

**Cross Reference Table (V1.0)**

Logos Series																		
Device	Principal Vendor	Processing	Series	LUT4	DRM(K bits)	Distribution RAM(Kbit)	APM	PLL	Core Voltage	IO Voltage	MaxUser	DDR3	HSST(Max.lane)	HSST(Gbps)	Package	Size(mm)	Pango Compatibility	Replacement Comments
PGL50H	Pango	40nm	Logos	51360	2412	544	84	5	1.2V	1.2~3.3V	304	800Mbps	4	6.375	FBG484	23*23	NA	Pango's PGL50H/G could directly to replace Xilinx's Spartan6 with very good compatibility, all parameters shall not be lower than Spartan6. For Altera's Cyclone4, because it is not pin compatible and different SerDes qty., only can support Functions Replacement in some scenarios.
XC6SLX45T	Xilinx	45nm	Spartan-6	43611	2088	401	58	12	1.2V	1.2~3.3V	296	800Mbps	4	3.2	CSG324 FGG484 CSG484	15*15 23*23 19*19	Pin-2-Pin Compatible	
EP4CGX50	Altera	60nm	Cyclone-4	50000	2502	NA	140	8	1.2V	1.2~3.3V	310	Not Support	8	3.125	F484 F672	23*23 27*27	Functions Replacement	
Device	Principal Vendor	Processing	Series	LUT4	DRM(K bits)	Distribution RAM(Kbit)	APM	PLL	Core Voltage	IO Voltage	MaxUser	DDR3	HSST(Max.lane)	HSST(Gbps)	Package	Size(mm)	Pango Compatibility	Replacement Comments
PGL50G	Pango	40nm	Logos	51360	2412	544	84	5	1.2V	1.2~3.3V	341	800Mbps	NA	NA	FBG484	23*23	NA	Same as above
XC6SLX45	Xilinx	45nm	Spartan-6	43611	2088	401	58	12	1.2V	1.2~3.3V	358	800Mbps	NA	NA	CSG324 FGG484 CSG484 FGG676	15*15 23*23 19*19 27*27	Pin-2-Pin Compatible	
EP4CE55	Altera	60nm	Cyclone-4	56000	2340	NA	154	4	1.0V/1.2V	1.2~3.3V	374	Not Support	NA	NA	U484 F484 F780	19*19 23*23 29*29	Functions Replacement	
Device	Principal Vendor	Processing	Series	LUT4	DRM(K bits)	Distribution RAM(Kbit)	APM	PLL	Core Voltage	IO Voltage	MaxUser	DDR3	HSST(Max.lane)	HSST(Gbps)	Package	Size(mm)	Pango Compatibility	Replacement Comments
PGL25G	Pango	40nm	Logos	27072	1080	242	40	4	1.2V	1.2~3.3V	308	800Mbps	NA	NA	FBG256 MBG324 FBG484	17*17 15*15 23*23	NA	Same as above
XC6SLX25	Xilinx	45nm	Spartan-6	24051	936	229	38	6	1.2V	1.2~3.3V	266	800Mbps	NA	NA	FTG256 CSG324 FGG484	17*17 15*15 23*23	Pin-2-Pin Compatible	
EP4CE22	Altera	60nm	Cyclone-4	22000	594	NA	66	4	1.0V/1.2V	1.2~3.3V	153	Not Support	NA	NA	U256 F256	14*14 17*17	Functions Replacement	
Device	Principal Vendor	Processing	Series	LUT4	DRM(K bits)	Distribution RAM(Kbit)	APM	PLL	Core Voltage	IO Voltage	MaxUser	DDR3	HSST(Max.lane)	HSST(Gbps)	Package	Size(mm)	Pango Compatibility	Replacement Comments
PGL22G/GS	Pango	40nm	Logos	21043	864	71	30	6	1.1V	1.2~3.3V	240	800Mbps	NA	NA	FBG256 MBG324 LPG176	17*17 15*15 22*22	NA	Pango's PGL12G/22G, original design had no compatibility design for foreign competitors, and it could not be directly replaced. Among the same kind of competing products, PGL22G supports hard core DDR3 and can support more scenarios.
