

| Bank Number | VREF | Pin Name/Function | Optional Function(s) | Configuration Function | Dedicated Tx/Rx Channel | Emulated LVDS Output Channel | IO Performance | F256 |
|-------------|----------|-------------------|----------------------|------------------------|-------------------------|------------------------------|----------------|------|
| 1A | VREFB1N0 | IO | ADC1IN1 | | DIFFIO_RX_L1n | DIFFOUT_L1n | Low_Speed | F5 |
| 1A | VREFB1N0 | IO | ADC1IN9 | | DIFFIO_RX_L2n | DIFFOUT_L2n | Low_Speed | C4 |
| 1A | VREFB1N0 | IO | ADC1IN2 | | DIFFIO_RX_L1p | DIFFOUT_L1p | Low_Speed | F4 |
| 1A | VREFB1N0 | IO | ADC1IN16 | | DIFFIO_RX_L2p | DIFFOUT_L2p | Low_Speed | C3 |
| 1A | VREFB1N0 | IO | ADC1IN3 | | DIFFIO_RX_L3n | DIFFOUT_L3n | Low_Speed | H5 |
| 1A | VREFB1N0 | IO | ADC1IN11 | | DIFFIO_RX_L4n | DIFFOUT_L4n | Low_Speed | E3 |
| 1A | VREFB1N0 | IO | ADC1IN4 | | DIFFIO_RX_L3p | DIFFOUT_L3p | Low_Speed | G5 |
| 1A | VREFB1N0 | IO | ADC1IN12 | | DIFFIO_RX_L4p | DIFFOUT_L4p | Low_Speed | F2 |
| 1A | VREFB1N0 | IO | ADC1IN5 | | DIFFIO_RX_L5n | DIFFOUT_L5n | Low_Speed | G2 |
| 1A | VREFB1N0 | IO | ADC1IN13 | | DIFFIO_RX_L6n | DIFFOUT_L6n | Low_Speed | C2 |
| 1A | VREFB1N0 | IO | ADC1IN6 | | DIFFIO_RX_L5p | DIFFOUT_L5p | Low_Speed | F1 |
| 1A | VREFB1N0 | IO | ADC1IN14 | | DIFFIO_RX_L6p | DIFFOUT_L6p | Low_Speed | B2 |
| 1A | VREFB1N0 | IO | ADC1IN7 | | DIFFIO_RX_L7n | DIFFOUT_L7n | Low_Speed | E1 |
| 1A | VREFB1N0 | IO | ADC1IN15 | | DIFFIO_RX_L8n | DIFFOUT_L8n | Low_Speed | B1 |
| 1A | VREFB1N0 | IO | ADC1IN8 | | DIFFIO_RX_L7p | DIFFOUT_L7p | Low_Speed | D1 |
| 1A | VREFB1N0 | IO | ADC1IN10 | | 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_L18n | DIFFOUT_L18n | High_Speed | M3 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L19n | DIFFOUT_L19n | High_Speed | L1 |
| 2 | VREFB2N0 | IO | CLK0p | | DIFFIO_RX_L18p | DIFFOUT_L18p | High_Speed | L3 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L19p | DIFFOUT_L19p | High_Speed | K2 |
| 2 | VREFB2N0 | IO | CLK1n | | DIFFIO_RX_L20n | DIFFOUT_L20n | High_Speed | J6 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L21n | DIFFOUT_L21n | High_Speed | M2 |
| 2 | VREFB2N0 | IO | CLK1p | | DIFFIO_RX_L20p | DIFFOUT_L20p | High_Speed | K6 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L21p | DIFFOUT_L21p | High_Speed | L2 |
| 2 | VREFB2N0 | IO | DPCLK0 | | DIFFIO_RX_L22n | DIFFOUT_L22n | High_Speed | N2 |
| 2 | VREFB2N0 | IO | VREFB2N0 | | | | | M1 |
| 2 | VREFB2N0 | IO | DPCLK1 | | DIFFIO_RX_L22p | DIFFOUT_L22p | High_Speed | P1 |
| 2 | VREFB2N0 | IO | | | | | | N1 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L25n | DIFFOUT_L25n | High_Speed | K5 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L25p | DIFFOUT_L25p | High_Speed | L6 |
| 2 | VREFB2N0 | IO | PLL_L_CLKOUTn | | DIFFIO_RX_L27n | DIFFOUT_L27n | High_Speed | N3 |
| 2 | VREFB2N0 | IO | PLL_L_CLKOUTp | | DIFFIO_RX_L27p | DIFFOUT_L27p | 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_B7n | DIFFOUT_B7n | High_Speed | R6 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B8n | DIFFOUT_B8n | High_Speed | T5 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B7p | DIFFOUT_B7p | High_Speed | R5 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B8p | DIFFOUT_B8p | High_Speed | T4 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B9n | DIFFOUT_B9n | High_Speed | M7 |
| 3 | VREFB3N0 | IO | VREFB3N0 | | | | | T7 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B9p | DIFFOUT_B9p | High_Speed | L8 |
| 3 | VREFB3N0 | IO | | | | | | T6 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B10n | DIFFOUT_B10n | High_Speed | R7 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B11n | DIFFOUT_B11n | High_Speed | T8 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B10p | DIFFOUT_B10p | High_Speed | P6 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B11p | DIFFOUT_B11p | High_Speed | R8 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B12n | DIFFOUT_B12n | High_Speed | P9 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B13n | DIFFOUT_B13n | High_Speed | T9 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B12p | DIFFOUT_B12p | High_Speed | P8 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B13p | DIFFOUT_B13p | High_Speed | R9 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B14n | DIFFOUT_B14n | High_Speed | M8 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B14p | DIFFOUT_B14p | High_Speed | M9 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B16n | DIFFOUT_B16n | High_Speed | T11 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B16p | DIFFOUT_B16p | High_Speed | R10 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B18n | DIFFOUT_B18n | High_Speed | P10 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B19n | DIFFOUT_B19n | High_Speed | R11 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B18p | DIFFOUT_B18p | High_Speed | P11 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B19p | DIFFOUT_B19p | High_Speed | R12 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B20n | DIFFOUT_B20n | High_Speed | M10 |
