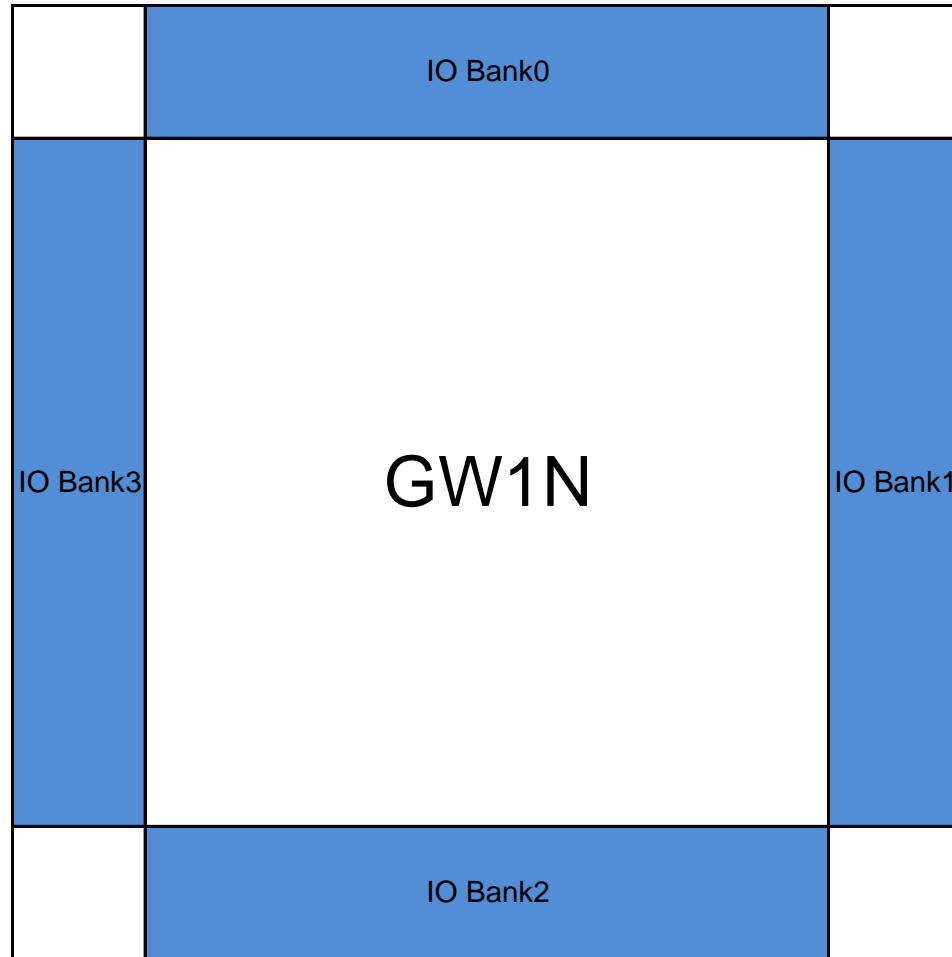


| 日期         | 版本   | 说明  |
|------------|------|---|
| 2016/8/23  | 1.00 | 初始版本。   |
| 2017/3/24  | 1.01 | 修改MI/MO位置。  |
| 2017/6/9   | 1.02 | 修改LQ144封装的60脚、61脚没有定义，125脚重复定义；<br>修改UG332封装U15脚和W18脚重复定义；<br>增加LQ100封装、QN88封装和QN48封装的信息；<br>修改BG256封装的B2, G8, D12, E4脚。  |
| 2017/9/22  | 1.03 | 修改UG332封装的信息；<br>增加LQ176封装的信息；<br>修改QN48封装的信息；<br>添加MG160封装的信息。   |
| 2017/3/14  | 1.04 | GCLK[n]_[x], RPLL_[n]_fb, RPLL_[n]_in分别拆分成GCLKT_[x], GCLKC_[x], LPLL_T_fb/RPLL_T_fb, LPLL_C_fb/RPLL_C_fb, LPLL_T_in/RPLL_T_in及 LPLL_C_in/RPLL_C_in并修改描述；<br>新增CM64封装信息；<br>修改MODE管脚相关描述，MODE不再作为专用管脚，可以复用为GPIO。 |
| 2018/6/5   | 1.05 | 在顶层Bank添加GCLK；<br>增加X16指示哪个IO位置支持16:1的功能。   |
| 2018/8/1   | 1.06 | 新增UBGA256封装信息；<br>将B端指示的X16改为NONE。  |
| 2018/11/27 | 1.07 | 增加电源供电要求。   |
| 2019/3/12  | 1.08 | 修改VCC UV版本的电源供电范围；<br>新增GW1N-9 EQ144封装信息。   |
| 2019/5/27  | 1.09 | 新增GW1N-9 MG196封装。   |

| 管脚名称                                 | 方向       | 说明   |
|--------------------------------------|----------|--|
| 用户I/O管脚                              |          |  |
| IO [End][Row/Column Number][A/B]     | I/O      | [End]提供管脚在器件中的位置信息，包括L(left) R(right) B(bottom) T(top)<br>[Row/Column Number]提供管脚在器件中的具体行列位置信息，若[End]为T(top)或B(bottom)，则提供列信息，即管脚对应的CFU列数。若[End]为L(left)或R(right)，则提供行信息，即管脚对应的CFU行数<br>[A/B]提供差分信号对信息 |
| 多功能管脚                                |          |  |
| IO [End][Row/Column Number][A/B]/MMM |          | 多功能管脚定义，/MMM表示在用户I/O功能的基础上有另外的一种或多种功能。当这些功能不使用的時候，这些管脚可以用作用户I/O  |
| RECONFIG_N                           | I, 内部弱上拉 | 低电平脉冲开始新的GowinCONFIG配置   |
| READY                                | I/O      | 高电平表示当前可以对器件进行编程配置<br>低电平表示无法对器件进行编程配置   |
| DONE                                 | I/O      | 高电平表示成功完成编程配置<br>低电平表示未完成编程配置或编程配置失败   |
| FASTRD_N/D3                          | I/O      | MSPI模式下Flash访问速度选择端口FASTRD_N，低电平表示使用高速Flash访问模式，高电平表示使用普通Flash访问模式<br>CPU模式下的数据端口D3  |
| MCLK/D4                              | I/O      | MSPI模式下时钟输出MCLK<br>CPU模式下的数据端口D4   |
| MCS_N/D5                             | I/O      | MSPI模式下的使能信号MCS_N，低电平有效<br>CPU模式下的数据端口D5   |
| MO/D6                                | I/O      | MSPI模式下MOSI: Master数据输出/Slave数据输入<br>CPU模式下的数据端口D6   |
| MI/D7                                | I/O      | MSPI模式下MISO: Master数据输入/Slave数据输出<br>CPU模式下的数据端口D7   |
| SSPI_CS_N/D0                         | I/O      | SSPI模式下的使能信号SSPI_CS_N，低电平有效<br>CPU模式下的数据端口D0   |
| SO/D1                                | I/O      | SSPI模式下MISO: Master数据输入/Slave数据输出<br>CPU模式下的数据端口D1   |
| SI/D2                                | I/O      | SSPI模式下MOSI: Master数据输出/Slave数据输入<br>CPU模式下的数据端口D2   |
| TMS                                  | I        | JTAG模式串行模式输入   |
| TCK                                  | I        | JTAG模式串行时钟输入   |

| 管脚名称                | 方向       | 说明   |
|---------------------|----------|--|
| TDI                 | I        | JTAG模式串行数据输入                                   |
| TDO                 | O        | JTAG模式串行数据输出                                   |
| JTAGSEL_N           | I, 内部弱上拉 | JTAG模式选择信号, 低电平有效                              |
| SCLK                | I        | SSPI, SERIAL, CPU模式下的时钟输入                      |
| DIN                 | I, 内部弱上拉 | SERIAL模式下的数据输入                                 |
| DOUT                | O        | SERIAL模式下的数据输出                                 |
| CLKHOLD_N           | I, 内部弱上拉 | 高电平表示SSPI模式和CPU模式操作有效<br>低电平表示SSPI模式和CPU模式操作无效 |
| WE_N                | I        | CPU模式下选择D[7: 0]的数据输入输出方向                       |
| GCLKT_[x]           | I        | 全局时钟输入管脚, T(True), [x]: 全局时钟序号                 |
| GCLKC_[x]           | I        | 全局时钟输入管脚, C(Comp), [x]: 全局时钟序号                 |
| LPLL_T_fb/RPLL_T_fb | I        | 左边/右边PLL反馈输入管脚, T(True)                        |
| LPLL_C_fb/RPLL_C_fb | I        | 左边/右边PLL反馈输入管脚, C(Comp)                        |
| LPLL_T_in/RPLL_T_in | I        | 左边/右边PLL时钟输入管脚, T(True)                        |
| LPLL_C_in/RPLL_C_in | I        | 左边/右边PLL时钟输入管脚, C(Comp)                        |
| MODE2               | I, 内部弱上拉 | GowinCONFIG配置模式选择信号端口                          |
| MODE1               | I, 内部弱上拉 | GowinCONFIG配置模式选择信号端口                          |
| MODE0               | I, 内部弱上拉 | GowinCONFIG配置模式选择信号端口                          |
| <b>其他管脚</b>         |          |  |
| NC                  | NA       | 预留未使用  |
| VSS                 | NA       | Ground管脚                                       |
| VCC                 | NA       | 核电压供电管脚  |
| VCCO#               | NA       | I/O BANK#的I/O电压供电管脚                            |
| VCCX                | NA       | 辅助电压供电管脚                                       |



**注!**

- 1.每个Bank还提供一个独立的参考电压 (VREF) ;
- 2.用户可以选择使用IOB内置的VREF源 (等于 $0.5 \cdot V_{CC0}$ ) ;
- 3.也可选择外部的VREF输入 (使用Bank中任意一个IO管脚作为外部VREF输入)

| 管脚名            | 功能  | BANK | 配置功能    | 差分Pair         | LVDS | X16  | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|----------------|-----|------|---------|----------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOB10A         | I/O | 2    |         | True_of_IOB10B | NONE | NONE |      |      |      |       |       |       |       |       |       | C1    | C1    | D3    |
| IOB10B         | I/O | 2    |         | Comp_of_IOB10A | NONE | NONE |      |      |      |       |       |       |       |       |       | D2    | D2    | E4    |
| IOB11A         | I/O | 2    |         | True_of_IOB11B | TRUE | x16  |      |      | 27   | 29    | 42    | 42    | L5    | 51    | N2    | B1    | B1    | B1    |
| IOB11B         | I/O | 2    |         | Comp_of_IOB11A | TRUE | NONE |      |      | 28   | 30    | 43    | 43    | M5    | 52    | P2    | C2    | C2    | C2    |
| IOB12A         | I/O | 2    |         | True_of_IOB12B | NONE | NONE |      |      |      |       | 44    | 44    |       |       |       |       | B3    | F4    |
| IOB12B         | I/O | 2    |         | Comp_of_IOB12A | NONE | NONE |      |      |      |       | 45    | 45    |       |       |       |       | A2    | E3    |
| IOB13A         | I/O | 2    |         | True_of_IOB13B | TRUE | x16  |      | H7   | 29   | 31    | 46    | 46    | N4    | 53    |       | E2    | E2    | G5    |
| IOB13B         | I/O | 2    |         | Comp_of_IOB13A | TRUE | NONE |      | G7   | 30   | 32    | 47    | 47    | P4    | 54    |       | E3    | E3    | H5    |
| IOB14A         | I/O | 2    |         | True_of_IOB14B | NONE | NONE |      |      |      |       |       |       |       |       |       | E1    | E1    | D2    |
| IOB14B         | I/O | 2    |         | Comp_of_IOB14A | NONE | NONE |      |      |      |       |       |       |       |       |       | F2    | F2    | C1    |
| IOB15A         | I/O | 2    |         | True_of_IOB15B | TRUE | x16  |      |      |      | 33    | 48    | 48    | N5    | 55    | N3    | F4    | F4    | G4    |
| IOB15B         | I/O | 2    |         | Comp_of_IOB15A | TRUE | NONE |      |      |      | 34    | 49    | 49    | P5    | 56    | P3    | G6    | G6    | F3    |
| IOB16A         | I/O | 2    |         | True_of_IOB16B | NONE | NONE |      |      |      |       |       |       |       |       |       | F3    | F3    | E2    |
| IOB16B         | I/O | 2    |         | Comp_of_IOB16A | NONE | NONE |      |      |      |       |       |       |       |       |       | F1    | F1    | D1    |
| IOB17A         | I/O | 2    |         | True_of_IOB17B | TRUE | x16  | 15   | H6   | 31   | 35    | 50    | 50    | L6    | 57    |       | G5    | G5    | G3    |
| IOB17B         | I/O | 2    |         | Comp_of_IOB17A | TRUE | NONE | 16   | G6   | 32   | 36    | 51    | 51    | M6    | 58    |       | G4    | G4    | H4    |
| IOB18A         | I/O | 2    |         | True_of_IOB18B | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | F2    |
| IOB18B         | I/O | 2    |         | Comp_of_IOB18A | NONE | NONE |      |      |      |       |       |       |       | 59    |       |       |       | E1    |
| IOB19A         | I/O | 2    |         | True_of_IOB19B | NONE | NONE |      |      |      |       |       |       |       | 60    |       |       |       | F1    |
| IOB19B         | I/O | 2    |         | Comp_of_IOB19A | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | G2    |
| IOB20A         | I/O | 2    |         | True_of_IOB20B | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | J5    |
| IOB20B         | I/O | 2    |         | Comp_of_IOB20A | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | J4    |
| IOB21A         | I/O | 2    |         | True_of_IOB21B | TRUE | x16  |      |      |      |       |       |       | L7    | 61    | L4    |       |       | H2    |
| IOB21B         | I/O | 2    |         | Comp_of_IOB21A | TRUE | NONE |      |      |      |       |       |       | M7    | 62    | M4    |       |       | H1    |
| IOB22A         | I/O | 2    |         | True_of_IOB22B | NONE | NONE |      |      |      |       |       |       |       |       |       | G2    | G2    | J3    |
| IOB22B         | I/O | 2    |         | Comp_of_IOB22A | NONE | NONE |      |      |      |       |       |       |       |       |       | G3    | G3    | J2    |
| IOB23A         | I/O | 2    |         | True_of_IOB23B | TRUE | x16  |      | H5   | 33   |       | 52    | 52    | N6    | 63    | N4    | F5    | F5    | K4    |
| IOB23B         | I/O | 2    |         | Comp_of_IOB23A | TRUE | NONE |      | G5   | 34   |       | 54    | 54    | P6    | 64    | P4    | H6    | H6    | K3    |
| IOB24A         | I/O | 2    |         | True_of_IOB24B | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | J1    |
| IOB24B         | I/O | 2    |         | Comp_of_IOB24A | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | K2    |
| IOB25A         | I/O | 2    |         | True_of_IOB25B | TRUE | x16  |      |      |      |       |       |       | L9    | 67    | N5    |       |       | K1    |
| IOB25B         | I/O | 2    |         | Comp_of_IOB25A | TRUE | NONE |      |      |      |       |       |       | M9    | 68    | P5    |       |       | L1    |
| IOB26A         | I/O | 2    |         | True_of_IOB26B | NONE | NONE |      |      |      |       |       |       |       |       |       | G1    | G1    | L4    |
| IOB26B         | I/O | 2    |         | Comp_of_IOB26A | NONE | NONE |      |      |      |       |       |       |       |       |       | H2    | H2    | L3    |
| IOB27A         | I/O | 2    |         | True_of_IOB27B | TRUE | x16  | 17   | H4   |      |       |       |       | N8    | 69    | N6    | H4    | H4    | L2    |
| IOB27B         | I/O | 2    |         | Comp_of_IOB27A | TRUE | NONE | 18   | G4   |      |       |       |       | P8    | 70    | P6    | J6    | J6    | M1    |
| IOB28A/GCLKT_5 | I/O | 2    | GCLKT_5 | True_of_IOB28B | NONE | NONE |      |      |      | 39    | 56    | 56    | N7    |       | N7    | J1    | J1    | M2    |
| IOB28B/GCLKC_5 | I/O | 2    | GCLKC_5 | Comp_of_IOB28A | NONE | NONE |      |      |      | 40    | 57    | 57    | P7    |       | P7    | J3    | J3    | M3    |
| IOB29A/GCLKT_4 | I/O | 2    | GCLKT_4 | True_of_IOB29B | TRUE | x16  | 19   | F5   | 35   | 41    | 58    | 58    | L8    | 71    | N8    | L2    | L2    | M5    |
| IOB29B/GCLKC_4 | I/O | 2    | GCLKC_4 | Comp_of_IOB29A | TRUE | NONE | 20   | F4   | 36   | 42    | 59    | 59    | M8    | 72    | P8    | M1    | M1    | M4    |
| IOB2A          | I/O | 2    |         | True_of_IOB2B  | TRUE | x16  |      |      | 17   |       |       |       |       | 36    |       |       |       | C6    |

