



| Bank number | IO Module (Note 1) | VERF | Pin Function | Optional Function | Configuration Function | Dedicated Tx/Rx Channel with OCT RD | Emulated LVDS Output Channel/ Input Channel with no OCT RD (Note 2) | F1152 | F780 | F572 | DQS for X4 for F1152 (Note 3) | DQS for X16/X18 for F1152 (Note 3) | DQS for X32/X36 for F1152 (Note 3) | DQS for X4 for F780 | DQS for X8/X9 for F780 (Note 3) | DQS for X16/X18 for F780 (Note 3) | DQS for X32/X36 for F780 (Note 3) | DQS for X4 for F572 | DQS for X8/X9 for F572 (Note 3) | DQS for X16/X18 for F572 (Note 3) |
|-------------|--------------------|-------------|--------------|-------------------|------------------------|-------------------------------------|---|-------|------|------|-------------------------------|------------------------------------|------------------------------------|---------------------|---------------------------------|-----------------------------------|-----------------------------------|---------------------|---------------------------------|-----------------------------------|
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_RX_R0m | DIFFD0T0_R0m | A64 | A41 | U0 | DQ12R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_RX_R0p | DIFFD0T0_R0p | A63 | A40 | A01 | DQ12R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_RX_R0b | DIFFD0T0_R0b | A64 | V1 | U0 | DQ12R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_TX_R10m | DIFFD0T0_R10m | A61 | V3 | V3 | DQ12R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_TX_R10p | DIFFD0T0_R10p | Y11 | P5 | T6 | DQ12R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_TX_R10b | DIFFD0T0_R10b | A62 | V4 | V4 | DQ12R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_TX_R11a | DIFFD0T0_R11a | A64 | V1 | W2 | DQ12R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_TX_R11b | DIFFD0T0_R11b | A61 | W2 | A01 | DQ11R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_TX_R11p | DIFFD0T0_R11p | V5 | V1 | V3 | DQ11R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_RX_R15a | DIFFD0T0_R15a | V1 | W3 | A03 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_TX_R15a | DIFFD0T0_R15a | V3 | R1 | V1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_RX_R12a | DIFFD0T0_R12a | V3 | U4 | A61 | DQ11R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_TX_R12a | DIFFD0T0_R12a | W10 | P6 | P5 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R003 | UREFBAND_K0 | | | | DIFFD0_RX_R12p | DIFFD0T0_R12p | V4 | U5 | A02 | DQ11R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_TX_R13a | DIFFD0T0_R13a | V6 | U3 | A01 | DQ11R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_TX_R13b | DIFFD0T0_R13b | W1 | V7 | V7 | DQ11R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_TX_R13p | DIFFD0T0_R13p | W7 | T4 | A01 | DQ11R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_RX_R14a | DIFFD0T0_R14a | W10 | N6 | R7 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_RX_R14b | DIFFD0T0_R14b | V63 | U1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_TX_R14a | DIFFD0T0_R14a | W11 | M6 | P7 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_RX_R14p | DIFFD0T0_R14p | V6 | T1 | R4 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_RX_R15a | DIFFD0T0_R15a | V3 | R1 | V1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_TX_R15a | DIFFD0T0_R15a | V4 | R4 | V1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_RX_R15p | DIFFD0T0_R15p | V7 | R5 | W1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_TX_R15p | DIFFD0T0_R15p | V2 | R2 | V2 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_RX_R16a | DIFFD0T0_R16a | V7 | P3 | T1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_TX_R16p | DIFFD0T0_R16p | V12 | L6 | N7 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R004 | UREFBAND_K0 | | | | DIFFD0_RX_R16p | DIFFD0T0_R16p | U7 | T7 | T4 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | UREFBAND_CLK0 | | DIFFCLK_0n | | | | | V5 | P2 | P3 | | | | | | | | | | |
| EA | UREFBAND_CLK0 | | DIFFCLK_0p | | | | | V6 | N1 | N2 | | | | | | | | | | |
| EA | UREFBAND_CLK0 | | DIFFCLK_0b | | | | | U6 | N1 | N3 | | | | | | | | | | |
| EA | UREFBAND_CLK11 | | DIFFCLK_3a | | | | | V5 | M1 | N4 | | | | | | | | | | |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_TX_R17a | DIFFD0T0_R17a | V11 | M2 | M3 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_TX_R17b | DIFFD0T0_R17b | R7 | R1 | R1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_RX_R17p | DIFFD0T0_R17p | U2 | L3 | M4 | | | | | | | | | | |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_TX_R18a | DIFFD0T0_R18a | V10 | M6 | M7 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_RX_R18b | DIFFD0T0_R18b | M3 | M3 | M7 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_TX_R18p | DIFFD0T0_R18p | U11 | L7 | L7 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_RX_R19a | DIFFD0T0_R19a | R1 | M4 | M4 | | | | | | | | | | |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_TX_R19b | DIFFD0T0_R19b | P1 | U7 | L1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_RX_R19p | DIFFD0T0_R19p | R2 | J3 | K1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_TX_R20a | DIFFD0T0_R20a | U4 | H1 | L4 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_RX_R20b | DIFFD0T0_R20b | N1 | K3 | K2 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_TX_R20p | DIFFD0T0_R20p | U7 | U7 | U7 | | | | | | | | | | |
| EA | R005 | UREFBAND_K0 | | | | DIFFD0_RX_R20p | DIFFD0T0_R20p | N7 | L4 | K3 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_TX_R21a | DIFFD0T0_R21a | T4 | G1 | J1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_RX_R21b | DIFFD0T0_R21b | R5 | R1 | J1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_TX_R21p | DIFFD0T0_R21p | R4 | E1 | H1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_RX_R21p | DIFFD0T0_R21p | R6 | F2 | J4 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_TX_R22a | DIFFD0T0_R22a | R10 | R7 | J5 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_RX_R22b | DIFFD0T0_R22b | R11 | U8 | J6 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_TX_R22p | DIFFD0T0_R22p | M2 | G1 | G2 | | | | | | | | | | |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_RX_R22p | DIFFD0T0_R22p | L1 | L4 | F1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_TX_R23a | DIFFD0T0_R23a | R4 | H4 | H4 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_RX_R23b | DIFFD0T0_R23b | R3 | R8 | H5 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_TX_R23p | DIFFD0T0_R23p | R8 | R8 | H6 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_RX_R24a | DIFFD0T0_R24a | H1 | H1 | H1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R006 | UREFBAND_K0 | | | | DIFFD0_TX_R24p | DIFFD0T0_R24p | T10 | R9 | H7 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_RX_R25a | DIFFD0T0_R25a | J2 | P5 | F3 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_TX_R25p | DIFFD0T0_R25p | H1 | H1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_RX_R25p | DIFFD0T0_R25p | G1 | G1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_TX_R26a | DIFFD0T0_R26a | E1 | E1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_RX_R26b | DIFFD0T0_R26b | M3 | M3 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_TX_R26p | DIFFD0T0_R26p | D2 | D2 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_RX_R26p | DIFFD0T0_R26p | D1 | D1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_TX_R27a | DIFFD0T0_R27a | M3 | M3 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_RX_R27b | DIFFD0T0_R27b | M3 | M3 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_TX_R27p | DIFFD0T0_R27p | N5 | N5 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_RX_R28a | DIFFD0T0_R28a | P9 | P9 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_TX_R28p | DIFFD0T0_R28p | C1 | C1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R007 | UREFBAND_K0 | | | | DIFFD0_RX_R29a | DIFFD0T0_R29a | M2 | B1 | D1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R008 | UREFBAND_K0 | | | DAT4 | DIFFD0_TX_R29b | DIFFD0T0_R29b | K2 | B1 | D1 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R008 | UREFBAND_K0 | | | DAT4 | DIFFD0_RX_R29b | DIFFD0T0_R29b | M4 | C2 | E3 | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R | DQ0R |
| EA | R008 | UREFBAND_K0 | | | DAT4 | DIFFD0_TX_R30a | DIFFD0T0_R30a | K3 | A0 | D2</ | | | | | | | | | | |