| 4 | VREFB4N0 | IO | VREFB4N0 | | | | | T13 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B20p | DIFFOUT_B20p | High_Speed | L9 |
| 4 | VREFB4N0 | IO | | | | | | T12 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B21n | DIFFOUT_B21n | High_Speed | P13 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B21p | DIFFOUT_B21p | High_Speed | P12 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B27n | DIFFOUT_B27n | High_Speed | M11 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B27p | DIFFOUT_B27p | High_Speed | L10 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R1p | DIFFOUT_R1p | High_Speed | P14 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R2p | DIFFOUT_R2p | High_Speed | T14 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R1n | DIFFOUT_R1n | High_Speed | R14 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R2n | DIFFOUT_R2n | High_Speed | T15 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R3p | DIFFOUT_R3p | High_Speed | L11 |

| Bank Number | VREF | Pin Name/Function | Optional Function(s) | Configuration Function | Dedicated Tx/Rx Channel | Emulated LVDS Output Channel | IO Performance | F256 |
|-------------|----------|-------------------|----------------------|------------------------|-------------------------|------------------------------|----------------|------|
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R3n | DIFFOUT_R3n | High Speed | L12 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R5p | DIFFOUT_R5p | High Speed | N14 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R6p | DIFFOUT_R6p | High Speed | M15 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R5n | DIFFOUT_R5n | High Speed | P15 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R6n | DIFFOUT_R6n | High Speed | M14 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R7p | DIFFOUT_R7p | High Speed | N16 |
| 5 | VREFB5N0 | IO | | | | | | R15 |
| 5 | VREFB5N0 | IO | VREFB5N0 | | DIFFIO_RX_R7n | DIFFOUT_R7n | High Speed | P16 |
| 5 | VREFB5N0 | IO | | | | | | R16 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R8p | DIFFOUT_R8p | High Speed | K11 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R8n | DIFFOUT_R8n | High Speed | K12 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R10p | DIFFOUT_R10p | High Speed | K14 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R11p | DIFFOUT_R11p | High Speed | M16 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R10n | DIFFOUT_R10n | High Speed | L15 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R11n | DIFFOUT_R11n | High Speed | L16 |
| 6 | VREFB6N0 | IO | CLK2p | | DIFFIO_RX_R14p | DIFFOUT_R14p | High Speed | J11 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R15p | DIFFOUT_R15p | High Speed | J14 |
| 6 | VREFB6N0 | IO | CLK2n | | DIFFIO_RX_R14n | DIFFOUT_R14n | High Speed | J12 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R15n | DIFFOUT_R15n | High Speed | K15 |
| 6 | VREFB6N0 | IO | CLK3p | | DIFFIO_RX_R16p | DIFFOUT_R16p | High Speed | J15 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R17p | DIFFOUT_R17p | High Speed | H15 |
| 6 | VREFB6N0 | IO | CLK3n | | DIFFIO_RX_R16n | DIFFOUT_R16n | High Speed | J16 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R17n | DIFFOUT_R17n | High Speed | H16 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R18p | DIFFOUT_R18p | High Speed | D16 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R18n | DIFFOUT_R18n | High Speed | C16 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R20p | DIFFOUT_R20p | High Speed | H11 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R20n | DIFFOUT_R20n | High Speed | H12 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R22p | DIFFOUT_R22p | High Speed | G14 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R23p | DIFFOUT_R23p | High Speed | G16 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R22n | DIFFOUT_R22n | High Speed | G15 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R23n | DIFFOUT_R23n | High Speed | F16 |
| 6 | VREFB6N0 | IO | DPCLK3 | | DIFFIO_RX_R26p | DIFFOUT_R26p | High Speed | G11 |
| 6 | VREFB6N0 | IO | VREFB6N0 | | | | | B15 |
| 6 | VREFB6N0 | IO | DPCLK2 | | DIFFIO_RX_R26n | DIFFOUT_R26n | High Speed | G12 |
| 6 | VREFB6N0 | IO | | | | | | B16 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R27p | DIFFOUT_R27p | High Speed | F14 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R28p | DIFFOUT_R28p | High Speed | E15 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R27n | DIFFOUT_R27n | High Speed | E14 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R28n | DIFFOUT_R28n | High Speed | E16 |
| 6 | VREFB6N0 | IO | PLL_R_CLKOUTp | | DIFFIO_RX_R33p | DIFFOUT_R33p | High Speed | D14 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R34p | DIFFOUT_R34p | High Speed | D15 |