| 管脚名    | 功能  | BANK | 配置功能 | 差分Pair         | LVDS | X16  | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|--------|-----|------|------|----------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOB2B  | I/O | 2    |      | Comp_of_IOB2A  | TRUE | NONE |      |      | 18   |       |       |       |       | 37    |       |       |       | D7    |
| IOB30A | I/O | 2    |      | True_of_IOB30B | NONE | NONE |      |      |      |       | 60    | 60    |       |       |       | H3    | H3    | N1    |
| IOB30B | I/O | 2    |      | Comp_of_IOB30A | NONE | NONE |      |      |      |       | 61    | 61    |       |       |       | H1    | H1    | N2    |
| IOB31A | I/O | 2    |      | True_of_IOB31B | TRUE | x16  |      |      | 37   | 43    | 62    | 62    | N9    | 73    | L8    | J2    | J2    | N3    |
| IOB31B | I/O | 2    |      | Comp_of_IOB31A | TRUE | NONE |      |      | 38   | 44    | 63    | 63    | P9    | 74    | M8    | K1    | K1    | N4    |
| IOB32A | I/O | 2    |      | True_of_IOB32B | NONE | NONE |      |      |      |       |       |       |       |       |       | H5    | H5    | P1    |
| IOB32B | I/O | 2    |      | Comp_of_IOB32A | NONE | NONE |      |      |      |       |       |       |       |       |       | J4    | J4    | R1    |
| IOB33A | I/O | 2    |      | True_of_IOB33B | TRUE | x16  |      | H3   | 39   | 45    | 64    | 64    | L10   | 75    | N9    | K3    | K3    | P2    |
| IOB33B | I/O | 2    |      | Comp_of_IOB33A | TRUE | NONE |      | G3   | 40   | 46    | 65    | 65    | M10   | 76    | P9    | K2    | K2    | P3    |
| IOB34A | I/O | 2    |      | True_of_IOB34B | NONE | NONE |      |      |      |       |       |       |       | 77    |       | J5    | J5    | R2    |
| IOB34B | I/O | 2    |      | Comp_of_IOB34A | NONE | NONE |      |      |      |       |       |       |       | 78    |       | K6    | K6    | T1    |
| IOB35A | I/O | 2    |      | True_of_IOB35B | TRUE | x16  | 21   |      |      | 47    | 66    | 66    | N10   | 79    | N10   | L1    | L1    | P4    |
| IOB35B | I/O | 2    |      | Comp_of_IOB35A | TRUE | NONE | 22   |      |      | 48    | 67    | 67    | P10   | 80    | P10   | L3    | L3    | R3    |
| IOB36A | I/O | 2    |      | True_of_IOB36B | NONE | NONE |      |      |      |       |       |       |       |       |       | K4    | K4    | N5    |
| IOB36B | I/O | 2    |      | Comp_of_IOB36A | NONE | NONE |      |      |      |       |       |       |       |       |       | L5    | L5    | P5    |
| IOB37A | I/O | 2    |      | True_of_IOB37B | NONE | NONE |      |      |      |       | 68    | 68    |       | 81    |       | K5    | K5    | T2    |
| IOB37B | I/O | 2    |      | Comp_of_IOB37A | NONE | NONE |      |      |      |       | 69    | 69    |       | 82    |       | L4    | L4    | U1    |
| IOB38A | I/O | 2    |      | True_of_IOB38B | NONE | NONE |      |      |      |       |       |       |       |       |       | N2    | N2    | R4    |
| IOB38B | I/O | 2    |      | Comp_of_IOB38A | NONE | NONE |      |      |      |       |       |       |       |       |       | P1    | P1    | T3    |
| IOB39A | I/O | 2    |      | True_of_IOB39B | TRUE | x16  | 23   | H2   |      | 49    | 70    | 70    | P11   | 83    | N11   | M3    | M3    | V1    |
| IOB39B | I/O | 2    |      | Comp_of_IOB39A | TRUE | NONE | 24   | G2   |      | 50    | 71    | 71    | N11   | 84    | P11   | N1    | N1    | U2    |
| IOB3A  | I/O | 2    |      | True_of_IOB3B  | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | B5    |
| IOB3B  | I/O | 2    |      | Comp_of_IOB3A  | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | A5    |
| IOB40A | I/O | 2    |      | True_of_IOB40B | NONE | NONE |      |      |      |       |       |       |       |       |       | M2    | M2    | T4    |
| IOB40B | I/O | 2    |      | Comp_of_IOB40A | NONE | NONE |      |      |      |       |       |       | P13   |       |       | N3    | N3    | R5    |
| IOB41A | I/O | 2    |      | True_of_IOB41B | TRUE | x16  |      | H1   | 41   |       | 72    | 72    | P12   | 85    | N12   | R1    | R1    | U3    |
| IOB41B | I/O | 2    |      | Comp_of_IOB41A | TRUE | NONE |      | G1   | 42   |       |       |       | N12   | 86    | P12   | P2    | P2    | V2    |
| IOB42A | I/O | 2    |      | True_of_IOB42B | NONE | NONE |      |      |      |       |       |       |       | 92    |       |       | T4    | U4    |
| IOB42B | I/O | 2    |      | Comp_of_IOB42A | NONE | NONE |      |      |      |       | 75    | 75    |       | 91    |       |       | P4    | T6    |
| IOB43A | I/O | 2    |      | True_of_IOB43B | TRUE | x16  |      |      |      | 55    | 78    | 78    | M14   | 94    | L12   |       | T2    | W2    |
| IOB43B | I/O | 2    |      | Comp_of_IOB43A | TRUE | NONE |      |      | 47   | 53    | 76    | 76    | N14   | 93    | M12   |       | R3    | W1    |
| IOB44A | I/O | 2    |      | True_of_IOB44B | NONE | NONE |      |      |      |       |       |       | K13   | 97    |       |       | R5    | T7    |
| IOB44B | I/O | 2    |      | Comp_of_IOB44A | NONE | NONE |      |      |      |       |       |       | L14   | 96    |       |       | P5    | T8    |
| IOB45A | I/O | 2    |      | True_of_IOB45B | TRUE | x16  |      |      |      |       |       |       | J13   | 99    | N13   |       | T3    | U5    |
| IOB45B | I/O | 2    |      | Comp_of_IOB45A | TRUE | NONE |      |      |      |       |       |       | L13   | 98    | P13   |       | R4    | V4    |
| IOB46A | I/O | 2    |      | True_of_IOB46B | NONE | NONE |      |      |      |       |       |       |       | 101   |       |       |       | U6    |
| IOB46B | I/O | 2    |      | Comp_of_IOB46A | NONE | NONE |      |      |      |       |       |       |       | 100   |       |       |       | V5    |
| IOB4A  | I/O | 2    |      | True_of_IOB4B  | TRUE | x16  |      |      | 19   |       | 29    | 29    | L1    | 38    | L2    |       |       | D6    |
| IOB4B  | I/O | 2    |      | Comp_of_IOB4A  | TRUE | NONE |      |      | 20   |       | 30    | 30    | M1    | 39    | L1    |       |       | E7    |
| IOB5A  | I/O | 2    |      | True_of_IOB5B  | NONE | NONE |      |      |      |       |       |       |       |       |       |       | D6    | C5    |
| IOB5B  | I/O | 2    |      | Comp_of_IOB5A  | NONE | NONE |      |      |      |       |       |       |       |       |       |       | E7    | D5    |
| IOB6A  | I/O | 2    |      | True_of_IOB6B  | TRUE | x16  |      |      |      | 22    | 32    | 32    | N1    | 41    | N1    |       | A4    | E6    |
| IOB6B  | I/O | 2    |      | Comp_of_IOB6A  | TRUE | NONE |      |      |      | 23    | 34    | 34    | P2    | 42    |       |       | C5    | F5    |
| IOB7A  | I/O | 2    |      | True_of_IOB7B  | NONE | NONE |      |      |      |       |       |       |       |       |       |       | A5    | B4    |
| IOB7B  | I/O | 2    |      | Comp_of_IOB7A  | NONE | NONE |      |      |      |       |       |       |       |       |       |       | B6    | A4    |

| 管脚名               | 功能  | BANK | 配置功能       | 差分Pair         | LVDS | X16  | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|-------------------|-----|------|------------|----------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| I0B8A             | I/O | 2    |            | True_of_I0B8B  | TRUE | x16  | 13   | H8   | 25   | 27    | 38    | 38    | N3    | 47    | M2    |       | A3    | C4    |
| I0B8B             | I/O | 2    |            | Comp_of_I0B8A  | TRUE | NONE | 14   | G8   | 26   | 28    | 39    | 39    | P3    | 48    | M1    |       | B4    | A3    |
| I0B9A             | I/O | 2    |            | True_of_I0B9B  | NONE | NONE |      |      |      |       | 40    | 40    |       | 49    |       | D3    | D3    | B3    |
| I0B9B             | I/O | 2    |            | Comp_of_I0B9A  | NONE | NONE |      |      |      |       | 41    | 41    |       | 50    |       | D1    | D1    | D4    |
| IOL11A/TMS        | I/O | 3    | TMS        | True_of_IOL11B | TRUE | NONE | 4    | D7   | 5    | 8     | 13    | 13    | F1    | 16    | B14   | B8    | B8    | C9    |
| IOL11B/TCK        | I/O | 3    | TCK        | Comp_of_IOL11A | TRUE | NONE | 5    | D6   | 6    | 9     | 14    | 14    | G1    | 17    | B13   | A7    | A7    | A8    |
| IOL12A/SCLK       | I/O | 3    | SCLK       | True_of_IOL12B | NONE | NONE |      |      |      | 10    | 15    | 15    | F3    | 18    |       | C10   | C10   | B13   |
| IOL12B/TDI        | I/O | 3    | TDI        | Comp_of_IOL12A | NONE | NONE | 6    | E7   | 7    | 11    | 16    | 16    | G4    | 19    | A13   | A6    | A6    | B7    |
| IOL13A/TDO        | I/O | 3    | TDO        | True_of_IOL13B | TRUE | NONE | 7    | E6   | 8    | 12    | 18    | 18    | G3    | 20    | C14   | C6    | C6    | C7    |
| IOL13B/RECONFIG_N | I/O | 3    | RECONFIG_N | Comp_of_IOL13A | TRUE | NONE | 8    |      | 9    | 14    | 20    | 20    | H3    | 21    |       | B10   | B10   | A14   |
| IOL14A/DONE       | I/O | 3    | DONE       | True_of_IOL14B | NONE | NONE | 9    |      | 10   | 15    | 21    | 21    | J4    | 23    | N14   | C13   | C13   | B17   |
| IOL14B/READY      | I/O | 3    | READY      | Comp_of_IOL14A | NONE | NONE |      |      |      | 16    | 22    | 22    | H2    |       |       | A13   | A13   | A13   |
| IOL15A/GCLKT_6    | I/O | 3    | GCLKT_6    | True_of_IOL15B | TRUE | NONE | 10   | D8   | 11   | 17    | 23    | 23    | J2    | 24    | G2    | C8    | C8    | D12   |
| IOL15B/GCLKC_6    | I/O | 3    | GCLKC_6    | Comp_of_IOL15A | TRUE | NONE | 11   | E8   |      | 18    | 24    | 24    | J3    | 25    | G1    | A8    | A8    | C12   |
| IOL16A            | I/O | 3    |            | True_of_IOL16B | NONE | NONE |      |      |      |       |       |       |       |       |       | F8    | F9    | B12   |
| IOL16B            | I/O | 3    |            | Comp_of_IOL16A | NONE | NONE |      |      |      |       |       |       |       |       |       | D9    | E11   | A12   |
| IOL17A            | I/O | 3    |            | True_of_IOL17B | TRUE | NONE |      |      |      |       |       |       | H1    | 26    | J2    | D8    |       | D11   |
| IOL17B            | I/O | 3    |            | Comp_of_IOL17A | TRUE | NONE |      |      |      |       |       |       | K3    | 27    | J1    | E9    |       | C11   |
| IOL18A            | I/O | 3    |            | True_of_IOL18B | NONE | NONE |      |      |      |       |       |       |       |       |       | B7    | B9    | B11   |
| IOL18B            | I/O | 3    |            | Comp_of_IOL18A | NONE | NONE |      |      |      |       |       |       |       |       |       | C7    | A10   | A11   |
| IOL20A            | I/O | 3    |            | True_of_IOL20B | TRUE | NONE |      |      |      | 19    |       |       | J1    | 28    | J4    | F7    | F8    | E10   |
| IOL20B            | I/O | 3    |            | Comp_of_IOL20A | TRUE | NONE |      |      |      | 20    |       |       | K1    | 29    | J3    | E8    | D9    | D10   |
| IOL21A            | I/O | 3    |            | True_of_IOL21B | NONE | NONE |      |      |      |       |       |       |       |       |       | C4    | D8    | C10   |
| IOL21B            | I/O | 3    |            | Comp_of_IOL21A | NONE | NONE |      |      |      |       |       |       |       |       |       | B5    | E9    | B10   |
| IOL22A            | I/O | 3    |            | True_of_IOL22B | TRUE | NONE |      | F8   | 13   |       | 25    | 25    | K2    | 30    | K2    | E6    | B7    | E12   |
| IOL22B            | I/O | 3    |            | Comp_of_IOL22A | TRUE | NONE |      | F7   | 14   |       | 26    | 26    | L2    | 31    | K1    | D7    | C7    | B9    |
| IOL23A            | I/O | 3    |            | True_of_IOL23B | NONE | NONE |      |      |      |       |       |       |       |       |       | D6    | F7    | D9    |
| IOL23B            | I/O | 3    |            | Comp_of_IOL23A | NONE | NONE |      |      |      |       |       |       |       |       |       | E7    | E8    | E9    |
| IOL24A            | I/O | 3    |            | True_of_IOL24B | TRUE | NONE |      |      |      |       |       |       |       | 32    |       | A4    | C4    | A9    |
| IOL24B            | I/O | 3    |            | Comp_of_IOL24A | TRUE | NONE |      |      |      |       |       |       |       | 33    |       | C5    | B5    | B8    |
| IOL25A            | I/O | 3    |            | True_of_IOL25B | NONE | NONE |      |      |      |       |       |       |       |       |       | B3    | E6    | A7    |
| IOL25B            | I/O | 3    |            | Comp_of_IOL25A | NONE | NONE |      |      |      |       |       |       |       |       |       | A2    | D7    | C8    |
| IOL26A            | I/O | 3    |            | True_of_IOL26B | TRUE | NONE |      |      | 15   |       | 27    | 27    |       |       |       | A5    |       | D8    |
| IOL26B            | I/O | 3    |            | Comp_of_IOL26A | TRUE | NONE |      |      | 16   |       | 28    | 28    |       |       |       | B6    |       | E8    |
| IOL27A            | I/O | 3    |            | True_of_IOL27B | NONE | NONE |      |      |      |       |       |       |       | 35    |       | A3    |       | B6    |
| IOL27B            | I/O | 3    |            | Comp_of_IOL27A | NONE | NONE |      |      |      |       |       |       |       |       |       | B4    |       | A6    |
| IOL2A             | I/O | 3    |            | True_of_IOL2B  | TRUE | NONE |      |      | 3    |       | 3     | 3     | C1    | 3     |       | B11   | B14   | A18   |
| IOL2B             | I/O | 3    |            | Comp_of_IOL2A  | TRUE | NONE |      |      |      |       |       |       | D2    | 4     |       | A12   | A15   | A17   |
| IOL3A             | I/O | 3    |            | True_of_IOL3B  | NONE | NONE |      |      |      |       |       |       |       | 5     |       | C12   | F10   | D15   |
| IOL3B             | I/O | 3    |            | Comp_of_IOL3A  | NONE | NONE |      |      |      |       |       |       |       | 6     |       | B12   | D11   | E14   |

