Intel® 400 Series Chipset Family Platform Controller Hub

BGA Package Ballout

May 2020

Revision 001

Document Number: 620854-001

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
AR2	CL_CLK	11.1867	5.587	I/O	
AT5	CL_DATA	9.8557	5.9957	I/O	
AU4	CL_RST#	10.3129	6.2141	OD	
R6	CLKIN_XTAL	9.2954	-4.224	I	
C8	CLKOUT_CPUBCLK_N	8.4925	-10.3132	O	
B8	CLKOUT_CPUBCLK_P	8.4623	-10.8156	O	
C6	CLKOUT_CPUNSSC_N	9.0912	-10.3574	O	
D7	CLKOUT_CPUNSSC_P	8.9144	-9.8725	O	
B6	CLKOUT_CPUPCIBCLK_N	9.3967	-10.811	O	
A6	CLKOUT_CPUPCIBCLK_P	9.399	-11.3139	O	
Y3	CLKOUT_ITPXDP_N	10.8133	-1.9012	O	
Y4	CLKOUT_ITPXDP_P	10.3129	-1.8199	O	
AJ6	CLKOUT_PCIE_N0	9.397	2.5857	O	
AH9	CLKOUT_PCIE_N1	7.9187	2.2047	O	
AC9	CLKOUT_PCIE_N10	7.8501	-0.5791	O	
AE9	CLKOUT_PCIE_N11	7.8501	0.5791	O	
AC7	CLKOUT_PCIE_N12	8.6121	-0.5791	O	
AA1	CLKOUT_PCIE_N13	11.814	-1.6777	O	
T2	CLKOUT_PCIE_N14	11.3157	-4.0681	O	
V2	CLKOUT_PCIE_N15	11.1028	-2.7292	O	
AE14	CLKOUT_PCIE_N2	5.5641	0.5791	O	
AE6	CLKOUT_PCIE_N3	9.3741	0.5791	O	
AC2	CLKOUT_PCIE_N4	11.1028	-0.5321	O	
AB2	CLKOUT_PCIE_N5	11.1867	-1.1928	O	
W4	CLKOUT_PCIE_N6	10.098	-2.2743	O	
W7	CLKOUT_PCIE_N7	8.6578	-2.3952	O	
AC14	CLKOUT_PCIE_N8	5.5641	-0.5791	O	
U2	CLKOUT_PCIE_N9	11.1867	-3.3899	O	
AJ7	CLKOUT_PCIE_P0	8.6578	2.3952	O	
AH10	CLKOUT_PCIE_P1	7.1796	2.0142	O	
AC11	CLKOUT_PCIE_P10	7.0881	-0.5791	O	
AE11	CLKOUT_PCIE_P11	7.0881	0.5791	O	
AC6	CLKOUT_PCIE_P12	9.3741	-0.5791	O	
Y2	CLKOUT_PCIE_P13	11.3157	-1.871	O	
T1	CLKOUT_PCIE_P14	11.814	-3.8748	O	
V3	CLKOUT_PCIE_P15	10.5593	-2.8829	O	
AE15	CLKOUT_PCIE_P2	4.8021	0.5791	O	
AE7	CLKOUT_PCIE_P3	8.6121	0.5791	O	
AC3	CLKOUT_PCIE_P4	10.5593	-0.6922	O	
AB3	CLKOUT_PCIE_P5	10.686	-1.1928	O	
W3	CLKOUT_PCIE_P6	10.6182	-2.3663	O	
W6	CLKOUT_PCIE_P7	9.397	-2.5857	O	
AC15	CLKOUT_PCIE_P8	4.8021	-0.5791	O	
U3	CLKOUT_PCIE_P9	10.686	-3.3899	O	
BD4	CNV_WR_CLKN	10.4739	9.9832	I	
BE3	CNV_WR_CLKP	10.8603	10.3114	I	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
BB3	CNV_WR_D0N	11.3181	9.3147	I	
BB4	CNV_WR_D0P	10.8256	9.1266	I	
BA3	CNV_WR_D1N	10.8091	8.5943	I	
BA2	CNV_WR_D1P	11.3157	8.5258	I	
BC5	CNV_WT_CLKN	9.6342	9.254	O	
BB6	CNV_WT_CLKP	9.0881	8.7064	O	
BE6	CNV_WT_D0N	9.0912	10.3574	O	
BD7	CNV_WT_D0P	8.9144	9.8725	O	
BG6	CNV_WT_D1N	9.399	11.3139	O	
BF6	CNV_WT_D1P	9.3967	10.811	O	
BA1	CNV_WT_RCOMP	11.814	8.3198	O	
AM4	CPU_TRST#	10.3129	4.017	I/O	
AE3	CPUPWRGD	10.5593	0.6922	O	
BF47	DCPRTC	-10.7094	10.8778	I	
BG47	DCPRTC	-10.9593	11.3139	I	
K34	DMI0_RXN	-4.6558	-6.7186	I	
J35	DMI0_RXP	-4.892	-7.4516	I	
C33	DMI0_TXN	-4.0983	-10.3132	O	
B33	DMI0_TXP	-4.0681	-10.8156	O	
G33	DMI1_RXN	-3.843	-8.1349	I	
F34	DMI1_RXP	-4.224	-8.7953	I	
C32	DMI1_TXN	-3.3899	-10.1859	O	
B32	DMI1_TXP	-3.3899	-10.6865	O	
K32	DMI2_RXN	-3.2588	-6.6805	I	
J32	DMI2_RXP	-3.495	-7.4135	I	
C31	DMI2_TXN	-2.8892	-10.0592	O	
B31	DMI2_TXP	-2.7292	-10.6027	O	
G30	DMI3_RXN	-2.3952	-8.1577	I	
F30	DMI3_RXP	-2.5857	-8.8969	I	
C29	DMI3_TXN	-1.9012	-10.3132	O	
B29	DMI3_TXP	-1.871	-10.8156	O	
M29	RSVD	-2.0142	-5.9017	I	
K29	RSVD	-2.0142	-6.6794	I	
E28	RSVD	-1.6015	-9.3556	O	
D29	RSVD	-1.8199	-9.8128	O	
M26	RSVD	-0.5791	-5.826	I	
L26	RSVD	-0.5791	-6.588	I	
C27	RSVD	-1.1928	-10.1859	O	
B27	RSVD	-1.1928	-10.6865	O	
G26	RSVD	-0.5791	-8.112	I	
F26	RSVD	-0.5791	-8.874	I	
B26	RSVD	-0.5321	-10.6027	O	
C26	RSVD	-0.6922	-10.0592	O	
R24	RSVD	0.5791	-4.302	I	
P24	RSVD	0.5791	-5.064	I	
B25	RSVD	0	-10.8059	O	
A25	RSVD	0	-11.3139	O	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
BB46	DRAM_RESET#	-10.8256	9.1266	OD	
AW41	DSW_PWROK	-7.824	7.5773	I	
BF44	GPD0 / BATLOW#	-9.3967	10.811	I	
BG42	GPD1 / ACPRESENT	-8.2944	11.3139	I	
BC42	GPD10 / SLP_S5#	-8.1928	9.3556	I or O	Default type depends on soft strap. If SLP_S5# selected: O; else: I
BF41	GPD11 / LANPHYPC	-7.7841	10.6865	I or O	Default type depends on soft strap. If LANPHYPC selected: O; else: I
BG44	GPD2 / LAN_WAKE#	-9.399	11.3139	I	
BE46	GPD3 / PWRBTN#	-10.3909	10.4871	I	
BF42	GPD4 / SLP_S3#	-8.4623	10.8156	I or O	Default type depends on soft strap. If SLP_S3# selected: O; else: I
BE42	GPD5 / SLP_S4#	-8.4925	10.3132	I or O	Default type depends on soft strap. If SLP_S4# selected: O; else: I
BE40	GPD6 / SLP_A#	-7.2834	10.0592	I or O	Default type depends on soft strap. If SLP_A# selected: O; else: I
BE41	GPD7	-7.7841	10.1859	O	
BE45	GPD8 / SUSCLK	-9.9652	10.2122	O	
BD42	GPD9 / SLP_WLAN#	-8.4112	9.8128	I or O	Default type depends on soft strap; If SLP_WLAN# selected: O; else: I
AV32	GPP_A8 / CLKRUN#	-3.2588	6.6805	I/OD or I	LPC mode: I/OD; eSPI mode: I (client) or I/OD (Server/WS)
BE39	GPP_A0 / RCIN# / ESPI_ALERT1#	-6.7605	10.1181	I	
BB39	GPP_A1 / LAD0 / ESPI_IO0	-6.8656	8.7953	I/O	
BB34	GPP_A10 / CLKOUT_LPC1	-4.224	8.7953	I or O	LPC mode: O; eSPI mode: I
BE36	GPP_A11 / PME# / SD_VDD2_PWR_EN#	-5.587	10.1859	I/OD or I	LPC mode: I/OD; eSPI mode: I
BF36	GPP_A12 / BM_BUSY# / ISH_GP6 / SX_EXIT_HOLDOFF#	-5.587	10.6865	I	
BC37	GPP_A13 / SUSWARN# / SUSPWRDNACK	-5.9957	9.3556	I or O	LPC mode: O; eSPI mode: I
BF38	GPP_A14 / SUS_STAT# / ESPI_RESET#	-6.2652	10.8156	O	
BE35	GPP_A15 / SUSACK#	-5.0864	10.0592	I	
BE33	GPP_A16 / CLKOUT_48	-4.0983	10.3132	I or O	Default type depends on soft strap; If CLKOUT_48 selected: O; else: I
BD38	GPP_A17 / SD_VDD1_PWR_EN# / ISH_GP7	-6.2141	9.8128	I	
BF35	GPP_A18 / ISH_GP0	-4.9263	10.6027	I	
BD34	GPP_A19 / ISH_GP1	-4.4714	9.5979	I	
AW37	GPP_A2 / LAD1 / ESPI_IO1	-6.0096	7.4897	I	