| 6 | VREFB6N0 | IO | PLL_R_CLKOUTn | | DIFFIO_RX_R33n | DIFFOUT_R33n | High Speed | C14 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R34n | DIFFOUT_R34n | High Speed | C15 |
| 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_T3p | DIFFOUT_T3p | High Speed | F11 |
| 7 | VREFB7N0 | IO | | | | | | A14 |
| 7 | VREFB7N0 | IO | VREFB7N0 | | DIFFIO_RX_T3n | DIFFOUT_T3n | High Speed | F12 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T8p | DIFFOUT_T8p | High Speed | A15 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T8n | DIFFOUT_T8n | High Speed | F10 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T10p | DIFFOUT_T10p | High Speed | B13 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T10n | DIFFOUT_T10n | High Speed | A13 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T12p | DIFFOUT_T12p | Low Speed | D9 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T12n | DIFFOUT_T12n | Low Speed | C9 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T14p | DIFFOUT_T14p | Low Speed | F9 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T15p | DIFFOUT_T15p | Low Speed | B12 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T14n | DIFFOUT_T14n | Low Speed | E9 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T15n | DIFFOUT_T15n | Low Speed | B11 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T16p | DIFFOUT_T16p | Low Speed | C10 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T17p | DIFFOUT_T17p | Low Speed | A11 |
| 8 | VREFB8N0 | IO | | DEV_CLRn | DIFFIO_RX_T16n | DIFFOUT_T16n | Low Speed | B10 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T17n | DIFFOUT_T17n | Low Speed | A12 |
| 8 | VREFB8N0 | IO | | DEV_OE | DIFFIO_RX_T18p | DIFFOUT_T18p | Low Speed | B8 |
| 8 | VREFB8N0 | IO | | | | | | A10 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T18n | DIFFOUT_T18n | Low Speed | B7 |
| 8 | VREFB8N0 | IO | VREFB8N0 | | | | | A9 |
| 8 | VREFB8N0 | IO | | CONFIG_SEL | | | | F8 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T19p | DIFFOUT_T19p | Low Speed | B9 |
| 8 | VREFB8N0 | Input_only | | nCONFIG | | | | E8 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T19n | DIFFOUT_T19n | Low Speed | A8 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T20p | DIFFOUT_T20p | Low Speed | B6 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T21p | DIFFOUT_T21p | Low Speed | A7 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T20n | DIFFOUT_T20n | Low Speed | C6 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T21n | DIFFOUT_T21n | Low Speed | A6 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T22p | DIFFOUT_T22p | Low Speed | B5 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T23p | DIFFOUT_T23p | Low Speed | B4 |
| 8 | VREFB8N0 | IO | | CRC_ERROR | DIFFIO_RX_T22n | DIFFOUT_T22n | Low Speed | C5 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T23n | DIFFOUT_T23n | Low Speed | A5 |
| 8 | VREFB8N0 | IO | | nSTATUS | DIFFIO_RX_T24p | DIFFOUT_T24p | Low Speed | F7 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T25p | DIFFOUT_T25p | Low Speed | A3 |
| 8 | VREFB8N0 | IO | | CONF_DONE | DIFFIO_RX_T24n | DIFFOUT_T24n | Low Speed | E7 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T25n | DIFFOUT_T25n | Low Speed | A2 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T26p | DIFFOUT_T26p | Low Speed | B3 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T26n | DIFFOUT_T26n | Low Speed | A4 |
| | | GND | | | | | | T16 |
| | | GND | | | | | | T10 |
| | | GND | | | | | | T1 |
| | | GND | | | | | | R13 |

| Bank Number | VREF | Pin Name/Function | Optional Function(s) | Configuration Function | Dedicated Tx/Rx Channel | Emulated LVDS Output Channel | IO Performance | F256 |
|-------------|------|-------------------|----------------------|------------------------|-------------------------|------------------------------|----------------|------|
| | | GND | | | | | | P7 |
| | | GND | | | | | | P3 |
| | | GND | | | | | | N9 |
| | | GND | | | | | | N15 |
| | | GND | | | | | | N12 |
| | | GND | | | | | | M4 |
| | | GND | | | | | | L14 |
| | | GND | | | | | | K9 |
| | | GND | | | | | | K7 |
| | | GND | | | | | | K3 |
| | | GND | | | | | | K16 |
| | | 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 |
| | | REFGND | | | | | | E2 |
| | | VCC | | | | | | K8 |
| | | VCC | | | | | | K10 |
| | | VCC | | | | | | J9 |
| | | VCC | | | | | | J8 |
| | | VCC | | | | | | J7 |
| | | VCC | | | | | | H9 |
| | | VCC | | | | | | H8 |
| | | VCC | | | | | | H10 |
| | | VCC | | | | | | G9 |
| | | VCC | | | | | | G7 |
| | | VCCD_PLL1 | | | | | | M5 |
| | | VCCD_PLL2 | | | | | | D13 |
| | | 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 |
| | | NC | | | | | | N13 |
| | | NC | | | | | | F3 |
| | | NC | | | | | | D4 |
| | | VCCA1 | | | | | | L5 |
| | | VCCA2 | | | | | | E12 |
| | | VCCA3 | | | | | | D5 |
| | | VCCA4 | | | | | | M12 |
| | | VCCA_ADC | | | | | | E5 |
| | | VCCINT | | | | | | F6 |
| | | ADC_VREF | | | | | | E4 |
| | | ANAIN1 | | | | | | D2 |

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 | U324 |
