

## Содержание

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## Rockchip rk3568 package pin length V1.0

| PinDes | Name       | Group | Package Pin length(mil) |
|--------|------------|-------|-------------------------|
| B6     | AC0        | DDR   | 276.81                  |
| F5     | AC1        | DDR   | 215.83                  |
| D6     | AC10       | DDR   | 218.38                  |
| C2     | AC11       | DDR   | 304.42                  |
| C4     | AC12       | DDR   | 277.72                  |
| B8     | AC13       | DDR   | 249.65                  |
| C5     | AC14       | DDR   | 244.33                  |
| E4     | AC15       | DDR   | 217.54                  |
| D5     | AC16       | DDR   | 232.08                  |
| E6     | AC17       | DDR   | 208.13                  |
| E11    | AC18       | DDR   | 152.87                  |
| E9     | AC19       | DDR   | 138.75                  |
| B1     | AC2        | DDR   | 338.78                  |
| F8     | AC20       | DDR   | 153.63                  |
| F7     | AC21       | DDR   | 144.48                  |
| B3     | AC22       | DDR   | 312.78                  |
| B4     | AC23       | DDR   | 322.4                   |
| A4     | AC24       | DDR   | 313.78                  |
| A2     | AC25       | DDR   | 344.42                  |
| B2     | AC26       | DDR   | 316.41                  |
| E8     | AC27       | DDR   | 181.09                  |
| D8     | AC28       | DDR   | 223.57                  |
| F11    | AC29       | DDR   | 123.93                  |
| F4     | AC3        | DDR   | 250.62                  |
| D9     | AC4        | DDR   | 194.1                   |
| B7     | AC5        | DDR   | 281.65                  |
| A7     | AC6        | DDR   | 310.88                  |
| A8     | AC7        | DDR   | 278.67                  |
| C1     | AC8        | DDR   | 325.81                  |
| A5     | AC9        | DDR   | 290.85                  |
| H5     | DDR_DM0_A  | DDR   | 147.74                  |
| D14    | DDR_DM0_B  | DDR   | 175.84                  |
| J4     | DDR_DM1_A  | DDR   | 184.24                  |
| E17    | DDR_DM1_B  | DDR   | 176.52                  |
| F2     | DDR_DQ0_A  | DDR   | 258.33                  |
| B10    | DDR_DQ0_B  | DDR   | 239.17                  |
| E1     | DDR_DQ1_A  | DDR   | 278.41                  |
| A9     | DDR_DQ1_B  | DDR   | 278.13                  |
| L7     | DDR_DQ10_A | DDR   | 95.37                   |
| A17    | DDR_DQ10_B | DDR   | 277.32                  |
| L6     | DDR_DQ11_A | DDR   | 106.5                   |

| PinDes | Name          | Group | Package Pin length(mil) |
|--------|---------------|-------|-------------------------|
| B18    | DDR_DQ11_B    | DDR   | 273.54                  |
| K2     | DDR_DQ12_A    | DDR   | 227.44                  |
| B13    | DDR_DQ12_B    | DDR   | 264.4                   |
| J6     | DDR_DQ13_A    | DDR   | 135.4                   |
| A13    | DDR_DQ13_B    | DDR   | 285.09                  |
| J7     | DDR_DQ14_A    | DDR   | 84.81                   |
| D17    | DDR_DQ14_B    | DDR   | 194.36                  |
| L4     | DDR_DQ15_A    | DDR   | 176.8                   |
| B14    | DDR_DQ15_B    | DDR   | 258.98                  |
| E2     | DDR_DQ2_A     | DDR   | 253.63                  |
| D12    | DDR_DQ2_B     | DDR   | 182.1                   |
| D1     | DDR_DQ3_A     | DDR   | 303.58                  |
| E12    | DDR_DQ3_B     | DDR   | 156.15                  |
| J1     | DDR_DQ4_A     | DDR   | 251.17                  |
| A12    | DDR_DQ4_B     | DDR   | 278.3                   |
| J2     | DDR_DQ5_A     | DDR   | 230.15                  |
| D15    | DDR_DQ5_B     | DDR   | 176.68                  |
| H1     | DDR_DQ6_A     | DDR   | 248.86                  |
| E15    | DDR_DQ6_B     | DDR   | 168.53                  |
| H4     | DDR_DQ7_A     | DDR   | 183.75                  |
| E14    | DDR_DQ7_B     | DDR   | 154.56                  |
| M1     | DDR_DQ8_A     | DDR   | 255.64                  |
| A16    | DDR_DQ8_B     | DDR   | 285.48                  |
| N2     | DDR_DQ9_A     | DDR   | 226.83                  |
| B17    | DDR_DQ9_B     | DDR   | 255.55                  |
| G2     | DDR_DQS0N_A   | DDR   | 279.09                  |
| B11    | DDR_DQS0N_B   | DDR   | 242.83                  |
| G1     | DDR_DQS0P_A   | DDR   | 269.3                   |
| A11    | DDR_DQS0P_B   | DDR   | 256.29                  |
| L1     | DDR_DQS1N_A   | DDR   | 240.92                  |
| A15    | DDR_DQS1N_B   | DDR   | 264.99                  |
| L2     | DDR_DQS1P_A   | DDR   | 234.5                   |
| B15    | DDR_DQS1P_B   | DDR   | 268.35                  |
| P7     | DDR_ECC_DM    | DDR   | 119.85                  |
| P5     | DDR_ECC_DQ0   | DDR   | 155.46                  |
| M4     | DDR_ECC_DQ1   | DDR   | 165.35                  |
| M5     | DDR_ECC_DQ2   | DDR   | 130.79                  |
| R5     | DDR_ECC_DQ3   | DDR   | 153.43                  |
| M7     | DDR_ECC_DQ4   | DDR   | 93.64                   |
| R7     | DDR_ECC_DQ5   | DDR   | 135.56                  |
| P4     | DDR_ECC_DQ6   | DDR   | 201.25                  |
| R4     | DDR_ECC_DQ7   | DDR   | 179.34                  |
| P1     | DDR_ECC_DQS_N | DDR   | 264.37                  |

| PinDes | Name          | Group | Package Pin length(mil) |
|--------|---------------|-------|-------------------------|
| P2     | DDR_ECC_DQS_P | DDR   | 251.79                  |
| M25    | eDP_TX_AUXN   | eDP   | 138.73                  |
| L25    | eDP_TX_AUXP   | eDP   | 136.31                  |
| K27    | eDP_TX_D0N    | eDP   | 250.22                  |
| J28    | eDP_TX_D0P    | eDP   | 238.75                  |
| L27    | eDP_TX_D1N    | eDP   | 228.57                  |
| K28    | eDP_TX_D1P    | eDP   | 220.35                  |
| M27    | eDP_TX_D2N    | eDP   | 234.58                  |
| L28    | eDP_TX_D2P    | eDP   | 225.33                  |
| N27    | eDP_TX_D3N    | eDP   | 234.21                  |
| M28    | eDP_TX_D3P    | eDP   | 229.23                  |
| D18    | GPIO1_A0_u    | GPIO1 | 177.56                  |
| E18    | GPIO1_A1_u    | GPIO1 | 128.76                  |
| A19    | GPIO1_A2_d    | GPIO1 | 250.88                  |
| B19    | GPIO1_A3_d    | GPIO1 | 226.93                  |
| F18    | GPIO1_A4_d    | GPIO1 | 99.09                   |
| A20    | GPIO1_A5_d    | GPIO1 | 263.45                  |
| C20    | GPIO1_A6_d    | GPIO1 | 222.9                   |
| B20    | GPIO1_A7_d    | GPIO1 | 230.95                  |
| D20    | GPIO1_B0_d    | GPIO1 | 204.53                  |
| E20    | GPIO1_B1_d    | GPIO1 | 191.59                  |
| A21    | GPIO1_B2_d    | GPIO1 | 263.45                  |
| B21    | GPIO1_B3_d    | GPIO1 | 244.78                  |
| A24    | GPIO1_B4_u    | GPIO1 | 274.99                  |
| C21    | GPIO1_B5_u    | GPIO1 | 222.16                  |
| B24    | GPIO1_B6_u    | GPIO1 | 302.75                  |
| D21    | GPIO1_B7_u    | GPIO1 | 200.00                  |
| A25    | GPIO1_C0_u    | GPIO1 | 305.02                  |
| E21    | GPIO1_C1_u    | GPIO1 | 170.33                  |
| E22    | GPIO1_C2_u    | GPIO1 | 179.1                   |
| B25    | GPIO1_C3_u    | GPIO1 | 302.11                  |
| B22    | GPIO1_C4_u    | GPIO1 | 266.12                  |
| A23    | GPIO1_C5_d    | GPIO1 | 282.31                  |
| A26    | GPIO1_C6_d    | GPIO1 | 335.25                  |
| F20    | GPIO1_C7_d    | GPIO1 | 163.07                  |
| A22    | GPIO1_D0_d    | GPIO1 | 294.87                  |
| C24    | GPIO1_D1_u    | GPIO1 | 249.03                  |
| D23    | GPIO1_D2_u    | GPIO1 | 225.32                  |
| C23    | GPIO1_D3_u    | GPIO1 | 267.75                  |
| A27    | GPIO1_D4_u    | GPIO1 | 320.42                  |
| J25    | GPIO1_D5_u    | GPIO1 | 187.9                   |
| J24    | GPIO1_D6_u    | GPIO1 | 129.06                  |
| H26    | GPIO1_D7_u    | GPIO1 | 207.15                  |

| PinDes | Name       | Group | Package Pin length(mil) |
|--------|------------|-------|-------------------------|
| J23    | GPIO2_A0_u | GPIO2 | 119.63                  |
| H27    | GPIO2_A1_u | GPIO2 | 234.14                  |
| H28    | GPIO2_A2_d | GPIO2 | 238.25                  |
| E27    | GPIO2_A3_u | GPIO2 | 254.44                  |
| E28    | GPIO2_A4_u | GPIO2 | 274.89                  |
| B28    | GPIO2_A5_u | GPIO2 | 341.8                   |
| C27    | GPIO2_A6_u | GPIO2 | 312.32                  |
| C28    | GPIO2_A7_u | GPIO2 | 299.12                  |
| D27    | GPIO2_B0_d | GPIO2 | 257.34                  |
| D26    | GPIO2_B1_d | GPIO2 | 248.12                  |
| E25    | GPIO2_B2_u | GPIO2 | 220.16                  |
| F28    | GPIO2_B3_u | GPIO2 | 249.1                   |
| G27    | GPIO2_B4_u | GPIO2 | 220.84                  |
| G28    | GPIO2_B5_u | GPIO2 | 246.5                   |
| F27    | GPIO2_B6_u | GPIO2 | 290.81                  |
| H25    | GPIO2_B7_d | GPIO2 | 173.26                  |
| F24    | GPIO2_C0_d | GPIO2 | 171.29                  |
| G23    | GPIO2_C1_d | GPIO2 | 119.74                  |
| F25    | GPIO2_C2_d | GPIO2 | 195.93                  |
| H24    | GPIO2_C3_d | GPIO2 | 143.41                  |
| H23    | GPIO2_C4_d | GPIO2 | 120.81                  |
| F26    | GPIO2_C5_d | GPIO2 | 211.9                   |
| E26    | GPIO2_C6_d | GPIO2 | 234.29                  |
| AG6    | GPIO2_D0_d | GPIO2 | 327.56                  |
| AD7    | GPIO2_D1_d | GPIO2 | 253.4                   |
| AC8    | GPIO2_D2_d | GPIO2 | 193.17                  |
| AC7    | GPIO2_D3_d | GPIO2 | 217.33                  |
| AF5    | GPIO2_D4_d | GPIO2 | 313.13                  |
| AF6    | GPIO2_D5_d | GPIO2 | 298.12                  |
| AD6    | GPIO2_D6_d | GPIO2 | 261.99                  |
| AH5    | GPIO2_D7_d | GPIO2 | 364.87                  |
| AH4    | GPIO3_A0_d | GPIO3 | 367.52                  |
| AB8    | GPIO3_A1_d | GPIO3 | 170.82                  |
| AE5    | GPIO3_A2_d | GPIO3 | 286.55                  |
| AG4    | GPIO3_A3_d | GPIO3 | 336.56                  |
| AF4    | GPIO3_A4_d | GPIO3 | 317.96                  |
| AH3    | GPIO3_A5_d | GPIO3 | 372.61                  |
| AG3    | GPIO3_A6_d | GPIO3 | 342.11                  |
| AH2    | GPIO3_A7_d | GPIO3 | 380.47                  |
| AG2    | GPIO3_B0_d | GPIO3 | 359.62                  |
| AG1    | GPIO3_B1_d | GPIO3 | 370.52                  |
| AF2    | GPIO3_B2_d | GPIO3 | 339.37                  |
| AF1    | GPIO3_B3_d | GPIO3 | 358.4                   |

