

iCE40 Pinout HX4K					
Pin Function	Pin Type	Bank	(BG121) 121-Ball caBGA Ball Number	(CB132) 132-Ball csBGA Ball Number	(TQ144) 144-Pin TQFP Pin Number
IOL_2A	DPIO	3	B1	B1	1
IOL_2B	DPIO	3	B2	C1	2
IOL_3A	DPIO	3	-	-	3
IOL_3B	DPIO	3	-	-	4
GND	GND	GND	-	A9	5
VCCIO_3	VCCIO	VCCIO	-	E3	6
IOL_4A	DPIO	3	C4	C3	7
IOL_4B	DPIO	3	C3	D3	8
IOL_5A	DPIO	3	C2	D1	9
IOL_5B	DPIO	3	C1	E1	10
IOL_8A	DPIO	3	E1	D4	11
IOL_8B	DPIO	3	D1	E4	12
IOL_9A	DPIO	3	D2	F4	-
IOL_9B	DPIO	3	D3	F3	-
GND	GND	GND	-	F1	13
GND	GND	GND	-	F7	14
IOL_10A	DPIO	3	E2	H4	15
IOL_10B	DPIO	3	E3	G4	16
IOL_12A	DPIO	3	F1	J3	17
IOL_12B	DPIO	3	F2	J1	18
IOL_13A	DPIO	3	F4	G3	19
IOL_13B_GBIN7	GBIN	3	F3	G1	20
IOL_14A_GBIN6	GBIN	3	G1	H1	21
IOL_14B	DPIO	3	G2	H3	22
IOL_17A	DPIO	3	G3	-	23
IOL_17B	DPIO	3	H3	-	24
IOL_18A	DPIO	3	H1	K3	25
IOL_18B	DPIO	3	H2	K4	26
VCC	VCC	VCC	-	F8	27
IOL_23A	DPIO	3	J1	L1	28
IOL_23B	DPIO	3	K1	M1	29
VCCIO_3	VCCIO	VCCIO	E4	J6	30
IOL_24A	DPIO	3	-	-	31
IOL_24B	DPIO	3	-	-	32
IOL_25A	DPIO	3	K2	N1	33
IOL_25B	DPIO	3	J2	P1	34
IOB_56	PIO	2	L1	P2	37
IOB_57	PIO	2	J3	-	38
IOB_59	PIO	2	-	P3	-
IOB_61	PIO	2	L2	-	39
VCC	VCC	VCC	D8	G6	40
IOB_63	PIO	2	K3	M4	41

IOB_64	PIO	2	J4	M3	42
IOB_71	PIO	2	L3	L5	43
IOB_72	PIO	2	L4	L4	44
IOB_73	PIO	2	K4	P4	45
IOB_74	PIO	2	-	P5	-
IOB_77	PIO	2	-	M6	-
IOB_78	PIO	2	J5	L6	-
VCCIO_2	VCCIO	VCCIO	H6	J9	46
IOB_79	PIO	2	K5	M7	47
IOB_80	PIO	2	-	-	48
IOB_81_GBIN5	GBIN	2	L5	P7	49
IOB_82_GBIN4	GBIN	2	K6	P8	52
GNDPLL0	GNDPLL	GNDPLL	L6	L7	53
VCCPLL0	VCCPLL	VCCPLL	J6	M8	54
IOB_87	PIO	2	H7	L8	-
IOB_89	PIO	2	K7	P9	-
IOB_91	PIO	2	J8	M9	55
IOB_94	PIO	2	L7	-	56
VCCIO_2	VCCIO	VCCIO	-	M5	57
GND	GND	GND	E5	G7	59
IOB_95	PIO	2	-	-	60
IOB_96	PIO	2	-	-	61
IOB_102	PIO	2	-	-	62
IOB_103_CBSEL0	PIO	2	L8	L9	63
IOB_104_CBSEL1	PIO	2	H9	P10	64
CDONE	CONFIG	2	K8	M10	65
CRESET_B	CONFIG	2	L9	L10	66
IOB_105_SDO	SPI	SPI	K9	M11	67
IOB_106_SDI	SPI	SPI	J9	P11	68
GND	GND	GND	E6	G8	69
IOB_107_SCK	SPI	SPI	L10	P12	70
IOB_108_SS	SPI	SPI	K10	P13	71
VCC_SPI	SPI	SPI	L11	L11	72
IOR_109	PIO	1	-	M12	73
IOR_110	PIO	1	-	P14	74
IOR_111	PIO	1	-	L12	75
IOR_112	PIO	1	-	N14	76
NC	NC	NC	-	M14	77
IOR_114	PIO	1	J11	L14	78
IOR_115	PIO	1	K11	K12	79
IOR_116	PIO	1	H10	K11	80
IOR_117	PIO	1	J10	K14	81
IOR_118	PIO	1	G8	J12	82
IOR_119	PIO	1	H11	J11	83
IOR_120	PIO	1	G10	H12	84
IOR_128	PIO	1	G9	H11	85
IOR_129	PIO	1	G11	G12	-
GND	GND	GND	E7	G9	86
IOR_136	PIO	1	F10	G11	87
IOR_137	PIO	1	F9	F12	88
VCCIO_1	VCCIO	VCCIO	-	F9	89
IOR_138	PIO	1	-	-	90
IOR_139	PIO	1	-	-	91
VCC	VCC	VCC	D4	H9	92