| Bank number | IO Module (Note 1) | USERF | Pin Function | Optional Function | Configuration Function | Dedicated Tx/Rx Channel with OCT RD | Emulated LVDS Output Channel/ Dedicated LVDS Input Channel with no OCT RD (Note 2) | F152 | F780 | F572 | DQS for X4 for F152 (Note 3) | DQS for X8/X9 for F1152 (Note 3) | DQS for X16/X18 for F1152 (Note 3) | DQS for X32/X36 for F1152 (Note 3) | DQS for X4 for F780 | DQS for X8/X9 for F780 (Note 3) | DQS for X16/X18 for F780 (Note 3) | DQS for X32/X36 for F780 (Note 3) | DQS for X4 for F572 | DQS for X8/X9 for F572 (Note 3) | DQS for X16/X18 for F572 (Note 3) |
|-------------|--------------------|--------------|---------------|-------------------|------------------------|-------------------------------------|--|------|------|------|------------------------------|----------------------------------|------------------------------------|------------------------------------|---------------------|---------------------------------|-----------------------------------|-----------------------------------|---------------------|---------------------------------|-----------------------------------|
| IA | TK08 | USERFBAND_K0 | DIFFRX_RX_T8c | DIFFEQUT_T8c | | D13 | B3 | | | | DQ15T | DQ0T | DQ0T | DQ13T | DQ0T | DQ0T | DQ0T | DQ0T | | | |
| IA | TK08 | USERFBAND_K0 | DIFFRX_RX_T8b | DIFFEQUT_T8b | | D13 | A3 | | | | DQ15T | DQ0T | DQ0T | DQ13T | DQ0T | DQ0T | DQ0T | DQ0T | | | |
| IA | TK08 | USERFBAND_K0 | DIFFRX_RX_T8a | DIFFEQUT_T8a | | A31 | A4 | | | | DQ15T | DQ0T | DQ0T | DQ13T | DQ0T | DQ0T | DQ0T | DQ0T | | | |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7c | DIFFEQUT_T7c | | B3 | E7 | D6 | | | DQ14T | DQ0T | DQ0T | DQ12T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7b | DIFFEQUT_T7b | | K16 | G11 | H9 | | | DQ14T | DQ0T | DQ0T | DQ12T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7a | DIFFEQUT_T7a | | A31 | D7 | D7 | | | DQ14T | DQ0T | DQ0T | DQ12T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7d | DIFFEQUT_T7d | | J16 | E11 | G9 | | | DQ14T | DQ0T | DQ0T | DQ12T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7e | DIFFEQUT_T7e | | A4 | D6 | D6 | | | DQ14T | DQ0T | DQ0T | DQ12T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7f | DIFFEQUT_T7f | | G14 | E9 | G4 | | | DQ14T | DQ0T | DQ0T | DQ12T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7g | DIFFEQUT_T7g | | A4 | E5 | A4 | | | DQ14T | DQ0T | DQ0T | DQ12T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7h | DIFFEQUT_T7h | | E15 | D9 | B4 | | | DQ14T | DQ0T | DQ0T | DQ12T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7i | DIFFEQUT_T7i | | C9 | C7 | A3 | | | DQ13T | DQ0T | DQ0T | DQ11T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7j | DIFFEQUT_T7j | | L16 | J12 | F5 | | | DQ13T | DQ0T | DQ0T | DQ11T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7k | DIFFEQUT_T7k | | B9 | C6 | A2 | | | DQ13T | DQ0T | DQ0T | DQ11T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7l | DIFFEQUT_T7l | | A37 | G11 | E8 | | | DQ13T | DQ0T | DQ0T | DQ11T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7m | DIFFEQUT_T7m | | B6 | D8 | D8 | | | DQ13T | DQ0T | DQ0T | DQ11T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7n | DIFFEQUT_T7n | | B7 | D10 | A6 | | | DQ13T | DQ0T | DQ0T | DQ11T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7o | DIFFEQUT_T7o | | A6 | D8 | D7 | | | DQ13T | DQ0T | DQ0T | DQ11T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK07 | USERFBAND_K0 | DIFFRX_RX_T7p | DIFFEQUT_T7p | | A7 | C10 | A5 | | | DQ13T | DQ0T | DQ0T | DQ11T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6c | DIFFEQUT_T6c | | D14 | E16 | D3 | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6b | DIFFEQUT_T6b | | J17 | E12 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6a | DIFFEQUT_T6a | | C16 | D12 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6d | DIFFEQUT_T6d | | H16 | F15 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6e | DIFFEQUT_T6e | | A9 | C9 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6f | DIFFEQUT_T6f | | E15 | D11 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6g | DIFFEQUT_T6g | | A8 | B9 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6h | DIFFEQUT_T6h | | C13 | G13 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6i | DIFFEQUT_T6i | | E15 | C11 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6j | DIFFEQUT_T6j | | H16 | K13 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6k | DIFFEQUT_T6k | | C12 | F13 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6l | DIFFEQUT_T6l | | D18 | K12 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6m | DIFFEQUT_T6m | | E15 | K14 | | | | DQ12T | DQ0T | DQ0T | DQ10T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6n | DIFFEQUT_T6n | | G16 | C13 | | | | DQ11T | DQ0T | DQ0T | DQ09T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6o | DIFFEQUT_T6o | | E16 | D13 | | | | DQ11T | DQ0T | DQ0T | DQ09T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6p | DIFFEQUT_T6p | | H16 | E16 | | | | DQ11T | DQ0T | DQ0T | DQ09T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6q | DIFFEQUT_T6q | | A11 | A9 | A7 | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK06 | USERFBAND_K0 | DIFFRX_RX_T6r | DIFFEQUT_T6r | | B13 | BB | DA | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5c | DIFFEQUT_T5c | | G17 | K14 | | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5b | DIFFEQUT_T5b | | B12 | AA | CA | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5a | DIFFEQUT_T5a | | A10 | A14 | A10 | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5d | DIFFEQUT_T5d | | A12 | A10 | | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5e | DIFFEQUT_T5e | | B10 | AA | BF | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5f | DIFFEQUT_T5f | | A11 | A9 | A7 | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5g | DIFFEQUT_T5g | | B10 | AA | BF | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5h | DIFFEQUT_T5h | | A14 | B12 | | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5i | DIFFEQUT_T5i | | A17 | G14 | F10 | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5j | DIFFEQUT_T5j | | M13 | G11 | C10 | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5k | DIFFEQUT_T5k | | M16 | F14 | E10 | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5l | DIFFEQUT_T5l | | B15 | A13 | BB | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5m | DIFFEQUT_T5m | | B16 | A15 | | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5n | DIFFEQUT_T5n | | A15 | A12 | AA | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5o | DIFFEQUT_T5o | | A16 | A14 | A10 | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5p | DIFFEQUT_T5p | | A18 | B16 | A10 | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5q | DIFFEQUT_T5q | | K18 | D14 | F12 | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK05 | USERFBAND_K0 | DIFFRX_RX_T5r | DIFFEQUT_T5r | | F17 | C16 | D11 | | | DQ10T | DQ0T | DQ0T | DQ08T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4c | DIFFEQUT_T4c | | J16 | C14 | F11 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4b | DIFFEQUT_T4b | | D16 | C16 | E10 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4a | DIFFEQUT_T4a | | N19 | F16 | E13 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4d | DIFFEQUT_T4d | | D17 | B15 | D12 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4e | DIFFEQUT_T4e | | M19 | F16 | D13 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4f | DIFFEQUT_T4f | | C18 | A18 | C12 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4g | DIFFEQUT_T4g | | A18 | B16 | A12 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4h | DIFFEQUT_T4h | | B17 | A17 | B12 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4i | DIFFEQUT_T4i | | A17 | A16 | A11 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4j | DIFFEQUT_T4j | | B17 | A16 | A11 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4k | DIFFEQUT_T4k | | G19 | H15 | G13 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4l | DIFFEQUT_T4l | | A13 | D18 | A14 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4m | DIFFEQUT_T4m | | F19 | G15 | F13 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4n | DIFFEQUT_T4n | | D21 | C19 | B15 | | | DQ08T | DQ0T | DQ0T | DQ06T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T | DQ0T |
| IA | TK04 | USERFBAND_K0 | DIFFRX_RX_T4o | | | | | | | | | | | | | | | | | | |