| PinDes | Name       | Group | Package Pin length(mil) |
|--------|------------|-------|-------------------------|
| AE1    | GPIO3_B4_d | GPIO3 | 342.28                  |
| AE2    | GPIO3_B5_d | GPIO3 | 320.64                  |
| AE3    | GPIO3_B6_d | GPIO3 | 280.3                   |
| AD4    | GPIO3_B7_d | GPIO3 | 254.43                  |
| AD2    | GPIO3_C0_d | GPIO3 | 281.93                  |
| AD1    | GPIO3_C1_d | GPIO3 | 304.17                  |
| AA7    | GPIO3_C2_d | GPIO3 | 127.37                  |
| AC4    | GPIO3_C3_d | GPIO3 | 226.39                  |
| AC3    | GPIO3_C4_d | GPIO3 | 250.96                  |
| AC2    | GPIO3_C5_d | GPIO3 | 269.04                  |
| AC5    | GPIO3_C6_d | GPIO3 | 243.33                  |
| AA6    | GPIO3_C7_d | GPIO3 | 171.49                  |
| AB5    | GPIO3_D0_d | GPIO3 | 197.65                  |
| AB1    | GPIO3_D1_d | GPIO3 | 304.22                  |
| Y7     | GPIO3_D2_d | GPIO3 | 144.15                  |
| AC1    | GPIO3_D3_d | GPIO3 | 337.43                  |
| AA1    | GPIO3_D4_d | GPIO3 | 300.61                  |
| AA5    | GPIO3_D5_d | GPIO3 | 190                     |
| Y6     | GPIO3_D6_d | GPIO3 | 171.09                  |
| Y5     | GPIO3_D7_d | GPIO3 | 188.71                  |
| AA3    | GPIO4_A0_d | GPIO4 | 249.81                  |
| AA2    | GPIO4_A1_d | GPIO4 | 277.2                   |
| Y4     | GPIO4_A2_d | GPIO4 | 248.79                  |
| Y3     | GPIO4_A3_d | GPIO4 | 243.86                  |
| Y2     | GPIO4_A4_d | GPIO4 | 284.31                  |
| Y1     | GPIO4_A5_d | GPIO4 | 287.72                  |
| W2     | GPIO4_A6_d | GPIO4 | 281.48                  |
| W1     | GPIO4_A7_d | GPIO4 | 287.26                  |
| V7     | GPIO4_B0_d | GPIO4 | 150.89                  |
| V2     | GPIO4_B1_d | GPIO4 | 269.66                  |
| V4     | GPIO4_B2_d | GPIO4 | 207.82                  |
| V1     | GPIO4_B3_d | GPIO4 | 289.86                  |
| V6     | GPIO4_B4_d | GPIO4 | 168.72                  |
| V5     | GPIO4_B5_d | GPIO4 | 205.71                  |
| U5     | GPIO4_B6_d | GPIO4 | 152.4                   |
| U4     | GPIO4_B7_d | GPIO4 | 233.12                  |
| U3     | GPIO4_C0_d | GPIO4 | 222.7                   |
| U2     | GPIO4_C1_d | GPIO4 | 243.75                  |
| AF8    | GPIO4_C2_d | GPIO4 | 295.62                  |
| AA11   | GPIO4_C3_d | GPIO4 | 141.35                  |
| AH7    | GPIO4_C4_d | GPIO4 | 355.6                   |
| AD8    | GPIO4_C5_d | GPIO4 | 250.59                  |
| AE8    | GPIO4_C6_d | GPIO4 | 274.62                  |

| PinDes | Name                            | Group            | Package Pin length(mil) |
|--------|---------------------------------|------------------|-------------------------|
| AG8    | GPIO4_C7_u                      | GPIO4            | 326.21                  |
| AG7    | GPIO4_D0_u                      | GPIO4            | 328.77                  |
| AH6    | GPIO4_D1_u                      | GPIO4            | 358.67                  |
| AB9    | GPIO4_D2_d                      | GPIO4            | 167.55                  |
| AG19   | HDMI_TX_CLKN                    | HDMI             | 307.11                  |
| AH19   | HDMI_TX_CLKP                    | HDMI             | 322.21                  |
| AH20   | HDMI_TX_D0N                     | HDMI             | 318.5                   |
| AG20   | HDMI_TX_D0P                     | HDMI             | 321.7                   |
| AH21   | HDMI_TX_D1N                     | HDMI             | 330.13                  |
| AG21   | HDMI_TX_D1P                     | HDMI             | 332.57                  |
| AH22   | HDMI_TX_D2N                     | HDMI             | 339.51                  |
| AG22   | HDMI_TX_D2P                     | HDMI             | 339.16                  |
| AH10   | MIPI_CSI_RX_CLK0N               | CSI              | 342.43                  |
| AG10   | MIPI_CSI_RX_CLK0P               | CSI              | 338.2                   |
| AH9    | MIPI_CSI_RX_CLK1N               | CSI              | 351.9                   |
| AG9    | MIPI_CSI_RX_CLK1P               | CSI              | 348.46                  |
| AH12   | MIPI_CSI_RX_D0N                 | CSI              | 326.25                  |
| AG12   | MIPI_CSI_RX_D0P                 | CSI              | 317.69                  |
| AH11   | MIPI_CSI_RX_D1N                 | CSI              | 332.8                   |
| AG11   | MIPI_CSI_RX_D1P                 | CSI              | 328.53                  |
| AD11   | MIPI_CSI_RX_D2N                 | CSI              | 259.27                  |
| AE11   | MIPI_CSI_RX_D2P                 | CSI              | 253.67                  |
| AE9    | MIPI_CSI_RX_D3N                 | CSI              | 275.61                  |
| AD9    | MIPI_CSI_RX_D3P                 | CSI              | 269.86                  |
| AG15   | MIPI_DSI_TX0_CLKN/LVDS_TX0_CLKN | DSI_TX0_LVDS_TX0 | 309.78                  |
| AH15   | MIPI_DSI_TX0_CLKP/LVDS_TX0_CLKP | DSI_TX0_LVDS_TX0 | 310.29                  |
| AG17   | MIPI_DSI_TX0_D0N/LVDS_TX0_D0N   | DSI_TX0_LVDS_TX0 | 303.23                  |
| AH17   | MIPI_DSI_TX0_D0P/LVDS_TX0_D0P   | DSI_TX0_LVDS_TX0 | 297.41                  |
| AG16   | MIPI_DSI_TX0_D1N/LVDS_TX0_D1N   | DSI_TX0_LVDS_TX0 | 307.23                  |
| AH16   | MIPI_DSI_TX0_D1P/LVDS_TX0_D1P   | DSI_TX0_LVDS_TX0 | 303.94                  |
| AG14   | MIPI_DSI_TX0_D2N/LVDS_TX0_D2N   | DSI_TX0_LVDS_TX0 | 326.74                  |
| AH14   | MIPI_DSI_TX0_D2P/LVDS_TX0_D2P   | DSI_TX0_LVDS_TX0 | 322.34                  |
| AG13   | MIPI_DSI_TX0_D3N/LVDS_TX0_D3N   | DSI_TX0_LVDS_TX0 | 353.77                  |
| AH13   | MIPI_DSI_TX0_D3P/LVDS_TX0_D3P   | DSI_TX0_LVDS_TX0 | 349.25                  |
| AE15   | MIPI_DSI_TX1_CLKN               | DSI_TX1          | 224.98                  |
| AD15   | MIPI_DSI_TX1_CLKP               | DSI_TX1          | 219.65                  |
| AE18   | MIPI_DSI_TX1_D0N                | DSI_TX1          | 277.06                  |
| AD18   | MIPI_DSI_TX1_D0P                | DSI_TX1          | 271.94                  |
| AC17   | MIPI_DSI_TX1_D1N                | DSI_TX1          | 220.39                  |
| AD17   | MIPI_DSI_TX1_D1P                | DSI_TX1          | 227.71                  |
| AC14   | MIPI_DSI_TX1_D2N                | DSI_TX1          | 197.9                   |
| AD14   | MIPI_DSI_TX1_D2P                | DSI_TX1          | 196.62                  |
| AE12   | MIPI_DSI_TX1_D3N                | DSI_TX1          | 237.62                  |



