_RX_T150p	DIFFOUT_T150p	A33	DQS20T/CQ20T/CQn20T/QKn20T	DQS10T/CQ10T/CQn10T/QKn10T	
8A	VREFB8A0	IO			DIFFIO_RX_T150n	DIFFOUT_T150n	B33	DQS20T/QK20T	DQS10T/QK10T	
8A	VREFB8A0	IO			DIFFIO_TX_T151p	DIFFOUT_T151p	H31	DQ20T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T151n	DIFFOUT_T151n	J31			
8A	VREFB8A0	IO			DIFFIO_RX_T152p	DIFFOUT_T152p	C31	DQ20T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_RX_T152n	DIFFOUT_T152n	D31	DQ20T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T153p	DIFFOUT_T153p	C32	DQ20T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T153n	DIFFOUT_T153n	D32			
8A	VREFB8A0	IO			DIFFIO_RX_T154p	DIFFOUT_T154p	N31	DQ21T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_RX_T154n	DIFFOUT_T154n	P31	DQ21T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T155p	DIFFOUT_T155p	J32	DQ21T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T155n	DIFFOUT_T155n	K32			
8A	VREFB8A0	IO			DIFFIO_RX_T156p	DIFFOUT_T156p	M32	DQ21T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_RX_T156n	DIFFOUT_T156n	N32	DQ21T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T157p	DIFFOUT_T157p	J34	DQ21T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T157n	DIFFOUT_T157n	K34			
8A	VREFB8A0	IO			DIFFIO_RX_T158p	DIFFOUT_T158p	L33	DQS21T/CQ21T/CQn21T/QKn21T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_RX_T158n	DIFFOUT_T158n	M33	DQS21T/QK21T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T159p	DIFFOUT_T159p	L31	DQ21T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T159n	DIFFOUT_T159n	M31			
8A	VREFB8A0	IO	CLK23p		DIFFIO_RX_T160p	DIFFOUT_T160p	N34	DQ21T	DQ10T	
8A	VREFB8A0	IO	CLK23n		DIFFIO_RX_T160n	DIFFOUT_T160n	N33	DQ21T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T161p	DIFFOUT_T161p	L34	DQ21T	DQ10T	
8A	VREFB8A0	IO			DIFFIO_TX_T161n	DIFFOUT_T161n	M34			
8A	VREFB8A0	IO	CLK22p		DIFFIO_RX_T162p	DIFFOUT_T162p	E34	DQ22T		
8A	VREFB8A0	IO	CLK22n		DIFFIO_RX_T162n	DIFFOUT_T162n	F34	DQ22T		
8A	VREFB8A0	IO					J33	DQ22T		
8A	VREFB8A0	IO	VREFB8A0				H33			
8A	VREFB8A0	IO	FPLL_TL_CLKOUT2,FPLL_TL_FBp,FPLL_TL_FB1		DIFFIO_RX_T163p	DIFFOUT_T163p	B34	DQ22T		
8A	VREFB8A0	IO	FPLL_TL_CLKOUT3,FPLL_TL_FBn		DIFFIO_RX_T163n	DIFFOUT_T163n	A35	DQ22T		
8A	VREFB8A0	IO	FPLL_TL_CLKOUT0,FPLL_TL_CLKOUTp,FPLL_TL_FB0		DIFFIO_TX_T164p	DIFFOUT_T164p	C33	DQ22T		
8A	VREFB8A0	IO	FPLL_TL_CLKOUT1,FPLL_TL_CLKOUTn		DIFFIO_TX_T164n	DIFFOUT_T164n	D33			
8A	VREFB8A0	IO	CLK21p		DIFFIO_RX_T165p	DIFFOUT_T165p	G34	DQS22T/CQ22T/CQn22T/QKn22T		
8A	VREFB8A0	IO	CLK21n		DIFFIO_RX_T165n	DIFFOUT_T165n	H34	DQS22T/QK22T		
8A	VREFB8A0	IO			DIFFIO_TX_T166p	DIFFOUT_T166p	F32	DQ22T		
8A	VREFB8A0	IO			DIFFIO_TX_T166n	DIFFOUT_T166n	G32			
8A	VREFB8A0	IO	CLK20p		DIFFIO_RX_T167p	DIFFOUT_T167p	C34	DQ22T		
8A	VREFB8A0	IO	CLK20n		DIFFIO_RX_T167n	DIFFOUT_T167n	D34	DQ22T		
8A	VREFB8A0	IO			DIFFIO_TX_T168p	DIFFOUT_T168p	E33	DQ22T		
8A	VREFB8A0	IO	RZQ_6		DIFFIO_TX_T168n	DIFFOUT_T168n	F33			
8A		MSEL0		MSEL0			H35			
