Dedicated Pin	100-Pin TQFP	100-Pin FineLine BGA	144-Pin TQFP	208-Pin PQFP	256-Pin FineLine BGA
INPUT/GCLK1	87	A6	125	184	D9
INPUT/GCLRn	89	B5	127	182	E8
INPUT/OE1	88	B6	126	183	E9
INPUT/OE2/GCLK2	90	A5	128	181	D8
TDI (1)	4	A1	4	176	D4
TMS (1)	15	F3	20	127	J6
TCK (1)	62	F8	89	30	J11
TDO (1)	73	A10	104	189	D13
GNDINT	38, 86	D6, G5	52, 57, 124, 129	75, 82, 180, 185	A8, C9, G9, K8, P9
GNDIO (2)	11, 26, 43, 59, 74, 95	C3, D7, E5, F6, G4, H8	3, 13, 17, 33, 59, 64, 85, 105, 135	14, 32, 50, 72, 94, 116, 134, 152, 174, 200	A3, B10, C2, D14, F6, G10, H8, J9, K7, L11, M3, P6, P10, R2, R3, T1, T15
VCCINT (3.3 V Only)	39, 91	D5, G6	51, 58, 123, 130	74, 83, 179, 186	B9, C8, G8, K9, P8
VCCIO (2.5 V or 3.3 V) (2)	3, 18, 34, 51, 66, 82	C8, D4, E6, F5, G7, H3	24, 50, 73, 76, 95, 115, 144	5, 23, 41, 63, 85, 107, 125, 143, 165, 191	B3, B5, C14, E15, F11, G3, G7, G15, H9, J8, K10, L3, L6, M15, P14, T2, T3
No Connect (N.C.)	–	–	–	1, 2, 51, 52, 53, 54, 103, 104, 105, 106, 155, 156, 157, 158, 207, 208	A1, A2, A6, A12, A13, A14, A15, A16, B1, B2, B15, B16, C1, C15, C16, D1, D3, D15, D16, G1, G16, H15, H16, J1, K1, L1, L2, M1, M16, N1, N2, N14, N15, N16, P1, P2, P15, P16, R1, R14, R15, R16, T7, T8, T10, T11, T14, T16
Total User I/O Pins (3)	84	84	120	164	164

LAB	MC	100-Pin TQFP	100-Pin FineLine BGA	144-Pin TQFP	208-Pin PQFP	256-Pin FineLine BGA
A	1	–	C1	–	153	C3
A	2	–	–	–	–	–
A	3	–	–	2	154	C4
A	4	–	–	–	–	–
A	5	–	B1	1	159	E5
A	6	–	–	143	160	D5
A	7	–	–	–	–	–
A	8	2	–	–	161	C5
A	9	1	–	–	162	B4
A	10	–	–	–	–	–
A	11	100	B2	142	163	A4
A	12	–	–	–	–	–
A	13	–	–	141	164	A5
A	14	99	A2	140	166	D6
A	15	–	–	–	–	–
A	16	98	A3	139	167	C6
B	17	–	–	–	141	F5
B	18	–	–	–	–	–
B	19	–	–	10	142	F2
B	20	–	–	–	–	–
B	21	–	–	9	144	E1
B	22	–	–	–	145	F4
B	23	–	–	–	–	–
B	24	8	D2	8	146	F3
B	25	7	D1	7	147	E2
B	26	–	–	–	–	–
B	27	6	D3	6	148	D2
B	28	–	–	–	–	–
B	29	5	C2	5	149	E3
B	30	–	–	–	150	E4
B	31	–	–	–	–	–
B	32	4 (1)	A1 (1)	4 (1)	151	D4 (1)
C	33	–	–	36	108	N4
C	34	–	–	–	–	–
C	35	–	–	35	109	P3
C	36	–	–	–	–	–
C	37	–	–	34	110	N3
C	38	–	–	–	111	M4
C	39	–	–	–	–	–
C	40	25	K1	32	112	M2
C	41	24	J1	31	113	L4
C	42	–	–	–	–	–
C	43	23	H1	30	114	L5
C	44	–	–	–	–	–
C	45	22	H2	29	115	K6
C	46	–	–	–	117	K5
C	47	–	–	–	–	–
C	48	21	G2	28	118	K4