|-------------|----------|-------------------|----------------------|------------------------|-------------------------|------------------------------|----------------|------|
| 1A | VREFB1N0 | IO | ADC1IN1 | | DIFFIO_RX_L1n | DIFFOUT_L1n | Low_Speed | D4 |
| 1A | VREFB1N0 | IO | ADC1IN9 | | DIFFIO_RX_L2n | DIFFOUT_L2n | Low_Speed | C2 |
| 1A | VREFB1N0 | IO | ADC1IN2 | | DIFFIO_RX_L1p | DIFFOUT_L1p | Low_Speed | E4 |
| 1A | VREFB1N0 | IO | ADC1IN16 | | DIFFIO_RX_L2p | DIFFOUT_L2p | Low_Speed | D2 |
| 1A | VREFB1N0 | IO | ADC1IN3 | | DIFFIO_RX_L3n | DIFFOUT_L3n | Low_Speed | G6 |
| 1A | VREFB1N0 | IO | ADC1IN11 | | DIFFIO_RX_L4n | DIFFOUT_L4n | Low_Speed | B1 |
| 1A | VREFB1N0 | IO | ADC1IN4 | | DIFFIO_RX_L3p | DIFFOUT_L3p | Low_Speed | H6 |
| 1A | VREFB1N0 | IO | ADC1IN12 | | DIFFIO_RX_L4p | DIFFOUT_L4p | Low_Speed | C1 |
| 1A | VREFB1N0 | IO | ADC1IN5 | | DIFFIO_RX_L5n | DIFFOUT_L5n | Low_Speed | F5 |
| 1A | VREFB1N0 | IO | ADC1IN13 | | DIFFIO_RX_L6n | DIFFOUT_L6n | Low_Speed | D1 |
| 1A | VREFB1N0 | IO | ADC1IN6 | | DIFFIO_RX_L5p | DIFFOUT_L5p | Low_Speed | E5 |
| 1A | VREFB1N0 | IO | ADC1IN14 | | DIFFIO_RX_L6p | DIFFOUT_L6p | Low_Speed | E1 |
| 1A | VREFB1N0 | IO | ADC1IN7 | | DIFFIO_RX_L7n | DIFFOUT_L7n | Low_Speed | G3 |
| 1A | VREFB1N0 | IO | ADC1IN15 | | DIFFIO_RX_L8n | DIFFOUT_L8n | Low_Speed | F1 |
| 1A | VREFB1N0 | IO | ADC1IN8 | | DIFFIO_RX_L7p | DIFFOUT_L7p | Low_Speed | F2 |
| 1A | VREFB1N0 | IO | ADC1IN10 | | DIFFIO_RX_L8p | DIFFOUT_L8p | Low_Speed | G1 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L9n | DIFFOUT_L9n | Low_Speed | G7 |
| 1B | VREFB1N0 | IO | | JTAGEN | DIFFIO_RX_L10n | DIFFOUT_L10n | Low_Speed | H2 |
| 1B | VREFB1N0 | IO | | TMS | DIFFIO_RX_L9p | DIFFOUT_L9p | Low_Speed | H7 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L10p | DIFFOUT_L10p | Low_Speed | H1 |
| 1B | VREFB1N0 | IO | | TCK | DIFFIO_RX_L11n | DIFFOUT_L11n | Low_Speed | J7 |
| 1B | VREFB1N0 | IO | VREFB1N0 | | | | | J3 |
| 1B | VREFB1N0 | IO | | TCK | DIFFIO_RX_L11p | DIFFOUT_L11p | Low_Speed | J8 |
| 1B | VREFB1N0 | IO | | | | | | J4 |
| 1B | VREFB1N0 | IO | | TDI | DIFFIO_RX_L12n | DIFFOUT_L12n | Low_Speed | H3 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L13n | DIFFOUT_L13n | Low_Speed | J2 |
| 1B | VREFB1N0 | IO | | TDO | DIFFIO_RX_L12p | DIFFOUT_L12p | Low_Speed | H4 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L13p | DIFFOUT_L13p | Low_Speed | J1 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L14n | DIFFOUT_L14n | Low_Speed | J6 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L15n | DIFFOUT_L15n | Low_Speed | K2 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L14p | DIFFOUT_L14p | Low_Speed | K7 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L15p | DIFFOUT_L15p | Low_Speed | K1 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L16n | DIFFOUT_L16n | Low_Speed | K4 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L17n | DIFFOUT_L17n | Low_Speed | L1 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L16p | DIFFOUT_L16p | Low_Speed | K3 |
| 1B | VREFB1N0 | IO | | | DIFFIO_RX_L17p | DIFFOUT_L17p | Low_Speed | L2 |
| 2 | VREFB2N0 | IO | CLK0n | | DIFFIO_RX_L18n | DIFFOUT_L18n | High_Speed | L3 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L19n | DIFFOUT_L19n | High_Speed | M1 |
| 2 | VREFB2N0 | IO | CLK0p | | DIFFIO_RX_L18p | DIFFOUT_L18p | High_Speed | M3 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L19p | DIFFOUT_L19p | High_Speed | M2 |
| 2 | VREFB2N0 | IO | CLK1n | | DIFFIO_RX_L20n | DIFFOUT_L20n | High_Speed | K8 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L21n | DIFFOUT_L21n | High_Speed | N1 |
| 2 | VREFB2N0 | IO | CLK1p | | DIFFIO_RX_L20p | DIFFOUT_L20p | High_Speed | L8 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L21p | DIFFOUT_L21p | High_Speed | P1 |
| 2 | VREFB2N0 | IO | DPCLK0 | | DIFFIO_RX_L22n | DIFFOUT_L22n | High_Speed | M4 |
| 2 | VREFB2N0 | IO | VREFB2N0 | | | | | R1 |
| 2 | VREFB2N0 | IO | DPCLK1 | | DIFFIO_RX_L22p | DIFFOUT_L22p | High_Speed | N3 |
| 2 | VREFB2N0 | IO | | | | | | R2 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L23n | DIFFOUT_L23n | High_Speed | R3 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L24n | DIFFOUT_L24n | High_Speed | P2 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L23p | DIFFOUT_L23p | High_Speed | T3 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L24p | DIFFOUT_L24p | High_Speed | P3 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L25n | DIFFOUT_L25n | High_Speed | L7 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L26n | DIFFOUT_L26n | High_Speed | T1 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L25p | DIFFOUT_L25p | High_Speed | M7 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L26p | DIFFOUT_L26p | High_Speed | T2 |
| 2 | VREFB2N0 | IO | PLL_L_CLKOUTn | | DIFFIO_RX_L27n | DIFFOUT_L27n | High_Speed | N4 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L28n | DIFFOUT_L28n | High_Speed | U1 |