| Bank number | IO Module (Note 1) | VREF | Pin Function | Optional Function | Configuration Function | Dedicated Tx/Rx Channel with OCT Rd | Emulated LVDS Output Channel/ Dedicated LVDS Input Channel with no OCT Rd (Note 2) | F1152 | F780 | F572 | DQS for X4 for F1152 (Note 3) | DQS for X8/X9 for F1152 (Note 3) | DQS for X16/X18 for F1152 (Note 3) | DQS for X32/X36 for F1152 (Note 3) | DQS for X4 for F780 | DQS for X8/X9 for F780 (Note 3) | DQS for X16/X18 for F780 (Note 3) | DQS for X32/X36 for F780 (Note 3) | DQS for X4 for F572 | DQS for X8/X9 for F572 (Note 3) | DQS for X16/X18 for F572 (Note 3) | | |
|-------------|--------------------|------|--------------|-------------------|------------------------|-------------------------------------|---|-------|------|------|-------------------------------|----------------------------------|------------------------------------|------------------------------------|---------------------|---------------------------------|-----------------------------------|-----------------------------------|---------------------|---------------------------------|-----------------------------------|--|--|
| | | | GND | | | | | W18 | L11 | E20 | | | | | | | | | | | | | |
| | | | GND | | | | | W16 | H6 | E11 | | | | | | | | | | | | | |
| | | | GND | | | | | W14 | H17 | B2 | | | | | | | | | | | | | |
| | | | GND | | | | | W11 | G0 | AG8 | | | | | | | | | | | | | |
| | | | GND | | | | | V23 | E20 | AG17 | | | | | | | | | | | | | |
| | | | GND | | | | | V21 | E11 | N13 | | | | | | | | | | | | | |
| | | | GND | | | | | V19 | B2 | W18 | | | | | | | | | | | | | |
| | | | GND | | | | | V16 | AG8 | M10 | | | | | | | | | | | | | |
| | | | GND | | | | | V13 | AD14 | L2 | | | | | | | | | | | | | |
| | | | GND | | | | | U22 | AD20 | L13 | | | | | | | | | | | | | |
| | | | GND | | | | | U20 | AD14 | K16 | | | | | | | | | | | | | |
| | | | GND | | | | | U18 | AD20 | K20 | | | | | | | | | | | | | |
| | | | GND | | | | | U16 | AA11 | J13 | | | | | | | | | | | | | |
| | | | GND | | | | | U14 | U18 | H20 | | | | | | | | | | | | | |
| | | | GND | | | | | T8 | H15 | H11 | | | | | | | | | | | | | |
| | | | GND | | | | | T5 | H11 | EA | | | | | | | | | | | | | |
| | | | GND | | | | | T3 | T5 | E14 | | | | | | | | | | | | | |
| | | | GND | | | | | T21 | T2 | B20 | | | | | | | | | | | | | |
| | | | GND | | | | | T2 | T16 | B11 | | | | | | | | | | | | | |
| | | | GND | | | | | T19 | T12 | AG2 | | | | | | | | | | | | | |
| | | | GND | | | | | T17 | B0 | | | | | | | | | | | | | | |
| | | | GND | | | | | T15 | R17 | | | | | | | | | | | | | | |
| | | | GND | | | | | T13 | R11 | | | | | | | | | | | | | | |
| | | | GND | | | | | T11 | P16 | | | | | | | | | | | | | | |
| | | | GND | | | | | R22 | P10 | | | | | | | | | | | | | | |
| | | | GND | | | | | R20 | N8 | | | | | | | | | | | | | | |
| | | | GND | | | | | R18 | N2 | | | | | | | | | | | | | | |
| | | | GND | | | | | R16 | N17 | | | | | | | | | | | | | | |
| | | | GND | | | | | R14 | N13 | | | | | | | | | | | | | | |
| | | | GND | | | | | P8 | M18 | | | | | | | | | | | | | | |
| | | | GND | | | | | P5 | M14 | | | | | | | | | | | | | | |
| | | | GND | | | | | P25 | M10 | | | | | | | | | | | | | | |
| | | | GND | | | | | P21 | L4 | | | | | | | | | | | | | | |
| | | | GND | | | | | P21 | L2 | | | | | | | | | | | | | | |
| | | | GND | | | | | P19 | L4 | | | | | | | | | | | | | | |
| | | | GND | | | | | P19 | H8 | | | | | | | | | | | | | | |
| | | | GND | | | | | P17 | H2 | | | | | | | | | | | | | | |
| | | | GND | | | | | P15 | H11 | | | | | | | | | | | | | | |
| | | | GND | | | | | P13 | E23 | | | | | | | | | | | | | | |
| | | | GND | | | | | P11 | E14 | | | | | | | | | | | | | | |
| | | | GND | | | | | N24 | B20 | | | | | | | | | | | | | | |
| | | | GND | | | | | N22 | B11 | | | | | | | | | | | | | | |
| | | | GND | | | | | N18 | AG17 | | | | | | | | | | | | | | |
| | | | GND | | | | | N16 | AG2 | | | | | | | | | | | | | | |
| | | | GND | | | | | N14 | AD14 | | | | | | | | | | | | | | |
| | | | GND | | | | | N12 | AA5 | | | | | | | | | | | | | | |
| | | | GND | | | | | L8 | AA14 | | | | | | | | | | | | | | |
| | | | GND | | | | | L5 | A20 | | | | | | | | | | | | | | |
| | | | GND | | | | | L28 | H14 | | | | | | | | | | | | | | |
| | | | GND | | | | | L23 | E4 | | | | | | | | | | | | | | |
| | | | GND | | | | | L20 | E17 | | | | | | | | | | | | | | |
| | | | GND | | | | | L17 | H6 | | | | | | | | | | | | | | |
| | | | GND | | | | | L14 | B14 | | | | | | | | | | | | | | |
| | | | GND | | | | | L14 | AG2 | | | | | | | | | | | | | | |
| | | | GND | | | | | K10 | AG8 | | | | | | | | | | | | | | |
| | | | GND | | | | | J8 | AD17 | | | | | | | | | | | | | | |
| | | | GND | | | | | H8 | AG8 | | | | | | | | | | | | | | |
| | | | GND | | | | | H5 | AA17 | | | | | | | | | | | | | | |
| | | | GND | | | | | H29 | EA | | | | | | | | | | | | | | |
| | | | GND | | | | | H26 | E2 | | | | | | | | | | | | | | |
| | | | GND | | | | | J44 | BA | | | | | | | | | | | | | | |
| | | | GND | | | | | H20 | B17 | | | | | | | | | | | | | | |
| | | | GND | | | | | H2 | AG5 | | | | | | | | | | | | | | |
| | | | GND | | | | | H17 | AG11 | | | | | | | | | | | | | | |
| | | | GND | | | | | H14 | AG2 | | | | | | | | | | | | | | |
| | | | GND | | | | | H11 | AB23 | | | | | | | | | | | | | | |
| | | | GND | | | | | E5 | AG2 | | | | | | | | | | | | | | |
| | | | GND | | | | | E29 | | | | | | | | | | | | | | | |
| | | | GND | | | | | E26 | | | | | | | | | | | | | | | |
| | | | GND | | | | | E23 | | | | | | | | | | | | | | | |
| | | | GND | | | | | E20 | | | | | | | | | | | | | | | |
| | | | GND | | | | | E2 | | | | | | | | | | | | | | | |
| | | | GND | | | | | E17 | | | | | | | | | | | | | | | |
| | | | GND | | | | | E14 | | | | | | | | | | | | | | | |
| | | | GND | | | | | E11 | | | | | | | | | | | | | | | |
| | | | GND | | | | | B5 | | | | | | | | | | | | | | | |
| | | | GND | | | | | B5 | | | | | | | | | | | | | | | |
| | | | GND | | | | | B26 | | | | | | | | | | | | | | | |
| | | | GND | | | | | B23 | | | | | | | | | | | | | | | |
| | | | GND | | | | | B2 | | | | | | | | | | | | | | | |
| | | | GND | | | | | B17 | | | | | | | | | | | | | | | |
| | | | GND | | | | | B11 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AN9 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AN8 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AN20 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AN17 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AN11 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AN6 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AK26 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AK20 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AK17 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AG5 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AG26 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AG20 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AG17 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AG11 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AG10 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AG5 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AD23 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AD2 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AD14 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AD11 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AD7 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AD3 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AB13 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AA25 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AA2 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AA11 | | | | | | | | | | | | | | | |
| | | | GND | | | | | B14 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AN8 | | | | | | | | | | | | | | | |