BE34	GPP_A20 / ISH_GP2	-4.5634	10.1181	I	
BA33	GPP_A21 / ISH_GP3	-3.843	8.1349	I	
AW32	GPP_A22 / ISH_GP4	-3.495	7.4135	I	
AV34	GPP_A23 / ISH_GP5	-4.6558	6.7186	I	
AV37	GPP_A3 / LAD2 / ESPI_IO2	-5.748	6.7567	I/O	
BA38	GPP_A4 / LAD3 / ESPI_IO3	-6.4846	8.1349	I/O	
BE38	GPP_A5 / LFRAME# / ESPI_CS0#	-6.2954	10.3132	O	
AW35	GPP_A6 / SERIRQ / ESPI_CS1#	-4.892	7.4516	I/O, O, or I	LPC mode: I/O; eSPI mode: I (client) or O (Server/WS)
BA36	GPP_A7 / PIRQA# / ESPI_ALERT0#	-5.24	8.1349	I/OD or I	LPC mode: I/OD; eSPI mode: I
BB36	GPP_A9 / CLKOUT_LPC0 / ESPI_CLK	-5.621	8.7953	O	
BE29	GPP_B0 / GSPI0_CS1#	-1.9012	10.3132	I	

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BF33	GPP_B1 / GSPI1_CS1# / TIME_SYNC1	-4.0681	10.8156	I	
AN29	GPP_B10 / SRCCLKREQ5#	-2.0142	4.2893	I	
AP29	GPP_B11 / I2S_MCLK	-2.0142	5.064	I	
BC28	GPP_B12 / SLP_S0#	-1.6015	9.3556	O	
AV29	GPP_B13 / PLTRST#	-2.0142	6.6794	O	
AW29	GPP_B14 / SPKR	-2.2047	7.4186	O	
BB26	GPP_B15 / GSPI0_CS0#	-0.5791	8.874	I	
BF29	GPP_B16 / GSPI0_CLK	-1.871	10.8156	I	
BD29	GPP_B17 / GSPI0_MISO	-1.8199	9.8128	I	
BE30	GPP_B18 / GSPI0_MOSI	-2.3663	10.1181	O	
AW26	GPP_B19 / GSPI1_CS0#	-0.5791	7.35	I	
BE32	GPP_B2 / VRALERT#	-3.3899	10.1859	I	
AU26	GPP_B20 / GSPI1_CLK	-0.5791	6.588	I	
BD30	GPP_B21 / GSPI1_MISO	-2.2743	9.5979	I	
BA26	GPP_B22 / GSPI1_MOSI	-0.5791	8.112	O	
BD33	GPP_B23 / SML1ALERT# / PCHHOT#	-4.017	9.8128	O	
BF32	GPP_B3 / CPU_GP2	-3.3899	10.6865	I	
BC33	GPP_B4 / CPU_GP3	-3.7986	9.3556	I	
BF31	GPP_B5 / SRCCLKREQ0#	-2.7292	10.6027	I	
BE31	GPP_B6 / SRCCLKREQ1#	-2.8892	10.0592	I	
AR32	GPP_B7 / SRCCLKREQ2#	-3.2588	5.1565	I	
BB30	GPP_B8 / SRCCLKREQ3#	-2.5857	8.8969	I	
BA30	GPP_B9 / SRCCLKREQ4#	-2.3952	8.1577	I	
BE26	GPP_C0 / SMBCLK	-0.6922	10.0592	I/OD	
BF26	GPP_C1 / SMBDATA	-0.5321	10.6027	I/OD	
BA24	GPP_C10 / UART0A_RTS#	0.5791	8.112	I	
AP24	GPP_C11 / UART0A_CTS#	0.5791	5.064	I	
AU24	GPP_C12 / UART1_RXD / ISH_UART1_RXD	0.5791	6.588	I	
AP21	GPP_C13 / UART1_TXD / ISH_UART1_TXD	2.0142	5.064	I	
AW24	GPP_C14 / UART1_RTS# / ISH_UART1_RTS#	0.5791	7.35	I	
BD21	GPP_C15 / UART1_CTS# / ISH_UART1_CTS#	1.8199	9.8128	I	
BF23	GPP_C16 / I2C0_SDA	1.1928	10.6865	I	
BC22	GPP_C17 / I2C0_SCL	1.6015	9.3556	I	
BF21	GPP_C18 / I2C1_SDA	1.871	10.8156	I	
BE21	GPP_C19 / I2C1_SCL	1.9012	10.3132	I	
BE25	GPP_C2 / SMBALERT#	0	10.2979	I/OD or O	Default type depends on soft strap. If SMBALERT# selected: I/OD; else: O
BD20	GPP_C20 / UART2_RXD	2.2743	9.5979	I	
BE20	GPP_C21 / UART2_TXD	2.3663	10.1181	I	
AW21	GPP_C22 / UART2_RTS#	2.2047	7.4186	I	
AV21	GPP_C23 / UART2_CTS#	2.0142	6.6794	I	
BF25	GPP_C3 / SML0CLK	0	10.8059	I/OD	
BE24	GPP_C4 / SML0DATA	0.6922	10.0592	I/OD	
BF24	GPP_C5 / SML0ALERT#	0.5321	10.6027	O	
BF27	GPP_C6 / SML1CLK	-1.1928	10.6865	I	
BE27	GPP_C7 / SML1DATA	-1.1928	10.1859	I	
BE23	GPP_C8 / UART0A_RXD	1.1928	10.1859	I	

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BB24	GPP_C9 / UART0A_TXD	0.5791	8.874	I	
BF19	GPP_D0 / SPI1_CS# / SBK0 / BK0	2.7292	10.6027	I	
BE19	GPP_D1 / SPI1_CLK / SBK1 / BK1	2.8892	10.0592	I	
BB20	GPP_D10 / ISH_SPI_CLK / GSPI2_CLK	2.5857	8.8969	I	
BB16	GPP_D11 / ISH_SPI_MISO / GP_BSSB_CLK / GSPI2_MISO	4.224	8.7953	I	
AN18	GPP_D12 / ISH_SPI_MOSI / GP_BSSB_DI / GSPI2_MOSI	3.2588	4.3945	I	
BE17	GPP_D13 / ISH_UART0_RXD / I2C2_SDA	4.0983	10.3132	I	
BF17	GPP_D14 / ISH_UART0_TXD / I2C2_SCL	4.0681	10.8156	I	
AR18	GPP_D15 / ISH_UART0_RTS# / GSPI2_CS1# / CNV_WFEN	3.2588	5.1565	I	
BF14	GPP_D16 / ISH_UART0_CTS# / CNV_WCEN	5.587	10.6865	I	
AW15	GPP_D17 / DMIC_CLK1 / SNDW3_CLK	4.892	7.4516	I	
AV16	GPP_D18 / DMIC_DATA1 / SNDW3_DATA	4.6558	6.7186	I	
BD16	GPP_D19 / DMIC_CLK0 / SNDW4_CLK	4.4714	9.5979	I	
BE18	GPP_D2 / SPI1_MISO / SBK2 / BK2	3.3899	10.1859	I	
BF15	GPP_D20 / DMIC_DATA0 / SNDW4_DATA	4.9263	10.6027	I	
BD17	GPP_D21 / SPI1_IO2	4.017	9.8128	I	
BC17	GPP_D22 / SPI1_IO3	3.7986	9.3556	I	
BE14	GPP_D23 / ISH_I2C2_SCL / I2C3_SCL	5.587	10.1859	I	
BF18	GPP_D3 / SPI1_MOSI / SBK3 / BK3	3.3899	10.6865	I	
BE15	GPP_D4 / ISH_I2C2_SDA / I2C3_SDA / SBK4 / BK4	5.0864	10.0592	I	
BE16	GPP_D5 / I2S2_SFRM / CNV_RF_RESET#	4.5634	10.1181	O	
BA17	GPP_D6 / I2S2_TXD / MODEM_CLKREQ	3.843	8.1349	O	
AW18	GPP_D7 / I2S2_RXD	3.495	7.4135	I	
AV18	GPP_D8 / I2S2_SCLK	3.2588	6.6805	I	
BA20	GPP_D9 / ISH_SPI_CS# / GSPI2_CS0#	2.3952	8.1577	I	
AH41	GPP_E0 / SATAXPCIE0 / SATAGP0	-7.9187	2.2047	I	
AJ43	GPP_E1 / SATAXPCIE1 / SATAGP1	-8.6578	2.3952	I	
AL40	GPP_E10 / USB2_OC1#	-7.1806	3.2588	I	
AJ44	GPP_E11 / USB2_OC2#	-9.397	2.5857	I	
AL41	GPP_E12 / USB2_OC3#	-7.9136	3.495	I	
AK47	GPP_E2 / SATAXPCIE2 / SATAGP2	-10.5593	2.8829	I	
AL47	GPP_E3 / CPU_GP0	-10.686	3.3899	I	
AL48	GPP_E4 / SATA_DEVSLP0	-11.1867	3.3899	I	
AH35	GPP_E5 / SATA_DEVSLP1	-4.7894	2.0142	I	
AH40	GPP_E6 / SATA_DEVSLP2	-7.1796	2.0142	I	
AM45	GPP_E7 / CPU_GP1	-9.8557	3.7986	I	
AK48	GPP_E8 / SATALED#	-11.1028	2.7292	I	
AH36	GPP_E9 / USB2_OC0#	-5.5641	2.0142	I	
AN47	GPP_F0 / SATAXPCIE3 / SATAGP3	-10.6182	4.5634	I	
AM46	GPP_F1 / SATAXPCIE4 / SATAGP4	-10.3129	4.017	I	
AR42	GPP_F10 / SATA_SCLOCK	-8.508	5.4686	I	
AR48	GPP_F11 / SATA_SLOAD	-11.1867	5.587	I	
AU46	GPP_F12 / SATA_SDATAOUT1	-10.3129	6.2141	I	
AU47	GPP_F13 / SATA_SDATAOUT0	-10.8133	6.2954	I	
AP41	GPP_F14 / PS_ON#	-7.9136	4.9682	O	
AV47	GPP_F15 / USB2_OC4#	-10.6182	6.7605	I	
AR35	GPP_F16 / USB2_OC5#	-4.92	5.4432	I	

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AR37	GPP_F17 / USB2_OC6#	-5.682	5.4432	I	
AV43	GPP_F18 / USB2_OC7#	-8.5969	6.764	I	