8A		MSEL1		MSEL1			A34			
8A		MSEL2		MSEL2			D35			
8A		MSEL3		MSEL3			A37			
8A		MSEL4		MSEL4			P34			
8A		CONF_DONE		CONF_DONE			K35			
8A		nSTATUS		nSTATUS			F35			
8A		nCE		nCE			M35			
8A		nCONFIG		nCONFIG			A36			
8A		GND					P35			
		GND					AA33			
		GND					AA35			
		GND					AA38			
		GND					AA39			
		GND					AB31			
		GND					AB32			
		GND					AB34			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					AB36			
		GND					AB37			
		GND					AC33			
		GND					AC38			
		GND					AC39			
		GND					AD30			
		GND					AD32			
		GND					AD36			
		GND					AD37			
		GND					AE33			
		GND					AE35			
		GND					AE38			
		GND					AE39			
		GND					AF31			
		GND					AF32			
		GND					AF34			
		GND					AF36			
		GND					AF37			
		GND					AG38			
		GND					AG39			
		GND					AH32			
		GND					AH33			
		GND					AH34			
		GND					AH35			
		GND					AH36			
		GND					AH37			
		GND					AJ35			
		GND					AJ38			
		GND					AJ39			
		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					AU35			
		GND					AU38			
		GND					AU39			
		GND					AV35			
		GND					AV36			
		GND					AV37			
		GND					AV38			
		GND					AV39			
		GND					AV35			
		GND					AV38			
		GND					B36			
		GND					B37			
		GND					C35			
		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			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		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					U35			
		GND					U38			
		GND					U39			
		GND					V32			
		GND					V34			
		GND					V36			
		GND					V37			
		GND					W33			
		GND					W38			
		GND					W39			
		GND					Y31			
		GND					Y32			
		GND					Y36			
		GND					Y37			
		GND					A2			
		GND					A3			
		GND					A4			
		GND					A5			
		GND					AA3			
		GND					AA4			
		GND					AA6			
		GND					AA8			
		GND					AB1			
		GND					AB2			
		GND					AB7			
		GND					AC3			
		GND					AC4			
		GND					AC8			
		GND					AD1			
		GND					AD10			
		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			
		GND					AM2			
		GND					AM5			
		GND					AN3			
		GND					AN4			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		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					B1			
		GND					B2			
		GND					B5			
		GND					C3			
		GND					C4			
		GND					D1			
		GND					D2			
		GND					D5			
		GND					E3			
		GND					E4			
		GND					F1			
		GND					F2			
		GND					F5			
		GND					G3			
		GND					G4			
		GND					H1			
		GND					H2			
		GND					H5			
		GND					J3			
		GND					J4			
		GND					K1			
		GND					K2			
		GND					K5			
		GND					L3			
		GND					L4			
		GND					M1			
		GND					M2			
		GND					M5			
		GND					N3			
		GND					N4			
		GND					N5			
		GND					P1			
		GND					P2			
		GND					P6			
		GND					P7			
		GND					R3			
		GND					R4			
		GND					R8			
		GND					T1			
		GND					T10			
		GND					T2			
		GND					T5			
		GND					T7			
		GND					U3			
		GND					U4			
		GND					U6			
		GND					U8			
		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					U16			