EP4CE22	Altera	60nm	Cyclone-4	22000	594	NA	66	4	1.0V/1.2V	1.2~3.3V	153	Not Support	NA	NA	U256 F256	14*14 17*17	Functions Replacement	
Device	Principal Vendor	Processing	Series	LUT4	DRM(K bits)	Distribution RAM(Kbit)	APM	PLL	Core Voltage	IO Voltage	MaxUser	DDR3	HSST(Max.lane)	HSST(Gbps)	Package	Size(mm)	Pango Compatibility	Replacement Comments
PGL12G	Pango	40nm	Logos	12480	540	84	20	4	1.1V	1.2~3.3V	160	800Mbps	NA	NA	LPG144 FBG256	22*22 17*17	NA	Same as above
XC6SLX9	Xilinx	45nm	Spartan-6	9152	576	90	32	6	1.2V	1.2~3.3V	200	800Mbps	NA	NA	CPG196 TQG144 CSG225 FTG256 CSG324	8*8 20*20 13*13 17*17 15*15	Functions Replacement	
EP4CE10	Altera	60nm	Cyclone-4	10000	414	NA	23	4	1.0V/1.2V	1.2~3.3V	179	Not Support	NA	NA	E144 U256 F256	22*22 14*14 17*17	Functions Replacement	
Logos-2 Series																		
Device	Principal Vendor	Processing	Series	LUT4	DRM(K bits)	Distribution RAM(Kbit)	APM	PLL	Core Voltage	IO Voltage	MaxUser	DDR3	HSST(Max.lane)	HSST(Gbps)	Package	Size(mm)	Pango Compatibility	Replacement Comments
PG2L100H	Pango	28nm	Logos-2	99900	5580	1273	240	12	1.0V	1.2~3.3V	300	1066Mbps	8	6.6	MBG324 FBG484 FBG676	15*15 23*23 27*27	NA	Pango's PG2L can be pin-2-pin compatible to replace Xilinx. Pango's devices compare to Altera Cyclone5, its parameters and performances almost same, can do the Functions Replacement.
XC7A100T	Xilinx	28nm	Artix-7	95100	4860	1188	240	12	1.0V	1.2~3.3V	300	1066Mbps	8	6.6	CSG324 FTG256 FGG484 FGG676	15*15 17*17 23*23 27*27	Compatible	
5CGTD5	Altera	28nm	Cyclone-5	77000	4460	NA	300	12	1.1V	1.2~3.3V	336	800Mbps	6	6.144	U484 F484 F672	19*19 23*23 27*27	Functions Replacement	
Titan Series																		
Device	Principal Vendor	Processing	Series	LUT4	DRM(K bits)	Distribution RAM(Kbit)	APM	PLL	Core Voltage	IO Voltage	MaxUser	DDR3	HSST(Max.lane)	HSST(Gbps)	Package	Size(mm)	Pango Compatibility	Replacement Comments
PGT180H	Pango	40nm	Titan	180K	9468	584	224	8	1.1V	1.2~3.3V	611	800Mbps	3	5	FFBG1140 FFBG1152	35*35 35*35	NA	Pango's PGT180,original design had no compatibility design for foreign competitors, and it could not be directly replaced. PGT180H, its parameters are close to Spartan6 Series 150T,and Cyclone4 EP4CGX150, can do the Functions Replacement.
EP4CGX150	Altera	60nm	Cyclone-4	150K	6480	NA	360	18	1.2V	1.2~3.3V	475	Not Support	8	3.2	F484 F672 F896	23*23 27*27 31*31	Functions Replacement	
XC6SLX150T	Xilinx	45nm	Spartan-6	147K	4824	1355	180	8	1.2V	1.2~3.3V	540	800Mbps	8	3.125	FGG484 CSG484 FGG676 FGG900	23*23 19*19 27*27 31*31	Functions Replacement	
Titan-2 Series																		
Device	Principal Vendor	Processing	Series	LUT4	DRM(K bits)	Distribution RAM(Kbit)	APM	PLL	Core Voltage	IO Voltage	MaxUser	DDR3	HSST(Max.lane)	HSST(Gbps)	Package	Size(mm)	Pango Compatibility	Replacement Comments
PG2T390H	Pango	28nm	Titan-2	390K	17280	4712	840	20	1.0V	1.2~3.3V	500	1866Mbps	16	13.125	FFBG676 FFBG900	27*27 31*31	NA	Pango's PG2T can be pin-2-pin compatible to replace Xilinx. Pango's devices compare to Altera, its parameters and performances almost same, can do the Functions Replacement.
