

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
B1	1	PIPESTAT0	N10	H6
B1	2	PIPESTAT1	N9	H7
B1	3	PIPESTAT2	M9	L10
B1	4	TRACECLK	N8	L9
B1	5	TRACESYNC	M8	J6
B1	6	TRACEPKT0	L8	M8
B1	7	TRACEPKT1	K8	N9
B1	8	TRACEPKT2	J8	L8
B1	9	TRACEPKT3	H8	K6
B1	10	TRACEPKT4	N7	J7
B1	11	TRACEPKT5	M7	M9
B1	12	TRACEPKT6	L7	N8
B1	13	TRACEPKT7	K7	L6
B1	14	TRACEPKT8	J7	K7
B1	15	TRACEPKT9	H7	P9
B1	16	TRACEPKT10	N6	M7
B1	17	TRACEPKT11	M6	P8
B1	18	TRACEPKT12	L6	M6
B1	19	TRACEPKT13	K6	N7
B1	20	TRACEPKT14	J6	L7
B1	21	TRACEPKT15	H6	N6
B13	22	I/O	A8	-
B13	23	I/O	E8	E4
B13	24	I/O	A5	-
B13	25	I/O	D5	F3
-	26	VCCINT	VCCINT	VCCINT
-	27	GND	GND	GND
B13	28	I/O	E6	G4
B13	29	I/O	E4	-
B13	30	I/O	B8	F4
B13	31	I/O	E7	E3
B13	32	I/O	E5	G3
B13	33	VCCI0	VCCI09	VCCI09
B13	34	I/O	C8	H5
B13	35	I/O	B5	-
B13	36	I/O	G5	H4
B13	37	I/O	H5	H3
B13	38	I/O	D8	J5
-	39	VCCINT	VCCINT	VCCINT
-	40	GND	GND	GND
B13	41	I/O	J4	K5
B13	42	I/O	E9	-
B13	43	I/O	F5	J4
B13	44	I/O	J5	J3
B13	45	I/O	K5	K4
-	46	GNDIO	GND	GND
B13	47	I/O	H4	L5

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
B13	48	I/O	K4	-
B13	49	I/O	L5	L3
B13	50	I/O	M5	K3
B13	51	I/O	N5	L4
-	52	VCCINT	VCCINT	VCCINT
-	53	GND	GND	GND
B13	54	I/O	N4	R3
B13	55	I/O	E10	-
B13	56	I/O	P8	P7
B13	57	I/O	P7	T4
B13	58	I/O	P6	U3
B13	59	VCCI0	VCCI09	VCCI09
B13	60	I/O	P5	T5
B13	61	I/O	R5	-
B13	62	I/O, DATA6 (1)	A4	V3
B13	63	I/O	P4	T3
B13	64	I/O	R7	U5
-	65	VCCINT	VCCINT	VCCINT
-	66	GND	GND	GND
B13	67	I/O	R8	R4
B13	68	I/O	R6	-
B13	69	I/O, DATA7 (1)	B4	T7
B13	70	I/O	T4	V4
B13	71	I/O	R4	U4
-	72	GNDI0	GND	GND
B13	73	I/O	T7	R6
B13	74	I/O	T6	-
B13	75	I/O, nWS (1)	C4	Y3
B13	76	I/O	T5	-
B13	77	I/O	T8	U7
-	78	VCCINT	VCCINT	VCCINT
-	79	GND	GND	GND
B13	80	I/O	U4	W3
B13	81	I/O	U5	-
B13	82	I/O, nRS (1)	D4	T6
B13	83	I/O	V4	-
B13	84	I/O	U6	W4
-	85	VCCI0	VCCI09	VCCI09
B13	86	I/O	V5	-
B13	87	I/O	V6	-
B13	88	I/O, nCS (1)	D3	Y4
B13	89	I/O	U7	R5
B13	90	I/O	U8	U6
-	91	VCCINT	VCCINT	VCCINT
-	92	GND	GND	GND
-	93	VCC_CK4 (2)	P9	R9
-	94	GND_CK4 (2)	T9	R8

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
-	95	GND_CK4 (2)	T9	R8
B13	96	I/O, CS (1)	E3	V7
B13	97	I/O	V7	V6
B13	98	I/O, DEV_CLRn (3)	H3	V5
B13	99	VCCIO	VCCIO9	VCCIO9
-	100	GNDIO	GND	GND
B13	101	I/O, CLK4n (4)	J3	M5
B5	102	CLK4n (4)	K3	N5
B13	103	I/O, CLK4n (4)	N3	W5
B13	104	CLK4p	P3	Y5
B13	105	I/O, CLK2n (4)	R3	Y6
-	106	VCCINT	VCCINT	VCCINT
-	107	GND	GND	GND
B13	108	DATA0 (5), (6)	V3	W7
B13	109	DCLK (5)	W3	R7
B13	110	CLK2p	Y3	W6
B13	111	nCE (5)	AC3	P6
B13	112	TDI (5)	AD3	P5
B12	113	VCCIO	VCCIO8	VCCIO8
-	114	GND_CK4 (2)	V9	T9
-	115	GND_CK4 (2)	V9	T9
-	116	GND	GND	GND
-	117	VCCINT	VCCINT	VCCINT
-	118	VCC_CK4 (2)	Y9	T8
B12	119	I/O, DEV_OE (3)	AE3	AA3
B5	120	VCC_CKOUT2 (7)	AA9	U8
B5	121	GND_CKOUT2 (7)	W9	V8
B5	122	CLK4n (4)	AH3	M4
B12	123	I/O, CLK4n (4)	AJ3	M3
B12	124	VCCIO	VCCIO8	VCCIO8
B12	125	I/O, LVDSTXINCLK1p	AM5	D1
B12	126	I/O, LVDSTXINCLK1n (4)	AL5	D2
B12	127	I/O, LOCK2 (9)	AK4	AB3
B12	128	I/O, LVDSTXOUTCLK1n (4)	AM4	E2
B12	129	I/O, LVDSTXOUTCLK1p	AL4	E1
-	130	GND	GND	GND
-	131	VCCINT	VCCINT	VCCINT
B12	132	I/O, LVDSTX01p	D1	F1
B12	133	I/O, LVDSTX01n (4)	D2	F2
B12	134	I/O	W6	Y7
B12	135	I/O, LVDSTX02n (4)	E1	G2
B12	136	I/O, LVDSTX02p	E2	G1
-	137	GNDIO	GND	GND
B12	138	I/O, LVDSTX03p	H1	H1
B12	139	I/O, LVDSTX03n (4)	H2	H2
B12	140	I/O	W5	AA4
B12	141	I/O, LVDSTX04n (4)	J1	J2