| Bank number | IO Module (Note 1) | VERF | Pin Function | Optional Function | Configuration Function | Dedicated Tx/Rx Channel with OCT Rd | Emulated LVDS Output Channel/ Dedicated LVDS Input Channel with no OCT Rd (Note 2) | F1152 | F780 | F572 | DQS for X4 for F1152 | DQS for X8/X9 for F1152 (Note 3) | DQS for X16/X18 for F1152 (Note 3) | DQS for X32/X36 for F1152 (Note 3) | DQS for X4 for F780 | DQS for X8/X9 for F780 (Note 3) | DQS for X16/X18 for F780 (Note 3) | DQS for X32/X36 for F780 (Note 3) | DQS for X4 for F572 | DQS for X8/X9 for F572 (Note 3) | DQS for X16/X18 for F572 (Note 3) | | |
|-------------|--------------------|------|--------------|-------------------|------------------------|-------------------------------------|--|-------|------|------|----------------------|----------------------------------|------------------------------------|------------------------------------|---------------------|---------------------------------|-----------------------------------|-----------------------------------|---------------------|---------------------------------|-----------------------------------|--|--|
| | | | GND | | | | | AB03 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AB19 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AB15 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AAE | | | | | | | | | | | | | | | |
| | | | GND | | | | | AA20 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AA14 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AA8 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AA22 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AA16 | | | | | | | | | | | | | | | |
| | | | GND | | | | | AA18 | | | | | | | | | | | | | | | |
| | | | WCC | | | | | V16 | P15 | M13 | | | | | | | | | | | | | |
| | | | WCC | | | | | V24 | W20 | U12 | | | | | | | | | | | | | |
| | | | WCC | | | | | V22 | W18 | T9 | | | | | | | | | | | | | |
| | | | WCC | | | | | V20 | W16 | V57 | | | | | | | | | | | | | |
| | | | WCC | | | | | V18 | W14 | T15 | | | | | | | | | | | | | |
| | | | WCC | | | | | V15 | V21 | T11 | | | | | | | | | | | | | |
| | | | WCC | | | | | W23 | V19 | R8 | | | | | | | | | | | | | |
| | | | WCC | | | | | W21 | W17 | R16 | | | | | | | | | | | | | |
| | | | WCC | | | | | W19 | V15 | R14 | | | | | | | | | | | | | |
| | | | WCC | | | | | W17 | V13 | R12 | | | | | | | | | | | | | |
| | | | WCC | | | | | W15 | V11 | R10 | | | | | | | | | | | | | |
| | | | WCC | | | | | W13 | U20 | P9 | | | | | | | | | | | | | |
| | | | WCC | | | | | V24 | V18 | P17 | | | | | | | | | | | | | |
| | | | WCC | | | | | V22 | V16 | P15 | | | | | | | | | | | | | |
| | | | WCC | | | | | V20 | V14 | P13 | | | | | | | | | | | | | |
| | | | WCC | | | | | V18 | V12 | P11 | | | | | | | | | | | | | |
| | | | WCC | | | | | V14 | V10 | N8 | | | | | | | | | | | | | |
| | | | WCC | | | | | U21 | T9 | N18 | | | | | | | | | | | | | |
| | | | WCC | | | | | V19 | T19 | N16 | | | | | | | | | | | | | |
| | | | WCC | | | | | V15 | T17 | N14 | | | | | | | | | | | | | |
| | | | WCC | | | | | V13 | T15 | N12 | | | | | | | | | | | | | |
| | | | WCC | | | | | T24 | V13 | M9 | | | | | | | | | | | | | |
| | | | WCC | | | | | T22 | T11 | M15 | | | | | | | | | | | | | |
| | | | WCC | | | | | T20 | R18 | M11 | | | | | | | | | | | | | |
| | | | WCC | | | | | T18 | R16 | L8 | | | | | | | | | | | | | |
| | | | WCC | | | | | T16 | R14 | L16 | | | | | | | | | | | | | |
| | | | WCC | | | | | T14 | R12 | L14 | | | | | | | | | | | | | |
| | | | WCC | | | | | R23 | R10 | L12 | | | | | | | | | | | | | |
| | | | WCC | | | | | R41 | R8 | L10 | | | | | | | | | | | | | |
| | | | WCC | | | | | R19 | P19 | K9 | | | | | | | | | | | | | |
| | | | WCC | | | | | R17 | P17 | K17 | | | | | | | | | | | | | |
| | | | WCC | | | | | R15 | P15 | K15 | | | | | | | | | | | | | |
| | | | WCC | | | | | R13 | P13 | K13 | | | | | | | | | | | | | |
| | | | WCC | | | | | F24 | N20 | K21 | | | | | | | | | | | | | |
| | | | WCC | | | | | F22 | N18 | J8 | | | | | | | | | | | | | |
| | | | WCC | | | | | F20 | N16 | J16 | | | | | | | | | | | | | |
| | | | WCC | | | | | F18 | N14 | J18 | | | | | | | | | | | | | |
| | | | WCC | | | | | F16 | N12 | J14 | | | | | | | | | | | | | |
| | | | WCC | | | | | F14 | N10 | J12 | | | | | | | | | | | | | |
| | | | WCC | | | | | F12 | M9 | J10 | | | | | | | | | | | | | |
| | | | WCC | | | | | N23 | M20 | H15 | | | | | | | | | | | | | |
| | | | WCC | | | | | N21 | M19 | H15 | | | | | | | | | | | | | |
| | | | WCC | | | | | N17 | M17 | H17 | | | | | | | | | | | | | |
| | | | WCC | | | | | N15 | M15 | H15 | | | | | | | | | | | | | |
| | | | WCC | | | | | N13 | M13 | H13 | | | | | | | | | | | | | |
| | | | WCC | | | | | AG23 | M17 | H17 | | | | | | | | | | | | | |
| | | | WCC | | | | | AB24 | L18 | H18 | | | | | | | | | | | | | |
| | | | WCC | | | | | AB22 | L16 | H16 | | | | | | | | | | | | | |
| | | | WCC | | | | | AB20 | L14 | H14 | | | | | | | | | | | | | |
| | | | WCC | | | | | AB18 | L12 | H12 | | | | | | | | | | | | | |
| | | | WCC | | | | | AB16 | L10 | H10 | | | | | | | | | | | | | |
| | | | WCC | | | | | AB14 | R17 | H17 | | | | | | | | | | | | | |
| | | | WCC | | | | | AB12 | | | | | | | | | | | | | | | |
| | | | WCC | | | | | AA24 | | | | | | | | | | | | | | | |
| | | | WCC | | | | | AA21 | | | | | | | | | | | | | | | |
| | | | WCC | | | | | AA19 | | | | | | | | | | | | | | | |
| | | | WCC | | | | | AA17 | | | | | | | | | | | | | | | |
| | | | WCC | | | | | AA15 | | | | | | | | | | | | | | | |
| | | | WCC | | | | | AA13 | | | | | | | | | | | | | | | |
| | | | DNJ | | | | | K25 | H23 | G18 | | | | | | | | | | | | | |
| | | | DNJ | | | | | V17 | R16 | N12 | | | | | | | | | | | | | |
| | | | DNJ | | | | | C4 | F6 | D6 | | | | | | | | | | | | | |
| | | | WCCDAT | | | | | E27 | U24 | F19 | | | | | | | | | | | | | |
| | | | WCCA_PLL_1 | | | | | H25 | G20 | F17 | | | | | | | | | | | | | |
| | | | WCCA_PLL_2 | | | | | J19 | M9 | E6 | | | | | | | | | | | | | |
| | | | WCCA_PLL_3 | | | | | AG10 | V8 | V8 | | | | | | | | | | | | | |
| | | | WCCA_PLL_4 | | | | | AG25 | AB20 | W17 | | | | | | | | | | | | | |
| | | | WCCA_PLL_5 | | | | | T8 | R8 | L8 | | | | | | | | | | | | | |
| | | | WCCA_PLL_6 | | | | | W9 | R7 | P6 | | | | | | | | | | | | | |
| | | | WCCD_PLL_1 | | | | | J28 | H24 | E18 | | | | | | | | | | | | | |
| | | | WCCD_PLL_2 | | | | | K9 | U8 | F4 | | | | | | | | | | | | | |
| | | | WCCD_PLL_3 | | | | | AB9 | AA7 | W5 | | | | | | | | | | | | | |
| | | | WCCD_PLL_4 | | | | | AF26 | AA21 | V18 | | | | | | | | | | | | | |
| | | | WCCD_PLL_5 | | | | | UB | P7 | M5 | | | | | | | | | | | | | |
| | | | WCCD_PLL_6 | | | | | V8 | R8 | N8 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AM20 | AG16 | AC16 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AM24 | AD19 | AA17 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | A209 | AD16 | | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AM22 | | | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AD25 | AC20 | V19 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AM14 | AG7 | Y10 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AM11 | AG3 | AC7 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AG17 | AG10 | AG10 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AJ17 | AD13 | | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | A214 | AD10 | | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AM11 | | | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AG3 | V2 | V2 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AD3 | U2 | R2 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | AM6 | R2 | AA2 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | M3 | AP2 | | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | T6 | K2 | M2 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | V5 | Q2 | | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | P1 | R2 | F2 | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | F14 | B7 | CB | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | F11 | BA | CA | | | | | | | | | | | | | |
| | | | WCCDPA | | | | | C14 | B | | | | | | | | | | | | | | |