		VCCP					V13			
		VCCP					V22			
		VCCP					V25			
		VCCP					V27			
		VCCP					Y13			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		VCCP					Y27			
		VCCA_FPLL					AC30			
		VCCA_FPLL					AC9			
		VCCA_FPLL					Y30			
		VCCA_FPLL					AA9			
		VCCBAT					R33			
		VCC_AUX					AB14			
		VCC_AUX					AB26			
		VCC_AUX					U14			
		VCC_AUX					U28			
		VCCD_FPLL					AD31			
		VCCD_FPLL					AE9			
		VCCD_FPLL					W30			
		VCCD_FPLL					W9			
		VCCA_GXBL0					AF33			
		VCCA_GXBR0					AE7			
		VCCA_GXBL1					AB33			
		VCCA_GXBR1					AA7			
		VCCH_GXBL0					AD33			
		VCCH_GXBR0					AC7			
		VCCH_GXBL1					Y33			
		VCCH_GXBR1					W7			
		VCCL_GXBL0					AD34			
		VCCL_GXBL0					AD35			
		VCCL_GXBR0					AC5			
		VCCL_GXBR0					AC6			
		VCCL_GXBL1					Y34			
		VCCL_GXBL1					Y35			
		VCCL_GXBR1					W5			
		VCCL_GXBR1					W6			
		VCCR_GXBL					AC34			
		VCCR_GXBL					AC35			
		VCCR_GXBL					AG34			
		VCCR_GXBL					AG35			
		VCCR_GXBL					R35			
		VCCR_GXBR					AB5			
		VCCR_GXBR					AB6			
		VCCR_GXBR					AF5			
		VCCR_GXBR					AF6			
		VCCR_GXBR					P5			
		VCCT_GXBL0					AE34			
		VCCT_GXBL0					AF35			
		VCCT_GXBR0					AD6			
		VCCT_GXBR0					AE5			
		VCCT_GXBL1					AA34			
		VCCT_GXBL1					AB35			
		VCCT_GXBR1					AA5			
		VCCT_GXBR1					Y6			
		VCC					AA10			
		VCC					AA12			
		VCC					AA14			
		VCC					AA16			
		VCC					AA18			
		VCC					AA20			
		VCC					AA22			
		VCC					AA24			
		VCC					AA26			
		VCC					AB11			
		VCC					AB17			
		VCC					U10			
		VCC					U12			
		VCC					V11			
		VCC					V15			
		VCC					V17			
		VCC					V23			
		VCC					V29			
		VCC					W10			
		VCC					W12			
		VCC					W14			
		VCC					W16			
		VCC					W18			
		VCC					W20			
		VCC					W22			
		VCC					W24			
		VCC					W26			
		VCC					W28			
		VCC					Y11			
		VCC					Y15			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		VCC					Y17			
		VCC					Y19			
		VCC					Y23			
		VCC					Y25			
		VCC					Y29			
		VCC					Y21			
		VCCIO3A					AH29			
		VCCIO3A					AJ30			
		VCCIO3A					AK35			
		VCCIO3A					AM30			
		VCCIO3A					AP35			
		VCCIO3A					AT35			
		VCCIO3B					AK28			
		VCCIO3B					AL27			
		VCCIO3B					AN28			
		VCCIO3B					AT28			
		VCCIO3C					AJ24			
		VCCIO3C					AL25			
		VCCIO3C					AM24			
		VCCIO3C					AP25			
		VCCIO3C					AR24			
		VCCIO3C					AU25			
		VCCIO3D					AJ22			
		VCCIO3D					AL21			
		VCCIO3D					AM22			
		VCCIO3D					AP21			
		VCCIO3D					AR22			
		VCCIO3D					AU21			
		VCCIO4A					AG10			
		VCCIO4A					AJ5			
		VCCIO4A					AL5			
		VCCIO4A					AN5			
		VCCIO4A					AR5			
		VCCIO4A					AU5			
		VCCIO4B					AK13			
		VCCIO4B					AM12			
		VCCIO4B					AN10			
		VCCIO4B					AN13			
		VCCIO4B					AR12			
		VCCIO4B					AT10			
		VCCIO4C					AJ15			
		VCCIO4C					AM15			
		VCCIO4C					AR15			
		VCCIO4C					AV15			
		VCCIO4D					AJ19			
		VCCIO4D					AK18			
		VCCIO4D					AM19			
		VCCIO4D					AN18			
		VCCIO4D					AR19			
		VCCIO4D					AT18			
		VCCIO7A					E5			