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
B12	142	I/O, LVDSTX04p	J2	J1
-	143	GND	GND	GND
-	144	VCCINT	VCCINT	VCCINT
B12	145	I/O, LVDSTX05p	K1	K1
B12	146	I/O, LVDSTX05n (4)	K2	K2
B12	147	I/O, LOCK4 (9)	AK5	AB4
B12	148	I/O, LVDSTX06n (4)	N1	L2
B12	149	I/O, LVDSTX06p	N2	L1
B12	150	VCCI0	VCCI08	VCCI08
B12	151	I/O, LVDSTX07p	P1	M1
B12	152	I/O, LVDSTX07n (4)	P2	M2
B12	153	I/O	W4	P4
B12	154	I/O, LVDSTX08n (4)	R1	R2
B12	155	I/O, LVDSTX08p	R2	R1
-	156	GND	GND	GND
-	157	VCCINT	VCCINT	VCCINT
B12	158	I/O, LVDSTX09p	V1	T1
B12	159	I/O, LVDSTX09n (4)	V2	T2
B12	160	I/O	Y6	AA5
B12	161	I/O, LVDSTX10n (4)	W1	U2
B12	162	I/O, LVDSTX10p	W2	U1
-	163	GNDI0	GND	GND
B12	164	I/O, LVDSTX11p	Y1	W1
B12	165	I/O, LVDSTX11n (4)	Y2	W2
B12	166	I/O	Y5	AB5
B12	167	I/O, LVDSTX12n (4)	AC1	V2
B12	168	I/O, LVDSTX12p	AC2	V1
-	169	GND	GND	GND
-	170	VCCINT	VCCINT	VCCINT
B12	171	I/O, LVDSTX13p	AD1	Y1
B12	172	I/O, LVDSTX13n (4)	AD2	Y2
B12	173	I/O	Y4	AA7
B12	174	I/O, LVDSTX14n (4)	AE1	AA2
B12	175	I/O, LVDSTX14p	AE2	AA1
B12	176	VCCI0	VCCI08	VCCI08
B12	177	I/O, LVDSTX15p	AH1	AC1
B12	178	I/O, LVDSTX15n (4)	AH2	AC2
B12	179	I/O	AA6	AA6
B12	180	I/O, LVDSTX16n (4)	AJ1	AB2
B12	181	I/O, LVDSTX16p	AJ2	AB1
-	182	GND	GND	GND
-	183	VCCINT	VCCINT	VCCINT
B12	184	I/O	AB6	AE4
B12	185	I/O	AA5	AB7
B12	186	I/O	AB5	AB6
B12	187	I/O	AC7	-
B12	188	I/O	AC6	AC5

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
-	189	GNDIO	GND	GND
B12	190	I/O	AC5	AC6
B12	191	I/O	AC4	AE5
B12	192	I/O	AD5	AD5
B12	193	I/O	AD4	-
B12	194	I/O	AD7	AD6
-	195	GND	GND	GND
-	196	VCCINT	VCCINT	VCCINT
B12	197	I/O	AD6	AF4
B12	198	I/O	AE4	AC7
B12	199	I/O	AF5	AF5
B12	200	I/O	AE5	-
B12	201	VCCI0	VCCI08	VCCI08
B11	202	VCCI0	VCCI07	VCCI07
B11	203	I/O	AE6	W9
B11	204	I/O	AE7	Y8
B11	205	I/O	AF6	AF7
B11	206	I/O	AF7	AE7
B11	207	I/O	AJ4	AD7
B11	208	I/O	AH4	-
B11	209	I/O	AJ5	AD8
B11	210	I/O	AG7	Y9
B11	211	I/O	AG6	-
B11	212	I/O	AG5	-
-	213	GNDIO	GND	GND
B11	214	I/O	AH7	AC8
B11	215	I/O	AH6	W10
B11	216	I/O	AH5	V11
B11	217	I/O	AK8	AF9
B11	218	I/O	AG9	AB8
B11	219	I/O	AG8	AA8
B11	220	I/O	AJ9	AE9
B11	221	I/O	AH9	AD9
B11	222	I/O	AJ8	AA9
B11	223	I/O	AH8	-
-	224	VCCI0	VCCI07	VCCI07
B11	225	I/O	AM8	AC9
B11	226	I/O	AG10	Y10
B11	227	I/O	AL8	V12
B11	228	I/O	AJ10	AB9
B11	229	I/O	AL9	AB10
B11	230	I/O	AH10	Y11
B11	231	I/O	AK9	W11
B11	232	I/O	AL10	AC10
B11	233	I/O	AK10	-
B11	234	I/O	AM9	AA10
-	235	GNDIO	GND	GND