| Bank number | IO Module (Note 1) | VERF | Pin Function | Optional Function | Configuration Function | Dedicated Tx/Rx Channel with DCT Rd | Emulated LVDS Output Channel/ Dedicated LVDS Input Channel with no OCT Rd (Note 2) | F1152 | F780 | F572 | DQS for X4 for F1152 | DQS for X8/X9 for F1152 (Note 3) | DQS for X16/X18 for F1152 (Note 3) | DQS for X32/X36 for F1152 (Note 3) | DQS for X4 for F780 | DQS for X8/X9 for F780 (Note 3) | DQS for X16/X18 for F780 (Note 3) | DQS for X32/X36 for F780 (Note 3) | DQS for X4 for F572 | DQS for X8/X9 for F572 (Note 3) | DQS for X16/X18 for F572 (Note 3) | DQS for X32/X36 for F572 (Note 3) |
|-------------|--------------------|----------|--------------|-------------------|------------------------|-------------------------------------|--|-------|------|------|----------------------|----------------------------------|------------------------------------|------------------------------------|---------------------|---------------------------------|-----------------------------------|-----------------------------------|---------------------|---------------------------------|-----------------------------------|-----------------------------------|
| | | | | | | | | M24 | G21 | H18 | | | | | | | | | | | | |
| 3A | | VERFBAND | WCCP2NC | VERFBAND | | | | A620 | V17 | T16 | | | | | | | | | | | | |
| 4A | | VERFBAND | VERFBAND | VERFBAND | | | | AD15 | AB12 | V10 | | | | | | | | | | | | |
| 4E | | VERFBAND | VERFBAND | VERFBAND | | | | AD15 | | | | | | | | | | | | | | |
| 5A | | VERFBAND | VERFBAND | VERFBAND | | | | AB11 | W7 | I17 | | | | | | | | | | | | |
| 6A | | VERFBAND | VERFBAND | VERFBAND | | | | N11 | L9 | J7 | | | | | | | | | | | | |
| 7A | | VERFBAND | VERFBAND | VERFBAND | | | | L16 | H12 | H12 | | | | | | | | | | | | |
| 7B | | VERFBAND | VERFBAND | VERFBAND | | | | K13 | | | | | | | | | | | | | | |
| 8A | | VERFBAND | VERFBAND | VERFBAND | | | | K10 | M18 | G16 | | | | | | | | | | | | |
| | | NC | | | | | | AL30 | AF21 | AD22 | | | | | | | | | | | | |
| | | NC | | | | | | AM80 | AD22 | AC22 | | | | | | | | | | | | |
| | | NC | | | | | | AG30 | | | | | | | | | | | | | | |
| | | NC | | | | | | M29 | | | | | | | | | | | | | | |
| | | NC | | | | | | AD21 | | | | | | | | | | | | | | |
| | | NC | | | | | | J23 | | | | | | | | | | | | | | |
| | | NC | | | | | | K2 | | | | | | | | | | | | | | |
| | | NC | | | | | | AD30 | | | | | | | | | | | | | | |
| | | NC | | | | | | K28 | | | | | | | | | | | | | | |
| | | NC | | | | | | AF21 | | | | | | | | | | | | | | |
| | | NC | | | | | | F27 | | | | | | | | | | | | | | |
| | | NC | | | | | | L26 | | | | | | | | | | | | | | |
| | | NC | | | | | | L28 | | | | | | | | | | | | | | |
| | | NC | | | | | | A20 | | | | | | | | | | | | | | |
| | | NC | | | | | | K22 | | | | | | | | | | | | | | |
| | | NC | | | | | | AK27 | | | | | | | | | | | | | | |
| | | NC | | | | | | G27 | | | | | | | | | | | | | | |
| | | NC | | | | | | AK30 | | | | | | | | | | | | | | |
| | | NC | | | | | | G8 | | | | | | | | | | | | | | |
| | | NC | | | | | | L22 | | | | | | | | | | | | | | |
| | | NC | | | | | | AK28 | | | | | | | | | | | | | | |
| | | NC | | | | | | G28 | | | | | | | | | | | | | | |
| | | NC | | | | | | AE23 | | | | | | | | | | | | | | |
| | | NC | | | | | | G26 | | | | | | | | | | | | | | |
| | | NC | | | | | | AL28 | | | | | | | | | | | | | | |
| | | NC | | | | | | J28 | | | | | | | | | | | | | | |
| | | NC | | | | | | AF23 | | | | | | | | | | | | | | |
| | | NC | | | | | | H27 | | | | | | | | | | | | | | |
| | | NC | | | | | | AK27 | | | | | | | | | | | | | | |
| | | NC | | | | | | J27 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM28 | | | | | | | | | | | | | | |
| | | NC | | | | | | M8 | | | | | | | | | | | | | | |
| | | NC | | | | | | J22 | | | | | | | | | | | | | | |
| | | NC | | | | | | A27 | | | | | | | | | | | | | | |
| | | NC | | | | | | L6 | | | | | | | | | | | | | | |
| | | NC | | | | | | G24 | | | | | | | | | | | | | | |
| | | NC | | | | | | A29 | | | | | | | | | | | | | | |
| | | NC | | | | | | K21 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM1 | | | | | | | | | | | | | | |
| | | NC | | | | | | G25 | | | | | | | | | | | | | | |
| | | NC | | | | | | AF11 | | | | | | | | | | | | | | |
| | | NC | | | | | | F8 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM1 | | | | | | | | | | | | | | |
| | | NC | | | | | | G10 | | | | | | | | | | | | | | |
| | | NC | | | | | | AG10 | | | | | | | | | | | | | | |
| | | NC | | | | | | AK8 | | | | | | | | | | | | | | |
| | | NC | | | | | | F8 | | | | | | | | | | | | | | |
| | | NC | | | | | | AL3 | | | | | | | | | | | | | | |
| | | NC | | | | | | A16 | | | | | | | | | | | | | | |
| | | NC | | | | | | H10 | | | | | | | | | | | | | | |
| | | NC | | | | | | AL3 | | | | | | | | | | | | | | |
| | | NC | | | | | | L4 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM3 | | | | | | | | | | | | | | |
| | | NC | | | | | | D7 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM6 | | | | | | | | | | | | | | |
| | | NC | | | | | | A10 | | | | | | | | | | | | | | |
| | | NC | | | | | | AG9 | | | | | | | | | | | | | | |
| | | NC | | | | | | ET | | | | | | | | | | | | | | |
| | | NC | | | | | | AD12 | | | | | | | | | | | | | | |
| | | NC | | | | | | K2 | | | | | | | | | | | | | | |
| | | NC | | | | | | AE6 | | | | | | | | | | | | | | |
| | | NC | | | | | | G9 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM10 | | | | | | | | | | | | | | |
| | | NC | | | | | | AC9 | | | | | | | | | | | | | | |
| | | NC | | | | | | ET | | | | | | | | | | | | | | |
| | | NC | | | | | | AE11 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM | | | | | | | | | | | | | | |
| | | NC | | | | | | M9 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM9 | | | | | | | | | | | | | | |
| | | NC | | | | | | AC8 | | | | | | | | | | | | | | |
| | | NC | | | | | | G7 | | | | | | | | | | | | | | |
| | | NC | | | | | | K5 | | | | | | | | | | | | | | |
| | | NC | | | | | | AG4 | | | | | | | | | | | | | | |
| | | NC | | | | | | K11 | | | | | | | | | | | | | | |
| | | NC | | | | | | A9 | | | | | | | | | | | | | | |
| | | NC | | | | | | AF6 | | | | | | | | | | | | | | |
| | | NC | | | | | | F8 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM4 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM4 | | | | | | | | | | | | | | |
| | | NC | | | | | | K11 | | | | | | | | | | | | | | |
| | | NC | | | | | | AE28 | | | | | | | | | | | | | | |
| | | NC | | | | | | AF5 | | | | | | | | | | | | | | |
| | | NC | | | | | | F6 | | | | | | | | | | | | | | |
| | | NC | | | | | | AF21 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM3 | | | | | | | | | | | | | | |
| | | NC | | | | | | M23 | | | | | | | | | | | | | | |
| | | NC | | | | | | AG28 | | | | | | | | | | | | | | |
| | | NC | | | | | | AF22 | | | | | | | | | | | | | | |
| | | NC | | | | | | AC11 | | | | | | | | | | | | | | |
| | | NC | | | | | | D30 | | | | | | | | | | | | | | |
| | | NC | | | | | | AE24 | | | | | | | | | | | | | | |
| | | NC | | | | | | A32 | | | | | | | | | | | | | | |
| | | NC | | | | | | F26 | | | | | | | | | | | | | | |
| | | NC | | | | | | AE26 | | | | | | | | | | | | | | |
| | | NC | | | | | | ES10 | | | | | | | | | | | | | | |
| | | NC | | | | | | ES10 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM28 | | | | | | | | | | | | | | |
| | | NC | | | | | | A24 | | | | | | | | | | | | | | |
| | | NC | | | | | | G29 | | | | | | | | | | | | | | |
| | | NC | | | | | | AE27 | | | | | | | | | | | | | | |
| | | NC | | | | | | A11 | | | | | | | | | | | | | | |
| | | NC | | | | | | H24 | | | | | | | | | | | | | | |
| | | NC | | | | | | AM29 | | | | | | | | | | | | | | |
| | | NC | | | | | | A13 | | | | | | | | | | | | | | |
| | | NC | | | | | | F28 | | | | | | | | | | | | | | |
| | | NC | | | | | | AE28 | | | </ | | | | | | | | | | | |