IOR_140_GBIN3	GBIN	1	F11	F14	93
IOR_141_GBIN2	GBIN	1	E10	G14	94
IOR_144	PIO	1	E9	F11	95
IOR_146	PIO	1	E8	E11	96
IOR_147	PIO	1	D9	E12	97
IOR_148	PIO	1	E11	E14	98
IOR_152	PIO	1	D11	D14	99
IOR_154	PIO	1	D10	C14	-
VCCIO_1	VCCIO	VCCIO	F8	H14	100
IOR_160	PIO	1	C11	D12	101
IOR_161	PIO	1	B11	B14	102
GND	GND	GND	F5	H6	103
IOR_164	PIO	1	-	-	104
IOR_165	PIO	1	-	-	105
IOR_166	PIO	1	-	-	106
IOR_167	PIO	1	-	-	107
VPP_2V5	VPP	VPP	C10	A14	108
VPP_FAST	VPP	VPP	B10	A13	109
IOT_168	PIO	0	A11	-	110
VCC	VCC	VCC	-	J4	111
IOT_169	PIO	0	-	-	112
IOT_170	PIO	0	A10	A12	113
IOT_171	PIO	0	-	-	114
IOT_172	PIO	0	C9	C12	115
IOT_173	PIO	0	-	-	116
IOT_174	PIO	0	B9	C11	117
IOT_177	PIO	0	B8	D10	118
IOT_178	PIO	0	A9	D11	119
IOT_179	PIO	0	C8	A11	120
IOT_181	PIO	0	D7	A10	121
IOT_186	PIO	0	-	C10	-
IOT_188	PIO	0	-	D9	-
IOT_190	PIO	0	A8	C9	122
VCCIO_0	VCCIO	VCCIO	-	A8	123
IOT_191	PIO	0	C7	-	124
IOT_192	PIO	0	A7	-	125
VCCPLL1	VCCPLL	VCCPLL	C6	C8	126
GNDPLL1	GNDPLL	GNDPLL	C5	D8	127
IOT_197_GBIN1	GBIN	0	B7	A7	128
IOT_198_GBIN0	GBIN	0	B6	A6	129
IOT_200	PIO	0	-	C7	-
IOT_202	PIO	0	-	D7	-
IOT_206	PIO	0	A6	C6	130
IOT_207	PIO	0	A5	D6	-
IOT_208	PIO	0	B5	A5	-
IOT_211	PIO	0	A4	D5	-
VCCIO_0	VCCIO	VCCIO	-	F6	131
GND	GND	GND	F6	H7	132
IOT_212	PIO	0	D5	C5	134
IOT_213	PIO	0	-	-	135
IOT_214	PIO	0	-	-	136
IOT_215	PIO	0	-	-	137
IOT_216	PIO	0	-	-	138
IOT_217	PIO	0	-	-	139

GND	GND	GND	F7	H8	140
IOT_219	PIO	0	B4	A4	141
IOT_220	PIO	0	-	-	142
IOT_221	PIO	0	B3	C4	143
IOT_222	PIO	0	A2	A3	144
IOT_223	PIO	0	A3	A2	-
IOT_225	PIO	0	A1	A1	-
VCC	VCC	VCC	H8	J7	-
NC	NC	NC		-	35
NC	NC	NC		-	36
NC	NC	NC		-	50
NC	NC	NC		-	51
NC	NC	NC		-	58
NC	NC	NC		-	133
GND	GND	GND	G5	J14	-
GND	GND	GND	G6	J8	-
GND	GND	GND	G7	L3	-
GND	GND	GND	-	P6	-
VCCIO_3	VCCIO	VCCIO	G4	K1	-

Version	Date
3.0	2017/05/5
2.1	41438
2.0	41346
1.0	10/1/2012
0.92	40891
0.91	40860
0.9	40847

Description	
add "BG121" for "121-Ball caBGA"(new 9x9 mm package ucBGA121), Revision "iCE40HX08.pkt 1.1"	
Included package ordering code.	
Updated table format to include all packages	
Chnaged name from "TQ144" to "144-pin TQFP" Production Release	
Package drawing, removed option notes 6 and 7	
1K pins 40, 49, 50, 52, 133, 134 updated	
Preliminary	