| 管脚名                       | 功能  | BANK | 配置功能                | 差分Pair         | LVDS | X16  | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|---------------------------|-----|------|---------------------|----------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOL4A                     | I/O | 3    |                     | True_of_IOL4B  | TRUE | NONE |      |      |      |       |       |       | D1    | 7     | E2    | B13   | B11   | C16   |
| IOL4B                     | I/O | 3    |                     | Comp_of_IOL4A  | TRUE | NONE |      |      |      |       |       |       | E1    | 8     | E1    | A14   | A12   | B16   |
| IOL5A/JTAGSEL_N/LPLL_T_in | I/O | 3    | JTAGSEL_N/LPLL_T_in | True_of_IOL5B  | NONE | NONE | 3    | C8   | 4    | 3     | 4     | 4     | E2    | 9     | D2    | A11   | C12   | C15   |
| IOL5B/LPLL_C_in           | I/O | 3    | LPLL_C_in           | Comp_of_IOL5A  | NONE | NONE |      | C7   |      |       |       |       | E3    | 10    | D1    | C11   | B12   | D14   |
| IOL6A/LPLL_T_fb           | I/O | 3    | LPLL_T_fb           | True_of_IOL6B  | TRUE | NONE |      |      |      |       |       |       | E4    | 11    | F4    | D10   | B13   | A16   |
| IOL6B/LPLL_C_fb           | I/O | 3    | LPLL_C_fb           | Comp_of_IOL6A  | TRUE | NONE |      |      |      |       | 6     | 6     | F4    | 12    | F3    | E10   | A14   | A15   |
| IOL7A                     | I/O | 3    |                     | True_of_IOL7B  | NONE | NONE |      |      |      |       | 7     | 7     |       |       |       | F9    | A11   | E13   |
| IOL7B                     | I/O | 3    |                     | Comp_of_IOL7A  | NONE | NONE |      |      |      | 5     | 8     | 8     |       |       |       | E11   | C11   | D13   |
| IOL8A                     | I/O | 3    |                     | True_of_IOL8B  | TRUE | NONE |      |      |      |       | 9     | 9     | H4    |       | F2    | A9    | D10   | B15   |
| IOL8B                     | I/O | 3    |                     | Comp_of_IOL8A  | TRUE | NONE |      |      |      |       | 10    | 10    | K4    |       | F1    | B9    | E10   | C14   |
| IOL9A/GCLK_T_7            | I/O | 3    | GCLK_T_7            | True_of_IOL9B  | NONE | NONE |      |      |      | 6     | 11    | 11    | F2    | 14    | H2    | A10   | A9    | B14   |
| IOL9B/GCLK_C_7            | I/O | 3    | GCLK_C_7            | Comp_of_IOL9A  | NONE | NONE |      |      |      | 7     | 12    | 12    | G2    | 15    | H1    | C9    | C9    | C13   |
| IOR11A/MI/D7              | I/O | 1    | MI/D7               | True_of_IOR11B | TRUE | NONE | 34   |      | 62   | 68    | 96    | 96    | F14   | 122   |       | M9    | P10   | W13   |
| IOR11B/MO/D6              | I/O | 1    | MO/D6               | Comp_of_IOR11A | TRUE | NONE | 33   |      | 61   | 67    | 95    | 95    | G14   | 121   |       | L10   | R10   | Y14   |
| IOR12A/MCS_N/D5           | I/O | 1    | MCS_N/D5            | True_of_IOR12B | NONE | NONE | 32   |      | 60   | 66    | 94    | 94    | E12   | 120   |       | R9    | M9    | T12   |
| IOR12B/MCLK/D4            | I/O | 1    | MCLK/D4             | Comp_of_IOR12A | NONE | NONE | 31   |      | 59   | 65    | 93    | 93    | G12   | 119   |       | T10   | L10   | U13   |
| IOR13A/FASTRD_N/D3        | I/O | 1    | FASTRD_N/D3         | True_of_IOR13B | TRUE | NONE |      |      | 57   | 64    | 92    | 92    | G11   | 118   | J13   | M8    | R9    | T11   |
| IOR13B/SI/D2              | I/O | 1    | SI/D2               | Comp_of_IOR13A | TRUE | NONE |      |      |      | 62    | 90    | 90    | G13   | 117   | J14   | N9    | T10   | U11   |
| IOR14A/SO/D1              | I/O | 1    | SO/D1               | True_of_IOR14B | NONE | NONE |      |      | 56   | 61    | 88    | 88    | H14   | 116   |       | N8    | M8    | W10   |
| IOR14B/SSPI_CS_N/D0       | I/O | 1    | SSPI_CS_N/D0        | Comp_of_IOR14A | NONE | NONE |      |      | 55   | 60    | 87    | 87    | J11   | 114   |       | L9    | N9    | Y9    |
| IOR15A/DIN/CLKHOLD_N      | I/O | 1    | DIN/CLKHOLD_N       | True_of_IOR15B | TRUE | NONE |      |      | 54   | 59    | 86    | 86    | H13   | 113   | H13   | P8    | T9    | Y8    |
| IOR15B/DOUT/WE_N          | I/O | 1    | DOUT/WE_N           | Comp_of_IOR15A | TRUE | NONE |      |      | 53   | 58    | 85    | 85    | H12   | 112   | H14   | T8    | P9    | W9    |
| IOR16A                    | I/O | 1    |                     | True_of_IOR16B | NONE | NONE |      |      |      |       |       |       |       |       |       | M6    |       | V10   |
| IOR16B                    | I/O | 1    |                     | Comp_of_IOR16A | NONE | NONE |      |      |      |       |       |       |       |       |       | L8    |       | U10   |
| IOR17A/GCLK_T_3           | I/O | 1    | GCLK_T_3            | True_of_IOR17B | TRUE | NONE | 30   | E3   | 52   | 57    | 84    | 84    | J14   | 111   | H11   | T7    | T7    | V9    |
| IOR17B/GCLK_C_3           | I/O | 1    | GCLK_C_3            | Comp_of_IOR17A | TRUE | NONE | 29   | D3   | 51   | 56    | 83    | 83    | K14   |       | H12   | R8    | R8    | W8    |
| IOR18A                    | I/O | 1    |                     | True_of_IOR18B | NONE | NONE |      |      |      |       |       |       |       |       |       | M7    | N8    | Y7    |
| IOR18B                    | I/O | 1    |                     | Comp_of_IOR18A | NONE | NONE |      |      |      |       |       |       |       |       |       | N7    | L9    | W7    |



| 管脚名             | 功能  | BANK | 配置功能      | 差分Pair         | LVDS | X16  | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|-----------------|-----|------|-----------|----------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOR20A          | I/O | 1    |           | True_of_IOR20B | TRUE | NONE |      |      |      |       |       |       |       |       | J11   | R7    | P8    | V8    |
| IOR20B          | I/O | 1    |           | Comp_of_IOR20A | TRUE | NONE |      |      |      |       |       |       |       |       | J12   | P7    | T8    | U9    |
| IOR21A          | I/O | 1    |           | True_of_IOR21B | NONE | NONE |      |      |      |       |       |       |       |       |       | N6    | M6    | Y6    |
| IOR21B          | I/O | 1    |           | Comp_of_IOR21A | NONE | NONE |      |      |      |       |       |       |       |       |       | L7    | L8    | W6    |
| IOR22A          | I/O | 1    |           | True_of_IOR22B | TRUE | NONE |      | E1   |      |       | 82    | 82    | E11   | 109   | K13   | P6    | M7    | Y5    |
| IOR22B          | I/O | 1    |           | Comp_of_IOR22A | TRUE | NONE |      | E2   | 50   |       | 81    | 81    | F11   | 108   | K14   | T6    | N7    | Y4    |
| IOR23A          | I/O | 1    |           | True_of_IOR23B | NONE | NONE |      |      |      |       |       |       |       |       |       | T5    | R7    | V7    |
| IOR23B          | I/O | 1    |           | Comp_of_IOR23A | NONE | NONE |      |      |      |       |       |       |       |       |       | R6    | P7    | U8    |
| IOR24A          | I/O | 1    |           | True_of_IOR24B | TRUE | NONE | 28   | F1   | 49   |       | 80    | 80    | J12   | 107   | L13   | T3    | N6    | W5    |
| IOR24B          | I/O | 1    |           | Comp_of_IOR24A | TRUE | NONE | 27   | F2   | 48   |       | 79    | 79    | H11   | 106   | L14   | R4    | L7    | V6    |
| IOR25A          | I/O | 1    |           | True_of_IOR25B | NONE | NONE |      |      |      |       |       |       |       |       |       | R5    | P6    | U7    |
| IOR25B          | I/O | 1    |           | Comp_of_IOR25A | NONE | NONE |      |      |      |       |       |       |       |       |       | P5    | T6    | T9    |
| IOR26A          | I/O | 1    |           | True_of_IOR26B | TRUE | NONE |      |      |      |       |       |       | K12   | 105   | M13   | T2    |       | Y3    |
| IOR26B          | I/O | 1    |           | Comp_of_IOR26A | TRUE | NONE |      |      |      |       |       |       | K11   | 104   | M14   | R3    |       | W4    |
| IOR27A          | I/O | 1    |           | True_of_IOR27B | NONE | NONE |      |      |      |       |       |       |       | 103   |       | T4    | T5    | W3    |
| IOR27B          | I/O | 1    |           | Comp_of_IOR27A | NONE | NONE |      |      |      |       |       |       |       | 102   |       | P4    | R6    | Y2    |
| IOR2A           | I/O | 1    |           | True_of_IOR2B  | TRUE | NONE |      |      |      |       |       |       |       |       | C12   | R13   |       |       |
| IOR2B           | I/O | 1    |           | Comp_of_IOR2A  | TRUE | NONE |      |      |      |       |       |       |       |       | C13   | T14   |       |       |
| IOR3A           | I/O | 1    |           | True_of_IOR3B  | NONE | NONE |      |      |      |       |       |       |       |       |       | T15   | R11   | V14   |
| IOR3B           | I/O | 1    |           | Comp_of_IOR3A  | NONE | NONE |      |      |      |       |       |       |       |       |       | R14   | T12   | U14   |
| IOR4A           | I/O | 1    |           | True_of_IOR4B  | TRUE | NONE |      |      |      |       |       |       |       |       | E13   | P12   | R13   | T14   |
| IOR4B           | I/O | 1    |           | Comp_of_IOR4A  | TRUE | NONE |      |      |      |       |       |       |       |       | E14   | T13   | T14   | T13   |
| IOR5A/RPLL_T_in | I/O | 1    | RPLL_T_in | True_of_IOR5B  | NONE | NONE | 35   | C1   | 63   | 73    | 106   | 106   | B14   | 129   | D13   | M10   | T15   | W14   |
| IOR5B/RPLL_C_in | I/O | 1    | RPLL_C_in | Comp_of_IOR5A  | NONE | NONE |      | C2   |      | 72    | 104   | 104   | C14   | 128   | D14   | N11   | R14   | V13   |
| IOR6A/RPLL_T_fb | I/O | 1    | RPLL_T_fb | True_of_IOR6B  | TRUE | NONE |      | D1   |      |       | 102   | 102   | D14   | 127   | F11   | T11   | P12   | Y13   |
| IOR6B/RPLL_C_fb | I/O | 1    | RPLL_C_fb | Comp_of_IOR6A  | TRUE | NONE |      | D2   |      |       | 101   | 101   | E14   | 126   | F12   | P11   | T13   | Y12   |
| IOR7A           | I/O | 1    |           | True_of_IOR7B  | NONE | NONE |      |      |      |       |       |       |       |       |       | N10   | M10   | W12   |
| IOR7B           | I/O | 1    |           | Comp_of_IOR7A  | NONE | NONE |      |      |      |       |       |       |       |       |       | M11   | N11   | V12   |
| IOR8A           | I/O | 1    |           | True_of_IOR8B  | TRUE | NONE |      |      |      |       | 100   | 100   | D13   |       | G13   | P10   | T11   | U12   |
| IOR8B           | I/O | 1    |           | Comp_of_IOR8A  | TRUE | NONE |      |      |      |       | 99    | 99    | E13   | 125   | G14   | R10   | P11   | V11   |
| IOR9A/GCLK_T_2  | I/O | 1    | GCLKT_2   | True_of_IOR9B  | NONE | NONE |      |      |      | 70    | 98    | 98    | F13   | 124   | F13   | T9    | N10   | W11   |
| IOR9B/GCLK_C_2  | I/O | 1    | GCLKC_2   | Comp_of_IOR9A  | NONE | NONE |      |      |      | 69    | 97    | 97    | F12   | 123   | F14   | P9    | M11   | Y10   |
| IOT10A          | I/O | 3    |           | True_of_IOT10B | NONE | NONE |      |      | 84   |       | 140   | 140   |       | 169   |       |       | C16   | G16   |
| IOT10B          | I/O | 3    |           | Comp_of_IOT10A | NONE | NONE |      |      | 83   |       | 139   | 139   |       | 168   |       |       | D15   | F17   |
| IOT11A          | I/O | 3    |           | True_of_IOT11B | NONE | x16  |      | A7   | 82   |       |       |       |       | 167   |       |       |       | D20   |
| IOT11B          | I/O | 3    |           | Comp_of_IOT11A | NONE | NONE |      | B7   | 81   |       |       |       |       | 166   |       |       |       | E19   |
| IOT12A          | I/O | 3    |           | True_of_IOT12B | NONE | NONE | 47   |      | 80   | 97    | 138   | 138   | A4    | 165   |       |       |       | H16   |
| IOT12B          | I/O | 3    |           | Comp_of_IOT12A | NONE | NONE | 46   |      | 79   | 96    | 137   | 137   | A5    | 164   |       |       |       | G17   |
| IOT13A          | I/O | 0    |           | True_of_IOT13B | NONE | x16  |      |      |      |       |       |       |       |       | D3    | L15   | E16   | G18   |