| Bank number | IO Module (Note 1) | VERF | Pin Function | Optional Function | Configuration Function | Dedicated Tx/Rx Channel with DCT Rd | Emulated LVDS Output Channel/ Dedicated LVDS Input Channel with no OCT Rd (Note 2) | F1152 | F780 | F572 | DQS for X4 for F1152 | DQS for X8/X9 for F1152 (Note 3) | DQS for X16/X18 for F1152 (Note 3) | DQS for X32/X36 for F1152 (Note 3) | DQS for X4 for F780 | DQS for X8/X9 for F780 (Note 3) | DQS for X16/X18 for F780 (Note 3) | DQS for X32/X36 for F780 (Note 3) | DQS for X4 for F572 | DQS for X8/X9 for F572 (Note 3) | DQS for X16/X18 for F572 (Note 3) | | |
|-------------|--------------------|------|--------------|-------------------|------------------------|-------------------------------------|--|-------|------|------|----------------------|----------------------------------|------------------------------------|------------------------------------|---------------------|---------------------------------|-----------------------------------|-----------------------------------|---------------------|---------------------------------|-----------------------------------|--|--|
| | | | NC | | | | F0 | | | | | | | | | | | | | | | | |
| | | | NC | | | | AG27 | | | | | | | | | | | | | | | | |
| | | | NC | | | | D9 | | | | | | | | | | | | | | | | |
| | | | NC | | | | G30 | | | | | | | | | | | | | | | | |
| | | | NC | | | | AG24 | | | | | | | | | | | | | | | | |
| | | | NC | | | | G6 | | | | | | | | | | | | | | | | |
| | | | NC | | | | J24 | | | | | | | | | | | | | | | | |
| | | | NC | | | | AK26 | | | | | | | | | | | | | | | | |
| | | | NC | | | | W27 | | | | | | | | | | | | | | | | |
| | | | NC | | | | C4 | | | | | | | | | | | | | | | | |
| | | | NC | | | | H28 | | | | | | | | | | | | | | | | |
| | | | NC | | | | AG22 | | | | | | | | | | | | | | | | |
| | | | NC | | | | Y28 | | | | | | | | | | | | | | | | |
| | | | NC | | | | F5 | | | | | | | | | | | | | | | | |
| | | | NC | | | | K24 | | | | | | | | | | | | | | | | |
| | | | NC | | | | Y28 | | | | | | | | | | | | | | | | |
| | | | NC | | | | J5 | | | | | | | | | | | | | | | | |
| | | | NC | | | | J55 | | | | | | | | | | | | | | | | |
| | | | NC | | | | MB | | | | | | | | | | | | | | | | |
| | | | NC | | | | C28 | | | | | | | | | | | | | | | | |
| | | | NC | | | | M7 | | | | | | | | | | | | | | | | |
| | | | NC | | | | G8 | | | | | | | | | | | | | | | | |
| | | | NC | | | | J7 | | | | | | | | | | | | | | | | |
| | | | NC | | | | G4 | | | | | | | | | | | | | | | | |
| | | | NC | | | | B5 | | | | | | | | | | | | | | | | |
| | | | NC | | | | M12 | | | | | | | | | | | | | | | | |
| | | | NC | | | | K7 | | | | | | | | | | | | | | | | |
| | | | NC | | | | M10 | | | | | | | | | | | | | | | | |
| | | | NC | | | | K8 | | | | | | | | | | | | | | | | |
| | | | NC | | | | M9 | | | | | | | | | | | | | | | | |
| | | | NC | | | | E4 | | | | | | | | | | | | | | | | |
| | | | NC | | | | D4 | | | | | | | | | | | | | | | | |
| | | | NC | | | | E3 | | | | | | | | | | | | | | | | |
| | | | NC | | | | D3 | | | | | | | | | | | | | | | | |
| | | | NC | | | | F4 | | | | | | | | | | | | | | | | |
| | | | NC | | | | M8 | | | | | | | | | | | | | | | | |
| | | | NC | | | | F3 | | | | | | | | | | | | | | | | |
| | | | NC | | | | N7 | | | | | | | | | | | | | | | | |
| | | | NC | | | | M4 | | | | | | | | | | | | | | | | |
| | | | NC | | | | M8 | | | | | | | | | | | | | | | | |
| | | | NC | | | | L7 | | | | | | | | | | | | | | | | |
| | | | NC | | | | M5 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A12 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A8 | | | | | | | | | | | | | | | | |
| | | | NC | | | | J6.1 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A8.1 | | | | | | | | | | | | | | | | |
| | | | NC | | | | G17 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A86 | | | | | | | | | | | | | | | | |
| | | | NC | | | | M66 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A85 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A84 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A810 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A8 | | | | | | | | | | | | | | | | |
| | | | NC | | | | G50 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A8.8 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A8.7 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A8.7 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A86 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A811 | | | | | | | | | | | | | | | | |
| | | | NC | | | | M22 | | | | | | | | | | | | | | | | |
| | | | NC | | | | M11 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A812 | | | | | | | | | | | | | | | | |
| | | | NC | | | | A821 | | | | | | | | | | | | | | | | |
| | | | NC | | | | N28 | | | | | | | | | | | | | | | | |
| | | | NC | | | | N28 | | | | | | | | | | | | | | | | |
| | | | NC | | | | Y28 | | | | | | | | | | | | | | | | |
| | | | NC | | | | L30 | | | | | | | | | | | | | | | | |
| | | | NC | | | | C33 | | | | | | | | | | | | | | | | |
| | | | NC | | | | C24 | | | | | | | | | | | | | | | | |
| | | | NC | | | | E21 | | | | | | | | | | | | | | | | |
| | | | NC | | | | B32 | | | | | | | | | | | | | | | | |
| | | | NC | | | | E33 | | | | | | | | | | | | | | | | |
| | | | NC | | | | E24 | | | | | | | | | | | | | | | | |
| | | | NC | | | | D31 | | | | | | | | | | | | | | | | |
| | | | NC | | | | G32 | | | | | | | | | | | | | | | | |
| | | | NC | | | | G33 | | | | | | | | | | | | | | | | |
| | | | NC | | | | G34 | | | | | | | | | | | | | | | | |
| | | | NC | | | | F31 | | | | | | | | | | | | | | | | |
| | | | NC | | | | F32 | | | | | | | | | | | | | | | | |
| | | | NC | | | | J33 | | | | | | | | | | | | | | | | |
| | | | NC | | | | J34 | | | | | | | | | | | | | | | | |
| | | | NC | | | | H31 | | | | | | | | | | | | | | | | |
| | | | NC | | | | H32 | | | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | W25 | R22 | M19 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | V28 | F23 | L20 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | V26 | P21 | K19 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | U27 | M24 | P20 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | U25 | N22 | P19 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | T28 | M21 | N20 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | T26 | F23 | | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | R27 | T21 | | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | R25 | G24 | | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | U23 | V15 | U13 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | L12 | M7 | M6 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | L18 | J15 | G12 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | A818 | P20 | M17 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | A817 | A821 | A824 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | A29 | A26 | | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | U24 | G20 | P18 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | R24 | M21 | L18 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | A824 | U21 | | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | P27 | U23 | R18 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | N28 | U22 | K18 | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | A828 | M22 | | | | | | | | | | | | | | | |
| | | | WCL_GXB | | | | A827 | L22 | | | | | | | | | | | | | | | |

Notes:
 (1) An IO module is a group of 16 IO pins.
 (2) When not used as DIFFN or DIFFO_TX, all pins marked with * (DIFFN_#(pin)) can be configured as emulated LVDS output channels (DIFFOUT). Only DIFFN pins of the same index group (e.g. DIFFN_B1p and DIFFN_B1n) can be used to form an emulated LVDS output channel.
 (3) When not used as clocks, the C0n and D0Sn pins can be used as DO pins.