| PinDes | Name                                     | Group         | Package Pin length(mil) |
|--------|--|---------------|-------------------------|
| AD12   | MIPI_DSI_TX1_D3P                         | DSI_TX1       | 226.07                  |
| R25    | MULTI_PHY0_REFCLKN                       | MULTI_PHY_CLK | 147.75                  |
| R24    | MULTI_PHY0_REFCLKP                       | MULTI_PHY_CLK | 134.71                  |
| U24    | MULTI_PHY1_REFCLKN                       | MULTI_PHY_CLK | 161.1                   |
| U25    | MULTI_PHY1_REFCLKP                       | MULTI_PHY_CLK | 161.32                  |
| V25    | PCIE20_REFCLKN                           | PCIE20        | 168.85                  |
| V24    | PCIE20_REFCLKP                           | PCIE20        | 161.44                  |
| Y28    | PCIE20_RXN/SATA2_RXN/QSGMII_RXN_M1       | PCIE20        | 286.61                  |
| Y27    | PCIE20_RXP/SATA2_RXP/QSGMII_RXP_M1       | PCIE20        | 277.64                  |
| W28    | PCIE20_TXN/SATA2_TXN/QSGMII_TXN_M1       | PCIE20        | 284.38                  |
| W27    | PCIE20_TXP/SATA2_TXP/QSGMII_TXP_M1       | PCIE20        | 274.94                  |
| AA25   | PCIE30_REFCLKN_IN                        | PCIE30        | 246.94                  |
| Y25    | PCIE30_REFCLKP_IN                        | PCIE30        | 260.47                  |
| AC27   | PCIE30_RX0N                              | PCIE30        | 300.62                  |
| AC28   | PCIE30_RX0P                              | PCIE30        | 296.6                   |
| AD27   | PCIE30_RX1N                              | PCIE30        | 329.37                  |
| AD28   | PCIE30_RX1P                              | PCIE30        | 336.44                  |
| AA27   | PCIE30_TX0N                              | PCIE30        | 282.72                  |
| AA28   | PCIE30_TX0P                              | PCIE30        | 276.89                  |
| AB27   | PCIE30_TX1N                              | PCIE30        | 292.78                  |
| AB28   | PCIE30_TX1P                              | PCIE30        | 300.14                  |
| R1     | USB2_HOST2_DM                            | USB           | 252.47                  |
| R2     | USB2_HOST2_DP                            | USB           | 258.03                  |
| T1     | USB2_HOST3_DM                            | USB           | 254.6                   |
| T2     | USB2_HOST3_DP                            | USB           | 258.76                  |
| P25    | USB3_HOST1_DM                            | USB           | 145.46                  |
| P24    | USB3_HOST1_DP                            | USB           | 141.39                  |
| U27    | USB3_HOST1_SSRXN/SATA1_RXN/QSGMII_RXN_M0 | USB           | 238.12                  |
| U28    | USB3_HOST1_SSRXP/SATA1_RXP/QSGMII_RXP_M0 | USB           | 236.2                   |
| V27    | USB3_HOST1_SSTXN/SATA1_TXN/QSGMII_TXN_M0 | USB           | 267.24                  |
| V28    | USB3_HOST1_SSTXP/SATA1_TXP/QSGMII_TXP_M0 | USB           | 269                     |
| P28    | USB3_OTG0_DM                             | USB           | 221.43                  |
| P27    | USB3_OTG0_DP                             | USB           | 222.12                  |
| R27    | USB3_OTG0_SSRXN/SATA0_RXN                | USB           | 205.59                  |
| R28    | USB3_OTG0_SSRXP/SATA0_RXP                | USB           | 219.73                  |
| T27    | USB3_OTG0_SSTXN/SATA0_TXN                | USB           | 276.86                  |
| T28    | USB3_OTG0_SSTXP/SATA0_TXP                | USB           | 269.61                  |
| J27    | AVSS_1                                   | AVSS          |                         |
| R26    | AVSS_10                                  | AVSS          |                         |
| U23    | AVSS_11                                  | AVSS          |                         |
| U26    | AVSS_12                                  | AVSS          |                         |
| V14    | AVSS_13                                  | AVSS          |                         |
| V15    | AVSS_14                                  | AVSS          |                         |

| PinDes | Name    | Group | Package Pin length(mil) |
|--------|---------|-------|-------------------------|
| V16    | AVSS_15 | AVSS  |                         |
| V22    | AVSS_16 | AVSS  |                         |
| V23    | AVSS_17 | AVSS  |                         |
| V26    | AVSS_18 | AVSS  |                         |
| W17    | AVSS_19 | AVSS  |                         |
| L24    | AVSS_2  | AVSS  |                         |
| Y18    | AVSS_20 | AVSS  |                         |
| Y23    | AVSS_21 | AVSS  |                         |
| Y24    | AVSS_22 | AVSS  |                         |
| Y26    | AVSS_23 | AVSS  |                         |
| AA12   | AVSS_24 | AVSS  |                         |
| AA14   | AVSS_25 | AVSS  |                         |
| AA15   | AVSS_26 | AVSS  |                         |
| AA17   | AVSS_27 | AVSS  |                         |
| AA24   | AVSS_28 | AVSS  |                         |
| AA26   | AVSS_29 | AVSS  |                         |
| L26    | AVSS_3  | AVSS  |                         |
| AB11   | AVSS_30 | AVSS  |                         |
| AB12   | AVSS_31 | AVSS  |                         |
| AB14   | AVSS_32 | AVSS  |                         |
| AB15   | AVSS_33 | AVSS  |                         |
| AB17   | AVSS_34 | AVSS  |                         |
| AC9    | AVSS_35 | AVSS  |                         |
| AC11   | AVSS_36 | AVSS  |                         |
| AC12   | AVSS_37 | AVSS  |                         |
| AC15   | AVSS_38 | AVSS  |                         |
| AC18   | AVSS_39 | AVSS  |                         |
| M21    | AVSS_4  | AVSS  |                         |
| AC25   | AVSS_40 | AVSS  |                         |
| AC26   | AVSS_41 | AVSS  |                         |
| AD26   | AVSS_42 | AVSS  |                         |
| AE14   | AVSS_43 | AVSS  |                         |
| AE17   | AVSS_44 | AVSS  |                         |
| AE20   | AVSS_45 | AVSS  |                         |
| AE27   | AVSS_46 | AVSS  |                         |
| AE28   | AVSS_47 | AVSS  |                         |
| AF9    | AVSS_48 | AVSS  |                         |
| AF11   | AVSS_49 | AVSS  |                         |
| M26    | AVSS_5  | AVSS  |                         |
| AF12   | AVSS_50 | AVSS  |                         |
| AF14   | AVSS_51 | AVSS  |                         |
| AF15   | AVSS_52 | AVSS  |                         |
| AF17   | AVSS_53 | AVSS  |                         |

| PinDes | Name            | Group | Package Pin length(mil) |
|--------|-----------------|-------|-------------------------|
| AF18   | AVSS_54         | AVSS  |                         |
| AF20   | AVSS_55         | AVSS  |                         |
| AF21   | AVSS_56         | AVSS  |                         |
| AG18   | AVSS_57         | AVSS  |                         |
| AH18   | AVSS_58         | AVSS  |                         |
| AH23   | AVSS_59         | AVSS  |                         |
| N28    | AVSS_6          | AVSS  |                         |
| P21    | AVSS_7          | AVSS  |                         |
| P26    | AVSS_8          | AVSS  |                         |
| R23    | AVSS_9          | AVSS  |                         |
| J8     | DDR_AVSS        | DDR   |                         |
| H7     | DDR_RZQ         | DDR   |                         |
| P8     | DDR_VREFOUT     | DDR   |                         |
| H9     | DDRPHY_VDDQ_1   | DDR   |                         |
| H11    | DDRPHY_VDDQ_2   | DDR   |                         |
| H12    | DDRPHY_VDDQ_3   | DDR   |                         |
| H14    | DDRPHY_VDDQ_4   | DDR   |                         |
| H15    | DDRPHY_VDDQ_5   | DDR   |                         |
| J9     | DDRPHY_VDDQ_6   | DDR   |                         |
| L9     | DDRPHY_VDDQ_7   | DDR   |                         |
| M9     | DDRPHY_VDDQ_8   | DDR   |                         |
| J11    | DDRPHY_VDDQL_1  | DDR   |                         |
| J12    | DDRPHY_VDDQL_2  | DDR   |                         |
| J14    | DDRPHY_VDDQL_3  | DDR   |                         |
| K10    | DDRPHY_VDDQL_4  | DDR   |                         |
| L10    | DDRPHY_VDDQL_5  | DDR   |                         |
| M10    | DDRPHY_VDDQL_6  | DDR   |                         |
| M20    | eDP_TX_AVDD_0V9 | eDP   |                         |
| M22    | eDP_TX_AVDD_1V8 | eDP   |                         |
| AG27   | GPIO0_A0_d      | GPIO0 |                         |
| AG26   | GPIO0_A1_z      | GPIO0 |                         |
| AG28   | GPIO0_A2_d      | GPIO0 |                         |
| AA22   | GPIO0_A3_u      | GPIO0 |                         |
| Y22    | GPIO0_A4_u      | GPIO0 |                         |
| AF25   | GPIO0_A5_d      | GPIO0 |                         |
| AE24   | GPIO0_A6_d      | GPIO0 |                         |
| AG25   | GPIO0_A7_u      | GPIO0 |                         |
| AD23   | GPIO0_B0_u      | GPIO0 |                         |
| AF24   | GPIO0_B1_u      | GPIO0 |                         |
| AB21   | GPIO0_B2_u      | GPIO0 |                         |
| AG24   | GPIO0_B3_u      | GPIO0 |                         |
| AB20   | GPIO0_B4_u      | GPIO0 |                         |
| AC22   | GPIO0_B5_u      | GPIO0 |                         |

| PinDes | Name                           | Group            | Package Pin length(mil) |
|--------|--------------------------------|------------------|-------------------------|
| AA20   | GPIO0_B6_u                     | GPIO0            |                         |
| AH26   | GPIO0_B7_d                     | GPIO0            |                         |
| AD22   | GPIO0_C0_d                     | GPIO0            |                         |
| AF23   | GPIO0_C1_d                     | GPIO0            |                         |
| AG23   | GPIO0_C2_d                     | GPIO0            |                         |
| AE23   | GPIO0_C3_d                     | GPIO0            |                         |
| AD21   | GPIO0_C4_d                     | GPIO0            |                         |
| AC21   | GPIO0_C5_d                     | GPIO0            |                         |
| AD20   | GPIO0_C6_d                     | GPIO0            |                         |
| AH25   | GPIO0_C7_d                     | GPIO0            |                         |
| AC20   | GPIO0_D0_u                     | GPIO0            |                         |
| AH24   | GPIO0_D1_u                     | GPIO0            |                         |
| AE26   | GPIO0_D3_d                     | GPIO0            |                         |
| AB23   | GPIO0_D4_d                     | GPIO0            |                         |
| AD25   | GPIO0_D5_d                     | GPIO0            |                         |
| AC24   | GPIO0_D6_d                     | GPIO0            |                         |
| V17    | HDMI_TX_AVDD_0V9_1             | HDMI             |                         |
| V18    | HDMI_TX_AVDD_0V9_2             | HDMI             |                         |
| W18    | HDMI_TX_AVDD_1V8               | HDMI             |                         |
| AB18   | HDMI_TX_HPDI                   | HDMI             |                         |
| AA18   | HDMI_TX_REXT                   | HDMI             |                         |
| W14    | MIPI_CSI_RX_AVDD_0V9           | CSI              |                         |
| Y14    | MIPI_CSI_RX_AVDD_1V8           | CSI              |                         |
| W16    | MIPI_DSI_TX0/LVDS_TX0_AVDD_0V9 | DSI_TX0_LVDS_TX0 |                         |
| Y17    | MIPI_DSI_TX0/LVDS_TX0_AVDD_1V8 | DSI_TX0_LVDS_TX0 |                         |
| W15    | MIPI_DSI_TX1_AVDD_0V9          | DSI_TX1          |                         |
| Y15    | MIPI_DSI_TX1_AVDD_1V8          | DSI_TX1          |                         |
| R20    | MULTI_PHY_AVDD_0V9_1           | MULTI_PHY        |                         |
| R21    | MULTI_PHY_AVDD_0V9_2           | MULTI_PHY        |                         |
| R22    | MULTI_PHY_AVDD_1V8             | MULTI_PHY        |                         |
| AH27   | NPOR_u                         | SYS              |                         |
| H20    | OTP_VCC18                      | SYS              |                         |
| U21    | PCIE30_AVDD_0V9_1              | PCIE30           |                         |
| U20    | PCIE30_AVDD_0V9_2              | PCIE30           |                         |
| U22    | PCIE30_AVDD_1V8                | PCIE30           |                         |
| U19    | PCIE30_RESREF                  | PCIE30           |                         |
| V19    | PMU_VDD_LOGIC_0V9              | PMU              |                         |
| Y20    | PMUIO1                         | PMU              |                         |
| W19    | PMUIO2                         | PMU              |                         |
| V21    | PMUPLL_AVDD_0V9                | PMU              |                         |
| Y21    | PMUPLL_AVDD_1V8                | PMU              |                         |
| V20    | PMUPLL_AVSS                    | PMU              |                         |
| H22    | SARADC_AVDD_1V8                | SARADC           |                         |