AV44	GPP_F19 / eDP_VDDEN	-9.2954	7.0942	I	
AM43	GPP_F2 / SATAXPCIE5 / SATAGP5	-8.635	3.843	I	
AV46	GPP_F20 / eDP_BKLTEN	-10.098	6.6685	I	
AU48	GPP_F21 / eDP_BKLTCTL	-11.3157	6.2652	I	
AT49	GPP_F22 / DDPF_CTRLCLK	-11.814	6.0973	I	
AN40	GPP_F23 / DDPF_CTRLDATA	-7.1806	4.6558	O	
AM47	GPP_F3 / SATAXPCIE6 / SATAGP6	-10.8133	4.0983	I	
AM48	GPP_F4 / SATAXPCIE7 / SATAGP7	-11.3157	4.0681	I	
AP48	GPP_F5 / SATA_DEVSLP3	-11.1028	4.9263	I	
AR47	GPP_F6 / SATA_DEVSLP4	-10.686	5.587	I	
AN46	GPP_F7 / SATA_DEVSLP5	-10.098	4.4714	I	
AN37	GPP_F8 / SATA_DEVSLP6	-5.682	4.351	I	
AP47	GPP_F9 / SATA_DEVSLP7	-10.5593	5.08	I	
AW13	GPP_G0 / SD_CMD	6.0096	7.4897	I	
BE9	GPP_G1 / SD_DATA0	7.7841	10.1859	I	
BF8	GPP_G2 / SD_DATA1	8.4623	10.8156	I	
BF9	GPP_G3 / SD_DATA2	7.7841	10.6865	I	
BG8	GPP_G4 / SD_DATA3	8.2944	11.3139	I	
BE8	GPP_G5 / SD_CD#	8.4925	10.3132	I	
BD8	GPP_G6 / SD_CLK	8.4112	9.8128	I	
AV13	GPP_G7 / SD_WP	5.748	6.7567	I	
AE47	GPP_H0 / SRCCLKREQ6#	-10.5593	0.6922	I	
AC48	GPP_H1 / SRCCLKREQ7#	-11.1028	-0.5321	I	
AE48	GPP_H10 / SML2CLK	-11.1028	0.5321	I	
AD47	GPP_H11 / SML2DATA	-10.798	0	I	
AB47	GPP_H12 / SML2ALERT#	-10.686	-1.1928	O	
AF47	GPP_H13 / SML3CLK	-10.686	1.1928	I	
AD48	GPP_H14 / SML3DATA	-11.306	0	I	
AC47	GPP_H15 / SML3ALERT#	-10.5593	-0.6922	I	
AE43	GPP_H16 / SML4CLK	-8.6121	0.5791	I	
AJ46	GPP_H17 / SML4DATA	-10.098	2.2743	I	
AE44	GPP_H18 / SML4ALERT#	-9.3741	0.5791	I	
AH46	GPP_H19 / ISH_I2C0_SDA	-10.3129	1.8199	I	
AE41	GPP_H2 / SRCCLKREQ8#	-7.8501	0.5791	I	
AG45	GPP_H20 / ISH_I2C0_SCL	-9.8557	1.6015	I	
AH48	GPP_H21 / ISH_I2C1_SDA	-11.3157	1.871	I	
AH47	GPP_H22 / ISH_I2C1_SCL	-10.8133	1.9012	I	
AJ47	GPP_H23 / TIME_SYNC0	-10.6182	2.3663	I	
AF48	GPP_H3 / SRCCLKREQ9#	-11.1867	1.1928	I	
AC41	GPP_H4 / SRCCLKREQ10#	-7.8501	-0.5791	I	
AC39	GPP_H5 / SRCCLKREQ11#	-7.0881	-0.5791	I	
AE39	GPP_H6 / SRCCLKREQ12#	-7.0881	0.5791	I	
AB48	GPP_H7 / SRCCLKREQ13#	-11.1867	-1.1928	I	
AC44	GPP_H8 / SRCCLKREQ14#	-9.3741	-0.5791	I	
AC43	GPP_H9 / SRCCLKREQ15#	-8.6121	-0.5791	I	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
AT6	GPP_I0 / DDPB_HPD0 / DISP_MISC0	9.2954	5.6591	I	
AN10	GPP_I1 / DDPC_HPD1 / DISP_MISC1	7.1806	4.6558	I	
AR3	GPP_I10 / DDPD_CTRLDATA	10.686	5.587	I	
AP3	GPP_I11 / M2_SKT2_CFG0	10.5593	5.08	I	
AP2	GPP_I12 / M2_SKT2_CFG1	11.1028	4.9263	I	
AN4	GPP_I13 / M2_SKT2_CFG2	10.098	4.4714	I	
AM7	GPP_I14 / M2_SKT2_CFG3	8.635	3.843	I	
AP9	GPP_I2 / DDPD_HPD2 / DISP_MISC2	7.9136	4.9682	I	
AL15	GPP_I3 / DDPF_HPD3 / DISP_MISC3	4.8946	3.2588	I	
AN6	GPP_I4 / EDP_HPD / DISP_MISC4	9.2954	4.224	I	
AL13	GPP_I5 / DDPB_CTRLCLK	5.6566	3.2588	I	
AR8	GPP_I6 / DDPB_CTRLDATA	8.508	5.4686	O	
AN13	GPP_I7 / DDPC_CTRLCLK	5.682	4.351	I	
AL10	GPP_I8 / DDPC_CTRLDATA	7.1806	3.2588	O	
AL9	GPP_I9 / DDPD_CTRLCLK	7.9136	3.495	I	
AW3	GPP_J2	10.5593	7.2771	I	
AT10	GPP_J3	7.1806	5.7734	I	
AV4	GPP_J4 / CNV_BRI_DT / UART0B_RTS#	10.098	6.6685	O	
AV6	GPP_J0 / CNV_PA_BLANKING	9.2954	7.0942	I	
AY3	GPP_J1 / CPU_C10_GATE#	10.686	7.7841	O	
AV7	GPP_J10	8.5969	6.764	I	
AR13	GPP_J11 / A4WP_PRESENT	5.682	5.4432	I	
AY2	GPP_J5 / CNV_BRI_RSP / UART0B_RXD	11.1867	7.7841	I	
BA4	GPP_J6 / CNV_RGI_DT / UART0B_TXD	10.3042	8.4681	O	
AV3	GPP_J7 / CNV_RGI_RSP / UART0B_CTS#	10.6182	6.7605	I	
AW2	GPP_J8 / CNV_MFUART2_RXD	11.1028	7.1234	I	
AU9	GPP_J9 / CNV_MFUART2_TXD	7.9136	6.416	O	
L47	GPP_K0	-10.8133	-6.2954	I	
L46	GPP_K1	-10.3129	-6.2141	I	
V48	GPP_K10	-11.1028	-2.7292	OD	
W47	GPP_K11	-10.6182	-2.3663	OD	
Y46	GPP_K12 / GSXDOUT	-10.3129	-1.8199	OD	
Y48	GPP_K13 / GSXSLOAD	-11.3157	-1.871	I	
W46	GPP_K14 / GSXDIN	-10.098	-2.2743	I	
AA45	GPP_K15 / GSXSRESET#	-9.8557	-1.6015	I	
Y47	GPP_K16 / GSXCLK	-10.8133	-1.9012	I	
R47	GPP_K17 / ADR_COMPLETE	-10.6182	-4.5634	I	
T47	GPP_K18 / NMI#	-10.8133	-4.0983	I	
T48	GPP_K19 / SMI#	-11.3157	-4.0681	I	
U48	GPP_K2	-11.1867	-3.3899	I	
T46	GPP_K20	-10.3129	-4.017	O	
T45	GPP_K21	-9.8557	-3.7986	O	
L48	GPP_K22 / IMGCLKOUT0	-11.3157	-6.2652	I	
M45	GPP_K23 / IMGCLKOUT1	-9.8557	-5.9957	I	
U47	GPP_K3	-10.686	-3.3899	I	
N48	GPP_K4	-11.1867	-5.587	I	
N47	GPP_K5	-10.686	-5.587	I	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
P47	GPP_K6	-10.5593	-5.08	I	
R46	GPP_K7	-10.098	-4.4714	I	
P48	GPP_K8	-11.1028	-4.9263	I	
V47	GPP_K9	-10.5593	-2.8829	OD	
BD1	GPPJ_RCOMP_1P8	11.814	9.9586	I	
BE1	GPPJ_RCOMP_1P8	11.814	10.4592	I	
BE2	GPPJ_RCOMP_1P8	11.3731	10.1958	I	
BD11	HDA_BCLK / I2S0_SCLK	6.6685	9.5979	O	
BE10	HDA_RST# / I2S1_SCLK	7.2834	10.0592	O	
BE11	HDA_SDI0 / I2S0_RXD	6.7605	10.1181	I/O	
BF10	HDA_SDI1 / I2S1_RXD	7.1234	10.6027	I/O	
BF12	HDA_SDO / I2S0_TXD	6.2652	10.8156	O	
BG13	HDA_SYNC / I2S0_SFRM	6.0719	11.3139	O	
AM3	HDACPU_SCLK	10.8133	4.0983	O	
AN3	HDACPU_SDI	10.6182	4.5634	I	
AM2	HDACPU_SDO	11.3157	4.0681	O	
BD12	I2S1_SFRM / SNDW2_CLK	6.2141	9.8128	O	
BE12	I2S1_TXD / SNDW2_DATA	6.2954	10.3132	I/O	
BB44	INTRUDER#	-9.0881	8.7064	I	
AL3	ITP_PMODE	10.686	3.3899	I/O	
AJ3	PCH_JTAG_TCK	10.6182	2.3663	I/O	
AH2	PCH_JTAG_TDI	11.3157	1.871	I/OD	
AH3	PCH_JTAG_TDO	10.8133	1.9012	I/OD	
AJ4	PCH_JTAG_TMS	10.098	2.2743	I/OD	
AH4	PCH_JTAGX	10.3129	1.8199	I/O	
AY42	PCH_PWROK	-8.5329	7.8976	I	
B12	PCIE_RCOMPN	6.2652	-10.8156	I	
A13	PCIE_RCOMPP	6.0719	-11.3139	I	
G17	PCIE1_RXN / USB31_7_RXN	3.843	-8.1349	I	
F16	PCIE1_RXP / USB31_7_RXP	4.224	-8.7953	I	
A17	PCIE1_TXN / USB31_7_TXN	3.8748	-11.3139	O	
B17	PCIE1_TXP / USB31_7_TXP	4.0681	-10.8156	O	
K37	PCIE10_RXN	-5.748	-6.7567	I	