| Pin Name | Pin Type (1st and 2nd Function) | Pin Description |
|---|---------------------------------|--|
| Clock and PLL Pins | | |
| CLK[4:15] | Clock, Input | Single ended clock input pin. |
| DIFFCLK[0:5]p | Clock, Input | Clock input pin for differential clock input. OCT Rd is not supported. |
| DIFFCLK[0:5]n | Clock, Input | Negative clock input for differential clock input. OCT Rd is not supported |
| PLL_[1:4]_CLKOUT1p | I/O, Clock | PLL[1:4]_CLKOUT1 (except PLL1 and PLL3 in EP2AGX125 and EP2AGX260) supports 2 clock I/O pins, configured either as one single ended I/O or one differential I/O pair. PLL1 and PLL3 in EP2AGX125 and EP2AGX260 support 6 clock I/O pins, configured either as 3 single ended I/Os or 3 differential I/O pairs. |
| PLL_[1:4]_CLKOUT1n | I/O, Clock | |
| PLL_[1,3]_CLKOUT[2:3]p (Note 4) | I/O, Clock | PLL1 and PLL3 in EP2AGX125 and EP2AGX260 support 6 clock I/O pins, configured either as 3 single ended I/Os or 3 differential I/O pairs. |
| PLL_[1,3]_CLKOUT[2:3]n (Note 4) | I/O, Clock | |
| Dedicated Configuration/JTAG Pins | | |
| nIO_PULLUP | Input | Dedicated input that chooses whether the internal pull-ups on the user I/O pins and dual-purpose I/O pins (nCSO, ASDO, DATA[7:0], CLKUSR, INIT_DONE, DEV_OE, DEV_CLRn) are on or off before and during configuration. A logic high (1.5V, 1.8V, 2.5V, 3.0V or 3.3V) turns off the weak pull-up, while a logic low turns them on. |
| MSEL[0:3] | Input | Configuration input pins that set the FPGA device configuration scheme. |
| nCE | Input | Dedicated active-low chip enable. When nCE is low, the device is enabled. When nCE is high, the device is disabled. |
| nCONFIG | Input | Dedicated configuration control input. Pulling this pin low during user-mode will cause the FPGA to lose its configuration data, enter a reset state, and tri-state all I/O pins. Returning this pin to a logic high level will initiate reconfiguration. |
| CONF_DONE | Bidirectional (open-drain) | This is a dedicated configuration done pin. As a status output, the CONF_DONE pin drives low before and during configuration. Once all configuration data is received without error and the initialization cycle starts, CONF_DONE is released. As a status input, CONF_DONE goes high after all data is received. Then the device initializes and enters user mode. It is not available as a user I/O pin. |
| nCEO | I/O, Output (open-drain) | Output that drives low when device configuration is complete. This pin can be used as a regular I/O if not used for device configuration. |
| nSTATUS | Bidirectional (open-drain) | This is a dedicated configuration status pin. The FPGA drives nSTATUS low immediately after power-up and releases it after POR time. As a status output, the nSTATUS is pulled low if an error occurs during configuration. As a status input, the device enters an error state when nSTATUS is driven low by an external source during configuration or initialization. It is not available as an user I/O pin. |
| TCK | Input | Dedicated JTAG test clock input pin. |
| TMS | Input | Dedicated JTAG test mode select input pin. |
| TDI | Input | Dedicated JTAG test data input pin. |
| TDO | Output | Dedicated JTAG test data output pin. |
| Optional/Dual-Purpose Configuration Pins | | |
| nCSO | Output | Dedicated output control signal from the FPGA to the serial configuration device in AS mode that enables the configuration device. |
| ASDO | Output | Control signal from the FPGA to the serial configuration device in AS mode used to read out configuration data. |
| DCLK | I/O (PS, FPP) Output (AS) | Dedicated configuration clock pin. In PS and FPP configuration, DCLK is used to clock configuration data from an external source into the FPGA. In AS mode, DCLK is an output from the FPGA that provides timing for the configuration interface. |
| CRC_ERROR | I/O, Output (open-drain) | Active high signal that indicates that the error detection circuit has detected errors in the configuration SRAM bits. This pin is optional and is used when the CRC error detection circuit is enabled. This pin can be used as regular I/O if not used for CRC error detection. |
| DEV_CLRn | I/O, Input | Optional pin that allows designers to override all clears on all device registers. When this pin is driven low, all registers are cleared; when this pin is driven high, all registers behave as programmed. |
| DEV_OE | I/O, Input | Optional pin that allows designers to override all tri-states on the device. When this pin is driven low, all I/O pins are tri-stated; when this pin is driven high, all I/O pins behave as defined in the design. |
| DATA0 | Input | DATA[0] is a dedicated pin that is used for both the passive and active configuration modes |
| DATA[1:7] | I/O, Input | Dual-purpose configuration input data pins. The DATA[0:7] pins can be used for byte-wide configuration. DATA[1:7] pins can also be used as user I/O pins after configuration, but not DATA0. |



Pin Information for the Arria® II GX EP2AGX95 Device
Version 1.2
Notes (1), (2), (3)

| Pin Name | Pin Type (1st and 2nd Function) | Pin Description |
|---|---------------------------------|---|
| INIT_DONE | I/O, Output (open-drain) | This is a dual-purpose pin and can be used as an I/O pin when not enabled as INIT_DONE. When enabled, a transition from low to high at the pin indicates when the device has entered user mode. If the INIT_DONE output is enabled, the INIT_DONE pin cannot be used as a user I/O pin after configuration. |
| CLKUSR | I/O, Input | Optional user-supplied clock input. Synchronizes the initialization of one or more devices. If this pin is not enabled for use as a user-supplied configuration clock, it can be used as a user I/O pin. |
| Differential I/O Pins | | |
| DIFFIO_RX_[T,B,R][##]p, DIFFIO_RX_[T,B,R][##]n | I/O, RX channel | These are true LVDS receiver channels with OCT Rd support. Pins with a "p" suffix carry the positive signal for the differential channel. Pins with an "n" suffix carry the negative signal for the differential channel. If not used for differential signaling, these pins are available as user I/O pins. |
| DIFFIO_TX_[T,B,R][##]p, DIFFIO_TX_[T,B,R][##]n | I/O, TX channel | These are true LVDS transmitter channels. Pins with a "p" suffix carry the positive signal for the differential channel. Pins with an "n" suffix carry the negative signal for the differential channel. If not used as true LVDS transmitter channels, these pins can be configured as true LVDS receiver channels without OCT Rd support (DIFFIN_[T,B,R][##][p,n]). If not used for differential signaling, these pins are available as user I/O pins. |
| DIFFIN_[T,B,R][##]p, DIFFIN_[T,B,R][##]n | I/O, RX channel | These are true LVDS receiver channels without OCT Rd support. Pins with a "p" suffix carry the positive signal for the differential channel. Pins with an "n" suffix carry the negative signal for the differential channel. If not used as true LVDS receiver channels without OCT Rd support, these pins can be configured as true LVDS transmitter channels (DIFFIO_TX_[T,B,R][##][p,n]). If not used for differential signaling, these pins are available as user I/O pins. |
| DIFFOUT_[##]p, DIFFOUT_[##]n | I/O, TX channel | These are emulated LVDS output channels. On I/O banks, there are true LVDS input buffers but no true LVDS output buffers. However, all column user I/Os, including I/Os with true LVDS input buffers, (DIFFIO_RX_[T,B,R][##][p,n] , DIFFIN_[T,B,R][##][p,n]) can be configured as emulated LVDS output buffers. Pins with a "p" suffix carry the positive signal for the differential channel. Pins with an "n" suffix carry the negative signal for the differential channel. If not used for differential signaling, these pins are available as user I/O pins. |
| External Memory Interface Pins | | |
| DQS[##][T,B,R] | I/O, DQS | Optional data strobe signal for use in external memory interfacing. These pins drive to dedicated DQS phase shift circuitry. The shifted DQS signal can also drive to internal logic. |
| DQSn[##][T,B,R] (Note 5) | I/O, DQSn | Optional complementary data strobe signal for use in external memory interfacing. These pins drive to dedicated DQS phase shift circuitry. |
| DQ[##][T,B,R] | I/O, DQ | Optional data signal for use in external memory interfacing. The order of the DQ bits within a designated DQ bus is not important; however, use caution when making pin assignments if you plan on migrating to a different memory interface that has a different DQ bus width. Analyze the available DQ pins across all pertinent DQS columns in the pin list. |
| CQ[##][T,B,R] | DQS | Optional data strobe signal for use in QDRII SRAM. These are the pins for echo clocks. |
| CQn[##][T,B,R] (Note 5) | DQS | Optional complementary data strobe signal for use in QDRII SRAM. These are the pins for echo clocks. |
| Reference Pins | | |
| RUP[0:2] | I/O, Input | Reference pins for I/O banks. The RUP pins share the same VCCIO with the I/O bank where they are located. The external precision resistor RUP must be connected to the designated RUP pin within the bank. If not required, this pin is a regular I/O pin. |
| RDN[0:2] | I/O, Input | Reference pins for I/O banks. The RDN pins share the same GND with the I/O bank where they are located. The external precision resistor RDN must be connected to the designated RDN pin within the bank. If not required, this pin is a regular I/O pin. |
| DNU | Do Not Use | Do Not Use (DNU). |
| NC | No Connect | Do not drive signals into these pins. |
| Supply Pins | | |
| VCC | Power | VCC supplies power to the core and periphery. |
| VCCD_PLL [1:6] | Power | Digital power for PLL[1:6]. All of these pins must be connected even if the PLL is not used |
| VCCCB | Power | Configuration RAM bits power supply. |
| VCCA_PLL [1:6] | Power | Analog power for PLL [1:6]. All of these pins must be connected even if the PLL is not used |
| VCCIO[3:8][A,B] | Power | These are I/O supply voltage pins for banks 3 through 8. Each bank can support a different voltage level. VCCIO supplies power to the output buffers for all LVDS, LVCMOS(1.2V, 1.5V, 1.8V, 2.5V, 3.0V,3.3V), HSTL(12,15,18),SSTL(15,18,2),3.0V PCI/PCI-X I/O as well as LVTTTL (1.8V, 2.5V, 3.0V, 3.3V) I/O standards. VCCIO also supplies power to the input buffers used for LVCMOS(1.2V, 1.5V, 1.8V, 2.5V, 3.0V, 3.3V), 3.0V PCI/PCI-X and LVTTTL (1.8V, 2.5V, 3.0V, 3.3V) I/O standards. |