| 2 | VREFB2N0 | IO | PLL_L_CLKOUTp | | DIFFIO_RX_L27p | DIFFOUT_L27p | High_Speed | P4 |
| 2 | VREFB2N0 | IO | | | DIFFIO_RX_L28p | DIFFOUT_L28p | High_Speed | U2 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B1n | DIFFOUT_B1n | High_Speed | R4 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B2n | DIFFOUT_B2n | High_Speed | U3 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B1p | DIFFOUT_B1p | High_Speed | T4 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B2p | DIFFOUT_B2p | High_Speed | V2 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B3n | DIFFOUT_B3n | High_Speed | P6 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B4n | DIFFOUT_B4n | High_Speed | V3 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B3p | DIFFOUT_B3p | High_Speed | P5 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B4p | DIFFOUT_B4p | High_Speed | V4 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B5n | DIFFOUT_B5n | High_Speed | R5 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B6n | DIFFOUT_B6n | High_Speed | U5 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B5p | DIFFOUT_B5p | High_Speed | R6 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B6p | DIFFOUT_B6p | High_Speed | V5 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B7n | DIFFOUT_B7n | High_Speed | T5 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B8n | DIFFOUT_B8n | High_Speed | T7 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B7p | DIFFOUT_B7p | High_Speed | T6 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B8p | DIFFOUT_B8p | High_Speed | T8 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B9n | DIFFOUT_B9n | High_Speed | N7 |
| 3 | VREFB3N0 | IO | VREFB3N0 | | | | | U6 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B9p | DIFFOUT_B9p | High_Speed | N8 |
| 3 | VREFB3N0 | IO | | | | | | V6 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B10n | DIFFOUT_B10n | High_Speed | R8 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B11n | DIFFOUT_B11n | High_Speed | U7 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B10p | DIFFOUT_B10p | High_Speed | R9 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B11p | DIFFOUT_B11p | High_Speed | V7 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B12n | DIFFOUT_B12n | High_Speed | V9 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B13n | DIFFOUT_B13n | High_Speed | U8 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B12p | DIFFOUT_B12p | High_Speed | U9 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B13p | DIFFOUT_B13p | High_Speed | V8 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B14n | DIFFOUT_B14n | High_Speed | M8 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B15n | DIFFOUT_B15n | High_Speed | V10 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B14p | DIFFOUT_B14p | High_Speed | M9 |

| Bank Number | VREF | Pin Name/Function | Optional Function(s) | Configuration Function | Dedicated Tx/Rx Channel | Emulated LVDS Output Channel | IO Performance | U324 |
|-------------|----------|-------------------|----------------------|------------------------|-------------------------|------------------------------|----------------|------|
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B15p | DIFFOUT_B15p | High Speed | V11 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B16n | DIFFOUT_B16n | High Speed | T9 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B17n | DIFFOUT_B17n | High Speed | V12 |
| 3 | VREFB3N0 | IO | | | DIFFIO_TX_RX_B16p | DIFFOUT_B16p | High Speed | T10 |
| 3 | VREFB3N0 | IO | | | DIFFIO_RX_B17p | DIFFOUT_B17p | High Speed | U11 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B18n | DIFFOUT_B18n | High Speed | P10 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B19n | DIFFOUT_B19n | High Speed | U12 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B18p | DIFFOUT_B18p | High Speed | N11 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B19p | DIFFOUT_B19p | High Speed | U13 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B20n | DIFFOUT_B20n | High Speed | M10 |
| 4 | VREFB4N0 | IO | VREFB4N0 | | | | | T11 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B20p | DIFFOUT_B20p | High Speed | L10 |
| 4 | VREFB4N0 | IO | | | | | | T12 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B21n | DIFFOUT_B21n | High Speed | R10 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B22n | DIFFOUT_B22n | High Speed | V13 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B21p | DIFFOUT_B21p | High Speed | R11 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B22p | DIFFOUT_B22p | High Speed | V14 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B23n | DIFFOUT_B23n | High Speed | R12 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B24n | DIFFOUT_B24n | High Speed | T13 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B23p | DIFFOUT_B23p | High Speed | R13 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B24p | DIFFOUT_B24p | High Speed | T14 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B25n | DIFFOUT_B25n | High Speed | R14 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B26n | DIFFOUT_B26n | High Speed | V15 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B25p | DIFFOUT_B25p | High Speed | T15 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B26p | DIFFOUT_B26p | High Speed | U15 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B27n | DIFFOUT_B27n | High Speed | U16 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B28n | DIFFOUT_B28n | High Speed | V16 |