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
-	236	VCCINT	VCCINT	VCCINT
-	237	VCCINT	VCCINT	VCCINT
-	238	GND	GND	GND
-	239	GND	GND	GND
B11	240	I/O	AG11	W12
B11	241	I/O	AF12	-
B11	242	I/O	AH12	AE10
B11	243	I/O	AF13	AD10
B11	244	I/O	AG12	AA11
B11	245	I/O	AH11	-
B11	246	I/O	AK13	AC11
B11	247	I/O	AJ13	AF10
B11	248	I/O	AH13	AB11
B11	249	I/O	AG13	Y12
B11	250	VCCI0	VCCI07	VCCI07
B11	251	I/O	AH14	AD11
B11	252	I/O	AG14	AB12
B11	253	I/O	AL13	AA12
B11	254	I/O	AF14	V13
B11	255	I/O	AJ14	-
B11	256	I/O	AK14	W13
B11	257	I/O	AL14	AD12
B11	258	I/O	AF15	AF11
B11	259	I/O	AG15	AE11
B11	260	I/O	AH15	-
-	261	GNDI0	GND	GND
B11	262	I/O	AJ15	AC12
B11	263	I/O	AK15	-
B11	264	VCCI0	VCCI07	VCCI07
B11	265	I/O	AL15	AC13
B11	266	I/O	AH16	AA13
B11	267	I/O	AG16	-
B11	268	I/O	AF16	Y13
B11	269	I/O, LVDSDESKEW	AM10	V14
B11	270	I/O	AK17	Y14
B11	271	I/O	AJ16	AB14
B11	272	I/O	AK16	AB13
B10	273	CONF_DONE (5)	AM13	AD13
B10	274	NSTATUS (5)	AM14	AE12
B10	275	FAST4	AM15	AF12
B10	276	VCCI0	VCCI06	VCCI06
-	277	VCCINT	VCCINT	VCCINT
-	278	VCCINT	VCCINT	VCCINT
-	279	GND	GND	GND
-	280	GND	GND	GND
B10	281	FAST3	AM18	AF15
B10	282	TCK (5)	AM19	AD14

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
B10	283	TMS (5)	AM20	AE15
B10	284	I/O	AG17	AA14
B10	285	I/O	AF17	W14
B10	286	I/O	AJ17	AD15
B10	287	I/O	AH17	AC14
B10	288	I/O	AL18	V15
B10	289	I/O	AK18	-
B10	290	I/O	AJ18	AC15
B10	291	I/O	AH18	AB15
B10	292	I/O	AG18	-
B10	293	I/O	AF18	-
-	294	GNDIO	GND	GND
B10	295	I/O	AL19	AA15
B10	296	I/O	AK19	Y15
B10	297	I/O	AJ19	W15
B10	298	I/O	AK20	V16
B10	299	I/O	AG19	AD16
B10	300	I/O	AL20	AE16
B10	301	I/O	AH19	AF16
B10	302	I/O	AH20	AF17
B10	303	I/O	AJ20	-
B10	304	I/O	AF19	AC16
-	305	VCCI0	VCCI06	VCCI06
B10	306	I/O	AG21	W16
B10	307	I/O	AH21	AD17
B10	308	I/O	AG20	AE17
B10	309	I/O	AM23	AB16
B10	310	I/O	AH22	-
B10	311	I/O	AL23	AC17
B10	312	I/O	AF20	AE18
B10	313	I/O	AK23	AA16
B10	314	I/O	AJ23	-
B10	315	I/O	AF21	Y16
-	316	VCCINT	VCCINT	VCCINT
-	317	VCCINT	VCCINT	VCCINT
-	318	GND	GND	GND
-	319	GND	GND	GND
-	320	GNDIO	GND	GND
B10	321	I/O	AF22	Y17
B10	322	I/O	AM24	-
B10	323	I/O	AG22	AB17
B10	324	I/O	AM25	Y18
B10	325	I/O	AK24	AA17
B10	326	I/O	AH23	-
B10	327	I/O	AL24	AB18
B10	328	I/O	AF23	W17
B10	329	I/O	AJ24	AA18

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
B10	330	I/O	AG23	AC18
B10	331	VCCI0	VCCI06	VCCI06
B10	332	I/O	AH25	-
B10	333	I/O	AJ25	AC19
B10	334	I/O	AH24	AD18
B10	335	I/O	AL25	AF18
B10	336	I/O	AF24	-
B10	337	I/O	AG24	AD19
B10	338	I/O	AK25	AF20
B10	339	I/O	AF25	W18
B10	340	I/O	AK28	AD20
B10	341	I/O	AG25	AE20
-	342	GNDI0	GND	GND
B10	343	I/O	AH28	-
B10	344	I/O	AG26	-
B10	345	I/O	AJ28	AD21
B10	346	I/O	AH26	AC20
B10	347	I/O	AE25	-
B10	348	I/O	AH27	AF22
B10	349	I/O	AJ29	AE22
B10	350	I/O	AF26	AE23
B10	351	I/O	AK29	AC21
B10	352	I/O	AJ30	AF23
B10	353	VCCI0	VCCI06	VCCI06
B9	354	VCCI0	VCCI05	VCCI05
B9	355	I/O	AF27	-
B9	356	I/O	AH29	AD22
B9	357	I/O	AG27	AB21
B9	358	I/O	AF28	AB22
-	359	VCCINT	VCCINT	VCCINT
-	360	GND	GND	GND
B9	361	I/O	AG28	AB20
B9	362	I/O	AD26	-
B9	363	I/O	AE27	AC22
B9	364	I/O	AH30	AA21
B9	365	I/O	AE26	AB19
-	366	GNDI0	GND	GND
B9	367	I/O	AD27	AA22
B9	368	I/O	AE29	-
B9	369	I/O	AE28	AA20
B9	370	I/O	AE30	Y20
B9	371	I/O	AD29	AB23
-	372	VCCINT	VCCINT	VCCINT
-	373	GND	GND	GND
B9	374	I/O	AD28	AA19
B9	375	I/O	AC28	-
B9	376	I/O	AC27	AC25

