

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	IO Performance	F256	DQS X8	DQS X16
1A	VREFB1N0	IO			DIFFIO_RX_L1n	DIFFOUT_L1n	Low_Speed	F5		
1A	VREFB1N0	IO			DIFFIO_RX_L2n	DIFFOUT_L2n	Low_Speed	C4		
1A	VREFB1N0	IO			DIFFIO_RX_L1p	DIFFOUT_L1p	Low_Speed	F4		
1A	VREFB1N0	IO			DIFFIO_RX_L2p	DIFFOUT_L2p	Low_Speed	C3		
1A	VREFB1N0	IO			DIFFIO_RX_L3n	DIFFOUT_L3n	Low_Speed	H5		
1A	VREFB1N0	IO			DIFFIO_RX_L4n	DIFFOUT_L4n	Low_Speed	E3		
1A	VREFB1N0	IO			DIFFIO_RX_L3p	DIFFOUT_L3p	Low_Speed	G5		
1A	VREFB1N0	IO			DIFFIO_RX_L4p	DIFFOUT_L4p	Low_Speed	F2		
1A	VREFB1N0	IO			DIFFIO_RX_L5n	DIFFOUT_L5n	Low_Speed	G2		
1A	VREFB1N0	IO			DIFFIO_RX_L6n	DIFFOUT_L6n	Low_Speed	C2		
1A	VREFB1N0	IO			DIFFIO_RX_L5p	DIFFOUT_L5p	Low_Speed	F1		
1A	VREFB1N0	IO			DIFFIO_RX_L6p	DIFFOUT_L6p	Low_Speed	B2		
1A	VREFB1N0	IO			DIFFIO_RX_L7n	DIFFOUT_L7n	Low_Speed	E1		
1A	VREFB1N0	IO			DIFFIO_RX_L8n	DIFFOUT_L8n	Low_Speed	B1		
1A	VREFB1N0	IO			DIFFIO_RX_L7p	DIFFOUT_L7p	Low_Speed	D1		
1A	VREFB1N0	IO			DIFFIO_RX_L8p	DIFFOUT_L8p	Low_Speed	C1		
1B	VREFB1N0	IO		JTAGEN				G6		
1B	VREFB1N0	IO		TMS	DIFFIO_RX_L11n	DIFFOUT_L11n	Low_Speed	H2		
1B	VREFB1N0	IO	VREFB1N0					J1		
1B	VREFB1N0	IO		TCK	DIFFIO_RX_L11p	DIFFOUT_L11p	Low_Speed	H3		
1B	VREFB1N0	IO		TDI	DIFFIO_RX_L12n	DIFFOUT_L12n	Low_Speed	G1		
1B	VREFB1N0	IO		TDO	DIFFIO_RX_L12p	DIFFOUT_L12p	Low_Speed	H1		
1B	VREFB1N0	IO			DIFFIO_RX_L14n	DIFFOUT_L14n	Low_Speed	J5		
1B	VREFB1N0	IO			DIFFIO_RX_L14p	DIFFOUT_L14p	Low_Speed	H6		
1B	VREFB1N0	IO			DIFFIO_RX_L16n	DIFFOUT_L16n	Low_Speed	J3		
1B	VREFB1N0	IO			DIFFIO_RX_L16p	DIFFOUT_L16p	Low_Speed	J2		
2	VREFB2N0	IO	CLK0n		DIFFIO_RX_L20n	DIFFOUT_L20n	High_Speed	M3		
2	VREFB2N0	IO			DIFFIO_RX_L21n	DIFFOUT_L21n	High_Speed	L1		
2	VREFB2N0	IO	CLK0p		DIFFIO_RX_L20p	DIFFOUT_L20p	High_Speed	L3		
2	VREFB2N0	IO			DIFFIO_RX_L21p	DIFFOUT_L21p	High_Speed	K2		
2	VREFB2N0	IO	CLK1n		DIFFIO_RX_L22n	DIFFOUT_L22n	High_Speed	J6		
2	VREFB2N0	IO			DIFFIO_RX_L23n	DIFFOUT_L23n	High_Speed	M2		
2	VREFB2N0	IO	CLK1p		DIFFIO_RX_L22p	DIFFOUT_L22p	High_Speed	K6		
2	VREFB2N0	IO			DIFFIO_RX_L23p	DIFFOUT_L23p	High_Speed	L2		
2	VREFB2N0	IO	DPCLK0		DIFFIO_RX_L24n	DIFFOUT_L24n	High_Speed	N2		
2	VREFB2N0	IO	VREFB2N0					M1		
2	VREFB2N0	IO	DPCLK1		DIFFIO_RX_L24p	DIFFOUT_L24p	High_Speed	P1		
2	VREFB2N0	IO						N1		
2	VREFB2N0	IO			DIFFIO_RX_L27n	DIFFOUT_L27n	High_Speed	K5		
2	VREFB2N0	IO			DIFFIO_RX_L27p	DIFFOUT_L27p	High_Speed	L6		
2	VREFB2N0	IO	PLL_L_CLKOUTn		DIFFIO_RX_L35n	DIFFOUT_L35n	High_Speed	N3		
2	VREFB2N0	IO	PLL_L_CLKOUTp		DIFFIO_RX_L35p	DIFFOUT_L35p	High_Speed	N4		
3	VREFB3N0	IO			DIFFIO_TX_RX_B1n	DIFFOUT_B1n	High_Speed	P4		
3	VREFB3N0	IO			DIFFIO_RX_B2n	DIFFOUT_B2n	High_Speed	P2		
3	VREFB3N0	IO			DIFFIO_TX_RX_B1p	DIFFOUT_B1p	High_Speed	N5		
3	VREFB3N0	IO			DIFFIO_RX_B2p	DIFFOUT_B2p	High_Speed	R1		
3	VREFB3N0	IO			DIFFIO_TX_RX_B3n	DIFFOUT_B3n	High_Speed	M6		
3	VREFB3N0	IO			DIFFIO_RX_B4n	DIFFOUT_B4n	High_Speed	R3		
3	VREFB3N0	IO			DIFFIO_TX_RX_B3p	DIFFOUT_B3p	High_Speed	L7		
3	VREFB3N0	IO			DIFFIO_RX_B4p	DIFFOUT_B4p	High_Speed	R2		
3	VREFB3N0	IO			DIFFIO_TX_RX_B5n	DIFFOUT_B5n	High_Speed	R4		
3	VREFB3N0	IO			DIFFIO_RX_B6n	DIFFOUT_B6n	High_Speed	T3		
3	VREFB3N0	IO			DIFFIO_TX_RX_B5p	DIFFOUT_B5p	High_Speed	P5		
3	VREFB3N0	IO			DIFFIO_RX_B6p	DIFFOUT_B6p	High_Speed	T2		
3	VREFB3N0	IO			DIFFIO_TX_RX_B13n	DIFFOUT_B13n	High_Speed	R6		
3	VREFB3N0	IO			DIFFIO_RX_B14n	DIFFOUT_B14n	High_Speed	T5		
3	VREFB3N0	IO			DIFFIO_TX_RX_B13p	DIFFOUT_B13p	High_Speed	R5		
3	VREFB3N0	IO			DIFFIO_RX_B14p	DIFFOUT_B14p	High_Speed	T4		
3	VREFB3N0	IO			DIFFIO_TX_RX_B15n	DIFFOUT_B15n	High_Speed	M7		
3	VREFB3N0	IO	VREFB3N0					T7		
3	VREFB3N0	IO			DIFFIO_TX_RX_B15p	DIFFOUT_B15p	High_Speed	L8		
3	VREFB3N0	IO						T6		
3	VREFB3N0	IO			DIFFIO_TX_RX_B16n	DIFFOUT_B16n	High_Speed	R7		
3	VREFB3N0	IO			DIFFIO_RX_B17n	DIFFOUT_B17n	High_Speed	T8		
3	VREFB3N0	IO			DIFFIO_TX_RX_B16p	DIFFOUT_B16p	High_Speed	P6		
3	VREFB3N0	IO			DIFFIO_RX_B17p	DIFFOUT_B17p	High_Speed	R8		
3	VREFB3N0	IO	CLK6n		DIFFIO_TX_RX_B18n	DIFFOUT_B18n	High_Speed	P9		
3	VREFB3N0	IO			DIFFIO_RX_B19n	DIFFOUT_B19n	High_Speed	T9		
3	VREFB3N0	IO	CLK6p		DIFFIO_TX_RX_B18p	DIFFOUT_B18p	High_Speed	P8		
3	VREFB3N0	IO			DIFFIO_RX_B19p	DIFFOUT_B19p	High_Speed	R9		
3	VREFB3N0	IO	CLK7n		DIFFIO_TX_RX_B20n	DIFFOUT_B20n	High_Speed	M8		
3	VREFB3N0	IO	CLK7p		DIFFIO_TX_RX_B20p	DIFFOUT_B20p	High_Speed	M9		
3	VREFB3N0	IO			DIFFIO_TX_RX_B22n	DIFFOUT_B22n	High_Speed	T11		
3	VREFB3N0	IO			DIFFIO_TX_RX_B22p	DIFFOUT_B22p	High_Speed	R10		
4	VREFB4N0	IO			DIFFIO_TX_RX_B30n	DIFFOUT_B30n	High_Speed	P10		
4	VREFB4N0	IO			DIFFIO_RX_B31n	DIFFOUT_B31n	High_Speed	R11		
4	VREFB4N0	IO			DIFFIO_TX_RX_B30p	DIFFOUT_B30p	High_Speed	P11		
4	VREFB4N0	IO			DIFFIO_RX_B31p	DIFFOUT_B31p	High_Speed	R12		
4	VREFB4N0	IO			DIFFIO_TX_RX_B32n	DIFFOUT_B32n	High_Speed	M10		