| 管脚名            | 功能  | BANK | 配置功能    | 差分Pair         | LVDS | X16  | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|----------------|-----|------|---------|----------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOT13B         | I/O | 0    |         | Comp_of_IOT13A | NONE | NONE |      |      |      |       |       |       |       |       | D4    | M16   | F15   | H17   |
| IOT14A         | I/O | 0    |         | True_of_IOT14B | NONE | NONE |      |      |      |       |       |       | B5    |       |       | C16   | F14   | F20   |
| IOT14B         | I/O | 0    |         | Comp_of_IOT14A | NONE | NONE |      |      |      |       |       |       | B6    |       |       | D15   | F16   | G19   |
| IOT15A         | I/O | 0    |         | True_of_IOT15B | NONE | x16  |      | A6   |      | 95    | 136   | 136   |       | 163   | B1    | C15   | F13   | E20   |
| IOT15B         | I/O | 0    |         | Comp_of_IOT15A | NONE | NONE |      | B6   |      | 94    | 135   | 135   |       | 162   | C1    | B16   | G12   | F19   |
| IOT16A         | I/O | 0    |         | True_of_IOT16B | NONE | NONE |      |      |      |       |       |       |       |       |       | D16   | F12   | H18   |
| IOT16B         | I/O | 0    |         | Comp_of_IOT16A | NONE | NONE |      |      |      |       |       |       |       |       |       | E14   | G13   | H19   |
| IOT17A         | I/O | 0    |         | True_of_IOT17B | NONE | x16  |      | A5   |      | 93    | 134   | 134   |       | 161   | B2    | E16   | G15   | G20   |
| IOT17B         | I/O | 0    |         | Comp_of_IOT17A | NONE | NONE |      | B5   |      | 92    | 133   | 133   |       | 160   | A2    | F15   | G14   | H20   |
| IOT18A         | I/O | 0    |         | True_of_IOT18B | NONE | NONE |      |      |      |       |       |       | C5    |       | B3    | F12   |       | J18   |
| IOT18B         | I/O | 0    |         | Comp_of_IOT18A | NONE | NONE |      |      |      |       |       |       | D5    |       | A3    | G13   |       | J19   |
| IOT19A         | I/O | 0    |         | True_of_IOT19B | NONE | NONE |      |      |      |       |       |       |       |       |       | F13   | G11   | J17   |
| IOT19B         | I/O | 0    |         | Comp_of_IOT19A | NONE | NONE |      |      |      |       |       |       |       |       |       | G12   | H12   | J16   |
| IOT20A         | I/O | 0    |         | True_of_IOT20B | NONE | NONE |      |      |      | 91    | 132   | 132   |       | 159   |       | F14   | G16   | J20   |
| IOT20B         | I/O | 0    |         | Comp_of_IOT20A | NONE | NONE |      |      |      |       | 131   | 131   |       | 158   |       | F16   | H15   | K18   |
| IOT21A         | I/O | 0    |         | True_of_IOT21B | NONE | x16  |      |      |      |       |       |       |       |       | B4    | G15   |       | K17   |
| IOT21B         | I/O | 0    |         | Comp_of_IOT21A | NONE | NONE |      |      |      |       |       |       |       |       | A4    | G14   |       | K16   |
| IOT22A         | I/O | 0    |         | True_of_IOT22B | NONE | NONE | 45   |      |      | 90    | 130   | 130   | A6    | 157   | B5    | G11   | H13   | K19   |
| IOT22B         | I/O | 0    |         | Comp_of_IOT22A | NONE | NONE | 44   |      |      | 89    | 129   | 129   | A7    | 156   | A5    | H12   | J12   | L20   |
| IOT23A         | I/O | 0    |         | True_of_IOT23B | NONE | x16  |      | C5   |      |       |       |       |       |       |       | G16   | H14   | L19   |
| IOT23B         | I/O | 0    |         | Comp_of_IOT23A | NONE | NONE |      | C4   |      |       |       |       |       |       |       | H15   | H16   | L18   |
| IOT24A         | I/O | 0    |         | True_of_IOT24B | NONE | NONE |      |      |      |       | 128   | 128   | C6    |       |       | H13   |       | M20   |
| IOT24B         | I/O | 0    |         | Comp_of_IOT24A | NONE | NONE |      |      |      |       | 126   | 126   | D6    |       |       | J12   |       | M19   |
| IOT25A         | I/O | 0    |         | True_of_IOT25B | NONE | x16  |      |      |      |       |       |       |       |       | B6    | H11   | J16   | L17   |
| IOT25B         | I/O | 0    |         | Comp_of_IOT25A | NONE | NONE |      |      |      |       |       |       |       | 153   | A6    | J13   | J14   | M18   |
| IOT26A         | I/O | 0    |         | True_of_IOT26B | NONE | NONE |      |      |      |       |       |       | C7    |       |       | J16   |       | M16   |
| IOT26B         | I/O | 0    |         | Comp_of_IOT26A | NONE | NONE |      |      |      |       |       |       | D7    |       |       | J14   |       | M17   |
| IOT27A         | I/O | 0    |         | True_of_IOT27B | NONE | x16  |      | A4   |      |       | 125   | 125   |       | 152   | B7    | J15   | J15   | N20   |
| IOT27B         | I/O | 0    |         | Comp_of_IOT27A | NONE | NONE |      | B4   |      |       | 124   | 124   |       | 151   | A7    | K16   | K16   | N19   |
| IOT28A/GCLKT_0 | I/O | 0    | GCLKT_0 | True_of_IOT28B | NONE | NONE |      |      |      |       |       |       | B7    |       | B8    | H14   | H11   | P19   |
| IOT28B/GCLKC_0 | I/O | 0    | GCLKC_0 | Comp_of_IOT28A | NONE | NONE |      |      |      |       |       |       | B8    |       | D8    | H16   | J13   | P18   |
| IOT29A/GCLKT_1 | I/O | 0    | GCLKT_1 | True_of_IOT29B | NONE | x16  |      | A3   |      |       | 123   | 123   |       | 150   | A8    | K14   | K14   | R19   |
| IOT29B/GCLKC_1 | I/O | 0    | GCLKC_1 | Comp_of_IOT29A | NONE | NONE |      | B3   |      |       | 122   | 122   |       | 149   | B10   | K15   | K15   | R18   |
| IOT2A          | I/O | 3    |         | True_of_IOT2B  | NONE | x16  |      |      |      |       |       |       |       |       |       | F10   | L15   | A19   |
| IOT2B          | I/O | 3    |         | Comp_of_IOT2A  | NONE | NONE |      |      |      |       |       |       |       |       |       | D11   |       | B18   |
| IOT30A         | I/O | 0    |         | True_of_IOT30B | NONE | NONE |      |      |      |       |       |       | A8    |       | A9    | L16   | J11   | T18   |
| IOT30B         | I/O | 0    |         | Comp_of_IOT30A | NONE | NONE |      |      |      |       |       |       | A9    |       | A10   | L14   | L12   | U18   |
| IOT31A         | I/O | 0    |         | True_of_IOT31B | NONE | x16  |      |      |      |       |       |       |       |       | C8    | J11   |       | R20   |
| IOT31B         | I/O | 0    |         | Comp_of_IOT31A | NONE | NONE |      |      |      |       |       |       |       |       | B9    | L12   |       | T20   |
| IOT32A         | I/O | 0    |         | True_of_IOT32B | NONE | NONE | 43   |      |      | 86    | 121   | 121   | C8    | 148   |       | K13   | L16   | U20   |
| IOT32B         | I/O | 0    |         | Comp_of_IOT32A | NONE | NONE | 42   |      |      | 85    | 120   | 120   | D8    | 147   |       | K12   | L14   | V20   |

| 管脚名         | 功能  | BANK | 配置功能  | 差分Pair         | LVDS | X16  | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|-------------|-----|------|-------|----------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOT33A      | I/O | 0    |       | True_of_IOT33B | NONE | x16  |      | A2   |      |       |       |       | B9    |       | A11   | L13   |       | T19   |
| IOT33B      | I/O | 0    |       | Comp_of_IOT33A | NONE | NONE |      | B2   |      |       |       |       | B10   |       | B12   | M14   |       | U19   |
| IOT34A      | I/O | 0    |       | True_of_IOT34B | NONE | NONE |      |      |      |       | 119   | 119   | D9    | 146   | D11   | D14   | K13   | N16   |
| IOT34B      | I/O | 0    |       | Comp_of_IOT34A | NONE | NONE |      |      |      |       | 118   | 118   | C9    | 145   | C11   | E15   | K12   | N17   |
| IOT35A      | I/O | 0    |       | True_of_IOT35B | NONE | x16  |      |      |      |       |       |       |       |       | B11   | K11   |       | V19   |
| IOT35B      | I/O | 0    |       | Comp_of_IOT35A | NONE | NONE |      |      |      |       |       |       |       |       | A12   | M15   |       | W19   |
| IOT36A      | I/O | 1    |       | True_of_IOT36B | NONE | NONE |      |      |      |       |       |       | A11   |       |       |       | K11   | P16   |
| IOT36B      | I/O | 1    |       | Comp_of_IOT36A | NONE | NONE |      |      |      |       |       |       | A10   |       |       |       | L13   | P17   |
| IOT37A      | I/O | 1    |       | True_of_IOT37B | NONE | NONE | 41   |      | 77   | 84    | 117   | 117   |       | 144   |       | N15   | M14   | T17   |
| IOT37B      | I/O | 1    |       | Comp_of_IOT37A | NONE | NONE | 40   |      | 76   | 83    | 116   | 116   |       | 143   |       | P16   | M15   | R17   |
| IOT38A      | I/O | 1    |       | True_of_IOT38B | NONE | NONE |      |      | 75   |       |       |       | B11   | 142   |       | N16   | D14   | W18   |
| IOT38B      | I/O | 1    |       | Comp_of_IOT38A | NONE | NONE |      |      | 74   |       |       |       | B12   | 141   |       | N14   | E15   | Y18   |
| IOT39A      | I/O | 1    |       | True_of_IOT39B | NONE | x16  |      | A1   | 73   | 82    | 115   | 115   |       | 140   |       | P15   | N15   | V17   |
| IOT39B      | I/O | 1    |       | Comp_of_IOT39A | NONE | NONE |      | B1   | 72   | 81    | 114   | 114   |       | 139   |       | R16   | P16   | U17   |
| IOT3A       | I/O | 3    |       | True_of_IOT3B  | NONE | NONE |      |      |      |       |       |       |       |       |       | B14   |       | D16   |
| IOT3B       | I/O | 3    |       | Comp_of_IOT3A  | NONE | NONE |      |      |      |       |       |       |       |       |       | A15   |       | E15   |
| IOT40A      | I/O | 1    |       | True_of_IOT40B | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | Y19   |
| IOT40B      | I/O | 1    |       | Comp_of_IOT40A | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | W20   |
| IOT41A      | I/O | 1    |       | True_of_IOT41B | NONE | x16  |      |      | 71   | 80    | 113   | 113   |       | 138   |       |       | N16   | U16   |
| IOT41B      | I/O | 1    |       | Comp_of_IOT41A | NONE | NONE |      |      | 70   | 79    | 112   | 112   |       | 137   |       |       | N14   | R16   |
| IOT42A      | I/O | 1    |       | True_of_IOT42B | NONE | NONE | 39   |      | 69   | 78    | 111   | 111   | A12   | 136   |       |       | P15   | W16   |
| IOT42B      | I/O | 1    |       | Comp_of_IOT42A | NONE | NONE | 38   |      | 68   | 77    | 110   | 110   | A13   | 135   |       |       | R16   | V16   |
| IOT43A      | I/O | 1    |       | True_of_IOT43B | NONE | x16  |      |      |      |       |       |       |       |       |       |       |       | Y16   |
| IOT43B      | I/O | 1    |       | Comp_of_IOT43A | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | W15   |
| IOT44A      | I/O | 1    |       | True_of_IOT44B | NONE | NONE |      |      |      |       |       |       |       | D10   |       |       |       | W17   |
| IOT44B      | I/O | 1    |       | Comp_of_IOT44A | NONE | NONE |      |      |      |       |       |       | C10   |       |       |       |       | Y17   |
| IOT45A      | I/O | 1    |       | True_of_IOT45B | NONE | x16  |      |      |      |       |       |       |       |       |       |       | R12   | T15   |
| IOT45B      | I/O | 1    |       | Comp_of_IOT45A | NONE | NONE |      |      |      |       |       |       |       |       |       |       | P13   | U15   |
| IOT46A      | I/O | 1    |       | True_of_IOT46B | NONE | NONE |      |      |      |       |       |       |       |       |       |       | R11   | V15   |
| IOT46B      | I/O | 1    |       | Comp_of_IOT46A | NONE | NONE |      |      |      |       |       |       |       |       |       |       | T12   | Y15   |
| IOT4A       | I/O | 3    |       | True_of_IOT4B  | NONE | x16  |      |      |      |       |       |       |       |       |       |       |       | C19   |
| IOT4B       | I/O | 3    |       | Comp_of_IOT4A  | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | B20   |
| IOT5A/MODE0 | I/O | 3    | MODE0 | True_of_IOT5B  | NONE | NONE |      |      | 88   | 100   | 144   | 144   | B1    | 174   |       |       | M16   | C17   |
| IOT5B/MODE2 | I/O | 3    | MODE2 | Comp_of_IOT5A  | NONE | NONE | 48   |      |      |       |       |       | A2    | 173   |       |       | C15   | D17   |
| IOT6A       | I/O | 3    |       | True_of_IOT6B  | NONE | x16  |      |      |      |       |       |       |       |       |       |       |       | F16   |
| IOT6B/MODE1 | I/O | 3    | MODE1 | Comp_of_IOT6A  | NONE | NONE | 48   |      | 87   |       | 143   | 143   | A3    | 172   |       |       | B16   | E17   |
| IOT7A       | I/O | 3    |       | True_of_IOT7B  | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | D18   |
| IOT7B       | I/O | 3    |       | Comp_of_IOT7A  | NONE | NONE |      |      |      |       |       |       |       |       |       |       |       | B19   |
| IOT8A       | I/O | 3    |       | True_of_IOT8B  | NONE | x16  |      | A8   | 86   | 99    | 142   | 142   | B3    | 171   |       |       |       | D19   |
| IOT8B       | I/O | 3    |       | Comp_of_IOT8A  | NONE | NONE |      | B8   | 85   | 98    | 141   | 141   | B4    | 170   |       |       |       | C20   |
| IOT9A       | I/O | 3    |       | True_of_IOT9B  | NONE | NONE |      |      |      |       |       |       |       |       |       |       | D16   | E18   |
| IOT9B       | I/O | 3    |       | Comp_of_IOT9A  | NONE | NONE |      |      |      |       |       |       |       |       |       |       | E14   | F18   |