| PinDes | Name              | Group  | Package Pin length(mil) |
|--------|-------------------|--------|-------------------------|
| B27    | SARADC_VIN0       | SARADC |                         |
| C26    | SARADC_VIN1       | SARADC |                         |
| D24    | SARADC_VIN2       | SARADC |                         |
| E23    | SARADC_VIN3       | SARADC |                         |
| G21    | SARADC_VIN4       | SARADC |                         |
| F22    | SARADC_VIN5       | SARADC |                         |
| G20    | SARADC_VIN6       | SARADC |                         |
| F21    | SARADC_VIN7       | SARADC |                         |
| P11    | SYSPLL_AVDD_0V9   | SYSPLL |                         |
| N10    | SYSPLL_AVDD_1V8   | SYSPLL |                         |
| N11    | SYSPLL_AVSS       | SYSPLL |                         |
| AB24   | TVSS              | SYS    |                         |
| R8     | USB2_AVDD_0V9     | USB    |                         |
| P9     | USB2_AVDD_1V8     | USB    |                         |
| P10    | USB2_AVDD_3V3     | USB    |                         |
| P22    | USB3_AVDD_0V9     | USB    |                         |
| P23    | USB3_AVDD_1V8     | USB    |                         |
| M23    | USB3_AVDD_3V3     | USB    |                         |
| L23    | USB3_OTG0_ID      | USB    |                         |
| M24    | USB3_OTG0_VBUSDET | USB    |                         |
| H17    | VCCIO1            | VCCIO  |                         |
| H18    | VCCIO2            | VCCIO  |                         |
| L22    | VCCIO3            | VCCIO  |                         |
| J21    | VCCIO4            | VCCIO  |                         |
| V10    | VCCIO5_1          | VCCIO  |                         |
| V11    | VCCIO5_2          | VCCIO  |                         |
| R9     | VCCIO6_1          | VCCIO  |                         |
| U9     | VCCIO6_2          | VCCIO  |                         |
| V12    | VCCIO7            | VCCIO  |                         |
| J15    | VDD_CPU_1         | VDD    |                         |
| M17    | VDD_CPU_10        | VDD    |                         |
| K15    | VDD_CPU_2         | VDD    |                         |
| K16    | VDD_CPU_3         | VDD    |                         |
| K17    | VDD_CPU_4         | VDD    |                         |
| K18    | VDD_CPU_5         | VDD    |                         |
| L15    | VDD_CPU_6         | VDD    |                         |
| L16    | VDD_CPU_7         | VDD    |                         |
| L17    | VDD_CPU_8         | VDD    |                         |
| L18    | VDD_CPU_9         | VDD    |                         |
| M15    | VDD_CPU_COM       | VDD    |                         |
| R13    | VDD_GPU_1         | VDD    |                         |
| T13    | VDD_GPU_2         | VDD    |                         |
| U11    | VDD_GPU_3         | VDD    |                         |

| PinDes | Name         | Group | Package Pin length(mil) |
|--------|--------------|-------|-------------------------|
| U12    | VDD_GPU_4    | VDD   |                         |
| U13    | VDD_GPU_5    | VDD   |                         |
| L12    | VDD_LOGIC_1  | VDD   |                         |
| T16    | VDD_LOGIC_10 | VDD   |                         |
| M12    | VDD_LOGIC_2  | VDD   |                         |
| N13    | VDD_LOGIC_3  | VDD   |                         |
| N16    | VDD_LOGIC_4  | VDD   |                         |
| P13    | VDD_LOGIC_5  | VDD   |                         |
| P16    | VDD_LOGIC_6  | VDD   |                         |
| R12    | VDD_LOGIC_7  | VDD   |                         |
| R16    | VDD_LOGIC_8  | VDD   |                         |
| T12    | VDD_LOGIC_9  | VDD   |                         |
| M19    | VDD_NPU_1    | VDD   |                         |
| N19    | VDD_NPU_2    | VDD   |                         |
| P18    | VDD_NPU_3    | VDD   |                         |
| P19    | VDD_NPU_4    | VDD   |                         |
| P20    | VDD_NPU_5    | VDD   |                         |
| A1     | VSS_1        | VSS   |                         |
| B12    | VSS_10       | VSS   |                         |
| R15    | VSS_100      | VSS   |                         |
| R17    | VSS_101      | VSS   |                         |
| R18    | VSS_102      | VSS   |                         |
| R19    | VSS_103      | VSS   |                         |
| T10    | VSS_104      | VSS   |                         |
| T11    | VSS_105      | VSS   |                         |
| T14    | VSS_106      | VSS   |                         |
| T15    | VSS_107      | VSS   |                         |
| T17    | VSS_108      | VSS   |                         |
| T18    | VSS_109      | VSS   |                         |
| B16    | VSS_11       | VSS   |                         |
| T19    | VSS_110      | VSS   |                         |
| U1     | VSS_111      | VSS   |                         |
| U6     | VSS_112      | VSS   |                         |
| U7     | VSS_113      | VSS   |                         |
| U8     | VSS_114      | VSS   |                         |
| U10    | VSS_115      | VSS   |                         |
| U14    | VSS_116      | VSS   |                         |
| U15    | VSS_117      | VSS   |                         |
| U16    | VSS_118      | VSS   |                         |
| U17    | VSS_119      | VSS   |                         |
| B23    | VSS_12       | VSS   |                         |
| U18    | VSS_120      | VSS   |                         |
| V3     | VSS_121      | VSS   |                         |

| PinDes | Name    | Group | Package Pin length(mil) |
|--------|---------|-------|-------------------------|
| V8     | VSS_122 | VSS   |                         |
| V9     | VSS_123 | VSS   |                         |
| V13    | VSS_124 | VSS   |                         |
| W10    | VSS_125 | VSS   |                         |
| W11    | VSS_126 | VSS   |                         |
| W12    | VSS_127 | VSS   |                         |
| W13    | VSS_128 | VSS   |                         |
| Y8     | VSS_129 | VSS   |                         |
| B26    | VSS_13  | VSS   |                         |
| Y9     | VSS_130 | VSS   |                         |
| Y11    | VSS_131 | VSS   |                         |
| Y12    | VSS_132 | VSS   |                         |
| AA4    | VSS_133 | VSS   |                         |
| AA9    | VSS_134 | VSS   |                         |
| AA23   | VSS_135 | VSS   |                         |
| AB2    | VSS_136 | VSS   |                         |
| AB6    | VSS_137 | VSS   |                         |
| AD3    | VSS_138 | VSS   |                         |
| AE6    | VSS_139 | VSS   |                         |
| C3     | VSS_14  | VSS   |                         |
| AE21   | VSS_140 | VSS   |                         |
| AF3    | VSS_141 | VSS   |                         |
| AF26   | VSS_142 | VSS   |                         |
| AG5    | VSS_143 | VSS   |                         |
| AH1    | VSS_144 | VSS   |                         |
| AH8    | VSS_145 | VSS   |                         |
| AH28   | VSS_146 | VSS   |                         |
| C6     | VSS_15  | VSS   |                         |
| C8     | VSS_16  | VSS   |                         |
| C9     | VSS_17  | VSS   |                         |
| C11    | VSS_18  | VSS   |                         |
| C12    | VSS_19  | VSS   |                         |
| A3     | VSS_2   | VSS   |                         |
| C14    | VSS_20  | VSS   |                         |
| C15    | VSS_21  | VSS   |                         |
| C17    | VSS_22  | VSS   |                         |
| C18    | VSS_23  | VSS   |                         |
| C25    | VSS_24  | VSS   |                         |
| D2     | VSS_25  | VSS   |                         |
| D3     | VSS_26  | VSS   |                         |
| D11    | VSS_27  | VSS   |                         |
| D28    | VSS_28  | VSS   |                         |
| E3     | VSS_29  | VSS   |                         |

| PinDes | Name   | Group | Package Pin length(mil) |
|--------|--------|-------|-------------------------|
| A6     | VSS_3  | VSS   |                         |
| E7     | VSS_30 | VSS   |                         |
| F1     | VSS_31 | VSS   |                         |
| F3     | VSS_32 | VSS   |                         |
| F9     | VSS_33 | VSS   |                         |
| F12    | VSS_34 | VSS   |                         |
| F14    | VSS_35 | VSS   |                         |
| F15    | VSS_36 | VSS   |                         |
| F17    | VSS_37 | VSS   |                         |
| G5     | VSS_38 | VSS   |                         |
| G6     | VSS_39 | VSS   |                         |
| A10    | VSS_4  | VSS   |                         |
| G8     | VSS_40 | VSS   |                         |
| G9     | VSS_41 | VSS   |                         |
| G11    | VSS_42 | VSS   |                         |
| G12    | VSS_43 | VSS   |                         |
| G14    | VSS_44 | VSS   |                         |
| G15    | VSS_45 | VSS   |                         |
| G17    | VSS_46 | VSS   |                         |
| G18    | VSS_47 | VSS   |                         |
| G24    | VSS_48 | VSS   |                         |
| H2     | VSS_49 | VSS   |                         |
| A14    | VSS_5  | VSS   |                         |
| H3     | VSS_50 | VSS   |                         |
| H6     | VSS_51 | VSS   |                         |
| J3     | VSS_52 | VSS   |                         |
| J5     | VSS_53 | VSS   |                         |
| J17    | VSS_54 | VSS   |                         |
| J18    | VSS_55 | VSS   |                         |
| J20    | VSS_56 | VSS   |                         |
| J22    | VSS_57 | VSS   |                         |
| J26    | VSS_58 | VSS   |                         |
| K1     | VSS_59 | VSS   |                         |
| A18    | VSS_6  | VSS   |                         |
| K11    | VSS_60 | VSS   |                         |
| K12    | VSS_61 | VSS   |                         |
| K13    | VSS_62 | VSS   |                         |
| K14    | VSS_63 | VSS   |                         |
| K19    | VSS_64 | VSS   |                         |
| L3     | VSS_65 | VSS   |                         |
| L5     | VSS_66 | VSS   |                         |
| L8     | VSS_67 | VSS   |                         |
| L11    | VSS_68 | VSS   |                         |



