



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3A		nCONFIG		nCONFIG			AK35				
3A		TRST		TRST			AM35				
3A		TMS		TMS			AT35				
3A		TCK		TCK			AA31				
3A		TDI		TDI			AJ34				
3A		TDO		TDO			AH34				
3A		nCS0		nCS0			AD32				
3A		AS_DATA3		AS_DATA3			AG32				
3A		AS_DATA2		AS_DATA2			AC32				
3A		AS_DATA1		AS_DATA1			Y31				
3A		AS_DATA0,ASDO		AS_DATA0,ASDO			AB31				
3A		DCLK		DCLK			AC31				
3A	VREFB3A0	IO		CLKUSR	DIFFIO TX B1n	DIFFOUT B1n	AN34	DO1B	DO1B		
3A	VREFB3A0	IO		CRC ERROR	DIFFIO TX B1p	DIFFOUT B1p	AN33	DO1B	DO1B		
3A	VREFB3A0	IO	RZQ_0		DIFFIO RX B2n	DIFFOUT B2n	AR34	DQS1B	DO1B		
3A	VREFB3A0	IO		DEV OE	DIFFIO RX B2p	DIFFOUT B2p	AP34	DQS1B	DO1B/CQn1B		
3A	VREFB3A0	IO		DEV CLRn	DIFFIO TX B3n	DIFFOUT B3n	AM34	DO1B	DO1B		
3A	VREFB3A0	IO		INIT_DONE	DIFFIO TX B3p	DIFFOUT B3p	AL34	DO1B	DO1B		
3A	VREFB3A0	IO		nCEO	DIFFIO RX B4n	DIFFOUT B4n	AN32	DQS2B	DQS2B/DO1B		
3A	VREFB3A0	IO		DATA0	DIFFIO RX B4p	DIFFOUT B4p	AP33	DQS2B	DQS1B/CQ1B		
3A	VREFB3A0	IO		DATA1	DIFFIO TX B5n	DIFFOUT B5n	AT33	DO2B	DO1B		
3A	VREFB3A0	IO		DATA2	DIFFIO TX B5p	DIFFOUT B5p	AR33	DO2B	DO1B		
3A	VREFB3A0	IO		DATA3	DIFFIO RX B6n	DIFFOUT B6n	AU34	DO2B	DO1B		
3A	VREFB3A0	IO		DATA4	DIFFIO RX B6p	DIFFOUT B6p	AU33	DO2B	DO1B		
3A	VREFB3A0	IO		DATA5	DIFFIO TX B7n	DIFFOUT B7n	AN31	DO3B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA6	DIFFIO TX B7p	DIFFOUT B7p	AM31	DO3B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA7	DIFFIO RX B8n	DIFFOUT B8n	AU32	DQS3B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA8	DIFFIO RX B8p	DIFFOUT B8p	AT32	DQS3B	DO2B/CQn2B	DO1B	
3A	VREFB3A0	IO		DATA9	DIFFIO TX B9n	DIFFOUT B9n	AR31	DO3B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA10	DIFFIO TX B9p	DIFFOUT B9p	AP31	DO3B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA11	DIFFIO RX B10n	DIFFOUT B10n	AW34	DQS4B	DQS2B/DO2B	DO1B	
3A	VREFB3A0	IO		DATA12	DIFFIO RX B10p	DIFFOUT B10p	AV34	DQS4B	DQS2B/CQ2B	DO1B/CQn1B	
3A	VREFB3A0	IO		DATA13	DIFFIO TX B11n	DIFFOUT B11n	AW31	DO4B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA14	DIFFIO TX B11p	DIFFOUT B11p	AV31	DO4B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA15	DIFFIO RX B12n	DIFFOUT B12n	AW32	DO4B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA16	DIFFIO RX B12p	DIFFOUT B12p	AV32	DO4B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA17	DIFFIO TX B13n	DIFFOUT B13n	AJ33	DO5B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA18	DIFFIO TX B13p	DIFFOUT B13p	AH33	DO5B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA19	DIFFIO RX B14n	DIFFOUT B14n	AL33	DQS5B	DO3B	DQS1B/DO1B	
3A	VREFB3A0	IO		DATA20	DIFFIO RX B14p	DIFFOUT B14p	AK33	DQS5B	DO3B/CQn3B	DQS1B/CQ1B	
3A	VREFB3A0	IO		DATA21	DIFFIO TX B15n	DIFFOUT B15n	AK32	DO5B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA22	DIFFIO TX B15p	DIFFOUT B15p	AJ32	DO5B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA23	DIFFIO RX B16n	DIFFOUT B16n	AH31	DQS6B	DQS3B/DO3B	DO1B	
3A	VREFB3A0	IO		DATA24	DIFFIO RX B16p	DIFFOUT B16p	AG31	DQS6B	DQS3B/CQ3B	DO1B	
3A	VREFB3A0	IO		DATA25	DIFFIO TX B17n	DIFFOUT B17n	AF31	DO6B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA26	DIFFIO TX B17p	DIFFOUT B17p	AE31	DO6B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA27	DIFFIO RX B18n	DIFFOUT B18n	AJ30	DO6B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA28	DIFFIO RX B18p	DIFFOUT B18p	AH30	DO6B	DO3B	DO1B	
3A	VREFB3B0	IO		DATA29	DIFFIO TX B19n	DIFFOUT B19n	AR30	DO7B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO		DATA30	DIFFIO TX B19p	DIFFOUT B19p	AP30	DO7B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO		DATA31	DIFFIO RX B20n	DIFFOUT B20n	AU30	DQS7B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO		PR_DONE	DIFFIO RX B20p	DIFFOUT B20p	AT30	DQS7B	DO4B/CQn4B	DO2B	DO1B
3B	VREFB3B0	IO		PR_REQUEST	DIFFIO TX B21n	DIFFOUT B21n	AN30	DO7B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO		PR_READY	DIFFIO TX B21p	DIFFOUT B21p	AN29	DO7B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO	CLK0n		DIFFIO RX B22n	DIFFOUT B22n	AW29	DQS8B	DQS4B/DO4B	DO2B	DO1B
3B	VREFB3B0	IO	CLK0p		DIFFIO RX B22p	DIFFOUT B22p	AV29	DQS8B	DQS4B/CQ4B	DO2B/CQn2B	DO1B
3B	VREFB3B0	IO		PR_ERROR	DIFFIO TX B23n	DIFFOUT B23n	AU29	DO8B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO		CvP_CONFDONE	DIFFIO TX B23p	DIFFOUT B23p	AT29	DO8B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO	CLK1n		DIFFIO RX B24n	DIFFOUT B24n	AW28	DO8B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO	CLK1p		DIFFIO RX B24p	DIFFOUT B24p	AV28	DO8B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO	FPLL_BL_CLKOUT0,FPLL_BL_CLKOUTn		DIFFIO TX B25n	DIFFOUT B25n	AE30	DO9B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO	FPLL_BL_CLKOUT0,FPLL_BL_CLKOUTp,FPLL_BL_FB0		DIFFIO TX B25p	DIFFOUT B25p	AD30	DO9B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO	FPLL_BL_CLKOUT3,FPLL_BL_FBn		DIFFIO RX B26n	DIFFOUT B26n	AC30	DQS9B	DQS5B	DQS2B/CQ2B	DO1B
3B	VREFB3B0	IO	FPLL_BL_CLKOUT2,FPLL_BL_FBp,FPLL_BL_FB1		DIFFIO RX B26p	DIFFOUT B26p	AB30	DQS9B	DQS5B/CQn5B	DQS2B/CQ2B	DO1B
3B	VREFB3B0	IO		nPERSTL0	DIFFIO TX B27n	DIFFOUT B27n	AC28	DO9B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO		nPERSTL1	DIFFIO TX B27p	DIFFOUT B27p	AB28	DO9B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO	CLK2n		DIFFIO RX B28n	DIFFOUT B28n	AG30	DQS10B	DQS5B/DO5B	DO2B	DO1B
3B	VREFB3B0	IO	CLK2p		DIFFIO RX B28p	DIFFOUT B28p	AF29	DQS10B	DQS5B/CQ5B	DO2B	DO1B/CQn1B
3B	VREFB3B0	IO		nPERSTR1	DIFFIO TX B29n	DIFFOUT B29n	AE29	DO10B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO		nPERSTR0	DIFFIO TX B29p	DIFFOUT B29p	AF28	DO10B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO	CLK3n		DIFFIO RX B30n	DIFFOUT B30n	AH28	DO10B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO	CLK3p		DIFFIO RX B30p	DIFFOUT B30p	AG28	DO10B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO			DIFFIO TX B31n	DIFFOUT B31n	AL30	DO11B	DO6B	DO3B	DO1B
3B	VREFB3B0	IO			DIFFIO TX B31p	DIFFOUT B31p	AK30	DO11B	DO6B	DO3B	DO1B
3B	VREFB3B0	IO			DIFFIO RX B32n	DIFFOUT B32n	AM29	DQS11B	DO6B	DO3B	DQS1B/DO1B
3B	VREFB3B0	IO			DIFFIO RX B32p	DIFFOUT B32p	AL29	DQS11B	DO6B/CQn6B	DO3B	DQS1B/CQ1B
3B	VREFB3B0	IO			DIFFIO TX B33n	DIFFOUT B33n	AJ29	DO11B	DO6B	DO3B	DO1B
3B	VREFB3B0	IO			DIFFIO TX B33p	DIFFOUT B33p	AK29	DO11B	DO6B	DO3B	DO1B



Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3B	VREFB3BN0	IO			DIFFIO RX B34n	DIFFOUT B34n	AR26	DQSn12B	DQSn6B/DQ6B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B34p	DIFFOUT B34p	AP26	DQS12B	DQS6B/CQ6B	DQ3B/CQn3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B35n	DIFFOUT B35n	AL26	DQ12B	DO6B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO TX B35p	DIFFOUT B35p	AL27	DQ12B	DO6B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO RX B36n	DIFFOUT B36n	AN28	DQ12B	DO6B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO RX B36p	DIFFOUT B36p	AM28	DQ12B	DO6B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO TX B37n	DIFFOUT B37n	AA27	DQ13B	DO7B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO TX B37p	DIFFOUT B37p	AA26	DQ13B	DO7B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO RX B38n	DIFFOUT B38n	AA29	DQSn13B	DO7B	DQSn3B/DQ3B	DO1B
3B	VREFB3BN0	IO			DIFFIO RX B38p	DIFFOUT B38p	AA28	DQS13B	DO7B/CQn7B	DQSn3B/CQ3B	DO1B
3B	VREFB3BN0	IO			DIFFIO TX B39n	DIFFOUT B39n	AC27	DQ13B	DO7B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO TX B39p	DIFFOUT B39p	AB27	DQ13B	DO7B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO RX B40n	DIFFOUT B40n	AE27	DQSn14B	DQSn7B/DO7B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO RX B40p	DIFFOUT B40p	AD27	DQS14B	DQSn7B/CQ7B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO TX B41n	DIFFOUT B41n	AH27	DQ14B	DO7B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO TX B41p	DIFFOUT B41p	AG27	DQ14B	DO7B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO RX B42n	DIFFOUT B42n	AK27	DQ14B	DO7B	DO3B	DO1B
3B	VREFB3BN0	IO			DIFFIO RX B42p	DIFFOUT B42p	AJ27	DQ14B	DO7B	DO3B	DO1B
3C	VREFB3CN0	IO			DIFFIO TX B43n	DIFFOUT B43n	AU27	DQ15B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B43p	DIFFOUT B43p	AT27	DQ15B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B44n	DIFFOUT B44n	AW26	DQSn15B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B44p	DIFFOUT B44p	AV26	DQS15B	DO8B/CQn8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B45n	DIFFOUT B45n	AU26	DQ15B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B45p	DIFFOUT B45p	AT26	DQ15B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B46n	DIFFOUT B46n	AR27	DQSn16B	DQSn8B/DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B46p	DIFFOUT B46p	AP27	DQS16B	DQSn8B/CQ8B	DO4B/CQn4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B47n	DIFFOUT B47n	AM26	DQ16B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B47p	DIFFOUT B47p	AL26	DQ16B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B48n	DIFFOUT B48n	AN27	DQ16B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B48p	DIFFOUT B48p	AN26	DQ16B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B49n	DIFFOUT B49n	AE26	DQ17B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B49p	DIFFOUT B49p	AD26	DQ17B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B50n	DIFFOUT B50n	AA25	DQSn17B	DO9B	DQSn4B/DQ4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B50p	DIFFOUT B50p	AB25	DQS17B	DO9B/CQn9B	DQSn4B/CQ4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B51n	DIFFOUT B51n	AC26	DQ17B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B51p	DIFFOUT B51p	AC25	DQ17B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B52n	DIFFOUT B52n	AK26	DQSn18B	DQSn9B/DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B52p	DIFFOUT B52p	AJ26	DQS18B	DQSn9B/CQ9B	DO4B	DO2B/CQn2B
3C	VREFB3CN0	IO			DIFFIO TX B53n	DIFFOUT B53n	AG26	DQ18B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B53p	DIFFOUT B53p	AF26	DQ18B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B54n	DIFFOUT B54n	AH25	DQ18B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B54p	DIFFOUT B54p	AC25	DQ18B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B55n	DIFFOUT B55n	AW25	DQ19B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B55p	DIFFOUT B55p	AV25	DQ19B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B56n	DIFFOUT B56n	AL25	DQSn19B	DO10B	DO5B	DQSn2B/DQ2B
3C	VREFB3CN0	IO			DIFFIO RX B56p	DIFFOUT B56p	AU24	DQS19B	DO10B/CQn10B	DO5B	DQSn2B/CQ2B
3C	VREFB3CN0	IO			DIFFIO TX B57n	DIFFOUT B57n	AT24	DQ19B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B57p	DIFFOUT B57p	AR24	DQ19B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B58n	DIFFOUT B58n	AR25	DQSn20B	DQSn10B/DQ10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B58p	DIFFOUT B58p	AP25	DQS20B	DQSn10B/CQ10B	DO5B/CQn5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B59n	DIFFOUT B59n	AN25	DQ20B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B59p	DIFFOUT B59p	AM25	DQ20B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B60n	DIFFOUT B60n	AP24	DQ20B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B60p	DIFFOUT B60p	AN24	DQ20B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B61n	DIFFOUT B61n	AC24	DQ21B	DO11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B61p	DIFFOUT B61p	AB24	DQ21B	DO11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B62n	DIFFOUT B62n	AF25	DQSn21B	DO11B	DQSn5B/DQ5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B62p	DIFFOUT B62p	AE25	DQS21B	DO11B/CQn11B	DQSn5B/CQ5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B63n	DIFFOUT B63n	AE24	DQ21B	DO11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B63p	DIFFOUT B63p	AD24	DQ21B	DO11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B64n	DIFFOUT B64n	AG24	DQSn22B	DQSn11B/DQ11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B64p	DIFFOUT B64p	AH24	DQS22B	DQSn11B/CQ11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B65n	DIFFOUT B65n	AK24	DQ22B	DO11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B65p	DIFFOUT B65p	AJ24	DQ22B	DO11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B66n	DIFFOUT B66n	AL24	DQ22B	DO11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B66p	DIFFOUT B66p	AL25	DQ22B	DO11B	DO5B	DO2B
3D	VREFB3DN0	IO			DIFFIO TX B67n	DIFFOUT B67n	AW23	DQ23B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO TX B67p	DIFFOUT B67p	AV23	DQ23B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B68n	DIFFOUT B68n	AW22	DQSn23B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B68p	DIFFOUT B68p	AV22	DQS23B	DO12B/CQn12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO TX B69n	DIFFOUT B69n	AU23	DQ23B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO TX B69p	DIFFOUT B69p	AT23	DQ23B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B70n	DIFFOUT B70n	AR22	DQSn24B	DQSn12B/DQ12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B70p	DIFFOUT B70p	AP22	DQS24B	DQSn12B/CQ12B	DO6B/CQn6B	DO3B
3D	VREFB3DN0	IO			DIFFIO TX B71n	DIFFOUT B71n	AN22	DQ24B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO TX B71p	DIFFOUT B71p	AM22	DQ24B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B72n	DIFFOUT B72n	AN23	DQ24B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B72p	DIFFOUT B72p	AM23	DQ24B	DO12B	DO6B	DO3B



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Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3D	VREFB3DN0	IO			DIFFIO TX B73n	DIFFOUT B73n	AE23	DQ25B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B73p	DIFFOUT B73p	AD23	DQ25B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B74n	DIFFOUT B74n	AG23	DQS25B	DQ13B	DQS6B/DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B74p	DIFFOUT B74p	AF23	DQS25B	DQ13B/CQn13B	DQS6B/CQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B75n	DIFFOUT B75n	AE22	DQ25B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B75p	DIFFOUT B75p	AD22	DQ25B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO	CLK4n		DIFFIO RX B76n	DIFFOUT B76n	AJ22	DQS26B	DQS13B/DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO	CLK4p		DIFFIO RX B76p	DIFFOUT B76p	AH22	DQS26B	DQS13B/CQ13B	DQ6B	DQ3B/CQn3B
3D	VREFB3DN0	IO			DIFFIO TX B77n	DIFFOUT B77n	AG22	DQ26B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B77p	DIFFOUT B77p	AF22	DQ26B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO	CLK5n		DIFFIO RX B78n	DIFFOUT B78n	AL23	DQ26B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO	CLK5p		DIFFIO RX B78p	DIFFOUT B78p	AK23	DQ26B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B79n	DIFFOUT B79n	AW20	DQ27B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B79p	DIFFOUT B79p	AV20	DQ27B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B80n	DIFFOUT B80n	AL21	DQS27B	DQ14B	DQ7B	DQS3B/DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B80p	DIFFOUT B80p	AT21	DQS27B	DQ14B/CQn14B	DQ7B	DQS3B/CQ3B
3D	VREFB3DN0	IO			DIFFIO TX B81n	DIFFOUT B81n	AL20	DQ27B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B81p	DIFFOUT B81p	AT20	DQ27B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B82n	DIFFOUT B82n	AR21	DQS28B	DQS14B/DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B82p	DIFFOUT B82p	AR20	DQS28B	DQS14B/CQ14B	DQ7B/CQn7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B83n	DIFFOUT B83n	AM20	DQ28B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B83p	DIFFOUT B83p	AN20	DQ28B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B84n	DIFFOUT B84n	AP21	DQ28B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B84p	DIFFOUT B84p	AN21	DQ28B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B85n	DIFFOUT B85n	AD21	DQ29B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B85p	DIFFOUT B85p	AD20	DQ29B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B86n	DIFFOUT B86n	AG21	DQS29B	DQ15B	DQS7B/DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B86p	DIFFOUT B86p	AH21	DQS29B	DQ15B/CQn15B	DQS7B/CQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B87n	DIFFOUT B87n	AE21	DQ29B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B87p	DIFFOUT B87p	AE20	DQ29B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B88n	DIFFOUT B88n	AL22	DQS30B	DQS15B/DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B88p	DIFFOUT B88p	AK21	DQS30B	DQS15B/CQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B89n	DIFFOUT B89n	AJ21	DQ30B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B89p	DIFFOUT B89p	AJ20	DQ30B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B90n	DIFFOUT B90n	AL21	DQ30B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B90p	DIFFOUT B90p	AL20	DQ30B	DQ15B	DQ7B	DQ3B
4D	VREFB4DN0	IO			DIFFIO TX B127n	DIFFOUT B127n	AH19	DQ43B	DQ16B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B127p	DIFFOUT B127p	AG19	DQ43B	DQ16B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B128n	DIFFOUT B128n	AK18	DQS43B	DQ16B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B128p	DIFFOUT B128p	AJ19	DQS43B	DQ16B/CQn16B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B129n	DIFFOUT B129n	AJ18	DQ43B	DQ16B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B129p	DIFFOUT B129p	AH18	DQ43B	DQ16B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B130n	DIFFOUT B130n	AG18	DQS44B	DQS16B/DQ16B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B130p	DIFFOUT B130p	AF19	DQS44B	DQS16B/CQ16B	DQ8B/CQn8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B131n	DIFFOUT B131n	AE19	DQ44B	DQ16B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B131p	DIFFOUT B131p	AE18	DQ44B	DQ16B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B132n	DIFFOUT B132n	AD17	DQ44B	DQ16B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B132p	DIFFOUT B132p	AD18	DQ44B	DQ16B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B133n	DIFFOUT B133n	AM19	DQ45B	DQ17B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B133p	DIFFOUT B133p	AL18	DQ45B	DQ17B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B134n	DIFFOUT B134n	AN18	DQS45B	DQ17B	DQS8B/DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B134p	DIFFOUT B134p	AN19	DQS45B	DQ17B/CQn17B	DQS8B/CQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B135n	DIFFOUT B135n	AR18	DQ45B	DQ17B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B135p	DIFFOUT B135p	AP18	DQ45B	DQ17B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B136n	DIFFOUT B136n	AR19	DQS46B	DQS17B/DQ17B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B136p	DIFFOUT B136p	AP19	DQS46B	DQS17B/CQ17B	DQ8B	DQ4B/CQn4B
4D	VREFB4DN0	IO			DIFFIO TX B137n	DIFFOUT B137n	AU18	DQ46B	DQ17B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B137p	DIFFOUT B137p	AT18	DQ46B	DQ17B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B138n	DIFFOUT B138n	AW19	DQ46B	DQ17B	DQ8B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B138p	DIFFOUT B138p	AV19	DQ46B	DQ17B	DQ8B	DQ4B
4D	VREFB4DN0	IO	FPLL_BC_CLKOUT1,FPLL_BC_CLKOUTn		DIFFIO TX B139n	DIFFOUT B139n	AJ17	DQ47B	DQ18B	DQ9B	DQ4B
4D	VREFB4DN0	IO	FPLL_BC_CLKOUT0,FPLL_BC_CLKOUTp,FPLL_BC_FB0		DIFFIO TX B139p	DIFFOUT B139p	AH16	DQ47B	DQ18B	DQ9B	DQ4B
4D	VREFB4DN0	IO	FPLL_BC_CLKOUT2,FPLL_BC_FBn		DIFFIO RX B140n	DIFFOUT B140n	AL17	DQS47B	DQ18B	DQ9B	DQS4B/DQ4B
4D	VREFB4DN0	IO	FPLL_BC_CLKOUT2,FPLL_BC_FBp,FPLL_BC_FB1		DIFFIO RX B140p	DIFFOUT B140p	AK17	DQS47B	DQ18B/CQn18B	DQ9B	DQS4B/CQ4B
4D	VREFB4DN0	IO			DIFFIO TX B141n	DIFFOUT B141n	AM16	DQ47B	DQ18B	DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B141p	DIFFOUT B141p	AL16	DQ47B	DQ18B	DQ9B	DQ4B
4D	VREFB4DN0	IO	CLK8n		DIFFIO RX B142n	DIFFOUT B142n	AG17	DQS48B	DQS18B/DQ18B	DQ9B	DQ4B
4D	VREFB4DN0	IO	CLK8p		DIFFIO RX B142p	DIFFOUT B142p	AF17	DQS48B	DQS18B/CQ18B	DQ9B/CQn9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B143n	DIFFOUT B143n	AG16	DQ48B	DQ18B	DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B143p	DIFFOUT B143p	AF16	DQ48B	DQ18B	DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B144n	DIFFOUT B144n	AE16	DQ48B	DQ18B	DQ9B	DQ4B
4D	VREFB4DN0	IO	CLK7n		DIFFIO RX B144p	DIFFOUT B144p	AE17	DQ48B	DQ18B	DQ9B	DQ4B
4D	VREFB4DN0	IO	CLK7p		DIFFIO TX B145n	DIFFOUT B145n	AN17	DQ49B	DQ19B	DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B145p	DIFFOUT B145p	AM17	DQ49B	DQ19B	DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B146n	DIFFOUT B146n	AP16	DQS49B	DQ19B	DQS9B/DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B146p	DIFFOUT B146p	AN16	DQS49B	DQ19B/CQn19B	DQS9B/CQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B147n	DIFFOUT B147n	AT17	DQ49B	DQ19B	DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B147p	DIFFOUT B147p	AR17	DQ49B	DQ19B	DQ9B	DQ4B