J37	PCIE10_RXP	-6.0096	-7.4897	I	
C35	PCIE10_TXN	-5.0864	-10.0592	O	
B35	PCIE10_TXP	-4.9263	-10.6027	O	
G38	PCIE11_RXN / SATA0A_RXN	-6.4846	-8.1349	I	
F39	PCIE11_RXP / SATA0A_RXP	-6.8656	-8.7953	I	
B36	PCIE11_TXN / SATA0A_TXN	-5.587	-10.6865	O	
C36	PCIE11_TXP / SATA0A_TXP	-5.587	-10.1859	O	
H42	PCIE12_RXN / SATA1A_RXN	-8.5329	-7.8976	I	
J41	PCIE12_RXP / SATA_1A_RXP	-7.824	-7.5773	I	
D38	PCIE12_TXN / SATA1A_TXN	-6.2141	-9.8128	O	
E37	PCIE12_TXP / SATA1A_TXP	-5.9957	-9.3556	O	
C45	PCIE13_RXN / SATA0B_RXN	-9.9651	-10.2122	I	
C46	PCIE13_RXP / SATA0B_RXP	-10.3909	-10.4871	I	
B38	PCIE13_TXN / SATA0B_TXN	-6.2652	-10.8156	O	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
C38	PCIE13_TXP / SATA0B_TXP	-6.2954	-10.3132	O	
D46	PCIE14_RXN / SATA1B_RXN	-10.4739	-9.9832	I	
C47	PCIE14_RXP / SATA1B_RXP	-10.8603	-10.3114	I	
C39	PCIE14_TXN / SATA1B_TXN	-6.7605	-10.1181	O	
D39	PCIE14_TXP / SATA1B_TXP	-6.6685	-9.5979	O	
F44	PCIE15_RXN / SATA2_RXN	-9.0881	-8.7064	I	
E45	PCIE15_RXP / SATA2_RXP	-9.6342	-9.254	I	
B40	PCIE15_TXN / SATA2_TXN	-7.1234	-10.6027	O	
C40	PCIE15_TXP / SATA2_TXP	-7.2834	-10.0592	O	
L41	PCIE16_RXN / SATA3_RXN	-7.9136	-6.416	I	
M40	PCIE16_RXP / SATA3_RXP	-7.1806	-5.7734	I	
B41	PCIE16_TXN / SATA3_TXN	-7.7841	-10.6865	O	
C41	PCIE16_TXP / SATA3_TXP	-7.7841	-10.1859	O	
K43	PCIE17_RXN / SATA4_RXN	-8.5969	-6.764	I	
K44	PCIE17_RXP / SATA4_RXP	-9.2954	-7.0942	I	
A42	PCIE17_TXN / SATA4_TXN	-8.2944	-11.3139	O	
B42	PCIE17_TXP / SATA4_TXP	-8.4623	-10.8156	O	
P41	PCIE18_RXN / SATA5_RXN	-7.9136	-4.9682	I	
R40	PCIE18_RXP / SATA5_RXP	-7.1806	-4.6558	I	
C42	PCIE18_TXN / SATA5_TXN	-8.4925	-10.3132	O	
D42	PCIE18_TXP / SATA5_TXP	-8.4112	-9.8128	O	
M44	PCIE19_RXN / SATA6_RXN	-9.2954	-5.6591	I	
N42	PCIE19_RXP / SATA6_RXP	-8.508	-5.4686	I	
C44	PCIE19_TXN / SATA6_TXN	-9.0912	-10.3574	O	
D43	PCIE19_TXP / SATA6_TXP	-8.9144	-9.8725	O	
R21	PCIE2_RXN / USB31_8_RXN	2.0142	-4.2893	I	
P21	PCIE2_RXP / USB31_8_RXP	2.0142	-5.064	I	
B18	PCIE2_TXN / USB31_8_TXN	3.3899	-10.6865	O	
C18	PCIE2_TXP / USB31_8_TXP	3.3899	-10.1859	O	
R35	PCIE20_RXN / SATA7_RXN	-4.92	-4.351	I	
R37	PCIE20_RXP / SATA7_RXP	-5.682	-4.351	I	
A44	PCIE20_TXN / SATA7_TXN	-9.399	-11.3139	O	
B44	PCIE20_TXP / SATA7_TXP	-9.3967	-10.811	O	
T43	PCIE21_RXN	-8.635	-3.843	I	
R44	PCIE21_RXP	-9.2954	-4.224	I	
G47	PCIE21_TXN	-10.8091	-8.5943	O	
F46	PCIE21_TXP	-10.8256	-9.1266	O	
U40	PCIE22_RXN	-7.1806	-3.2588	I	
U41	PCIE22_RXP	-7.9136	-3.495	I	
H47	PCIE22_TXN	-10.686	-7.7841	O	
H48	PCIE22_TXP	-11.1867	-7.7841	O	
W43	PCIE23_RXN	-8.6578	-2.3952	I	
W44	PCIE23_RXP	-9.397	-2.5857	I	
G49	PCIE23_TXN	-11.814	-8.3198	O	
G48	PCIE23_TXP	-11.3157	-8.5258	O	
Y40	PCIE24_RXN	-7.1796	-2.0142	I	
Y41	PCIE24_RXP	-7.9187	-2.2047	I	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
G46	PCIE24_TXN	-10.3042	-8.4681	O	
G45	PCIE24_TXP	-9.8557	-8.1928	O	
K18	PCIE3_RXN / USB31_9_RXN	3.2588	-6.6805	I	
J18	PCIE3_RXP / USB31_9_RXP	3.495	-7.4135	I	
B19	PCIE3_TXN / USB31_9_TXN	2.7292	-10.6027	O	
C19	PCIE3_TXP / USB31_9_TXP	2.8892	-10.0592	O	
N18	PCIE4_RXN / USB31_10_RXN	3.2588	-5.1565	I	
R18	PCIE4_RXP / USB31_10_RXP	3.2588	-4.3945	I	
D20	PCIE4_TXN / USB31_10_TXN	2.2743	-9.5979	O	
C20	PCIE4_TXP / USB31_10_TXP	2.3663	-10.1181	O	
F20	PCIE5_RXN	2.5857	-8.8969	I	
G20	PCIE5_RXP	2.3952	-8.1577	I	
B21	PCIE5_TXN	1.871	-10.8156	O	
A22	PCIE5_TXP	1.6777	-11.3139	O	
K21	PCIE6_RXN	2.0142	-6.6794	I	
J21	PCIE6_RXP	2.2047	-7.4186	I	
D21	PCIE6_TXN	1.8199	-9.8128	O	
C21	PCIE6_TXP	1.9012	-10.3132	O	
L24	PCIE7_RXN	0.5791	-6.588	I	
J24	PCIE7_RXP	0.5791	-7.35	I	
C23	PCIE7_TXN	1.1928	-10.1859	O	
B23	PCIE7_TXP	1.1928	-10.6865	O	
F24	PCIE8_RXN	0.5791	-8.874	I	
G24	PCIE8_RXP	0.5791	-8.112	I	
B24	PCIE8_TXN	0.5321	-10.6027	O	
C24	PCIE8_TXP	0.6922	-10.0592	O	
G36	PCIE9_RXN	-5.24	-8.1349	I	
F36	PCIE9_RXP	-5.621	-8.7953	I	
C34	PCIE9_TXN	-4.5634	-10.1181	O	
D34	PCIE9_TXP	-4.4714	-9.5979	O	
AF2	PECI	11.1867	1.1928	I/O	
AG5	PLTRST_CPU#	9.8557	1.6015	O	
AE2	PM_DOWN	11.1028	0.5321	I	
AF3	PM_SYNC	10.686	1.1928	O	
AM5	PRDY#	9.8557	3.7986	I/OD	
AL2	PREQ#	11.1867	3.3899	I/OD	
BA47	RSMRST#	-10.8091	8.5943	I	
BC1	RSVD	11.814	9.4579	N/A	
AH14	RSVD	5.5641	2.0142	N/A	
AH15	RSVD	4.7894	2.0142	N/A	
R32	RSVD	-3.2588	-4.3945	N/A	
N32	RSVD	-3.2588	-5.1565	N/A	
U35	RSVD	-4.8946	-3.2588	N/A	
U37	RSVD	-5.6566	-3.2588	N/A	
R15	RSVD	4.92	-4.351	N/A	
R13	RSVD	5.682	-4.351	N/A	
U13	RSVD	5.6566	-3.2588	N/A	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
Y35	RSVD	-4.7894	-2.0142	N/A	
Y36	RSVD	-5.5641	-2.0142	N/A	
Y15	RSVD	4.7894	-2.0142	N/A	
Y14	RSVD	5.5641	-2.0142	N/A	
BE47	RTCRST#	-10.8603	10.3114	I	
BA49	RTCX1	-11.814	8.3198	I	
BA48	RTCX2	-11.3157	8.5258	O	
BE5	SD_1P8_RCOMP	9.9651	10.2122	I	
BE4	SD_3P3_RCOMP	10.3909	10.4871	I	
BF40	SLP_LAN#	-7.1234	10.6027	O	
BD39	SLP_SUS#	-6.6685	9.5979	O	
AW47	SPI0_CLK	-10.5593	7.2771	O	
AY47	SPI0_CS0#	-10.686	7.7841	O	
AW48	SPI0_CS1#	-11.1028	7.1234	O	
AT40	SPI0_CS2#	-7.1806	5.7734	O	
AY48	SPI0_IO2	-11.1867	7.7841	I/O	
BA46	SPI0_IO3	-10.3042	8.4681	I/O	
BA45	SPI0_MISO	-9.8557	8.1928	I/O	
AU41	SPI0_MOSI	-7.9136	6.416	I/O	
BD46	SRTCRST#	-10.4739	9.9832	I	
AU3	SYS_PWROK	10.8133	6.2954	I	
AU2	SYS_RESET#	11.3157	6.2652	I	
AD3	THRMTRIP#	10.798	0	I	
AL35	TP	-4.8946	3.2588	N/A	
AN35	TP	-4.92	4.351	N/A	
AK2	TRIGGER_IN	11.1028	2.7292	I	
AK3	TRIGGER_OUT	10.5593	2.8829	O	
F4	USB2_COMP	10.8256	-9.1266	I	
G3	USB2_ID	10.8091	-8.5943	I	
F3	USB2_VBUSSENSE	11.3181	-9.3147	I	