| 管脚名          | 功能    | BANK | 配置功能 | 差分Pair | LVDS | X16 | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |     |
|--------------|-------|------|------|--------|------|-----|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| NC           | N/A   | N/A  |      |        |      |     |      |      |      |       |       |       |       |       |       |       |       |       | A2  |
| NC           | N/A   | N/A  |      |        |      |     |      |      |      |       |       |       |       |       |       |       |       |       | B2  |
| NC           | N/A   | N/A  |      |        |      |     |      |      |      |       |       |       |       |       |       |       |       |       | G1  |
| NC           | N/A   | N/A  |      |        |      |     |      |      |      |       |       |       |       |       |       |       |       |       | H3  |
| NC           | N/A   | N/A  |      |        |      |     |      |      |      |       |       |       |       |       |       |       |       |       | N18 |
| NC           | N/A   | N/A  |      |        |      |     |      |      |      |       |       |       |       |       |       |       |       |       | P20 |
| VCC          | Power | N/A  |      |        |      |     | 12   | E5   | 22   | 25    | 36    | 36    |       | 44    |       |       |       |       |     |
| VCC          | Power | N/A  |      |        |      |     | 37   | D4   | 66   | 75    | 108   | 108   |       | 132   |       |       |       |       |     |
| VCC          | Power | N/A  |      |        |      |     |      |      | 1    | 1     | 1     | 1     |       | 1     |       |       |       |       |     |
| VCC          | Power | N/A  |      |        |      |     |      |      | 45   | 51    | 73    | 73    |       | 89    |       |       |       |       |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       | A1    |       | E10   | A1    | A1    | J10   |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       | A14   |       | E5    | A16   | A16   | J11   |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       | P1    |       | E6    | G7    | G7    | K9    |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       | P14   |       | E9    | G10   | G10   | K12   |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | F10   | K7    | K7    | L9    |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | F5    | K10   | K10   | L12   |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | F6    | T1    | T1    | M10   |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | F9    | T16   | T16   | M11   |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | J5    |       |       |       |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | J6    |       |       |       |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | J9    |       |       |       |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | K10   |       |       |       |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | K5    |       |       |       |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | K6    |       |       |       |     |
| VCC          | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | K9    |       |       |       |     |
| VCCO0        | Power | N/A  |      |        |      |     |      |      | 67   | 76    | 109   | 109   |       | 133   |       |       |       |       |     |
| VCCO0        | Power | N/A  |      |        |      |     |      |      |      | 88    | 127   | 127   |       | 155   |       |       |       |       |     |
| VCCO0        | Power | N/A  |      |        |      |     |      |      |      |       |       |       | C11   |       | C4    | H10   | H10   | K13   |     |
| VCCO0        | Power | N/A  |      |        |      |     |      |      |      |       |       |       | C4    |       | C10   | E13   | E13   | J13   |     |
| VCCO0        | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       | 176   |       |       |       |       |     |
| VCCO0        | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | C5    | J10   | J10   | L13   |     |
| VCCO0        | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | C9    | M13   | M13   |       |     |
| VCCO0/VCC O2 | Power | N/A  |      |        |      |     |      | C6   |      |       |       |       |       |       |       |       |       |       |     |
| VCCO0/VCC O3 | Power | N/A  |      |        |      |     | 1    |      |      |       |       |       |       |       |       |       |       |       |     |
| VCCO1        | Power | N/A  |      |        |      |     |      |      | 58   | 63    | 91    | 91    |       | 115   |       |       |       |       |     |
| VCCO1        | Power | N/A  |      |        |      |     |      |      |      | 71    | 103   | 103   |       |       |       |       |       |       |     |
| VCCO1        | Power | N/A  |      |        |      |     |      |      |      |       |       |       | D12   |       | D12   | K9    |       | N9    |     |
| VCCO1        | Power | N/A  |      |        |      |     |      |      |      |       |       |       | L12   |       | E12   | K8    | K8    | N10   |     |
| VCCO1        | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       | 95    |       |       |       |       |     |
| VCCO1        | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       | 110   |       |       |       |       |     |
| VCCO1        | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | G11   | N12   | N12   | N11   |     |
| VCCO1        | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | G12   | N5    | N5    | N12   |     |
| VCCO1        | Power | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | K11   |       |       |       |     |

| 管脚名         | 功能     | BANK | 配置功能 | 差分Pair | LVDS | X16 | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|-------------|--------|------|------|--------|------|-----|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| VCCO1       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | K12   |       |       |       |
| VCCO1/VCCO2 | Power  | N/A  |      |        |      |     | 25   |      |      |       |       |       |       |       |       |       |       |       |
| VCCO1/VCCO3 | Power  | N/A  |      |        |      |     |      | F3   |      |       |       |       |       |       |       |       |       |       |
| VCCO2       | Power  | N/A  |      |        |      |     |      |      | 23   | 26    | 37    | 37    |       | 45    |       |       |       |       |
| VCCO2       | Power  | N/A  |      |        |      |     |      |      | 44   |       |       |       |       | 88    |       |       |       |       |
| VCCO2       | Power  | N/A  |      |        |      |     |      |      |      | 38    | 55    | 55    |       | 65    |       |       |       |       |
| VCCO2       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       | M11   |       | M5    | J7    | J7    | K5    |
| VCCO2       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       | M4    |       | M10   | H7    | H7    | J8    |
| VCCO2       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | M6    | M4    | M4    | K8    |
| VCCO2       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | M9    |       |       | L8    |
| VCCO2       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       |       | E4    | E4    | M8    |
| VCCO3       | Power  | N/A  |      |        |      |     |      |      | 12   |       |       |       |       |       |       |       |       |       |
| VCCO3       | Power  | N/A  |      |        |      |     |      |      |      | 4     | 5     | 5     |       | 13    |       |       |       |       |
| VCCO3       | Power  | N/A  |      |        |      |     |      |      |      | 13    | 19    | 19    |       | 22    |       |       |       |       |
| VCCO3       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       | D3    |       | E3    | G9    | G9    | H11   |
| VCCO3       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       | L3    |       | E4    | D12   | D12   | H12   |
| VCCO3       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       | 34    |       |       |       |       |
| VCCO3       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | G3    | D5    | D5    | H9    |
| VCCO3       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | H3    |       |       |       |
| VCCO3       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | K3    |       |       |       |
| VCCO3       | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | K4    |       |       |       |
| VCCX        | Power  | N/A  |      |        |      |     | 36   | C3   | 64   |       |       |       |       | 130   |       |       |       |       |
| VCCX        | Power  | N/A  |      |        |      |     |      | F6   |      | 21    | 31    | 31    |       | 40    |       |       |       |       |
| VCCX        | Power  | N/A  |      |        |      |     |      |      | 78   |       |       |       |       | 154   |       |       |       |       |
| VCCX        | Power  | N/A  |      |        |      |     |      |      |      | 54    | 77    | 77    |       |       |       |       |       |       |
| VCCX        | Power  | N/A  |      |        |      |     |      |      |      |       |       |       | C13   |       | L7    |       |       |       |
| VCCX        | Power  | N/A  |      |        |      |     |      |      |      |       |       |       | C2    |       | K7    |       |       |       |
| VCCX        | Power  | N/A  |      |        |      |     |      |      |      |       |       |       | M13   |       | H6    | G8    | G8    | M13   |
| VCCX        | Power  | N/A  |      |        |      |     |      |      |      |       |       |       | M2    |       | H5    |       | K9    | H10   |
| VCCX        | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       | 66    |       |       |       |       |
| VCCX        | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | D7    |       |       |       |
| VCCX        | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | E7    |       |       |       |
| VCCX        | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | G10   |       |       |       |
| VCCX        | Power  | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | G9    |       |       |       |
| VSS         | Ground | N/A  |      |        |      |     | 2    |      | 2    | 2     | 2     | 2     |       | 2     |       |       |       |       |
| VSS         | Ground | N/A  |      |        |      |     | 26   |      | 46   | 52    | 74    | 74    |       | 90    |       |       |       |       |
| VSS         | Ground | N/A  |      |        |      |     |      | D5   |      | 24    | 35    | 35    |       | 43    |       |       |       |       |
| VSS         | Ground | N/A  |      |        |      |     |      | E4   |      |       |       |       |       | 134   |       |       |       |       |

| 管脚名 | 功能     | BANK | 配置功能 | 差分Pair | LVDS | X16 | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |  |
|-----|--------|------|------|--------|------|-----|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| VSS | Ground | N/A  |      |        |      |     |      |      | 21   |       | 33    | 33    |       |       |       |       |       |       |  |
| VSS | Ground | N/A  |      |        |      |     |      |      | 24   |       |       |       |       | 46    |       |       |       |       |  |
| VSS | Ground | N/A  |      |        |      |     |      |      | 43   |       |       |       |       | 87    |       |       |       |       |  |
| VSS | Ground | N/A  |      |        |      |     |      |      | 65   | 74    |       |       |       |       |       |       |       |       |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      | 37    |       |       |       |       |       |       |       |       |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      | 87    |       |       |       |       |       |       |       |       |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       | 17    | 17    |       |       |       |       |       |       |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       | 53    | 53    |       |       |       |       |       |       |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       | 89    | 89    |       |       |       |       |       |       |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       | 105   | 105   |       |       |       |       |       |       |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       | 107   | 107   |       | 131   |       |       |       |       |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | B13   |       | A14   | C3    | C3    | A10   |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | B2    |       | A1    | B15   | B15   | A1    |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | C12   |       | C3    | D4    | D4    | C3    |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | C3    |       | C2    | C14   | C14   | A20   |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | D11   |       | C7    | E5    | E5    | E11   |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | D4    |       | C6    | D13   | D13   | C18   |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | L11   |       | D5    | F6    | F6    | H13   |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | L4    |       | D10   | E12   | E12   | H8    |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | M12   |       | D9    | H8    | H8    | J12   |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | M3    |       | D6    | F11   | F11   | J9    |  |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | N13   |       | E8    | J8    | J8    | K11   |  |

| 管脚名 | 功能     | BANK | 配置功能 | 差分Pair | LVDS | X16 | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|-----|--------|------|------|--------|------|-----|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       | N2    |       | E11   | H9    | H9    | K10   |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       | 175   |       |       |       |       |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | F7    | J9    | J9    | K20   |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | F8    | L6    | L6    | L5    |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | G4    |       |       |       |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | G5    | L11   | L11   | L10   |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | G6    | M5    | M5    | L11   |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | G7    | M12   | M12   | L16   |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | G8    | N4    | N4    | M9    |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | H10   | N13   | N13   | M12   |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | H4    | P3    | P3    | N8    |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | H7    | P14   | P14   | N13   |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | H8    | R2    | R2    | T10   |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | H9    | R15   | R15   | V3    |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | J10   | B2    | B2    | V18   |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | J7    |       |       | Y1    |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | J8    |       |       | Y11   |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | K8    |       |       | Y20   |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | L10   |       |       |       |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | L11   |       |       |       |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | L3    |       |       |       |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | L5    |       |       |       |

| 管脚名 | 功能     | BANK | 配置功能 | 差分Pair | LVDS | X16 | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|-----|--------|------|------|--------|------|-----|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | L6    |       |       |       |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | L9    |       |       |       |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | M11   |       |       |       |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | M3    |       |       |       |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | M7    |       |       |       |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | P1    |       |       |       |
| VSS | Ground | N/A  |      |        |      |     |      |      |      |       |       |       |       |       | P14   |       |       |       |



| 管脚名               | 功能  | BANK | 配置功能       | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|-------------------|-----|------|------------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>BANK3 True</b> |     |      |            |                |      |       |      |      |      |       |       |       |       |       |       |       |       |       |
| IOL11A/TMS        | I/O | 3    | TMS        | True_of_IOL11B | TRUE | NON E | 4    | D7   | 5    | 8     | 13    | 13    | F1    | 16    | B14   | B8    | B8    | C9    |
| IOL11B/TCK        | I/O | 3    | TCK        | Comp_of_IOL11A | TRUE | NON E | 5    | D6   | 6    | 9     | 14    | 14    | G1    | 17    | B13   | A7    | A7    | A8    |
| IOL12A/SCLK       | I/O | 3    | SCLK       | True_of_IOL12B | NONE | NON E |      |      |      | 10    | 15    | 15    | F3    | 18    |       | C10   | C10   | B13   |
| IOL12B/TDI        | I/O | 3    | TDI        | Comp_of_IOL12A | NONE | NON E |      |      |      | 11    | 16    | 16    | G4    | 19    |       | A6    | A6    | B7    |
| IOL13A/TDO        | I/O | 3    | TDO        | True_of_IOL13B | TRUE | NON E | 7    |      | 8    | 12    | 18    | 18    | G3    | 20    |       | C6    | C6    | C7    |
| IOL13B/RECONFIG_N | I/O | 3    | RECONFIG_N | Comp_of_IOL13A | TRUE | NON E | 8    |      | 9    | 14    | 20    | 20    | H3    | 21    |       | B10   | B10   | A14   |
| IOL14A/DONE       | I/O | 3    | DONE       | True_of_IOL14B | NONE | NON E |      |      |      | 15    | 21    | 21    | J4    |       |       | C13   | C13   | B17   |
| IOL14B/READY      | I/O | 3    | READY      | Comp_of_IOL14A | NONE | NON E |      |      |      | 16    | 22    | 22    | H2    |       |       | A13   | A13   | A13   |
| IOL15A/GCLKT_6    | I/O | 3    | GCLKT_6    | True_of_IOL15B | TRUE | NON E | 10   | D8   |      | 17    | 23    | 23    | J2    | 24    | G2    | C8    | C8    | D12   |
| IOL15B/GCLKC_6    | I/O | 3    | GCLKC_6    | Comp_of_IOL15A | TRUE | NON E | 11   | E8   |      | 18    | 24    | 24    | J3    | 25    | G1    | A8    | A8    | C12   |
| IOL16A            | I/O | 3    |            | True_of_IOL16B | NONE | NON E |      |      |      |       |       |       |       |       |       | F8    | F9    | B12   |
| IOL16B            | I/O | 3    |            | Comp_of_IOL16A | NONE | NON E |      |      |      |       |       |       |       |       |       | D9    | E11   | A12   |
| IOL17A            | I/O | 3    |            | True_of_IOL17B | TRUE | NON E |      |      |      |       |       |       | H1    | 26    | J2    | D8    |       | D11   |
| IOL17B            | I/O | 3    |            | Comp_of_IOL17A | TRUE | NON E |      |      |      |       |       |       | K3    | 27    | J1    | E9    |       | C11   |
| IOL18A            | I/O | 3    |            | True_of_IOL18B | NONE | NON E |      |      |      |       |       |       |       |       |       | B7    | B9    | B11   |
| IOL18B            | I/O | 3    |            | Comp_of_IOL18A | NONE | NON E |      |      |      |       |       |       |       |       |       | C7    | A10   | A11   |
| IOL20A            | I/O | 3    |            | True_of_IOL20B | TRUE | NON E |      |      |      | 19    |       |       | J1    | 28    | J4    | F7    | F8    | E10   |
| IOL20B            | I/O | 3    |            | Comp_of_IOL20A | TRUE | NON E |      |      |      | 20    |       |       | K1    | 29    | J3    | E8    | D9    | D10   |

| 管脚名    | 功能  | BANK | 配置功能 | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|--------|-----|------|------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOL21A | I/O | 3    |      | True_of_IOL21B | NONE | NON E |      |      |      |       |       |       |       |       |       | C4    | D8    | C10   |
| IOL21B | I/O | 3    |      | Comp_of_IOL21A | NONE | NON E |      |      |      |       |       |       |       |       |       | B5    | E9    | B10   |
| IOL22A | I/O | 3    |      | True_of_IOL22B | TRUE | NON E |      | F8   | 13   |       | 25    | 25    | K2    | 30    | K2    | E6    | B7    | E12   |
| IOL22B | I/O | 3    |      | Comp_of_IOL22A | TRUE | NON E |      | F7   | 14   |       | 26    | 26    | L2    | 31    | K1    | D7    | C7    | B9    |
| IOL23A | I/O | 3    |      | True_of_IOL23B | NONE | NON E |      |      |      |       |       |       |       |       |       | D6    | F7    | D9    |
| IOL23B | I/O | 3    |      | Comp_of_IOL23A | NONE | NON E |      |      |      |       |       |       |       |       |       | E7    | E8    | E9    |
| IOL24A | I/O | 3    |      | True_of_IOL24B | TRUE | NON E |      |      |      |       |       |       |       | 32    |       | A4    | C4    | A9    |
| IOL24B | I/O | 3    |      | Comp_of_IOL24A | TRUE | NON E |      |      |      |       |       |       |       | 33    |       | C5    | B5    | B8    |
| IOL25A | I/O | 3    |      | True_of_IOL25B | NONE | NON E |      |      |      |       |       |       |       |       |       | B3    | E6    | A7    |
| IOL25B | I/O | 3    |      | Comp_of_IOL25A | NONE | NON E |      |      |      |       |       |       |       |       |       | A2    | D7    | C8    |
| IOL26A | I/O | 3    |      | True_of_IOL26B | TRUE | NON E |      |      | 15   |       | 27    | 27    |       |       |       | A5    |       | D8    |
| IOL26B | I/O | 3    |      | Comp_of_IOL26A | TRUE | NON E |      |      | 16   |       | 28    | 28    |       |       |       | B6    |       | E8    |
| IOL27A | I/O | 3    |      | True_of_IOL27B | NONE | NON E |      |      |      |       |       |       |       |       |       | A3    |       | B6    |
| IOL27B | I/O | 3    |      | Comp_of_IOL27A | NONE | NON E |      |      |      |       |       |       |       |       |       | B4    |       | A6    |
| IOL2A  | I/O | 3    |      | True_of_IOL2B  | TRUE | NON E |      |      |      |       |       |       | C1    | 3     |       | B11   | B14   | A18   |
| IOL2B  | I/O | 3    |      | Comp_of_IOL2A  | TRUE | NON E |      |      |      |       |       |       | D2    | 4     |       | A12   | A15   | A17   |
| IOL3A  | I/O | 3    |      | True_of_IOL3B  | NONE | NON E |      |      |      |       |       |       |       | 5     |       | C12   | F10   | D15   |
| IOL3B  | I/O | 3    |      | Comp_of_IOL3A  | NONE | NON E |      |      |      |       |       |       |       | 6     |       | B12   | D11   | E14   |
| IOL4A  | I/O | 3    |      | True_of_IOL4B  | TRUE | NON E |      |      |      |       |       |       | D1    | 7     | E2    | B13   | B11   | C16   |