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
4D	VREFB4DN0	IO			DIFFIO RX B148n	DIFFOUT B148n	AU16	DQS50B	DQS19B/DQ19B	DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B148p	DIFFOUT B148p	AU17	DQS50B	DQS19B/CQ19B	DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B149n	DIFFOUT B149n	AW16	DQ50B	DQ19B	DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO TX B149p	DIFFOUT B149p	AV16	DQ50B	DQ19B	DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B150n	DIFFOUT B150n	AW17	DQ50B	DQ19B	DQ9B	DQ4B
4D	VREFB4DN0	IO			DIFFIO RX B150p	DIFFOUT B150p	AV17	DQ50B	DQ19B	DQ9B	DQ4B
4C	VREFB4CN0	IO			DIFFIO TX B151n	DIFFOUT B151n	AB15	DQ51B	DQ20B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B151p	DIFFOUT B151p	AB16	DQ51B	DQ20B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B152n	DIFFOUT B152n	AD16	DQ51B	DQ20B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B152p	DIFFOUT B152p	AC15	DQ51B	DQ20B/CQn20B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B153n	DIFFOUT B153n	AA15	DQ51B	DQ20B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B153p	DIFFOUT B153p	AA14	DQ51B	DQ20B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B154n	DIFFOUT B154n	AE15	DQ52B	DQSn20B/DQ20B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B154p	DIFFOUT B154p	AD15	DQ52B	DQSn20B/CQ20B	DI01B/CQn10B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B155n	DIFFOUT B155n	AJ15	DQ52B	DQ20B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B155p	DIFFOUT B155p	AH15	DQ52B	DQ20B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B156n	DIFFOUT B156n	AG14	DQ52B	DQ20B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B156p	DIFFOUT B156p	AG15	DQ52B	DQ20B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B157n	DIFFOUT B157n	AL15	DQ53B	DQ21B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B157p	DIFFOUT B157p	AK15	DQ53B	DQ21B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B158n	DIFFOUT B158n	AL14	DQ53B	DQ21B	DQSn10B/DQ10B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B158p	DIFFOUT B158p	AK14	DQ53B	DQ21B/CQn21B	DQSn10B/CQ10B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B159n	DIFFOUT B159n	AN14	DQ53B	DQ21B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B159p	DIFFOUT B159p	AM14	DQ53B	DQ21B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B160n	DIFFOUT B160n	AP15	DQ54B	DQSn21B/DQ21B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B160p	DIFFOUT B160p	AN15	DQ54B	DQSn21B/CQ21B	DI01B	DQ5B/CQn5B
4C	VREFB4CN0	IO			DIFFIO TX B161n	DIFFOUT B161n	AR15	DQ54B	DQ21B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B161p	DIFFOUT B161p	AR14	DQ54B	DQ21B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B162n	DIFFOUT B162n	AU15	DQ54B	DQ21B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B162p	DIFFOUT B162p	AT15	DQ54B	DQ21B	DI01B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B163n	DIFFOUT B163n	AC13	DQ55B	DQ22B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B163p	DIFFOUT B163p	AB13	DQ55B	DQ22B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B164n	DIFFOUT B164n	AD14	DQ55B	DQ22B	DI11B	DQSn5B/DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B164p	DIFFOUT B164p	AC14	DQ55B	DQ22B/CQn22B	DI11B	DQ55B/CQ5B
4C	VREFB4CN0	IO			DIFFIO TX B165n	DIFFOUT B165n	AA13	DQ55B	DQ22B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B165p	DIFFOUT B165p	AA12	DQ55B	DQ22B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B166n	DIFFOUT B166n	AF14	DQ55B	DQSn22B/DQ22B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B166p	DIFFOUT B166p	AE14	DQ55B	DQSn22B/CQ22B	DI11B/CQn11B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B167n	DIFFOUT B167n	AJ13	DQ56B	DQ22B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B167p	DIFFOUT B167p	AH13	DQ56B	DQ22B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B168n	DIFFOUT B168n	AC13	DQ56B	DQ22B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B168p	DIFFOUT B168p	AF13	DQ56B	DQ22B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B169n	DIFFOUT B169n	AM13	DQ57B	DQ23B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B169p	DIFFOUT B169p	AL13	DQ57B	DQ23B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B170n	DIFFOUT B170n	AP12	DQ57B	DQ23B	DQSn11B/DQ11B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B170p	DIFFOUT B170p	AN12	DQ57B	DQ23B/CQn23B	DQSn11B/CQ11B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B171n	DIFFOUT B171n	AP13	DQ57B	DQ23B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B171p	DIFFOUT B171p	AN13	DQ57B	DQ23B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B172n	DIFFOUT B172n	AU14	DQ58B	DQSn23B/DQ23B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B172p	DIFFOUT B172p	AT14	DQ58B	DQSn23B/CQ23B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B173n	DIFFOUT B173n	AW14	DQ58B	DQ23B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO TX B173p	DIFFOUT B173p	AV14	DQ58B	DQ23B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B174n	DIFFOUT B174n	AW13	DQ58B	DQ23B	DI11B	DC5B
4C	VREFB4CN0	IO			DIFFIO RX B174p	DIFFOUT B174p	AV13	DQ58B	DQ23B	DI11B	DC5B
4B	VREFB4BN0	IO			DIFFIO TX B175n	DIFFOUT B175n	AC12	DQ59B	DQ24B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO TX B175p	DIFFOUT B175p	AB12	DQ59B	DQ24B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B176n	DIFFOUT B176n	AE12	DQ59B	DQ24B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B176p	DIFFOUT B176p	AD12	DQ59B	DQ24B/CQn24B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO TX B177n	DIFFOUT B177n	AE11	DQ59B	DQ24B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO TX B177p	DIFFOUT B177p	AE10	DQ59B	DQ24B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B178n	DIFFOUT B178n	AJ12	DQ59B	DQSn24B/DQ24B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B178p	DIFFOUT B178p	AH12	DQ59B	DQSn24B/CQ24B	DI2B/CQn12B	DC6B
4B	VREFB4BN0	IO			DIFFIO TX B179n	DIFFOUT B179n	AF11	DQ60B	DQ24B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO TX B179p	DIFFOUT B179p	AG12	DQ60B	DQ24B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B180n	DIFFOUT B180n	AK12	DQ60B	DQ24B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B180p	DIFFOUT B180p	AL12	DQ60B	DQ24B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO TX B181n	DIFFOUT B181n	AL11	DQ61B	DQ25B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO TX B181p	DIFFOUT B181p	AK11	DQ61B	DQ25B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B182n	DIFFOUT B182n	AR12	DQ61B	DQ25B	DQSn12B/DQ12B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B182p	DIFFOUT B182p	AR11	DQ61B	DQ25B/CQn25B	DQSn12B/CQ12B	DC6B
4B	VREFB4BN0	IO			DIFFIO TX B183n	DIFFOUT B183n	AM11	DQ61B	DQ25B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO TX B183p	DIFFOUT B183p	AM11	DQ61B	DQ25B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B184n	DIFFOUT B184n	AU12	DQ62B	DQSn25B/DQ25B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B184p	DIFFOUT B184p	AT12	DQ62B	DQSn25B/CQ25B	DI2B	DQ5B/CQn5B
4B	VREFB4BN0	IO			DIFFIO TX B185n	DIFFOUT B185n	AU11	DQ62B	DQ25B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO TX B185p	DIFFOUT B185p	AT11	DQ62B	DQ25B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B186n	DIFFOUT B186n	AW11	DQ62B	DQ25B	DI2B	DC6B
4B	VREFB4BN0	IO			DIFFIO RX B186p	DIFFOUT B186p	AV11	DQ62B	DQ25B	DI2B	DC6B



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note 1.1

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
4B	VREFB4BN0	IO			DIFFIO TX B187n	DIFFOUT B187n	AC9	DO63B	DO26B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO TX B187p	DIFFOUT B187p	AB9	DO63B	DO26B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO RX B188n	DIFFOUT B188n	AC10	DOSn63B	DO26B	DO13B	DOSn6B/DO6B
4B	VREFB4BN0	IO			DIFFIO RX B188p	DIFFOUT B188p	AB10	DOS63B	DO26B/CQn26B	DO13B	DOS6B/CQ6B
4B	VREFB4BN0	IO			DIFFIO TX B189n	DIFFOUT B189n	AE9	DO63B	DO26B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO TX B189p	DIFFOUT B189p	AD9	DO63B	DO26B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO RX B190n	DIFFOUT B190n	AG10	DOSn64B	DOSn26B/DO26B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO RX B190p	DIFFOUT B190p	AF10	DOS64B	DOS26B/CQ26B	DO13B/CQn13B	DO6B
4B	VREFB4BN0	IO			DIFFIO TX B191n	DIFFOUT B191n	AH9	DO64B	DO26B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO TX B191p	DIFFOUT B191p	AG9	DO64B	DO26B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO RX B192n	DIFFOUT B192n	AJ10	DO64B	DO26B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO RX B192p	DIFFOUT B192p	AH10	DO64B	DO26B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO TX B193n	DIFFOUT B193n	AM10	DO65B	DO27B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO TX B193p	DIFFOUT B193p	AL10	DO65B	DO27B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO RX B194n	DIFFOUT B194n	AP10	DOSn85B	DO27B	DOSn13B/DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO RX B194p	DIFFOUT B194p	AN10	DOS85B	DO27B/CQn27B	DOS13B/CQ13B	DO6B
4B	VREFB4BN0	IO			DIFFIO TX B195n	DIFFOUT B195n	AP9	DO65B	DO27B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO TX B195p	DIFFOUT B195p	AN9	DO65B	DO27B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO RX B196n	DIFFOUT B196n	AW10	DOSn66B	DOSn27B/DO27B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO RX B196p	DIFFOUT B196p	AV10	DOS66B	DOS27B/CQ27B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO TX B197n	DIFFOUT B197n	AT9	DO66B	DO27B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO TX B197p	DIFFOUT B197p	AR9	DO66B	DO27B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO RX B198n	DIFFOUT B198n	AU10	DO66B	DO27B	DO13B	DO6B
4B	VREFB4BN0	IO			DIFFIO RX B198p	DIFFOUT B198p	AU9	DO66B	DO27B	DO13B	DO6B
4A	VREFB4AN0	IO			DIFFIO TX B199n	DIFFOUT B199n	AW8	DO67B	DO28B	DO14B	
4A	VREFB4AN0	IO			DIFFIO TX B199p	DIFFOUT B199p	AV8	DO67B	DO28B	DO14B	
4A	VREFB4AN0	IO	CLK11n		DIFFIO RX B200n	DIFFOUT B200n	AW7	DOSn67B	DO28B	DO14B	
4A	VREFB4AN0	IO	CLK11p		DIFFIO RX B200p	DIFFOUT B200p	AV7	DOS67B	DO28B/CQn28B	DO14B	
4A	VREFB4AN0	IO			DIFFIO TX B201n	DIFFOUT B201n	AU8	DO67B	DO28B	DO14B	
4A	VREFB4AN0	IO			DIFFIO TX B201p	DIFFOUT B201p	AU7	DO67B	DO28B	DO14B	
4A	VREFB4AN0	IO	CLK10n		DIFFIO RX B202n	DIFFOUT B202n	AT8	DOSn68B	DOSn28B/DO28B	DO14B	
4A	VREFB4AN0	IO	CLK10p		DIFFIO RX B202p	DIFFOUT B202p	AR8	DOS68B	DOS28B/CQ28B	DO14B/CQn14B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT1.FPLL_BR_CLKOUTn		DIFFIO TX B203n	DIFFOUT B203n	AU6	DO68B	DO28B	DO14B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT0.FPLL_BR_CLKOUTp.FPLL_BR_FB0		DIFFIO TX B203p	DIFFOUT B203p	AT6	DO68B	DO28B	DO14B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT3.FPLL_BR_FBn		DIFFIO RX B204n	DIFFOUT B204n	AR7	DO68B	DO28B	DO14B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT2.FPLL_BR_FBp.FPLL_BR_FB1		DIFFIO RX B204p	DIFFOUT B204p	AP7	DO68B	DO28B	DO14B	
4A	VREFB4AN0	IO			DIFFIO TX B205n	DIFFOUT B205n	AR6	DO69B	DO29B	DO14B	
4A	VREFB4AN0	IO			DIFFIO TX B205p	DIFFOUT B205p	AP6	DO69B	DO29B	DO14B	
4A	VREFB4AN0	IO	CLK9n		DIFFIO RX B206n	DIFFOUT B206n	AN7	DOSn69B	DO29B	DOSn14B/DO14B	
4A	VREFB4AN0	IO	CLK9p		DIFFIO RX B206p	DIFFOUT B206p	AN6	DOS69B	DO29B/CQn29B	DOS14B/CQ14B	
4A	VREFB4AN0	IO			DIFFIO TX B207n	DIFFOUT B207n	AM8	DO69B	DO29B	DO14B	
4A	VREFB4AN0	IO			DIFFIO TX B207p	DIFFOUT B207p	AN8	DO69B	DO29B	DO14B	
4A	VREFB4AN0	IO	CLK8n		DIFFIO RX B208n	DIFFOUT B208n	AM7	DOSn70B	DOSn29B/DO29B	DO14B	
4A	VREFB4AN0	IO	CLK8p		DIFFIO RX B208p	DIFFOUT B208p	AL7	DOS70B	DOS29B/CQ29B	DO14B	
4A	VREFB4AN0	IO			DIFFIO TX B209n	DIFFOUT B209n	AJ7	DO70B	DO29B	DO14B	
4A	VREFB4AN0	IO			DIFFIO TX B209p	DIFFOUT B209p	AJ6	DO70B	DO29B	DO14B	
4A	VREFB4AN0	IO			DIFFIO RX B210n	DIFFOUT B210n	AL6	DO70B	DO29B	DO14B	
4A	VREFB4AN0	IO	RZO_1		DIFFIO RX B210p	DIFFOUT B210p	AK6	DO70B	DO29B	DO14B	
4A		GND									
4A		nCE		nCE			AC8				
4A		nSTATUS		nSTATUS			AM5				
4A		CONF_DONE		CONF_DONE			AH6				
4A		nIO_PULLUP		nIO_PULLUP			AK5				
4A		MSEL0		MSEL0			AA9				
4A		MSEL1		MSEL1			AA10				
4A		MSEL2		MSEL2			AD8				
4A		MSEL3		MSEL3			AG8				
4A		MSEL4		MSEL4			AH7				
7A		GND					M5				
7A	VREFB7AN0	IO	RZO_4		DIFFIO RX T1p	DIFFOUT T1p	J6	DO1T	DO1T	DO1T	
7A	VREFB7AN0	IO			DIFFIO RX T1n	DIFFOUT T1n	H7	DO1T	DO1T	DO1T	
7A	VREFB7AN0	IO			DIFFIO TX T2p	DIFFOUT T2p	J7	DO1T	DO1T	DO1T	
7A	VREFB7AN0	IO			DIFFIO TX T2n	DIFFOUT T2n	K7	DO1T	DO1T	DO1T	
7A	VREFB7AN0	IO	CLK12p		DIFFIO RX T3p	DIFFOUT T3p	G7	DOS1T	DOS1T/CQ1T	DO1T	
7A	VREFB7AN0	IO	CLK12n		DIFFIO RX T3n	DIFFOUT T3n	G6	DOSn1T	DOSn1T/DQ1T	DO1T	
7A	VREFB7AN0	IO			DIFFIO TX T4p	DIFFOUT T4p	M6	DO2T	DO1T	DO1T	
7A	VREFB7AN0	IO			DIFFIO TX T4n	DIFFOUT T4n	N6	DO2T	DO1T	DO1T	
7A	VREFB7AN0	IO	CLK13p		DIFFIO RX T5p	DIFFOUT T5p	L6	DOS2T	DO1T/CQn1T	DOS1T/CQ1T	
7A	VREFB7AN0	IO	CLK13n		DIFFIO RX T5n	DIFFOUT T5n	K6	DOSn2T	DO1T	DOSn1T/DQ1T	
7A	VREFB7AN0	IO			DIFFIO TX T6p	DIFFOUT T6p	P7	DO2T	DO1T	DO1T	
7A	VREFB7AN0	IO			DIFFIO TX T6n	DIFFOUT T6n	N7	DO2T	DO1T	DO1T	
7A	VREFB7AN0	IO	FPLL_TR_CLKOUT2.FPLL_TR_FBp.FPLL_TR_FB1		DIFFIO RX T7p	DIFFOUT T7p	A3	DO3T	DO2T	DO1T	
7A	VREFB7AN0	IO	FPLL_TR_CLKOUT3.FPLL_TR_FBn		DIFFIO RX T7n	DIFFOUT T7n	A4	DO3T	DO2T	DO1T	
7A	VREFB7AN0	IO	FPLL_TR_CLKOUT0.FPLL_TR_CLKOUTp.FPLL_TR_FB0		DIFFIO TX T8p	DIFFOUT T8p	A6	DO3T	DO2T	DO1T	
7A	VREFB7AN0	IO	FPLL_TR_CLKOUT1.FPLL_TR_CLKOUTn		DIFFIO TX T8n	DIFFOUT T8n	A5	DO3T	DO2T	DO1T	
7A	VREFB7AN0	IO	CLK14p		DIFFIO RX T9p	DIFFOUT T9p	B7	DOS3T	DOS2T/CQ2T	DO1T/CQn1T	
7A	VREFB7AN0	IO	CLK14n		DIFFIO RX T9n	DIFFOUT T9n	A7	DOSn3T	DOSn2T/DO2T	DO1T	
7A	VREFB7AN0	IO			DIFFIO TX T10p	DIFFOUT T10p	E6	DO4T	DO2T	DO1T	



Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
7A	VREFB7AN0	IO			DIFFIO TX T10n	DIFFOUT T10n	D6	DO4T	DO2T	DO1T	
7A	VREFB7AN0	IO	CLK15p		DIFFIO RX T11p	DIFFOUT T11p	D7	DOS4T	DO2T/CQn2T	DO1T	
7A	VREFB7AN0	IO	CLK15n		DIFFIO RX T11n	DIFFOUT T11n	C7	DOSn4T	DO2T	DO1T	
7A	VREFB7AN0	IO			DIFFIO TX T12p	DIFFOUT T12p	F6	DO4T	DO2T	DO1T	
7A	VREFB7AN0	IO			DIFFIO TX T12n	DIFFOUT T12n	E7	DO4T	DO2T	DO1T	
7B	VREFB7BN0	IO			DIFFIO RX T13p	DIFFOUT T13p	F8	DO5T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T13n	DIFFOUT T13n	E8	DO5T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T14p	DIFFOUT T14p	G9	DO5T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T14n	DIFFOUT T14n	G8	DO5T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T15p	DIFFOUT T15p	G10	DOS5T	DOS3T/CQ3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T15n	DIFFOUT T15n	F9	DOSn5T	DOSn3T/DQ3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T16p	DIFFOUT T16p	A8	DO6T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T16n	DIFFOUT T16n	B8	DO6T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T17p	DIFFOUT T17p	C8	DOS6T	DO3T/CQn3T	DOS2T/CQ2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T17n	DIFFOUT T17n	C9	DOSn6T	DO3T	DOSn2T/DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T18p	DIFFOUT T18p	E9	DO6T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T18n	DIFFOUT T18n	D9	DO6T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T19p	DIFFOUT T19p	M8	DO7T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T19n	DIFFOUT T19n	L8	DO7T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T20p	DIFFOUT T20p	K9	DO7T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T20n	DIFFOUT T20n	J9	DO7T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T21p	DIFFOUT T21p	M9	DOS7T	DOS4T/CQ4T	DO2T/CQn2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T21n	DIFFOUT T21n	L9	DOSn7T	DOSn4T/DQ4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T22p	DIFFOUT T22p	N8	DO8T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T22n	DIFFOUT T22n	N9	DO8T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T23p	DIFFOUT T23p	T9	DOS8T	DO4T/CQn4T	DO2T	DOS1T/CQ1T
7B	VREFB7BN0	IO			DIFFIO RX T23n	DIFFOUT T23n	R9	DOSn8T	DO4T	DO2T	DOSn1T/DQ1T
7B	VREFB7BN0	IO			DIFFIO TX T24p	DIFFOUT T24p	R8	DO8T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T24n	DIFFOUT T24n	P8	DO8T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T25p	DIFFOUT T25p	H11	DO9T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T25n	DIFFOUT T25n	G11	DO9T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T26p	DIFFOUT T26p	J10	DO9T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T26n	DIFFOUT T26n	H10	DO9T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T27p	DIFFOUT T27p	F11	DOS9T	DOS5T/CQ5T	DO3T	DO1T/CQn1T
7B	VREFB7BN0	IO			DIFFIO RX T27n	DIFFOUT T27n	E11	DOSn9T	DOSn5T/DQ5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T28p	DIFFOUT T28p	D10	DO10T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T28n	DIFFOUT T28n	C10	DO10T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T29p	DIFFOUT T29p	B10	DQS10T	DO5T/CQn5T	DOS3T/CQ3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T29n	DIFFOUT T29n	A10	DQSn10T	DO5T	DOSn3T/DQ3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T30p	DIFFOUT T30p	B11	DO10T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T30n	DIFFOUT T30n	A11	DO10T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T31p	DIFFOUT T31p	K10	DO11T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T31n	DIFFOUT T31n	J11	DO11T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T32p	DIFFOUT T32p	P10	DO11T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T32n	DIFFOUT T32n	N10	DO11T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T33p	DIFFOUT T33p	M11	DQS11T	DOS6T/CQ6T	DO3T/CQn3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T33n	DIFFOUT T33n	L11	DQSn11T	DOSn6T/DQ6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T34p	DIFFOUT T34p	T10	DO12T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T34n	DIFFOUT T34n	R10	DO12T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T35p	DIFFOUT T35p	R11	DQS12T	DO6T/CQn6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T35n	DIFFOUT T35n	P11	DQSn12T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T36p	DIFFOUT T36p	U10	DO12T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T36n	DIFFOUT T36n	U9	DO12T	DO6T	DO3T	DO1T
7C	VREFB7CN0	IO			DIFFIO RX T37p	DIFFOUT T37p	B13	DO13T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T37n	DIFFOUT T37n	A13	DO13T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T38p	DIFFOUT T38p	D12	DO13T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T38n	DIFFOUT T38n	C12	DO13T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T39p	DIFFOUT T39p	D13	DQS13T	DOS7T/CQ7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T39n	DIFFOUT T39n	C13	DQSn13T	DOSn7T/DQ7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T40p	DIFFOUT T40p	G12	DO14T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T40n	DIFFOUT T40n	G13	DO14T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T41p	DIFFOUT T41p	F12	DQS14T	DO7T/CQn7T	DOS4T/CQ4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T41n	DIFFOUT T41n	E12	DQSn14T	DO7T	DOSn4T/DQ4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T42p	DIFFOUT T42p	J13	DO14T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T42n	DIFFOUT T42n	H13	DO14T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T43p	DIFFOUT T43p	M12	DO15T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T43n	DIFFOUT T43n	L12	DO15T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T44p	DIFFOUT T44p	K12	DO15T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T44n	DIFFOUT T44n	J12	DO15T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T45p	DIFFOUT T45p	L13	DQS15T	DOS8T/CQ8T	DO4T/CQn4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T45n	DIFFOUT T45n	K13	DQSn15T	DOSn8T/DQ8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T46p	DIFFOUT T46p	N13	DO16T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T46n	DIFFOUT T46n	N12	DO16T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T47p	DIFFOUT T47p	U11	DQS16T	DO8T/CQn8T	DO4T	DOS2T/CQ2T
7C	VREFB7CN0	IO			DIFFIO RX T47n	DIFFOUT T47n	T12	DQSn16T	DO8T	DO4T	DOSn2T/DO2T
7C	VREFB7CN0	IO			DIFFIO TX T48p	DIFFOUT T48p	R12	DO16T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T48n	DIFFOUT T48n	P13	DO16T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T49p	DIFFOUT T49p	C14	DO17T	DO9T	DO5T	DO2T



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note 1.1

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
7C	VREFB7CN0	IO			DIFFIO RX T49n	DIFFOUT T49n	C15	DQ17T	DQ9T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T50p	DIFFOUT T50p	B14	DQ17T	DQ9T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T50n	DIFFOUT T50n	A14	DQ17T	DQ9T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO RX T51p	DIFFOUT T51p	E15	DQS17T	DQS9T/CQ9T	DQ5T	DQ2T/CQn2T
7C	VREFB7CN0	IO			DIFFIO RX T51n	DIFFOUT T51n	D15	DQSn17T	DQSn9T/DQ9T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T52p	DIFFOUT T52p	F14	DQ18T	DQ9T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T52n	DIFFOUT T52n	E14	DQ18T	DQ9T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO RX T53p	DIFFOUT T53p	G15	DQS18T	DQ9T/CQn9T	DQS5T/CQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO RX T53n	DIFFOUT T53n	F15	DQSn18T	DQ9T	DQSn5T/DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T54p	DIFFOUT T54p	H14	DQ18T	DQ9T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T54n	DIFFOUT T54n	G14	DQ18T	DQ9T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO RX T55p	DIFFOUT T55p	U13	DQ19T	DQ10T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO RX T55n	DIFFOUT T55n	U12	DQ19T	DQ10T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T56p	DIFFOUT T56p	T13	DQ19T	DQ10T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T56n	DIFFOUT T56n	U14	DQ19T	DQ10T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO RX T57p	DIFFOUT T57p	R14	DQS19T	DQS10T/CQ10T	DQS5T/CQn5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO RX T57n	DIFFOUT T57n	P14	DQSn19T	DQSn10T/DQ10T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T58p	DIFFOUT T58p	N14	DQ20T	DQ10T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T58n	DIFFOUT T58n	M14	DQ20T	DQ10T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO RX T59p	DIFFOUT T59p	J14	DQS20T	DQ10T/CQn10T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO RX T59n	DIFFOUT T59n	J15	DQSn20T	DQ10T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T60p	DIFFOUT T60p	L15	DQ20T	DQ10T	DQ5T	DQ2T
7C	VREFB7CN0	IO			DIFFIO TX T60n	DIFFOUT T60n	K15	DQ20T	DQ10T	DQ5T	DQ2T
7D	VREFB7DN0	IO			DIFFIO RX T61p	DIFFOUT T61p	B17	DQ21T	DQ11T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T61n	DIFFOUT T61n	A17	DQ21T	DQ11T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T62p	DIFFOUT T62p	B16	DQ21T	DQ11T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T62n	DIFFOUT T62n	A16	DQ21T	DQ11T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T63p	DIFFOUT T63p	D16	DQS21T	DQS11T/CQ11T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T63n	DIFFOUT T63n	C16	DQSn21T	DQSn11T/DQ11T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T64p	DIFFOUT T64p	F17	DQ22T	DQ11T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T64n	DIFFOUT T64n	E17	DQ22T	DQ11T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T65p	DIFFOUT T65p	H16	DQS22T	DQ11T/CQn11T	DQS6T/CQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T65n	DIFFOUT T65n	G16	DQSn22T	DQ11T	DQSn6T/DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T66p	DIFFOUT T66p	H17	DQ22T	DQ11T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T66n	DIFFOUT T66n	G17	DQ22T	DQ11T	DQ6T	DQ3T
7D	VREFB7DN0	IO	CLK19p		DIFFIO RX T67p	DIFFOUT T67p	U15	DQ23T	DQ12T	DQ6T	DQ3T
7D	VREFB7DN0	IO	CLK19n		DIFFIO RX T67n	DIFFOUT T67n	T16	DQ23T	DQ12T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T68p	DIFFOUT T68p	T15	DQ23T	DQ12T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T68n	DIFFOUT T68n	R15	DQ23T	DQ12T	DQ6T	DQ3T
7D	VREFB7DN0	IO	CLK18p		DIFFIO RX T69p	DIFFOUT T69p	P16	DQS23T	DQS12T/CQ12T	DQ6T/CQn6T	DQ3T
7D	VREFB7DN0	IO	CLK18n		DIFFIO RX T69n	DIFFOUT T69n	N16	DQSn23T	DQSn12T/DQ12T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T70p	DIFFOUT T70p	N15	DQ24T	DQ12T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T70n	DIFFOUT T70n	M15	DQ24T	DQ12T	DQ6T	DQ3T
7D	VREFB7DN0	IO	FPLL TC CLKOUT2,FPLL TC FBp,FPLL TC FB1		DIFFIO RX T71p	DIFFOUT T71p	J16	DQS24T	DQ12T/CQn12T	DQ6T	DQS3T/CQ3T
7D	VREFB7DN0	IO	FPLL TC CLKOUT3,FPLL TC FBn		DIFFIO RX T71n	DIFFOUT T71n	J17	DQSn24T	DQ12T	DQ6T	DQSn3T/DQ3T
7D	VREFB7DN0	IO	FPLL TC CLKOUT0,FPLL TC CLKOUTp,FPLL TC FB0		DIFFIO TX T72p	DIFFOUT T72p	L16	DQ24T	DQ12T	DQ6T	DQ3T
7D	VREFB7DN0	IO	FPLL TC CLKOUT1,FPLL TC CLKOUTn		DIFFIO TX T72n	DIFFOUT T72n	K16	DQ24T	DQ12T	DQ6T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T73p	DIFFOUT T73p	B19	DQ25T	DQ13T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T73n	DIFFOUT T73n	A19	DQ25T	DQ13T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T74p	DIFFOUT T74p	D18	DQ25T	DQ13T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T74n	DIFFOUT T74n	C18	DQ25T	DQ13T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T75p	DIFFOUT T75p	D19	DQS25T	DQS13T/CQ13T	DQ7T	DQ3T/CQn3T
7D	VREFB7DN0	IO			DIFFIO RX T75n	DIFFOUT T75n	C19	DQSn25T	DQSn13T/DQ13T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T76p	DIFFOUT T76p	E18	DQ26T	DQ13T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T76n	DIFFOUT T76n	E19	DQ26T	DQ13T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T77p	DIFFOUT T77p	G18	DQS26T	DQ13T/CQn13T	DQS7T/CQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T77n	DIFFOUT T77n	F18	DQSn26T	DQ13T	DQSn7T/DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T78p	DIFFOUT T78p	H19	DQ26T	DQ13T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T78n	DIFFOUT T78n	G19	DQ26T	DQ13T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T79p	DIFFOUT T79p	N17	DQ27T	DQ14T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T79n	DIFFOUT T79n	M17	DQ27T	DQ14T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T80p	DIFFOUT T80p	R16	DQ27T	DQ14T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T80n	DIFFOUT T80n	P17	DQ27T	DQ14T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T81p	DIFFOUT T81p	N18	DQS27T	DQS14T/CQ14T	DQ7T/CQn7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T81n	DIFFOUT T81n	N19	DQSn27T	DQSn14T/DQ14T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T82p	DIFFOUT T82p	M18	DQ28T	DQ14T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T82n	DIFFOUT T82n	L18	DQ28T	DQ14T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T83p	DIFFOUT T83p	K18	DQS28T	DQ14T/CQn14T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO RX T83n	DIFFOUT T83n	J18	DQSn28T	DQ14T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T84p	DIFFOUT T84p	K19	DQ28T	DQ14T	DQ7T	DQ3T
7D	VREFB7DN0	IO			DIFFIO TX T84n	DIFFOUT T84n	L19	DQ28T	DQ14T	DQ7T	DQ3T
8D	VREFB8DN0	IO			DIFFIO RX T121p	DIFFOUT T121p	K21	DO41T	DO15T	DO8T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T121n	DIFFOUT T121n	J21	DO41T	DO15T	DO8T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T122p	DIFFOUT T122p	M20	DO41T	DO15T	DO8T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T122n	DIFFOUT T122n	L20	DO41T	DO15T	DO8T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T123p	DIFFOUT T123p	K22	DQS41T	DQS15T/CQ15T	DO8T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T123n	DIFFOUT T123n	J22	DQSn41T	DQSn15T/DO15T	DO8T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T124p	DIFFOUT T124p	M21	DO42T	DO15T	DO8T	DO4T



Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
8D	VREFB8DN0	IO			DIFFIO TX T124n	DIFFOUT T124n	L21	DQ42T	DQ15T	DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T125p	DIFFOUT T125p	P22	DQS42T	DQ15T/CQn15T	DQS8T/CQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T125n	DIFFOUT T125n	N22	DQS42T	DQ15T	DQS8T/DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T126p	DIFFOUT T126p	N20	DQ42T	DQ15T	DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T126n	DIFFOUT T126n	N21	DQ42T	DQ15T	DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T127p	DIFFOUT T127p	F20	DQ43T	DQ16T	DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T127n	DIFFOUT T127n	E20	DQ43T	DQ16T	DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T128p	DIFFOUT T128p	H20	DQ43T	DQ16T	DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T128n	DIFFOUT T128n	G20	DQ43T	DQ16T	DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T129p	DIFFOUT T129p	G21	DQS43T	DQS16T/CQ16T	DQS8T/CQn8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T129n	DIFFOUT T129n	F21	DQS43T	DQS16T/DQ16T	DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T130p	DIFFOUT T130p	C20	DQ44T	DQ16T	DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T130n	DIFFOUT T130n	C21	DQ44T	DQ16T	DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T131p	DIFFOUT T131p	E21	DQS44T	DQ16T/CQn16T	DQ8T	DQS4T/CQ4T
8D	VREFB8DN0	IO			DIFFIO TX T131n	DIFFOUT T131n	D21	DQS44T	DQ16T	DQ8T	DQS4T/DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T132p	DIFFOUT T132p	B20	DQ44T	DQ16T	DQ8T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T132n	DIFFOUT T132n	A20	DQ44T	DQ16T	DQ8T	DQ4T
8D	VREFB8DN0	IO	CLK17p		DIFFIO RX T133p	DIFFOUT T133p	M23	DQ45T	DQ17T	DQ9T	DQ4T
8D	VREFB8DN0	IO	CLK17n		DIFFIO TX T133n	DIFFOUT T133n	L23	DQ45T	DQ17T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T134p	DIFFOUT T134p	L24	DQ45T	DQ17T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T134n	DIFFOUT T134n	K24	DQ45T	DQ17T	DQ9T	DQ4T
8D	VREFB8DN0	IO	CLK16p		DIFFIO RX T135p	DIFFOUT T135p	J23	DQS45T	DQS17T/CQ17T	DQ9T	DQ4T/CQn4T
8D	VREFB8DN0	IO	CLK16n		DIFFIO TX T135n	DIFFOUT T135n	J24	DQS45T	DQS17T/DQ17T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T136p	DIFFOUT T136p	P23	DQ46T	DQ17T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T136n	DIFFOUT T136n	N23	DQ46T	DQ17T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T137p	DIFFOUT T137p	N24	DQS46T	DQ17T/CQn17T	DQS9T/CQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T137n	DIFFOUT T137n	M24	DQS46T	DQ17T	DQS9T/DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T138p	DIFFOUT T138p	T24	DQ46T	DQ17T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T138n	DIFFOUT T138n	R24	DQ46T	DQ17T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T139p	DIFFOUT T139p	H23	DQ47T	DQ18T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T139n	DIFFOUT T139n	G23	DQ47T	DQ18T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T140p	DIFFOUT T140p	H22	DQ47T	DQ18T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T140n	DIFFOUT T140n	G22	DQ47T	DQ18T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T141p	DIFFOUT T141p	F23	DQS47T	DQS18T/CQ18T	DQ9T/CQn9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T141n	DIFFOUT T141n	E23	DQS47T	DQS18T/DQ18T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T142p	DIFFOUT T142p	C22	DQ48T	DQ18T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T142n	DIFFOUT T142n	D22	DQ48T	DQ18T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T143p	DIFFOUT T143p	B22	DQS48T	DQ18T/CQn18T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T143n	DIFFOUT T143n	A22	DQS48T	DQ18T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T144p	DIFFOUT T144p	B23	DQ48T	DQ18T	DQ9T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T144n	DIFFOUT T144n	A23	DQ48T	DQ18T	DQ9T	DQ4T
8C	VREFB8CN0	IO			DIFFIO RX T145p	DIFFOUT T145p	P25	DQ49T	DQ19T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T145n	DIFFOUT T145n	N25	DQ49T	DQ19T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T146p	DIFFOUT T146p	U25	DQ49T	DQ19T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T146n	DIFFOUT T146n	T25	DQ49T	DQ19T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T147p	DIFFOUT T147p	R25	DQS49T	DQS19T/CQ19T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T147n	DIFFOUT T147n	R26	DQS49T	DQS19T/DQ19T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T148p	DIFFOUT T148p	P26	DQ50T	DQ19T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T148n	DIFFOUT T148n	N26	DQ50T	DQ19T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T149p	DIFFOUT T149p	M26	DQS50T	DQ19T/CQn19T	DQS10T/CQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T149n	DIFFOUT T149n	L26	DQS50T	DQ19T	DQS10T/DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T150p	DIFFOUT T150p	K25	DQ50T	DQ19T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T150n	DIFFOUT T150n	J25	DQ50T	DQ19T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T151p	DIFFOUT T151p	G24	DQ51T	DQ20T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T151n	DIFFOUT T151n	F24	DQ51T	DQ20T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T152p	DIFFOUT T152p	H26	DQ51T	DQ20T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T152n	DIFFOUT T152n	G25	DQ51T	DQ20T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T153p	DIFFOUT T153p	E24	DQS51T	DQS20T/CQ20T	DQ10T/CQn10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T153n	DIFFOUT T153n	E25	DQS51T	DQS20T/DQ20T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T154p	DIFFOUT T154p	D24	DQ52T	DQ20T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T154n	DIFFOUT T154n	C24	DQ52T	DQ20T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T155p	DIFFOUT T155p	D25	DQS52T	DQ20T/CQn20T	DQ10T	DQS5T/CQ5T
8C	VREFB8CN0	IO			DIFFIO TX T155n	DIFFOUT T155n	C25	DQS52T	DQ20T	DQ10T	DQS5T/DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T156p	DIFFOUT T156p	B25	DQ52T	DQ20T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T156n	DIFFOUT T156n	A25	DQ52T	DQ20T	DQ10T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T157p	DIFFOUT T157p	U26	DQ53T	DQ21T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T157n	DIFFOUT T157n	U27	DQ53T	DQ21T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T158p	DIFFOUT T158p	T27	DQ53T	DQ21T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T158n	DIFFOUT T158n	R27	DQ53T	DQ21T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T159p	DIFFOUT T159p	U28	DQS53T	DQS21T/CQ21T	DQ11T	DQ5T/CQn5T
8C	VREFB8CN0	IO			DIFFIO TX T159n	DIFFOUT T159n	T28	DQS53T	DQS21T/DQ21T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T160p	DIFFOUT T160p	N27	DQ54T	DQ21T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T160n	DIFFOUT T160n	P28	DQ54T	DQ21T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T161p	DIFFOUT T161p	K27	DQS54T	DQ21T/CQn21T	DQS11T/CQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T161n	DIFFOUT T161n	J27	DQS54T	DQ21T	DQS11T/DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T162p	DIFFOUT T162p	M27	DQ54T	DQ21T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T162n	DIFFOUT T162n	L27	DQ54T	DQ21T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T163p	DIFFOUT T163p	G26	DQ55T	DQ22T	DQ11T	DQ5T



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note 1.1

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
8C	VREFB8CN0	IO			DIFFIO RX T163n	DIFFOUT T163n	F26	DQ55T	DQ22T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T164p	DIFFOUT T164p	J26	DQ55T	DQ22T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T164n	DIFFOUT T164n	H26	DQ55T	DQ22T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T165p	DIFFOUT T165p	G27	DQS55T	DQS22T/CQ22T	DQ11T/CQn11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T165n	DIFFOUT T165n	F27	DQS55T	DQS22T/DQ22T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T166p	DIFFOUT T166p	E27	DQ56T	DQ22T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T166n	DIFFOUT T166n	D27	DQ56T	DQ22T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T167p	DIFFOUT T167p	B26	DQS56T	DQ22T/CQn22T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO RX T167n	DIFFOUT T167n	A26	DQS56T	DQ22T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T168p	DIFFOUT T168p	C26	DQ56T	DQ22T	DQ11T	DQ5T
8C	VREFB8CN0	IO			DIFFIO TX T168n	DIFFOUT T168n	C27	DQ56T	DQ22T	DQ11T	DQ5T
8B	VREFB8BN0	IO			DIFFIO RX T169p	DIFFOUT T169p	V29	DQ57T	DQ23T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T169n	DIFFOUT T169n	U29	DQ57T	DQ23T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T170p	DIFFOUT T170p	R29	DQ57T	DQ23T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T170n	DIFFOUT T170n	P29	DQ57T	DQ23T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T171p	DIFFOUT T171p	U30	DQS57T	DQS23T/CQ23T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T171n	DIFFOUT T171n	T30	DQS57T	DQS23T/DQ23T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T172p	DIFFOUT T172p	N28	DQ58T	DQ23T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T172n	DIFFOUT T172n	M29	DQ58T	DQ23T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T173p	DIFFOUT T173p	J29	DQS58T	DQ23T/CQn23T	DQS12T/CQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T173n	DIFFOUT T173n	J28	DQS58T	DQ23T	DQSn12T/DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T174p	DIFFOUT T174p	L28	DQ58T	DQ23T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T174n	DIFFOUT T174n	K28	DQ58T	DQ23T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T175p	DIFFOUT T175p	F29	DQ59T	DQ24T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T175n	DIFFOUT T175n	E28	DQ59T	DQ24T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T176p	DIFFOUT T176p	H28	DQ59T	DQ24T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T176n	DIFFOUT T176n	G28	DQ59T	DQ24T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T177p	DIFFOUT T177p	H29	DQS59T	DQS24T/CQ24T	DQ12T/CQn12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T177n	DIFFOUT T177n	G29	DQS59T	DQS24T/DQ24T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T178p	DIFFOUT T178p	D28	DQ60T	DQ24T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T178n	DIFFOUT T178n	C28	DQ60T	DQ24T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T179p	DIFFOUT T179p	B28	DQS60T	DQ24T/CQn24T	DQ12T	DQ6T/CQ6T
8B	VREFB8BN0	IO			DIFFIO RX T179n	DIFFOUT T179n	A28	DQS60T	DQ24T	DQ12T	DQ6T/CQ6T
8B	VREFB8BN0	IO			DIFFIO TX T180p	DIFFOUT T180p	B29	DQ60T	DQ24T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T180n	DIFFOUT T180n	A29	DQ60T	DQ24T	DQ12T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T181p	DIFFOUT T181p	N30	DQ61T	DQ25T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T181n	DIFFOUT T181n	M30	DQ61T	DQ25T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T182p	DIFFOUT T182p	R30	DQ61T	DQ25T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T182n	DIFFOUT T182n	R31	DQ61T	DQ25T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T183p	DIFFOUT T183p	P31	DQ581T	DQS25T/CQ25T	DQ13T	DQ6T/CQn6T
8B	VREFB8BN0	IO			DIFFIO RX T183n	DIFFOUT T183n	R31	DQ581T	DQS25T/DQ25T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T184p	DIFFOUT T184p	L31	DQ62T	DQ25T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T184n	DIFFOUT T184n	L30	DQ62T	DQ25T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T185p	DIFFOUT T185p	K30	DQS62T	DQ25T/CQn25T	DQS13T/CQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T185n	DIFFOUT T185n	J30	DQS62T	DQ25T	DQSn13T/DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T186p	DIFFOUT T186p	K31	DQ62T	DQ25T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T186n	DIFFOUT T186n	J31	DQ62T	DQ25T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T187p	DIFFOUT T187p	B31	DQ63T	DQ26T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T187n	DIFFOUT T187n	A31	DQ63T	DQ26T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T188p	DIFFOUT T188p	D30	DQ63T	DQ26T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T188n	DIFFOUT T188n	C30	DQ63T	DQ26T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T189p	DIFFOUT T189p	D31	DQS63T	DQS26T/CQ26T	DQ13T/CQn13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T189n	DIFFOUT T189n	C31	DQS63T	DQS26T/DQ26T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T190p	DIFFOUT T190p	G30	DQ64T	DQ26T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T190n	DIFFOUT T190n	F30	DQ64T	DQ26T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T191p	DIFFOUT T191p	E30	DQS64T	DQ26T/CQn26T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T191n	DIFFOUT T191n	E31	DQS64T	DQ26T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T192p	DIFFOUT T192p	H31	DQ64T	DQ26T	DQ13T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T192n	DIFFOUT T192n	G31	DQ64T	DQ26T	DQ13T	DQ6T
8A	VREFB8AN0	IO	CLK23p		DIFFIO RX T193p	DIFFOUT T193p	R32	DQ65T	DQ27T	DQ14T	DQ6T
8A	VREFB8AN0	IO	CLK23n		DIFFIO RX T193n	DIFFOUT T193n	P32	DQ65T	DQ27T	DQ14T	DQ6T
8A	VREFB8AN0	IO			DIFFIO TX T194p	DIFFOUT T194p	U31	DQ65T	DQ27T	DQ14T	DQ6T
8A	VREFB8AN0	IO			DIFFIO TX T194n	DIFFOUT T194n	T31	DQ65T	DQ27T	DQ14T	DQ6T
8A	VREFB8AN0	IO	CLK22p		DIFFIO RX T195p	DIFFOUT T195p	N32	DQS65T	DQS27T/CQ27T	DQ14T	DQ6T
8A	VREFB8AN0	IO	CLK22n		DIFFIO RX T195n	DIFFOUT T195n	M32	DQS65T	DQS27T/DQ27T	DQ14T	DQ6T
8A	VREFB8AN0	IO			DIFFIO TX T196p	DIFFOUT T196p	N33	DQ66T	DQ27T	DQ14T	DQ6T
8A	VREFB8AN0	IO			DIFFIO TX T196n	DIFFOUT T196n	M33	DQ66T	DQ27T	DQ14T	DQ6T
8A	VREFB8AN0	IO	FPLL TL CLKOUT2,FPLL TL FBp,FPLL TL FB1		DIFFIO RX T197p	DIFFOUT T197p	L33	DQS66T	DQ27T/CQn27T	DQS14T/CQ14T	DQ6T
8A	VREFB8AN0	IO	FPLL TL CLKOUT3,FPLL TL FBn		DIFFIO RX T197n	DIFFOUT T197n	L34	DQS66T	DQ27T	DQSn14T/DQ14T	DQ6T
8A	VREFB8AN0	IO	FPLL TL CLKOUT0,FPLL TL CLKOUTp,FPLL TL FB0		DIFFIO TX T198p	DIFFOUT T198p	P34	DQ66T	DQ27T	DQ14T	DQ6T
8A	VREFB8AN0	IO	FPLL TL CLKOUT1,FPLL TL CLKOUTn		DIFFIO TX T198n	DIFFOUT T198n	N34	DQ66T	DQ27T	DQ14T	DQ6T
8A	VREFB8AN0	IO	CLK21p		DIFFIO RX T199p	DIFFOUT T199p	D33	DQ67T	DQ28T	DQ14T	DQ6T
8A	VREFB8AN0	IO	CLK21n		DIFFIO RX T199n	DIFFOUT T199n	C33	DQ67T	DQ28T	DQ14T	DQ6T
8A	VREFB8AN0	IO			DIFFIO TX T200p	DIFFOUT T200p	B32	DQ67T	DQ28T	DQ14T	DQ6T
8A	VREFB8AN0	IO			DIFFIO TX T200n	DIFFOUT T200n	A32	DQ67T	DQ28T	DQ14T	DQ6T
8A	VREFB8AN0	IO	CLK20p		DIFFIO RX T201p	DIFFOUT T201p	E34	DQS67T	DQS28T/CQ28T	DQ14T/CQn14T	DQ6T
8A	VREFB8AN0	IO	CLK20n		DIFFIO RX T201n	DIFFOUT T201n	D34	DQS67T	DQS28T/DQ28T	DQ14T	DQ6T
8A	VREFB8AN0	IO			DIFFIO TX T202p	DIFFOUT T202p	A34	DQ68T	DQ28T	DQ14T	DQ6T



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
8A	VREFB8A0	IO			DIFFIO TX T202n	DIFFOUT T202n	A35	DQ68T	DQ28T	DQ14T	
8A	VREFB8A0	IO			DIFFIO RX T203p	DIFFOUT T203p	C34	DQS68T	DQ28T/CQn28T	DQ14T	
8A	VREFB8A0	IO	RZO 5		DIFFIO RX T203n	DIFFOUT T203n	B34	DQSn68T	DQ28T	DQ14T	
8A	VREFB8A0	IO			DIFFIO TX T204p	DIFFOUT T204p	A36	DQ68T	DQ28T	DQ14T	
8A	VREFB8A0	IO			DIFFIO TX T204n	DIFFOUT T204n	A37	DQ68T	DQ28T	DQ14T	
8A	VREFB8A0	IO			DIFFIO RX T205p	DIFFOUT T205p	E32	DQ69T	DQ29T		
8A	VREFB8A0	IO			DIFFIO RX T205n	DIFFOUT T205n	F32	DQ69T	DQ29T		
8A	VREFB8A0	IO			DIFFIO TX T206p	DIFFOUT T206p	G33	DQ69T	DQ29T		
8A	VREFB8A0	IO			DIFFIO TX T206n	DIFFOUT T206n	G32	DQ69T	DQ29T		
8A	VREFB8A0	IO			DIFFIO RX T207p	DIFFOUT T207p	F33	DQS69T	DQS29T/CQ29T		
8A	VREFB8A0	IO			DIFFIO RX T207n	DIFFOUT T207n	E33	DQSn69T	DQSn29T/DQ29T		
8A	VREFB8A0	IO			DIFFIO TX T208p	DIFFOUT T208p	K33	DQ70T	DQ29T		
8A	VREFB8A0	IO			DIFFIO TX T208n	DIFFOUT T208n	J33	DQ70T	DQ29T		
8A	VREFB8A0	IO			DIFFIO RX T209p	DIFFOUT T209p	H34	DQS70T	DQ29T/CQn29T		
8A	VREFB8A0	IO			DIFFIO RX T209n	DIFFOUT T209n	G34	DQSn70T	DQ29T		
8A	VREFB8A0	IO			DIFFIO TX T210p	DIFFOUT T210p	K34	DQ70T	DQ29T		
8A	VREFB8A0	IO			DIFFIO TX T210n	DIFFOUT T210n	J34	DQ70T	DQ29T		
		GND					A2				
		GND					A38				
		GND					AA11				
		GND					AA17				
		GND					AA21				
		GND					AA32				
		GND					AA8				
		GND					AB11				
		GND					AB14				
		GND					AB23				
		GND					AB26				
		GND					AB29				
		GND					AB32				
		GND					AB8				
		GND					AC16				
		GND					AC18				
		GND					AC20				
		GND					AC22				
		GND					AC33				
		GND					AC7				
		GND					AD10				
		GND					AD13				
		GND					AD25				
		GND					AD28				
		GND					AD31				
		GND					AE32				
		GND					AE8				
		GND					AF12				
		GND					AF15				
		GND					AF18				
		GND					AF21				
		GND					AF24				
		GND					AF27				
		GND					AF30				
		GND					AF32				
		GND					AF8				
		GND					AF9				
		GND					AG33				
		GND					AG35				
		GND					AG5				
		GND					AG7				
		GND					AH11				
		GND					AH14				
		GND					AH17				
		GND					AH20				
		GND					AH23				
		GND					AH26				
		GND					AH29				
		GND					AH32				
		GND					AH35				
		GND					AH5				
		GND					AH8				
		GND					AJ35				
		GND					AJ5				
		GND					AK10				
		GND					AK13				
		GND					AK16				
		GND					AK19				
		GND					AK22				
		GND					AK25				
		GND					AK28				



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					AK31				
		GND					AK34				
		GND					AK36				
		GND					AK4				
		GND					AK7				
		GND					AL35				
		GND					AL5				
		GND					AL9				
		GND					AM12				
		GND					AM15				
		GND					AM18				
		GND					AM21				
		GND					AM24				
		GND					AM27				
		GND					AM30				
		GND					AM33				
		GND					AM36				
		GND					AM4				
		GND					AM6				
		GND					AM9				
		GND					AN35				
		GND					AN5				
		GND					AP11				
		GND					AP14				
		GND					AP17				
		GND					AP20				
		GND					AP23				
		GND					AP26				
		GND					AP29				
		GND					AP32				
		GND					AP35				
		GND					AP5				
		GND					AP8				
		GND					AR35				
		GND					AR5				
		GND					AT10				
		GND					AT13				
		GND					AT16				
		GND					AT19				
		GND					AT22				
		GND					AT25				
		GND					AT28				
		GND					AT31				
		GND					AT34				
		GND					AT36				
		GND					AT4				
		GND					AT7				
		GND					AU35				
		GND					AU5				
		GND					AV12				
		GND					AV15				
		GND					AV18				
		GND					AV21				
		GND					AV24				
		GND					AV27				
		GND					AV30				
		GND					AV33				
		GND					AV6				
		GND					AV9				
		GND					B12				
		GND					B15				
		GND					B18				
		GND					B2				
		GND					B21				
		GND					B24				
		GND					B27				
		GND					B3				
		GND					B30				
		GND					B33				
		GND					B35				
		GND					B36				
		GND					B37				
		GND					B38				
		GND					B4				
		GND					B5				
		GND					B6				
		GND					B9				
		GND					C35				



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					C5				
		GND					D11				
		GND					D14				
		GND					D17				
		GND					D20				
		GND					D23				
		GND					D26				
		GND					D29				
		GND					D32				
		GND					D35				
		GND					D5				
		GND					D8				
		GND					E36				
		GND					E5				
		GND					F10				
		GND					F13				
		GND					F16				
		GND					F19				
		GND					F22				
		GND					F25				
		GND					F28				
		GND					F31				
		GND					F34				
		GND					F35				
		GND					F5				
		GND					F7				
		GND					G35				
		GND					G5				
		GND					H12				
		GND					H15				
		GND					H18				
		GND					H21				
		GND					H24				
		GND					H27				
		GND					H30				
		GND					H33				
		GND					H35				
		GND					H5				
		GND					H6				
		GND					H9				
		GND					J35				
		GND					J5				
		GND					K11				
		GND					K14				
		GND					K17				
		GND					K20				
		GND					K23				
		GND					K26				
		GND					K29				
		GND					K32				
		GND					K35				
		GND					K5				
		GND					K8				
		GND					L35				
		GND					L5				
		GND					M10				
		GND					M13				
		GND					M16				
		GND					M19				
		GND					M22				
		GND					M25				
		GND					M28				
		GND					M31				
		GND					M34				
		GND					M35				
		GND					M4				
		GND					M7				
		GND					N35				
		GND					N5				
		GND					P12				
		GND					P15				
		GND					P18				
		GND					P24				
		GND					P27				
		GND					P30				
		GND					P33				
		GND					P35				
		GND					P4				



Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					P6				
		GND					P9				
		GND					R18				
		GND					R20				
		GND					R22				
		GND					R33				
		GND					R34				
		GND					R35				
		GND					R5				
		GND					T11				
		GND					T14				
		GND					T17				
		GND					T21				
		GND					T28				
		GND					T29				
		GND					T32				
		GND					T8				
		GND					U19				
		GND					U23				
		GND					U32				
		GND					U8				
		GND					V10				
		GND					V11				
		GND					V12				
		GND					V13				
		GND					V15				
		GND					V20				
		GND					V25				
		GND					V28				
		GND					V30				
		GND					V31				
		GND					V32				
		GND					V8				
		GND					V9				
		GND					W10				
		GND					W12				
		GND					W17				
		GND					W23				
		GND					W28				
		GND					W30				
		GND					W31				
		GND					W32				
		GND					W8				
		GND					W9				
		GND					Y10				
		GND					Y12				
		GND					Y15				
		GND					Y25				
		GND					Y27				
		GND					Y28				
		GND					Y30				
		GND					Y32				
		GND					Y8				
		GND					Y9				
		GND					AA20				
		VCC					AC17				
		VCC					AC19				
		VCC					AC21				
		VCC					AC23				
		VCC					R17				
		VCC					R19				
		VCC					R21				
		VCC					R23				
		VCC					AA18				
		VCC					AA19				
		VCC					AA22				
		VCC					AA23				
		VCC					AB17				
		VCC					AB18				
		VCC					AB19				
		VCC					AB20				
		VCC					AB21				
		VCC					AB22				
		VCC					T16				
		VCC					T19				
		VCC					T20				
		VCC					T22				
		VCC					T23				



Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		VCC					U17				
		VCC					U18				
		VCC					U20				
		VCC					U21				
		VCC					U22				
		VCC					V17				
		VCC					V18				
		VCC					V19				
		VCC					V21				
		VCC					V22				
		VCC					V23				
		VCC					W18				
		VCC					W19				
		VCC					W20				
		VCC					W21				
		VCC					W22				
		VCC					Y17				
		VCC					Y18				
		VCC					Y19				
		VCC					Y22				
		VCC					Y23				
		VCC					Y21				
		VCCPT					AD19				
		VCCPT					AE13				
		VCCPT					AE28				
		VCCPT					P19				
		VCCPT					R13				
		VCCPT					R28				
		DNU					AW35				
		DNU					AV35				
		DNU					AA30				
		DNU					AL19				
		DNU					AV5				
		DNU					AW5				
		DNU					R7				
		DNU					J19				
		DNU					Y20				
		VCCPGM					AL31				
		VCCPGM					AJ9				
		TEMPIODEn					F5				
		TEMPIODEp					R6				
		VCCBAT					AK9				
		VCCIO3A					AU31				
		VCCIO3A					AW33				
		VCCIO3B					AU28				
		VCCIO3B					AW30				
		VCCIO3C					AW24				
		VCCIO3C					AW27				
		VCCIO3D					AU22				
		VCCIO3D					AW21				
		VCCIO4A					AW6				
		VCCIO4B					AW12				
		VCCIO4B					AW9				
		VCCIO4C					AU13				
		VCCIO4C					AW15				
		VCCIO4D					AU19				
		VCCIO4D					AW18				
		VCCIO7A					C6				
		VCCIO7B					A9				
		VCCIO7B					C11				
		VCCIO7C					A12				
		VCCIO7C					A15				
		VCCIO7D					A18				
		VCCIO7D					C17				
		VCCIO8A					A33				
		VCCIO8A					C32				
		VCCIO8B					A30				
		VCCIO8B					C29				
		VCCIO8C					A24				
		VCCIO8C					A27				
		VCCIO8D					A21				
		VCCIO8D					C23				
		VCCPD3AB					AR29				
		VCCPD3AB					AR32				
		VCCPD3CD					AR23				
		VCCPD3CD					AR26				
		VCCPD4					AR10				
		VCCPD4					AR13				



Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		VCCPD4					AR16				
		VCCPD7					E10				
		VCCPD7					E13				
		VCCPD7					E16				
		VCCPD8					E22				
		VCCPD8					E26				
		VCCPD8					E29				
3A	VREFB3AN0	VREFB3AN0	VREFB3AN0				AJ31				
3B	VREFB3BN0	VREFB3BN0	VREFB3BN0				AJ28				
3C	VREFB3CN0	VREFB3CN0	VREFB3CN0				AJ25				
3D	VREFB3DN0	VREFB3DN0	VREFB3DN0				AJ23				
4A	VREFB4AN0	VREFB4AN0	VREFB4AN0				AJ8				
4B	VREFB4BN0	VREFB4BN0	VREFB4BN0				AJ11				
4C	VREFB4CN0	VREFB4CN0	VREFB4CN0				AJ14				
4D	VREFB4DN0	VREFB4DN0	VREFB4DN0				AJ16				
7A	VREFB7AN0	VREFB7AN0	VREFB7AN0				L7				
7B	VREFB7BN0	VREFB7BN0	VREFB7BN0				L10				
7C	VREFB7CN0	VREFB7CN0	VREFB7CN0				L14				
7D	VREFB7DN0	VREFB7DN0	VREFB7DN0				L17				
8A	VREFB8AN0	VREFB8AN0	VREFB8AN0				L32				
8B	VREFB8BN0	VREFB8BN0	VREFB8BN0				L29				
8C	VREFB8CN0	VREFB8CN0	VREFB8CN0				L25				
8D	VREFB8DN0	VREFB8DN0	VREFB8DN0				L22				
		NC					AA1				
		NC					AA16				
		NC					AA2				
		NC					AA24				
		NC					AA3				
		NC					AA33				
		NC					AA34				
		NC					AA35				
		NC					AA36				
		NC					AA37				
		NC					AA38				
		NC					AA39				
		NC					AA4				
		NC					AA5				
		NC					AA6				
		NC					AA7				
		NC					AB1				
		NC					AB2				
		NC					AB3				
		NC					AB33				
		NC					AB34				
		NC					AB35				
		NC					AB36				
		NC					AB37				
		NC					AB38				
		NC					AB39				
		NC					AB4				
		NC					AB5				
		NC					AB6				
		NC					AB7				
		NC					AC1				
		NC					AC2				
		NC					AC3				
		NC					AC34				
		NC					AC35				
		NC					AC36				
		NC					AC37				
		NC					AC38				
		NC					AC39				
		NC					AC4				
		NC					AC5				
		NC					AC6				
		NC					AD1				
		NC					AD2				
		NC					AD3				
		NC					AD33				
		NC					AD34				
		NC					AD35				
		NC					AD36				
		NC					AD37				
		NC					AD38				
		NC					AD39				
		NC					AD4				
		NC					AD5				
		NC					AD6				



Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					AD7				
		NC					AE1				
		NC					AE2				
		NC					AE3				
		NC					AE33				
		NC					AE34				
		NC					AE35				
		NC					AE36				
		NC					AE37				
		NC					AE38				
		NC					AE39				
		NC					AE4				
		NC					AE5				
		NC					AE6				
		NC					AE7				
		NC					AF1				
		NC					AF2				
		NC					AF3				
		NC					AF33				
		NC					AF34				
		NC					AF35				
		NC					AF36				
		NC					AF37				
		NC					AF38				
		NC					AF39				
		NC					AF4				
		NC					AF5				
		NC					AF6				
		NC					AF7				
		NC					AG1				
		NC					AG2				
		NC					AG3				
		NC					AG34				
		NC					AG36				
		NC					AG37				
		NC					AG38				
		NC					AG39				
		NC					AG4				
		NC					AG6				
		NC					AH1				
		NC					AH2				
		NC					AH3				
		NC					AH36				
		NC					AH37				
		NC					AH38				
		NC					AH39				
		NC					AH4				
		NC					AJ1				
		NC					AJ2				
		NC					AJ3				
		NC					AJ36				
		NC					AJ37				
		NC					AJ38				
		NC					AJ39				
		NC					AJ4				
		NC					AK1				
		NC					AK2				
		NC					AK3				
		NC					AK37				
		NC					AK38				
		NC					AK39				
		NC					AL1				
		NC					AL2				
		NC					AL3				
		NC					AL36				
		NC					AL37				
		NC					AL38				
		NC					AL39				
		NC					AL4				
		NC					AM1				
		NC					AM2				
		NC					AM3				
		NC					AM37				
		NC					AM38				
		NC					AM39				
		NC					AN1				
		NC					AN2				
		NC					AN3				



Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					AN36				
		NC					AN37				
		NC					AN38				
		NC					AN39				
		NC					AN4				
		NC					AP1				
		NC					AP2				
		NC					AP3				
		NC					AP36				
		NC					AP37				
		NC					AP38				
		NC					AP39				
		NC					AP4				
		NC					AR1				
		NC					AR2				
		NC					AR3				
		NC					AR36				
		NC					AR37				
		NC					AR38				
		NC					AR39				
		NC					AR4				
		NC					AT1				
		NC					AT2				
		NC					AT3				
		NC					AT37				
		NC					AT38				
		NC					AT39				
		NC					AU1				
		NC					AU2				
		NC					AU3				
		NC					AU36				
		NC					AU37				
		NC					AU38				
		NC					AU39				
		NC					AU4				
		NC					AV1				
		NC					AV2				
		NC					AV3				
		NC					AV36				
		NC					AV37				
		NC					AV38				
		NC					AV39				
		NC					AV4				
		NC					AW2				
		NC					AW3				
		NC					AW37				
		NC					AW38				
		NC					C1				
		NC					C2				
		NC					C3				
		NC					C36				
		NC					C37				
		NC					C38				
		NC					C39				
		NC					C4				
		NC					D1				
		NC					D2				
		NC					D3				
		NC					D36				
		NC					D37				
		NC					D38				
		NC					D39				
		NC					D4				
		NC					E1				
		NC					E2				
		NC					E3				
		NC					E36				
		NC					E37				
		NC					E38				
		NC					E39				
		NC					E4				
		NC					F1				
		NC					F2				
		NC					F3				
		NC					F36				
		NC					F37				
		NC					F38				
		NC					F39				



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					F4				
		NC					G1				
		NC					G2				
		NC					G3				
		NC					G36				
		NC					G37				
		NC					G38				
		NC					G39				
		NC					G4				
		NC					H1				
		NC					H2				
		NC					H3				
		NC					H36				
		NC					H37				
		NC					H38				
		NC					H39				
		NC					H4				
		NC					J1				
		NC					J2				
		NC					J3				
		NC					J36				
		NC					J37				
		NC					J38				
		NC					J39				
		NC					J4				
		NC					K1				
		NC					K2				
		NC					K3				
		NC					K36				
		NC					K37				
		NC					K38				
		NC					K39				
		NC					K4				
		NC					L1				
		NC					L2				
		NC					L3				
		NC					L36				
		NC					L37				
		NC					L38				
		NC					L39				
		NC					L4				
		NC					M1				
		NC					M2				
		NC					M3				
		NC					M36				
		NC					M37				
		NC					M38				
		NC					M39				
		NC					N1				
		NC					N2				
		NC					N3				
		NC					N36				
		NC					N37				
		NC					N38				
		NC					N39				
		NC					N4				
		NC					P1				
		NC					P2				
		NC					P3				
		NC					P36				
		NC					P37				
		NC					P38				
		NC					P39				
		NC					R1				
		NC					R2				
		NC					R3				
		NC					R36				
		NC					R37				
		NC					R38				
		NC					R39				
		NC					R4				
		NC					T1				
		NC					T2				
		NC					T3				
		NC					T33				
		NC					T34				
		NC					T35				
		NC					T36				



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					T37				
		NC					T38				
		NC					T39				
		NC					T4				
		NC					T5				
		NC					T6				
		NC					T7				
		NC					U1				
		NC					U16				
		NC					U2				
		NC					U24				
		NC					U3				
		NC					U33				
		NC					U34				
		NC					U35				
		NC					U36				
		NC					U37				
		NC					U38				
		NC					U39				
		NC					U4				
		NC					U5				
		NC					U6				
		NC					U7				
		NC					V1				
		NC					V14				
		NC					V16				
		NC					V2				
		NC					V24				
		NC					V26				
		NC					V27				
		NC					V3				
		NC					V33				
		NC					V34				
		NC					V35				
		NC					V36				
		NC					V37				
		NC					V38				
		NC					V39				
		NC					V4				
		NC					V5				
		NC					V6				
		NC					V7				
		NC					W1				
		NC					W13				
		NC					W14				
		NC					W15				
		NC					W16				
		NC					W2				
		NC					W24				
		NC					W25				
		NC					W26				
		NC					W27				
		NC					W3				
		NC					W33				
		NC					W34				
		NC					W35				
		NC					W36				
		NC					W37				
		NC					W38				
		NC					W39				
		NC					W4				
		NC					W5				
		NC					W6				
		NC					W7				
		NC					Y1				
		NC					Y13				
		NC					Y14				
		NC					Y16				
		NC					Y2				
		NC					Y24				
		NC					Y26				
		NC					Y3				
		NC					Y33				
		NC					Y34				
		NC					Y35				
		NC					Y36				
		NC					Y37				
		NC					Y38				



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	H1517	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					Y39				
		NC					Y4				
		NC					Y5				
		NC					Y6				
		NC					Y7				
		RREF_BL					AW36				
		RREF_BR					AW4				
		RREF_TL					B39				
		RREF_TR					B1				
		VCCA_FPLL					AL32				
		VCCA_FPLL					AG20				
		VCCA_FPLL					AK8				
		VCCA_FPLL					J8				
		VCCA_FPLL					P20				
		VCCA_FPLL					J32				
		VCCA_FPLL					AD29				
		VCCA_FPLL					W29				
		VCCA_FPLL					AD11				
		VCCA_FPLL					W11				
		VCCD_FPLL					AM32				
		VCCD_FPLL					AF20				
		VCCD_FPLL					AL8				
		VCCD_FPLL					H8				
		VCCD_FPLL					P21				
		VCCD_FPLL					H32				
		VCCD_FPLL					AC29				
		VCCD_FPLL					Y29				
		VCCD_FPLL					AC11				
		VCCD_FPLL					Y11				
		VCC_AUX					AG11				
		VCC_AUX					AG29				
		VCC_AUX					AK20				
		VCC_AUX					J20				
		VCC_AUX					N11				
		VCC_AUX					N29				

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



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3A		nCONFIG		nCONFIG			AM38				
3A		TRST		TRST			AG37				
3A		TMS		TMS			AL37				
3A		TCK		TCK			AL34				
3A		TDI		TDI			AM37				
3A		TDO		TDO			AL36				
3A		nCS0		nCS0			AG35				
3A		AS_DATA3		AS_DATA3			AK36				
3A		AS_DATA2		AS_DATA2			AJ35				
3A		AS_DATA1		AS_DATA1			AJ36				
3A		AS_DATA0,ASDO		AS_DATA0,ASDO			AH36				
3A		DCLK		DCLK			AG36				
3A	VREFB3A0	IO		CLKUSR	DIFFIO TX B1n	DIFFOUT B1n	AW37	DO1B	DO1B		
3A	VREFB3A0	IO		CRC ERROR	DIFFIO TX B1p	DIFFOUT B1p	AV37	DO1B	DO1B		
3A	VREFB3A0	IO	RZQ_0		DIFFIO RX B2n	DIFFOUT B2n	BA36	DQS1B	DO1B		
3A	VREFB3A0	IO		DEV OE	DIFFIO RX B2p	DIFFOUT B2p	AY37	DQS1B	DO1B/CQn1B		
3A	VREFB3A0	IO		DEV CLRn	DIFFIO TX B3n	DIFFOUT B3n	BC37	DO1B	DO1B		
3A	VREFB3A0	IO		INIT_DONE	DIFFIO TX B3p	DIFFOUT B3p	BB36	DO1B	DO1B		
3A	VREFB3A0	IO		nCEO	DIFFIO RX B4n	DIFFOUT B4n	BB39	DQS2B	DQS1B/DO1B		
3A	VREFB3A0	IO		DATA0	DIFFIO RX B4p	DIFFOUT B4p	BB38	DQS2B	DQS1B/CQ1B		
3A	VREFB3A0	IO		DATA1	DIFFIO TX B5n	DIFFOUT B5n	BD38	DO2B	DO1B		
3A	VREFB3A0	IO		DATA2	DIFFIO TX B5p	DIFFOUT B5p	BC39	DO2B	DO1B		
3A	VREFB3A0	IO		DATA3	DIFFIO RX B6n	DIFFOUT B6n	BD37	DO2B	DO1B		
3A	VREFB3A0	IO		DATA4	DIFFIO RX B6p	DIFFOUT B6p	BC38	DO2B	DO1B		
3A	VREFB3A0	IO		DATA5	DIFFIO TX B7n	DIFFOUT B7n	AR37	DO3B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA6	DIFFIO TX B7p	DIFFOUT B7p	AP37	DO3B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA7	DIFFIO RX B8n	DIFFOUT B8n	AN39	DQS3B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA8	DIFFIO RX B8p	DIFFOUT B8p	AP39	DQS3B	DO2B/CQn2B	DO1B	
3A	VREFB3A0	IO		DATA9	DIFFIO TX B9n	DIFFOUT B9n	AN38	DO3B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA10	DIFFIO TX B9p	DIFFOUT B9p	AN37	DO3B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA11	DIFFIO RX B10n	DIFFOUT B10n	AR36	DQS4B	DQS2B/DO2B	DO1B	
3A	VREFB3A0	IO		DATA12	DIFFIO RX B10p	DIFFOUT B10p	AR35	DQS4B	DQS2B/CQ2B	DO1B/CQn1B	
3A	VREFB3A0	IO		DATA13	DIFFIO TX B11n	DIFFOUT B11n	AT36	DO4B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA14	DIFFIO TX B11p	DIFFOUT B11p	AT35	DO4B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA15	DIFFIO RX B12n	DIFFOUT B12n	AU37	DO4B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA16	DIFFIO RX B12p	DIFFOUT B12p	AU36	DO4B	DO2B	DO1B	
3A	VREFB3A0	IO		DATA17	DIFFIO TX B13n	DIFFOUT B13n	AP34	DO5B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA18	DIFFIO TX B13p	DIFFOUT B13p	AN34	DO5B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA19	DIFFIO RX B14n	DIFFOUT B14n	AP36	DQS5B	DO3B	DQS1B/DO1B	
3A	VREFB3A0	IO		DATA20	DIFFIO RX B14p	DIFFOUT B14p	AN36	DQS5B	DO3B/CQn3B	DQS1B/CQ1B	
3A	VREFB3A0	IO		DATA21	DIFFIO TX B15n	DIFFOUT B15n	AL36	DO5B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA22	DIFFIO TX B15p	DIFFOUT B15p	AK35	DO5B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA23	DIFFIO RX B16n	DIFFOUT B16n	AG34	DQS6B	DQS3B/DO3B	DO1B	
3A	VREFB3A0	IO		DATA24	DIFFIO RX B16p	DIFFOUT B16p	AF35	DQS6B	DQS3B/CQ3B	DO1B	
3A	VREFB3A0	IO		DATA25	DIFFIO TX B17n	DIFFOUT B17n	AJ34	DO6B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA26	DIFFIO TX B17p	DIFFOUT B17p	AH34	DO6B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA27	DIFFIO RX B18n	DIFFOUT B18n	AE36	DO6B	DO3B	DO1B	
3A	VREFB3A0	IO		DATA28	DIFFIO RX B18p	DIFFOUT B18p	AE35	DO6B	DO3B	DO1B	
3A	VREFB3B0	IO		DATA29	DIFFIO TX B19n	DIFFOUT B19n	AR33	DO7B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO		DATA30	DIFFIO TX B19p	DIFFOUT B19p	AR34	DO7B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO		DATA31	DIFFIO RX B20n	DIFFOUT B20n	AU35	DQS7B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO		PR_DONE	DIFFIO RX B20p	DIFFOUT B20p	AU34	DQS7B	DO4B/CQn4B	DO2B	DO1B
3B	VREFB3B0	IO		PR_REQUEST	DIFFIO TX B21n	DIFFOUT B21n	AW36	DO7B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO		PR_READY	DIFFIO TX B21p	DIFFOUT B21p	AV35	DO7B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO	CLK0n		DIFFIO RX B22n	DIFFOUT B22n	AY36	DQS8B	DQS4B/DO4B	DO2B	DO1B
3B	VREFB3B0	IO	CLK0p		DIFFIO RX B22p	DIFFOUT B22p	AW35	DQS8B	DQS4B/CQ4B	DO2B/CQn2B	DO1B
3B	VREFB3B0	IO		PR_ERROR	DIFFIO TX B23n	DIFFOUT B23n	BC35	DO8B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO		CvP_CONFDONE	DIFFIO TX B23p	DIFFOUT B23p	BB35	DO8B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO	CLK1n		DIFFIO RX B24n	DIFFOUT B24n	BA34	DO8B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO	CLK1p		DIFFIO RX B24p	DIFFOUT B24p	AY34	DO8B	DO4B	DO2B	DO1B
3B	VREFB3B0	IO	FPLL_BL_CLKOUT0,FPLL_BL_CLKOUTn		DIFFIO TX B25n	DIFFOUT B25n	AW33	DO9B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO	FPLL_BL_CLKOUT0,FPLL_BL_CLKOUTp,FPLL_BL_FB0		DIFFIO TX B25p	DIFFOUT B25p	AV34	DO9B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO	FPLL_BL_CLKOUT3,FPLL_BL_FBn		DIFFIO RX B26n	DIFFOUT B26n	AR32	DQS9B	DO5B	DQS2B/DO2B	DO1B
3B	VREFB3B0	IO	FPLL_BL_CLKOUT2,FPLL_BL_FBp,FPLL_BL_FB1		DIFFIO RX B26p	DIFFOUT B26p	AR31	DQS9B	DO5B/CQn5B	DQS2B/CQ2B	DO1B
3B	VREFB3B0	IO		nPERSTL0	DIFFIO TX B27n	DIFFOUT B27n	AU33	DO9B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO		nPERSTL1	DIFFIO TX B27p	DIFFOUT B27p	AT33	DO9B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO	CLK2n		DIFFIO RX B28n	DIFFOUT B28n	BA33	DQS10B	DQS5B/DO5B	DO2B	DO1B
3B	VREFB3B0	IO	CLK2p		DIFFIO RX B28p	DIFFOUT B28p	AY33	DQS10B	DQS5B/CQ5B	DO2B	DO1B/CQn1B
3B	VREFB3B0	IO		nPERSTR1	DIFFIO TX B29n	DIFFOUT B29n	BD35	DO10B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO		nPERSTR0	DIFFIO TX B29p	DIFFOUT B29p	BD34	DO10B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO	CLK3n		DIFFIO RX B30n	DIFFOUT B30n	BC34	DO10B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO	CLK3p		DIFFIO RX B30p	DIFFOUT B30p	BB33	DO10B	DO5B	DO2B	DO1B
3B	VREFB3B0	IO			DIFFIO TX B31n	DIFFOUT B31n	AN33	DO11B	DO6B	DO3B	DO1B
3B	VREFB3B0	IO			DIFFIO TX B31p	DIFFOUT B31p	AP33	DO11B	DO6B	DO3B	DO1B
3B	VREFB3B0	IO			DIFFIO RX B32n	DIFFOUT B32n	AJ33	DQS11B	DO6B	DO3B	DQS1B/DO1B
3B	VREFB3B0	IO			DIFFIO RX B32p	DIFFOUT B32p	AK33	DQS11B	DO6B/CQn6B	DO3B	DQS1B/CQ1B
3B	VREFB3B0	IO			DIFFIO TX B33n	DIFFOUT B33n	AG33	DO11B	DO6B	DO3B	DO1B
3B	VREFB3B0	IO			DIFFIO TX B33p	DIFFOUT B33p	AH33	DO11B	DO6B	DO3B	DO1B