J3	USB2N_1	10.5593	-7.2771	I/O	
H3	USB2N_10	10.686	-7.7841	I/O	
R10	USB2N_11	7.1806	-4.6558	I/O	
G1	USB2N_12	11.814	-8.3198	I/O	
N3	USB2N_13	10.686	-5.587	I/O	
E5	USB2N_14	9.6342	-9.254	I/O	
N13	USB2N_2	5.682	-5.4432	I/O	
K4	USB2N_3	10.098	-6.6685	I/O	
M10	USB2N_4	7.1806	-5.7734	I/O	
M1	USB2N_5	11.814	-6.0973	I/O	
K7	USB2N_6	8.5969	-6.764	I/O	
L4	USB2N_7	10.3129	-6.2141	I/O	
G4	USB2N_8	10.3042	-8.4681	I/O	
M6	USB2N_9	9.2954	-5.6591	I/O	
J2	USB2P_1	11.1028	-7.1234	I/O	
H2	USB2P_10	11.1867	-7.7841	I/O	
P9	USB2P_11	7.9136	-4.9682	I/O	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
G2	USB2P_12	11.3157	-8.5258	I/O	
N2	USB2P_13	11.1867	-5.587	I/O	
F6	USB2P_14	9.0881	-8.7064	I/O	
N15	USB2P_2	4.92	-5.4432	I/O	
K3	USB2P_3	10.6182	-6.7605	I/O	
L9	USB2P_4	7.9136	-6.416	I/O	
L2	USB2P_5	11.3157	-6.2652	I/O	
K6	USB2P_6	9.2954	-7.0942	I/O	
L3	USB2P_7	10.8133	-6.2954	I/O	
G5	USB2P_8	9.8557	-8.1928	I/O	
N8	USB2P_9	8.508	-5.4686	I/O	
D11	USB31_1_RXN	6.6685	-9.5979	I	
C11	USB31_1_RXP	6.7605	-10.1181	I	
F9	USB31_1_TXN	8.0241	-8.7744	O	
F7	USB31_1_TXP	8.5893	-9.0002	O	
B9	USB31_2_RXN	7.7841	-10.6865	I	
C9	USB31_2_RXP	7.7841	-10.1859	I	
C3	USB31_2_TXN	10.8603	-10.3114	O	
D4	USB31_2_TXP	10.4739	-9.9832	O	
B10	USB31_3_RXN	7.1234	-10.6027	I	
C10	USB31_3_RXP	7.2834	-10.0592	I	
F11	USB31_3_TXN	6.8656	-8.7953	O	
G12	USB31_3_TXP	6.4846	-8.1349	O	
K16	USB31_4_RXN	4.6558	-6.7186	I	
J15	USB31_4_RXP	4.892	-7.4516	I	
B14	USB31_4_TXN	5.587	-10.6865	O	
C14	USB31_4_TXP	5.587	-10.1859	O	
J13	USB31_5_RXN	6.0096	-7.4897	I	
K13	USB31_5_RXP	5.748	-6.7567	I	
C15	USB31_5_TXN	5.0864	-10.0592	O	
B15	USB31_5_TXP	4.9263	-10.6027	O	
G14	USB31_6_RXN	5.24	-8.1349	I	
F14	USB31_6_RXP	5.621	-8.7953	I	
C17	USB31_6_TXN	4.0983	-10.3132	O	
C16	USB31_6_TXP	4.5634	-10.1181	O	
V19	VCCA_BCLK_1P05	3.0988	-3.0988	I	
W19	VCCA_SRC_1P05	3.0988	-2.3241	I	
W20	VCCA_SRC_1P05	2.3241	-2.3241	I	
P2	VCCA_XTAL_1P05	11.1028	-4.9263	I	
P3	VCCA_XTAL_1P05	10.5593	-5.08	I	
C49	VCCAMPHYPLL_1P05	-11.814	-10.4592	I	
D49	VCCAMPHYPLL_1P05	-11.814	-9.9586	I	
E49	VCCAMPHYPLL_1P05	-11.814	-9.4579	I	
B1	VCCAPLL_1P05	11.814	-10.9598	I	
B2	VCCAPLL_1P05	11.3304	-10.8303	I	
B3	VCCAPLL_1P05	10.7094	-10.8778	I	
C1	VCCAPLL_1P05	11.814	-10.4592	I	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
C2	VCCAPLL_1P05	11.3731	-10.1958	I	
AJ22	VCCDPHY_1P24	1.5494	2.3241	I	
AJ23	VCCDPHY_1P24	0.7747	2.3241	I	
BG5	VCCDPHY_1P24	9.9581	11.3139	I	
BG45	VCCDSW_1P05	-9.9581	11.3139	I	
BG46	VCCDSW_1P05	-10.4587	11.3139	I	
BE48	VCCDSW_3P3	-11.3731	10.1958	I	
BE49	VCCDSW_3P3	-11.814	10.4592	I	
W22	VCCDUSB_1P05	1.5494	-2.3241	I	
W23	VCCDUSB_1P05	0.7747	-2.3241	I	
BB14	VCCHDA	5.621	8.7953	I	
K47	VCCMPHY_SENSE	-10.6182	-6.7605	I	
AN32	VCCPGPPA	-3.2588	4.3945	I	
AN26	VCCPGPPBC	-0.5791	4.302	I	
AP26	VCCPGPPBC	-0.5791	5.064	I	
AN24	VCCPGPPD	0.5791	4.302	I	
AE35	VCCPGPPEF	-4.8021	0.5791	I	
AE36	VCCPGPPEF	-5.5641	0.5791	I	
AN21	VCCPGPPG_3P3	2.0142	4.2893	I	
AC35	VCCPGPPHK	-4.8021	-0.5791	I	
AC36	VCCPGPPHK	-5.5641	-0.5791	I	
AF19	VCCPHVLDO_1P8	3.0988	0.7747	I	
AF20	VCCPHVLDO_1P8	2.3241	0.7747	I	
D1	VCCPRIM_1P05	11.814	-9.9586	I	
E1	VCCPRIM_1P05	11.814	-9.4579	I	
AF31	VCCPRIM_1P05	-3.0988	0.7747	I	
AG31	VCCPRIM_1P05	-3.0988	1.5494	I	
AK22	VCCDPHY_1P24	1.5494	3.0988	I	
AK23	VCCDPHY_1P24	0.7747	3.0988	I	
U26	VCCPRIM_1P05	-0.5791	-3.5908	I	
U29	VCCPRIM_1P05	-2.0142	-3.5781	I	
V25	VCCPRIM_1P05	0	-3.0988	I	
V27	VCCPRIM_1P05	-0.7747	-3.0988	I	
V28	VCCPRIM_1P05	-1.5494	-3.0988	I	
V30	VCCPRIM_1P05	-2.3241	-3.0988	I	
V31	VCCPRIM_1P05	-3.0988	-3.0988	I	
AA22	VCCPRIM_1P05	1.5494	-1.5494	I	
AA23	VCCPRIM_1P05	0.7747	-1.5494	I	
AB20	VCCPRIM_1P05	2.3241	-0.7747	I	
AB22	VCCPRIM_1P05	1.5494	-0.7747	I	
AB23	VCCPRIM_1P05	0.7747	-0.7747	I	
AB27	VCCPRIM_1P05	-0.7747	-0.7747	I	
AB28	VCCPRIM_1P05	-1.5494	-0.7747	I	
AB30	VCCPRIM_1P05	-2.3241	-0.7747	I	
AD20	VCCPRIM_1P05	2.3241	0	I	
AD23	VCCPRIM_1P05	0.7747	0	I	
AD27	VCCPRIM_1P05	-0.7747	0	I	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
AD28	VCCPRIM_1P05	-1.5494	0	I	
AD30	VCCPRIM_1P05	-2.3241	0	I	
AF23	VCCPRIM_1P05	0.7747	0.7747	I	
AF27	VCCPRIM_1P05	-0.7747	0.7747	I	
AF30	VCCPRIM_1P05	-2.3241	0.7747	I	
AE17	VCCPRIM_1P05	4.0401	0.5791	I	
AD31	VCCPRIM_1P05	-3.0988	0	I	
AG19	VCCPRIM_1P8	3.0988	1.5494	I	
AG20	VCCPRIM_1P8	2.3241	1.5494	I	
AN15	VCCPRIM_1P8	4.92	4.351	I	
AR15	VCCPRIM_1P8	4.92	5.4432	I	
BB11	VCCPRIM_1P8	6.8656	8.7953	I	
AT44	VCCPRIM_3P3	-9.2954	5.6591	I	
AW9	VCCPRIM_3P3	7.824	7.5773	I	
AY8	VCCPRIM_3P3	8.5329	7.8976	I	
BB7	VCCPRIM_3P3	8.5893	9.0002	I	
V23	VCCPRIM_3P3	0.7747	-3.0988	I	
W31	VCCPRIM_MPHY_1P05	-3.0988	-2.3241	I	
BC49	VCCRTC	-11.814	9.4579	I	
BD49	VCCRTC	-11.814	9.9586	I	
AN44	VCCSPI	-9.2954	4.224	I	
AL37	VSS	-5.6566	3.2588	GND	
A2	VSS	11.46	-11.3139	GND	
A28	VSS	-1.6777	-11.3139	GND	
A3	VSS	10.9593	-11.3139	GND	
A33	VSS	-3.8748	-11.3139	GND	
A37	VSS	-6.0719	-11.3139	GND	
A4	VSS	10.4587	-11.3139	GND	
A45	VSS	-9.9581	-11.3139	GND	
A46	VSS	-10.4587	-11.3139	GND	
A47	VSS	-10.9593	-11.3139	GND	
A48	VSS	-11.46	-11.3139	GND	
A5	VSS	9.9581	-11.3139	GND	
A8	VSS	8.2944	-11.3139	GND	
AA19	VSS	3.0988	-1.5494	GND	
AA20	VSS	2.3241	-1.5494	GND	
AA25	VSS	0	-1.5494	GND	
AA27	VSS	-0.7747	-1.5494	GND	
AA28	VSS	-1.5494	-1.5494	GND	
AA30	VSS	-2.3241	-1.5494	GND	
AA31	VSS	-3.0988	-1.5494	GND	
AA49	VSS	-11.814	-1.6777	GND	
AA5	VSS	9.8557	-1.6015	GND	
AB19	VSS	3.0988	-0.7747	GND	
AB25	VSS	0	-0.7747	GND	
AB31	VSS	-3.0988	-0.7747	GND	