LAB	MC	100-Pin TQFP	100-Pin FineLine BGA	144-Pin TQFP	208-Pin PQFP	256-Pin FineLine BGA
D	49	31	H4	44	92	N6
D	50	–	–	–	–	–
D	51	30	J3	43	93	T5
D	52	–	–	–	–	–
D	53	29	K3	42	95	M6
D	54	28	J2	41	96	R5
D	55	–	–	–	–	–
D	56	–	–	40	97	M5
D	57	–	–	–	98	P5
D	58	–	–	–	–	–
D	59	–	–	39	99	N5
D	60	–	–	–	–	–
D	61	–	–	38	100	T4
D	62	–	–	–	101	R4
D	63	–	–	–	–	–
D	64	27	K2	37	102	P4
E	65	–	–	–	168	B6
E	66	–	–	–	–	–
E	67	–	–	–	169	E6
E	68	–	–	–	–	–
E	69	–	–	138	170	F7
E	70	–	–	–	171	E7
E	71	–	–	–	–	–
E	72	97	B3	137	172	D7
E	73	96	A4	136	173	C7
E	74	–	–	–	–	–
E	75	94	B4	134	175	B7
E	76	–	–	–	–	–
E	77	93	C4	133	176 (1)	A7
E	78	–	–	132	177	F8
E	79	–	–	–	–	–
E	80	92	C5	131	178	B8
F	81	–	–	–	130	H5
F	82	–	–	–	–	–
F	83	–	–	19	131	H1
F	84	–	–	–	–	–
F	85	–	–	18	132	H2
F	86	–	–	–	133	H3
F	87	–	–	–	–	–
F	88	14	F4	16	135	H4
F	89	13	E2	15	136	G6
F	90	–	–	–	–	–
F	91	12	E1	14	137	G5
F	92	–	–	–	–	–
F	93	10	E3	12	138	G2
F	94	–	–	–	139	G4
F	95	–	–	–	–	–
F	96	9	E4	11	140	F1

LAB	MC	100-Pin TQFP	100-Pin FineLine BGA	144-Pin TQFP	208-Pin PQFP	256-Pin FineLine BGA
G	97	–	–	–	119	K3
G	98	–	–	–	–	–
G	99	–	–	27	120	K2
G	100	–	–	–	–	–
G	101	–	–	26	121	J7
G	102	–	–	–	122	H7
G	103	–	–	–	–	–
G	104	20	G1	25	123	J5
G	105	19	G3	23	124	J2
G	106	–	–	–	–	–
G	107	17	F2	22	126	J3
G	108	–	–	–	–	–
G	109	16	F1	21	127 (1)	J4
G	110	–	–	–	128	H6
G	111	–	–	–	–	–
G	112	15 (1)	F3 (1)	20 (1)	129	J6 (1)
H	113	37	K5	–	79	M8
H	114	–	–	–	–	–
H	115	36	J5	54	80	N8
H	116	–	–	–	–	–
H	117	–	–	53	81	L8
H	118	35	H5	–	84	R7
H	119	–	–	–	–	–
H	120	–	–	49	86	P7
H	121	–	–	48	87	N7
H	122	–	–	–	–	–
H	123	–	–	47	88	M7
H	124	–	–	–	–	–
H	125	33	K4	46	89	L7
H	126	–	–	–	90	T6
H	127	–	–	–	–	–
H	128	32	J4	45	91	R6
I	129	80	B8	114	197	C11
I	130	–	–	–	–	–
I	131	81	A7	116	196	B11
I	132	–	–	–	–	–
I	133	–	–	117	195	A11
I	134	–	–	–	194	F10
I	135	–	–	–	–	–
I	136	–	–	118	193	E10
I	137	–	–	119	192	A10
I	138	–	–	–	–	–
I	139	83	B7	120	190	C10
I	140	–	–	–	–	–
I	141	84	C7	121	189 (1)	D10
I	142	–	–	–	188	F9
I	143	–	–	–	–	–
I	144	85	C6	122	187	A9

LAB	MC	100-Pin TQFP	100-Pin FineLine BGA	144-Pin TQFP	208-Pin PQFP	256-Pin FineLine BGA
J	145	63	F7	–	27	J15
J	146	–	–	–	–	–
J	147	64	E9	90	26	J16
J	148	–	–	–	–	–
J	149	65	E10	91	25	J10
J	150	–	–	–	24	H14
J	151	–	–	–	–	–
J	152	–	–	92	22	H13
J	153	–	–	93	21	H12
J	154	–	–	–	–	–
J	155	67	E8	94	20	H11
J	156	–	–	–	–	–
J	157	–	–	96	19	H10
J	158	–	–	–	18	G11
J	159	–	–	–	–	–
J	160	68	E7	97	17	G14
K	161	–	–	–	38	K11
K	162	–	–	–	–	–
K	163	57	G10	82	37	K12
K	164	–	–	–	–	–
K	165	–	–	83	36	K14
K	166	–	–	–	35	K13
K	167	–	–	–	–	–
K	168	58	G8	84	34	K15
K	169	–	–	86	33	K16
K	170	–	–	–	–	–
K	171	60	F9	87	31	J13
K	172	–	–	–	–	–
K	173	61	F10	88	30 (1)	J14
K	174	–	–	–	29	J12
K	175	–	–	–	–	–
K	176	62 (1)	F8 (1)	89 (1)	28	J11 (1)
L	177	–	–	–	78	R8
L	178	–	–	–	–	–
L	179	–	–	55	77	T9
L	180	–	–	–	–	–
L	181	–	–	56	76	R9
L	182	–	–	–	73	N9
L	183	–	–	–	–	–
L	184	40	K6	60	71	M9
L	185	41	J6	61	70	L9
L	186	–	–	–	–	–
L	187	42	H6	62	69	R10
L	188	–	–	–	–	–
L	189	44	K7	63	68	N10
L	190	–	–	–	67	M10
L	191	–	–	–	–	–
L	192	45	J7	65	66	L10