| 管脚名                       | 功能  | BANK | 配置功能                | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|---------------------------|-----|------|---------------------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOL4B                     | I/O | 3    |                     | Comp_of_IOL4A  | TRUE | NON E |      |      |      |       |       |       | E1    | 8     | E1    | A14   | A12   | B16   |
| IOL5A/JTAGSEL_N/LPLL_T_in | I/O | 3    | JTAGSEL_N/LPLL_T_in | True_of_IOL5B  | NONE | NON E |      | C8   |      |       |       |       | E2    | 9     | D2    | A11   | C12   | C15   |
| IOL5B/LPLL_C_in           | I/O | 3    | LPLL_C_in           | Comp_of_IOL5A  | NONE | NON E |      | C7   |      |       |       |       | E3    | 10    | D1    | C11   | B12   | D14   |
| IOL6A/LPLL_T_fb           | I/O | 3    | LPLL_T_fb           | True_of_IOL6B  | TRUE | NON E |      |      |      |       |       |       | E4    | 11    | F4    | D10   | B13   | A16   |
| IOL6B/LPLL_C_fb           | I/O | 3    | LPLL_C_fb           | Comp_of_IOL6A  | TRUE | NON E |      |      |      |       |       |       | F4    | 12    | F3    | E10   | A14   | A15   |
| IOL7A                     | I/O | 3    |                     | True_of_IOL7B  | NONE | NON E |      |      |      |       | 7     | 7     |       |       |       | F9    | A11   | E13   |
| IOL7B                     | I/O | 3    |                     | Comp_of_IOL7A  | NONE | NON E |      |      |      |       | 8     | 8     |       |       |       | E11   | C11   | D13   |
| IOL8A                     | I/O | 3    |                     | True_of_IOL8B  | TRUE | NON E |      |      |      |       | 9     | 9     | H4    |       | F2    | A9    | D10   | B15   |
| IOL8B                     | I/O | 3    |                     | Comp_of_IOL8A  | TRUE | NON E |      |      |      |       | 10    | 10    | K4    |       | F1    | B9    | E10   | C14   |
| IOL9A/GCLK_T_7            | I/O | 3    | GCLK_T_7            | True_of_IOL9B  | NONE | NON E |      |      |      | 6     | 11    | 11    | F2    | 14    | H2    | A10   | A9    | B14   |
| IOL9B/GCLK_C_7            | I/O | 3    | GCLK_C_7            | Comp_of_IOL9A  | NONE | NON E |      |      |      | 7     | 12    | 12    | G2    | 15    | H1    | C9    | C9    | C13   |
| IOT10A                    | I/O | 3    |                     | True_of_IOT10B | NONE | NON E |      |      | 84   |       | 140   | 140   |       | 169   |       |       | C16   | G16   |
| IOT10B                    | I/O | 3    |                     | Comp_of_IOT10A | NONE | NON E |      |      | 83   |       | 139   | 139   |       | 168   |       |       | D15   | F17   |
| IOT11A                    | I/O | 3    |                     | True_of_IOT11B | NONE | x16   |      | A7   | 82   |       |       |       |       | 167   |       |       |       | D20   |
| IOT11B                    | I/O | 3    |                     | Comp_of_IOT11A | NONE | NON E |      | B7   | 81   |       |       |       |       | 166   |       |       |       | E19   |
| IOT12A                    | I/O | 3    |                     | True_of_IOT12B | NONE | NON E | 47   |      | 80   | 97    | 138   | 138   | A4    | 165   |       |       |       | H16   |
| IOT12B                    | I/O | 3    |                     | Comp_of_IOT12A | NONE | NON E | 46   |      | 79   | 96    | 137   | 137   | A5    | 164   |       |       |       | G17   |
| IOT2A                     | I/O | 3    |                     | True_of_IOT2B  | NONE | x16   |      |      |      |       |       |       |       |       |       | F10   |       | A19   |
| IOT2B                     | I/O | 3    |                     | Comp_of_IOT2A  | NONE | NON E |      |      |      |       |       |       |       |       |       | D11   |       | B18   |

| 管脚名                         | 功能  | BANK | 配置功能  | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |     |
|-----------------------------|-----|------|-------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| IOT3A                       | I/O | 3    |       | True_of_IOT3B  | NONE | NON E |      |      |      |       |       |       |       |       |       | B14   |       | D16   |     |
| IOT3B                       | I/O | 3    |       | Comp_of_IOT3A  | NONE | NON E |      |      |      |       |       |       |       |       |       | A15   |       | E15   |     |
| IOT4A                       | I/O | 3    |       | True_of_IOT4B  | NONE | x16   |      |      |      |       |       |       |       |       |       |       |       | C19   |     |
| IOT4B                       | I/O | 3    |       | Comp_of_IOT4A  | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | B20   |     |
| IOT5A/MODE0                 | I/O | 3    | MODE0 | True_of_IOT5B  | NONE | NON E |      |      |      |       |       |       | B1    | 174   |       |       | M16   | C17   |     |
| IOT5B/MODE2                 | I/O | 3    | MODE2 | Comp_of_IOT5A  | NONE | NON E |      |      |      |       |       |       | A2    | 173   |       |       | C15   | D17   |     |
| IOT6A                       | I/O | 3    |       | True_of_IOT6B  | NONE | x16   |      |      |      |       |       |       |       |       |       |       |       | F16   |     |
| IOT6B/MODE1                 | I/O | 3    | MODE1 | Comp_of_IOT6A  | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | E17   |     |
| IOT7A                       | I/O | 3    |       | True_of_IOT7B  | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | D18   |     |
| IOT7B                       | I/O | 3    |       | Comp_of_IOT7A  | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | B19   |     |
| IOT8A                       | I/O | 3    |       | True_of_IOT8B  | NONE | x16   |      | A8   | 86   | 99    | 142   | 142   | B3    | 171   |       |       |       | D19   |     |
| IOT8B                       | I/O | 3    |       | Comp_of_IOT8A  | NONE | NON E |      | B8   | 85   | 98    | 141   | 141   | B4    | 170   |       |       |       | C20   |     |
| IOT9A                       | I/O | 3    |       | True_of_IOT9B  | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | D16   | E18 |
| IOT9B                       | I/O | 3    |       | Comp_of_IOT9A  | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | E14   | F18 |
| <b>BANK2 True LVDS Pair</b> |     |      |       |                |      |       |      |      |      |       |       |       |       |       |       |       |       |       |     |
| IOB10A                      | I/O | 2    |       | True_of_IOB10B | NONE | NON E |      |      |      |       |       |       |       |       |       |       | C1    | C1    | D3  |
| IOB10B                      | I/O | 2    |       | Comp_of_IOB10A | NONE | NON E |      |      |      |       |       |       |       |       |       |       | D2    | D2    | E4  |
| IOB11A                      | I/O | 2    |       | True_of_IOB11B | TRUE | x16   |      |      | 27   | 29    | 42    | 42    | L5    | 51    | N2    | B1    | B1    | B1    |     |
| IOB11B                      | I/O | 2    |       | Comp_of_IOB11A | TRUE | NON E |      |      | 28   | 30    | 43    | 43    | M5    | 52    | P2    | C2    | C2    | C2    |     |
| IOB12A                      | I/O | 2    |       | True_of_IOB12B | NONE | NON E |      |      |      |       | 44    | 44    |       |       |       |       |       | B3    | F4  |
| IOB12B                      | I/O | 2    |       | Comp_of_IOB12A | NONE | NON E |      |      |      |       | 45    | 45    |       |       |       |       |       | A2    | E3  |
| IOB13A                      | I/O | 2    |       | True_of_IOB13B | TRUE | x16   |      | H7   | 29   | 31    | 46    | 46    | N4    | 53    |       | E2    | E2    | G5    |     |

| 管脚名    | 功能  | BANK | 配置功能 | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|--------|-----|------|------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOB13B | I/O | 2    |      | Comp_of_IOB13A | TRUE | NON E |      | G7   | 30   | 32    | 47    | 47    | P4    | 54    |       | E3    | E3    | H5    |
| IOB14A | I/O | 2    |      | True_of_IOB14B | NONE | NON E |      |      |      |       |       |       |       |       |       | E1    | E1    | D2    |
| IOB14B | I/O | 2    |      | Comp_of_IOB14A | NONE | NON E |      |      |      |       |       |       |       |       |       | F2    | F2    | C1    |
| IOB15A | I/O | 2    |      | True_of_IOB15B | TRUE | x16   |      |      |      | 33    | 48    | 48    | N5    | 55    | N3    | F4    | F4    | G4    |
| IOB15B | I/O | 2    |      | Comp_of_IOB15A | TRUE | NON E |      |      |      | 34    | 49    | 49    | P5    | 56    | P3    | G6    | G6    | F3    |
| IOB16A | I/O | 2    |      | True_of_IOB16B | NONE | NON E |      |      |      |       |       |       |       |       |       | F3    | F3    | E2    |
| IOB16B | I/O | 2    |      | Comp_of_IOB16A | NONE | NON E |      |      |      |       |       |       |       |       |       | F1    | F1    | D1    |
| IOB17A | I/O | 2    |      | True_of_IOB17B | TRUE | x16   | 15   | H6   | 31   | 35    | 50    | 50    | L6    | 57    |       | G5    | G5    | G3    |
| IOB17B | I/O | 2    |      | Comp_of_IOB17A | TRUE | NON E | 16   | G6   | 32   | 36    | 51    | 51    | M6    | 58    |       | G4    | G4    | H4    |
| IOB18A | I/O | 2    |      | True_of_IOB18B | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | F2    |
| IOB18B | I/O | 2    |      | Comp_of_IOB18A | NONE | NON E |      |      |      |       |       |       |       | 59    |       |       |       | E1    |
| IOB19A | I/O | 2    |      | True_of_IOB19B | NONE | NON E |      |      |      |       |       |       |       | 60    |       |       |       | F1    |
| IOB19B | I/O | 2    |      | Comp_of_IOB19A | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | G2    |
| IOB20A | I/O | 2    |      | True_of_IOB20B | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | J5    |
| IOB20B | I/O | 2    |      | Comp_of_IOB20A | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | J4    |
| IOB21A | I/O | 2    |      | True_of_IOB21B | TRUE | x16   |      |      |      |       |       |       | L7    | 61    | L4    |       |       | H2    |
| IOB21B | I/O | 2    |      | Comp_of_IOB21A | TRUE | NON E |      |      |      |       |       |       | M7    | 62    | M4    |       |       | H1    |
| IOB22A | I/O | 2    |      | True_of_IOB22B | NONE | NON E |      |      |      |       |       |       |       |       |       | G2    | G2    | J3    |
| IOB22B | I/O | 2    |      | Comp_of_IOB22A | NONE | NON E |      |      |      |       |       |       |       |       |       | G3    | G3    | J2    |
| IOB23A | I/O | 2    |      | True_of_IOB23B | TRUE | x16   |      | H5   | 33   |       | 52    | 52    | N6    | 63    | N4    | F5    | F5    | K4    |
| IOB23B | I/O | 2    |      | Comp_of_IOB23A | TRUE | NON E |      | G5   | 34   |       | 54    | 54    | P6    | 64    | P4    | H6    | H6    | K3    |

| 管脚名            | 功能  | BANK | 配置功能    | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|----------------|-----|------|---------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOB24A         | I/O | 2    |         | True_of_IOB24B | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | J1    |
| IOB24B         | I/O | 2    |         | Comp_of_IOB24A | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | K2    |
| IOB25A         | I/O | 2    |         | True_of_IOB25B | TRUE | x16   |      |      |      |       |       |       | L9    | 67    | N5    |       |       | K1    |
| IOB25B         | I/O | 2    |         | Comp_of_IOB25A | TRUE | NON E |      |      |      |       |       |       | M9    | 68    | P5    |       |       | L1    |
| IOB26A         | I/O | 2    |         | True_of_IOB26B | NONE | NON E |      |      |      |       |       |       |       |       |       | G1    | G1    | L4    |
| IOB26B         | I/O | 2    |         | Comp_of_IOB26A | NONE | NON E |      |      |      |       |       |       |       |       |       | H2    | H2    | L3    |
| IOB27A         | I/O | 2    |         | True_of_IOB27B | TRUE | x16   | 17   | H4   |      |       |       |       | N8    | 69    | N6    | H4    | H4    | L2    |
| IOB27B         | I/O | 2    |         | Comp_of_IOB27A | TRUE | NON E | 18   | G4   |      |       |       |       | P8    | 70    | P6    | J6    | J6    | M1    |
| IOB28A/GCLKT_5 | I/O | 2    | GCLKT_5 | True_of_IOB28B | NONE | NON E |      |      |      | 39    | 56    | 56    | N7    |       | N7    | J1    | J1    | M2    |
| IOB28B/GCLKC_5 | I/O | 2    | GCLKC_5 | Comp_of_IOB28A | NONE | NON E |      |      |      | 40    | 57    | 57    | P7    |       | P7    | J3    | J3    | M3    |
| IOB29A/GCLKT_4 | I/O | 2    | GCLKT_4 | True_of_IOB29B | TRUE | x16   | 19   | F5   | 35   | 41    | 58    | 58    | L8    | 71    | N8    | L2    | L2    | M5    |
| IOB29B/GCLKC_4 | I/O | 2    | GCLKC_4 | Comp_of_IOB29A | TRUE | NON E | 20   | F4   | 36   | 42    | 59    | 59    | M8    | 72    | P8    | M1    | M1    | M4    |
| IOB2A          | I/O | 2    |         | True_of_IOB2B  | TRUE | x16   |      |      | 17   |       |       |       |       | 36    |       |       |       | C6    |
| IOB2B          | I/O | 2    |         | Comp_of_IOB2A  | TRUE | NON E |      |      | 18   |       |       |       |       | 37    |       |       |       | D7    |
| IOB30A         | I/O | 2    |         | True_of_IOB30B | NONE | NON E |      |      |      |       | 60    | 60    |       |       |       | H3    | H3    | N1    |
| IOB30B         | I/O | 2    |         | Comp_of_IOB30A | NONE | NON E |      |      |      |       | 61    | 61    |       |       |       | H1    | H1    | N2    |
| IOB31A         | I/O | 2    |         | True_of_IOB31B | TRUE | x16   |      |      | 37   | 43    | 62    | 62    | N9    | 73    | L8    | J2    | J2    | N3    |
| IOB31B         | I/O | 2    |         | Comp_of_IOB31A | TRUE | NON E |      |      | 38   | 44    | 63    | 63    | P9    | 74    | M8    | K1    | K1    | N4    |
| IOB32A         | I/O | 2    |         | True_of_IOB32B | NONE | NON E |      |      |      |       |       |       |       |       |       | H5    | H5    | P1    |
| IOB32B         | I/O | 2    |         | Comp_of_IOB32A | NONE | NON E |      |      |      |       |       |       |       |       |       | J4    | J4    | R1    |
| IOB33A         | I/O | 2    |         | True_of_IOB33B | TRUE | x16   |      | H3   | 39   | 45    | 64    | 64    | L10   | 75    | N9    | K3    | K3    | P2    |