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B9	377	I/O	AD30	Y21
B9	378	I/O	AC26	Y19
B9	379	VCCI0	VCCI05	VCCI05
B9	380	I/O	AC29	Y22
B9	381	I/O	AB28	-
B9	382	I/O	AB27	W20
B9	383	I/O	AB26	V19
B9	384	I/O	AA28	AC26
-	385	VCCINT	VCCINT	VCCINT
-	386	GND	GND	GND
B9	387	I/O	AA27	AB24
B9	388	I/O	Y29	-
B9	389	I/O	AA25	AA24
B9	390	I/O	Y28	W21
B9	391	I/O	AA23	V20
-	392	GNDIO	GND	GND
B9	393	I/O	AA26	W22
B9	394	I/O	Y27	-
B9	395	I/O	AA24	AA23
B9	396	I/O	W27	V21
B9	397	I/O	W29	Y24
-	398	VCCINT	VCCINT	VCCINT
-	399	GND	GND	GND
B9	400	I/O	W28	Y23
B9	401	I/O	Y26	-
B9	402	I/O	V29	W23
B9	403	I/O	Y25	V22
B9	404	I/O	U29	U20
B9	405	VCCI0	VCCI05	VCCI05
B9	406	I/O	V28	W24
B9	407	I/O	V27	-
B9	408	I/O	Y24	U21
B9	409	I/O	T28	-
B9	410	I/O	W26	V23
-	411	VCCINT	VCCINT	VCCINT
-	412	GND	GND	GND
B9	413	I/O	W25	U22
B9	414	I/O	U28	-
B9	415	I/O	T29	V24
B9	416	I/O	V26	-
B9	417	I/O	V25	T20
-	418	GNDIO	GND	GND
B9	419	I/O	U27	U23
B9	420	I/O	T27	-
B9	421	I/O	U25	T21
B9	422	I/O	U24	-
B9	423	I/O, LOCK1 (9)	AC30	U24

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
-	424	VCCINT	VCCINT	VCCINT
-	425	GND	GND	GND
B9	426	I/O	T25	R20
B9	427	I/O	U26	-
B9	428	I/O	T26	T22
-	429	VCC_CLKL1 (2)	W24	U19
-	430	GND_CLKL1 (2)	V24	T19
-	431	GND_CLKL1 (2)	V24	T19
B9	432	VCCIO	VCCI05	VCCI05
B9	433	I/O, CLKLK_FB1n (4)	AM28	T24
B4	434	CLKLK_FB1p	AL28	T23
B9	435	I/O, CLK3n (4)	Y30	R22
B9	436	CLK3p	W30	R23
B9	437	I/O, CLK1n (4)	V30	N20
-	438	VCCINT	VCCINT	VCCINT
-	439	GND	GND	GND
B9	440	VCCIO	VCCI05	VCCI05
B9	441	NCONFIG (5)	R30	M20
B9	442	CLKLK_ENA (5) (10)	P30	R21
B9	443	CLK1p	N30	P20
B9	444	MSEL1 (5)	K30	N21
B9	445	MSEL0 (5)	J30	N22
-	446	GND	GND	GND
-	447	VCCINT	VCCINT	VCCINT
B4	448	VCC_CKOUT1 (7)	N24	R19
B4	449	GND_CKOUT1 (7)	T24	P19
B4	450	CLKLK_OUT1p (8)	AM29	P22
B8	451	I/O, CLKLK_OUT1n (4)	AL29	P21
-	452	VCC_CLKL3 (2)	M24	N19
-	453	GNDIO	GND	GND
-	454	GND_CLKL3 (2)	P23	L18, M18
-	455	GND_CLKL3 (2)	P24	L18, M18
B8	456	I/O, LVDSRXINCLK1p	B29	AB26
B8	457	I/O, LVDSRXINCLK1n (4)	A29	AB25
B8	458	I/O	R28	-
B8	459	I/O	R29	N25
-	460	GND	GND	GND
-	461	VCCINT	VCCINT	VCCINT
B8	462	I/O, LVDSRX01p	AJ32	Y26
B8	463	I/O, LVDSRX01n (4)	AJ31	Y25
B8	464	I/O, LOCK3 (9)	H30	R24
B8	465	I/O, LVDSRX02n (4)	AH32	AA25
B8	466	I/O, LVDSRX02p	AH31	AA26
B8	467	VCCIO	VCCI04	VCCI04
B8	468	I/O, LVDSRX03p	AE32	W26
B8	469	I/O, LVDSRX03n (4)	AE31	W25
B8	470	I/O	R27	N23

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
B8	471	I/O, LVDSRX04n (4)	AD32	V25
B8	472	I/O, LVDSRX04p	AD31	V26
-	473	GND	GND	GND
-	474	VCCINT	VCCINT	VCCINT
B8	475	I/O, LVDSRX05p	AC32	U26
B8	476	I/O, LVDSRX05n (4)	AC31	U25
B8	477	I/O	R26	M23
B8	478	I/O, LVDSRX06n (4)	Y32	T25
B8	479	I/O, LVDSRX06p	Y31	T26
-	480	GNDIO	GND	GND
B8	481	I/O, LVDSRX07p	W32	R26
B8	482	I/O, LVDSRX07n (4)	W31	R25
B8	483	I/O	P29	M21
B8	484	I/O, LVDSRX08n (4)	V32	M25
B8	485	I/O, LVDSRX08p	V31	M26
-	486	GND	GND	GND
-	487	VCCINT	VCCINT	VCCINT
B8	488	I/O, LVDSRX09p	R32	L26
B8	489	I/O, LVDSRX09n (4)	R31	L25
B8	490	I/O	P28	M22
B8	491	I/O, LVDSRX10n (4)	P32	K25
B8	492	I/O, LVDSRX10p	P31	K26
-	493	VCCIO	VCCI04	VCCI04
B8	494	I/O, LVDSRX11p	N32	J26
B8	495	I/O, LVDSRX11n (4)	N31	J25
B8	496	I/O	P27	M19
B8	497	I/O, LVDSRX12n (4)	K32	H25
B8	498	I/O, LVDSRX12p	K31	H26
-	499	GND	GND	GND
-	500	VCCINT	VCCINT	VCCINT
B8	501	I/O, LVDSRX13p	J32	G26
B8	502	I/O, LVDSRX13n (4)	J31	G25
B8	503	I/O	P26	M24
B8	504	I/O, LVDSRX14n (4)	H32	F25
B8	505	I/O, LVDSRX14p	H31	F26
-	506	GNDIO	GND	GND
B8	507	I/O, LVDSRX15p	E32	E26
B8	508	I/O, LVDSRX15n (4)	E31	E25
B8	509	I/O	N29	L21
B8	510	I/O, LVDSRX16n (4)	D32	D25
B8	511	I/O, LVDSRX16p	D31	D26
-	512	GND	GND	GND
-	513	VCCINT	VCCINT	VCCINT
B8	514	I/O	N28	L20
B8	515	I/O	N27	L23
B8	516	I/O	N26	L22
B8	517	I/O	M28	-