4	VREFB4N0	IO	VREFB4N0					T13		
4	VREFB4N0	IO			DIFFIO_TX_RX_B32p	DIFFOUT_B32p	High_Speed	L9		
4	VREFB4N0	IO						T12		
4	VREFB4N0	IO			DIFFIO_TX_RX_B33n	DIFFOUT_B33n	High_Speed	P13		
4	VREFB4N0	IO			DIFFIO_TX_RX_B33p	DIFFOUT_B33p	High_Speed	P12		
4	VREFB4N0	IO	PLL_B_CLKOUTn		DIFFIO_TX_RX_B49n	DIFFOUT_B49n	High_Speed	M11		
4	VREFB4N0	IO	PLL_B_CLKOUTp		DIFFIO_TX_RX_B49p	DIFFOUT_B49p	High_Speed	L10		
5	VREFB5N0	IO	RUP		DIFFIO_RX_R1p	DIFFOUT_R1p	High_Speed	P14		
5	VREFB5N0	IO			DIFFIO_RX_R2p	DIFFOUT_R2p	High_Speed	T14		
5	VREFB5N0	IO	RDN		DIFFIO_RX_R1n	DIFFOUT_R1n	High_Speed	R14		
5	VREFB5N0	IO			DIFFIO_RX_R2n	DIFFOUT_R2n	High_Speed	T15		
5	VREFB5N0	IO			DIFFIO_RX_R9p	DIFFOUT_R9p	High_Speed	L11	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R9n	DIFFOUT_R9n	High_Speed	L12	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R11p	DIFFOUT_R11p	High_Speed	N14	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R12p	DIFFOUT_R12p	High_Speed	M15	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R11n	DIFFOUT_R11n	High_Speed	P15	DMOR	
5	VREFB5N0	IO			DIFFIO_RX_R12n	DIFFOUT_R12n	High_Speed	M14	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R13p	DIFFOUT_R13p	High_Speed	N16		
5	VREFB5N0	IO						R15		

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	IO Performance	F256	DQS X8	DQS X16
5	VREFB5N0	IO			DIFFIO_RX_R13n	DIFFOUT_R13n	High_Speed	P16		
5	VREFB5N0	IO	VREFB5N0					R16		
5	VREFB5N0	IO			DIFFIO_RX_R14p	DIFFOUT_R14p	High_Speed	K11	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R14n	DIFFOUT_R14n	High_Speed	K12	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R16p	DIFFOUT_R16p	High_Speed	K14	DQS0R	
5	VREFB5N0	IO			DIFFIO_RX_R17p	DIFFOUT_R17p	High_Speed	M16	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R16n	DIFFOUT_R16n	High_Speed	L15	DQSn0R	
5	VREFB5N0	IO			DIFFIO_RX_R17n	DIFFOUT_R17n	High_Speed	L16	DQ0R	
6	VREFB6N0	IO	CLK2p		DIFFIO_RX_R20p	DIFFOUT_R20p	High_Speed	J11		
6	VREFB6N0	IO			DIFFIO_RX_R21p	DIFFOUT_R21p	High_Speed	J14		
6	VREFB6N0	IO	CLK2n		DIFFIO_RX_R20n	DIFFOUT_R20n	High_Speed	J12		
6	VREFB6N0	IO			DIFFIO_RX_R21n	DIFFOUT_R21n	High_Speed	K15		
6	VREFB6N0	IO	CLK3p		DIFFIO_RX_R22p	DIFFOUT_R22p	High_Speed	J15		
6	VREFB6N0	IO			DIFFIO_RX_R23p	DIFFOUT_R23p	High_Speed	H15		
6	VREFB6N0	IO	CLK3n		DIFFIO_RX_R22n	DIFFOUT_R22n	High_Speed	J16		
6	VREFB6N0	IO			DIFFIO_RX_R23n	DIFFOUT_R23n	High_Speed	H16		
6	VREFB6N0	IO			DIFFIO_RX_R24p	DIFFOUT_R24p	High_Speed	D16		
6	VREFB6N0	IO			DIFFIO_RX_R24n	DIFFOUT_R24n	High_Speed	C16		
6	VREFB6N0	IO			DIFFIO_RX_R26p	DIFFOUT_R26p	High_Speed	H11	DQ1R	
6	VREFB6N0	IO			DIFFIO_RX_R26n	DIFFOUT_R26n	High_Speed	H12	DQ1R	
6	VREFB6N0	IO			DIFFIO_RX_R28p	DIFFOUT_R28p	High_Speed	G14	DQ1R	
6	VREFB6N0	IO			DIFFIO_RX_R29p	DIFFOUT_R29p	High_Speed	G16	DQ1R	
6	VREFB6N0	IO			DIFFIO_RX_R28n	DIFFOUT_R28n	High_Speed	G15	DM1R	
6	VREFB6N0	IO			DIFFIO_RX_R29n	DIFFOUT_R29n	High_Speed	F16	DQ1R	
6	VREFB6N0	IO	DPCLK3		DIFFIO_RX_R32p	DIFFOUT_R32p	High_Speed	G11	DQS1R	
6	VREFB6N0	IO	VREFB6N0					B15		
6	VREFB6N0	IO	DPCLK2		DIFFIO_RX_R32n	DIFFOUT_R32n	High_Speed	G12	DQSn1R	
6	VREFB6N0	IO						B16		
6	VREFB6N0	IO			DIFFIO_RX_R33p	DIFFOUT_R33p	High_Speed	F14	DQ1R	
6	VREFB6N0	IO			DIFFIO_RX_R34p	DIFFOUT_R34p	High_Speed	E15	DQ1R	
6	VREFB6N0	IO			DIFFIO_RX_R33n	DIFFOUT_R33n	High_Speed	E14	DQ1R	
6	VREFB6N0	IO			DIFFIO_RX_R34n	DIFFOUT_R34n	High_Speed	E16	DQ1R	
6	VREFB6N0	IO	PLL_R_CLKOUTp		DIFFIO_RX_R47p	DIFFOUT_R47p	High_Speed	D14		
6	VREFB6N0	IO			DIFFIO_RX_R48p	DIFFOUT_R48p	High_Speed	D15	CK_6	CK_6
6	VREFB6N0	IO	PLL_R_CLKOUTn		DIFFIO_RX_R47n	DIFFOUT_R47n	High_Speed	C14		
6	VREFB6N0	IO			DIFFIO_RX_R48n	DIFFOUT_R48n	High_Speed	C15	CK#_6	CK#_6
7	VREFB7N0	IO			DIFFIO_RX_T1p	DIFFOUT_T1p	High_Speed	D12		
7	VREFB7N0	IO			DIFFIO_RX_T2p	DIFFOUT_T2p	High_Speed	C13		
7	VREFB7N0	IO			DIFFIO_RX_T1n	DIFFOUT_T1n	High_Speed	E11		
7	VREFB7N0	IO			DIFFIO_RX_T2n	DIFFOUT_T2n	High_Speed	C12		
7	VREFB7N0	IO			DIFFIO_RX_T17p	DIFFOUT_T17p	High_Speed	F11		
7	VREFB7N0	IO						A14		
7	VREFB7N0	IO			DIFFIO_RX_T17n	DIFFOUT_T17n	High_Speed	F12		
7	VREFB7N0	IO	VREFB7N0					A15		
7	VREFB7N0	IO			DIFFIO_RX_T28p	DIFFOUT_T28p	High_Speed	F10		
7	VREFB7N0	IO			DIFFIO_RX_T28n	DIFFOUT_T28n	High_Speed	E10		
7	VREFB7N0	IO			DIFFIO_RX_T30p	DIFFOUT_T30p	High_Speed	B13		
7	VREFB7N0	IO			DIFFIO_RX_T30n	DIFFOUT_T30n	High_Speed	A13		
8	VREFB8N0	IO	CLK4p		DIFFIO_RX_T32p	DIFFOUT_T32p	Low_Speed	D9		
8	VREFB8N0	IO	CLK4n		DIFFIO_RX_T32n	DIFFOUT_T32n	Low_Speed	C9		
8	VREFB8N0	IO	CLK5p		DIFFIO_RX_T34p	DIFFOUT_T34p	Low_Speed	F9		
8	VREFB8N0	IO			DIFFIO_RX_T35p	DIFFOUT_T35p	Low_Speed	B12		
8	VREFB8N0	IO	CLK5n		DIFFIO_RX_T34n	DIFFOUT_T34n	Low_Speed	E9		
8	VREFB8N0	IO			DIFFIO_RX_T35n	DIFFOUT_T35n	Low_Speed	B11		
8	VREFB8N0	IO			DIFFIO_RX_T36p	DIFFOUT_T36p	Low_Speed	C10		