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3B	VREFB3BN0	IO			DIFFIO RX B34n	DIFFOUT B34n	AM32	DQSn12B	DQSn6B/DQ6B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B34p	DIFFOUT B34p	AM31	DQS12B	DQS6B/CQ6B	DQ3B/CQn3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B35n	DIFFOUT B35n	AK32	DQ12B	DO6B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B35p	DIFFOUT B35p	AJ32	DQ12B	DO6B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B36n	DIFFOUT B36n	AP31	DQ12B	DO6B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B36p	DIFFOUT B36p	AN31	DQ12B	DO6B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B37n	DIFFOUT B37n	AF34	DQ13B	DO7B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B37p	DIFFOUT B37p	AE34	DQ13B	DO7B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B38n	DIFFOUT B38n	AG32	DQSn13B	DO7B	DQSn3B/DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B38p	DIFFOUT B38p	AF32	DQS13B	DO7B/CQn7B	DQS3B/CQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B39n	DIFFOUT B39n	AE33	DQ13B	DO7B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B39p	DIFFOUT B39p	AD33	DQ13B	DO7B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B40n	DIFFOUT B40n	AE32	DQSn14B	DQSn7B/DO7B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B40p	DIFFOUT B40p	AD32	DQS14B	DQS7B/CQ7B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B41n	DIFFOUT B41n	AE30	DQ14B	DO7B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO TX B41p	DIFFOUT B41p	AE29	DQ14B	DO7B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B42n	DIFFOUT B42n	AF31	DQ14B	DO7B	DQ3B	DQ1B
3B	VREFB3BN0	IO			DIFFIO RX B42p	DIFFOUT B42p	AE31	DQ14B	DO7B	DQ3B	DQ1B
3C	VREFB3CN0	IO			DIFFIO TX B43n	DIFFOUT B43n	AP30	DQ15B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B43p	DIFFOUT B43p	AN30	DQ15B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B44n	DIFFOUT B44n	AU32	DQSn15B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B44p	DIFFOUT B44p	AT32	DQS15B	DO8B/CQn8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B45n	DIFFOUT B45n	AT30	DQ15B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B45p	DIFFOUT B45p	AR30	DQ15B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B46n	DIFFOUT B46n	AL31	DQSn16B	DQSn8B/DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B46p	DIFFOUT B46p	AL30	DQS16B	DQS8B/CQ8B	DO4B/CQn4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B47n	DIFFOUT B47n	AJ31	DQ16B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B47p	DIFFOUT B47p	AH31	DQ16B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B48n	DIFFOUT B48n	AJ30	DQ16B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B48p	DIFFOUT B48p	AH30	DQ16B	DO8B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B49n	DIFFOUT B49n	AV31	DQ17B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B49p	DIFFOUT B49p	AU31	DQ17B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B50n	DIFFOUT B50n	AU30	DQSn17B	DO9B	DQSn4B/DQ4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B50p	DIFFOUT B50p	AT29	DQS17B	DO9B/CQn9B	DQS4B/CQ4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B51n	DIFFOUT B51n	AW32	DQ17B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B51p	DIFFOUT B51p	AV32	DQ17B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B52n	DIFFOUT B52n	AL29	DQSn18B	DQSn9B/DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B52p	DIFFOUT B52p	AK30	DQS18B	DQS9B/CQ9B	DO4B	DO2B/CQn2B
3C	VREFB3CN0	IO			DIFFIO TX B53n	DIFFOUT B53n	AN28	DQ18B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B53p	DIFFOUT B53p	AM29	DQ18B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B54n	DIFFOUT B54n	AR28	DQ18B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B54p	DIFFOUT B54p	AP28	DQ18B	DO9B	DO4B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B55n	DIFFOUT B55n	AY31	DQ19B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B55p	DIFFOUT B55p	AW30	DQ19B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B56n	DIFFOUT B56n	BB32	DQSn19B	DO10B	DO5B	DQSn2B/DO2B
3C	VREFB3CN0	IO			DIFFIO RX B56p	DIFFOUT B56p	BA31	DQS19B	DQ10B/CQn10B	DO5B	DQS2B/CQ2B
3C	VREFB3CN0	IO			DIFFIO TX B57n	DIFFOUT B57n	BD32	DQ19B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B57p	DIFFOUT B57p	BC32	DQ19B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B58n	DIFFOUT B58n	BA29	DQSn20B	DQSn10B/DQ10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B58p	DIFFOUT B58p	AY30	DQS20B	DQS10B/CQ10B	DO5B/CQn5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B59n	DIFFOUT B59n	BD31	DQ20B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B59p	DIFFOUT B59p	BC31	DQ20B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B60n	DIFFOUT B60n	BB30	DQ20B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B60p	DIFFOUT B60p	BA30	DQ20B	DO10B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B61n	DIFFOUT B61n	AG30	DQ21B	DO11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B61p	DIFFOUT B61p	AG29	DQ21B	DO11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B62n	DIFFOUT B62n	AK29	DQSn21B	DQ11B	DQSn5B/DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B62p	DIFFOUT B62p	AJ29	DQS21B	DQ11B/CQn11B	DQS5B/CQ5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B63n	DIFFOUT B63n	AF29	DQ21B	DO11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B63p	DIFFOUT B63p	AF28	DQ21B	DO11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B64n	DIFFOUT B64n	AE28	DQSn22B	DQSn11B/DQ11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B64p	DIFFOUT B64p	AE27	DQS22B	DQS11B/CQ11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B65n	DIFFOUT B65n	AG26	DQ22B	DQ11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO TX B65p	DIFFOUT B65p	AG25	DQ22B	DQ11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B66n	DIFFOUT B66n	AG28	DQ22B	DQ11B	DO5B	DO2B
3C	VREFB3CN0	IO			DIFFIO RX B66p	DIFFOUT B66p	AG27	DQ22B	DQ11B	DO5B	DO2B
3D	VREFB3DN0	IO			DIFFIO TX B67n	DIFFOUT B67n	AM28	DQ23B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO TX B67p	DIFFOUT B67p	AL28	DQ23B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B68n	DIFFOUT B68n	AP27	DQSn23B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B68p	DIFFOUT B68p	AN27	DQS23B	DO12B/CQn12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO TX B69n	DIFFOUT B69n	AL27	DQ23B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO TX B69p	DIFFOUT B69p	AK27	DQ23B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B70n	DIFFOUT B70n	AR28	DQSn24B	DQSn12B/DQ12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B70p	DIFFOUT B70p	AR27	DQS24B	DQS12B/CQ12B	DO6B/CQn6B	DO3B
3D	VREFB3DN0	IO			DIFFIO TX B71n	DIFFOUT B71n	AV28	DQ24B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO TX B71p	DIFFOUT B71p	AU28	DQ24B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B72n	DIFFOUT B72n	AV29	DQ24B	DO12B	DO6B	DO3B
3D	VREFB3DN0	IO			DIFFIO RX B72p	DIFFOUT B72p	AU29	DQ24B	DO12B	DO6B	DO3B



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
3D	VREFB3DN0	IO			DIFFIO TX B73n	DIFFOUT B73n	AW29	DQ25B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B73p	DIFFOUT B73p	AY26	DQ25B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B74n	DIFFOUT B74n	BD29	DQS25B	DQ13B	DQS6B/DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B74p	DIFFOUT B74p	BC29	DQS25B	DQ13B/CQn13B	DQS6B/CQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B75n	DIFFOUT B75n	BB29	DQ25B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B75p	DIFFOUT B75p	BA28	DQ25B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO	CLK4n		DIFFIO RX B76n	DIFFOUT B76n	BD28	DQS26B	DQS13B/DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO	CLK4p		DIFFIO RX B76p	DIFFOUT B76p	BC28	DQS26B	DQS13B/CQ13B	DQ6B	DQ3B/CQn3B
3D	VREFB3DN0	IO			DIFFIO TX B77n	DIFFOUT B77n	AY27	DQ26B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B77p	DIFFOUT B77p	AW27	DQ26B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO	CLK5n		DIFFIO RX B78n	DIFFOUT B78n	BB27	DQ26B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO	CLK5p		DIFFIO RX B78p	DIFFOUT B78p	BA27	DQ26B	DQ13B	DQ6B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B79n	DIFFOUT B79n	AJ28	DQ27B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B79p	DIFFOUT B79p	AH28	DQ27B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B80n	DIFFOUT B80n	AJ27	DQS27B	DQ14B	DQ7B	DQS3B/DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B80p	DIFFOUT B80p	AH27	DQS27B	DQ14B/CQn14B	DQ7B	DQS3B/CQ3B
3D	VREFB3DN0	IO			DIFFIO TX B81n	DIFFOUT B81n	AL26	DQ27B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B81p	DIFFOUT B81p	AK26	DQ27B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B82n	DIFFOUT B82n	AJ25	DQS28B	DQS14B/DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B82p	DIFFOUT B82p	AJ25	DQS28B	DQS14B/CQ14B	DQ7B/CQn7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B83n	DIFFOUT B83n	AH25	DQ28B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B83p	DIFFOUT B83p	AH24	DQ28B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B84n	DIFFOUT B84n	AK24	DQ28B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B84p	DIFFOUT B84p	AJ24	DQ28B	DQ14B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B85n	DIFFOUT B85n	AN25	DQ29B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B85p	DIFFOUT B85p	AM26	DQ29B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B86n	DIFFOUT B86n	AR26	DQS29B	DQ15B	DQS7B/DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B86p	DIFFOUT B86p	AP25	DQS29B	DQ15B/CQn15B	DQS7B/CQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B87n	DIFFOUT B87n	AM25	DQ29B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B87p	DIFFOUT B87p	AL25	DQ29B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B88n	DIFFOUT B88n	AU26	DQS30B	DQS15B/DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B88p	DIFFOUT B88p	AT26	DQS30B	DQS15B/CQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B89n	DIFFOUT B89n	AU27	DQ30B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO TX B89p	DIFFOUT B89p	AT27	DQ30B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B90n	DIFFOUT B90n	AW26	DQ30B	DQ15B	DQ7B	DQ3B
3D	VREFB3DN0	IO			DIFFIO RX B90p	DIFFOUT B90p	AV26	DQ30B	DQ15B	DQ7B	DQ3B
3E	VREFB3EN0	IO			DIFFIO TX B91n	DIFFOUT B91n	AU25	DQ31B	DQ16B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO TX B91p	DIFFOUT B91p	AU24	DQ31B	DQ16B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B92n	DIFFOUT B92n	AR25	DQS31B	DQ16B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B92p	DIFFOUT B92p	AP24	DQS31B	DQ16B/CQn16B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO TX B93n	DIFFOUT B93n	AW24	DQ31B	DQ16B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO TX B93p	DIFFOUT B93p	AV25	DQ31B	DQ16B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B94n	DIFFOUT B94n	BB26	DQS32B	DQS16B/DQ16B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B94p	DIFFOUT B94p	BA25	DQS32B	DQS16B/CQ16B	DQ8B/CQn8B	
3E	VREFB3EN0	IO			DIFFIO TX B95n	DIFFOUT B95n	BD26	DQ32B	DQ16B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO TX B95p	DIFFOUT B95p	BC26	DQ32B	DQ16B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B96n	DIFFOUT B96n	BA24	DQ32B	DQ16B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B96p	DIFFOUT B96p	AY25	DQ32B	DQ16B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO TX B97n	DIFFOUT B97n	AK23	DQ33B	DQ17B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO TX B97p	DIFFOUT B97p	AJ23	DQ33B	DQ17B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B98n	DIFFOUT B98n	AJ22	DQS33B	DQ17B	DQS8B/DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B98p	DIFFOUT B98p	AH22	DQS33B	DQ17B/CQn17B	DQS8B/CQ8B	
3E	VREFB3EN0	IO			DIFFIO TX B99n	DIFFOUT B99n	AL21	DQ33B	DQ17B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO TX B99p	DIFFOUT B99p	AK21	DQ33B	DQ17B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B100n	DIFFOUT B100n	AT23	DQS34B	DQS17B/DQ17B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B100p	DIFFOUT B100p	AR23	DQS34B	DQS17B/CQ17B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO TX B101n	DIFFOUT B101n	AL24	DQ34B	DQ17B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO TX B101p	DIFFOUT B101p	AL23	DQ34B	DQ17B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B102n	DIFFOUT B102n	AN23	DQ34B	DQ17B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO RX B102p	DIFFOUT B102p	AM23	DQ34B	DQ17B	DQ8B	
3E	VREFB3EN0	IO			DIFFIO TX B103n	DIFFOUT B103n	AV23	DQ35B	DQ18B		
3E	VREFB3EN0	IO			DIFFIO TX B103p	DIFFOUT B103p	AU23	DQ35B	DQ18B		
3E	VREFB3EN0	IO			DIFFIO RX B104n	DIFFOUT B104n	AT24	DQS35B	DQ18B		
3E	VREFB3EN0	IO			DIFFIO RX B104p	DIFFOUT B104p	AR24	DQS35B	DQ18B/CQn18B		
3E	VREFB3EN0	IO			DIFFIO TX B105n	DIFFOUT B105n	AY24	DQ35B	DQ18B		
3E	VREFB3EN0	IO			DIFFIO TX B105p	DIFFOUT B105p	AW23	DQ35B	DQ18B		
3E	VREFB3EN0	IO			DIFFIO RX B106n	DIFFOUT B106n	BD25	DQS36B	DQS18B/DQ18B		
3E	VREFB3EN0	IO			DIFFIO RX B106p	DIFFOUT B106p	BC25	DQS36B	DQS18B/CQ18B		
3E	VREFB3EN0	IO			DIFFIO TX B107n	DIFFOUT B107n	BB24	DQ36B	DQ18B		
3E	VREFB3EN0	IO			DIFFIO TX B107p	DIFFOUT B107p	BB23	DQ36B	DQ18B		
3E	VREFB3EN0	IO			DIFFIO RX B108n	DIFFOUT B108n	BD23	DQ36B	DQ19B		
3E	VREFB3EN0	IO			DIFFIO RX B108p	DIFFOUT B108p	BC23	DQ36B	DQ19B		
4E	VREFB4EN0	IO			DIFFIO TX B109n	DIFFOUT B109n	AN22	DQ37B	DQ19B		
4E	VREFB4EN0	IO			DIFFIO TX B109p	DIFFOUT B109p	AM22	DQ37B	DQ19B		
4E	VREFB4EN0	IO			DIFFIO RX B110n	DIFFOUT B110n	AJ21	DQS37B	DQ19B		
4E	VREFB4EN0	IO			DIFFIO RX B110p	DIFFOUT B110p	AK20	DQS37B	DQ19B/CQn19B		
4E	VREFB4EN0	IO			DIFFIO TX B111n	DIFFOUT B111n	AM20	DQ37B	DQ19B		
4E	VREFB4EN0	IO			DIFFIO TX B111p	DIFFOUT B111p	AL20	DQ37B	DQ19B		



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
4E	VREFB4E0	IO			DIFFIO RX B112n	DIFFOUT B112n	AH21	DQS38B	DQS19B/DQ19B		
4E	VREFB4E0	IO			DIFFIO RX B112p	DIFFOUT B112p	AG21	DQS38B	DQS19B/CQ19B		
4E	VREFB4E0	IO			DIFFIO TX B113n	DIFFOUT B113n	AJ20	DQ38B	DQ19B		
4E	VREFB4E0	IO			DIFFIO TX B113p	DIFFOUT B113p	AJ19	DQ38B	DQ19B		
4E	VREFB4E0	IO			DIFFIO RX B114n	DIFFOUT B114n	AG20	DQ38B	DQ19B		
4E	VREFB4E0	IO			DIFFIO RX B114p	DIFFOUT B114p	AG19	DQ38B	DQ19B		
4E	VREFB4E0	IO			DIFFIO TX B115n	DIFFOUT B115n	AR21	DQ39B	DQ20B	DO9B	
4E	VREFB4E0	IO			DIFFIO TX B115p	DIFFOUT B115p	AP21	DQ39B	DQ20B	DO9B	
4E	VREFB4E0	IO			DIFFIO RX B116n	DIFFOUT B116n	AT21	DQS39B	DQ20B	DO9B	
4E	VREFB4E0	IO			DIFFIO RX B116p	DIFFOUT B116p	AR22	DQS39B	DQ20B/CQn20B	DO9B	
4E	VREFB4E0	IO			DIFFIO TX B117n	DIFFOUT B117n	AU22	DQ39B	DQ20B	DO9B	
4E	VREFB4E0	IO			DIFFIO TX B117p	DIFFOUT B117p	AU21	DQ39B	DQ20B	DO9B	
4E	VREFB4E0	IO			DIFFIO RX B118n	DIFFOUT B118n	AW22	DQS40B	DQS20B/DQ20B	DO9B	
4E	VREFB4E0	IO			DIFFIO RX B118p	DIFFOUT B118p	AV22	DQS40B	DQS20B/CQ20B	DO9B/CQn9B	
4E	VREFB4E0	IO			DIFFIO TX B119n	DIFFOUT B119n	BA21	DQ40B	DQ20B	DO9B	
4E	VREFB4E0	IO			DIFFIO TX B119p	DIFFOUT B119p	AY21	DQ40B	DQ20B	DO9B	
4E	VREFB4E0	IO			DIFFIO RX B120n	DIFFOUT B120n	BA22	DQ40B	DQ20B	DO9B	
4E	VREFB4E0	IO			DIFFIO RX B120p	DIFFOUT B120p	AY22	DQ40B	DQ20B	DO9B	
4E	VREFB4E0	IO			DIFFIO TX B121n	DIFFOUT B121n	AV20	DQ41B	DQ21B	DO9B	
4E	VREFB4E0	IO			DIFFIO TX B121p	DIFFOUT B121p	AU20	DQ41B	DQ21B	DO9B	
4E	VREFB4E0	IO			DIFFIO RX B122n	DIFFOUT B122n	AT20	DQS41B	DQ21B	DQS9B/DO9B	
4E	VREFB4E0	IO			DIFFIO RX B122p	DIFFOUT B122p	AR20	DQS41B	DQ21B/CQn21B	DQS9B/CQn9B	
4E	VREFB4E0	IO			DIFFIO TX B123n	DIFFOUT B123n	AW21	DQ41B	DQ21B	DO9B	
4E	VREFB4E0	IO			DIFFIO TX B123p	DIFFOUT B123p	AW20	DQ41B	DQ21B	DO9B	
4E	VREFB4E0	IO			DIFFIO RX B124n	DIFFOUT B124n	BD22	DQS42B	DQS21B/DQ21B	DO9B	
4E	VREFB4E0	IO			DIFFIO RX B124p	DIFFOUT B124p	BC22	DQS42B	DQS21B/CQ21B	DO9B	
4E	VREFB4E0	IO			DIFFIO TX B125n	DIFFOUT B125n	BD20	DQ42B	DQ21B	DO9B	
4E	VREFB4E0	IO			DIFFIO TX B125p	DIFFOUT B125p	BC20	DQ42B	DQ21B	DO9B	
4E	VREFB4E0	IO			DIFFIO RX B126n	DIFFOUT B126n	BB21	DQ42B	DQ21B	DO9B	
4E	VREFB4E0	IO			DIFFIO RX B126p	DIFFOUT B126p	BB20	DQ42B	DQ21B	DO9B	
4D	VREFB4D0	IO			DIFFIO TX B127n	DIFFOUT B127n	AL19	DQ43B	DQ22B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B127p	DIFFOUT B127p	AL18	DQ43B	DQ22B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B128n	DIFFOUT B128n	AN20	DQS43B	DQ22B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B128p	DIFFOUT B128p	AM19	DQS43B	DQ22B/CQn22B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B129n	DIFFOUT B129n	AP19	DQ43B	DQ22B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B129p	DIFFOUT B129p	AN19	DQ43B	DQ22B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B130n	DIFFOUT B130n	AR19	DQS44B	DQS22B/DQ22B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B130p	DIFFOUT B130p	AP18	DQS44B	DQS22B/CQ22B	DQ10B/CQn10B	
4D	VREFB4D0	IO			DIFFIO TX B131n	DIFFOUT B131n	AW19	DQ44B	DQ22B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B131p	DIFFOUT B131p	AV19	DQ44B	DQ22B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B132n	DIFFOUT B132n	AU19	DQ44B	DQ22B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B132p	DIFFOUT B132p	AU18	DQ44B	DQ22B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B133n	DIFFOUT B133n	AG18	DQ45B	DQ23B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B133p	DIFFOUT B133p	AG17	DQ45B	DQ23B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B134n	DIFFOUT B134n	AJ16	DQS45B	DQ23B	DQS10B/DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B134p	DIFFOUT B134p	AJ15	DQS45B	DQ23B/CQn23B	DQS10B/CQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B135n	DIFFOUT B135n	AK17	DQ45B	DQ23B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B135p	DIFFOUT B135p	AJ17	DQ45B	DQ23B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B136n	DIFFOUT B136n	AH19	DQS46B	DQS23B/DQ23B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B136p	DIFFOUT B136p	AH18	DQS46B	DQS23B/CQ23B	DQ10B	DQ4B/CQn4B
4D	VREFB4D0	IO			DIFFIO TX B137n	DIFFOUT B137n	AM17	DQ46B	DQ23B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B137p	DIFFOUT B137p	AL17	DQ46B	DQ23B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B138n	DIFFOUT B138n	AK18	DQ46B	DQ23B	DQ10B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B138p	DIFFOUT B138p	AJ18	DQ46B	DQ23B	DQ10B	DQ4B
4D	VREFB4D0	IO	FPLL BC_CLKOUT1,FPLL BC_CLKOUTn		DIFFIO TX B139n	DIFFOUT B139n	BA19	DQ47B	DQ24B	DQ11B	DQ4B
4D	VREFB4D0	IO	FPLL BC_CLKOUT0,FPLL BC_CLKOUTp,FPLL BC_FB0		DIFFIO TX B139p	DIFFOUT B139p	AY19	DQ47B	DQ24B	DQ11B	DQ4B
4D	VREFB4D0	IO	FPLL BC_CLKOUT3,FPLL BC_FBn		DIFFIO RX B140n	DIFFOUT B140n	BD19	DQS47B	DQ24B	DQ11B	DQS4B/DQ4B
4D	VREFB4D0	IO	FPLL BC_CLKOUT2,FPLL BC_FBp,FPLL BC_FB1		DIFFIO RX B140p	DIFFOUT B140p	BC19	DQS47B	DQ24B/CQn24B	DQ11B	DQS4B/CQ4B
4D	VREFB4D0	IO			DIFFIO TX B141n	DIFFOUT B141n	BD17	DQ47B	DQ24B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B141p	DIFFOUT B141p	BC17	DQ47B	DQ24B	DQ11B	DQ4B
4D	VREFB4D0	IO	CLK6n		DIFFIO RX B142n	DIFFOUT B142n	BA18	DQS48B	DQS24B/DQ24B	DQ11B	DQ4B
4D	VREFB4D0	IO	CLK6p		DIFFIO RX B142p	DIFFOUT B142p	AY18	DQS48B	DQS24B/CQ24B	DQ11B/CQn11B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B143n	DIFFOUT B143n	BA16	DQ48B	DQ24B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B143p	DIFFOUT B143p	AY16	DQ48B	DQ24B	DQ11B	DQ4B
4D	VREFB4D0	IO	CLK7n		DIFFIO RX B144n	DIFFOUT B144n	BB17	DQ48B	DQ24B	DQ11B	DQ4B
4D	VREFB4D0	IO	CLK7p		DIFFIO RX B144p	DIFFOUT B144p	BB18	DQ48B	DQ24B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B145n	DIFFOUT B145n	AV17	DQ49B	DQ25B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B145p	DIFFOUT B145p	AU17	DQ49B	DQ25B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B146n	DIFFOUT B146n	AW17	DQS49B	DQ25B	DQS11B/DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B146p	DIFFOUT B146p	AW16	DQS49B	DQ25B/CQn25B	DQS11B/CQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B147n	DIFFOUT B147n	AV16	DQ49B	DQ25B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B147p	DIFFOUT B147p	AU16	DQ49B	DQ25B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B148n	DIFFOUT B148n	AP16	DQS50B	DQS25B/DQ25B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B148p	DIFFOUT B148p	AN17	DQS50B	DQS25B/CQ25B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B149n	DIFFOUT B149n	AT17	DQ50B	DQ25B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO TX B149p	DIFFOUT B149p	AR17	DQ50B	DQ25B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B150n	DIFFOUT B150n	AT18	DQ50B	DQ25B	DQ11B	DQ4B
4D	VREFB4D0	IO			DIFFIO RX B150p	DIFFOUT B150p	AR18	DQ50B	DQ25B	DQ11B	DQ4B



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
4C	VREFB4CN0	IO			DIFFIO TX B151n	DIFFOUT B151n	AE16	DQ51B	DQ26B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B151p	DIFFOUT B151p	AE15	DQ51B	DQ26B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B152n	DIFFOUT B152n	AE18	DQS51B	DQ26B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B152p	DIFFOUT B152p	AE17	DQS51B	DQ26B/CQn26B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B153n	DIFFOUT B153n	AG15	DQ51B	DQ26B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B153p	DIFFOUT B153p	AF16	DQ51B	DQ26B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B154n	DIFFOUT B154n	AF17	DQSn52B	DQSn26B/DQ26B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B154p	DIFFOUT B154p	AG16	DQS52B	DQSn26B/CQ26B	DQ12B/CQn12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B155n	DIFFOUT B155n	AK15	DQ52B	DQ26B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B155p	DIFFOUT B155p	AJ14	DQ52B	DQ26B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B156n	DIFFOUT B156n	AH15	DQ52B	DQ26B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B156p	DIFFOUT B156p	AG14	DQ52B	DQ26B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B157n	DIFFOUT B157n	BD16	DQ53B	DQ27B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B157p	DIFFOUT B157p	BC16	DQ53B	DQ27B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B158n	DIFFOUT B158n	BA15	DQSn53B	DQ27B	DQSn12B/DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B158p	DIFFOUT B158p	AY15	DQS53B	DQ27B/CQn27B	DQSn12B/CQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B159n	DIFFOUT B159n	BB15	DQ53B	DQ27B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B159p	DIFFOUT B159p	BB14	DQ53B	DQ27B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B160n	DIFFOUT B160n	BD14	DQSn64B	DQSn27B/DQ27B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B160p	DIFFOUT B160p	BC14	DQS54B	DQSn27B/CQ27B	DQ12B	DQ5B/CQn5B
4C	VREFB4CN0	IO			DIFFIO TX B161n	DIFFOUT B161n	BA13	DQ54B	DQ27B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B161p	DIFFOUT B161p	AY13	DQ54B	DQ27B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B162n	DIFFOUT B162n	BD13	DQ54B	DQ27B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B162p	DIFFOUT B162p	BC13	DQ54B	DQ27B	DQ12B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B163n	DIFFOUT B163n	AV14	DQ55B	DQ28B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B163p	DIFFOUT B163p	AU14	DQ55B	DQ28B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B164n	DIFFOUT B164n	AU15	DQSn55B	DQ28B	DQ13B	DQSn5B/DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B164p	DIFFOUT B164p	AT15	DQS55B	DQ28B/CQn28B	DQ13B	DQ5B/CQ5B
4C	VREFB4CN0	IO			DIFFIO TX B165n	DIFFOUT B165n	AW14	DQ55B	DQ28B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B165p	DIFFOUT B165p	AW13	DQ55B	DQ28B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B166n	DIFFOUT B166n	AR16	DQSn56B	DQSn28B/DQ28B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B166p	DIFFOUT B166p	AP15	DQS56B	DQSn28B/CQ28B	DQ13B/CQn13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B167n	DIFFOUT B167n	AM16	DQ56B	DQ28B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B167p	DIFFOUT B167p	AN15	DQ56B	DQ28B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B168n	DIFFOUT B168n	AL16	DQ56B	DQ28B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B168p	DIFFOUT B168p	AL15	DQ56B	DQ28B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B169n	DIFFOUT B169n	AR14	DQ57B	DQ29B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B169p	DIFFOUT B169p	AR15	DQ57B	DQ29B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B170n	DIFFOUT B170n	AV13	DQSn57B	DQ29B	DQSn13B/DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B170p	DIFFOUT B170p	AU12	DQS57B	DQSn13B/CQ13B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B171n	DIFFOUT B171n	AU13	DQ57B	DQ29B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B171p	DIFFOUT B171p	AT14	DQ57B	DQ29B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B172n	DIFFOUT B172n	AJ13	DQSn58B	DQSn29B/DQ29B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B172p	DIFFOUT B172p	AH13	DQS58B	DQSn29B/CQ29B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B173n	DIFFOUT B173n	AL14	DQ58B	DQ29B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO TX B173p	DIFFOUT B173p	AK14	DQ58B	DQ29B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B174n	DIFFOUT B174n	AN14	DQ58B	DQ29B	DQ13B	DQ5B
4C	VREFB4CN0	IO			DIFFIO RX B174p	DIFFOUT B174p	AM14	DQ58B	DQ29B	DQ13B	DQ5B
4B	VREFB4BN0	IO			DIFFIO TX B175n	DIFFOUT B175n	AE12	DQ59B	DQ30B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B175p	DIFFOUT B175p	AE11	DQ59B	DQ30B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B176n	DIFFOUT B176n	AE14	DQSn69B	DQ30B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B176p	DIFFOUT B176p	AD14	DQS59B	DQ30B/CQn30B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B177n	DIFFOUT B177n	AF14	DQ59B	DQ30B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B177p	DIFFOUT B177p	AE13	DQ59B	DQ30B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B178n	DIFFOUT B178n	AG13	DQSn60B	DQSn30B/DQ30B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B178p	DIFFOUT B178p	AF13	DQS60B	DQSn30B/CQ30B	DQ14B/CQn14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B179n	DIFFOUT B179n	AE10	DQ60B	DQ30B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B179p	DIFFOUT B179p	AE9	DQ60B	DQ30B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B180n	DIFFOUT B180n	AF11	DQ60B	DQ30B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B180p	DIFFOUT B180p	AF10	DQ60B	DQ30B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B181n	DIFFOUT B181n	BB12	DQ61B	DQ31B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B181p	DIFFOUT B181p	BA12	DQ61B	DQ31B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B182n	DIFFOUT B182n	BD11	DQSn61B	DQ31B	DQSn14B/DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B182p	DIFFOUT B182p	BC11	DQS61B	DQ31B/CQn31B	DQSn14B/CQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B183n	DIFFOUT B183n	AY12	DQ61B	DQ31B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B183p	DIFFOUT B183p	AW11	DQ61B	DQ31B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B184n	DIFFOUT B184n	BD10	DQSn62B	DQSn31B/DQ31B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B184p	DIFFOUT B184p	BC10	DQS62B	DQSn31B/CQ31B	DQ14B	DQ6B/CQn6B
4B	VREFB4BN0	IO			DIFFIO TX B185n	DIFFOUT B185n	AY10	DQ62B	DQ31B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B185p	DIFFOUT B185p	AW10	DQ62B	DQ31B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B186n	DIFFOUT B186n	BB11	DQ62B	DQ31B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B186p	DIFFOUT B186p	BA10	DQ62B	DQ31B	DQ14B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B187n	DIFFOUT B187n	AJ11	DQ63B	DQ32B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B187p	DIFFOUT B187p	AJ10	DQ63B	DQ32B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B188n	DIFFOUT B188n	AG11	DQSn63B	DQ32B	DQ15B	DQSn6B/DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B188p	DIFFOUT B188p	AG10	DQS63B	DQ32B/CQn32B	DQ15B	DQ5B/CQ6B
4B	VREFB4BN0	IO			DIFFIO TX B189n	DIFFOUT B189n	AH10	DQ63B	DQ32B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B189p	DIFFOUT B189p	AG9	DQ63B	DQ32B	DQ15B	DQ6B