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
B8	518	I/O	M27	K21
-	519	VCCIO	VCCIO4	VCCIO4
B8	520	I/O	L28	L24
B8	521	I/O	K29	-
B8	522	I/O	K27	L19
B8	523	I/O	L27	-
B8	524	I/O	K28	K22
-	525	GND	GND	GND
-	526	VCCINT	VCCINT	VCCINT
B8	527	I/O	J29	K24
B8	528	I/O	J28	K20
B8	529	I/O	H29	K19
B8	530	I/O	J27	-
B7	531	EN_SELECT (12)	H28	J23
B7	532	PROC_TRST	E30	G24
B7	533	PROC_TCK	D30	F24
B7	534	PROC_TDI	H27	H23
B7	535	PROC_TDO	H26	G23
B7	536	PROC_TMS	E29	E24
-	537	GND_CKCLK6 (2)	M25	F23
-	538	GND_CKCLK6 (2)	M25	F23
-	539	VCC_CKCLK6 (2)	L25	E23
-	540	GND_CKCLK5 (2)	K25	F22
-	541	GND_CKCLK5 (2)	K25	F22
-	542	VCC_CKCLK5 (2)	J25	E22
B7	543	CLK_REF	A28	H24
B7	544	NPOR	B28	J24
B7	545	GND	P18	K23
B7	546	VCCIO	VCCIO3	VCCIO3
-	547	GNDIO	GND	GND
B7	548	I/O, UART_CTS_N	G28	G22
B7	549	I/O, UART_DSR_N	F28	H22
B7	550	I/O, UART_RXD	D29	F21
B7	551	I/O, UART_DCD_N	G27	J22
B7	552	I/O, UART_RI_N	E28	J21
B7	553	I/O, UART_TXD	D28	G21
B7	554	I/O, UART_RTS_N	C28	H21
B7	555	I/O, UART_DTR_N	G26	J20
B6	556	I/O, EBI_BE_0	F27	D22
B6	557	I/O, EBI_BE_1	E27	K18
B6	558	VCCIO	VCCIO2	VCCIO2
B6	559	I/O, EBI_OE_N	F26	C22
B6	560	I/O, EBI_WE_N	E26	E21
B6	561	I/O, EBI_CS0	A25	K17
B6	562	I/O, EBI_CS1	B25	H20
B6	563	I/O, EBI_CS2	C25	J19
B6	564	I/O, EBI_CS3	D25	G20

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
B6	565	I/O, EBI_CLK	E25	D21
B6	566	I/O, EBI_ACK	F25	K16
B6	567	I/O, INT_EXT_PIN_N	G25	H19
B6	568	I/O, EBI_A0	H25	F20
-	569	GNDIO	GND	GND
B6	570	I/O, EBI_A1	D24	C21
B6	571	I/O, EBI_A2	E24	E20
B6	572	I/O, EBI_A3	F24	H18
B6	573	I/O, EBI_A4	G24	G19
B6	574	I/O, EBI_A5	J24	J18
B6	575	I/O, EBI_A6	H24	J17
B6	576	I/O, EBI_A7	E23	G18
B6	577	I/O, EBI_A8	F23	D20
B6	578	I/O, EBI_A9	G23	F19
B6	579	I/O, EBI_A10	K23	H17
B6	580	VCCIO	VCCIO2	VCCIO2
-	581	GND	GND	GND
-	582	GND	GND	GND
-	583	VCCINT	VCCINT	VCCINT
-	584	VCCINT	VCCINT	VCCINT
-	585	GND	-	-
B6	586	I/O, EBI_A11	J23	E19
B6	587	I/O, EBI_A12	H23	C20
B6	588	I/O, EBI_A13	E22	D19
B6	589	I/O, EBI_A14	F22	F18
B6	590	I/O, EBI_A15	E21	C19
B6	591	I/O, EBI_A16	L22	G17
B6	592	I/O, EBI_A17	K22	K15
B6	593	I/O, EBI_A18	J22	D18
B6	594	I/O, EBI_A19	H22	E18
B6	595	I/O, EBI_A20	G22	H16
B6	596	I/O, EBI_A21	F21	F17
-	597	GNDIO	GND	GND
B6	598	EBI_A22	G21	C18
B6	599	EBI_A23	L21	J16
B6	600	EBI_A24	K21	E17
B6	601	I/O, EBI_DQ0	J21	C17
B6	602	I/O, EBI_DQ1	H21	G16
B6	603	I/O, EBI_DQ2	E20	D17
B6	604	I/O, EBI_DQ3	F20	E16
B6	605	I/O, EBI_DQ4	E19	J15
B6	606	I/O, EBI_DQ5	L20	F16
B6	607	I/O, EBI_DQ6	K20	G15
B6	608	I/O, EBI_DQ7	J20	F15
B6	609	I/O, EBI_DQ8	H20	H15
-	610	VCCIO	VCCIO2	VCCIO2
B6	611	I/O, EBI_DQ9	G20	E15