| 4 | VREFB4N0 | IO | | | DIFFIO_TX_RX_B27p | DIFFOUT_B27p | High Speed | U17 |
| 4 | VREFB4N0 | IO | | | DIFFIO_RX_B28p | DIFFOUT_B28p | High Speed | V17 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R1p | DIFFOUT_R1p | High Speed | N14 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R2p | DIFFOUT_R2p | High Speed | T16 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R1n | DIFFOUT_R1n | High Speed | P14 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R2n | DIFFOUT_R2n | High Speed | R16 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R3p | DIFFOUT_R3p | High Speed | M12 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R4p | DIFFOUT_R4p | High Speed | U18 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R3n | DIFFOUT_R3n | High Speed | M11 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R4n | DIFFOUT_R4n | High Speed | T18 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R5p | DIFFOUT_R5p | High Speed | N15 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R6p | DIFFOUT_R6p | High Speed | N16 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R5n | DIFFOUT_R5n | High Speed | M15 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R6n | DIFFOUT_R6n | High Speed | M16 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R7p | DIFFOUT_R7p | High Speed | R15 |
| 5 | VREFB5N0 | IO | | | | | | P16 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R7n | DIFFOUT_R7n | High Speed | P15 |
| 5 | VREFB5N0 | IO | VREFB5N0 | | | | | P17 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R8p | DIFFOUT_R8p | High Speed | L12 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R9p | DIFFOUT_R9p | High Speed | T17 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R8n | DIFFOUT_R8n | High Speed | L11 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R9n | DIFFOUT_R9n | High Speed | R17 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R10p | DIFFOUT_R10p | High Speed | L15 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R11p | DIFFOUT_R11p | High Speed | L16 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R10n | DIFFOUT_R10n | High Speed | K15 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R11n | DIFFOUT_R11n | High Speed | K16 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R12p | DIFFOUT_R12p | High Speed | R18 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R13p | DIFFOUT_R13p | High Speed | N18 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R12n | DIFFOUT_R12n | High Speed | P18 |
| 5 | VREFB5N0 | IO | | | DIFFIO_RX_R13n | DIFFOUT_R13n | High Speed | M18 |
| 6 | VREFB6N0 | IO | CLK2p | | DIFFIO_RX_R14p | DIFFOUT_R14p | High Speed | K12 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R15p | DIFFOUT_R15p | High Speed | M17 |
| 6 | VREFB6N0 | IO | CLK2n | | DIFFIO_RX_R14n | DIFFOUT_R14n | High Speed | K11 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R15n | DIFFOUT_R15n | High Speed | L18 |
| 6 | VREFB6N0 | IO | CLK3p | | DIFFIO_RX_R16p | DIFFOUT_R16p | High Speed | L17 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R17p | DIFFOUT_R17p | High Speed | K18 |
| 6 | VREFB6N0 | IO | CLK3n | | DIFFIO_RX_R16n | DIFFOUT_R16n | High Speed | K17 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R17n | DIFFOUT_R17n | High Speed | J18 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R18p | DIFFOUT_R18p | High Speed | H18 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R19p | DIFFOUT_R19p | High Speed | H17 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R18n | DIFFOUT_R18n | High Speed | G18 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R19n | DIFFOUT_R19n | High Speed | G17 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R20p | DIFFOUT_R20p | High Speed | J11 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R20n | DIFFOUT_R20n | High Speed | J12 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R22p | DIFFOUT_R22p | High Speed | J15 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R23p | DIFFOUT_R23p | High Speed | J16 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R22n | DIFFOUT_R22n | High Speed | H15 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R23n | DIFFOUT_R23n | High Speed | H16 |
| 6 | VREFB6N0 | IO | DPCLK3 | | DIFFIO_RX_R26p | DIFFOUT_R26p | High Speed | H11 |
| 6 | VREFB6N0 | IO | VREFB6N0 | | | | | F18 |
| 6 | VREFB6N0 | IO | DPCLK2 | | DIFFIO_RX_R26n | DIFFOUT_R26n | High Speed | H12 |