| PinDes | Name    | Group | Package Pin length(mil) |
|--------|---------|-------|-------------------------|
| L13    | VSS_69  | VSS   |                         |
| A28    | VSS_7   | VSS   |                         |
| L14    | VSS_70  | VSS   |                         |
| L19    | VSS_71  | VSS   |                         |
| L20    | VSS_72  | VSS   |                         |
| L21    | VSS_73  | VSS   |                         |
| M2     | VSS_74  | VSS   |                         |
| M3     | VSS_75  | VSS   |                         |
| M6     | VSS_76  | VSS   |                         |
| M8     | VSS_77  | VSS   |                         |
| M11    | VSS_78  | VSS   |                         |
| M13    | VSS_79  | VSS   |                         |
| B5     | VSS_8   | VSS   |                         |
| M14    | VSS_80  | VSS   |                         |
| M16    | VSS_81  | VSS   |                         |
| M18    | VSS_82  | VSS   |                         |
| N1     | VSS_83  | VSS   |                         |
| N12    | VSS_84  | VSS   |                         |
| N14    | VSS_85  | VSS   |                         |
| N15    | VSS_86  | VSS   |                         |
| N17    | VSS_87  | VSS   |                         |
| N18    | VSS_88  | VSS   |                         |
| P3     | VSS_89  | VSS   |                         |
| B9     | VSS_9   | VSS   |                         |
| P6     | VSS_90  | VSS   |                         |
| P12    | VSS_91  | VSS   |                         |
| P14    | VSS_92  | VSS   |                         |
| P15    | VSS_93  | VSS   |                         |
| P17    | VSS_94  | VSS   |                         |
| R3     | VSS_95  | VSS   |                         |
| R6     | VSS_96  | VSS   |                         |
| R10    | VSS_97  | VSS   |                         |
| R11    | VSS_98  | VSS   |                         |
| R14    | VSS_99  | VSS   |                         |
| AF28   | XIN24M  | XTAL  |                         |
| AF27   | XOUT24M | XTAL  |                         |

| Pin Number    | Pin Name  | Package Pin length(mil) |
|---------------|---|-------------------------|
| <b>Part F</b> |   |                         |
| F2            | DDR_DQ0_A/DDR4_DQL0_A/LPDDR4_DQ0_A/DDR3_DQ0/LPDDR3_DQ15 | 258.33                  |
| E1            | DDR_DQ1_A/DDR4_DQL2_A/LPDDR4_DQ1_A/DDR3_DQ1/LPDDR3_DQ14 | 278.41                  |
| E2            | DDR_DQ2_A/DDR4_DQL4_A/LPDDR4_DQ2_A/DDR3_DQ2/LPDDR3_DQ10 | 253.63                  |
| D1            | DDR_DQ3_A/DDR4_DQL6_A/LPDDR4_DQ3_A/DDR3_DQ3/LPDDR3_DQ9  | 303.58                  |

| Pin Number    | Pin Name   | Package Pin length(mil) |
|---------------|--|-------------------------|
| <b>Part F</b> |  |                         |
| J1            | DDR_DQ4_A/DDR4_DQL7_A/LPDDR4_DQ4_A/DDR3_DQ4/LPDDR3_DQ13          | 251.17                  |
| J2            | DDR_DQ5_A/DDR4_DQL5_A/LPDDR4_DQ5_A/DDR3_DQ5/LPDDR3_DQ12          | 230.15                  |
| H1            | DDR_DQ6_A/DDR4_DQL3_A/LPDDR4_DQ6_A/DDR3_DQ6/LPDDR3_DQ8           | 248.86                  |
| H4            | DDR_DQ7_A/DDR4_DQL1_A/LPDDR4_DQ7_A/DDR3_DQ7/LPDDR3_DQ11          | 183.75                  |
| H5            | DDR_DM0_A/DDR4_DML_A/LPDDR4_DM0_A/DDR3_DM0/LPDDR3_DM1            | 147.74                  |
| G1            | DDR_DQS0P_A/DDR4_DQSL_P_A/LPDDR4_DQS0P_A/DDR3_DQS0P/LPDDR3_DQS1P | 269.30                  |
| G2            | DDR_DQS0N_A/DDR4_DQSL_N_A/LPDDR4_DQS0N_A/DDR3_DQS0N/LPDDR3_DQS1N | 279.09                  |
| M1            | DDR_DQ8_A/DDR4_DQU3_A/LPDDR4_DQ8_A/DDR3_DQ8/LPDDR3_DQ25          | 255.64                  |
| N2            | DDR_DQ9_A/DDR4_DQU1_A/LPDDR4_DQ9_A/DDR3_DQ9/LPDDR3_DQ24          | 226.83                  |
| L7            | DDR_DQ10_A/DDR4_DQU7_A/LPDDR4_DQ10_A/DDR3_DQ10/LPDDR3_DQ28       | 95.37                   |
| L6            | DDR_DQ11_A/DDR4_DQU5_A/LPDDR4_DQ11_A/DDR3_DQ11/LPDDR3_DQ29       | 106.50                  |
| K2            | DDR_DQ12_A/DDR4_DQU2_A/LPDDR4_DQ12_A/DDR3_DQ12/LPDDR3_DQ26       | 227.44                  |
| J6            | DDR_DQ13_A/DDR4_DQU4_A/LPDDR4_DQ13_A/DDR3_DQ13/LPDDR3_DQ31       | 135.40                  |
| J7            | DDR_DQ14_A/DDR4_DQU6_A/LPDDR4_DQ14_A/DDR3_DQ14/LPDDR3_DQ30       | 84.81                   |
| L4            | DDR_DQ15_A/DDR4_DQU0_A/LPDDR4_DQ15_A/DDR3_DQ15/LPDDR3_DQ27       | 176.80                  |
| J4            | DDR_DM1_A/DDR4_DMU_A/LPDDR4_DM1_A/DDR3_DM1/LPDDR3_DM3            | 184.24                  |
| L2            | DDR_DQS1P_A/DDR4_DQSU_P_A/LPDDR4_DQS1P_A/DDR3_DQS1P/LPDDR3_DQS3P | 234.50                  |
| L1            | DDR_DQS1N_A/DDR4_DQSU_N_A/LPDDR4_DQS1N_A/DDR3_DQS1N/LPDDR3_DQS3N | 240.92                  |
| B10           | DDR_DQ0_B/DDR4_DQU7_B/LPDDR4_DQ0_B/DDR3_DQ16/LPDDR3_DQ1          | 239.17                  |
| A9            | DDR_DQ1_B/DDR4_DQU5_B/LPDDR4_DQ1_B/DDR3_DQ17/LPDDR3_DQ5          | 278.13                  |
| D12           | DDR_DQ2_B/DDR4_DQU3_B/LPDDR4_DQ2_B/DDR3_DQ18/LPDDR3_DQ6          | 182.10                  |
| E12           | DDR_DQ3_B/DDR4_DQU1_B/LPDDR4_DQ3_B/DDR3_DQ19/LPDDR3_DQ4          | 156.15                  |
| A12           | DDR_DQ4_B/DDR4_DQU0_B/LPDDR4_DQ4_B/DDR3_DQ20/LPDDR3_DQ2          | 278.30                  |
| D15           | DDR_DQ5_B/DDR4_DQU6_B/LPDDR4_DQ5_B/DDR3_DQ21/LPDDR3_DQ3          | 176.68                  |
| E15           | DDR_DQ6_B/DDR4_DQU4_B/LPDDR4_DQ6_B/DDR3_DQ22/LPDDR3_DQ7          | 168.53                  |
| E14           | DDR_DQ7_B/DDR4_DQU2_B/LPDDR4_DQ7_B/DDR3_DQ23/LPDDR3_DQ0          | 154.56                  |
| D14           | DDR_DM0_B/DDR4_DMU_B/LPDDR4_DM0_B/DDR3_DM2/LPDDR3_DM0            | 175.84                  |
| A11           | DDR_DQS0P_B/DDR4_DQSU_P_B/LPDDR4_DQS0P_B/DDR3_DQS2P/LPDDR3_DQS0P | 256.29                  |
| B11           | DDR_DQS0N_B/DDR4_DQSU_N_B/LPDDR4_DQS0N_B/DDR3_DQS2N/LPDDR3_DQS0N | 242.83                  |
| A16           | DDR_DQ8_B/DDR4_DQL0_B/LPDDR4_DQ8_B/DDR3_DQ24/LPDDR3_DQ18         | 285.48                  |
| B17           | DDR_DQ9_B/DDR4_DQL2_B/LPDDR4_DQ9_B/DDR3_DQ25/LPDDR3_DQ19         | 255.55                  |
| A17           | DDR_DQ10_B/DDR4_DQL4_B/LPDDR4_DQ10_B/DDR3_DQ26/LPDDR3_DQ22       | 277.32                  |
| B18           | DDR_DQ11_B/DDR4_DQL6_B/LPDDR4_DQ11_B/DDR3_DQ27/LPDDR3_DQ23       | 273.54                  |
| B13           | DDR_DQ12_B/DDR4_DQL7_B/LPDDR4_DQ12_B/DDR3_DQ28/LPDDR3_DQ16       | 264.40                  |
| A13           | DDR_DQ13_B/DDR4_DQL5_B/LPDDR4_DQ13_B/DDR3_DQ29/LPDDR3_DQ17       | 285.09                  |
| D17           | DDR_DQ14_B/DDR4_DQL1_B/LPDDR4_DQ14_B/DDR3_DQ30/LPDDR3_DQ20       | 194.36                  |
| B14           | DDR_DQ15_B/DDR4_DQL3_B/LPDDR4_DQ15_B/DDR3_DQ31/LPDDR3_DQ21       | 258.98                  |
| E17           | DDR_DM1_B/DDR4_DML_B/LPDDR4_DM1_B/DDR3_DM3/LPDDR3_DM2            | 176.52                  |
| B15           | DDR_DQS1P_B/DDR4_DQSL_P_B/LPDDR4_DQS1P_B/DDR3_DQS3P/LPDDR3_DQS2P | 268.35                  |
| A15           | DDR_DQS1N_B/DDR4_DQSL_N_B/LPDDR4_DQS1N_B/DDR3_DQS3N/LPDDR3_DQS2N | 264.99                  |
| P5            | DDR_ECC_DQ0  | 155.46                  |
| M4            | DDR_ECC_DQ1  | 165.35                  |
| M5            | DDR_ECC_DQ2  | 130.79                  |
| R5            | DDR_ECC_DQ3  | 153.43                  |
| M7            | DDR_ECC_DQ4  | 93.64                   |
| R7            | DDR_ECC_DQ5  | 135.56                  |
| P4            | DDR_ECC_DQ6  | 201.25                  |
| R4            | DDR_ECC_DQ7  | 179.34                  |
| P7            | DDR_ECC_DM   | 119.85                  |
| P2            | DDR_ECC_DQS_P  | 251.79                  |
| P1            | DDR_ECC_DQS_N  | 264.37                  |
| B6            | DDR4_A0/LPDDR4_CLKP_B/DDR3_A9-/AC0                               | 276.81                  |
| F5            | DDR4_A1-/DDR3_A2-/AC1  | 215.83                  |
| B1            | DDR4_A2/LPDDR4_A1_A/DDR3_A4/LPDDR3_A6/AC2                        | 338.78                  |
| F4            | DDR4_A3/LPDDR4_CKE1_A/DDR3_A3-/AC3                               | 250.62                  |