8	VREFB8N0	IO			DIFFIO_RX_T37p	DIFFOUT_T37p	Low_Speed	A11		
8	VREFB8N0	IO		DEV_CLRn	DIFFIO_RX_T36n	DIFFOUT_T36n	Low_Speed	B10		
8	VREFB8N0	IO			DIFFIO_RX_T37n	DIFFOUT_T37n	Low_Speed	A12		
8	VREFB8N0	IO		DEV_OE	DIFFIO_RX_T38p	DIFFOUT_T38p	Low_Speed	B8		
8	VREFB8N0	IO						A10		
8	VREFB8N0	IO			DIFFIO_RX_T38n	DIFFOUT_T38n	Low_Speed	B7		
8	VREFB8N0	IO	VREFB8N0					A9		
8	VREFB8N0	IO		CONFIG_SEL				F8		
8	VREFB8N0	IO			DIFFIO_RX_T39p	DIFFOUT_T39p	Low_Speed	B9		
8	VREFB8N0	Input_only		nCONFIG				E8		
8	VREFB8N0	IO			DIFFIO_RX_T39n	DIFFOUT_T39n	Low_Speed	A8		
8	VREFB8N0	IO			DIFFIO_RX_T40p	DIFFOUT_T40p	Low_Speed	B6		
8	VREFB8N0	IO			DIFFIO_RX_T41p	DIFFOUT_T41p	Low_Speed	A7		
8	VREFB8N0	IO			DIFFIO_RX_T40n	DIFFOUT_T40n	Low_Speed	C6		
8	VREFB8N0	IO			DIFFIO_RX_T41n	DIFFOUT_T41n	Low_Speed	A6		
8	VREFB8N0	IO			DIFFIO_RX_T42p	DIFFOUT_T42p	Low_Speed	B5		
8	VREFB8N0	IO			DIFFIO_RX_T43p	DIFFOUT_T43p	Low_Speed	B4		
8	VREFB8N0	IO		CRC_ERROR	DIFFIO_RX_T42n	DIFFOUT_T42n	Low_Speed	C5		
8	VREFB8N0	IO			DIFFIO_RX_T43n	DIFFOUT_T43n	Low_Speed	A5		
8	VREFB8N0	IO		nSTATUS	DIFFIO_RX_T44p	DIFFOUT_T44p	Low_Speed	F7		
8	VREFB8N0	IO			DIFFIO_RX_T45p	DIFFOUT_T45p	Low_Speed	A3		
8	VREFB8N0	IO		CONF_DONE	DIFFIO_RX_T44n	DIFFOUT_T44n	Low_Speed	E7		
8	VREFB8N0	IO			DIFFIO_RX_T45n	DIFFOUT_T45n	Low_Speed	A2		
8	VREFB8N0	IO	PLL_T_CLKOUTp		DIFFIO_RX_T46p	DIFFOUT_T46p	Low_Speed	B3		
8	VREFB8N0	IO	PLL_T_CLKOUTn		DIFFIO_RX_T46n	DIFFOUT_T46n	Low_Speed	A4		
		GND						D2		
		GND						F3		
		GND						E2		
		GND						T16		
		GND						T10		
		GND						T1		
		GND						R13		
		GND						P7		
		GND						P3		
		GND						N9		
		GND						N15		
		GND						N12		
		GND						M4		
		GND						L14		
		GND						K9		
		GND						K7		
		GND						K3		
		GND						K16		

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	IO Performance	F256	DQS X8	DQS X16
		GND						K1		
		GND						J10		
		GND						H7		
		GND						H14		
		GND						G8		
		GND						G3		
		GND						G10		
		GND						F15		
		GND						E6		
		GND						E13		
		GND						D6		
		GND						D3		
		GND						C8		
		GND						C11		
		GND						B14		
		GND						A16		
		GND						A1		
		VCC						K8		
		VCC						K10		
		VCC						J9		
		VCC						J8		
		VCC						J7		
		VCC						H9		
		VCC						H8		
		VCC						H10		
		VCC						G9		
		VCC						G7		
		VCC						F6		
		VCCD_PLL1						M5		
		VCCD_PLL2						D13		
		VCCD_PLL3						D4		
		VCCD_PLL4						N13		
		VCCIO1A						H4		
		VCCIO1A						G4		
		VCCIO1B						J4		
		VCCIO2						L4		
		VCCIO2						K4		
		VCCIO3						N8		
		VCCIO3						N7		
		VCCIO3						N6		
		VCCIO4						N11		
		VCCIO4						N10		
		VCCIO5						M13		
		VCCIO5						L13		
		VCCIO5						K13		
		VCCIO6						J13		
		VCCIO6						H13		
		VCCIO6						G13		
		VCCIO6						F13		
		VCCIO7						D11		
		VCCIO7						D10		
		VCCIO8						D8		
		VCCIO8						D7		
		VCCIO8						C7		
		VCCA1						L5		
		VCCA2						E12		
		VCCA3						E4		
		VCCA3						D5		
		VCCA3						E5		
		VCCA4						M12		

Note:
(1) For more information about pin definition and pin connection guidelines, refer to the [MAX 10 FPGA Device Family Pin Connection Guidelines](#).

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	IO Performance	F484	DQS X8	DQS X16
1A	VREFB1N0	IO			DIFFIO_RX_L1n	DIFFOUT_L1n	Low_Speed	F5		
1A	VREFB1N0	IO			DIFFIO_RX_L2n	DIFFOUT_L2n	Low_Speed	E4		
1A	VREFB1N0	IO			DIFFIO_RX_L1p	DIFFOUT_L1p	Low_Speed	F4		
1A	VREFB1N0	IO			DIFFIO_RX_L2p	DIFFOUT_L2p	Low_Speed	E3		
1A	VREFB1N0	IO			DIFFIO_RX_L3n	DIFFOUT_L3n	Low_Speed	J8		
1A	VREFB1N0	IO			DIFFIO_RX_L4n	DIFFOUT_L4n	Low_Speed	G4		
1A	VREFB1N0	IO			DIFFIO_RX_L3p	DIFFOUT_L3p	Low_Speed	J9		
1A	VREFB1N0	IO			DIFFIO_RX_L4p	DIFFOUT_L4p	Low_Speed	F3		
1A	VREFB1N0	IO			DIFFIO_RX_L5n	DIFFOUT_L5n	Low_Speed	J4		
1A	VREFB1N0	IO			DIFFIO_RX_L6n	DIFFOUT_L6n	Low_Speed	H4		
1A	VREFB1N0	IO			DIFFIO_RX_L5p	DIFFOUT_L5p	Low_Speed	H3		
1A	VREFB1N0	IO			DIFFIO_RX_L6p	DIFFOUT_L6p	Low_Speed	G3		
1A	VREFB1N0	IO			DIFFIO_RX_L7n	DIFFOUT_L7n	Low_Speed	K5		
1A	VREFB1N0	IO			DIFFIO_RX_L8n	DIFFOUT_L8n	Low_Speed	K4		
1A	VREFB1N0	IO			DIFFIO_RX_L7p	DIFFOUT_L7p	Low_Speed	K6		
1A	VREFB1N0	IO			DIFFIO_RX_L8p	DIFFOUT_L8p	Low_Speed	J3		
1B	VREFB1N0	IO			DIFFIO_RX_L9n	DIFFOUT_L9n	Low_Speed	K8		
1B	VREFB1N0	IO			DIFFIO_RX_L10n	DIFFOUT_L10n	Low_Speed	D3		
1B	VREFB1N0	IO		JTAGEN	DIFFIO_RX_L9p	DIFFOUT_L9p	Low_Speed	K9		
1B	VREFB1N0	IO			DIFFIO_RX_L10p	DIFFOUT_L10p	Low_Speed	D2		
1B	VREFB1N0	IO		TMS	DIFFIO_RX_L11n	DIFFOUT_L11n	Low_Speed	H2		
1B	VREFB1N0	IO	VREFB1N0							
1B	VREFB1N0	IO		TCK	DIFFIO_RX_L11p	DIFFOUT_L11p	Low_Speed	G2		
1B	VREFB1N0	IO								
1B	VREFB1N0	IO		TDI	DIFFIO_RX_L12n	DIFFOUT_L12n	Low_Speed	L4		
1B	VREFB1N0	IO			DIFFIO_RX_L13n	DIFFOUT_L13n	Low_Speed	K2		
1B	VREFB1N0	IO		TDO	DIFFIO_RX_L12p	DIFFOUT_L12p	Low_Speed	M5		
1B	VREFB1N0	IO			DIFFIO_RX_L13p	DIFFOUT_L13p	Low_Speed	L2		