| 管脚名    | 功能  | BANK | 配置功能 | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|--------|-----|------|------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOB33B | I/O | 2    |      | Comp_of_IOB33A | TRUE | NON E |      | G3   | 40   | 46    | 65    | 65    | M10   | 76    | P9    | K2    | K2    | P3    |
| IOB34A | I/O | 2    |      | True_of_IOB34B | NONE | NON E |      |      |      |       |       |       |       | 77    |       | J5    | J5    | R2    |
| IOB34B | I/O | 2    |      | Comp_of_IOB34A | NONE | NON E |      |      |      |       |       |       |       | 78    |       | K6    | K6    | T1    |
| IOB35A | I/O | 2    |      | True_of_IOB35B | TRUE | x16   | 21   |      |      | 47    | 66    | 66    | N10   | 79    | N10   | L1    | L1    | P4    |
| IOB35B | I/O | 2    |      | Comp_of_IOB35A | TRUE | NON E | 22   |      |      | 48    | 67    | 67    | P10   | 80    | P10   | L3    | L3    | R3    |
| IOB36A | I/O | 2    |      | True_of_IOB36B | NONE | NON E |      |      |      |       |       |       |       |       |       | K4    | K4    | N5    |
| IOB36B | I/O | 2    |      | Comp_of_IOB36A | NONE | NON E |      |      |      |       |       |       |       |       |       | L5    | L5    | P5    |
| IOB37A | I/O | 2    |      | True_of_IOB37B | NONE | NON E |      |      |      |       | 68    | 68    |       | 81    |       | K5    | K5    | T2    |
| IOB37B | I/O | 2    |      | Comp_of_IOB37A | NONE | NON E |      |      |      |       | 69    | 69    |       | 82    |       | L4    | L4    | U1    |
| IOB38A | I/O | 2    |      | True_of_IOB38B | NONE | NON E |      |      |      |       |       |       |       |       |       | N2    | N2    | R4    |
| IOB38B | I/O | 2    |      | Comp_of_IOB38A | NONE | NON E |      |      |      |       |       |       |       |       |       | P1    | P1    | T3    |
| IOB39A | I/O | 2    |      | True_of_IOB39B | TRUE | x16   | 23   | H2   |      | 49    | 70    | 70    | P11   | 83    | N11   | M3    | M3    | V1    |
| IOB39B | I/O | 2    |      | Comp_of_IOB39A | TRUE | NON E | 24   | G2   |      | 50    | 71    | 71    | N11   | 84    | P11   | N1    | N1    | U2    |
| IOB3A  | I/O | 2    |      | True_of_IOB3B  | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | B5    |
| IOB3B  | I/O | 2    |      | Comp_of_IOB3A  | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | A5    |
| IOB40A | I/O | 2    |      | True_of_IOB40B | NONE | NON E |      |      |      |       |       |       |       |       |       | M2    | M2    | T4    |
| IOB40B | I/O | 2    |      | Comp_of_IOB40A | NONE | NON E |      |      |      |       |       |       |       |       |       | N3    | N3    | R5    |
| IOB41A | I/O | 2    |      | True_of_IOB41B | TRUE | x16   |      | H1   | 41   |       |       |       | P12   | 85    | N12   | R1    | R1    | U3    |
| IOB41B | I/O | 2    |      | Comp_of_IOB41A | TRUE | NON E |      | G1   | 42   |       |       |       | N12   | 86    | P12   | P2    | P2    | V2    |
| IOB42A | I/O | 2    |      | True_of_IOB42B | NONE | NON E |      |      |      |       |       |       |       | 92    |       |       | T4    | U4    |

| 管脚名    | 功能  | BANK | 配置功能 | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|--------|-----|------|------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOB42B | I/O | 2    |      | Comp_of_IOB42A | NONE | NON E |      |      |      |       |       |       |       | 91    |       |       | P4    | T6    |
| IOB43A | I/O | 2    |      | True_of_IOB43B | TRUE | x16   |      |      |      | 55    | 78    | 78    | M14   | 94    | L12   |       | T2    | W2    |
| IOB43B | I/O | 2    |      | Comp_of_IOB43A | TRUE | NON E |      |      |      | 53    | 76    | 76    | N14   | 93    | M12   |       | R3    | W1    |
| IOB44A | I/O | 2    |      | True_of_IOB44B | NONE | NON E |      |      |      |       |       |       | K13   | 97    |       |       | R5    | T7    |
| IOB44B | I/O | 2    |      | Comp_of_IOB44A | NONE | NON E |      |      |      |       |       |       | L14   | 96    |       |       | P5    | T8    |
| IOB45A | I/O | 2    |      | True_of_IOB45B | TRUE | x16   |      |      |      |       |       |       | J13   | 99    | N13   |       | T3    | U5    |
| IOB45B | I/O | 2    |      | Comp_of_IOB45A | TRUE | NON E |      |      |      |       |       |       | L13   | 98    | P13   |       | R4    | V4    |
| IOB46A | I/O | 2    |      | True_of_IOB46B | NONE | NON E |      |      |      |       |       |       |       | 101   |       |       |       | U6    |
| IOB46B | I/O | 2    |      | Comp_of_IOB46A | NONE | NON E |      |      |      |       |       |       |       | 100   |       |       |       | V5    |
| IOB4A  | I/O | 2    |      | True_of_IOB4B  | TRUE | x16   |      |      | 19   |       | 29    | 29    | L1    | 38    | L2    |       |       | D6    |
| IOB4B  | I/O | 2    |      | Comp_of_IOB4A  | TRUE | NON E |      |      | 20   |       | 30    | 30    | M1    | 39    | L1    |       |       | E7    |
| IOB5A  | I/O | 2    |      | True_of_IOB5B  | NONE | NON E |      |      |      |       |       |       |       |       |       |       | D6    | C5    |
| IOB5B  | I/O | 2    |      | Comp_of_IOB5A  | NONE | NON E |      |      |      |       |       |       |       |       |       |       | E7    | D5    |
| IOB6A  | I/O | 2    |      | True_of_IOB6B  | TRUE | x16   |      |      |      | 22    | 32    | 32    | N1    | 41    |       |       | A4    | E6    |
| IOB6B  | I/O | 2    |      | Comp_of_IOB6A  | TRUE | NON E |      |      |      | 23    | 34    | 34    | P2    | 42    |       |       | C5    | F5    |
| IOB7A  | I/O | 2    |      | True_of_IOB7B  | NONE | NON E |      |      |      |       |       |       |       |       |       |       | A5    | B4    |
| IOB7B  | I/O | 2    |      | Comp_of_IOB7A  | NONE | NON E |      |      |      |       |       |       |       |       |       |       | B6    | A4    |
| IOB8A  | I/O | 2    |      | True_of_IOB8B  | TRUE | x16   | 13   | H8   | 25   | 27    | 38    | 38    | N3    | 47    | M2    |       | A3    | C4    |
| IOB8B  | I/O | 2    |      | Comp_of_IOB8A  | TRUE | NON E | 14   | G8   | 26   | 28    | 39    | 39    | P3    | 48    | M1    |       | B4    | A3    |
| IOB9A  | I/O | 2    |      | True_of_IOB9B  | NONE | NON E |      |      |      |       | 40    | 40    |       | 49    |       | D3    | D3    | B3    |
| IOB9B  | I/O | 2    |      | Comp_of_IOB9A  | NONE | NON E |      |      |      |       | 41    | 41    |       | 50    |       | D1    | D1    | D4    |



| 管脚名                         | 功能  | BANK | 配置功能          | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|-----------------------------|-----|------|---------------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>BANK1 True LVDS Pair</b> |     |      |               |                |      |       |      |      |      |       |       |       |       |       |       |       |       |       |
| IOR11A/MI/D7                | I/O | 1    | MI/D7         | True_of_IOR11B | TRUE | NON E | 34   |      | 62   | 68    | 96    | 96    | F14   | 122   |       | M9    | P10   | W13   |
| IOR11B/MO/D6                | I/O | 1    | MO/D6         | Comp_of_IOR11A | TRUE | NON E | 33   |      | 61   | 67    | 95    | 95    | G14   | 121   |       | L10   | R10   | Y14   |
| IOR12A/MCS_N/D5             | I/O | 1    | MCS_N/D5      | True_of_IOR12B | NONE | NON E | 32   |      | 60   | 66    | 94    | 94    | E12   | 120   |       | R9    | M9    | T12   |
| IOR12B/MCLK/D4              | I/O | 1    | MCLK/D4       | Comp_of_IOR12A | NONE | NON E | 31   |      | 59   | 65    | 93    | 93    | G12   | 119   |       | T10   | L10   | U13   |
| IOR13A/FASTRD_N/D3          | I/O | 1    | FASTRD_N/D3   | True_of_IOR13B | TRUE | NON E |      |      |      | 64    | 92    | 92    | G11   | 118   | J13   | M8    | R9    | T11   |
| IOR13B/SI/D2                | I/O | 1    | SI/D2         | Comp_of_IOR13A | TRUE | NON E |      |      |      | 62    | 90    | 90    | G13   | 117   | J14   | N9    | T10   | U11   |
| IOR14A/SO/D1                | I/O | 1    | SO/D1         | True_of_IOR14B | NONE | NON E |      |      | 56   | 61    | 88    | 88    | H14   | 116   |       | N8    | M8    | W10   |
| IOR14B/SSPI_CS_N/D0         | I/O | 1    | SSPI_CS_N/D0  | Comp_of_IOR14A | NONE | NON E |      |      | 55   | 60    | 87    | 87    | J11   | 114   |       | L9    | N9    | Y9    |
| IOR15A/DIN/CLKHOLD_N        | I/O | 1    | DIN/CLKHOLD_N | True_of_IOR15B | TRUE | NON E |      |      | 54   | 59    | 86    | 86    | H13   | 113   | H13   | P8    | T9    | Y8    |
| IOR15B/DOUT/WE_N            | I/O | 1    | DOUT/WE_N     | Comp_of_IOR15A | TRUE | NON E |      |      | 53   | 58    | 85    | 85    | H12   | 112   | H14   | T8    | P9    | W9    |
| IOR16A                      | I/O | 1    |               | True_of_IOR16B | NONE | NON E |      |      |      |       |       |       |       |       |       | M6    |       | V10   |
| IOR16B                      | I/O | 1    |               | Comp_of_IOR16A | NONE | NON E |      |      |      |       |       |       |       |       |       | L8    |       | U10   |
| IOR17A/GCLKT_3              | I/O | 1    | GCLKT_3       | True_of_IOR17B | TRUE | NON E | 30   | E3   | 52   | 57    | 84    | 84    | J14   |       | H11   | T7    | T7    | V9    |
| IOR17B/GCLKC_3              | I/O | 1    | GCLKC_3       | Comp_of_IOR17A | TRUE | NON E | 29   | D3   | 51   | 56    | 83    | 83    | K14   |       | H12   | R8    | R8    | W8    |
| IOR18A                      | I/O | 1    |               | True_of_IOR18B | NONE | NON E |      |      |      |       |       |       |       |       |       | M7    | N8    | Y7    |
| IOR18B                      | I/O | 1    |               | Comp_of_IOR18A | NONE | NON E |      |      |      |       |       |       |       |       |       | N7    | L9    | W7    |
| IOR20A                      | I/O | 1    |               | True_of_IOR20B | TRUE | NON E |      |      |      |       |       |       |       | J11   |       | R7    | P8    | V8    |
| IOR20B                      | I/O | 1    |               | Comp_of_IOR20A | TRUE | NON E |      |      |      |       |       |       |       | J12   |       | P7    | T8    | U9    |

| 管脚名    | 功能  | BANK | 配置功能 | 差分Pair         | LVDS | X16      | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|--------|-----|------|------|----------------|------|----------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOR21A | I/O | 1    |      | True_of_IOR21B | NONE | NON<br>E |      |      |      |       |       |       |       |       |       | N6    | M6    | Y6    |
| IOR21B | I/O | 1    |      | Comp_of_IOR21A | NONE | NON<br>E |      |      |      |       |       |       |       |       |       | L7    | L8    | W6    |
| IOR22A | I/O | 1    |      | True_of_IOR22B | TRUE | NON<br>E |      | E1   |      |       | 82    | 82    | E11   | 109   | K13   | P6    | M7    | Y5    |
| IOR22B | I/O | 1    |      | Comp_of_IOR22A | TRUE | NON<br>E |      | E2   |      |       | 81    | 81    | F11   | 108   | K14   | T6    | N7    | Y4    |
| IOR23A | I/O | 1    |      | True_of_IOR23B | NONE | NON<br>E |      |      |      |       |       |       |       |       |       | T5    | R7    | V7    |
| IOR23B | I/O | 1    |      | Comp_of_IOR23A | NONE | NON<br>E |      |      |      |       |       |       |       |       |       | R6    | P7    | U8    |
| IOR24A | I/O | 1    |      | True_of_IOR24B | TRUE | NON<br>E | 28   | F1   | 49   |       | 80    | 80    | J12   | 107   | L13   | T3    | N6    | W5    |
| IOR24B | I/O | 1    |      | Comp_of_IOR24A | TRUE | NON<br>E | 27   | F2   | 48   |       | 79    | 79    | H11   | 106   | L14   | R4    | L7    | V6    |
| IOR25A | I/O | 1    |      | True_of_IOR25B | NONE | NON<br>E |      |      |      |       |       |       |       |       |       | R5    | P6    | U7    |
| IOR25B | I/O | 1    |      | Comp_of_IOR25A | NONE | NON<br>E |      |      |      |       |       |       |       |       |       | P5    | T6    | T9    |
| IOR26A | I/O | 1    |      | True_of_IOR26B | TRUE | NON<br>E |      |      |      |       |       |       | K12   | 105   | M13   | T2    |       | Y3    |
| IOR26B | I/O | 1    |      | Comp_of_IOR26A | TRUE | NON<br>E |      |      |      |       |       |       | K11   | 104   | M14   | R3    |       | W4    |
| IOR27A | I/O | 1    |      | True_of_IOR27B | NONE | NON<br>E |      |      |      |       |       |       |       | 103   |       | T4    | T5    | W3    |
| IOR27B | I/O | 1    |      | Comp_of_IOR27A | NONE | NON<br>E |      |      |      |       |       |       |       | 102   |       | P4    | R6    | Y2    |
| IOR2A  | I/O | 1    |      | True_of_IOR2B  | TRUE | NON<br>E |      |      |      |       |       |       |       |       | C12   | R13   |       |       |
| IOR2B  | I/O | 1    |      | Comp_of_IOR2A  | TRUE | NON<br>E |      |      |      |       |       |       |       |       | C13   | T14   |       |       |
| IOR3A  | I/O | 1    |      | True_of_IOR3B  | NONE | NON<br>E |      |      |      |       |       |       |       |       |       | T15   | R11   | V14   |
| IOR3B  | I/O | 1    |      | Comp_of_IOR3A  | NONE | NON<br>E |      |      |      |       |       |       |       |       |       | R14   | T12   | U14   |
| IOR4A  | I/O | 1    |      | True_of_IOR4B  | TRUE | NON<br>E |      |      |      |       |       |       |       |       | E13   | P12   | R13   | T14   |

