

Dedicated Pin	84-Pin PLCC	100-Pin TQFP	100-Pin FineLine BGA	144-Pin TQFP	169-Pin Ultra FineLine BGA	256-Pin FineLine BGA
INPUT/GCLK1	83	87	A6	125	D8	D9
INPUT/GCLRn	1	89	B5	127	D6	E8
INPUT/OE1	84	88	B6	126	D7	E9
INPUT/OE2/GCLK2	2	90	A5	128	E7	D8
TDI (1)	14	4	A1	4	E4	D4
TMS (1)	23	15	F3	20	J4	J6
TCK (1)	62	62	F8	89	J10	J11
TDO (1)	71	73	A10	104	E10	D13
GNDINT	42, 82	38, 86	D6, G5	52, 57, 124, 129	A7, E8, J7, N7	A8, C9, G9, K8, P9
GNDIO	7, 19, 32, 47, 59, 72	11, 26, 43, 59, 74, 95	C3, D7, E5, F6, G4, H8	3, 13, 17, 33, 59, 64, 85, 105, 135	A3, A12, E1, F5, F13, H1, H9, J13, N2, N11	A3, B10, C2, D14, F6, G10, H8, J9, K7, L11, M3, P6, P10, R2, R3, T1, T15
VCCINT (3.3 V Only)	3, 43	39, 91	D5, G6	51, 58, 123, 130	B7, E6, H7, M7	B9, C8, G8, K9, P8
VCCIO (2.5 V or 3.3 V)	13, 26, 38, 53, 66, 78	3, 18, 34, 51, 66, 82	C8, D4, E6, F5, G7, H3	24, 50, 73, 76, 95, 115, 144	A2, A11, E13, F1, F9, H5, H13, J1, N3, N12	B3, B5, C14, E15, F11, G3, G7, G15, H9, J8, K10, L3, L6, M15, P14, T2, T3
No Connect (N.C.)	–	–	–	1, 2, 12, 19, 34, 35, 36, 43, 46, 47, 48, 49, 66, 75, 90, 103, 108, 120, 121, 122	B5, B6, B8, B9, C5, C6, C7, C8, C9, C10, E2, E3, E11, E12, F2, F3, F11, F12, G1, G2, G3, G11, G12, H2, H3, H11, H12, J2, J3, J11, J12, L4, L5, L6, L7, L8, L9, M5, M6, M8, M9	A1, A2, A4, A5, A6, A7, A9, A10, A11, A12, A13, A14, A15, A16, B1, B2, B4, B6, B7, B8, B11, B12, B13, B14, B 15, B16, C1, C3, C4, C6, C11, C13, C15, C16, D1, D2, D3, D15, D16, E1, E2, E3, E14, E16, F1, F2, F15, F16, G1, G2, G14, G16, H1, H2, H15, H16, J1, J2, J15, J16, K1, K2, K3, K14, K15, K16, L1, L2, L15, L16, M1, M14, M16, N1, N2, N3, N14, N15, N16, P1, P2, P3, P4, P12, P13, P15, P16, R1, R4, R5, R6, R7, R8, R9, R11, R12, R13, R14, R15, R16, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T16
Total User I/O Pins (2)	68	84	84	100	100	100

LAB	MC	84-Pin PLCC	100-Pin TQFP	144-Pin TQFP	100-Pin FineLine BGA	169-Pin Ultra FineLine BGA	256-Pin FineLine BGA
A	1	–	2	143	C1	E5	F4
A	2	–	–	–	–	–	–
A	3	12	1	142	B1	D4	E4
A	4	–	–	141	–	B2	C5
A	5	11	100	140	B2	B3	E5
A	6	10	99	139	A2	C3	D5
A	7	–	–	–	–	–	–
A	8	9	98	138	A3	C4	D6
A	9	–	97	137	B3	B4	E6
A	10	–	–	–	–	–	–
A	11	8	96	136	A4	A4	D7
A	12	–	–	134	–	D5	C7
A	13	6	94	133	B4	A5	E7
A	14	5	93	132	C4	F6	F7
A	15	–	–	–	–	–	–
A	16	4	92	131	C5	A6	F8
B	17	22	14	18	F4	D1	J7
B	18	–	–	–	–	–	–
B	19	21	13	16	E2	G5	H5
B	20	–	–	15	–	D2	H3
B	21	20	12	14	E1	G4	H4
B	22	–	10	11	E3	D3	H6
B	23	–	–	–	–	–	–
B	24	18	9	10	E4	C1	H7
B	25	17	8	9	D2	C2	G5
B	26	–	–	–	–	–	–
B	27	16	7	8	D1	G7	G4
B	28	–	–	7	–	B1	F3
B	29	15	6	6	D3	F4	G6
B	30	–	5	5	C2	A1	F5
B	31	–	–	–	–	–	–
B	32	14 (1)	4 (1)	4 (1)	A1 (1)	E4 (1)	D4 (1)
C	33	–	25	32	K1	K4	N4
C	34	–	–	–	–	–	–
C	35	31	24	31	J1	J5	M4
C	36	–	–	30	–	N1	M2
C	37	30	23	29	H1	M1	L4
C	38	29	22	28	H2	L1	L5
C	39	–	–	–	–	–	–
C	40	28	21	27	G2	L2	K5
C	41	–	20	26	G1	K3	K4
C	42	–	–	–	–	–	–
C	43	27	19	25	G3	G6	K6
C	44	–	–	23	–	K2	J3
C	45	25	17	22	F2	H4	J5
C	46	24	16	21	F1	K1	J4
C	47	–	–	–	–	–	–
C	48	23 (1)	15 (1)	20 (1)	F3 (1)	J4 (1)	J6 (1)