1B	VREFB1N0	IO			DIFFIO_RX_L14n	DIFFOUT_L14n	Low_Speed	L8		
1B	VREFB1N0	IO			DIFFIO_RX_L15n	DIFFOUT_L15n	Low_Speed	E1		
1B	VREFB1N0	IO			DIFFIO_RX_L14p	DIFFOUT_L14p	Low_Speed	L9		
1B	VREFB1N0	IO			DIFFIO_RX_L15p	DIFFOUT_L15p	Low_Speed	F2		
1B	VREFB1N0	IO			DIFFIO_RX_L16n	DIFFOUT_L16n	Low_Speed	H1		
1B	VREFB1N0	IO			DIFFIO_RX_L17n	DIFFOUT_L17n	Low_Speed	G1		
1B	VREFB1N0	IO			DIFFIO_RX_L16p	DIFFOUT_L16p	Low_Speed	J1		
1B	VREFB1N0	IO			DIFFIO_RX_L17p	DIFFOUT_L17p	Low_Speed	F1		
1B	VREFB1N0	IO			DIFFIO_RX_L18n	DIFFOUT_L18n	Low_Speed	M4		
1B	VREFB1N0	IO			DIFFIO_RX_L19n	DIFFOUT_L19n	Low_Speed	K1		
1B	VREFB1N0	IO			DIFFIO_RX_L18p	DIFFOUT_L18p	Low_Speed	M3		
1B	VREFB1N0	IO			DIFFIO_RX_L19p	DIFFOUT_L19p	Low_Speed	L1		
2	VREFB2N0	IO	CLK0n		DIFFIO_RX_L20n	DIFFOUT_L20n	High_Speed	N4		
2	VREFB2N0	IO			DIFFIO_RX_L21n	DIFFOUT_L21n	High_Speed	P4		
2	VREFB2N0	IO	CLK0p		DIFFIO_RX_L20p	DIFFOUT_L20p	High_Speed	N5		
2	VREFB2N0	IO			DIFFIO_RX_L21p	DIFFOUT_L21p	High_Speed	P5		
2	VREFB2N0	IO	CLK1n		DIFFIO_RX_L22n	DIFFOUT_L22n	High_Speed	M8		
2	VREFB2N0	IO			DIFFIO_RX_L23n	DIFFOUT_L23n	High_Speed	N3		
2	VREFB2N0	IO	CLK1p		DIFFIO_RX_L22p	DIFFOUT_L22p	High_Speed	M9		
2	VREFB2N0	IO			DIFFIO_RX_L23p	DIFFOUT_L23p	High_Speed	N2		
2	VREFB2N0	IO	DPCLK0		DIFFIO_RX_L24n	DIFFOUT_L24n	High_Speed	P3		
2	VREFB2N0	IO	VREFB2N0							
2	VREFB2N0	IO	DPCLK1		DIFFIO_RX_L24p	DIFFOUT_L24p	High_Speed	R3		
2	VREFB2N0	IO								
2	VREFB2N0	IO			DIFFIO_RX_L25n	DIFFOUT_L25n	High_Speed	R4		
2	VREFB2N0	IO			DIFFIO_RX_L26n	DIFFOUT_L26n	High_Speed	T1		
2	VREFB2N0	IO			DIFFIO_RX_L25p	DIFFOUT_L25p	High_Speed	R5		
2	VREFB2N0	IO			DIFFIO_RX_L26p	DIFFOUT_L26p	High_Speed	T2		
2	VREFB2N0	IO			DIFFIO_RX_L27n	DIFFOUT_L27n	High_Speed	N8		
2	VREFB2N0	IO			DIFFIO_RX_L28n	DIFFOUT_L28n	High_Speed	P1		
2	VREFB2N0	IO			DIFFIO_RX_L27p	DIFFOUT_L27p	High_Speed	N9		
2	VREFB2N0	IO			DIFFIO_RX_L28p	DIFFOUT_L28p	High_Speed	N1		
2	VREFB2N0	IO			DIFFIO_RX_L29n	DIFFOUT_L29n	High_Speed	T3		
2	VREFB2N0	IO			DIFFIO_RX_L30n	DIFFOUT_L30n	High_Speed	U1		
2	VREFB2N0	IO			DIFFIO_RX_L29p	DIFFOUT_L29p	High_Speed	U2		
2	VREFB2N0	IO			DIFFIO_RX_L30p	DIFFOUT_L30p	High_Speed	V1		
2	VREFB2N0	IO			DIFFIO_RX_L31n	DIFFOUT_L31n	High_Speed	U4		
2	VREFB2N0	IO			DIFFIO_RX_L32n	DIFFOUT_L32n	High_Speed	U3		
2	VREFB2N0	IO			DIFFIO_RX_L31p	DIFFOUT_L31p	High_Speed	U5		
2	VREFB2N0	IO			DIFFIO_RX_L32p	DIFFOUT_L32p	High_Speed	V3		
2	VREFB2N0	IO			DIFFIO_RX_L33n	DIFFOUT_L33n	High_Speed	P8		
2	VREFB2N0	IO			DIFFIO_RX_L34n	DIFFOUT_L34n	High_Speed	W1		
2	VREFB2N0	IO			DIFFIO_RX_L33p	DIFFOUT_L33p	High_Speed	R7		
2	VREFB2N0	IO			DIFFIO_RX_L34p	DIFFOUT_L34p	High_Speed	W2		
2	VREFB2N0	IO	PLL_L_CLKOUTn		DIFFIO_RX_L35n	DIFFOUT_L35n	High_Speed	T5		
2	VREFB2N0	IO			DIFFIO_RX_L36n	DIFFOUT_L36n	High_Speed	R1		
2	VREFB2N0	IO	PLL_L_CLKOUTp		DIFFIO_RX_L35p	DIFFOUT_L35p	High_Speed	T6		
2	VREFB2N0	IO			DIFFIO_RX_L36p	DIFFOUT_L36p	High_Speed	R2		
3	VREFB3N0	IO			DIFFIO_TX_RX_B1n	DIFFOUT_B1n	High_Speed	W5		
3	VREFB3N0	IO			DIFFIO_RX_B2n	DIFFOUT_B2n	High_Speed	V4		
3	VREFB3N0	IO			DIFFIO_TX_RX_B1p	DIFFOUT_B1p	High_Speed	W6		
3	VREFB3N0	IO			DIFFIO_RX_B2p	DIFFOUT_B2p	High_Speed	V5		
3	VREFB3N0	IO			DIFFIO_TX_RX_B3n	DIFFOUT_B3n	High_Speed	U6		
3	VREFB3N0	IO			DIFFIO_RX_B4n	DIFFOUT_B4n	High_Speed	Y1		
3	VREFB3N0	IO			DIFFIO_TX_RX_B3p	DIFFOUT_B3p	High_Speed	U7		
3	VREFB3N0	IO			DIFFIO_RX_B4p	DIFFOUT_B4p	High_Speed	Y2		
3	VREFB3N0	IO			DIFFIO_TX_RX_B5n	DIFFOUT_B5n	High_Speed	W4		
3	VREFB3N0	IO			DIFFIO_RX_B6n	DIFFOUT_B6n	High_Speed	AA1		
3	VREFB3N0	IO			DIFFIO_TX_RX_B5p	DIFFOUT_B5p	High_Speed	W3		
3	VREFB3N0	IO			DIFFIO_RX_B6p	DIFFOUT_B6p	High_Speed	AA2		
3	VREFB3N0	IO			DIFFIO_TX_RX_B7n	DIFFOUT_B7n	High_Speed	V7		
3	VREFB3N0	IO			DIFFIO_RX_B8n	DIFFOUT_B8n	High_Speed	Y5		
3	VREFB3N0	IO			DIFFIO_TX_RX_B7p	DIFFOUT_B7p	High_Speed	V8		
3	VREFB3N0	IO			DIFFIO_RX_B8p	DIFFOUT_B8p	High_Speed	Y6		
3	VREFB3N0	IO			DIFFIO_TX_RX_B9n	DIFFOUT_B9n	High_Speed	R9		
3	VREFB3N0	IO			DIFFIO_RX_B10n	DIFFOUT_B10n	High_Speed	Y7		
3	VREFB3N0	IO			DIFFIO_TX_RX_B9p	DIFFOUT_B9p	High_Speed	P9		
3	VREFB3N0	IO			DIFFIO_RX_B10p	DIFFOUT_B10p	High_Speed	Y8		
3	VREFB3N0	IO			DIFFIO_TX_RX_B11n	DIFFOUT_B11n	High_Speed	W9		
3	VREFB3N0	IO			DIFFIO_RX_B12n	DIFFOUT_B12n	High_Speed	AB2		

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	IO Performance	F484	DQS X8	DQS X16
3	VREFB3N0	IO			DIFFIO_TX_RX_B11p	DIFFOUT_B11p	High_Speed	W10		
3	VREFB3N0	IO			DIFFIO_RX_B12p	DIFFOUT_B12p	High_Speed	AB3		
3	VREFB3N0	IO			DIFFIO_TX_RX_B13n	DIFFOUT_B13n	High_Speed	W7		
3	VREFB3N0	IO			DIFFIO_RX_B14n	DIFFOUT_B14n	High_Speed	Y3		
3	VREFB3N0	IO			DIFFIO_TX_RX_B13p	DIFFOUT_B13p	High_Speed	W8		
3	VREFB3N0	IO			DIFFIO_RX_B14p	DIFFOUT_B14p	High_Speed	Y4		
3	VREFB3N0	IO			DIFFIO_TX_RX_B15n	DIFFOUT_B15n	High_Speed	R10		
3	VREFB3N0	IO	VREFB3N0					AA3		