| 管脚名             | 功能  | BANK | 配置功能      | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|-----------------|-----|------|-----------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOR4B           | I/O | 1    |           | Comp_of_IOR4A  | TRUE | NON E |      |      |      |       |       |       |       |       | E14   | T13   | T14   | T13   |
| IOR5A/RPLL_T_in | I/O | 1    | RPLL_T_in | True_of_IOR5B  | NONE | NON E |      | C1   |      | 73    | 106   | 106   | B14   | 129   | D13   | M10   | T15   | W14   |
| IOR5B/RPLL_C_in | I/O | 1    | RPLL_C_in | Comp_of_IOR5A  | NONE | NON E |      | C2   |      | 72    | 104   | 104   | C14   | 128   | D14   | N11   | R14   | V13   |
| IOR6A/RPLL_T_fb | I/O | 1    | RPLL_T_fb | True_of_IOR6B  | TRUE | NON E |      | D1   |      |       | 102   | 102   | D14   | 127   | F11   | T11   | P12   | Y13   |
| IOR6B/RPLL_C_fb | I/O | 1    | RPLL_C_fb | Comp_of_IOR6A  | TRUE | NON E |      | D2   |      |       | 101   | 101   | E14   | 126   | F12   | P11   | T13   | Y12   |
| IOR7A           | I/O | 1    |           | True_of_IOR7B  | NONE | NON E |      |      |      |       |       |       |       |       |       | N10   | M10   | W12   |
| IOR7B           | I/O | 1    |           | Comp_of_IOR7A  | NONE | NON E |      |      |      |       |       |       |       |       |       | M11   | N11   | V12   |
| IOR8A           | I/O | 1    |           | True_of_IOR8B  | TRUE | NON E |      |      |      |       | 100   | 100   | D13   |       | G13   | P10   | T11   | U12   |
| IOR8B           | I/O | 1    |           | Comp_of_IOR8A  | TRUE | NON E |      |      |      |       | 99    | 99    | E13   | 125   | G14   | R10   | P11   | V11   |
| IOR9A/GCLK_T_2  | I/O | 1    | GCLKT_2   | True_of_IOR9B  | NONE | NON E |      |      |      | 70    | 98    | 98    | F13   | 124   | F13   | T9    | N10   | W11   |
| IOR9B/GCLK_C_2  | I/O | 1    | GCLKC_2   | Comp_of_IOR9A  | NONE | NON E |      |      |      | 69    | 97    | 97    | F12   | 123   | F14   | P9    | M11   | Y10   |
| IOT36A          | I/O | 1    |           | True_of_IOT36B | NONE | NON E |      |      |      |       |       |       | A11   |       |       |       | K11   | P16   |
| IOT36B          | I/O | 1    |           | Comp_of_IOT36A | NONE | NON E |      |      |      |       |       |       | A10   |       |       |       | L13   | P17   |
| IOT37A          | I/O | 1    |           | True_of_IOT37B | NONE | NON E | 41   |      | 77   | 84    | 117   | 117   |       | 144   |       | N15   | M14   | T17   |
| IOT37B          | I/O | 1    |           | Comp_of_IOT37A | NONE | NON E | 40   |      | 76   | 83    | 116   | 116   |       | 143   |       | P16   | M15   | R17   |
| IOT38A          | I/O | 1    |           | True_of_IOT38B | NONE | NON E |      |      | 75   |       |       |       | B11   | 142   |       | N16   | D14   | W18   |
| IOT38B          | I/O | 1    |           | Comp_of_IOT38A | NONE | NON E |      |      | 74   |       |       |       | B12   | 141   |       | N14   | E15   | Y18   |
| IOT39A          | I/O | 1    |           | True_of_IOT39B | NONE | x16   |      | A1   | 73   | 82    | 115   | 115   |       | 140   |       | P15   | N15   | V17   |
| IOT39B          | I/O | 1    |           | Comp_of_IOT39A | NONE | NON E |      | B1   | 72   | 81    | 114   | 114   |       | 139   |       | R16   | P16   | U17   |

| 管脚名                         | 功能  | BANK | 配置功能 | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|-----------------------------|-----|------|------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOT40A                      | I/O | 1    |      | True_of_IOT40B | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | Y19   |
| IOT40B                      | I/O | 1    |      | Comp_of_IOT40A | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | W20   |
| IOT41A                      | I/O | 1    |      | True_of_IOT41B | NONE | x16   |      |      | 71   | 80    | 113   | 113   |       | 138   |       |       | N16   | U16   |
| IOT41B                      | I/O | 1    |      | Comp_of_IOT41A | NONE | NON E |      |      | 70   | 79    | 112   | 112   |       | 137   |       |       | N14   | R16   |
| IOT42A                      | I/O | 1    |      | True_of_IOT42B | NONE | NON E | 39   |      | 69   | 78    | 111   | 111   | A12   | 136   |       |       | P15   | W16   |
| IOT42B                      | I/O | 1    |      | Comp_of_IOT42A | NONE | NON E | 38   |      | 68   | 77    | 110   | 110   | A13   | 135   |       |       | R16   | V16   |
| IOT43A                      | I/O | 1    |      | True_of_IOT43B | NONE | x16   |      |      |      |       |       |       |       |       |       |       |       | Y16   |
| IOT43B                      | I/O | 1    |      | Comp_of_IOT43A | NONE | NON E |      |      |      |       |       |       |       |       |       |       |       | W15   |
| IOT44A                      | I/O | 1    |      | True_of_IOT44B | NONE | NON E |      |      |      |       |       |       | D10   |       |       |       |       | W17   |
| IOT44B                      | I/O | 1    |      | Comp_of_IOT44A | NONE | NON E |      |      |      |       |       |       | C10   |       |       |       |       | Y17   |
| IOT45A                      | I/O | 1    |      | True_of_IOT45B | NONE | x16   |      |      |      |       |       |       |       |       |       | R12   |       | T15   |
| IOT45B                      | I/O | 1    |      | Comp_of_IOT45A | NONE | NON E |      |      |      |       |       |       |       |       |       | P13   |       | U15   |
| IOT46A                      | I/O | 1    |      | True_of_IOT46B | NONE | NON E |      |      |      |       |       |       |       |       |       | R11   | R12   | V15   |
| IOT46B                      | I/O | 1    |      | Comp_of_IOT46A | NONE | NON E |      |      |      |       |       |       |       |       |       | T12   | P13   | Y15   |
| <b>BANK0 True LVDS Pair</b> |     |      |      |                |      |       |      |      |      |       |       |       |       |       |       |       |       |       |
| IOT13A                      | I/O | 0    |      | True_of_IOT13B | NONE | x16   |      |      |      |       |       |       |       | D3    | L15   | E16   | G18   |       |
| IOT13B                      | I/O | 0    |      | Comp_of_IOT13A | NONE | NON E |      |      |      |       |       |       |       | D4    | M16   | F15   | H17   |       |
| IOT14A                      | I/O | 0    |      | True_of_IOT14B | NONE | NON E |      |      |      |       |       |       | B5    |       | C16   | F14   | F20   |       |
| IOT14B                      | I/O | 0    |      | Comp_of_IOT14A | NONE | NON E |      |      |      |       |       |       | B6    |       | D15   | F16   | G19   |       |
| IOT15A                      | I/O | 0    |      | True_of_IOT15B | NONE | x16   |      | A6   |      | 95    | 136   | 136   |       | 163   | B1    | C15   | F13   | E20   |
| IOT15B                      | I/O | 0    |      | Comp_of_IOT15A | NONE | NON E |      | B6   |      | 94    | 135   | 135   |       | 162   | C1    | B16   | G12   | F19   |

| 管脚名    | 功能  | BANK | 配置功能 | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|--------|-----|------|------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOT16A | I/O | 0    |      | True_of_IOT16B | NONE | NON E |      |      |      |       |       |       |       |       |       | D16   | F12   | H18   |
| IOT16B | I/O | 0    |      | Comp_of_IOT16A | NONE | NON E |      |      |      |       |       |       |       |       |       | E14   | G13   | H19   |
| IOT17A | I/O | 0    |      | True_of_IOT17B | NONE | x16   |      | A5   |      | 93    | 134   | 134   |       | 161   | B2    | E16   | G15   | G20   |
| IOT17B | I/O | 0    |      | Comp_of_IOT17A | NONE | NON E |      | B5   |      | 92    | 133   | 133   |       | 160   | A2    | F15   | G14   | H20   |
| IOT18A | I/O | 0    |      | True_of_IOT18B | NONE | NON E |      |      |      |       |       |       | C5    |       | B3    | F12   |       | J18   |
| IOT18B | I/O | 0    |      | Comp_of_IOT18A | NONE | NON E |      |      |      |       |       |       | D5    |       | A3    | G13   |       | J19   |
| IOT19A | I/O | 0    |      | True_of_IOT19B | NONE | NON E |      |      |      |       |       |       |       |       |       | F13   | G11   | J17   |
| IOT19B | I/O | 0    |      | Comp_of_IOT19A | NONE | NON E |      |      |      |       |       |       |       |       |       | G12   | H12   | J16   |
| IOT20A | I/O | 0    |      | True_of_IOT20B | NONE | NON E |      |      |      |       | 132   | 132   |       | 159   |       | F14   | G16   | J20   |
| IOT20B | I/O | 0    |      | Comp_of_IOT20A | NONE | NON E |      |      |      |       | 131   | 131   |       | 158   |       | F16   | H15   | K18   |
| IOT21A | I/O | 0    |      | True_of_IOT21B | NONE | x16   |      |      |      |       |       |       |       |       | B4    | G15   |       | K17   |
| IOT21B | I/O | 0    |      | Comp_of_IOT21A | NONE | NON E |      |      |      |       |       |       |       |       | A4    | G14   |       | K16   |
| IOT22A | I/O | 0    |      | True_of_IOT22B | NONE | NON E | 45   |      |      | 90    | 130   | 130   | A6    | 157   | B5    | G11   | H13   | K19   |
| IOT22B | I/O | 0    |      | Comp_of_IOT22A | NONE | NON E | 44   |      |      | 89    | 129   | 129   | A7    | 156   | A5    | H12   | J12   | L20   |
| IOT23A | I/O | 0    |      | True_of_IOT23B | NONE | x16   |      | C5   |      |       |       |       |       |       |       | G16   | H14   | L19   |
| IOT23B | I/O | 0    |      | Comp_of_IOT23A | NONE | NON E |      | C4   |      |       |       |       |       |       |       | H15   | H16   | L18   |
| IOT24A | I/O | 0    |      | True_of_IOT24B | NONE | NON E |      |      |      |       | 128   | 128   | C6    |       |       | H13   |       | M20   |
| IOT24B | I/O | 0    |      | Comp_of_IOT24A | NONE | NON E |      |      |      |       | 126   | 126   | D6    |       |       | J12   |       | M19   |
| IOT25A | I/O | 0    |      | True_of_IOT25B | NONE | x16   |      |      |      |       |       |       |       |       | B6    | H11   | J16   | L17   |
| IOT25B | I/O | 0    |      | Comp_of_IOT25A | NONE | NON E |      |      |      |       |       |       |       |       | A6    | J13   | J14   | M18   |
| IOT26A | I/O | 0    |      | True_of_IOT26B | NONE | NON E |      |      |      |       |       |       | C7    |       |       | J16   |       | M16   |

| 管脚名            | 功能  | BANK | 配置功能    | 差分Pair         | LVDS | X16   | QN48 | CM64 | QN88 | LQ100 | LQ144 | EQ144 | MG160 | LQ176 | MG196 | UG256 | PG256 | UG332 |
|----------------|-----|------|---------|----------------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| IOT26B         | I/O | 0    |         | Comp_of_IOT26A | NONE | NON E |      |      |      |       |       |       | D7    |       |       | J14   |       | M17   |
| IOT27A         | I/O | 0    |         | True_of_IOT27B | NONE | x16   |      | A4   |      |       | 125   | 125   |       | 152   | B7    | J15   | J15   | N20   |
| IOT27B         | I/O | 0    |         | Comp_of_IOT27A | NONE | NON E |      | B4   |      |       | 124   | 124   |       | 151   | A7    | K16   | K16   | N19   |
| IOT28A/GCLKT_0 | I/O | 0    | GCLKT_0 | True_of_IOT28B | NONE | NON E |      |      |      |       |       |       | B7    |       | B8    | H14   | H11   | P19   |
| IOT28B/GCLKC_0 | I/O | 0    | GCLKC_0 | Comp_of_IOT28A | NONE | NON E |      |      |      |       |       |       | B8    |       | D8    | H16   | J13   | P18   |
| IOT29A/GCLKT_1 | I/O | 0    | GCLKT_1 | True_of_IOT29B | NONE | x16   |      | A3   |      |       | 123   | 123   |       | 150   | A8    | K14   | K14   | R19   |
| IOT29B/GCLKC_1 | I/O | 0    | GCLKC_1 | Comp_of_IOT29A | NONE | NON E |      | B3   |      |       | 122   | 122   |       | 149   | B10   | K15   | K15   | R18   |
| IOT30A         | I/O | 0    |         | True_of_IOT30B | NONE | NON E |      |      |      |       |       |       | A8    |       | A9    | L16   | J11   | T18   |
| IOT30B         | I/O | 0    |         | Comp_of_IOT30A | NONE | NON E |      |      |      |       |       |       | A9    |       | A10   | L14   | L12   | U18   |
| IOT31A         | I/O | 0    |         | True_of_IOT31B | NONE | x16   |      |      |      |       |       |       |       |       | C8    | J11   |       | R20   |
| IOT31B         | I/O | 0    |         | Comp_of_IOT31A | NONE | NON E |      |      |      |       |       |       |       |       | B9    | L12   |       | T20   |
| IOT32A         | I/O | 0    |         | True_of_IOT32B | NONE | NON E | 43   |      |      | 86    | 121   | 121   | C8    | 148   |       | K13   | L16   | U20   |
| IOT32B         | I/O | 0    |         | Comp_of_IOT32A | NONE | NON E | 42   |      |      | 85    | 120   | 120   | D8    | 147   |       | K12   | L14   | V20   |
| IOT33A         | I/O | 0    |         | True_of_IOT33B | NONE | x16   |      | A2   |      |       |       |       | B9    |       | A11   | L13   |       | T19   |
| IOT33B         | I/O | 0    |         | Comp_of_IOT33A | NONE | NON E |      | B2   |      |       |       |       | B10   |       | B12   | M14   |       | U19   |
| IOT34A         | I/O | 0    |         | True_of_IOT34B | NONE | NON E |      |      |      |       | 119   | 119   | D9    | 146   | D11   | D14   | K13   | N16   |
| IOT34B         | I/O | 0    |         | Comp_of_IOT34A | NONE | NON E |      |      |      |       | 118   | 118   | C9    | 145   | C11   | E15   | K12   | N17   |
| IOT35A         | I/O | 0    |         | True_of_IOT35B | NONE | x16   |      |      |      |       |       |       |       |       | B11   | K11   |       | V19   |
| IOT35B         | I/O | 0    |         | Comp_of_IOT35A | NONE | NON E |      |      |      |       |       |       |       |       | A12   | M15   |       | W19   |

| GW1N-9 器件封装电源供电要求          |                             |        |        |
|----------------------------|-----------------------------|--------|--------|
| 名称                         | 描述                          | 最小值    | 最大值    |
| VCC                        | LV版本核电压                     | 1.14V  | 1.26V  |
|                            | UV版本核电压                     | 1.71V  | 3.465V |
| VCCO0、VCCO1<br>VCCO2、VCCO3 | LV版本I/O Bank电压              | 1.14V  | 3.465V |
|                            | UV版本I/O Bank电压              | 1.14V  | 3.465V |
|                            | 使用BANK2的MIPI输出时，VCCO2需供1.2V | 1.14V  | 1.26V  |
| VCCX                       | 辅助电压                        | 2.375V | 3.465V |