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
B6	612	I/O, EBI_DQ10	F19	J14
B6	613	I/O, EBI_DQ11	G19	E14
B6	614	I/O, EBI_DQ12	L19	K14
B6	615	I/O, EBI_DQ13	K19	G14
B6	616	I/O, EBI_DQ14	J19	F14
B6	617	I/O, EBI_DQ15	H19	H14
B3	618	I/O, INIT_DONE (3)	D14	A23
B3	619	I/O, RDYnBSY (1)	E14	A22
B3	620	I/O, CLKUSR (1)	A13	B23
B3	621	JSELECT	C24	C14
B3	622	NRESET	B13	B16
B3	623	TRST (5)	C13	D16
B3	624	nCEO (5)	D13	D15
B3	625	FAST1	E13	A16
-	626	GND	GND	GND
-	627	GND	GND	GND
-	628	VCCINT	VCCINT	VCCINT
-	629	VCCINT	VCCINT	VCCINT
-	630	GNDIO	GND	GND
B3	631	FAST2	E12	A15
B3	632	TD0 (5)	E11	B15
-	633	GND	-	-
-	634	GND	A10	C15
B3	635	DEBUG_EN	B10	D14
B3	636	BOOT_FLASH	C10	C16
B3	637	I/O, DATA1 (1)	D10	B20
B3	638	I/O, DATA2 (1)	A9	B18
B3	639	I/O, DATA3 (1)	B9	B22
B3	640	I/O, DATA4 (1)	C9	A20
B3	641	I/O, DATA5 (1)	D9	A18
B2	642	I/O, SD_DQ0	H18	J13
B2	643	I/O, SD_DQ1	H17	H13
B2	644	I/O, SD_DQ2	H16	F13
B2	645	I/O, SD_DQ3	J18	G13
B2	646	I/O, SD_DQ4	J17	E13
B2	647	VCCI0	VCCI012	VCCI012
B2	648	I/O, SD_DQ5	H15	D13
B2	649	I/O, SD_DDR_VS0	G17	D12
B2	650	I/O, SD_DQ6	J16	C13
B2	651	I/O, SD_DQ7	J15	B12
B2	652	I/O, SD_DQS0	J14	F12
B2	653	I/O, SD_DQM0	H14	H12
B2	654	I/O, SD_DQ8	K18	E12
B2	655	I/O, SD_DQ9	K17	G12
B2	656	I/O, SD_DQ10	L18	J12
B2	657	I/O, SD_DQ11	K16	A12
-	658	GNDIO	GND	GND

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
B2	659	I/O, SD_DQ12	L17	C12
B2	660	I/O, SD_DQ13	L16	B11
-	661	VCCI0	VCCI012	VCCI012
B2	662	I/O, SD_DQ14	K15	K13
B2	663	I/O, SD_DDR_VS1	G16	E11
B2	664	I/O, SD_DQ15	L15	A11
B2	665	I/O, SD_DQS1	K14	H11
B2	666	I/O, SD_DQM1	L14	G11
B2	667	SD_DQ_ECC6 (12)	M18	F11
B2	668	SD_DQ_ECC5 (12)	M17	D11
B2	669	SD_DQ_ECC4 (12)	M16	E10
B2	670	SD_DQ_ECC3 (12)	M15	C11
B2	671	SD_DQ_ECC2 (12)	M14	C10
B2	672	SD_DQ_ECC1 (12)	M13	J11
B2	673	SD_DQ_ECC0 (12)	M12	G10
B2	674	SD_DQS_ECC (12)	M11	F10
B2	675	SD_DQM_ECC (12)	M10	D10
B2	676	I/O, SD_DQ16	L13	A9
B2	677	I/O, SD_DQ17	K13	H10
B2	678	I/O, SD_DQ18	L12	B9
-	679	GND	GND	GND
-	680	GND	GND	GND
-	681	VCCINT	VCCINT	VCCINT
-	682	VCCINT	VCCINT	VCCINT
B2	683	VCCI0	VCCI012	VCCI012
B2	684	I/O, SD_DQ19	K12	C9
B2	685	I/O, SD_DQ20	L11	E9
B2	686	I/O, SD_DQ21	K11	K12
B2	687	I/O, SD_DQ22	L10	D9
B2	688	I/O, SD_DQ23	L9	G9
B2	689	I/O, SD_DQS2	K10	J10
B2	690	I/O, SD_DQM2	K9	F9
B2	691	SD_DQ24	H13	D8
B2	692	SD_DQ25	H12	H9
B2	693	DDR_VS2	G15	C8
-	694	GNDI0	GND	GND
B2	695	SD_DQ26	J13	A7
B2	696	SD_DQ27	J12	B7
B2	697	SD_DQ28	J11	E8
B2	698	SD_DQ29	J10	G8
B2	699	SD_DQ30	J9	C7
B2	700	SD_DQ31	H11	D7
B2	701	SD_DQS3	H10	K10
B2	702	I/O, SD_DQM3	H9	C6
B2	703	I/O, SD_WE_N	G18	A5
B2	704	I/O, SD_CAS_N	F18	F8
B2	705	VCCI0	VCCI012	VCCI012