3	VREFB3N0	IO			DIFFIO_TX_RX_B15p	DIFFOUT_B15p	High_Speed	P10		
3	VREFB3N0	IO						AB4		
3	VREFB3N0	IO			DIFFIO_TX_RX_B16n	DIFFOUT_B16n	High_Speed	AA6		
3	VREFB3N0	IO			DIFFIO_RX_B17n	DIFFOUT_B17n	High_Speed	AA5		
3	VREFB3N0	IO			DIFFIO_TX_RX_B16p	DIFFOUT_B16p	High_Speed	AA7		
3	VREFB3N0	IO			DIFFIO_RX_B17p	DIFFOUT_B17p	High_Speed	AB5		
3	VREFB3N0	IO	CLK6n		DIFFIO_TX_RX_B18n	DIFFOUT_B18n	High_Speed	V9		
3	VREFB3N0	IO			DIFFIO_RX_B19n	DIFFOUT_B19n	High_Speed	AB6		
3	VREFB3N0	IO	CLK6p		DIFFIO_TX_RX_B18p	DIFFOUT_B18p	High_Speed	V10		
3	VREFB3N0	IO			DIFFIO_RX_B19p	DIFFOUT_B19p	High_Speed	AB7		
3	VREFB3N0	IO	CLK7n		DIFFIO_TX_RX_B20n	DIFFOUT_B20n	High_Speed	R11		
3	VREFB3N0	IO			DIFFIO_RX_B21n	DIFFOUT_B21n	High_Speed	AA8		
3	VREFB3N0	IO	CLK7p		DIFFIO_TX_RX_B20p	DIFFOUT_B20p	High_Speed	P11		
3	VREFB3N0	IO			DIFFIO_RX_B21p	DIFFOUT_B21p	High_Speed	AB8		
3	VREFB3N0	IO			DIFFIO_TX_RX_B22n	DIFFOUT_B22n	High_Speed	Y10		
3	VREFB3N0	IO			DIFFIO_RX_B23n	DIFFOUT_B23n	High_Speed	AA9		
3	VREFB3N0	IO			DIFFIO_TX_RX_B22p	DIFFOUT_B22p	High_Speed	AA10		
3	VREFB3N0	IO			DIFFIO_RX_B23p	DIFFOUT_B23p	High_Speed	AB9		
4	VREFB4N0	IO			DIFFIO_TX_RX_B24n	DIFFOUT_B24n	High_Speed	V11		
4	VREFB4N0	IO			DIFFIO_RX_B25n	DIFFOUT_B25n	High_Speed	W11		
4	VREFB4N0	IO			DIFFIO_TX_RX_B24p	DIFFOUT_B24p	High_Speed	V12		
4	VREFB4N0	IO			DIFFIO_RX_B25p	DIFFOUT_B25p	High_Speed	Y11		
4	VREFB4N0	IO			DIFFIO_TX_RX_B26n	DIFFOUT_B26n	High_Speed	R12		
4	VREFB4N0	IO			DIFFIO_RX_B27n	DIFFOUT_B27n	High_Speed	AB10		
4	VREFB4N0	IO			DIFFIO_TX_RX_B26p	DIFFOUT_B26p	High_Speed	P12		
4	VREFB4N0	IO			DIFFIO_RX_B27p	DIFFOUT_B27p	High_Speed	AB11		
4	VREFB4N0	IO			DIFFIO_TX_RX_B28n	DIFFOUT_B28n	High_Speed	AA11		
4	VREFB4N0	IO			DIFFIO_RX_B29n	DIFFOUT_B29n	High_Speed	AB12		
4	VREFB4N0	IO			DIFFIO_TX_RX_B28p	DIFFOUT_B28p	High_Speed	AA12		
4	VREFB4N0	IO			DIFFIO_RX_B29p	DIFFOUT_B29p	High_Speed	AB13		
4	VREFB4N0	IO			DIFFIO_TX_RX_B30n	DIFFOUT_B30n	High_Speed	V13		
4	VREFB4N0	IO			DIFFIO_RX_B31n	DIFFOUT_B31n	High_Speed	W12		
4	VREFB4N0	IO			DIFFIO_TX_RX_B30p	DIFFOUT_B30p	High_Speed	W14		
4	VREFB4N0	IO			DIFFIO_RX_B31p	DIFFOUT_B31p	High_Speed	W13		
4	VREFB4N0	IO			DIFFIO_TX_RX_B32n	DIFFOUT_B32n	High_Speed	R13		
4	VREFB4N0	IO	VREFB4N0					AA13		
4	VREFB4N0	IO			DIFFIO_TX_RX_B32p	DIFFOUT_B32p	High_Speed	P13		
4	VREFB4N0	IO						AB14		
4	VREFB4N0	IO			DIFFIO_TX_RX_B33n	DIFFOUT_B33n	High_Speed	Y13		
4	VREFB4N0	IO			DIFFIO_RX_B34n	DIFFOUT_B34n	High_Speed	AA14		
4	VREFB4N0	IO			DIFFIO_TX_RX_B33p	DIFFOUT_B33p	High_Speed	Y14		
4	VREFB4N0	IO			DIFFIO_RX_B34p	DIFFOUT_B34p	High_Speed	AB15		
4	VREFB4N0	IO			DIFFIO_TX_RX_B35n	DIFFOUT_B35n	High_Speed	V14		
4	VREFB4N0	IO			DIFFIO_RX_B36n	DIFFOUT_B36n	High_Speed	AA15		
4	VREFB4N0	IO			DIFFIO_TX_RX_B35p	DIFFOUT_B35p	High_Speed	W15		
4	VREFB4N0	IO			DIFFIO_RX_B36p	DIFFOUT_B36p	High_Speed	Y16		
4	VREFB4N0	IO			DIFFIO_TX_RX_B37n	DIFFOUT_B37n	High_Speed	U15		
4	VREFB4N0	IO			DIFFIO_RX_B38n	DIFFOUT_B38n	High_Speed	AB16		
4	VREFB4N0	IO			DIFFIO_TX_RX_B37p	DIFFOUT_B37p	High_Speed	V16		
4	VREFB4N0	IO			DIFFIO_RX_B38p	DIFFOUT_B38p	High_Speed	AA16		
4	VREFB4N0	IO			DIFFIO_TX_RX_B39n	DIFFOUT_B39n	High_Speed	AA17		
4	VREFB4N0	IO			DIFFIO_RX_B40n	DIFFOUT_B40n	High_Speed	AB19		
4	VREFB4N0	IO			DIFFIO_TX_RX_B39p	DIFFOUT_B39p	High_Speed	Y17		
4	VREFB4N0	IO			DIFFIO_RX_B40p	DIFFOUT_B40p	High_Speed	AB20		
4	VREFB4N0	IO			DIFFIO_TX_RX_B41n	DIFFOUT_B41n	High_Speed	V15		
4	VREFB4N0	IO			DIFFIO_RX_B42n	DIFFOUT_B42n	High_Speed	AA19		
4	VREFB4N0	IO			DIFFIO_TX_RX_B41p	DIFFOUT_B41p	High_Speed	W16		
4	VREFB4N0	IO			DIFFIO_RX_B42p	DIFFOUT_B42p	High_Speed	Y18		
4	VREFB4N0	IO			DIFFIO_TX_RX_B45n	DIFFOUT_B45n	High_Speed	Y19		
4	VREFB4N0	IO			DIFFIO_RX_B46n	DIFFOUT_B46n	High_Speed	AB21		
4	VREFB4N0	IO			DIFFIO_TX_RX_B45p	DIFFOUT_B45p	High_Speed	W18		
4	VREFB4N0	IO			DIFFIO_RX_B46p	DIFFOUT_B46p	High_Speed	AA20		
4	VREFB4N0	IO	PLL_B_CLKOUTn		DIFFIO_TX_RX_B49n	DIFFOUT_B49n	High_Speed	W17		
4	VREFB4N0	IO			DIFFIO_RX_B50n	DIFFOUT_B50n	High_Speed	AB17		
4	VREFB4N0	IO	PLL_B_CLKOUTp		DIFFIO_TX_RX_B49p	DIFFOUT_B49p	High_Speed	V17		
4	VREFB4N0	IO			DIFFIO_RX_B50p	DIFFOUT_B50p	High_Speed	AB18		
5	VREFB5N0	IO	RUP		DIFFIO_RX_R1p	DIFFOUT_R1p	High_Speed	U18		
5	VREFB5N0	IO			DIFFIO_RX_R2p	DIFFOUT_R2p	High_Speed	AA21		
5	VREFB5N0	IO	RDN		DIFFIO_RX_R1n	DIFFOUT_R1n	High_Speed	U17		
5	VREFB5N0	IO			DIFFIO_RX_R2n	DIFFOUT_R2n	High_Speed	AA22		
5	VREFB5N0	IO			DIFFIO_RX_R3p	DIFFOUT_R3p	High_Speed	V18		
5	VREFB5N0	IO			DIFFIO_RX_R4p	DIFFOUT_R4p	High_Speed	Y22		
5	VREFB5N0	IO			DIFFIO_RX_R3n	DIFFOUT_R3n	High_Speed	U19		
5	VREFB5N0	IO			DIFFIO_RX_R4n	DIFFOUT_R4n	High_Speed	W22		
5	VREFB5N0	IO			DIFFIO_RX_R5p	DIFFOUT_R5p	High_Speed	W19		
5	VREFB5N0	IO			DIFFIO_RX_R6p	DIFFOUT_R6p	High_Speed	Y20		
5	VREFB5N0	IO			DIFFIO_RX_R5n	DIFFOUT_R5n	High_Speed	W20		