AC12	VSS	6.3261	-0.5791	GND	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
AC17	VSS	4.0401	-0.5791	GND	
AC33	VSS	-4.0401	-0.5791	GND	
AC38	VSS	-6.3261	-0.5791	GND	
AC4	VSS	10.0599	-0.5791	GND	
AC46	VSS	-10.0599	-0.5791	GND	
AD1	VSS	11.814	0	GND	
AD19	VSS	3.0988	0	GND	
AD2	VSS	11.306	0	GND	
AD22	VSS	1.5494	0	GND	
AD25	VSS	0	0	GND	
AD49	VSS	-11.814	0	GND	
AE12	VSS	6.3261	0.5791	GND	
AE33	VSS	-4.0401	0.5791	GND	
AE38	VSS	-6.3261	0.5791	GND	
AE4	VSS	10.0599	0.5791	GND	
AE46	VSS	-10.0599	0.5791	GND	
AF22	VSS	1.5494	0.7747	GND	
AF25	VSS	0	0.7747	GND	
AF28	VSS	-1.5494	0.7747	GND	
AG1	VSS	11.814	1.6777	GND	
AG22	VSS	1.5494	1.5494	GND	
AG23	VSS	0.7747	1.5494	GND	
AG25	VSS	0	1.5494	GND	
AG27	VSS	-0.7747	1.5494	GND	
AG28	VSS	-1.5494	1.5494	GND	
AG30	VSS	-2.3241	1.5494	GND	
AG49	VSS	-11.814	1.6777	GND	
AH12	VSS	6.4018	2.0142	GND	
AH17	VSS	4.0274	2.0142	GND	
AH33	VSS	-4.0274	2.0142	GND	
AH38	VSS	-6.4018	2.0142	GND	
AJ19	VSS	3.0988	2.3241	GND	
AJ20	VSS	2.3241	2.3241	GND	
AJ25	VSS	0	2.3241	GND	
AJ27	VSS	-0.7747	2.3241	GND	
AJ28	VSS	-1.5494	2.3241	GND	
AJ30	VSS	-2.3241	2.3241	GND	
AJ31	VSS	-3.0988	2.3241	GND	
AK19	VSS	3.0988	3.0988	GND	
AK20	VSS	2.3241	3.0988	GND	
AK25	VSS	0	3.0988	GND	
AK27	VSS	-0.7747	3.0988	GND	
AK28	VSS	-1.5494	3.0988	GND	
AK30	VSS	-2.3241	3.0988	GND	
AK31	VSS	-3.0988	3.0988	GND	
AK4	VSS	10.0599	2.7762	GND	
AK46	VSS	-10.0599	2.7762	GND	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
AL12	VSS	6.4186	3.2588	GND	
AL17	VSS	4.1326	3.2588	GND	
AL21	VSS	2.0142	3.5781	GND	
AL24	VSS	0.5791	3.5908	GND	
AL26	VSS	-0.5791	3.5908	GND	
AL29	VSS	-2.0142	3.5781	GND	
AL33	VSS	-4.1326	3.2588	GND	
AL38	VSS	-6.4186	3.2588	GND	
AM1	VSS	11.814	3.8748	GND	
AM18	VSS	3.2588	3.6833	GND	
AM32	VSS	-3.2588	3.6833	GND	
AM49	VSS	-11.814	3.8748	GND	
AN12	VSS	6.444	4.351	GND	
AN16	VSS	4.351	4.3945	GND	
AN34	VSS	-4.351	4.3945	GND	
AN38	VSS	-6.444	4.351	GND	
AP4	VSS	10.0599	4.9733	GND	
AP46	VSS	-10.0599	4.9733	GND	
AR12	VSS	6.444	5.4432	GND	
AR16	VSS	4.351	5.1819	GND	
AR34	VSS	-4.351	5.1819	GND	
AR38	VSS	-6.444	5.4432	GND	
AT1	VSS	11.814	6.0973	GND	
AT16	VSS	4.351	5.9439	GND	
AT18	VSS	3.2588	5.9185	GND	
AT21	VSS	2.0142	5.9017	GND	
AT24	VSS	0.5791	5.826	GND	
AT26	VSS	-0.5791	5.826	GND	
AT29	VSS	-2.0142	5.9017	GND	
AT32	VSS	-3.2588	5.9185	GND	
AT34	VSS	-4.351	5.9439	GND	
AT45	VSS	-9.8557	5.9957	GND	
AV11	VSS	7.0787	6.9751	GND	
AV39	VSS	-7.0787	6.9751	GND	
AW10	VSS	7.2619	7.5087	GND	
AW4	VSS	10.0599	7.1704	GND	
AW40	VSS	-7.2619	7.5087	GND	
AW46	VSS	-10.0599	7.1704	GND	
B47	VSS	-10.7094	-10.8778	GND	
B48	VSS	-11.3304	-10.8303	GND	
B49	VSS	-11.814	-10.9598	GND	
BA12	VSS	6.4846	8.1349	GND	
BA14	VSS	5.24	8.1349	GND	
BA44	VSS	-9.1298	8.2027	GND	
BA5	VSS	9.8557	8.1928	GND	
BA6	VSS	9.1298	8.2027	GND	
BB41	VSS	-8.0241	8.7744	GND	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
BB43	VSS	-8.5893	9.0002	GND	
BB9	VSS	8.0241	8.7744	GND	
BC10	VSS	7.1704	9.5598	GND	
BC13	VSS	5.9957	9.3556	GND	
BC15	VSS	4.9733	9.5598	GND	
BC19	VSS	2.7762	9.5598	GND	
BC24	VSS	0.5791	9.5598	GND	
BC26	VSS	-0.5791	9.5598	GND	
BC31	VSS	-2.7762	9.5598	GND	
BC35	VSS	-4.9733	9.5598	GND	
BC40	VSS	-7.1704	9.5598	GND	
BC45	VSS	-9.6342	9.254	GND	
BC8	VSS	8.1928	9.3556	GND	
BD43	VSS	-8.9144	9.8725	GND	
BE44	VSS	-9.0912	10.3574	GND	
BF1	VSS	11.814	10.9598	GND	
BF2	VSS	11.3304	10.8303	GND	
BF3	VSS	10.7094	10.8778	GND	
BF48	VSS	-11.3304	10.8303	GND	
BF49	VSS	-11.814	10.9598	GND	
BG17	VSS	3.8748	11.3139	GND	
BG2	VSS	11.46	11.3139	GND	
BG22	VSS	1.6777	11.3139	GND	
BG25	VSS	0	11.3139	GND	
BG28	VSS	-1.6777	11.3139	GND	
BG3	VSS	10.9593	11.3139	GND	
BG33	VSS	-3.8748	11.3139	GND	
BG37	VSS	-6.0719	11.3139	GND	
BG4	VSS	10.4587	11.3139	GND	
BG48	VSS	-11.46	11.3139	GND	
C12	VSS	6.2954	-10.3132	GND	
C25	VSS	0	-10.2979	GND	
C30	VSS	-2.3663	-10.1181	GND	
C4	VSS	10.3909	-10.4871	GND	
C48	VSS	-11.3731	-10.1958	GND	
C5	VSS	9.965	-10.2122	GND	
D12	VSS	6.2141	-9.8128	GND	
D16	VSS	4.4714	-9.5979	GND	
D17	VSS	4.017	-9.8128	GND	
D30	VSS	-2.2743	-9.5979	GND	
D33	VSS	-4.017	-9.8128	GND	
D8	VSS	8.4112	-9.8128	GND	
E10	VSS	7.1704	-9.5598	GND	
E13	VSS	5.9957	-9.3556	GND	
E15	VSS	4.9733	-9.5598	GND	
E17	VSS	3.7986	-9.3556	GND	
E19	VSS	2.7762	-9.5598	GND	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
E22	VSS	1.6015	-9.3556	GND	
E24	VSS	0.5791	-9.5598	GND	
E26	VSS	-0.5791	-9.5598	GND	
E31	VSS	-2.7762	-9.5598	GND	
E33	VSS	-3.7986	-9.3556	GND	
E35	VSS	-4.9733	-9.5598	GND	
E40	VSS	-7.1704	-9.5598	GND	
E42	VSS	-8.1928	-9.3556	GND	
E8	VSS	8.1928	-9.3556	GND	
F41	VSS	-8.0241	-8.7744	GND	
F43	VSS	-8.5893	-9.0002	GND	
F47	VSS	-11.3181	-9.3147	GND	
G44	VSS	-9.1298	-8.2027	GND	
G6	VSS	9.1298	-8.2027	GND	
H8	VSS	8.5329	-7.8976	GND	
J10	VSS	7.2619	-7.5087	GND	
J26	VSS	-0.5791	-7.35	GND	
J29	VSS	-2.2047	-7.4186	GND	
J4	VSS	10.0599	-7.1704	GND	
J40	VSS	-7.2619	-7.5087	GND	
J46	VSS	-10.0599	-7.1704	GND	
J47	VSS	-10.5593	-7.2771	GND	
J48	VSS	-11.1028	-7.1234	GND	
J9	VSS	7.824	-7.5773	GND	
K11	VSS	7.0787	-6.9751	GND	
K39	VSS	-7.0787	-6.9751	GND	
M16	VSS	4.351	-5.9439	GND	
M18	VSS	3.2588	-5.9185	GND	
M21	VSS	2.0142	-5.9017	GND	
M24	VSS	0.5791	-5.826	GND	
M32	VSS	-3.2588	-5.9185	GND	
M34	VSS	-4.351	-5.9439	GND	
M49	VSS	-11.814	-6.0973	GND	
M5	VSS	9.8557	-5.9957	GND	
N12	VSS	6.444	-5.4432	GND	
N16	VSS	4.351	-5.1819	GND	
N34	VSS	-4.351	-5.1819	GND	
N35	VSS	-4.92	-5.4432	GND	
N37	VSS	-5.682	-5.4432	GND	
N38	VSS	-6.444	-5.4432	GND	