XC7K325T	Xilinx	28nm	Kintex-7	326K	16020	4000	840	20	1.0V	1.2~3.3V	500	1866Mbps	16	12.5	FBG676 FFG676 FBG900 FFG900	27*27 27*27 31*31 31*31	Pin-2-Pin Compatible	
5AGZE3	Altera	28nm	Arria-5	360K	19140	NA	2088	20	0.85V	1.2~3.0V	414	1600Mbps	24	12.5	H780 F1152	33*33 35*35	Functions Replacement	
Compa Series																		
Device	Principal Vendor	Processing	Series	LUT4	DRM(K bits)	Distribution RAM(Kbit)	APM	PLL	Core Voltage	IO Voltage	MaxUser	DDR3	HSST(Max.lane)	HSST(Gbps)	Package	Size(mm)	Pango Compatibility	Replacement Comments
PGC1K	Pango	55nm	Compa	1276	63	11	-	1	1.2V/2.5V /3.3V	1.2~3.3V	-	207	NA	NA	UWG36 LPG100 LPG144 MBG256 FBG256	2.5*2.5 14*14 20*20 14*14 17*17	NA	Pango PGC Series is compatible with

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XO3LF-1300	Lattice	65nm	XO3	1300	64	10	-	1	1.2V/2.5V/3.3V	1.2~3.3V	-	206	NA	NA	WLCSP36 csBGA121 csBGA256 caBGA256	2.5*2.5 6*6 14*14 17*17	Pin-2-Pin Compatible	Lattice XO3 Series. PGC can be directly replaced with XO3 Series.  The parameters of the CPLD Series devices of Pango and Lattice are basically the same.
5M1270Z	Altera	180nm	MAX5	1270	NA	NA	NA	NA	1.8V	1.2~3.3V	NA	271	NA	NA	TQFP144 FBGA256 FBGA324	22*22 17*17 19*19	Functions Replacement	
PGC2K	Pango	55nm	Compa	2428	72	16	-	2	1.2V/2.5V/3.3V	1.2~3.3V	-	207	NA	NA	UWG49 SSBG256 LPG100 LPG144 MBG256 FBG256	3.2*3.2 9*9 14*14 20*20 14*14 17*17	NA	Same as above
XO3LF-2100	Lattice	65nm	XO3	2100	74	16	-	1	1.2V/2.5V/3.3V	1.2~3.3V	-	279	NA	NA	WLCSP49 csBGA121 csBGA256 csBGA324 caBGA256 caBGA324	3.2*3.2 6*6 9*9 10*10 14*14 15*15	Pin-2-Pin Compatible	
10M02	Altera	55nm	MAX10	2000	108	NA	16	2	1.2V	1.2~3.3V	-	246	NA	NA	WLCSP36 UBGA324	3*3 15*15	Functions Replacement	Same as above
PGC4K	Pango	55nm	Compa	4761	99	39	-	2	1.2V/2.5V/3.3V	1.2~3.3V	-	280	NA	NA	UWG81 SSBG256 LPG144 MBG256 FBG256 MBG324	3.8*3.8 9*9 20*20 14*14 17*17 15*15	NA	
XO3LF-4300	Lattice	65nm	XO3	4300	92	34	-	2	1.2V/2.5V/3.3V	1.2~3.3V	-	335	NA	NA	WLCSP81 csBGA121 csBGA256 csBGA324 caBGA256 caBGA324 caBGA400	3.8*3.8 6*6 9*9 10*10 14*14 15*15 17*17	Pin-2-Pin Compatible	Same as above
10M04	Altera	55nm	MAX10	4000	189	NA	20	2	1.2V	1.2~3.3V	1	246	NA	NA	UBGA324 FBGA256	15*15 17*17	Functions Replacement	
PGC7K	Pango	55nm	Compa	7104	234	56	-	2	2.5V/3.3V	1.2~3.3V	-	336	NA	NA	LPG144 MBG256 MBG400 FBG484	20*20 14*14 17*17 23*23	NA	Same as above
XO3LF-6900	Lattice	65nm	XO3	6900	240	54	-	2	2.5V/3.3V	1.2~3.3V	-	335	NA	NA	csBGA256 csBGA324 caBGA256 caBGA324 FBGA484	9*9 10*10 14*14 15*15 17*17	Pin-2-Pin Compatible	
10M08	Altera	55nm	MAX10	8000	378	NA	24	2	1.2V	1.2~3.3V	1	250	NA	NA	WLCSP81 UBGA324 FBGA256 FBGA484	4*4 15*15 17*17 23*23	Functions Replacement	Same as above
PGC10K	Pango	55nm	Compa	9907	405	78	-	2	2.5V/3.3V	1.2~3.3V	-	384	NA	NA	MBG484	19*19	NA	
XO3LF-9400	Lattice	65nm	XO3	9400	432	73	-	2	2.5V/3.3V	1.2~3.3V	-	384	NA	NA	csBGA256 caBGA256 caBGA400 caBGA484	9*9 14*14 17*17 19*19	Pin-2-Pin Compatible	Same as above
10M08	Altera	55nm	MAX10	8000	378	NA	24	2	1.2V	1.2~3.3V	1	250	NA	NA	WLCSP81 UBGA324 FBGA256 FBGA484	4*4 15*15 17*17 23*23	Functions Replacement	