5	VREFB5N0	IO			DIFFIO_RX_R6n	DIFFOUT_R6n	High_Speed	Y21		
5	VREFB5N0	IO			DIFFIO_RX_R7p	DIFFOUT_R7p	High_Speed	V20		
5	VREFB5N0	IO			DIFFIO_RX_R8p	DIFFOUT_R8p	High_Speed	V21		
5	VREFB5N0	IO			DIFFIO_RX_R7n	DIFFOUT_R7n	High_Speed	U20		
5	VREFB5N0	IO			DIFFIO_RX_R8n	DIFFOUT_R8n	High_Speed	V22		
5	VREFB5N0	IO			DIFFIO_RX_R9p	DIFFOUT_R9p	High_Speed	R15	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R10p	DIFFOUT_R10p	High_Speed	T21		
5	VREFB5N0	IO			DIFFIO_RX_R9n	DIFFOUT_R9n	High_Speed	R14	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R10n	DIFFOUT_R10n	High_Speed	T22		
5	VREFB5N0	IO			DIFFIO_RX_R11p	DIFFOUT_R11p	High_Speed	T19	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R12p	DIFFOUT_R12p	High_Speed	T20	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R11n	DIFFOUT_R11n	High_Speed	T18	DM0R	
5	VREFB5N0	IO			DIFFIO_RX_R12n	DIFFOUT_R12n	High_Speed	R20	DQ0R	

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	IO Performance	F484	DQS X8	DQS X16
5	VREFB5N0	IO			DIFFIO_RX_R13p	DIFFOUT_R13p	High_Speed	U21		
5	VREFB5N0	IO						R22		
5	VREFB5N0	IO			DIFFIO_RX_R13n	DIFFOUT_R13n	High_Speed	U22		
5	VREFB5N0	IO	VREFB5N0					P22		
5	VREFB5N0	IO			DIFFIO_RX_R14p	DIFFOUT_R14p	High_Speed	P15	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R15p	DIFFOUT_R15p	High_Speed	P21		
5	VREFB5N0	IO			DIFFIO_RX_R14n	DIFFOUT_R14n	High_Speed	P14	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R15n	DIFFOUT_R15n	High_Speed	N22		
5	VREFB5N0	IO			DIFFIO_RX_R16p	DIFFOUT_R16p	High_Speed	R18	DQS0R	
5	VREFB5N0	IO			DIFFIO_RX_R17p	DIFFOUT_R17p	High_Speed	P19	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R16n	DIFFOUT_R16n	High_Speed	P18	DQS0R	
5	VREFB5N0	IO			DIFFIO_RX_R17n	DIFFOUT_R17n	High_Speed	P20	DQ0R	
5	VREFB5N0	IO			DIFFIO_RX_R18p	DIFFOUT_R18p	High_Speed	M21		
5	VREFB5N0	IO			DIFFIO_RX_R19p	DIFFOUT_R19p	High_Speed	N21		
5	VREFB5N0	IO			DIFFIO_RX_R18n	DIFFOUT_R18n	High_Speed	L22		
5	VREFB5N0	IO			DIFFIO_RX_R19n	DIFFOUT_R19n	High_Speed	M22		
6	VREFB6N0	IO	CLK2p		DIFFIO_RX_R20p	DIFFOUT_R20p	High_Speed	N14		
6	VREFB6N0	IO			DIFFIO_RX_R21p	DIFFOUT_R21p	High_Speed	H22		
6	VREFB6N0	IO	CLK2n		DIFFIO_RX_R20n	DIFFOUT_R20n	High_Speed	N15		
6	VREFB6N0	IO			DIFFIO_RX_R21n	DIFFOUT_R21n	High_Speed	H21		
6	VREFB6N0	IO	CLK3p		DIFFIO_RX_R22p	DIFFOUT_R22p	High_Speed	K22		
6	VREFB6N0	IO			DIFFIO_RX_R23p	DIFFOUT_R23p	High_Speed	J22		
6	VREFB6N0	IO	CLK3n		DIFFIO_RX_R22n	DIFFOUT_R22n	High_Speed	K21		
6	VREFB6N0	IO			DIFFIO_RX_R23n	DIFFOUT_R23n	High_Speed	J21		
6	VREFB6N0	IO			DIFFIO_RX_R24p	DIFFOUT_R24p	High_Speed	G20		
6	VREFB6N0	IO			DIFFIO_RX_R25p	DIFFOUT_R25p	High_Speed	G22		
6	VREFB6N0	IO			DIFFIO_RX_R24n	DIFFOUT_R24n	High_Speed	G19		
6	VREFB6N0	IO			DIFFIO_RX_R25n	DIFFOUT_R25n	High_Speed	F22		
6	VREFB6N0	IO			DIFFIO_RX_R26p	DIFFOUT_R26p	High_Speed	M15	DQ1R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R27p	DIFFOUT_R27p	High_Speed	E22		
6	VREFB6N0	IO			DIFFIO_RX_R26n	DIFFOUT_R26n	High_Speed	M14	DQ1R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R27n	DIFFOUT_R27n	High_Speed	E21		
6	VREFB6N0	IO			DIFFIO_RX_R28p	DIFFOUT_R28p	High_Speed	N18	DQ1R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R29p	DIFFOUT_R29p	High_Speed	M20	DQ1R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R28n	DIFFOUT_R28n	High_Speed	N19	DM1R	DM0R
6	VREFB6N0	IO			DIFFIO_RX_R29n	DIFFOUT_R29n	High_Speed	N20	DQ1R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R30p	DIFFOUT_R30p	High_Speed	F21		
6	VREFB6N0	IO			DIFFIO_RX_R31p	DIFFOUT_R31p	High_Speed	D22		
6	VREFB6N0	IO			DIFFIO_RX_R30n	DIFFOUT_R30n	High_Speed	F20		
6	VREFB6N0	IO			DIFFIO_RX_R31n	DIFFOUT_R31n	High_Speed	C22		
6	VREFB6N0	IO	DPCLK3		DIFFIO_RX_R32p	DIFFOUT_R32p	High_Speed	L14	DQS1R	DQS0R
6	VREFB6N0	IO	VREFB6N0					D21		
6	VREFB6N0	IO	DPCLK2		DIFFIO_RX_R32n	DIFFOUT_R32n	High_Speed	L15	DQS1R	DQS0R
6	VREFB6N0	IO						C21		
6	VREFB6N0	IO			DIFFIO_RX_R33p	DIFFOUT_R33p	High_Speed	M18	DQ1R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R34p	DIFFOUT_R34p	High_Speed	L19	DQ1R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R33n	DIFFOUT_R33n	High_Speed	L18	DQ1R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R34n	DIFFOUT_R34n	High_Speed	L20	DQ1R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R35p	DIFFOUT_R35p	High_Speed	E19		
6	VREFB6N0	IO			DIFFIO_RX_R36p	DIFFOUT_R36p	High_Speed	F19		
6	VREFB6N0	IO			DIFFIO_RX_R35n	DIFFOUT_R35n	High_Speed	F18		
6	VREFB6N0	IO			DIFFIO_RX_R36n	DIFFOUT_R36n	High_Speed	E20		
6	VREFB6N0	IO			DIFFIO_RX_R37p	DIFFOUT_R37p	High_Speed	K14	DQS2R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R38p	DIFFOUT_R38p	High_Speed	C20		
6	VREFB6N0	IO			DIFFIO_RX_R37n	DIFFOUT_R37n	High_Speed	K15	DQS2R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R38n	DIFFOUT_R38n	High_Speed	D19		