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
4B	VREFB4BN0	IO			DIFFIO RX B190n	DIFFOUT B190n	AH12	DQS64B	DQS32B/DQ32B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B190p	DIFFOUT B190p	AG12	DQS64B	DQS32B/CQ32B	DQ15B/CQn15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B191n	DIFFOUT B191n	AL12	DQ64B	DQ32B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B191p	DIFFOUT B191p	AL11	DQ64B	DQ32B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B192n	DIFFOUT B192n	AK12	DQ64B	DQ32B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B192p	DIFFOUT B192p	AJ12	DQ64B	DQ32B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B193n	DIFFOUT B193n	AN12	DQ65B	DQ33B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B193p	DIFFOUT B193p	AM13	DQ65B	DQ33B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B194n	DIFFOUT B194n	AP13	DQ65B	DQ33B	DQ15B/DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B194p	DIFFOUT B194p	AP12	DQ65B	DQ33B/CQn33B	DQ15B/CQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B195n	DIFFOUT B195n	AR13	DQ65B	DQ33B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B195p	DIFFOUT B195p	AR12	DQ65B	DQ33B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B196n	DIFFOUT B196n	AV11	DQ66B	DQ33B/DQ33B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B196p	DIFFOUT B196p	AU10	DQ66B	DQ33B/CQ33B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B197n	DIFFOUT B197n	AV10	DQ66B	DQ33B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO TX B197p	DIFFOUT B197p	AU9	DQ66B	DQ33B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B198n	DIFFOUT B198n	AL11	DQ66B	DQ33B	DQ15B	DQ6B
4B	VREFB4BN0	IO			DIFFIO RX B198p	DIFFOUT B198p	AT12	DQ66B	DQ33B	DQ15B	DQ6B
4A	VREFB4AN0	IO			DIFFIO TX B199n	DIFFOUT B199n	BD7	DQ67B	DQ34B	DQ16B	
4A	VREFB4AN0	IO			DIFFIO TX B199p	DIFFOUT B199p	BC7	DQ67B	DQ34B	DQ16B	
4A	VREFB4AN0	IO	CLK11n		DIFFIO RX B200n	DIFFOUT B200n	BDB	DQ67B	DQ34B	DQ16B	
4A	VREFB4AN0	IO	CLK11p		DIFFIO RX B200p	DIFFOUT B200p	BC8	DQ67B	DQ34B/CQn34B	DQ16B	
4A	VREFB4AN0	IO			DIFFIO TX B201n	DIFFOUT B201n	BB9	DQ67B	DQ34B	DQ16B	
4A	VREFB4AN0	IO			DIFFIO TX B201p	DIFFOUT B201p	BB8	DQ67B	DQ34B	DQ16B	
4A	VREFB4AN0	IO	CLK10n		DIFFIO RX B202n	DIFFOUT B202n	BA9	DQ68B	DQ34B/DQ34B	DQ16B	
4A	VREFB4AN0	IO	CLK10p		DIFFIO RX B202p	DIFFOUT B202p	AY9	DQ68B	DQ34B/CQ34B	DQ16B/CQn16B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT1,FPLL_BR_CLKOUTn		DIFFIO TX B203n	DIFFOUT B203n	AW9	DQ68B	DQ34B	DQ16B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT0,FPLL_BR_CLKOUTp,FPLL_BR_FB0		DIFFIO TX B203p	DIFFOUT B203p	AV8	DQ68B	DQ34B	DQ16B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT3,FPLL_BR_FBn		DIFFIO RX B204n	DIFFOUT B204n	AU8	DQ68B	DQ34B	DQ16B	
4A	VREFB4AN0	IO	FPLL_BR_CLKOUT2,FPLL_BR_FBp,FPLL_BR_FB1		DIFFIO RX B204p	DIFFOUT B204p	AT9	DQ68B	DQ34B	DQ16B	
4A	VREFB4AN0	IO			DIFFIO TX B205n	DIFFOUT B205n	AL9	DQ69B	DQ35B	DQ16B	
4A	VREFB4AN0	IO			DIFFIO TX B205p	DIFFOUT B205p	AK9	DQ69B	DQ35B	DQ16B	
4A	VREFB4AN0	IO	CLK9n		DIFFIO RX B206n	DIFFOUT B206n	AT11	DQ69B	DQ35B	DQ16B/DQ16B	
4A	VREFB4AN0	IO	CLK9p		DIFFIO RX B206p	DIFFOUT B206p	AR11	DQ69B	DQ35B/CQn35B	DQ16B/CQ16B	
4A	VREFB4AN0	IO			DIFFIO TX B207n	DIFFOUT B207n	AN11	DQ69B	DQ35B	DQ16B	
4A	VREFB4AN0	IO			DIFFIO TX B207p	DIFFOUT B207p	AM11	DQ69B	DQ35B	DQ16B	
4A	VREFB4AN0	IO	CLK8n		DIFFIO RX B208n	DIFFOUT B208n	AR10	DQ70B	DQ35B/DQ35B	DQ16B	
4A	VREFB4AN0	IO	CLK8p		DIFFIO RX B208p	DIFFOUT B208p	AP10	DQ70B	DQ35B/CQ35B	DQ16B	
4A	VREFB4AN0	IO			DIFFIO TX B209n	DIFFOUT B209n	AR9	DQ70B	DQ35B	DQ16B	
4A	VREFB4AN0	IO			DIFFIO TX B209p	DIFFOUT B209p	AP9	DQ70B	DQ35B	DQ16B	
4A	VREFB4AN0	IO			DIFFIO RX B210n	DIFFOUT B210n	AT8	DQ70B	DQ35B	DQ16B	
4A	VREFB4AN0	IO	RZQ_1		DIFFIO RX B210p	DIFFOUT B210p	AR8	DQ70B	DQ35B	DQ16B	
4A		GND					AN6				
4A		nCE		nCE			AP6				
4A		nSTATUS		nSTATUS			AL8				
4A		CONF_DONE		CONF_DONE			AH9				
4A		nIO_PULLUP		nIO_PULLUP			AN7				
4A		MSEL0		MSEL0			AM5				
4A		MSEL1		MSEL1			AM8				
4A		MSEL2		MSEL2			AM7				
4A		MSEL3		MSEL3			AJ9				
4A		MSEL4		MSEL4			AN8				
7A		GND					M7				
7A	VREFB7AN0	IO	RZQ_4		DIFFIO RX T1p	DIFFOUT T1p	H9	DQ1T	DQ1T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO RX T1n	DIFFOUT T1n	H8	DQ1T	DQ1T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO TX T2p	DIFFOUT T2p	K8	DQ1T	DQ1T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO TX T2n	DIFFOUT T2n	J9	DQ1T	DQ1T	DQ1T	
7A	VREFB7AN0	IO	CLK12p		DIFFIO RX T3p	DIFFOUT T3p	M8	DQS1T	DQS1T/CQ1T	DQ1T	
7A	VREFB7AN0	IO	CLK12n		DIFFIO RX T3n	DIFFOUT T3n	L8	DQSn1T	DQSn1T/DQ1T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO TX T4p	DIFFOUT T4p	K10	DQ2T	DQ1T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO TX T4n	DIFFOUT T4n	K9	DQ2T	DQ1T	DQ1T	
7A	VREFB7AN0	IO	CLK13p		DIFFIO RX T5p	DIFFOUT T5p	M9	DQS2T	DQ1T/CQn1T	DQS1T/CQ1T	
7A	VREFB7AN0	IO	CLK13n		DIFFIO RX T5n	DIFFOUT T5n	L9	DQSn2T	DQ1T	DQSn1T/DQ1T	
7A	VREFB7AN0	IO			DIFFIO TX T6p	DIFFOUT T6p	P8	DQ2T	DQ1T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO TX T6n	DIFFOUT T6n	N8	DQ2T	DQ1T	DQ1T	
7A	VREFB7AN0	IO	FPLL_TR_CLKOUT2,FPLL_TR_FBp,FPLL_TR_FB1		DIFFIO RX T7p	DIFFOUT T7p	G8	DQ3T	DQ2T	DQ1T	
7A	VREFB7AN0	IO	FPLL_TR_CLKOUT3,FPLL_TR_FBn		DIFFIO RX T7n	DIFFOUT T7n	F8	DQ3T	DQ2T	DQ1T	
7A	VREFB7AN0	IO	FPLL_TR_CLKOUT0,FPLL_TR_CLKOUTp,FPLL_TR_FB0		DIFFIO TX T8p	DIFFOUT T8p	F9	DQ3T	DQ2T	DQ1T	
7A	VREFB7AN0	IO	FPLL_TR_CLKOUT1,FPLL_TR_CLKOUTn		DIFFIO TX T8n	DIFFOUT T8n	E9	DQ3T	DQ2T	DQ1T	
7A	VREFB7AN0	IO	CLK14p		DIFFIO RX T9p	DIFFOUT T9p	E8	DQS3T	DQS2T/CQ2T	DQ1T/CQn1T	
7A	VREFB7AN0	IO	CLK14n		DIFFIO RX T9n	DIFFOUT T9n	D9	DQSn3T	DQSn2T/DQ2T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO TX T10p	DIFFOUT T10p	D10	DQ4T	DQ2T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO TX T10n	DIFFOUT T10n	C9	DQ4T	DQ2T	DQ1T	
7A	VREFB7AN0	IO	CLK15p		DIFFIO RX T11p	DIFFOUT T11p	B8	DQS4T	DQ2T/CQn2T	DQ1T	
7A	VREFB7AN0	IO	CLK15n		DIFFIO RX T11n	DIFFOUT T11n	A8	DQS4T	DQ2T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO TX T12p	DIFFOUT T12p	B7	DQ4T	DQ2T	DQ1T	
7A	VREFB7AN0	IO			DIFFIO TX T12n	DIFFOUT T12n	A7	DQ4T	DQ2T	DQ1T	
7B	VREFB7BN0	IO			DIFFIO RX T13p	DIFFOUT T13p	V10	DQ5T	DQ3T	DQ2T	DQ1T



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
7B	VREFB7BN0	IO			DIFFIO RX T13n	DIFFOUT T13n	V9	DO5T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T14p	DIFFOUT T14p	T10	DO5T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T14n	DIFFOUT T14n	R10	DO5T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T15p	DIFFOUT T15p	U9	DOS5T	DOS3T/CQ3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T15n	DIFFOUT T15n	T9	DOSn5T	DOSn3T/DQ3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T16p	DIFFOUT T16p	P12	DO6T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T16n	DIFFOUT T16n	R12	DO6T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T17p	DIFFOUT T17p	T12	DOS6T	DO3T/CQn3T	DOS2T/CQ2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T17n	DIFFOUT T17n	T11	DOSn6T	DO3T	DOSn2T/DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T18p	DIFFOUT T18p	M12	DO6T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T18n	DIFFOUT T18n	L12	DO6T	DO3T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T19p	DIFFOUT T19p	J10	DO7T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T19n	DIFFOUT T19n	H10	DO7T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T20p	DIFFOUT T20p	N11	DO7T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T20n	DIFFOUT T20n	M11	DO7T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T21p	DIFFOUT T21p	K11	DQS7T	DQS4T/CQ4T	DO2T/CQn2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T21n	DIFFOUT T21n	L11	DOSn7T	DOSn4T/DQ4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T22p	DIFFOUT T22p	H12	DO8T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T22n	DIFFOUT T22n	H11	DO8T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T23p	DIFFOUT T23p	G10	DQS8T	DO4T/CQn4T	DO2T	DQS1T/CQ1T
7B	VREFB7BN0	IO			DIFFIO RX T23n	DIFFOUT T23n	F10	DOSn8T	DO4T	DO2T	DOSn1T/DO1T
7B	VREFB7BN0	IO			DIFFIO TX T24p	DIFFOUT T24p	K12	DO8T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T24n	DIFFOUT T24n	J12	DO8T	DO4T	DO2T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T25p	DIFFOUT T25p	P13	DO9T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T25n	DIFFOUT T25n	N13	DO9T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T26p	DIFFOUT T26p	T13	DO9T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T26n	DIFFOUT T26n	R13	DO9T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T27p	DIFFOUT T27p	P14	DQS9T	DQS5T/CQ5T	DO3T	DO1T/CQn1T
7B	VREFB7BN0	IO			DIFFIO RX T27n	DIFFOUT T27n	N14	DOSn9T	DOSn5T/DQ5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T28p	DIFFOUT T28p	U14	DO10T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T28n	DIFFOUT T28n	T14	DO10T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T29p	DIFFOUT T29p	V12	DQS10T	DO5T/CQn5T	DQS3T/CQ3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T29n	DIFFOUT T29n	V11	DOSn10T	DO5T	DOSn3T/DQ3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T30p	DIFFOUT T30p	U12	DO10T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T30n	DIFFOUT T30n	U11	DO10T	DO5T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T31p	DIFFOUT T31p	G11	DO11T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T31n	DIFFOUT T31n	F11	DO11T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T32p	DIFFOUT T32p	E12	DO11T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T32n	DIFFOUT T32n	E11	DO11T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T33p	DIFFOUT T33p	D12	DQS11T	DO6T/CQ6T	DO3T/CQn3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T33n	DIFFOUT T33n	C12	DOSn11T	DOSn6T/DQ6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T34p	DIFFOUT T34p	D11	DO12T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T34n	DIFFOUT T34n	C10	DO12T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T35p	DIFFOUT T35p	B11	DQS12T	DO6T/CQn6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO RX T35n	DIFFOUT T35n	A11	DOSn12T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T36p	DIFFOUT T36p	B10	DO12T	DO6T	DO3T	DO1T
7B	VREFB7BN0	IO			DIFFIO TX T36n	DIFFOUT T36n	A10	DO12T	DO6T	DO3T	DO1T
7C	VREFB7CN0	IO			DIFFIO RX T37p	DIFFOUT T37p	H14	DO13T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T37n	DIFFOUT T37n	H13	DO13T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T38p	DIFFOUT T38p	K13	DO13T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T38n	DIFFOUT T38n	J13	DO13T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T39p	DIFFOUT T39p	L15	DQS13T	DQS7T/CQ7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T39n	DIFFOUT T39n	K14	DOSn13T	DOSn7T/DQ7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T40p	DIFFOUT T40p	G13	DO14T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T40n	DIFFOUT T40n	F13	DO14T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T41p	DIFFOUT T41p	H15	DQS14T	DO7T/CQn7T	DQS4T/CQ4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T41n	DIFFOUT T41n	G14	DOSn14T	DO7T	DOSn4T/DQ4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T42p	DIFFOUT T42p	K16	DO14T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T42n	DIFFOUT T42n	J16	DO14T	DO7T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T43p	DIFFOUT T43p	Y17	DO15T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T43n	DIFFOUT T43n	W17	DO15T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T44p	DIFFOUT T44p	W14	DO15T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T44n	DIFFOUT T44n	V13	DO15T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T45p	DIFFOUT T45p	Y16	DQS15T	DQS8T/CQ8T	DO4T/CQn4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T45n	DIFFOUT T45n	W16	DOSn15T	DOSn8T/DQ8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T46p	DIFFOUT T46p	U15	DO16T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T46n	DIFFOUT T46n	T15	DO16T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T47p	DIFFOUT T47p	R15	DQS16T	DO8T/CQn8T	DO4T	DQS2T/CQ2T
7C	VREFB7CN0	IO			DIFFIO RX T47n	DIFFOUT T47n	P15	DOSn16T	DO8T	DO4T	DOSn2T/DO2T
7C	VREFB7CN0	IO			DIFFIO TX T48p	DIFFOUT T48p	V16	DO16T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T48n	DIFFOUT T48n	V15	DO16T	DO8T	DO4T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T49p	DIFFOUT T49p	R16	DO17T	DO9T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T49n	DIFFOUT T49n	P16	DO17T	DO9T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T50p	DIFFOUT T50p	T17	DO17T	DO9T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T50n	DIFFOUT T50n	T16	DO17T	DO9T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T51p	DIFFOUT T51p	V17	DQS17T	DQS9T/CQ9T	DQS5T	DO2T/CQn2T
7C	VREFB7CN0	IO			DIFFIO RX T51n	DIFFOUT T51n	U17	DOSn17T	DOSn9T/DQ9T	DQS5T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T52p	DIFFOUT T52p	N16	DO18T	DO9T	DO5T	DO2T



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
7C	VREFB7CN0	IO			DIFFIO TX T52n	DIFFOUT T52n	M15	DO18T	DO9T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T53p	DIFFOUT T53p	K15	DQS18T	DO9T/CQn9T	DO5T/CQ5T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T53n	DIFFOUT T53n	J16	DQSn18T	DO9T	DO5T/DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T54p	DIFFOUT T54p	M14	DO18T	DO9T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T54n	DIFFOUT T54n	L14	DO18T	DO9T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T55p	DIFFOUT T55p	F14	DO19T	DO10T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T55n	DIFFOUT T55n	E14	DO19T	DO10T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T56p	DIFFOUT T56p	D14	DO19T	DO10T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T56n	DIFFOUT T56n	C13	DO19T	DO10T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T57p	DIFFOUT T57p	E15	DQS19T	DO5T/CQn10T	DO5T/CQn5T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T57n	DIFFOUT T57n	D15	DQSn19T	DO5T/CQn10T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T58p	DIFFOUT T58p	B19	DO20T	DO10T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T58n	DIFFOUT T58n	A19	DO20T	DO10T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T59p	DIFFOUT T59p	C16	DQS20T	DO10T/CQn10T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO RX T59n	DIFFOUT T59n	C15	DQSn20T	DO10T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T60p	DIFFOUT T60p	B14	DO20T	DO10T	DO5T	DO2T
7C	VREFB7CN0	IO			DIFFIO TX T60n	DIFFOUT T60n	A14	DO20T	DO10T	DO5T	DO2T
7D	VREFB7DN0	IO			DIFFIO RX T61p	DIFFOUT T61p	N17	DO21T	DO11T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T61n	DIFFOUT T61n	P17	DO21T	DO11T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T62p	DIFFOUT T62p	R19	DO21T	DO11T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T62n	DIFFOUT T62n	R18	DO21T	DO11T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T63p	DIFFOUT T63p	P19	DQS21T	DO5T/CQn11T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T63n	DIFFOUT T63n	P18	DQSn21T	DO5T/CQn11T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T64p	DIFFOUT T64p	M18	DO22T	DO11T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T64n	DIFFOUT T64n	M17	DO22T	DO11T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T65p	DIFFOUT T65p	L18	DQS22T	DO11T/CQn11T	DO6T/CQ6T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T65n	DIFFOUT T65n	L17	DQSn22T	DO11T	DO6T/DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T66p	DIFFOUT T66p	K18	DO22T	DO11T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T66n	DIFFOUT T66n	K17	DO22T	DO11T	DO6T	DO3T
7D	VREFB7DN0	IO	CLK19p		DIFFIO RX T67p	DIFFOUT T67p	G16	DO23T	DO12T	DO6T	DO3T
7D	VREFB7DN0	IO	CLK19n		DIFFIO RX T67n	DIFFOUT T67n	F16	DO23T	DO12T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T68p	DIFFOUT T68p	H17	DO23T	DO12T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T68n	DIFFOUT T68n	H16	DO23T	DO12T	DO6T	DO3T
7D	VREFB7DN0	IO	CLK18p		DIFFIO RX T69p	DIFFOUT T69p	J18	DQS23T	DO5T/CQn12T	DO6T/CQn6T	DO3T
7D	VREFB7DN0	IO	CLK18n		DIFFIO RX T69n	DIFFOUT T69n	H18	DQSn23T	DO5T/CQn12T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T70p	DIFFOUT T70p	G17	DO24T	DO12T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T70n	DIFFOUT T70n	F17	DO24T	DO12T	DO6T	DO3T
7D	VREFB7DN0	IO	FPLL_TC_CLKOUT2,FPLL_TC_FBp,FPLL_TC_FB1		DIFFIO RX T71p	DIFFOUT T71p	E17	DQS24T	DO12T/CQn12T	DO6T	DO3T/CQ3T
7D	VREFB7DN0	IO	FPLL_TC_CLKOUT3,FPLL_TC_FBn		DIFFIO RX T71n	DIFFOUT T71n	D17	DQSn24T	DO12T	DO6T	DO3T/CQ3T
7D	VREFB7DN0	IO	FPLL_TC_CLKOUT0,FPLL_TC_CLKOUTp,FPLL_TC_FB0		DIFFIO TX T72p	DIFFOUT T72p	B16	DO24T	DO12T	DO6T	DO3T
7D	VREFB7DN0	IO	FPLL_TC_CLKOUT1,FPLL_TC_CLKOUTn		DIFFIO TX T72n	DIFFOUT T72n	A16	DO24T	DO12T	DO6T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T73p	DIFFOUT T73p	A19	DO25T	DO13T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T73n	DIFFOUT T73n	H19	DO25T	DO13T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T74p	DIFFOUT T74p	E18	DO25T	DO13T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T74n	DIFFOUT T74n	D18	DO25T	DO13T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T75p	DIFFOUT T75p	G19	DQS25T	DO5T/CQn13T	DO7T	DO3T/CQn3T
7D	VREFB7DN0	IO			DIFFIO RX T75n	DIFFOUT T75n	F19	DQSn25T	DO5T/CQn13T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T76p	DIFFOUT T76p	B17	DO26T	DO13T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T76n	DIFFOUT T76n	A17	DO26T	DO13T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T77p	DIFFOUT T77p	C19	DQS26T	DO13T/CQn13T	DO5T/CQ7T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T77n	DIFFOUT T77n	C18	DQSn26T	DO13T	DO5T/CQn7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T78p	DIFFOUT T78p	B19	DO26T	DO13T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T78n	DIFFOUT T78n	A19	DO26T	DO13T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T79p	DIFFOUT T79p	U18	DO27T	DO14T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T79n	DIFFOUT T79n	T18	DO27T	DO14T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T80p	DIFFOUT T80p	W18	DO27T	DO14T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T80n	DIFFOUT T80n	V18	DO27T	DO14T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T81p	DIFFOUT T81p	T20	DQS27T	DO5T/CQn14T	DO7T/CQn7T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T81n	DIFFOUT T81n	T19	DQSn27T	DO5T/CQn14T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T82p	DIFFOUT T82p	P20	DO28T	DO14T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T82n	DIFFOUT T82n	N20	DO28T	DO14T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T83p	DIFFOUT T83p	N19	DQS28T	DO14T/CQn14T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO RX T83n	DIFFOUT T83n	M20	DQSn28T	DO14T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T84p	DIFFOUT T84p	L20	DO28T	DO14T	DO7T	DO3T
7D	VREFB7DN0	IO			DIFFIO TX T84n	DIFFOUT T84n	K19	DO28T	DO14T	DO7T	DO3T
7E	VREFB7EN0	IO			DIFFIO RX T85p	DIFFOUT T85p	V19	DO29T	DO15T	DO8T	
7E	VREFB7EN0	IO			DIFFIO RX T85n	DIFFOUT T85n	U20	DO29T	DO15T	DO8T	
7E	VREFB7EN0	IO			DIFFIO TX T86p	DIFFOUT T86p	U21	DO29T	DO15T	DO8T	
7E	VREFB7EN0	IO			DIFFIO TX T86n	DIFFOUT T86n	T21	DO29T	DO15T	DO8T	
7E	VREFB7EN0	IO			DIFFIO RX T87p	DIFFOUT T87p	V21	DQS29T	DO5T/CQn15T	DO8T	
7E	VREFB7EN0	IO			DIFFIO RX T87n	DIFFOUT T87n	V20	DQSn29T	DO5T/CQn15T	DO8T	
7E	VREFB7EN0	IO			DIFFIO TX T88p	DIFFOUT T88p	R21	DO30T	DO15T	DO8T	
7E	VREFB7EN0	IO			DIFFIO TX T88n	DIFFOUT T88n	P21	DO30T	DO15T	DO8T	
7E	VREFB7EN0	IO			DIFFIO RX T89p	DIFFOUT T89p	N22	DQS30T	DO15T/CQn15T	DO5T/CQ8T	
7E	VREFB7EN0	IO			DIFFIO RX T89n	DIFFOUT T89n	M22	DQSn30T	DO15T	DO5T/CQ8T	
7E	VREFB7EN0	IO			DIFFIO TX T90p	DIFFOUT T90p	T22	DO30T	DO15T	DO8T	
7E	VREFB7EN0	IO			DIFFIO TX T90n	DIFFOUT T90n	R22	DO30T	DO15T	DO8T	
7E	VREFB7EN0	IO			DIFFIO RX T91p	DIFFOUT T91p	K21	DO31T	DO16T	DO8T	