P26	VSS	-0.5791	-5.064	GND	
P29	VSS	-2.0142	-5.064	GND	
P4	VSS	10.0599	-4.9733	GND	
P46	VSS	-10.0599	-4.9733	GND	
R12	VSS	6.444	-4.351	GND	
R16	VSS	4.351	-4.3945	GND	
R26	VSS	-0.5791	-4.302	GND	

Ball #	Ball Name	Xcoord (mm)	Ycoord (mm)	Default Buffer Type	Comments
R29	VSS	-2.0142	-4.2893	GND	
R3	VSS	10.6182	-4.5634	GND	
R34	VSS	-4.351	-4.3945	GND	
R38	VSS	-6.444	-4.351	GND	
R4	VSS	10.098	-4.4714	GND	
T17	VSS	3.8109	-3.6833	GND	
T18	VSS	3.2588	-3.6833	GND	
T32	VSS	-3.2588	-3.6833	GND	
T4	VSS	10.3129	-4.017	GND	
T49	VSS	-11.814	-3.8748	GND	
T5	VSS	9.8557	-3.7986	GND	
T7	VSS	8.635	-3.843	GND	
U12	VSS	6.4186	-3.2588	GND	
U15	VSS	4.8946	-3.2588	GND	
U17	VSS	4.1326	-3.2588	GND	
U21	VSS	2.0142	-3.5781	GND	
U24	VSS	0.5791	-3.5908	GND	
U33	VSS	-4.1326	-3.2588	GND	
U38	VSS	-6.4186	-3.2588	GND	
V20	VSS	2.3241	-3.0988	GND	
V22	VSS	1.5494	-3.0988	GND	
V4	VSS	10.0599	-2.7762	GND	
V46	VSS	-10.0599	-2.7762	GND	
W25	VSS	0	-2.3241	GND	
W27	VSS	-0.7747	-2.3241	GND	
W28	VSS	-1.5494	-2.3241	GND	
W30	VSS	-2.3241	-2.3241	GND	
Y10	VSS	7.1796	-2.0142	GND	
Y12	VSS	6.4018	-2.0142	GND	
Y17	VSS	4.0274	-2.0142	GND	
Y33	VSS	-4.0274	-2.0142	GND	
Y38	VSS	-6.4018	-2.0142	GND	
Y9	VSS	7.9187	-2.2047	GND	
K46	VSSMPHY_SENSE	-10.098	-6.6685	I	
BB47	WAKE#	-11.3181	9.3147	I/OD	
T3	XCLK_BIASREF	10.8133	-4.0983	I/O	
U10	XTAL_IN	7.1806	-3.2588	I	
U9	XTAL_OUT	7.9136	-3.495	O	

	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
BG	---	VSS	DCF			GPI	---		---	---	---	---	VSS	---	---	---	VSS	---	---	---	---	VSS	---	---	VSS	---	---	VSS	---	---	---	---	VSS	---	---	---		---	---	---	---	---	CN\	VC(	VSS	VSS	VSS	---	BG
BF	VSS	VSS	DCF	---	---	GPI	---	GPI	GPI	SLP	---	GPF	---	GPF	GPF	---	GPF	GPF	GPF	---	GPF	---	GPF	GPF	GPF	GPF	GPF	---	GPF	---	GPF	GPF	GPF	---	GPF	GPF	---	HDA	---	HDA	GPF	GPF	---	CN\	---	---	VSS	VSS	VSS	BF
BE	VC(	VC(	RTC	GPI	GPI	VSS	---	GPI	GPI	GPI	GPF	GPF	---	GPF	GPF	GPF	GPF	GPF	GPF	GPF	GPF	---	GPF	GPF	GPF	GPF	GPF	---	GPF	GPF	GPF	GPF	GPF	GPF	GPF	GPF	---	I2S'	HDA	HDA	GPF	GPF	---	CN\	SD_	SD_	CN\	GPF	GPF	BE
BD	VC(	---	---	SRT	---	---	VSS	GPI	---	---	SLP	GPF	---	---	---	GPF	GPF	---	---	GPF	GPF	---	---	---	---	---	---	---	GPF	GPF	---	---	GPF	GPF	---	---	---	I2S'	HDA	---	---	GPF	CN\	---	---	CN\	---	---	GPF	BD
BC	VC(	---	---	---	VSS	---	---	GPI	---	VSS	---	---	GPF	---	VSS	---	GPF	---	VSS	---	---	GPF	---	VSS	---	VSS	---	GPF	---	---	VSS	---	GPF	---	VSS	---	VSS	---	---	VSS	---	VSS	---	---	CN\	---	---	---	RSV	BC
BB	---	---	WA	DR/	---	INT	VSS	---	VSS	---	GPF	---	---	GPF	---	GPF	---	---	---	GPF	---	---	---	GPF	---	GPF	---	---	GPF	---	---	---	GPF	---	VC(	---	---	VC(	---	VSS	---	VC(	CN\	---	CN\	CN\	---	---	BB
BA	RTCX1	RTC	RSN	SPI	SPI	VSS	---	---	---	---	---	GPF	---	GPF	---	---	GPF	---	---	GPF	---	---	---	GPF	---	GPF	---	---	GPF	---	---	---	GPF	---	VSS	---	VSS	---	---	---	---	---	---	VSS	VSS	GPF	CN\	CN\		BA
AY	---	SPI	SPI	---	---	---	---	PCH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	VC(	---	---	---	---	GPF	GPF	---	AY
AW	---	SPI	SPI	VSS	---	---	---	---	DSV	VSS	---	---	GPF	---	GPF	---	---	GPF	---	---	GPF	---	---	GPF	---	GPF	---	---	GPF	---	---	GPF	---	GPF	---	GPF	---	---	---	VSS	VC(	---	---	---	VSS	GPF	GPF	---	AW
AV	---	---	GPF	GPF	---	GPF	GPF	---	---	---	VSS	---	GPF	---	---	GPF	---	GPF	---	---	GPF	---	---	---	---	---	---	---	GPF	---	---	GPF	---	GPF	---	GPF	---	---	VSS	---	---	---	GPF	GPF	---	GPF	GPF	---	AV
AU	---	GPF	GPF	GPF	---	---	---	---	SPI	---	---	---	---	---	---	---	---	---	---	---	---	---	---	GPF	---	GPF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	GPF	---	---	---	---	CL_	SYS	SYS	---	AU
AT		---	---	---	VSS	VC(	---	---	---	SPI	---	---	---	---	---	---	VSS	---	VSS	---	---	VSS	---	---	VSS	---	---	VSS	---	---	VSS	---	---	VSS	---	---	---	---	---	GPF	---	---	---	---	GPF	CL_	---	---	---	VSS	AT
AR	---	GPF	GPF	---	---	---	---	GPF	---	---	---	VSS	GPF	---	GPF	VSS	---	GPF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	GPF	---	VSS	VC(	---	---	---	---	---	---	---	---	---	GPF	CL_	---	---	AR
AP	---	GPF	GPF	VSS	---	---	---	---	GPF	---	---	---	---	---	---	---	---	---	---	---	GPF	---	---	VC(	---	GPF	---	---	GPF	---	---	---	---	---	---	---	---	---	---	---	---	GPF	---	---	---	VSS	GPF	GPF	---	AP
AN	---	---	GPF	GPF	---	VC(	---	---	---	GPF	---	VSS	GPF	---	TP	VSS	---	VC(	---	---	GPF	---	---	VC(	---	VC(	---	---	VC(	---	---	---	GPF	---	VSS	VC(	---	GPF	VSS	---	GPF	---	---	GPF	---	HDA	---	---	AN
AM	VSS	GPF	GPF	GPF	GPF	---	GPF	---	---	---	---	VSS	VSS	---	---	---	VSS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	VSS	---	---	---	---	---	---	---	---	---	---	GPF	---	PRI	CPU	HDA	HDA	VSS	AM
AL	---	GPF	GPF	---	---	---	---	---	GPF	GPF	---	VSS	VSS	---	TP	---	VSS				VSS			VSS		VSS			VSS					VSS	---	GPF	---	GPF	VSS	---		GPF	---	---	---	---	ITP_	PRE	---	AL
AK	---	GPF	GPF	VSS	---	---	---	---	---	---	---	---	---	---	---	---	---		VSS	VSS	---	VSS	VSS	---	VSS	---		---	VSS	VSS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	VSS	TRI	TRI	---	AK
AJ	---	---	GPF	GPF	---	GPF	GPF	---	---	---	---	---	---	---	---	---	---		VSS	VSS	---	VSS	VSS	---	VSS	---		---	VSS	VSS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	CLK	CLK	---	PCH	PCH	---	---	AJ
AH	---	GPF	GPF	GPF	---	---	---	---	GPF	GPF	---	VSS	---	GPF	GPF	---	VSS			---	---	---	---	---	---	---	---	---	---	---	---	---	VSS	---	RSV	RSV	---	VSS	---	CLK	CLK	---	---	---	---	PCH	PCH	PCH	---	AH