6	VREFB6N0	IO			DIFFIO_RX_R39p	DIFFOUT_R39p	High_Speed	K18	DQ2R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R40p	DIFFOUT_R40p	High_Speed	K19	DQ2R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R39n	DIFFOUT_R39n	High_Speed	J18	DQ2R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R40n	DIFFOUT_R40n	High_Speed	K20	DQ2R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R41p	DIFFOUT_R41p	High_Speed	F17		
6	VREFB6N0	IO			DIFFIO_RX_R42p	DIFFOUT_R42p	High_Speed	B22		
6	VREFB6N0	IO			DIFFIO_RX_R41n	DIFFOUT_R41n	High_Speed	E17		
6	VREFB6N0	IO			DIFFIO_RX_R42n	DIFFOUT_R42n	High_Speed	B21		
6	VREFB6N0	IO			DIFFIO_RX_R43p	DIFFOUT_R43p	High_Speed	J14	DQ2R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R44p	DIFFOUT_R44p	High_Speed	B20		
6	VREFB6N0	IO			DIFFIO_RX_R43n	DIFFOUT_R43n	High_Speed	J15	DM2R	DM0R
6	VREFB6N0	IO			DIFFIO_RX_R44n	DIFFOUT_R44n	High_Speed	A21		
6	VREFB6N0	IO			DIFFIO_RX_R45p	DIFFOUT_R45p	High_Speed	H19	DQ2R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R46p	DIFFOUT_R46p	High_Speed	J20	DQ2R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R45n	DIFFOUT_R45n	High_Speed	H18	DQ2R	DQ0R
6	VREFB6N0	IO			DIFFIO_RX_R46n	DIFFOUT_R46n	High_Speed	H20	DQ2R	DQ0R
6	VREFB6N0	IO	PLL_R_CLKOUTp		DIFFIO_RX_R47p	DIFFOUT_R47p	High_Speed	H17		
6	VREFB6N0	IO			DIFFIO_RX_R48p	DIFFOUT_R48p	High_Speed	D18	CK_6	CK_6
6	VREFB6N0	IO	PLL_R_CLKOUTn		DIFFIO_RX_R47n	DIFFOUT_R47n	High_Speed	G17		
6	VREFB6N0	IO			DIFFIO_RX_R48n	DIFFOUT_R48n	High_Speed	E18	CK#_6	CK#_6
7	VREFB7N0	IO			DIFFIO_RX_T1p	DIFFOUT_T1p	High_Speed	E16		
7	VREFB7N0	IO			DIFFIO_RX_T2p	DIFFOUT_T2p	High_Speed	D17		
7	VREFB7N0	IO			DIFFIO_RX_T1n	DIFFOUT_T1n	High_Speed	E15		
7	VREFB7N0	IO			DIFFIO_RX_T2n	DIFFOUT_T2n	High_Speed	C17		
7	VREFB7N0	IO			DIFFIO_RX_T5p	DIFFOUT_T5p	High_Speed	F16		
7	VREFB7N0	IO			DIFFIO_RX_T6p	DIFFOUT_T6p	High_Speed	C19		
7	VREFB7N0	IO			DIFFIO_RX_T5n	DIFFOUT_T5n	High_Speed	F15		
7	VREFB7N0	IO			DIFFIO_RX_T6n	DIFFOUT_T6n	High_Speed	B19		
7	VREFB7N0	IO			DIFFIO_RX_T7p	DIFFOUT_T7p	High_Speed	C18		
7	VREFB7N0	IO			DIFFIO_RX_T8p	DIFFOUT_T8p	High_Speed	A20		
7	VREFB7N0	IO			DIFFIO_RX_T7n	DIFFOUT_T7n	High_Speed	B17		
7	VREFB7N0	IO			DIFFIO_RX_T8n	DIFFOUT_T8n	High_Speed	A19		
7	VREFB7N0	IO			DIFFIO_RX_T9p	DIFFOUT_T9p	High_Speed	D15		
7	VREFB7N0	IO			DIFFIO_RX_T10p	DIFFOUT_T10p	High_Speed	A18		
7	VREFB7N0	IO			DIFFIO_RX_T9n	DIFFOUT_T9n	High_Speed	E14		
7	VREFB7N0	IO			DIFFIO_RX_T10n	DIFFOUT_T10n	High_Speed	A17		
7	VREFB7N0	IO			DIFFIO_RX_T15p	DIFFOUT_T15p	High_Speed	C16		
7	VREFB7N0	IO			DIFFIO_RX_T16p	DIFFOUT_T16p	High_Speed	B16		
7	VREFB7N0	IO			DIFFIO_RX_T15n	DIFFOUT_T15n	High_Speed	C15		
7	VREFB7N0	IO			DIFFIO_RX_T16n	DIFFOUT_T16n	High_Speed	A16		
7	VREFB7N0	IO			DIFFIO_RX_T17p	DIFFOUT_T17p	High_Speed	H14		
7	VREFB7N0	IO						A15		

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	IO Performance	F484	DQS X8	DQS X16
7	VREFB7N0	IO			DIFFIO_RX_T17n	DIFFOUT_T17n	High_Speed	J13		
7	VREFB7N0	IO	VREFB7N0					B15		
7	VREFB7N0	IO			DIFFIO_RX_T18p	DIFFOUT_T18p	High_Speed	C14		
7	VREFB7N0	IO			DIFFIO_RX_T19p	DIFFOUT_T19p	High_Speed	A14		
7	VREFB7N0	IO			DIFFIO_RX_T18n	DIFFOUT_T18n	High_Speed	C13		
7	VREFB7N0	IO			DIFFIO_RX_T19n	DIFFOUT_T19n	High_Speed	B14		
7	VREFB7N0	IO			DIFFIO_RX_T20p	DIFFOUT_T20p	High_Speed	D14		
7	VREFB7N0	IO			DIFFIO_RX_T21p	DIFFOUT_T21p	High_Speed	E12		
7	VREFB7N0	IO			DIFFIO_RX_T20n	DIFFOUT_T20n	High_Speed	E13		
7	VREFB7N0	IO			DIFFIO_RX_T21n	DIFFOUT_T21n	High_Speed	D13		
7	VREFB7N0	IO			DIFFIO_RX_T22p	DIFFOUT_T22p	High_Speed	H13		
7	VREFB7N0	IO			DIFFIO_RX_T23p	DIFFOUT_T23p	High_Speed	A13		
7	VREFB7N0	IO			DIFFIO_RX_T22n	DIFFOUT_T22n	High_Speed	J12		
7	VREFB7N0	IO			DIFFIO_RX_T23n	DIFFOUT_T23n	High_Speed	A12		
7	VREFB7N0	IO			DIFFIO_RX_T24p	DIFFOUT_T24p	High_Speed	C12		
7	VREFB7N0	IO			DIFFIO_RX_T25p	DIFFOUT_T25p	High_Speed	A11		
7	VREFB7N0	IO			DIFFIO_RX_T24n	DIFFOUT_T24n	High_Speed	D12		
7	VREFB7N0	IO			DIFFIO_RX_T25n	DIFFOUT_T25n	High_Speed	A10		
7	VREFB7N0	IO			DIFFIO_RX_T26p	DIFFOUT_T26p	High_Speed	C11		
7	VREFB7N0	IO			DIFFIO_RX_T27p	DIFFOUT_T27p	High_Speed	B12		
7	VREFB7N0	IO			DIFFIO_RX_T26n	DIFFOUT_T26n	High_Speed	C10		
7	VREFB7N0	IO			DIFFIO_RX_T27n	DIFFOUT_T27n	High_Speed	B11		
7	VREFB7N0	IO			DIFFIO_RX_T28p	DIFFOUT_T28p	High_Speed	H12		
7	VREFB7N0	IO			DIFFIO_RX_T29p	DIFFOUT_T29p	High_Speed	A7		
7	VREFB7N0	IO			DIFFIO_RX_T28n	DIFFOUT_T28n	High_Speed	J11		
7	VREFB7N0	IO			DIFFIO_RX_T29n	DIFFOUT_T29n	High_Speed	A8		
7	VREFB7N0	IO			DIFFIO_RX_T30p	DIFFOUT_T30p	High_Speed	B10		
7	VREFB7N0	IO			DIFFIO_RX_T31p	DIFFOUT_T31p	High_Speed	A9		
7	VREFB7N0	IO			DIFFIO_RX_T30n	DIFFOUT_T30n	High_Speed	C9		
7	VREFB7N0	IO			DIFFIO_RX_T31n	DIFFOUT_T31n	High_Speed	B8		
8	VREFB8N0	IO	CLK4p		DIFFIO_RX_T32p	DIFFOUT_T32p	Low_Speed	E11		