		VCCIO7A					G5			
		VCCIO7A					H7			
		VCCIO7A					J5			
		VCCIO7A					L5			
		VCCIO7A					M9			
		VCCIO7B					C13			
		VCCIO7B					D10			
		VCCIO7B					F13			
		VCCIO7B					G10			
		VCCIO7B					K10			
		VCCIO7B					L13			
		VCCIO7C					F16			
		VCCIO7C					G15			
		VCCIO7C					K15			
		VCCIO7C					L16			
		VCCIO7D					B19			
		VCCIO7D					D18			
		VCCIO7D					E19			
		VCCIO7D					G18			
		VCCIO7D					H19			
		VCCIO7D					M18			
		VCCIO8A					B35			
		VCCIO8A					G31			
		VCCIO8A					G33			
		VCCIO8A					K31			
		VCCIO8A					K33			
		VCCIO8A					P33			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		VCCIO8B					E28			
		VCCIO8B					E30			
		VCCIO8B					H30			
		VCCIO8B					K28			
		VCCIO8C					C25			
		VCCIO8C					D27			
		VCCIO8C					F25			
		VCCIO8C					G27			
		VCCIO8C					J25			
		VCCIO8C					M24			
		VCCIO8D					C21			
		VCCIO8D					D22			
		VCCIO8D					F21			
		VCCIO8D					G22			
		VCCIO8D					K22			
		VCCIO8D					L21			
		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			
		VCCPD7A					P8			
		VCCPD7A					R10			
		VCCPD7BCD					T12			
		VCCPD7BCD					T13			
		VCCPD7BCD					T16			
		VCCPD7BCD					U18			
		VCCPD7BCD					U19			
		VCCPD8					R32			
		VCCPD8					T30			
		VCCPD8					U21			
		VCCPD8					U22			
		VCCPD8					U24			
		VCCPD8					U26			
		VCCPD8					U28			
		VCCPGM					N11			
		VCCPGM					AG29			
		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					AE30			
		GND					AF11			
		GND					AF14			
		GND					AF17			
		GND					AF20			
		GND					AF23			
		GND					AF26			
		GND					AF29			
		GND					AF30			
		GND					AG31			
		GND					AG9			
		GND					AJ11			
		GND					AJ14			
		GND					AJ17			
		GND					AJ20			
		GND					AJ23			
		GND					AJ26			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		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					B14			
		GND					B17			
		GND					B20			
		GND					B23			
		GND					B26			
		GND					B29			
		GND					B32			
		GND					B8			
		GND					E11			
		GND					E14			
		GND					E17			
		GND					E20			
		GND					E23			
		GND					E26			
		GND					E29			
		GND					E32			
		GND					E8			
		GND					H11			
		GND					H14			
		GND					H17			
		GND					H20			
		GND					H23			
		GND					H26			
		GND					H29			
		GND					H32			
		GND					H8			
		GND					L11			
		GND					L14			
		GND					L17			
		GND					L20			
		GND					L23			
		GND					L26			
		GND					L29			
		GND					L32			
		GND					L8			
		GND					N8			
		GND					P11			
		GND					P14			
		GND					P17			
		GND					P20			
		GND					P23			
		GND					P26			
		GND					P29			
		GND					P32			
		GND					U11			
		GND					U13			



Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					U15			
		GND					U17			
		GND					U20			
		GND					U23			
		GND					U25			
		GND					U27			
		GND					U30			
		GND					V10			
		GND					V12			
		GND					V14			
		GND					V16			
		GND					V18			
		GND					V21			
		GND					V24			
		GND					V26			
		GND					V28			
		GND					V30			