I/O & VREF Bank	Pad Number Orientation	Pin/Pad Function	1,020-Pin FineLine BGA	672-Pin FineLine BGA
B2	706	I/O, SD_RAS_N	F17	J9
B2	707	I/O, SD_CS_N0	G14	E7
B2	708	I/O, SD_CS_N1	F16	D6
B2	709	I/O, SD_CLK_N	G13	G7
B2	710	I/O, SD_CLK	F15	B5
B2	711	SD_CLKE	F14	F7
B2	712	I/O, SD_A0	G12	K9
B2	713	I/O, SD_A1	F13	C5
B2	714	I/O, SD_A2	G11	E6
B2	715	I/O, SD_A3	F12	G6
B2	716	I/O, SD_A4	F11	K8
B2	717	I/O, SD_A5	G10	A4
B2	718	I/O, SD_A6	F10	B4
B2	719	I/O, SD_A7	F9	F5
B2	720	I/O, SD_A8	G9	D5
B2	721	I/O, SD_A9	F8	G5
B2	722	I/O, SD_A10	G8	K11
B2	723	I/O, SD_A11	F7	E5
B2	724	I/O, SD_A12	F6	H8
B2	725	I/O, SD_A13	G7	J8
B2	726	I/O, SD_A14	G6	F6
-	727	GNDIO	GND	GND
	728	-	-	

EPXA4 Configuration and Power Pins
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Pin Name	1,020-Pin FineLine BGA	672-Pin FineLine BGA
MSEL0 (5)	J30	N22
MSEL1 (5)	K30	N21
NSTATUS (5)	AM14	AE12
NCONFIG (5)	R30	M20
DCLK (5)	W3	R7
CONF_DONE (5)	AM13	AD13
INIT_DONE (3)	D14	A23
nCE (5)	AC3	P6
nCE0 (5)	D13	D15
nWS (1)	C4	Y3
nRS (1)	D4	T6
nCS (1)	D3	Y4
CS (1)	E3	V7
RDYnBSY (1)	E14	A22
CLKUSR (1)	A13	B23
DATA7 (1)	B4	T7
DATA6 (1)	A4	V3
DATA5 (1)	D9	A18
DATA4 (1)	C9	A20
DATA3 (1)	B9	B22
DATA2 (1)	A9	B18
DATA1 (1)	D10	B20
DATA0 (5), (6)	V3	W7
TDI (5)	AD3	P5
TD0 (5)	E11	B15
TCK (5)	AM19	AD14
TMS (5)	AM20	AE15
TRST (5)	C13	D16
Dedicated Fast I/Os	E13, E12, AM18, AM15	A15, A16, AF12, AF15
CLK1p	N30	P20
CLK2p	Y3	W6
CLK3p	W30	R23
CLK4p	P3	Y5
LOCK1 (9)	AC30	U24
LOCK2 (9)	AK4	AB3
LOCK3 (9)	H30	R24
LOCK4 (9)	AK5	AB4
CLKLK_ENA (5) (10)	P30	R21
CLKLK_OUT1p (8)	AM29	P22
CLKLK_OUT2p (8)	AH3	M4
CLKLK_FB1p	AL28	T23
CLKLK_FB2p	K3	N5
DEV_CLRn (3)	H3	V5
DEV_OE (3)	AE3	AA3
CLK_REF	A28	H24
NRESET	B13	B16
NPOR	B28	J24
BOOT_FLASH	C10	C16
DEBUG_EN	B10	D14
JSELECT	C24	C14

EPXA4 Configuration and Power Pins
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Pin Name	1,020-Pin FineLine BGA	672-Pin FineLine BGA
PROC_TDI	H27	H23
PROC_TDO	H26	G23
PROC_TCK	D30	F24
PROC_TMS	E29	E24
PROC_TRST	E30	G24
EN_SELECT (12)	H28	J23
VCCINT	A2, B1, F1, F2, L1, L2, U1, U2, U3, AB1, AB2, AG1, AG2, AL1, AM2, AL6, AM6, AL11, AM11, AL17, AM17, AL22, AM22, AL27, AM27, AM31, AL32, AG31, AG32, AB31, AB32, T30, T31, T32, L31, L32, F31, F32, B32, A31, A27, B27, A22, B22, A16, B16, A11, B11, A6, B6, R15, R18, T16, T17, U16, U17, V15, V18	A3, A24, B3, B8, B10, B17, B19, B24, C1, C2, C4, C23, C25, C26, D3, D24, L13, L15, M13, M16, N2, N10, N12, P15, P18, P24, P25, R10, R11, R14, T12, T17, U9, U14, U16, AC3, AC24, AD1, AD2, AD4, AD23, AD25, AD26, AE3, AE8, AE19, AE24, AF3, AF24
VCCI01	A3, C5	M10, P10
VCCI02	C17, C18, A7, B7, A12, B12, P15	B14, P11, U15
VCCI03	B21, C15, C16	P17, R18, U13
VCCI06	A26, B26, A21	L14, L12, A6
VCCI07	A30, C29	N17, M14, A13
VCCI08	M31, M32, G31, G32, C32	L17, N15, A21
VCCI09	AK32, AF31, AF32, AA31, AA32	R16, U18, N24
VCCI010	AL21, AM21, AL26, AM26, AM30	T15, V17, AF21, AE14
VCCI011	AM3, AL7, AM7, AL12, AM12	V10, U11, AF13, R13
VCCI012	AA1, AA2, AF1, AF2, AK1	T10, AF6
VCCI013	C1, G1, G2, M1, M2	N3, P12, M11
VCC_CLKK1 (2)	W24	U19
VCC_CLKK2 (2)	Y9	T8
VCC_CLKK3 (2)	M24	N19
VCC_CLKK4 (2)	P9	R9
VCC_CLKK5 (2)	J25	E22
VCC_CLKK6 (2)	L25	E23
VCC_CKOUT1 (7)	N24	R19
VCC_CKOUT2 (7)	AA9	U8
GND	A10, B2, B3, C2, C3, F3, F4, G3, G4, L3, L4, M3, M4, T1, T2, T3, AA3, AA4, AB3, AB4, AF3, AF4, AG3, AG4, AK2, AK3, AL2, AL3, AJ6, AJ7, AK6, AK7, AJ11, AJ12, AK11, AK12, AL16, AM16, AJ21, AJ22, AK21, AK22, AJ26, AJ27, AK26, AK27, AK30, AK31, AL30, AL31, AG29, AG30, AF29, AF30, AB29, AB30, AA29, AA30, U30, U31, U32, M29, M30, L29, L30, G29, G30, F29, F30, C30, C31, B30, B31, C26, C27, D26, D27, C21, C22, D21, D22, A17, B17, C11, C12, D11, D12, C6, C7, D6, D7, T15, U15, R16, V16, P18, P14, P19, R17, T18, U18, V17, W14, W19	A2, A8, A10, A14, A17, A19, A25, B1, B2, B6, B13, B21, B25, B26, C3, C15, C24, D4, D23, K23, L11, L16, M12, M15, M17, N1, N4, N11, N13, N14, N16, N18, N26, P1, P2, P3, P13, P14, P16, P23, P26, R12, R15, R17, T11, T13, T14, T16, T18, U10, U12, U17, V9, V18, W8, W19, AC4, AC23, AD3, AD24, AE1, AE2, AE6, AE13, AE21, AE25, AE26, AF2, AF8, AF14, AF19, AF25