| Pin Number                  | Pin Name   | Package Pin length(mil) |
|-----------------------------|--|-------------------------|
| <b>Part F</b>               |  |                         |
| D9                          | DDR4_A4/LPDDR4_A3_B/DDR3_BA1/LPDDR3_A3/AC4   | 194.10                  |
| B7                          | DDR4_A5/LPDDR4_A5_B/DDR3_A11/LPDDR3_A2/AC5   | 281.65                  |
| A7                          | DDR4_A6/LPDDR4_A1_B/DDR3_A13/LPDDR3_A1/AC6   | 310.88                  |
| A8                          | DDR4_A7/LPDDR4_ODT0_CA_B/DDR3_A8/-/AC7   | 278.67                  |
| C1                          | DDR4_A8/LPDDR4_ODT0_CA_A/DDR3_A6/LPDDR3_A9/AC8                                       | 325.81                  |
| A5                          | DDR4_A9/LPDDR4_CLKN_B/DDR3_A5/-/AC9  | 290.85                  |
| D6                          | DDR4_A10/LPDDR4_CKE0_B/DDR3_A10/-/AC10   | 218.38                  |
| C2                          | DDR4_A11/LPDDR4_A0_A/DDR3_A7/LPDDR3_A8/AC11  | 304.42                  |
| C4                          | DDR4_A12/LPDDR4_A3_A/DDR3_BA2/-/AC12   | 277.72                  |
| B8                          | DDR4_A13/LPDDR4_A0_B/DDR3_A14/LPDDR3_A0/AC13   | 249.65                  |
| C5                          | DDR4_A14_WEn/LPDDR4_A4_A/DDR3_A15/LPDDR3_A5/AC14                                     | 244.33                  |
| E4                          | DDR4_A15_CASn/LPDDR4_A2_A/DDR3_A0/-/AC15   | 217.54                  |
| D5                          | DDR4_A16_RASn/LPDDR4_A5_A/DDR3_RASn/LPDDR3_A7/AC16                                   | 232.08                  |
| E6                          | DDR4_ACTn/LPDDR4_CKE1_B/DDR3_CASn/-/AC17   | 208.13                  |
| E11                         | DDR4_BA0/LPDDR4_A2_B/DDR3_A1/-/AC18  | 152.87                  |
| E9                          | DDR4_BA1/LPDDR4_A4_B/DDR3_A12/LPDDR3_A4/AC19   | 138.75                  |
| F8                          | DDR4_BG0/LPDDR4_ODT1_CA_B/DDR3_WEn/-/AC20  | 153.63                  |
| F7                          | DDR4_BG1/LPDDR4_ODT1_CA_A/DDR3_BA0/-/AC21  | 144.48                  |
| B3                          | DDR4_CKE/LPDDR4_CKE0_A/DDR3_CKE/LPDDR3_CKE/AC22                                      | 312.78                  |
| B4                          | DDR4_CLKP/LPDDR4_CLKP_A/DDR3_CLKP/LPDDR3_CLKP/AC23                                   | 322.40                  |
| A4                          | DDR4_CLKN/LPDDR4_CLKN_A/DDR3_CLKN/LPDDR3_CLKN/AC24                                   | 313.78                  |
| A2                          | DDR4_CS0n/LPDDR4_CS0n_A/DDR3_ODT1/LPDDR3_ODT0/AC25                                   | 344.42                  |
| B2                          | DDR4_CS1n/LPDDR4_CS1n_A/DDR3_CS1n/LPDDR3_ODT1/AC26                                   | 316.41                  |
| E8                          | DDR4_ODT0/LPDDR4_CS1n_B/DDR3_ODT0/LPDDR3_CS1n/AC27                                   | 181.09                  |
| D8                          | DDR4_ODT1/LPDDR4_CS0n_B/DDR3_CS0n/LPDDR3_CS0n/AC28                                   | 223.57                  |
| F11                         | DDR4_RESETrn/LPDDR4_RESETrn/DDR3_RESETrn/AC29  | 123.93                  |
| <b>Part H VCCIO1 Domain</b> |  |                         |
| D18                         | I2C3_SDA_M0/UART3_RX_M0/CAN1_RX_M0/AUDIOPWM_LOUT_P/ACODEC_ADC_DATA/GPIO1_A0_u        | 177.56                  |
| E18                         | I2C3_SCL_M0/UART3_TX_M0/CAN1_TX_M0/AUDIOPWM_LOUT_N/ACODEC_ADC_CLK/GPIO1_A1_u         | 128.76                  |
| A19                         | I2S1_MCLK_M0/UART3_RTSn_M0/SCR_CLK/PCIE30X1_PERSTn_M2/GPIO1_A2_d                     | 250.88                  |
| B19                         | I2S1_SCLK_TX_M0/UART3_CTSn_M0/SCR_IO/PCIE30X1_WAKEn_M2/ACODEC_DAC_CLK/GPIO1_A3_d     | 226.93                  |
| F18                         | I2S1_SCLK_RX_M0/UART4_RX_M0/PDM_CLK1_M0/SPDIF_TX_M0/GPIO1_A4_d                       | 99.09                   |
| A20                         | I2S1_LRCK_TX_M0/UART4_RTSn_M0/SCR_RST/PCIE30X1_CLKREqn_M2/ACODEC_DAC_SYNC/GPIO1_A5_d | 263.45                  |
| C20                         | I2S1_LRCK_RX_M0/UART4_TX_M0/PDM_CLK0_M0/AUDIOPWM_ROUT_P/GPIO1_A6_d                   | 222.90                  |
| B20                         | I2S1_SDO0_M0/UART4_CTSn_M0/SCR_DET/AUDIOPWM_ROUT_N/ACODEC_DAC_DATA/GPIO1_A7_d        | 230.95                  |
| D20                         | I2S1_SDO1_M0/I2S1_SDI3_M0/PDM_SDI3_M0/PCIE20_CLKREqn_M2/ACODEC_DAC_DATA/GPIO1_B0_d   | 204.53                  |
| E20                         | I2S1_SDO2_M0/I2S1_SDI2_M0/PDM_SDI2_M0/PCIE20_WAKEn_M2/ACODEC_ADC_SYNC/GPIO1_B1_d     | 191.59                  |
| A21                         | I2S1_SDO3_M0/I2S1_SDI1_M0/PDM_SDI1_M0/PCIE20_PERSTn_M2/GPIO1_B2_d                    | 263.45                  |
| B21                         | I2S1_SDI0_M0/PDM_SDI0_M0/GPIO1_B3_d  | 244.78                  |
| <b>Part I VCCIO2 Domain</b> |  |                         |
| A24                         | EMMC_D0/FLASH_D0/GPIO1_B4_u  | 274.99                  |
| C21                         | EMMC_D1/FLASH_D1/GPIO1_B5_u  | 222.16                  |
| B24                         | EMMC_D2/FLASH_D2/GPIO1_B6_u  | 302.75                  |
| D21                         | EMMC_D3/FLASH_D3/GPIO1_B7_u  | 200.00                  |
| A25                         | EMMC_D4/FLASH_D4/GPIO1_C0_u  | 305.02                  |
| E21                         | EMMC_D5/FLASH_D5/GPIO1_C1_u  | 170.33                  |
| E22                         | EMMC_D6/FLASH_D6/GPIO1_C2_u  | 179.10                  |
| B25                         | EMMC_D7/FLASH_D7/GPIO1_C3_u  | 302.11                  |
| B22                         | EMMC_CMD/FLASH_WRn/GPIO1_C4_u  | 266.12                  |
| A23                         | EMMC_CLKOUT/FLASH_DQS/GPIO1_C5_d   | 282.31                  |
| A26                         | EMMC_DATA_STROBE/FSPI_CS1n/FLASH_CLE/GPIO1_C6_d                                      | 335.25                  |
| F20                         | EMMC_RSTn/FSPI_D2/FLASH_WPn/GPIO1_C7_d   | 163.07                  |
| A22                         | FSPI_CLK/FLASH_ALE/GPIO1_D0_d  | 294.87                  |
| C24                         | FSPI_D0/FLASH_RDY/GPIO1_D1_u   | 249.03                  |
| D23                         | FSPI_D1/FLASH_RDn/GPIO1_D2_u   | 225.32                  |