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
7E	VREFB7EN0	IO			DIFFIO RX T91n	DIFFOUT T91n	J21	DQ31T	DQ16T	DQ8T	
7E	VREFB7EN0	IO			DIFFIO TX T92p	DIFFOUT T92p	L21	DQ31T	DQ16T	DQ8T	
7E	VREFB7EN0	IO			DIFFIO TX T92n	DIFFOUT T92n	K20	DQ31T	DQ16T	DQ8T	
7E	VREFB7EN0	IO			DIFFIO RX T93p	DIFFOUT T93p	H21	DQS31T	DQS16T/CQ16T	DQ8T/CQn8T	
7E	VREFB7EN0	IO			DIFFIO RX T93n	DIFFOUT T93n	H20	DQS31T	DQS16T/DQ16T	DQ8T	
7E	VREFB7EN0	IO			DIFFIO TX T94p	DIFFOUT T94p	G20	DQ32T	DQ16T	DQ8T	
7E	VREFB7EN0	IO			DIFFIO TX T94n	DIFFOUT T94n	F20	DQ32T	DQ16T	DQ8T	
7E	VREFB7EN0	IO			DIFFIO RX T95p	DIFFOUT T95p	H22	DQS32T	DQ16T/CQn16T	DQ8T	
7E	VREFB7EN0	IO			DIFFIO RX T95n	DIFFOUT T95n	G22	DQS32T	DQ16T	DQ8T	
7E	VREFB7EN0	IO			DIFFIO TX T96p	DIFFOUT T96p	K22	DQ32T	DQ16T	DQ8T	
7E	VREFB7EN0	IO			DIFFIO TX T96n	DIFFOUT T96n	J22	DQ32T	DQ16T	DQ8T	
7E	VREFB7EN0	IO			DIFFIO RX T97p	DIFFOUT T97p	F22	DQ33T	DQ17T		
7E	VREFB7EN0	IO			DIFFIO RX T97n	DIFFOUT T97n	F21	DQ33T	DQ17T		
7E	VREFB7EN0	IO			DIFFIO TX T98p	DIFFOUT T98p	E21	DQ33T	DQ17T		
7E	VREFB7EN0	IO			DIFFIO TX T98n	DIFFOUT T98n	E20	DQ33T	DQ17T		
7E	VREFB7EN0	IO			DIFFIO RX T99p	DIFFOUT T99p	D21	DQS33T	DQS17T/CQ17T		
7E	VREFB7EN0	IO			DIFFIO RX T99n	DIFFOUT T99n	D20	DQS33T	DQS17T/DQ17T		
7E	VREFB7EN0	IO			DIFFIO TX T100p	DIFFOUT T100p	B20	DQ34T	DQ17T		
7E	VREFB7EN0	IO			DIFFIO TX T100n	DIFFOUT T100n	A20	DQ34T	DQ17T		
7E	VREFB7EN0	IO			DIFFIO RX T101p	DIFFOUT T101p	C22	DQS34T	DQ17T/CQn17T		
7E	VREFB7EN0	IO			DIFFIO RX T101n	DIFFOUT T101n	C21	DQS34T	DQ17T		
7E	VREFB7EN0	IO			DIFFIO TX T102p	DIFFOUT T102p	B22	DQ34T	DQ17T		
7E	VREFB7EN0	IO			DIFFIO TX T102n	DIFFOUT T102n	A22	DQ34T	DQ17T		
8E	VREFB8EN0	IO			DIFFIO RX T103p	DIFFOUT T103p	B25	DQ35T	DQ18T		
8E	VREFB8EN0	IO			DIFFIO RX T103n	DIFFOUT T103n	A25	DQ35T	DQ18T		
8E	VREFB8EN0	IO			DIFFIO TX T104p	DIFFOUT T104p	B23	DQ35T	DQ18T		
8E	VREFB8EN0	IO			DIFFIO TX T104n	DIFFOUT T104n	A23	DQ35T	DQ18T		
8E	VREFB8EN0	IO			DIFFIO RX T105p	DIFFOUT T105p	C25	DQS35T	DQS18T/CQ18T		
8E	VREFB8EN0	IO			DIFFIO RX T105n	DIFFOUT T105n	C24	DQS35T	DQS18T/DQ18T		
8E	VREFB8EN0	IO			DIFFIO TX T106p	DIFFOUT T106p	E23	DQ36T	DQ18T		
8E	VREFB8EN0	IO			DIFFIO TX T106n	DIFFOUT T106n	D23	DQ36T	DQ18T		
8E	VREFB8EN0	IO			DIFFIO RX T107p	DIFFOUT T107p	G23	DQS36T	DQ18T/CQn18T		
8E	VREFB8EN0	IO			DIFFIO RX T107n	DIFFOUT T107n	F23	DQS36T	DQ18T		
8E	VREFB8EN0	IO			DIFFIO TX T108p	DIFFOUT T108p	E24	DQ36T	DQ18T		
8E	VREFB8EN0	IO			DIFFIO TX T108n	DIFFOUT T108n	D24	DQ36T	DQ18T		
8E	VREFB8EN0	IO			DIFFIO RX T109p	DIFFOUT T109p	U24	DQ37T	DQ19T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO RX T109n	DIFFOUT T109n	T24	DQ37T	DQ19T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T110p	DIFFOUT T110p	U23	DQ37T	DQ19T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T110n	DIFFOUT T110n	T23	DQ37T	DQ19T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO RX T111p	DIFFOUT T111p	R24	DQS37T	DQS19T/CQ19T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO RX T111n	DIFFOUT T111n	P24	DQS37T	DQS19T/DQ19T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T112p	DIFFOUT T112p	P23	DQ38T	DQ19T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T112n	DIFFOUT T112n	N23	DQ38T	DQ19T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO RX T113p	DIFFOUT T113p	L23	DQS38T	DQ19T/CQn19T	DQS9T/CQ9T	
8E	VREFB8EN0	IO			DIFFIO RX T113n	DIFFOUT T113n	K24	DQS38T	DQ19T	DQS9T/DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T114p	DIFFOUT T114p	M23	DQ38T	DQ19T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T114n	DIFFOUT T114n	L24	DQ38T	DQ19T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO RX T115p	DIFFOUT T115p	H24	DQ39T	DQ20T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO RX T115n	DIFFOUT T115n	H23	DQ39T	DQ20T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T116p	DIFFOUT T116p	J25	DQ39T	DQ20T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T116n	DIFFOUT T116n	J24	DQ39T	DQ20T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO RX T117p	DIFFOUT T117p	K26	DQS39T	DQS20T/CQ20T	DQ9T/CQn9T	
8E	VREFB8EN0	IO			DIFFIO RX T117n	DIFFOUT T117n	K25	DQS39T	DQS20T/DQ20T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T118p	DIFFOUT T118p	F25	DQ40T	DQ20T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T118n	DIFFOUT T118n	F24	DQ40T	DQ20T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO RX T119p	DIFFOUT T119p	H26	DQS40T	DQ20T/CQn20T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO RX T119n	DIFFOUT T119n	G25	DQS40T	DQ20T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T120p	DIFFOUT T120p	E26	DQ40T	DQ20T	DQ9T	
8E	VREFB8EN0	IO			DIFFIO TX T120n	DIFFOUT T120n	D26	DQ40T	DQ20T	DQ9T	
8D	VREFB8DN0	IO			DIFFIO RX T121p	DIFFOUT T121p	D27	DQ41T	DQ21T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T121n	DIFFOUT T121n	C27	DQ41T	DQ21T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T122p	DIFFOUT T122p	B26	DQ41T	DQ21T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T122n	DIFFOUT T122n	A26	DQ41T	DQ21T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T123p	DIFFOUT T123p	F26	DQS41T	DQS21T/CQ21T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T123n	DIFFOUT T123n	E27	DQS41T	DQS21T/DQ21T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T124p	DIFFOUT T124p	A29	DQ42T	DQ21T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T124n	DIFFOUT T124n	A28	DQ42T	DQ21T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T125p	DIFFOUT T125p	E29	DQS42T	DQ21T/CQn21T	DQS10T/CQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T125n	DIFFOUT T125n	D29	DQS42T	DQ21T	DQS10T/DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T126p	DIFFOUT T126p	C28	DQ42T	DQ21T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T126n	DIFFOUT T126n	B28	DQ42T	DQ21T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T127p	DIFFOUT T127p	G29	DQ43T	DQ22T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T127n	DIFFOUT T127n	G28	DQ43T	DQ22T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T128p	DIFFOUT T128p	F29	DQ43T	DQ22T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T128n	DIFFOUT T128n	F28	DQ43T	DQ22T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T129p	DIFFOUT T129p	H27	DQS43T	DQS22T/CQ22T	DQ10T/CQn10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO RX T129n	DIFFOUT T129n	G26	DQS43T	DQS22T/DQ22T	DQ10T	DQ4T
8D	VREFB8DN0	IO			DIFFIO TX T130p	DIFFOUT T130p	H29	DQ44T	DQ22T	DQ10T	DQ4T



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
8D	VREFB8DN0	IO			DIFFIO TX T130n	DIFFOUT T130n	H28	DO44T	DO22T	DO10T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T131p	DIFFOUT T131p	J27	DQS44T	DO22T/CQn22T	DO10T	DO54T/CQ4T
8D	VREFB8DN0	IO			DIFFIO TX T131n	DIFFOUT T131n	H26	DQSn44T	DO22T	DO10T	DO5n4T/DO4T
8D	VREFB8DN0	IO			DIFFIO TX T132p	DIFFOUT T132p	K28	DO44T	DO22T	DO10T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T132n	DIFFOUT T132n	J28	DO44T	DO22T	DO10T	DO4T
8D	VREFB8DN0	IO	CLK17p		DIFFIO RX T133p	DIFFOUT T133p	N25	DO45T	DO23T	DO11T	DO4T
8D	VREFB8DN0	IO	CLK17h		DIFFIO RX T133n	DIFFOUT T133n	M25	DO45T	DO23T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T134p	DIFFOUT T134p	T26	DO45T	DO23T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T134n	DIFFOUT T134n	T25	DO45T	DO23T	DO11T	DO4T
8D	VREFB8DN0	IO	CLK16p		DIFFIO RX T135p	DIFFOUT T135p	R25	DQS45T	DO523T/CQ23T	DO11T	DO4T/CQn4T
8D	VREFB8DN0	IO	CLK16n		DIFFIO RX T135n	DIFFOUT T135n	P25	DQSn45T	DO5n23T/DQ23T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T136p	DIFFOUT T136p	V27	DO46T	DO23T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T136n	DIFFOUT T136n	V26	DO46T	DO23T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T137p	DIFFOUT T137p	V25	DQS46T	DO23T/CQn23T	DQSn11T/CQ11T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T137n	DIFFOUT T137n	U26	DQSn46T	DO23T	DQSn11T/DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T138p	DIFFOUT T138p	T27	DO46T	DO23T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T138n	DIFFOUT T138n	U27	DO46T	DO23T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T139p	DIFFOUT T139p	M27	DO47T	DO24T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T139n	DIFFOUT T139n	L26	DO47T	DO24T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T140p	DIFFOUT T140p	N28	DO47T	DO24T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T140n	DIFFOUT T140n	M28	DO47T	DO24T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T141p	DIFFOUT T141p	L27	DQS47T	DQS24T/CQ24T	DO11T/CQn11T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T141n	DIFFOUT T141n	K27	DQSn47T	DQSn24T/DO24T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T142p	DIFFOUT T142p	R27	DO48T	DO24T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T142n	DIFFOUT T142n	P27	DO48T	DO24T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T143p	DIFFOUT T143p	P26	DQS48T	DO24T/CQn24T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO RX T143n	DIFFOUT T143n	N26	DQSn48T	DO24T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T144p	DIFFOUT T144p	P28	DO48T	DO24T	DO11T	DO4T
8D	VREFB8DN0	IO			DIFFIO TX T144n	DIFFOUT T144n	P29	DO48T	DO24T	DO11T	DO4T
8C	VREFB8CN0	IO			DIFFIO RX T145p	DIFFOUT T145p	Y28	DO49T	DO25T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T145n	DIFFOUT T145n	Y27	DO49T	DO25T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T146p	DIFFOUT T146p	W28	DO49T	DO25T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T146n	DIFFOUT T146n	V28	DO49T	DO25T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T147p	DIFFOUT T147p	Y30	DQS49T	DQS25T/CQ25T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T147n	DIFFOUT T147n	Y29	DQSn49T	DQSn25T/DO25T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T148p	DIFFOUT T148p	W29	DO50T	DO25T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T148n	DIFFOUT T148n	V30	DO50T	DO25T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T149p	DIFFOUT T149p	T28	DQS50T	DO25T/CQn25T	DQSn12T/CQ12T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T149n	DIFFOUT T149n	R28	DQSn50T	DO25T	DQSn12T/DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T150p	DIFFOUT T150p	V29	DO50T	DO25T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T150n	DIFFOUT T150n	U29	DO50T	DO25T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T151p	DIFFOUT T151p	A32	DO51T	DO26T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T151n	DIFFOUT T151n	A31	DO51T	DO26T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T152p	DIFFOUT T152p	C30	DO51T	DO26T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T152n	DIFFOUT T152n	B29	DO51T	DO26T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T153p	DIFFOUT T153p	C31	DQS51T	DQS26T/CQ26T	DO12T/CQn12T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T153n	DIFFOUT T153n	B31	DQSn51T	DQSn26T/DO26T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T154p	DIFFOUT T154p	E30	DO52T	DO26T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T154n	DIFFOUT T154n	D30	DO52T	DO26T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T155p	DIFFOUT T155p	E32	DQS52T	DO26T/CQn26T	DO12T	DQSn5T/CO5T
8C	VREFB8CN0	IO			DIFFIO RX T155n	DIFFOUT T155n	D32	DQSn52T	DO26T	DO12T	DQSn5T/DO5T
8C	VREFB8CN0	IO			DIFFIO TX T156p	DIFFOUT T156p	G31	DO52T	DO26T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T156n	DIFFOUT T156n	F31	DO52T	DO26T	DO12T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T157p	DIFFOUT T157p	G32	DO53T	DO27T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T157n	DIFFOUT T157n	F32	DO53T	DO27T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T158p	DIFFOUT T158p	H32	DO53T	DO27T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T158n	DIFFOUT T158n	H31	DO53T	DO27T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T159p	DIFFOUT T159p	J30	DQS53T	DQS27T/CQ27T	DO13T	DQSn5T/CO5T
8C	VREFB8CN0	IO			DIFFIO RX T159n	DIFFOUT T159n	H30	DQSn53T	DQSn27T/DO27T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T160p	DIFFOUT T160p	L30	DO54T	DO27T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T160n	DIFFOUT T160n	L29	DO54T	DO27T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T161p	DIFFOUT T161p	K30	DQS54T	DO27T/CQn27T	DQSn13T/CQ13T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T161n	DIFFOUT T161n	K29	DQSn54T	DO27T	DQSn13T/DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T162p	DIFFOUT T162p	N29	DO54T	DO27T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T162n	DIFFOUT T162n	M30	DO54T	DO27T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T163p	DIFFOUT T163p	U30	DO55T	DO28T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T163n	DIFFOUT T163n	T29	DO55T	DO28T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T164p	DIFFOUT T164p	P31	DO55T	DO28T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T164n	DIFFOUT T164n	P30	DO55T	DO28T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T165p	DIFFOUT T165p	T30	DQS55T	DQS28T/CQ28T	DO13T/CQn13T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T165n	DIFFOUT T165n	R30	DQSn55T	DQSn28T/DO28T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T166p	DIFFOUT T166p	Y32	DO56T	DO28T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T166n	DIFFOUT T166n	W31	DO56T	DO28T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T167p	DIFFOUT T167p	W32	DQS56T	DO28T/CQn28T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO RX T167n	DIFFOUT T167n	V31	DQSn56T	DO28T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T168p	DIFFOUT T168p	T31	DO56T	DO28T	DO13T	DO5T
8C	VREFB8CN0	IO			DIFFIO TX T168n	DIFFOUT T168n	R31	DO56T	DO28T	DO13T	DO5T
8B	VREFB8BN0	IO			DIFFIO RX T169p	DIFFOUT T169p	A35	DO57T	DO29T	DO14T	DO6T



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
8B	VREFB8BN0	IO			DIFFIO RX T169n	DIFFOUT T169n	A34	DQ57T	DQ29T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T170p	DIFFOUT T170p	C33	DQ57T	DQ29T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T170n	DIFFOUT T170n	B32	DQ57T	DQ29T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T171p	DIFFOUT T171p	C34	DQS57T	DQS29T/CQ29T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T171n	DIFFOUT T171n	B34	DQS57T	DQS29T/DQ29T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T172p	DIFFOUT T172p	E33	DQ58T	DQ29T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T172n	DIFFOUT T172n	D33	DQ58T	DQ29T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T173p	DIFFOUT T173p	C36	DQS58T	DQ29T/CQn29T	DQ314T/CQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T173n	DIFFOUT T173n	B35	DQS58T	DQ29T	DQ3n14T/DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T174p	DIFFOUT T174p	D36	DQ58T	DQ29T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T174n	DIFFOUT T174n	D35	DQ58T	DQ29T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T175p	DIFFOUT T175p	U33	DQ58T	DQ30T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T175n	DIFFOUT T175n	U32	DQ58T	DQ30T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T176p	DIFFOUT T176p	V34	DQ59T	DQ30T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T176n	DIFFOUT T176n	V33	DQ59T	DQ30T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T177p	DIFFOUT T177p	T33	DQS59T	DQS30T/CQ30T	DQ14T/CQn14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T177n	DIFFOUT T177n	T32	DQS59T	DQS30T/DQ30T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T178p	DIFFOUT T178p	N31	DQ60T	DQ30T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T178n	DIFFOUT T178n	M31	DQ60T	DQ30T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T179p	DIFFOUT T179p	N32	DQS60T	DQ30T/CQn30T	DQ14T	DQS6T/CQ6T
8B	VREFB8BN0	IO			DIFFIO RX T179n	DIFFOUT T179n	M33	DQS60T	DQ30T	DQ14T	DQS6T/DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T180p	DIFFOUT T180p	P33	DQ60T	DQ30T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T180n	DIFFOUT T180n	P32	DQ60T	DQ30T	DQ14T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T181p	DIFFOUT T181p	F35	DQ61T	DQ31T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T181n	DIFFOUT T181n	E35	DQ61T	DQ31T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T182p	DIFFOUT T182p	G34	DQ61T	DQ31T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T182n	DIFFOUT T182n	F34	DQ61T	DQ31T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T183p	DIFFOUT T183p	H35	DQS61T	DQS31T/CQ31T	DQ15T	DQ6T/CQn6T
8B	VREFB8BN0	IO			DIFFIO RX T183n	DIFFOUT T183n	G35	DQS61T	DQS31T/DQ31T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T184p	DIFFOUT T184p	K31	DQ62T	DQ31T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T184n	DIFFOUT T184n	J31	DQ62T	DQ31T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T185p	DIFFOUT T185p	H34	DQS62T	DQ31T/CQn31T	DQS15T/CQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T185n	DIFFOUT T185n	H33	DQS62T	DQ31T	DQSn15T/DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T186p	DIFFOUT T186p	J34	DQ62T	DQ31T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T186n	DIFFOUT T186n	J33	DQ62T	DQ31T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T187p	DIFFOUT T187p	W34	DQ63T	DQ32T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T187n	DIFFOUT T187n	V35	DQ63T	DQ32T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T188p	DIFFOUT T188p	T34	DQ63T	DQ32T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T188n	DIFFOUT T188n	R34	DQ63T	DQ32T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T189p	DIFFOUT T189p	U35	DQS63T	DQS32T/CQ32T	DQ15T/CQn15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T189n	DIFFOUT T189n	T35	DQS63T	DQS32T/DQ32T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T190p	DIFFOUT T190p	R33	DQ64T	DQ32T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T190n	DIFFOUT T190n	P34	DQ64T	DQ32T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T191p	DIFFOUT T191p	L32	DQS64T	DQ32T/CQn32T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO RX T191n	DIFFOUT T191n	K32	DQS64T	DQ32T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T192p	DIFFOUT T192p	M34	DQ64T	DQ32T	DQ15T	DQ6T
8B	VREFB8BN0	IO			DIFFIO TX T192n	DIFFOUT T192n	L33	DQ64T	DQ32T	DQ15T	DQ6T
8A	VREFB8AN0	IO	CLK23p		DIFFIO RX T193p	DIFFOUT T193p	B37	DQ65T	DQ33T	DQ16T	
8A	VREFB8AN0	IO	CLK23n		DIFFIO RX T193n	DIFFOUT T193n	A37	DQ65T	DQ33T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T194p	DIFFOUT T194p	C37	DQ65T	DQ33T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T194n	DIFFOUT T194n	B38	DQ65T	DQ33T	DQ16T	
8A	VREFB8AN0	IO	CLK22p		DIFFIO RX T195p	DIFFOUT T195p	B39	DQS65T	DQS33T/CQ33T	DQ16T	
8A	VREFB8AN0	IO	CLK22n		DIFFIO RX T195n	DIFFOUT T195n	A38	DQS65T	DQS33T/DQ33T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T196p	DIFFOUT T196p	E36	DQ66T	DQ33T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T196n	DIFFOUT T196n	D37	DQ66T	DQ33T	DQ16T	
8A	VREFB8AN0	IO	FPLL TL_CLKOUT2,FPLL TL_FbP,FPLL TL_FB1		DIFFIO RX T197p	DIFFOUT T197p	J37	DQS66T	DQ33T/CQn33T	DQS16T/CQ16T	
8A	VREFB8AN0	IO	FPLL TL_CLKOUT3,FPLL TL_FbN		DIFFIO RX T197n	DIFFOUT T197n	H37	DQS66T	DQ33T	DQSn16T/DQ16T	
8A	VREFB8AN0	IO	FPLL TL_CLKOUT0,FPLL TL_CLKOUTp,FPLL TL_FB0		DIFFIO TX T198p	DIFFOUT T198p	G37	DQ66T	DQ33T	DQ16T	
8A	VREFB8AN0	IO	FPLL TL_CLKOUT1,FPLL TL_CLKOUTn		DIFFIO TX T198n	DIFFOUT T198n	F36	DQ66T	DQ33T	DQ16T	
8A	VREFB8AN0	IO	CLK21p		DIFFIO RX T199p	DIFFOUT T199p	U36	DQ67T	DQ34T	DQ16T	
8A	VREFB8AN0	IO	CLK21n		DIFFIO RX T199n	DIFFOUT T199n	T36	DQ67T	DQ34T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T200p	DIFFOUT T200p	W35	DQ67T	DQ34T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T200n	DIFFOUT T200n	V36	DQ67T	DQ34T	DQ16T	
8A	VREFB8AN0	IO	CLK20p		DIFFIO RX T201p	DIFFOUT T201p	R36	DQS67T	DQS34T/CQ34T	DQ16T/CQn16T	
8A	VREFB8AN0	IO	CLK20n		DIFFIO RX T201n	DIFFOUT T201n	P37	DQS67T	DQS34T/DQ34T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T202p	DIFFOUT T202p	P39	DQ68T	DQ34T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T202n	DIFFOUT T202n	P38	DQ68T	DQ34T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO RX T203p	DIFFOUT T203p	P36	DQS68T	DQ34T/CQn34T	DQ16T	
8A	VREFB8AN0	IO	RZQ 5		DIFFIO RX T203n	DIFFOUT T203n	P35	DQS68T	DQ34T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T204p	DIFFOUT T204p	N38	DQ68T	DQ34T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T204n	DIFFOUT T204n	N37	DQ68T	DQ34T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO RX T205p	DIFFOUT T205p	J36	DQ69T	DQ35T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO RX T205n	DIFFOUT T205n	H36	DQ69T	DQ35T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T206p	DIFFOUT T206p	K35	DQ69T	DQ35T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T206n	DIFFOUT T206n	K34	DQ69T	DQ35T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO RX T207p	DIFFOUT T207p	K37	DQS69T	DQS35T/CQ35T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO RX T207n	DIFFOUT T207n	K36	DQS69T	DQS35T/DQ35T	DQ16T	
8A	VREFB8AN0	IO			DIFFIO TX T208p	DIFFOUT T208p	M37	DQ70T	DQ35T	DQ16T	