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Pin Name	1,020-Pin FineLine BGA	672-Pin FineLine BGA
GND_CKCLK1 (2)	V24	T19
GND_CKCLK2 (2)	V9	T9
GND_CKCLK3 (2)	P23, P24	L18, M18
GND_CKCLK4 (2)	T9	R8
GND_CKCLK5 (2)	K25	F22
GND_CKCLK6 (2)	M25	F23
GND_CKOUT1 (7)	T24	P19
GND_CKOUT2 (7)	W9	V8
No Connect (N.C.)	A14, A15, A18, A19, A20, A23, A24, B14, B15, B18, B19, B20, B23, B24, C14, C19, C20, C23, D15, D16, D17, D18, D19, D20, D23, E15, E16, E17, E18, J26, K24, K26, L23, L24, L26, M19, M20, M21, M22, M23, M26, N11, N12, N13, N14, N15, N16, N17, N18, N19, N20, N21, N22, N23, N25, P10, P11, P12, P13, P16, P17, P20, P21, P22, P25, R9, R10, R11, R12, R13, R14, R19, R20, R21, R22, R23, R24, R25, T10, T11, T12, T13, T14, T19, T20, T21, T22, T23, U9, U10, U11, U12, U13, U14, U19, U20, U21, U22, U23, V8, V10, V11, V12, V13, V14, V19, V20, V21, V22, V23, W7, W8, W10, W11, W12, W13, W15, W16, W17, W18, W20, W21, W22, W23, Y7, Y8, Y10, Y11, Y12, Y13, Y14, Y15, Y16, Y17, Y18, Y19, Y20, Y21, Y22, Y23, AA7, AA8, AA10, AA11, AA12, AA13, AA14, AA15, AA16, AA17, AA18, AA19, AA20, AA21, AA22, AB7, AB8, AB9, AB10, AB11, AB12, AB13, AB14, AB15, AB16, AB17, AB18, AB19, AB20, AB21, AB22, AB23, AB24, AB25, AC8, AC9, AC10, AC11, AC12, AC13, AC14, AC15, AC16, AC17, AC18, AC19, AC20, AC21, AC22, AC23, AC24, AC25, AD8, AD9, AD10, AD11, AD12, AD13, AD14, AD15, AD16, AD17, AD18, AD19, AD20, AD21, AD22, AD23, AD24, AD25, AE8, AE9, AE10, AE11, AE12, AE13, AE14, AE15, AE16, AE17, AE18, AE19, AE20, AE21, AE22, AE23, AE24, AF8, AF9, AF10, AF11	
Total User I/O Pins (11)	488	426

Notes:

- (1) This pin can be used as a user I/O pin after configuration.
- (2) This pin is the power or ground for the ClockLock and ClockBoost circuitry. To ensure noise resistance, the power and ground supply to the ClockLock and ClockBoost circuitry should be isolated from the power and ground to the rest of the device. VCC_CKCLK has the same voltage specifications as the VCCINT and should be connected to a 1.8 -V power supply. If the ClockLock or ClockBoost circuitry is not used, this power or ground pin should be connected to VCCINT or GNDINT, respectively.
- (3) This pin can be used as a user I/O pin if it is not used for its device-wide or configuration function.
- (4) This pin is the complementary signal for the LVDS pair on dedicated inputs and outputs that can be configured for the LVDS standard. If not used for the LVDS pair, these pins are regular I/O pins. Pins with the "n" suffix carry the negative signal for the LVDS channel. Pins with a "p" suffix carry the positive signal for the LVDS channel.
- (5) This pin is a dedicated pin; it is not available as a user I/O pin.
- (6) This pin is tri-stated in user mode.
- (7) This pin is the power or ground for the external output of a PLL. These pins should be set to the VCCIO level/standard desired for the external clock output. To ensure noise resistance, the power and ground supply to the PLL external output should be isolated from the power and ground to the rest of the VCCIO and GNDIO pins. If the PLL or external output is not used, this power or ground pin should be connected to VCCIO or GNDIO, respectively.
- (8) The CLKCLK_OUT pin is powered by the VCC_CKOUT and GND_CKOUT pins.
- (9) This pin shows the status of the ClockLock and ClockBoost circuitry. When the ClockLock and ClockBoost circuitry is locked to the incoming clock and generates an internal clock, LOCK is driven high. LOCK remains high if a periodic clock stops clocking. The LOCK function is optional; if the LOCK output is not used, this pin is a user I/O pin.
- (10) This pin is the active high enable pin for all of the PLL circuits in the device. When de-asserted, all PLLs are reset to their default, unlocked state and will stop clocking. Once re-asserted, the PLLs will lock again and start clocking. If this pin function is not needed, the pin should be connected to VCCINT.
- (11) The user I/O pin count includes dedicated inputs and dedicated clock inputs. It does not include the dedicated clock feedback and output pins.
- (12) This pin is reserved for future functionality and should be connected to GND for this device.

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