8	VREFB8N0	IO			DIFFIO_RX_T33p	DIFFOUT_T33p	Low_Speed	C8		
8	VREFB8N0	IO	CLK4n		DIFFIO_RX_T32n	DIFFOUT_T32n	Low_Speed	E10		
8	VREFB8N0	IO			DIFFIO_RX_T33n	DIFFOUT_T33n	Low_Speed	C7		
8	VREFB8N0	IO	CLK5p		DIFFIO_RX_T34p	DIFFOUT_T34p	Low_Speed	J10		
8	VREFB8N0	IO			DIFFIO_RX_T35p	DIFFOUT_T35p	Low_Speed	B7		
8	VREFB8N0	IO	CLK5n		DIFFIO_RX_T34n	DIFFOUT_T34n	Low_Speed	H11		
8	VREFB8N0	IO			DIFFIO_RX_T35n	DIFFOUT_T35n	Low_Speed	A6		
8	VREFB8N0	IO			DIFFIO_RX_T36p	DIFFOUT_T36p	Low_Speed	D8		
8	VREFB8N0	IO			DIFFIO_RX_T37p	DIFFOUT_T37p	Low_Speed	A5		
8	VREFB8N0	IO		DEV_CLRn	DIFFIO_RX_T36n	DIFFOUT_T36n	Low_Speed	D9		
8	VREFB8N0	IO			DIFFIO_RX_T37n	DIFFOUT_T37n	Low_Speed	A4		
8	VREFB8N0	IO		DEV_OE	DIFFIO_RX_T38p	DIFFOUT_T38p	Low_Speed	D10		
8	VREFB8N0	IO						C6		
8	VREFB8N0	IO			DIFFIO_RX_T38n	DIFFOUT_T38n	Low_Speed	E9		
8	VREFB8N0	IO	VREFB8N0					D7		
8	VREFB8N0	IO		CONFIG_SEL				H10		
8	VREFB8N0	IO			DIFFIO_RX_T39p	DIFFOUT_T39p	Low_Speed	A2		
8	VREFB8N0	Input_only		nCONFIG				H9		
8	VREFB8N0	IO			DIFFIO_RX_T39n	DIFFOUT_T39n	Low_Speed	A3		
8	VREFB8N0	IO			DIFFIO_RX_T40p	DIFFOUT_T40p	Low_Speed	B3		
8	VREFB8N0	IO			DIFFIO_RX_T41p	DIFFOUT_T41p	Low_Speed	B5		
8	VREFB8N0	IO			DIFFIO_RX_T40n	DIFFOUT_T40n	Low_Speed	B4		
8	VREFB8N0	IO			DIFFIO_RX_T41n	DIFFOUT_T41n	Low_Speed	C4		
8	VREFB8N0	IO			DIFFIO_RX_T42p	DIFFOUT_T42p	Low_Speed	E8		
8	VREFB8N0	IO			DIFFIO_RX_T43p	DIFFOUT_T43p	Low_Speed	C5		
8	VREFB8N0	IO		CRC_ERROR	DIFFIO_RX_T42n	DIFFOUT_T42n	Low_Speed	F7		
8	VREFB8N0	IO			DIFFIO_RX_T43n	DIFFOUT_T43n	Low_Speed	D5		
8	VREFB8N0	IO		nSTATUS	DIFFIO_RX_T44p	DIFFOUT_T44p	Low_Speed	G9		
8	VREFB8N0	IO			DIFFIO_RX_T45p	DIFFOUT_T45p	Low_Speed	B2		
8	VREFB8N0	IO		CONF_DONE	DIFFIO_RX_T44n	DIFFOUT_T44n	Low_Speed	F8		
8	VREFB8N0	IO			DIFFIO_RX_T45n	DIFFOUT_T45n	Low_Speed	B1		
8	VREFB8N0	IO	PLL_T_CLKOUTp		DIFFIO_RX_T46p	DIFFOUT_T46p	Low_Speed	D6		
8	VREFB8N0	IO			DIFFIO_RX_T47p	DIFFOUT_T47p	Low_Speed	C3		
8	VREFB8N0	IO	PLL_T_CLKOUTn		DIFFIO_RX_T46n	DIFFOUT_T46n	Low_Speed	E6		
8	VREFB8N0	IO			DIFFIO_RX_T47n	DIFFOUT_T47n	Low_Speed	C2		
		GND						G5		
		GND						J5		
		GND						H5		
		GND						Y9		
		GND						Y15		
		GND						Y12		
		GND						W21		
		GND						V6		
		GND						V2		
		GND						V19		
		GND						U13		
		GND						U10		
		GND						T8		
		GND						T4		
		GND						T16		
		GND						T14		
		GND						R21		
		GND						R19		
		GND						P6		
		GND						P2		
		GND						P17		
		GND						N13		
		GND						N11		
		GND						M7		
		GND						M19		
		GND						M16		
		GND						M10		
		GND						L5		
		GND						L21		
		GND						L17		
		GND						L13		
		GND						K12		

Bank Number	VREF	Pin Name/Function	Optional Function(s)	Configuration Function	Dedicated Tx/Rx Channel	Emulated LVDS Output Channel	IO Performance	F484	DQS X8	DQS X16
		GND						K10		
		GND						J6		
		GND						J2		
		GND						J19		
		GND						J16		
		GND						G8		
		GND						G6		
		GND						G21		
		GND						G18		
		GND						G15		
		GND						F13		
		GND						F10		
		GND						E7		
		GND						E2		
		GND						D4		
		GND						D20		
		GND						D16		
		GND						D11		
		GND						B9		
		GND						B6		
		GND						B18		
		GND						B13		
		GND						AB22		
		GND						AB1		
		GND						AA4		
		GND						AA18		
		GND						A22		
		GND						A1		
		VCC						N12		
		VCC						N10		
		VCC						M13		
		VCC						M12		
		VCC						M11		
		VCC						L12		
		VCC						L11		
		VCC						L10		
		VCC						K13		
		VCC						K11		
		VCC						J7		
		VCCD_PLL1						T7		
		VCCD_PLL2						G16		
		VCCD_PLL3						G7		
		VCCD_PLL4						U16		
		VCCIO1A						L6		
		VCCIO1A						K7		
		VCCIO1B						M6		
		VCCIO1B						L7		
		VCCIO2						R6		
		VCCIO2						P7		
		VCCIO2						N7		
		VCCIO2						N6		
		VCCIO3						U9		
		VCCIO3						U8		
		VCCIO3						T9		
		VCCIO3						T11		
		VCCIO3						T10		
		VCCIO4						U14		
		VCCIO4						U12		
		VCCIO4						U11		
		VCCIO4						T13		
		VCCIO4						T12		
		VCCIO5						T17		
		VCCIO5						R17		
		VCCIO5						R16		
		VCCIO5						P16		
		VCCIO5						N16		
		VCCIO6						N17		
		VCCIO6						M17		
		VCCIO6						L16		
		VCCIO6						K17		
		VCCIO6						K16		
		VCCIO6						J17		
		VCCIO6						H16		
		VCCIO7						G14		
		VCCIO7						G13		
		VCCIO7						G12		
		VCCIO7						F14		
		VCCIO7						F12		
		VCCIO8						G11		
		VCCIO8						G10		
		VCCIO8						F9		
		VCCIO8						F11		
		NC						L3		
		NC						K3		
		NC						F6		
		NC						E5		
		VCCA1						R8		
		VCCA2						H15		
		VCCA3						H6		
		VCCA3						H8		
		VCCA3						H7		
		VCCA4						T15		

Note:
(1) For more information about pin definition and pin connection guidelines, refer to the [MAX 10 FPGA Device Family Pin Connection Guidelines](#).

Date	Version	Changes Made
April 2015	2015.04.07	Initial release.
December 2016	2016.12.23	Removed I/O performance for single-ended pins.
February 2017	2017.02.21	Rebranded as Intel.