LAB	MC	100-Pin TQFP	100-Pin FineLine BGA	144-Pin TQFP	208-Pin PQFP	256-Pin FineLine BGA
M	193	–	–	106	4	B14
M	194	–	–	–	–	–
M	195	75	C10	107	3	C13
M	196	–	–	–	–	–
M	197	–	–	108	206	B13
M	198	–	–	–	205	F12
M	199	–	–	–	–	–
M	200	–	–	109	204	E12
M	201	76	B10	110	203	D12
M	202	–	–	–	–	–
M	203	77	B9	111	202	C12
M	204	–	–	–	–	–
M	205	–	–	–	201	B12
M	206	78	A9	112	199	E11
M	207	–	–	–	–	–
M	208	79	A8	113	198	D11
N	209	–	–	–	16	G13
N	210	–	–	–	–	–
N	211	69	D9	98	15	G12
N	212	–	–	–	–	–
N	213	–	–	99	13	F16
N	214	–	–	–	12	F15
N	215	–	–	–	–	–
N	216	70	D10	100	11	F13
N	217	–	–	101	10	F14
N	218	–	–	–	–	–
N	219	71	D8	102	9	E16
N	220	–	–	–	–	–
N	221	72	C9	103	8	E14
N	222	–	–	–	7	E13
N	223	–	–	–	–	–
N	224	73 (1)	A10 (1)	104 (1)	6	D13 (1)
O	225	–	–	–	49	R13
O	226	–	–	–	–	–
O	227	–	–	74	48	P13
O	228	–	–	–	–	–
O	229	–	–	75	47	N13
O	230	–	–	–	46	M14
O	231	–	–	–	–	–
O	232	52	J10	77	45	M13
O	233	53	H10	78	44	L13
O	234	–	–	–	–	–
O	235	54	H9	79	43	L14
O	236	–	–	–	–	–
O	237	55	J9	80	42	L12
O	238	–	–	–	40	L15
O	239	–	–	–	–	–
O	240	56	G9	81	39	L16

LAB	MC	100-Pin TQFP	100-Pin FineLine BGA	144-Pin TQFP	208-Pin PQFP	256-Pin FineLine BGA
P	241	46	H7	66	65	R11
P	242	–	–	–	–	–
P	243	47	J8	67	64	P11
P	244	–	–	–	–	–
P	245	48	K8	68	62	N11
P	246	49	K9	69	61	M11
P	247	–	–	–	–	–
P	248	–	–	–	60	T12
P	249	–	–	70	59	R12
P	250	–	–	–	–	–
P	251	–	–	–	58	M12
P	252	–	–	–	–	–
P	253	–	–	71	57	P12
P	254	–	–	–	56	N12
P	255	–	–	–	–	–
P	256	50	K10	72	55	T13

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) EPM7512AE devices in the 208-pin PQFP package support vertical migration from EPM7256E, EPM7256S, and EPM7256A devices. EPM7512AE devices contain additional I/O pins which are no connects on the EPM7256E, EPM7256S, and EPM7256A devices. To support these additional I/O pins, EPM7512AE devices have two additional VCCIO (pins 105 and 207) and GNDIO (pins 51 and 158) pins that are no-connect pins on EPM7256E, EPM7256S, and EPM7256A devices. To achieve vertical migration between EPM7256A and EPM7512AE devices, tie the no-connect pins 105 and 207 to VCCIO and tie pins 51 and 158 to GNDIO on EPM7256A devices. On EPM7256E and EPM7256S devices, these no-connect pins must not be tied to VCCIO or GNDIO.

(3) The user I/O pin count includes dedicated input pins and all I/O pins.