LAB	MC	84-Pin PLCC	100-Pin TQFP	144-Pin TQFP	100-Pin FineLine BGA	169-Pin Ultra FineLine BGA	256-Pin FineLine BGA
D	49	41	37	56	K5	N6	N8
D	50	–	–	–	–	–	–
D	51	40	36	55	J5	K7	M8
D	52	–	–	54	–	N5	P7
D	53	39	35	53	H5	H6	L8
D	54	–	33	45	K4	N4	N7
D	55	–	–	–	–	–	–
D	56	37	32	44	J4	K6	M7
D	57	36	31	42	H4	M4	L7
D	58	–	–	–	–	–	–
D	59	35	30	41	J3	J6	M6
D	60	–	–	40	–	M3	P5
D	61	34	29	39	K3	L3	N6
D	62	–	28	38	J2	M2	M5
D	63	–	–	–	–	–	–
D	64	33	27	37	K2	K5	N5
E	65	44	40	60	K6	L10	N9
E	66	–	–	–	–	–	–
E	67	45	41	61	J6	H8	M9
E	68	–	–	62	–	N8	R10
E	69	46	42	63	H6	K8	L9
E	70	–	44	65	K7	N9	N10
E	71	–	–	–	–	–	–
E	72	48	45	67	J7	J8	M10
E	73	49	46	68	H7	M10	L10
E	74	–	–	–	–	–	–
E	75	50	47	69	J8	K9	M11
E	76	–	–	70	–	N10	P11
E	77	51	48	71	K8	K10	N11
E	78	–	49	72	K9	L11	N12
E	79	–	–	–	–	–	–
E	80	52	50	74	K10	M11	N13
F	81	–	52	77	J10	M12	M13
F	82	–	–	–	–	–	–
F	83	54	53	78	H10	J9	L13
F	84	–	–	79	–	N13	L14
F	85	55	54	80	H9	M13	L12
F	86	56	55	81	J9	L13	M12
F	87	–	–	–	–	–	–
F	88	57	56	82	G9	L12	K12
F	89	–	57	83	G10	K13	K13
F	90	–	–	–	–	–	–
F	91	58	58	84	G8	G8	K11
F	92	–	–	86	–	K12	J14
F	93	60	60	87	F9	H10	J12
F	94	61	61	88	F10	K11	J13
F	95	–	–	–	–	–	–
F	96	62 (1)	62 (1)	89 (1)	F8 (1)	J10 (1)	J11 (1)

LAB	MC	84-Pin PLCC	100-Pin TQFP	144-Pin TQFP	100-Pin FineLine BGA	169-Pin Ultra FineLine BGA	256-Pin FineLine BGA
G	97	63	63	91	F7	G13	J10
G	98	–	–	–	–	–	–
G	99	64	64	92	E9	G10	H12
G	100	–	–	93	–	D13	H14
G	101	65	65	94	E10	G9	H13
G	102	–	67	96	E8	D12	H11
G	103	–	–	–	–	–	–
G	104	67	68	97	E7	D11	H10
G	105	68	69	98	D9	C13	G12
G	106	–	–	–	–	–	–
G	107	69	70	99	D10	F10	G13
G	108	–	–	100	–	C12	F14
G	109	70	71	101	D8	E9	G11
G	110	–	72	102	C9	B13	F12
G	111	–	–	–	–	–	–
G	112	71 (1)	73 (1)	104 (1)	A10 (1)	E10 (1)	D13 (1)
H	113	–	75	106	C10	A13	F13
H	114	–	–	–	–	–	–
H	115	73	76	107	B10	D10	E13
H	116	–	–	109	–	B12	C12
H	117	74	77	110	B9	D9	E12
H	118	75	78	111	A9	C11	D12
H	119	–	–	–	–	–	–
H	120	76	79	112	A8	B11	D11
H	121	–	80	113	B8	B10	E11
H	122	–	–	–	–	–	–
H	123	77	81	114	A7	F8	D10
H	124	–	–	116	–	A10	C10
H	125	79	83	117	B7	F7	E10
H	126	80	84	118	C7	A9	F10
H	127	–	–	–	–	–	–
H	128	81	85	119	C6	A8	F9

Notes:

- (1) This pin may function as either a JTAG port or a user I/O pin. If the device is configured to use the JTAG ports for in-system programming, this pin is not available as a user I/O pin.
- (2) The user I/O pin count includes dedicated input pins and all I/O pins.

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