AG	VSS	---	---	---	GPF	---	---	---	---	---	---	---	---	---	---	---	---	---	VC(	VSS	---	VSS	VSS	---	VSS	---	VSS	VSS	---	VC(	VC(	---	---	---	---	---	---	---	---	---	---	---	---	---	---	PLT	---	---	---	VSS	AG
AF	---	GPF	GPF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	VC(	VC(	---	VSS	VC(	---	VSS	---	VC(	VSS	---	VC(	VC(	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	PM_	PEC	---	AF
AE	---	GPF	GPF	VSS	---	GPF	GPF	---	GPF	---	GPF	VSS	---	VC(	VC(	---	VSS			---	---	---	---	---	---	---	---	---	---	---	---	---	---	CLK	CLK	---	VSS	CLK	---	CLK	---	CLK	CLK	---	VSS	CPU	PM_	---	AE
AD	VSS	GPF	GPF	---	---	---	---	---	---	---	---	---	---	---	---	---	---		VC(	VC(	---		VC(	---	VSS	---	VC(	VSS	---	VC(	VSS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	THR	VSS	VSS	AD
AC	---	GPF	GPF	VSS	---	GPF	GPF	---	GPF	---	GPF	VSS	---	VC(	VC(	---	VSS			---	---	---	---	---	---	---	---	---	---	---	---	---	VSS	---	CLK	CLK	---	VSS	CLK	---	CLK	---	CLK	CLK	---	VSS	CLK	CLK	---	AC
AB	---	GPF	GPF	---	---	---	---	---	---	---	---	---	---	---	---	---	---		VSS	VC(	---		VC(	---	VSS	---	VC(	VC(	---	VC(	VSS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	CLK	CLK	---	AB
AA	VSS	---	---	---	GPF	---	---	---	---	---	---	---	---	---	---	---	---		VSS	VSS	---		VSS	---	VSS	---	VC(	VC(	---	VSS	VSS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	VSS	---	---	---		AA
Y	---	GPF	GPF	GPF	---	---	---	---	PCI	PCI	---	VSS	---	RS\	RSV	---	VSS			---	---	---	---	---	---	---	---	---	---	---	---	---	VSS	---	RS\	RS\	---	VSS	---	VSS	VSS	---	---	---	---	CLK	CLK	CLK	---	Y
W	---	---	GPF	GPF	---	PCI	PCI	---	---	---	---	---	---	---	---	---	---		VC(	VSS	---	VSS	VSS	---	VSS	---	VC(	VC(	---	VC(	VC(	---	---	---	---	---	---	---	---	---	---	---	---	---	---	CLK	CLK	---			---	---	W
V	---	GPF	GPF	VSS	---	---	---	---	---	---	---	---	---	---	---	---	---		VC(	VC(	---	VC(	VC(	---		---	VC(	VSS	---	VSS	VC(	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	VSS	CLK	CLK	---	V
U	---	GPF	GPF	---	---	---	---	---	PCI	PCI	---	VSS	RSVD	---	RSVD	---	VSS																VSS	---	VSS	---	RSVD	VSS	---	XTAL_IN	XTA	---	---	---	---	---	---	CLK	CLK	---	U
T	VSS	GPF	GPF	GPF	GPF	---	PCI	---	---	---	---	---	---	---	---	---	---	VSS	---	---	---	---	---	---	---	---	---	---	---	---	---	VSS	VSS	---	---	---	---	---	---	---	---	---	VSS	---	VSS	VSS	XCL	CLK		T
R	---	---	GPF	GPF	---	PCI	---	---	---	PCI	---	VSS	PCI	---	PCI	VSS	---	RS\	---	---	VSS	---	---	VSS	---	RSV	---	---	PCI	---	---	PCI	---	VSS	RSVD	---	RSVD	VSS	---	USE	---	---	---	CLK	---	VSS	VSS	---	---	R
P	---	GPF	GPF	VSS	---	---	---	---	PCI	---	---	---	---	---	---	---	---	---	---	---	VSS	---	---	VSS	---	RSV	---	---	PCI	---	---	---	---	---	---	---	---	---	---	---	---	USE	---	---	---	---	VSS	VC(	VC(	---	P
N	---	GPF	GPF	---	---	---	---	PCI	---	---	---	VSS	VSS	---	VSS	VSS	---	RSV	---	---	---	---	---	---	---	---	---	---	---	---	---	---	PCI	---	VSS	USE	---	USE	VSS	---	---	---	USE	---	---	---	---	USE	USE	---	N
M	VSS	---	---	---	GPF	PCI	---	---	---	PCI	---	---	---	---	---	VSS	---	VSS	---	---	RSV	---	---	RSV	---	VSS	---	---	VSS	---	---	VSS	---	VSS	---	---	---	---	---	---	USE	---	---	---	---	USE	VSS	---	---	---	USB2N_5	M
L	---	GPF	GPF	GPF	---	---	---	---	PCI	---	---	---	---	---	---	---	---	---	---	---	---	---	---	RSV	---	PCI	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	USE	---	---	---	---	USE	USE	USE	---	L
K	---	---	VC(	VSS	---	PCI	PCI	---	---	---	VSS	---	PCI	---	---	DMI	---	DMI	---	---	RSV	---	---	---	---	---	---	---	---	PCI	---	---	PCI	---	USE	---	---	USE	---	VSS	---	---	---	USE	USE	---	USE	USE	---	---	K
J	---	VSS	VSS	VSS	---	---	---	---	PCI	VSS	---	---	PCI	---	DMI	---	---	DMI	---	---	VSS	---	---	VSS	---	PCI	---	---	PCI	---	---	PCI	---	---	USE	---	USE	---	---	VSS	VSS	---	---	---	---	VSS	USE	USE	---	J
H	---	PCI	PCI	---	---	---	---	PCI	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	VSS	---	---	---	---	---	USE	USE	---	H
G	PCIE23_TXN	PCI	PCI	PCI	PCI	VSS	---	---	---	---	---	---	PCI	---	PCI	---	---	DMI	---	---	DMI	---	---	---	RSV	---	PCI	---	---	---	PCI	---	---	PCI	---	---	USE	---	USE	---	---	---	---	---	---	VSS	USE	USE	USE	USE	USB2N_12	G
F	---	---	VSS	PCI	---	PCI	VSS	---	VSS	---	PCI	---	---	PCI	---	DMI	---	---	---	---	DMI	---	---	---	RSV	---	PCI	---	---	---	PCI	---	---	---	---	PCI	---	USE	---	---	USE	---	USB31_1_TXN	---	USB31_1_TXP	USE	---	USE	USE	---	---	F
E	USB3PIPE_TXN	---	---	---	PCI	---	---	VSS	---	VSS	---	---	PCI	---	VSS	---	VSS	---	VSS	---	---	RSV	---	VSS	---	VSS	---	VSS	---	---	VSS	---	VSS	---	VSS	---	---	VSS	---	---	VSS	---	VSS	---	---	USE	---	---	---	VC(	E
D	USB3PIPE_TXP	---	---	PCI	---	---	PCI	PCI	---	---	PCI	PCI	---	---	---	PCI	VSS	---	---	VSS	RSV	---	---	---	---	---	---	---	PCI	PCI	---	---	VSS	VSS	---	---	---	VSS	USB31_1_RXN	---	---	VSS	CLK	---	---	USE	---	---	VC(	D
C	USB3PIPE_VPA	VSS	PCI	PCI	PCI	PCI	---	PCI	PCI	PCI	PCI	PCI	---	PCI	PCI	PCI	DMI	DMI	DMI	VSS	DMI	---	RSV	RSV	VSS	PCI	PCI	---	PCI	PCI	PCI	PCI	USB	USB31_0_TXP	USB	USB	---	VSS	USB31_1_RXP	USB	USB	CLK	---	CLK	VSS	VSS	USB	VC(	VC(	C
B	VSS	VSS	VSS	---	---	PCI	---	PCI	PCI	PCI	---	PCI	---	PCI	PCI	---	DMI	DMI	DMI	---	DMI	---	RSV	RSV	RSV	PCI	PCI	---	PCI	---			PCI	---	USB	USB	---	PCI	---	USB	USB	CLK	---	CLK	---	---	VC(	VC(	VC(	B
A	---	VSS	VSS	VSS	VSS	PCI	---		---	---	---	---	VSS	---	---	---	VSS	---	---	---	---	VSS	---	---	RSV	---	---	PCIE5_TXP	---	---	---		---	---	---	PCIE_RCOMPP	---	---	---	---	VSS	---	CLK	VSS	VSS	VSS	VSS	---	A
	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	