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Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
8A	VREFB8A0	IO			DIFFIO TX T208n	DIFFOUT T208n	M36	DQ70T	DQ35T		
8A	VREFB8A0	IO			DIFFIO RX T209p	DIFFOUT T209p	L36	DQS70T	DQ35T/CQn35T		
8A	VREFB8A0	IO			DIFFIO RX T209n	DIFFOUT T209n	L35	DQSn70T	DQ35T		
8A	VREFB8A0	IO			DIFFIO TX T210p	DIFFOUT T210p	M39	DQ70T	DQ35T		
8A	VREFB8A0	IO			DIFFIO TX T210n	DIFFOUT T210n	M38	DQ70T	DQ35T		
		GND					A12				
		GND					A15				
		GND					A18				
		GND					A21				
		GND					A24				
		GND					A27				
		GND					A30				
		GND					A33				
		GND					A36				
		GND					A39				
		GND					A40				
		GND					A6				
		GND					A9				
		GND					AA10				
		GND					AA11				
		GND					AA12				
		GND					AA13				
		GND					AA14				
		GND					AA15				
		GND					AA18				
		GND					AA20				
		GND					AA25				
		GND					AA27				
		GND					AA30				
		GND					AA31				
		GND					AA32				
		GND					AA33				
		GND					AA34				
		GND					AA35				
		GND					AA36				
		GND					AA37				
		GND					AA8				
		GND					AA9				
		GND					AB10				
		GND					AB11				
		GND					AB12				
		GND					AB13				
		GND					AB14				
		GND					AB16				
		GND					AB23				
		GND					AB29				
		GND					AB31				
		GND					AB32				
		GND					AB33				
		GND					AB34				
		GND					AB35				
		GND					AB36				
		GND					AB9				
		GND					AC10				
		GND					AC11				
		GND					AC12				
		GND					AC13				
		GND					AC15				
		GND					AC19				
		GND					AC22				
		GND					AC26				
		GND					AC30				
		GND					AC32				
		GND					AC33				
		GND					AC34				
		GND					AC35				
		GND					AC36				
		GND					AC38				
		GND					AC7				
		GND					AC9				
		GND					AD10				
		GND					AD11				
		GND					AD12				
		GND					AD13				
		GND					AD17				
		GND					AD20				
		GND					AD28				
		GND					AD31				



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					AD34				
		GND					AD35				
		GND					AD36				
		GND					AD37				
		GND					AD8				
		GND					AD9				
		GND					AE37				
		GND					AE8				
		GND					AF12				
		GND					AF15				
		GND					AF18				
		GND					AF19				
		GND					AF21				
		GND					AF23				
		GND					AF25				
		GND					AF27				
		GND					AF30				
		GND					AF33				
		GND					AF36				
		GND					AF8				
		GND					AF9				
		GND					AG38				
		GND					AG8				
		GND					AH11				
		GND					AH14				
		GND					AH17				
		GND					AH20				
		GND					AH23				
		GND					AH26				
		GND					AH29				
		GND					AH32				
		GND					AH35				
		GND					AH37				
		GND					AH8				
		GND					AJ37				
		GND					AJ8				
		GND					AK10				
		GND					AK13				
		GND					AK16				
		GND					AK19				
		GND					AK22				
		GND					AK25				
		GND					AK28				
		GND					AK31				
		GND					AK34				
		GND					AK37				
		GND					AK8				
		GND					AL38				
		GND					AL5				
		GND					AL7				
		GND					AM12				
		GND					AM15				
		GND					AM18				
		GND					AM21				
		GND					AM24				
		GND					AM27				
		GND					AM30				
		GND					AM33				
		GND					AM36				
		GND					AM39				
		GND					AM4				
		GND					AM40				
		GND					AM6				
		GND					AM9				
		GND					AN40				
		GND					AN5				
		GND					AP11				
		GND					AP14				
		GND					AP17				
		GND					AP20				
		GND					AP23				
		GND					AP26				
		GND					AP29				
		GND					AP32				
		GND					AP35				
		GND					AP38				
		GND					AP40				
		GND					AP5				



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					AP7				
		GND					AP8				
		GND					AR38				
		GND					AR39				
		GND					AR40				
		GND					AR5				
		GND					AR6				
		GND					AR7				
		GND					AT10				
		GND					AT13				
		GND					AT16				
		GND					AT19				
		GND					AT22				
		GND					AT25				
		GND					AT28				
		GND					AT31				
		GND					AT34				
		GND					AT37				
		GND					AT38				
		GND					AT7				
		GND					AU38				
		GND					AU7				
		GND					AV12				
		GND					AV15				
		GND					AV18				
		GND					AV21				
		GND					AV24				
		GND					AV27				
		GND					AV30				
		GND					AV33				
		GND					AV36				
		GND					AV38				
		GND					AV7				
		GND					AV9				
		GND					AW38				
		GND					AW7				
		GND					AW8				
		GND					AY11				
		GND					AY14				
		GND					AY17				
		GND					AY20				
		GND					AY23				
		GND					AY26				
		GND					AY29				
		GND					AY32				
		GND					AY35				
		GND					AY38				
		GND					AY7				
		GND					AY8				
		GND					B40				
		GND					B6				
		GND					BA38				
		GND					BA39				
		GND					BA40				
		GND					BA7				
		GND					BA8				
		GND					BB10				
		GND					BB13				
		GND					BB16				
		GND					BB19				
		GND					BB22				
		GND					BB25				
		GND					BB28				
		GND					BB31				
		GND					BB34				
		GND					BB37				
		GND					BB40				
		GND					BB6				
		GND					BB7				
		GND					BC4				
		GND					BC40				
		GND					BC41				
		GND					BC5				
		GND					BC6				
		GND					BD12				
		GND					BD15				
		GND					BD18				
		GND					BD21				



Pin Information for the Stratix® V 5SEE9 Device
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Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					BD24				
		GND					BD27				
		GND					BD30				
		GND					BD33				
		GND					BD36				
		GND					BD39				
		GND					BD40				
		GND					BD5				
		GND					BD6				
		GND					BD9				
		GND					C11				
		GND					C14				
		GND					C17				
		GND					C20				
		GND					C23				
		GND					C26				
		GND					C29				
		GND					C32				
		GND					C35				
		GND					C38				
		GND					C39				
		GND					C40				
		GND					C6				
		GND					C7				
		GND					C8				
		GND					D38				
		GND					D7				
		GND					D8				
		GND					E10				
		GND					E13				
		GND					E16				
		GND					E19				
		GND					E22				
		GND					E25				
		GND					E28				
		GND					E31				
		GND					E34				
		GND					E37				
		GND					E38				
		GND					E7				
		GND					F38				
		GND					F7				
		GND					G12				
		GND					G15				
		GND					G18				
		GND					G21				
		GND					G24				
		GND					G27				
		GND					G30				
		GND					G33				
		GND					G36				
		GND					G38				
		GND					G7				
		GND					G9				
		GND					H38				
		GND					H7				
		GND					J11				
		GND					J14				
		GND					J17				
		GND					J20				
		GND					J23				
		GND					J26				
		GND					J29				
		GND					J32				
		GND					J35				
		GND					J38				
		GND					J7				
		GND					J8				
		GND					K38				
		GND					K7				
		GND					L10				
		GND					L13				
		GND					L16				
		GND					L19				
		GND					L22				
		GND					L25				
		GND					L28				
		GND					L31				



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					L34				
		GND					L37				
		GND					L38				
		GND					L39				
		GND					L40				
		GND					L6				
		GND					L7				
		GND					M40				
		GND					M5				
		GND					M6				
		GND					N12				
		GND					N15				
		GND					N18				
		GND					N21				
		GND					N24				
		GND					N27				
		GND					N30				
		GND					N33				
		GND					N36				
		GND					N39				
		GND					N40				
		GND					N5				
		GND					N6				
		GND					N9				
		GND					P40				
		GND					P5				
		GND					P9				
		GND					R11				
		GND					R14				
		GND					R17				
		GND					R20				
		GND					R23				
		GND					R26				
		GND					R29				
		GND					R32				
		GND					R35				
		GND					R37				
		GND					R38				
		GND					R39				
		GND					R40				
		GND					R5				
		GND					R6				
		GND					R7				
		GND					R8				
		GND					R9				
		GND					T37				
		GND					T8				
		GND					U10				
		GND					U13				
		GND					U16				
		GND					U19				
		GND					U22				
		GND					U25				
		GND					U28				
		GND					U31				
		GND					U34				
		GND					U37				
		GND					U8				
		GND					V37				
		GND					V8				
		GND					W10				
		GND					W11				
		GND					W12				
		GND					W13				
		GND					W15				
		GND					W19				
		GND					W21				
		GND					W23				
		GND					W25				
		GND					W27				
		GND					W30				
		GND					W33				
		GND					W36				
		GND					W38				
		GND					W7				
		GND					W9				
		GND					Y10				
		GND					Y11				



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Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		GND					Y12				
		GND					Y13				
		GND					Y14				
		GND					Y15				
		GND					Y18				
		GND					Y22				
		GND					Y26				
		GND					Y31				
		GND					Y33				
		GND					Y34				
		GND					Y35				
		GND					Y36				
		GND					Y9				
		GND					AD24				
		VCC					AF20				
		VCC					AF22				
		VCC					AF24				
		VCC					AF26				
		VCC					W20				
		VCC					W22				
		VCC					W24				
		VCC					W26				
		VCC					AA19				
		VCC					AA21				
		VCC					AA22				
		VCC					AA23				
		VCC					AA24				
		VCC					AA26				
		VCC					AB19				
		VCC					AB20				
		VCC					AB21				
		VCC					AB22				
		VCC					AB24				
		VCC					AB25				
		VCC					AB26				
		VCC					AC20				
		VCC					AC21				
		VCC					AC25				
		VCC					AD19				
		VCC					AD21				
		VCC					AD22				
		VCC					AD23				
		VCC					AD25				
		VCC					AD26				
		VCC					AE19				
		VCC					AE20				
		VCC					AE21				
		VCC					AE22				
		VCC					AE23				
		VCC					AE24				
		VCC					AE25				
		VCC					AE26				
		VCC					Y19				
		VCC					Y20				
		VCC					Y21				
		VCC					Y23				
		VCC					Y24				
		VCC					Y25				
		VCC					AC24				
		VCCPPT					AG24				
		VCCPPT					AG31				
		VCCPPT					AH16				
		VCCPPT					V14				
		VCCPPT					V22				
		VCCPPT					V32				
		DNU					BD41				
		DNU					BD42				
		DNU					AF37				
		DNU					AF22				
		DNU					BD3				
		DNU					BD4				
		DNU					BF				
		DNU					K23				
		DNU					AC23				
		VCCPGM					AL33				
		VCCPGM					AL10				
		TEMPDIODEn					P7				
		TEMPDIODEp					P6				



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		VCCBAT					AL13				
		VCCIO3A					BA37				
		VCCIO3A					BC36				
		VCCIO3B					BA35				
		VCCIO3B					BC33				
		VCCIO3C					BA32				
		VCCIO3C					BC30				
		VCCIO3D					BA26				
		VCCIO3D					BC27				
		VCCIO3E					BA23				
		VCCIO3E					BC24				
		VCCIO4A					BC9				
		VCCIO4B					BA11				
		VCCIO4B					BC12				
		VCCIO4C					BA14				
		VCCIO4C					BC15				
		VCCIO4D					BA17				
		VCCIO4D					BC18				
		VCCIO4E					BA20				
		VCCIO4E					BC21				
		VCCIO7A					B9				
		VCCIO7B					B12				
		VCCIO7B					D13				
		VCCIO7C					B15				
		VCCIO7C					D16				
		VCCIO7D					B18				
		VCCIO7D					D19				
		VCCIO7E					B21				
		VCCIO7E					D22				
		VCCIO8A					B36				
		VCCIO8A					F37				
		VCCIO8B					B33				
		VCCIO8B					D34				
		VCCIO8C					B30				
		VCCIO8C					D31				
		VCCIO8D					B27				
		VCCIO8D					D28				
		VCCIO8E					B24				
		VCCIO8E					D25				
		VCCPD3AB					AW31				
		VCCPD3AB					AW34				
		VCCPD3CD					AW25				
		VCCPD3CD					AW28				
		VCCPD4					AW12				
		VCCPD4					AW15				
		VCCPD4					AW18				
		VCCPD7					F12				
		VCCPD7					F15				
		VCCPD7					F18				
		VCCPD8					F27				
		VCCPD8					F30				
		VCCPD8					F33				
3A	VREFB3AN0	VREFB3AN0	VREFB3AN0				AN35				
3B	VREFB3BN0	VREFB3BN0	VREFB3BN0				AN32				
3C	VREFB3CN0	VREFB3CN0	VREFB3CN0				AN29				
3D	VREFB3DN0	VREFB3DN0	VREFB3DN0				AN26				
3E	VREFB3EN0	VREFB3EN0	VREFB3EN0				AN24				
4A	VREFB4AN0	VREFB4AN0	VREFB4AN0				AN9				
4B	VREFB4BN0	VREFB4BN0	VREFB4BN0				AN13				
4C	VREFB4CN0	VREFB4CN0	VREFB4CN0				AN16				
4D	VREFB4DN0	VREFB4DN0	VREFB4DN0				AN18				
4E	VREFB4EN0	VREFB4EN0	VREFB4EN0				AN21				
7A	VREFB7AN0	VREFB7AN0	VREFB7AN0				M10				
7B	VREFB7BN0	VREFB7BN0	VREFB7BN0				M13				
7C	VREFB7CN0	VREFB7CN0	VREFB7CN0				M16				
7D	VREFB7DN0	VREFB7DN0	VREFB7DN0				M19				
7E	VREFB7EN0	VREFB7EN0	VREFB7EN0				M21				
8A	VREFB8AN0	VREFB8AN0	VREFB8AN0				K33				
8B	VREFB8BN0	VREFB8BN0	VREFB8BN0				M32				
8C	VREFB8CN0	VREFB8CN0	VREFB8CN0				M29				
8D	VREFB8DN0	VREFB8DN0	VREFB8DN0				M26				
8E	VREFB8EN0	VREFB8EN0	VREFB8EN0				M24				
		NC					A2				
		NC					A3				
		NC					A42				
		NC					A43				
		NC					A5				
		NC					AA1				



Pin Information for the Stratix® V 5SEE9 Device
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Note (1)

Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					AA16				
		NC					AA17				
		NC					AA2				
		NC					AA28				
		NC					AA29				
		NC					AA3				
		NC					AA38				
		NC					AA39				
		NC					AA4				
		NC					AA40				
		NC					AA41				
		NC					AA42				
		NC					AA43				
		NC					AA44				
		NC					AA5				
		NC					AA6				
		NC					AA7				
		NC					AB1				
		NC					AB15				
		NC					AB17				
		NC					AB18				
		NC					AB2				
		NC					AB27				
		NC					AB28				
		NC					AB3				
		NC					AB30				
		NC					AB38				
		NC					AB39				
		NC					AB4				
		NC					AB40				
		NC					AB41				
		NC					AB42				
		NC					AB43				
		NC					AB44				
		NC					AB5				
		NC					AB6				
		NC					AB7				
		NC					AC1				
		NC					AC14				
		NC					AC16				
		NC					AC17				
		NC					AC18				
		NC					AC2				
		NC					AC27				
		NC					AC28				
		NC					AC29				
		NC					AC3				
		NC					AC31				
		NC					AC39				
		NC					AC4				
		NC					AC40				
		NC					AC41				
		NC					AC42				
		NC					AC43				
		NC					AC44				
		NC					AC5				
		NC					AC6				
		NC					AD1				
		NC					AD15				
		NC					AD16				
		NC					AD18				
		NC					AD2				
		NC					AD27				
		NC					AD29				
		NC					AD3				
		NC					AD30				
		NC					AD38				
		NC					AD39				
		NC					AD4				
		NC					AD40				
		NC					AD41				
		NC					AD42				
		NC					AD43				
		NC					AD44				
		NC					AD5				
		NC					AD6				
		NC					AD7				
		NC					AE1				



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					AE2				
		NC					AE3				
		NC					AE38				
		NC					AE39				
		NC					AE4				
		NC					AE40				
		NC					AE41				
		NC					AE42				
		NC					AE43				
		NC					AE44				
		NC					AE5				
		NC					AE6				
		NC					AE7				
		NC					AF1				
		NC					AF2				
		NC					AF3				
		NC					AF38				
		NC					AF39				
		NC					AF4				
		NC					AF40				
		NC					AF41				
		NC					AF42				
		NC					AF43				
		NC					AF44				
		NC					AF5				
		NC					AF6				
		NC					AF7				
		NC					AG1				
		NC					AG2				
		NC					AG3				
		NC					AG39				
		NC					AG4				
		NC					AG40				
		NC					AG41				
		NC					AG42				
		NC					AG43				
		NC					AG44				
		NC					AG5				
		NC					AG6				
		NC					AG7				
		NC					AH1				
		NC					AH2				
		NC					AH3				
		NC					AH38				
		NC					AH39				
		NC					AH4				
		NC					AH40				
		NC					AH41				
		NC					AH42				
		NC					AH43				
		NC					AH44				
		NC					AH5				
		NC					AH6				
		NC					AH7				
		NC					AJ1				
		NC					AJ2				
		NC					AJ3				
		NC					AJ38				
		NC					AJ39				
		NC					AJ4				
		NC					AJ40				
		NC					AJ41				
		NC					AJ42				
		NC					AJ43				
		NC					AJ44				
		NC					AJ5				
		NC					AJ6				
		NC					AJ7				
		NC					AK1				
		NC					AK2				
		NC					AK3				
		NC					AK38				
		NC					AK39				
		NC					AK4				
		NC					AK40				
		NC					AK41				
		NC					AK42				
		NC					AK43				



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Note (1)

Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					AK44				
		NC					AK5				
		NC					AK6				
		NC					AK7				
		NC					AL1				
		NC					AL2				
		NC					AL3				
		NC					AL39				
		NC					AL4				
		NC					AL40				
		NC					AL41				
		NC					AL42				
		NC					AL43				
		NC					AL44				
		NC					AL6				
		NC					AM1				
		NC					AM2				
		NC					AM3				
		NC					AM41				
		NC					AM42				
		NC					AM43				
		NC					AM44				
		NC					AN1				
		NC					AN2				
		NC					AN3				
		NC					AN4				
		NC					AN41				
		NC					AN42				
		NC					AN43				
		NC					AN44				
		NC					AP1				
		NC					AP2				
		NC					AP3				
		NC					AP4				
		NC					AP41				
		NC					AP42				
		NC					AP43				
		NC					AP44				
		NC					AR1				
		NC					AR2				
		NC					AR3				
		NC					AR4				
		NC					AR41				
		NC					AR42				
		NC					AR43				
		NC					AR44				
		NC					AT1				
		NC					AT2				
		NC					AT3				
		NC					AT39				
		NC					AT4				
		NC					AT40				
		NC					AT41				
		NC					AT42				
		NC					AT43				
		NC					AT44				
		NC					AT5				
		NC					AT6				
		NC					AU1				
		NC					AU2				
		NC					AU3				
		NC					AU39				
		NC					AU4				
		NC					AU40				
		NC					AU41				
		NC					AU42				
		NC					AU43				
		NC					AU44				
		NC					AU5				
		NC					AU6				
		NC					AV1				
		NC					AV2				
		NC					AV3				
		NC					AV39				
		NC					AV4				
		NC					AV40				
		NC					AV41				
		NC					AV42				



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					AV43				
		NC					AV44				
		NC					AV5				
		NC					AV6				
		NC					AW1				
		NC					AW2				
		NC					AW3				
		NC					AW39				
		NC					AW4				
		NC					AW40				
		NC					AW41				
		NC					AW42				
		NC					AW43				
		NC					AW44				
		NC					AW5				
		NC					AW6				
		NC					AY1				
		NC					AY2				
		NC					AY3				
		NC					AY39				
		NC					AY4				
		NC					AY40				
		NC					AY41				
		NC					AY42				
		NC					AY43				
		NC					AY44				
		NC					AY5				
		NC					AY6				
		NC					B1				
		NC					B2				
		NC					B3				
		NC					B4				
		NC					B41				
		NC					B42				
		NC					B43				
		NC					B44				
		NC					B5				
		NC					BA1				
		NC					BA2				
		NC					BA3				
		NC					BA4				
		NC					BA41				
		NC					BA42				
		NC					BA43				
		NC					BA44				
		NC					BA5				
		NC					BA6				
		NC					BB1				
		NC					BB2				
		NC					BB3				
		NC					BB4				
		NC					BB41				
		NC					BB42				
		NC					BB43				
		NC					BB44				
		NC					BB5				
		NC					BC1				
		NC					BC2				
		NC					BC3				
		NC					BC42				
		NC					BC43				
		NC					BC44				
		NC					C1				
		NC					C2				
		NC					C3				
		NC					C4				
		NC					C41				
		NC					C42				
		NC					C43				
		NC					C44				
		NC					C5				
		NC					D1				
		NC					D2				
		NC					D3				
		NC					D39				
		NC					D4				
		NC					D40				
		NC					D41				



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					D42				
		NC					D43				
		NC					D44				
		NC					D5				
		NC					D6				
		NC					E1				
		NC					E2				
		NC					E3				
		NC					E39				
		NC					E4				
		NC					E40				
		NC					E41				
		NC					E42				
		NC					E43				
		NC					E44				
		NC					E5				
		NC					E6				
		NC					F1				
		NC					F2				
		NC					F3				
		NC					F39				
		NC					F4				
		NC					F40				
		NC					F41				
		NC					F42				
		NC					F43				
		NC					F44				
		NC					F5				
		NC					F6				
		NC					G1				
		NC					G2				
		NC					G3				
		NC					G39				
		NC					G4				
		NC					G40				
		NC					G41				
		NC					G42				
		NC					G43				
		NC					G44				
		NC					G5				
		NC					G6				
		NC					H1				
		NC					H2				
		NC					H3				
		NC					H39				
		NC					H4				
		NC					H40				
		NC					H41				
		NC					H42				
		NC					H43				
		NC					H44				
		NC					H5				
		NC					H6				
		NC					J1				
		NC					J2				
		NC					J3				
		NC					J39				
		NC					J4				
		NC					J40				
		NC					J41				
		NC					J42				
		NC					J43				
		NC					J44				
		NC					J5				
		NC					J6				
		NC					K1				
		NC					K2				
		NC					K3				
		NC					K39				
		NC					K4				
		NC					K40				
		NC					K41				
		NC					K42				
		NC					K43				
		NC					K44				
		NC					K5				
		NC					K6				
		NC					L1				



Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					L2				
		NC					L3				
		NC					L4				
		NC					L41				
		NC					L42				
		NC					L43				
		NC					L44				
		NC					L5				
		NC					M1				
		NC					M2				
		NC					M3				
		NC					M4				
		NC					M41				
		NC					M42				
		NC					M43				
		NC					M44				
		NC					N1				
		NC					N2				
		NC					N3				
		NC					N4				
		NC					N41				
		NC					N42				
		NC					N43				
		NC					N44				
		NC					P1				
		NC					P2				
		NC					P3				
		NC					P4				
		NC					P41				
		NC					P42				
		NC					P43				
		NC					P44				
		NC					R1				
		NC					R2				
		NC					R3				
		NC					R4				
		NC					R41				
		NC					R42				
		NC					R43				
		NC					R44				
		NC					T1				
		NC					T2				
		NC					T3				
		NC					T38				
		NC					T39				
		NC					T4				
		NC					T40				
		NC					T41				
		NC					T42				
		NC					T43				
		NC					T44				
		NC					T5				
		NC					T6				
		NC					T7				
		NC					U1				
		NC					U2				
		NC					U3				
		NC					U38				
		NC					U39				
		NC					U4				
		NC					U40				
		NC					U41				
		NC					U42				
		NC					U43				
		NC					U44				
		NC					U5				
		NC					U6				
		NC					U7				
		NC					V1				
		NC					V2				
		NC					V3				
		NC					V38				
		NC					V39				
		NC					V4				
		NC					V40				
		NC					V41				
		NC					V42				
		NC					V43				



Pin Information for the Stratix® V 5SEE9 Device
Version 1.1
Note (1)

Bank Number	VREF	Pin Name/Function (2)	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	F1932	DQS for X4	DQS for X8/X9	DQS for X16/ X18	DQS for X32/ X36
		NC					V44				
		NC					V5				
		NC					V6				
		NC					V7				
		NC					W1				
		NC					W2				
		NC					W3				
		NC					W39				
		NC					W4				
		NC					W40				
		NC					W41				
		NC					W42				
		NC					W43				
		NC					W44				
		NC					W5				
		NC					W6				
		NC					Y1				
		NC					Y2				
		NC					Y3				
		NC					Y38				
		NC					Y39				
		NC					Y4				
		NC					Y40				
		NC					Y41				
		NC					Y42				
		NC					Y43				
		NC					Y44				
		NC					Y5				
		NC					Y6				
		NC					Y7				
		RREF BL					BD43				
		RREF BR					BD2				
		RREF TL					A41				
		RREF TR					A4				
		VCCA_FPLL					AM34				
		VCCA_FPLL					AG22				
		VCCA_FPLL					AM10				
		VCCA_FPLL					P10				
		VCCA_FPLL					V23				
		VCCA_FPLL					N35				
		VCCA_FPLL					AB37				
		VCCA_FPLL					Y37				
		VCCA_FPLL					AB8				
		VCCA_FPLL					Y8				
		VCCD_FPLL					AM35				
		VCCD_FPLL					AG23				
		VCCD_FPLL					AN10				
		VCCD_FPLL					N10				
		VCCD_FPLL					V24				
		VCCD_FPLL					M35				
		VCCD_FPLL					AC37				
		VCCD_FPLL					W37				
		VCCD_FPLL					AC8				
		VCCD_FPLL					W8				
		VCC_AUX					AK11				
		VCC_AUX					AL22				
		VCC_AUX					AL32				
		VCC_AUX					N34				
		VCC_AUX					P11				
		VCC_AUX					P22				

Notes:

- (1) For more information about pin definition and pin connection guidelines, refer to the [Stratix V Device Family Pin Connection Guidelines](#).
- (2) The VCCPD3CD pin is shared by I/O banks 3C, 3D, and 3E.



**Pin Information for the Stratix® V 5SEE9 Device
Version 1.1**

Version Number	Date	Changes Made
1.0	5/4/2012	Initial release.
1.1	10/14/2013	Added note to Pin Name/Function column for F1932 package.