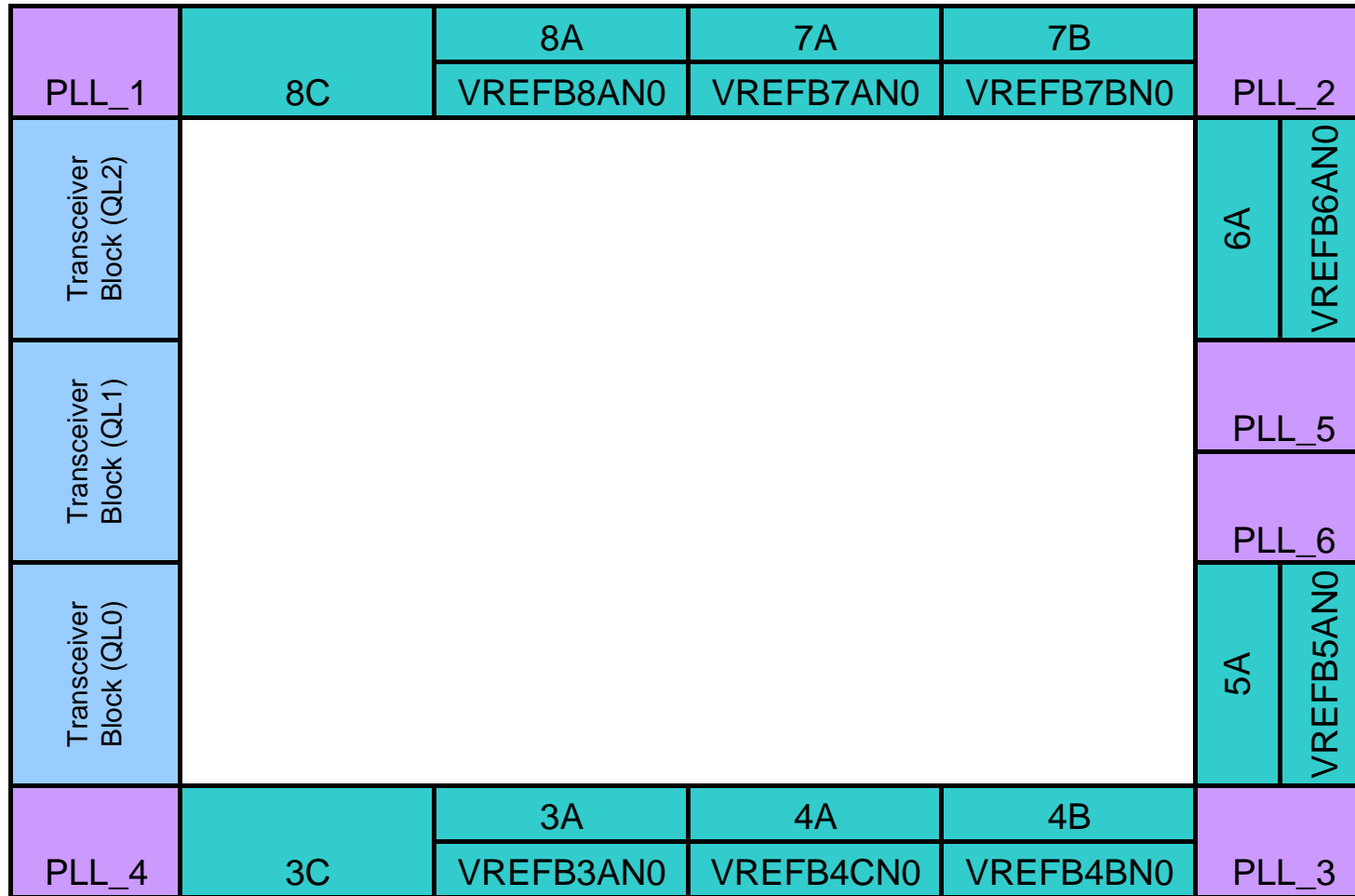


Pin Information for the Arria® II GX EP2AGX95 Device
Version 1.2
Notes (1), (2), (3)

| Pin Name | Pin Type (1st and 2nd Function) | Pin Description |
|---------------------------------|---------------------------------|--|
| VCCIO[3,8]C | Power | These are configuration and JTAG supply voltage pins for banks 3C and 8C. Each bank can support a different voltage level. For AS/PP/FPP configuration schemes, VCCIO8C supports 1.8V, 2.5V, 3.0V or 3.3V. JTAG can support 1.5V, 1.8V, 2.5V, 3.0V or 3.3V. |
| VCCPD[3:8][A,B], VCCPD[3,8]C | Power | Dedicated power pins. This supply is used to power the I/O pre-drivers and the input buffers for HSTL/SSTL input buffers. This can be connected to 3.3V, 3.0V or 2.5V. For 3.3V I/O standard connect VCCPD to 3.3V, for 3.0V I/O standard connect VCCPD to 3.0V and for 2.5V/1.8V/1.2V I/O standards connect VCCPD to 2.5V |
| VCCBAT | Power | Battery back-up power supply for design security volatile key register. |
| GND | Ground | Device ground pins. |
| VREF[3:8][A,B]N0 | Power | Input reference voltage for each I/O bank. If a bank uses a voltage-referenced I/O standard, then these pins are used as the voltage-reference pins for the bank. These pins cannot be used as regular I/Os. |
| Transceiver Pins | | |
| VCCL_GXB | Power | Supplies power to the transceiver PMA TX, PMA RX and clocking. |
| VCCH_GXB | Power | Supplies power to the transceiver PMA output (TX) buffer. |
| VCCA | Power | Supplies power to the transceiver PMA regulator. |
| GXB_RX[0:15]p (Note 6) | Input | High speed positive differential receiver channels. |
| GXB_RX[0:15]n (Note 6) | Input | High speed negative differential receiver channels. |
| GXB_TX[0:15]p (Note 6) | Output | High speed positive differential transmitter channels. |
| GXB_TX[0:15]n (Note 6) | Output | High speed negative differential transmitter channels. |
| REFCLK[0:7]p | Input | High speed differential reference clock positive. |
| REFCLK[0:7]n | Input | High speed differential reference clock complement. |
| RREF[0:1] | Input | Reference resistor for transceiver. |

Notes:

1. Refer to the Arria II GX Device Datasheet and Pin Connection Guidelines for the recommended operating conditions.
2. This pin definition is prepared based on the EP2AGX260.
3. Some of the pull-up /pull down resistors mentioned in the table above may not be required, depending on the exact device configuration scheme.
The ability to NC or short them may be valuable during the debug phase, should you be required to use a different configuration scheme.
Refer to the Configuring Arria II GX Devices chapter in the Arria II GX Device Handbook for more information.
4. PLL[1,3]_CLKOUT[2..3][p,n] are only available in PLL1 and PLL3 in EP2AGX125 and EP2AGX260.
5. When not used as clocks, the CQn and DQS_n pins can be used as DQ pin.
6. Transceiver signals GXB_RX[15..0] and GXB_TX[15..0] are device specific.



This is a top view of the silicon die that corresponds to a reverse view for flip chip packages. It is a graphical representation only.



Pin Information for the Arria® II GX EP2AGX95 Device
Version 1.2

| Version Number | Date | Changes Made |
|----------------|------------|--|
| 1.0 | 2/27/2009 | Initial release. |
| 1.1 | 5/29/2009 | Added DNU in Pin List and Pin Definitions. |
| 1.2 | 10/10/2013 | Added PLL_5 and PLL_6 in Bank & PLL Diagram. |
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