		GND					W11			
		GND					W13			
		GND					W15			
		GND					W17			
		GND					W19			
		GND					W23			
		GND					W25			
		GND					W27			
		GND					W29			
		GND					Y10			
		GND					Y12			
		GND					Y14			
		GND					Y16			
		GND					Y18			
		GND					Y20			
		GND					Y22			
		GND					Y24			
		GND					Y26			
		GND					Y28			
		GND					W21			
		VCCR GXBR					V6			
		VCCR GXBR					V6			
		VCCR GXBL					W35			
		VCCR GXBL					W34			
		VCCD FLL					R9			
		VCCD FLL					T31			
		VCCA FLL					U9			
		VCCA FLL					V31			
		VCCL GXBR2					R6			
		VCCL GXBR2					R6			
		VCCL GXBL2					T35			
		VCCL GXBL2					T34			
		VCCH GXBR2					R7			
		VCCH GXBL2					T33			
		VCCA GXBR2					U7			
		VCCA GXBL2					V33			
		GND					H38			
		GND					T8			
		GND					H39			
		GND					T9			
		DNU					G37			
		DNU					B4			
		DNU					G36			
		DNU					B3			
		GND					F38			
		GND					C1			
		GND					F39			
		GND					C2			
		DNU					E37			
		DNU					D4			
		DNU					E36			
		DNU					D3			
		GND					D38			
		GND					E1			
		GND					D39			
		GND					E2			
		DNU					C37			
		DNU					F4			
		DNU					C36			
		DNU					F3			
		GND					U31			



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6
Note (1)

Bank Number	VREF	PinName/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1517	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					G1			
		GND					U32			
		GND					G2			
		GND					W31			
		DNU					H4			
		GND					W32			
		DNU					H3			
		GND					P38			
		GND					J1			
		GND					P39			
		GND					J2			
		DNU					N37			
		DNU					K4			
		DNU					N36			
		DNU					K3			
		GND					M38			
		GND					L1			
		GND					M39			
		GND					L2			
		DNU					L37			
		DNU					M4			
		DNU					L36			
		DNU					M3			
		GND					K38			
		GND					N1			
		GND					K39			
		GND					N2			
		DNU					J37			
		GND					V8			
		DNU					J36			
		GND					V9			
		VCCT_GXBR2					U5			
		VCCT_GXBR2					T6			
		VCCT_GXBL2					V35			
		VCCT_GXBL2					U34			

Notes:

(1) For more information about pin definitions and pin connection guidelines, refer to the [Arria V Device Family Pin Connection Guidelines](#).

(2) GXB_REFCLK pin is not supported in current Quartus II version, but will be supported in future Quartus II release version.



Pin Information for the Arria® V 5AGXBB3 Device
Version 1.6

Version Number	Date	Changes Made
1.0	9/2/2011	Initial release.
1.1	11/18/2011	Updated F1517 package - R9 and T31 changed from NC to VCCD_FPLL - U9 and V31 changed from NC to VCCA_FPLL
1.2	11/30/2011	Updated pin name nPERSTL1 to nPERSTR0
1.3	1/3/2012	Split VCC to VCC and VCCP
1.4	5/11/2012	Rename the CQ pins in DQS and hard memory PHY columns
1.5	7/6/2012	- Some of the NC pins changed to power, DNU, or GND pins. - Updated for production device support. Added two HMC address pins (A_4D_15 and A_7D_15) for 5AGXB3 production devices, these two pins are not applicable for 5AGXB3 ES devices.
1.6	9/3/2012	Removed unsupported nPERSTL0 and nPERSTR0 pins