| 6 | VREFB6N0 | IO | | | | | | E18 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R27p | DIFFOUT_R27p | High Speed | F15 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R28p | DIFFOUT_R28p | High Speed | G16 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R27n | DIFFOUT_R27n | High Speed | G15 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R28n | DIFFOUT_R28n | High Speed | F16 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R29p | DIFFOUT_R29p | High Speed | E16 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R30p | DIFFOUT_R30p | High Speed | D18 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R29n | DIFFOUT_R29n | High Speed | D16 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R30n | DIFFOUT_R30n | High Speed | E17 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R31p | DIFFOUT_R31p | High Speed | G11 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R32p | DIFFOUT_R32p | High Speed | C18 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R31n | DIFFOUT_R31n | High Speed | G12 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R32n | DIFFOUT_R32n | High Speed | B18 |

| Bank Number | VREF | Pin Name/Function | Optional Function(s) | Configuration Function | Dedicated Tx/Rx Channel | Emulated LVDS Output Channel | IO Performance | U324 |
|-------------|----------|-------------------|----------------------|------------------------|-------------------------|------------------------------|----------------|------|
| 6 | VREFB6N0 | IO | PLL_R_CLKOUTp | | DIFFIO_RX_R33p | DIFFOUT_R33p | High Speed | E15 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R34p | DIFFOUT_R34p | High Speed | D17 |
| 6 | VREFB6N0 | IO | PLL_R_CLKOUTn | | DIFFIO_RX_R33n | DIFFOUT_R33n | High Speed | D15 |
| 6 | VREFB6N0 | IO | | | DIFFIO_RX_R34n | DIFFOUT_R34n | High Speed | C17 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T1p | DIFFOUT_T1p | High Speed | E14 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T2p | DIFFOUT_T2p | High Speed | B17 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T1n | DIFFOUT_T1n | High Speed | D14 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T2n | DIFFOUT_T2n | High Speed | B16 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T3p | DIFFOUT_T3p | High Speed | D12 |
| 7 | VREFB7N0 | IO | | | | | | A17 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T3n | DIFFOUT_T3n | High Speed | D13 |
| 7 | VREFB7N0 | IO | VREFB7N0 | | | | | A16 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T4p | DIFFOUT_T4p | High Speed | C16 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T5p | DIFFOUT_T5p | High Speed | A15 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T4n | DIFFOUT_T4n | High Speed | C15 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T5n | DIFFOUT_T5n | High Speed | A14 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T6p | DIFFOUT_T6p | High Speed | C14 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T7p | DIFFOUT_T7p | High Speed | B14 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T6n | DIFFOUT_T6n | High Speed | C13 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T7n | DIFFOUT_T7n | High Speed | B13 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T8p | DIFFOUT_T8p | High Speed | F11 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T9p | DIFFOUT_T9p | High Speed | C12 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T8n | DIFFOUT_T8n | High Speed | F12 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T9n | DIFFOUT_T9n | High Speed | B12 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T10p | DIFFOUT_T10p | High Speed | C11 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T11p | DIFFOUT_T11p | High Speed | A13 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T10n | DIFFOUT_T10n | High Speed | B11 |
| 7 | VREFB7N0 | IO | | | DIFFIO_RX_T11n | DIFFOUT_T11n | High Speed | A12 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T12p | DIFFOUT_T12p | Low Speed | D10 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T13p | DIFFOUT_T13p | Low Speed | A11 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T12n | DIFFOUT_T12n | Low Speed | D9 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T13n | DIFFOUT_T13n | Low Speed | A10 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T14p | DIFFOUT_T14p | Low Speed | F10 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T15p | DIFFOUT_T15p | Low Speed | A9 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T14n | DIFFOUT_T14n | Low Speed | G10 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T15n | DIFFOUT_T15n | Low Speed | A8 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T16p | DIFFOUT_T16p | Low Speed | B9 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T17p | DIFFOUT_T17p | Low Speed | C10 |
| 8 | VREFB8N0 | IO | | DEV_CLRn | DIFFIO_RX_T16n | DIFFOUT_T16n | Low Speed | B8 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T17n | DIFFOUT_T17n | Low Speed | C9 |