| Pin Number                  | Pin Name   | Package Pin length(mil) |
|-----------------------------|--|-------------------------|
| <b>Part F</b>               |  |                         |
| C23                         | FSPI_CS0n/FLASH_CS0n/GPIO1_D3_u  | 267.75                  |
| A27                         | FSPI_D3/FLASH_CS1n/GPIO1_D4_u  | 320.42                  |
| <b>Part J VCCIO3 Domain</b> |  |                         |
| J25                         | SDMMC0_D0/UART2_TX_M1/UART6_TX_M1/PWM8_M1/GPIO1_D5_u                               | 187.90                  |
| J24                         | SDMMC0_D1/UART2_RX_M1/UART6_RX_M1/PWM9_M1/GPIO1_D6_u                               | 129.06                  |
| H26                         | SDMMC0_D2/ARMJTAG_TCK/UART5_CTSn_M0/GPIO1_D7_u                                     | 207.15                  |
| J23                         | SDMMC0_D3/ARMJTAG_TMS/UART5_RTSn_M0/GPIO2_A0_u                                     | 119.63                  |
| H27                         | SDMMC0_CMD/PWM10_M1/UART5_RX_M0/CAN0_TX_M1/GPIO2_A1_u                              | 234.14                  |
| H28                         | SDMMC0_CLK/TEST_CLKOUT/UART5_TX_M0/CAN0_RX_M1/GPIO2_A2_d                           | 238.25                  |
| <b>Part K VCCIO4 Domain</b> |  |                         |
| E27                         | SDMMC1_D0/GMAC0_RXD2/UART6_RX_M0/GPIO2_A3_u  | 254.44                  |
| E28                         | SDMMC1_D1/GMAC0_RXD3/UART6_TX_M0/GPIO2_A4_u  | 274.89                  |
| B28                         | SDMMC1_D2/GMAC0_RXCLK/UART7_RX_M0/GPIO2_A5_u                                       | 341.80                  |
| C27                         | SDMMC1_D3/GMAC0_TXD2/UART7_TX_M0/GPIO2_A6_u  | 312.32                  |
| C28                         | SDMMC1_CMD/GMAC0_TXD3/UART9_RX_M0/GPIO2_A7_u                                       | 299.12                  |
| D27                         | SDMMC1_CLK/GMAC0_TXCLK/UART9_TX_M0/GPIO2_B0_d                                      | 257.34                  |
| D26                         | SDMMC1_PWREN/I2C4_SDA_M1/UART8_RTSn_M0/CAN2_RX_M1/GPIO2_B1_d                       | 248.12                  |
| E25                         | SDMMC1_DET/I2C4_SCL_M1/UART8_CTSn_M0/CAN2_TX_M1/GPIO2_B2_u                         | 220.16                  |
| F28                         | GMAC0_TXD0/UART1_RX_M0/GPIO2_B3_u  | 249.10                  |
| G27                         | GMAC0_TXD1/UART1_TX_M0/GPIO2_B4_u  | 220.84                  |
| G28                         | GMAC0_TXEN/UART1_RTSn_M0/SPI1_CLK_M0/GPIO2_B5_u                                    | 246.50                  |
| F27                         | GMAC0_RXD0/UART1_CTSn_M0/SPI1_MISO_M0/GPIO2_B6_u                                   | 290.81                  |
| H25                         | I2S2_SCLK_RX_M0/GMAC0_RXD1/UART6_RTSn_M0/SPI1_MOSI_M0/GPIO2_B7_d                   | 173.26                  |
| F24                         | I2S2_LRCK_RX_M0/GMAC0_RXDV_CRS/UART6_CTSn_M0/SPI1_CS0_M0/GPIO2_C0_d                | 171.29                  |
| G23                         | I2S2_MCLK_M0/ETH0_REFCLKO_25M/UART7_RTSn_M0/SPI2_CLK_M0/GPIO2_C1_d                 | 119.74                  |
| F25                         | I2S2_SCLK_TX_M0/GMAC0_MCLKINOUT/UART7_CTSn_M0/SPI2_MISO_M0/GPIO2_C2_d              | 195.93                  |
| H24                         | I2S2_LRCK_TX_M0/GMAC0_MDC/UART9_RTSn_M0/SPI2_MOSI_M0/GPIO2_C3_d                    | 143.41                  |
| H23                         | I2S2_SDO_M0/GMAC0_MDIO/UART9_CTSn_M0/SPI2_CS0_M0/GPIO2_C4_d                        | 120.81                  |
| F26                         | I2S2_SDI_M0/GMAC0_RXER/UART8_TX_M0/SPI2_CS1_M0/GPIO2_C5_d                          | 211.90                  |
| E26                         | CLK32K_OUT1/UART8_RX_M0/SPI1_CS1_M0/GPIO2_C6_d                                     | 234.29                  |
| <b>Part L VCCIO5 Domain</b> |  |                         |
| AG6                         | LCDC_D0/VOP_BT656_D0_M0/SPI0_MISO_M1/PCIE20_CLKREQn_M1/I2S1_MCLK_M2/GPIO2_D0_d     | 327.56                  |
| AD7                         | LCDC_D1/VOP_BT656_D1_M0/SPI0_MOSI_M1/PCIE20_WAKEn_M1/I2S1_SCLK_TX_M2/GPIO2_D1_d    | 253.40                  |
| AC8                         | LCDC_D2/VOP_BT656_D2_M0/SPI0_CS0_M1/PCIE30X1_CLKREQn_M1/I2S1_LRCK_TX_M2/GPIO2_D2_d | 193.17                  |
| AC7                         | LCDC_D3/VOP_BT656_D3_M0/SPI0_CLK_M1/PCIE30X1_WAKEn_M1/I2S1_SDI0_M2/GPIO2_D3_d      | 217.33                  |
| AF5                         | LCDC_D4/VOP_BT656_D4_M0/SPI2_CS1_M1/PCIE30X2_CLKREQn_M1/I2S1_SDI1_M2/GPIO2_D4_d    | 313.13                  |
| AF6                         | LCDC_D5/VOP_BT656_D5_M0/SPI2_CS0_M1/PCIE30X2_WAKEn_M1/I2S1_SDI2_M2/GPIO2_D5_d      | 298.12                  |
| AD6                         | LCDC_D6/VOP_BT656_D6_M0/SPI2_MOSI_M1/PCIE30X2_PERSTn_M1/I2S1_SDI3_M2/GPIO2_D6_d    | 261.99                  |
| AH5                         | LCDC_D7/VOP_BT656_D7_M0/SPI2_MISO_M1/UART8_TX_M1/I2S1_SDO0_M2/GPIO2_D7_d           | 364.87                  |
| AH4                         | LCDC_CLK/VOP_BT656_CLK_M0/SPI2_CLK_M1/UART8_RX_M1/I2S1_SDO1_M2/GPIO3_A0_d          | 367.52                  |
| AB8                         | LCDC_D8/VOP_BT1120_D0/SPI1_CS0_M1/PCIE30X1_PERSTn_M1/SDMMC2_D0_M1/GPIO3_A1_d       | 170.82                  |
| AE5                         | LCDC_D9/VOP_BT1120_D1/GMAC1_TXD2_M0/I2S3_MCLK_M0/SDMMC2_D1_M1/GPIO3_A2_d           | 286.55                  |
| AG4                         | LCDC_D10/VOP_BT1120_D2/GMAC1_TXD3_M0/I2S3_SCLK_M0/SDMMC2_D2_M1/GPIO3_A3_d          | 336.56                  |
| AF4                         | LCDC_D11/VOP_BT1120_D3/GMAC1_RXD2_M0/I2S3_LRCK_M0/SDMMC2_D3_M1/GPIO3_A4_d          | 317.96                  |
| AH3                         | LCDC_D12/VOP_BT1120_D4/GMAC1_RXD3_M0/I2S3_SDO_M0/SDMMC2_CMD_M1/GPIO3_A5_d          | 372.61                  |
| AG3                         | LCDC_D13/VOP_BT1120_CLK/GMAC1_TXCLK_M0/I2S3_SDI_M0/SDMMC2_CLK_M1/GPIO3_A6_d        | 342.11                  |
| AH2                         | LCDC_D14/VOP_BT1120_D5/GMAC1_RXCLK_M0/SDMMC2_DET_M1/GPIO3_A7_d                     | 380.47                  |
| AG2                         | LCDC_D15/VOP_BT1120_D6/ETH1_REFCLKO_25M_M0/SDMMC2_PWREN_M1/GPIO3_B0_d              | 359.62                  |
| AG1                         | LCDC_D16/VOP_BT1120_D7/GMAC1_RXD0_M0/UART4_RX_M1/PWM8_M0/GPIO3_B1_d                | 370.52                  |
| AF2                         | LCDC_D17/VOP_BT1120_D8/GMAC1_RXD1_M0/UART4_TX_M1/PWM9_M0/GPIO3_B2_d                | 339.37                  |
| AF1                         | LCDC_D18/VOP_BT1120_D9/GMAC1_RXDV_CRS_M0/I2C5_SCL_M0/PDM_SDI0_M2/GPIO3_B3_d        | 358.40                  |
| AE1                         | LCDC_D19/VOP_BT1120_D10/GMAC1_RXER_M0/I2C5_SDA_M0/PDM_SDI1_M2/GPIO3_B4_d           | 342.28                  |
| AE2                         | LCDC_D20/VOP_BT1120_D11/GMAC1_TXD0_M0/I2C3_SCL_M1/PWM10_M0/GPIO3_B5_d              | 320.64                  |
| AE3                         | LCDC_D21/VOP_BT1120_D12/GMAC1_TXD1_M0/I2C3_SDA_M1/PWM11_IR_M0/GPIO3_B6_d           | 280.30                  |
| AD4                         | LCDC_D22/PWM12_M0/GMAC1_TXEN_M0/UART3_TX_M1/PDM_SDI2_M2/GPIO3_B7_d                 | 254.43                  |

| Pin Number                  | Pin Name  | Package Pin length(mil) |
|-----------------------------|---|-------------------------|
| <b>Part F</b>               |   |                         |
| AD2                         | LCDC_D23/PWM13_M0/GMAC1_MCLKINOUT_M0/UART3_RX_M1/PDM_SDI3_M2/GPIO3_C0_d           | 281.93                  |
| AD1                         | LCDC_HSYNC/VOP_BT1120_D13/SPI1_MOSI_M1/PCIE20_PERSTn_M1/I2S1_SDO2_M2/GPIO3_C1_d   | 304.17                  |
| AA7                         | LCDC_VSYNC/VOP_BT1120_D14/SPI1_MISO_M1/UART5_TX_M1/I2S1_SDO3_M2/GPIO3_C2_d        | 127.37                  |
| AC4                         | LCDC_DEN/VOP_BT1120_D15/SPI1_CLK_M1/UART5_RX_M1/I2S1_SCLK_RX_M2/GPIO3_C3_d        | 226.39                  |
| AC3                         | PWM14_M0/VOP_PWM_M1/GMAC1_MDC_M0/UART7_TX_M1/PDM_CLK1_M2/GPIO3_C4_d               | 250.96                  |
| AC2                         | PWM15_IR_M0/SPDIF_TX_M1/GMAC1_MDIO_M0/UART7_RX_M1/I2S1_LRCK_RX_M2/GPIO3_C5_d      | 269.04                  |
| <b>Part M VCCIO6 Domain</b> |   |                         |
| AC5                         | CIF_D0/EBC_SDDO0/SDMMC2_D0_M0/I2S1_MCLK_M1/VOP_BT656_D0_M1/GPIO3_C6_d             | 243.33                  |
| AA6                         | CIF_D1/EBC_SDDO1/SDMMC2_D1_M0/I2S1_SCLK_TX_M1/VOP_BT656_D1_M1/GPIO3_C7_d          | 171.49                  |
| AB5                         | CIF_D2/EBC_SDDO2/SDMMC2_D2_M0/I2S1_LRCK_TX_M1/VOP_BT656_D2_M1/GPIO3_D0_d          | 197.65                  |
| AB1                         | CIF_D3/EBC_SDDO3/SDMMC2_D3_M0/I2S1_SDO0_M1/VOP_BT656_D3_M1/GPIO3_D1_d             | 304.22                  |
| Y7                          | CIF_D4/EBC_SDDO4/SDMMC2_CMD_M0/I2S1_SDI0_M1/VOP_BT656_D4_M1/GPIO3_D2_d            | 144.15                  |
| AC1                         | CIF_D5/EBC_SDDO5/SDMMC2_CLK_M0/I2S1_SDI1_M1/VOP_BT656_D5_M1/GPIO3_D3_d            | 337.43                  |
| AA1                         | CIF_D6/EBC_SDDO6/SDMMC2_DET_M0/I2S1_SDI2_M1/VOP_BT656_D6_M1/GPIO3_D4_d            | 300.61                  |
| AA5                         | CIF_D7/EBC_SDDO7/SDMMC2_PWREN_M0/I2S1_SDI3_M1/VOP_BT656_D7_M1/GPIO3_D5_d          | 190.00                  |
| Y6                          | CIF_D8/EBC_SDDO8/GMAC1_TXD2_M1/UART1_TX_M1/PDM_CLK0_M1/GPIO3_D6_d                 | 171.09                  |
| Y5                          | CIF_D9/EBC_SDDO9/GMAC1_TXD3_M1/UART1_RX_M1/PDM_SDI0_M1/GPIO3_D7_d                 | 188.71                  |
| AA3                         | CIF_D10/EBC_SDDO10/GMAC1_TXCLK_M1/PDM_CLK1_M1/GPIO4_A0_d                          | 249.81                  |
| AA2                         | CIF_D11/EBC_SDDO11/GMAC1_RXD2_M1/PDM_SDI1_M1/GPIO4_A1_d                           | 277.20                  |
| Y4                          | CIF_D12/EBC_SDDO12/GMAC1_RXD3_M1/UART7_TX_M2/PDM_SDI2_M1/GPIO4_A2_d               | 248.79                  |
| Y3                          | CIF_D13/EBC_SDDO13/GMAC1_RXCLK_M1/UART7_RX_M2/PDM_SDI3_M1/GPIO4_A3_d              | 243.86                  |
| Y2                          | CIF_D14/EBC_SDDO14/GMAC1_TXD0_M1/UART9_TX_M2/I2S2_LRCK_TX_M1/GPIO4_A4_d           | 284.31                  |
| Y1                          | CIF_D15/EBC_SDDO15/GMAC1_TXD1_M1/UART9_RX_M2/I2S2_LRCK_RX_M1/GPIO4_A5_d           | 287.72                  |
| W2                          | ISP_FLASHTRIGOUT/EBC_SDCE0/GMAC1_TXEN_M1/SPI3_CS0_M0/I2S1_SCLK_RX_M1/GPIO4_A6_d   | 281.48                  |
| W1                          | CAM_CLKOUT0/EBC_SDCE1/GMAC1_RXD0_M1/SPI3_CS1_M0/I2S1_LRCK_RX_M1/GPIO4_A7_d        | 287.26                  |
| V7                          | CAM_CLKOUT1/EBC_SDCE2/GMAC1_RXD1_M1/SPI3_MISO_M0/I2S1_SDO1_M1/GPIO4_B0_d          | 150.89                  |
| V2                          | ISP_PRELIGHT_TRIG/EBC_SDCE3/GMAC1_RXDV_CRS_M1/I2S1_SDO2_M1/GPIO4_B1_d             | 269.66                  |
| V4                          | I2C4_SDA_M0/EBC_VCOM/GMAC1_RXER_M1/SPI3_MOSI_M0/I2S2_SDI_M1/GPIO4_B2_d            | 207.82                  |
| V1                          | I2C4_SCL_M0/EBC_GDOE/ETH1_REFCLKO_25M_M1/SPI3_CLK_M0/I2S2_SDO_M1/GPIO4_B3_d       | 289.86                  |
| V6                          | I2C2_SDA_M1/EBC_GDSP/CAN2_RX_M0/ISP_FLASH_TRIGIN/VOP_BT656_CLK_M1/GPIO4_B4_d      | 168.72                  |
| V5                          | I2C2_SCL_M1/EBC_SDSHR/CAN2_TX_M0/I2S1_SDO3_M1/GPIO4_B5_d                          | 205.71                  |
| U5                          | CIF_HREF/EBC_SDLE/GMAC1_MDC_M1/UART1_RTsn_M1/I2S2_MCLK_M1/GPIO4_B6_d              | 152.40                  |
| U4                          | CIF_VSYNC/EBC_SDOE/GMAC1_MDIO_M1/I2S2_SCLK_TX_M1/GPIO4_B7_d                       | 233.12                  |
| U3                          | CIF_CLKOUT/EBC_GDCLK/PWM11_IR_M1/GPIO4_C0_d                                       | 222.70                  |
| U2                          | CIF_CLKIN/EBC_SDCLK/GMAC1_MCLKINOUT_M1/UART1_CTSn_M1/I2S2_SCLK_RX_M1/GPIO4_C1_d   | 243.75                  |
| <b>Part N VCCIO7 Domain</b> |   |                         |
| AF8                         | PWM14_M1/SPI3_CLK_M1/CAN1_RX_M1/PCIE30X2_CLKREqn_M2/I2S3_MCLK_M1/GPIO4_C2_d       | 295.62                  |
| AA11                        | PWM15_IR_M1/SPI3_MOSI_M1/CAN1_TX_M1/PCIE30X2_WAKEn_M2/I2S3_SCLK_M1/GPIO4_C3_d     | 141.35                  |
| AH7                         | EDP_HPDIN_M0/SPDIF_TX_M2/SATA2_ACT_LED/PCIE30X2_PERSTn_M2/I2S3_LRCK_M1/GPIO4_C4_d | 355.60                  |
| AD8                         | PWM12_M1/SPI3_MISO_M1/SATA1_ACT_LED/UART9_TX_M1/I2S3_SDO_M1/GPIO4_C5_d            | 250.59                  |
| AE8                         | PWM13_M1/SPI3_CS0_M1/SATA0_ACT_LED/UART9_RX_M1/I2S3_SDI_M1/GPIO4_C6_d             | 274.62                  |
| AG8                         | HDMITX_SCL/I2C5_SCL_M1/GPIO4_C7_u   | 326.21                  |
| AG7                         | HDMITX_SDA/I2C5_SDA_M1/GPIO4_D0_u   | 328.77                  |
| AH6                         | HDMITX_CEC_M0/SPI3_CS1_M1/GPIO4_D1_u  | 358.67                  |
| AB9                         | GPIO4_D2_d  | 167.55                  |
| <b>Part P MIPI CSI RX</b>   |   |                         |
| AG12                        | MIPI_CSI_RX_D0P   | 317.69                  |
| AH12                        | MIPI_CSI_RX_D0N   | 326.25                  |
| AG11                        | MIPI_CSI_RX_D1P   | 328.53                  |
| AH11                        | MIPI_CSI_RX_D1N   | 332.80                  |
| AE11                        | MIPI_CSI_RX_D2P   | 253.67                  |
| AD11                        | MIPI_CSI_RX_D2N   | 259.27                  |
| AD9                         | MIPI_CSI_RX_D3P   | 269.86                  |
| AE9                         | MIPI_CSI_RX_D3N   | 275.61                  |
| AG10                        | MIPI_CSI_RX_CLK0P   | 338.20                  |

