

# Kintex®-7 FPGAs



## Kintex®-7 FPGAs Optimized for Best Price-Performance (1.0V, 0.95V, 0.9V)

	Part Number	XC7K70T	XC7K160T	XC7K325T	XC7K355T	XC7K410T	XC7K420T	XC7K480T
	EasyPath™ Cost Reduction Solutions <sup>(1)</sup>	—	—	XCE7K325T	XCE7K355T	XCE7K410T	XCE7K420T	XCE7K480T
Logic Resources	Slices	10,250	25,350	50,950	55,650	63,550	65,150	74,650
	Logic Cells	65,600	162,240	326,080	356,160	406,720	416,960	477,760
	CLB Flip-Flops	82,000	202,800	407,600	445,200	508,400	521,200	597,200
Memory Resources	Maximum Distributed RAM (Kb)	838	2,188	4,000	5,088	5,663	5,938	6,788
	Block RAM/FIFO w/ ECC (36 Kb each)	135	325	445	715	795	835	955
	Total Block RAM (Kb)	4,860	11,700	16,020	25,740	28,620	30,060	34,380
Clock Resources	CMTs (1 MMCM + 1 PLL)	6	8	10	6	10	8	8
I/O Resources	Maximum Single-Ended I/O	300	400	500	300	500	400	400
	Maximum Differential I/O Pairs	144	192	240	144	240	192	192
Integrated IP Resources	DSP48 Slices	240	600	840	1,440	1,540	1,680	1,920
	PCIe® Gen2 <sup>(2)</sup>	1	1	1	1	1	1	1
	Analog Mixed Signal (AMS) / XADC	1	1	1	1	1	1	1
	Configuration AES / HMAC Blocks	1	1	1	1	1	1	1
	GTX Transceivers (12.5 Gb/s Max Rate)	8	8	16	24	16	32	32
Speed Grades	Commercial	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2
	Extended	-2L, -3	-2L, -3	-2L, -3	-2L, -3	-2L, -3	-2L, -3	-2L, -3
	Industrial	-1, -2	-1, -2, -2L	-1, -2, -2L	-1, -2, -2L	-1, -2, -2L	-1, -2, -2L	-1, -2, -2L
	Package <sup>(3)</sup>	Dimensions (mm)		Available User I/O: 3.3V HR I/O, 1.8V HP I/Os (GTX)				
Footprint	FBG484 / FBV484	23 x 23	185, 100 (4)	185, 100 (4)				
	FBG676 / FBV676	27 x 27	200, 100 (8)	250, 150 (8)		250, 150 (8)		
Compatible	FFG676 / FFV676	27 x 27		250, 150 (8)		250, 150 (8)		
Footprint	FBG900 / FBV900	31 x 31		350, 150 (16)		350, 150 (16)		
	FBG900 / FFV900	31 x 31		350, 150 (16)		350, 150 (16)		
Compatible	FFG901 / FFV901	31 x 31			300, 0 (24)		380, 0 (28)	380, 0 (28)
	FFG1156 / FFV1156	35 x 35					400, 0 (32)	400, 0 (32)

XMP085 (v3.8)

**FBG / FBV:** 1.0 mm Lidless flip-chip; **FFG / FFV:** 1.0 mm Flip-chip fine-pitch

- Notes: 1. EasyPath™ solutions provide a fast and conversion-free path for cost reduction.  
 2. Hard block supports PCI Express Base 2.1 specification at Gen1 and Gen2 data rates. Gen3 supported with soft IP.  
 3. See DS180, *7 Series FPGAs Overview* for package details.