| 8 | VREFB8N0 | IO | | DEV_OE | DIFFIO_RX_T18p | DIFFOUT_T18p | Low Speed | D8 |
| 8 | VREFB8N0 | IO | | | | | | A7 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T18n | DIFFOUT_T18n | Low Speed | D7 |
| 8 | VREFB8N0 | IO | VREFB8N0 | | | | | B7 |
| 8 | VREFB8N0 | IO | | CONFIG_SEL | | | | G9 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T19p | DIFFOUT_T19p | Low Speed | A6 |
| 8 | VREFB8N0 | input_only | | nCONFIG | | | | H9 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T19n | DIFFOUT_T19n | Low Speed | A5 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T20p | DIFFOUT_T20p | Low Speed | C6 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T21p | DIFFOUT_T21p | Low Speed | C8 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T20n | DIFFOUT_T20n | Low Speed | B5 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T21n | DIFFOUT_T21n | Low Speed | C7 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T22p | DIFFOUT_T22p | Low Speed | C5 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T23p | DIFFOUT_T23p | Low Speed | A4 |
| 8 | VREFB8N0 | IO | | CRC_ERROR | DIFFIO_RX_T22n | DIFFOUT_T22n | Low Speed | C4 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T23n | DIFFOUT_T23n | Low Speed | B4 |
| 8 | VREFB8N0 | IO | | nSTATUS | DIFFIO_RX_T24p | DIFFOUT_T24p | Low Speed | G8 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T25p | DIFFOUT_T25p | Low Speed | A3 |
| 8 | VREFB8N0 | IO | | CONF_DONE | DIFFIO_RX_T24n | DIFFOUT_T24n | Low Speed | H8 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T25n | DIFFOUT_T25n | Low Speed | B3 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T26p | DIFFOUT_T26p | Low Speed | D6 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T27p | DIFFOUT_T27p | Low Speed | A2 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T26n | DIFFOUT_T26n | Low Speed | D5 |
| 8 | VREFB8N0 | IO | | | DIFFIO_RX_T27n | DIFFOUT_T27n | Low Speed | B2 |
| | | GND | | | | | | V18 |
| | | GND | | | | | | V1 |
| | | GND | | | | | | U4 |
| | | GND | | | | | | U14 |
| | | GND | | | | | | U10 |
| | | GND | | | | | | R7 |
| | | GND | | | | | | N5 |
| | | GND | | | | | | N2 |
| | | GND | | | | | | N17 |
| | | GND | | | | | | N12 |
| | | GND | | | | | | N10 |
| | | GND | | | | | | M14 |
| | | GND | | | | | | L4 |
| | | GND | | | | | | K9 |
| | | GND | | | | | | K6 |
| | | GND | | | | | | K13 |
| | | GND | | | | | | J17 |
| | | GND | | | | | | J10 |
| | | GND | | | | | | H14 |
| | | GND | | | | | | G4 |
| | | GND | | | | | | G2 |
| | | GND | | | | | | F8 |
| | | GND | | | | | | F17 |
| | | GND | | | | | | E6 |
| | | GND | | | | | | E13 |
| | | GND | | | | | | E10 |
| | | GND | | | | | | D3 |

| Bank Number | VREF | Pin Name/Function | Optional Function(s) | Configuration Function | Dedicated Tx/Rx Channel | Emulated LVDS Output Channel | IO Performance | U324 |
|-------------|------|-------------------|----------------------|------------------------|-------------------------|------------------------------|----------------|------|
| | | GND | | | | | | B6 |
| | | GND | | | | | | B15 |
| | | GND | | | | | | B10 |
| | | GND | | | | | | A18 |
| | | GND | | | | | | A1 |
| | | REFGND | | | | | | E3 |
| | | VCC | | | | | | L9 |
| | | VCC | | | | | | K10 |
| | | VCC | | | | | | J9 |
| | | VCC | | | | | | H10 |
| | | VCCD_PLL1 | | | | | | N6 |
| | | VCCD_PLL2 | | | | | | F13 |
| | | VCCIO1A | | | | | | H5 |
| | | VCCIO1A | | | | | | G5 |
| | | VCCIO1B | | | | | | K5 |
| | | VCCIO1B | | | | | | J5 |
| | | VCCIO2 | | | | | | M5 |
| | | VCCIO2 | | | | | | L6 |
| | | VCCIO2 | | | | | | L5 |
| | | VCCIO3 | | | | | | P9 |
| | | VCCIO3 | | | | | | P8 |
| | | VCCIO3 | | | | | | P7 |
| | | VCCIO3 | | | | | | N9 |
| | | VCCIO4 | | | | | | P12 |
| | | VCCIO4 | | | | | | P11 |
| | | VCCIO5 | | | | | | M13 |
| | | VCCIO5 | | | | | | L14 |
| | | VCCIO5 | | | | | | L13 |
| | | VCCIO5 | | | | | | K14 |
| | | VCCIO6 | | | | | | J14 |
| | | VCCIO6 | | | | | | J13 |
| | | VCCIO6 | | | | | | H13 |
| | | VCCIO6 | | | | | | G14 |
| | | VCCIO6 | | | | | | G13 |
| | | VCCIO7 | | | | | | E12 |
| | | VCCIO7 | | | | | | E11 |
| | | VCCIO7 | | | | | | D11 |
| | | VCCIO8 | | | | | | F9 |
| | | VCCIO8 | | | | | | E9 |
| | | VCCIO8 | | | | | | E8 |
| | | VCCIO8 | | | | | | E7 |
| | | NC | | | | | | N13 |
| | | NC | | | | | | F7 |
| | | VCCA1 | | | | | | M6 |
| | | VCCA2 | | | | | | F14 |
| | | VCCA3 | | | | | | F6 |
| | | VCCA4 | | | | | | P13 |
| | | VCCA_ADC | | | | | | F4 |
| | | VCCINT | | | | | | C3 |
| | | ADC_VREF | | | | | | F3 |
| | | ANAIN1 | | | | | | E2 |

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 |
|----------------|------------|--|
| September 2014 | 2014.09.22 | Initial release. |
| December 2014 | 2014.12.15 | -Updated the BOOT_SEL pin name to CONFIG_SEL pin name. -Removed differential pair pins for non-differential function support. |
| December 2016 | 2016.12.23 | Removed I/O performance for single-ended pins. |
| February 2017 | 2017.02.21 | Rebranded as Intel. |