| Pin Number   | Pin Name                                 | Package Pin length(mil) |
|--|--|-------------------------|
| <b>Part F</b>  |  |                         |
| AH10   | MIPI_CSI_RX_CLK0N                        | 342.43                  |
| AG9  | MIPI_CSI_RX_CLK1P                        | 348.46                  |
| AH9  | MIPI_CSI_RX_CLK1N                        | 351.90                  |
| <b>Part Q HDMI2.0 TX</b>                                   |  |                         |
| AG22   | HDMI_TX_D2P                              | 339.16                  |
| AH22   | HDMI_TX_D2N                              | 339.51                  |
| AG21   | HDMI_TX_D1P                              | 332.57                  |
| AH21   | HDMI_TX_D1N                              | 330.13                  |
| AG20   | HDMI_TX_D0P                              | 321.70                  |
| AH20   | HDMI_TX_D0N                              | 318.50                  |
| AH19   | HDMI_TX_CLKP                             | 322.21                  |
| AG19   | HDMI_TX_CLKN                             | 307.11                  |
| <b>Part R MIPI_DSI_TX0/LVDS_TX0</b>                        |  |                         |
| AH17   | MIPI_DSI_TX0_D0P/LVDS_TX0_D0P            | 297.41                  |
| AG17   | MIPI_DSI_TX0_D0N/LVDS_TX0_D0N            | 303.23                  |
| AH16   | MIPI_DSI_TX0_D1P/LVDS_TX0_D1P            | 303.94                  |
| AG16   | MIPI_DSI_TX0_D1N/LVDS_TX0_D1N            | 307.23                  |
| AH14   | MIPI_DSI_TX0_D2P/LVDS_TX0_D2P            | 322.34                  |
| AG14   | MIPI_DSI_TX0_D2N/LVDS_TX0_D2N            | 326.74                  |
| AH13   | MIPI_DSI_TX0_D3P/LVDS_TX0_D3P            | 349.25                  |
| AG13   | MIPI_DSI_TX0_D3N/LVDS_TX0_D3N            | 353.77                  |
| AH15   | MIPI_DSI_TX0_CLKP/LVDS_TX0_CLKP          | 310.29                  |
| AG15   | MIPI_DSI_TX0_CLKN/LVDS_TX0_CLKN          | 309.78                  |
| <b>Part S MIPI_DSI_TX1</b>                                 |  |                         |
| AD18   | MIPI_DSI_TX1_D0P                         | 271.94                  |
| AE18   | MIPI_DSI_TX1_D0N                         | 277.06                  |
| AD17   | MIPI_DSI_TX1_D1P                         | 227.71                  |
| AC17   | MIPI_DSI_TX1_D1N                         | 220.39                  |
| AD14   | MIPI_DSI_TX1_D2P                         | 196.62                  |
| AC14   | MIPI_DSI_TX1_D2N                         | 197.90                  |
| AD12   | MIPI_DSI_TX1_D3P                         | 226.07                  |
| AE12   | MIPI_DSI_TX1_D3N                         | 237.62                  |
| AD15   | MIPI_DSI_TX1_CLKP                        | 219.65                  |
| AE15   | MIPI_DSI_TX1_CLKN                        | 224.98                  |
| <b>Part T EDP TX</b>                                       |  |                         |
| J28  | EDP_TX_D0P                               | 238.75                  |
| K27  | EDP_TX_D0N                               | 250.22                  |
| K28  | EDP_TX_D1P                               | 220.35                  |
| L27  | EDP_TX_D1N                               | 228.57                  |
| L28  | EDP_TX_D2P                               | 225.33                  |
| M27  | EDP_TX_D2N                               | 234.58                  |
| M28  | EDP_TX_D3P                               | 229.23                  |
| N27  | EDP_TX_D3N                               | 234.21                  |
| L25  | EDP_TX_AUXP                              | 136.31                  |
| M25  | EDP_TX_AUXN                              | 138.73                  |
| <b>Part U USB3.0 OTG0/USB3.0 HOST1/SATA/QSGMII/PCIe2.0</b> |  |                         |
| P27  | USB3_OTG0_DP                             | 222.12                  |
| P28  | USB3_OTG0_DM                             | 221.43                  |
| P24  | USB3_HOST1_DP                            | 141.39                  |
| P25  | USB3_HOST1_DM                            | 145.46                  |
| T28  | USB3_OTG0_SSTXP/SATA0_TXP                | 269.61                  |
| T27  | USB3_OTG0_SSTXN/SATA0_TXN                | 276.86                  |
| R28  | USB3_OTG0_SSRXP/SATA0_RXP                | 219.73                  |
| R27  | USB3_OTG0_SSRXN/SATA0_RXN                | 205.59                  |
| V28  | USB3_HOST1_SSTXP/SATA1_TXP/QSGMII_TXP_M0 | 269.00                  |



| Pin Number                              | Pin Name                                 | Package Pin length(mil) |
|---|--|-------------------------|
| <b>Part F</b>                           |  |                         |
| V27                                     | USB3_HOST1_SSTXN/SATA1_TXN/QSGMII_TXN_M0 | 267.24                  |
| U28                                     | USB3_HOST1_SSRXP/SATA1_RXP/QSGMII_RXP_M0 | 236.20                  |
| U27                                     | USB3_HOST1_SSRXN/SATA1_RXN/QSGMII_RXN_M0 | 238.12                  |
| W27                                     | PCIE20_TXP/SATA2_TXP/QSGMII_TXP_M1       | 274.94                  |
| W28                                     | PCIE20_TXN/SATA2_TXN/QSGMII_TXN_M1       | 284.38                  |
| Y27                                     | PCIE20_RXP/SATA2_RXP/QSGMII_RXP_M1       | 277.64                  |
| Y28                                     | PCIE20_RXN/SATA2_RXN/QSGMII_RXN_M1       | 286.61                  |
| V24                                     | PCIE20_REFCLKP                           | 161.44                  |
| V25                                     | PCIE20_REFCLKN                           | 168.85                  |
| R24                                     | MULTI_PHY0_REFCLKP                       | 134.71                  |
| R25                                     | MULTI_PHY0_REFCLKN                       | 147.75                  |
| U25                                     | MULTI_PHY1_REFCLKP                       | 161.32                  |
| U24                                     | MULTI_PHY1_REFCLKN                       | 161.10                  |
| <b>Part V USB2.0 HOST2/USB2.0 HOST3</b> |  |                         |
| R2                                      | USB2_HOST2_DP                            | 258.03                  |
| R1                                      | USB2_HOST2_DM                            | 252.47                  |
| T2                                      | USB2_HOST3_DP                            | 258.76                  |
| T1                                      | USB2_HOST3_DM                            | 254.60                  |
| <b>Part W PCIe3.0</b>                   |  |                         |
| AA28                                    | PCIE30_TX0P                              | 276.89                  |
| AA27                                    | PCIE30_TX0N                              | 282.72                  |
| AB28                                    | PCIE30_TX1P                              | 300.14                  |
| AB27                                    | PCIE30_TX1N                              | 292.78                  |
| AC28                                    | PCIE30_RX0P                              | 296.60                  |
| AC27                                    | PCIE30_RX0N                              | 300.62                  |
| AD28                                    | PCIE30_RX1P                              | 336.44                  |
| AD27                                    | PCIE30_RX1N                              | 329.37                  |
| Y25                                     | PCIE30_REFCLKP_IN                        | 260.47                  |
| AA25                                    | PCIE30_REFCLKN_IN                        | 246.94                  |