

Virtex-7 FPGAs														
Optimized for Highest System Performance and Capacity														
(1.0V, 0.9V)														
(1.0V)														
Part Number		XC7V585T	XC7V1500T	XC7V2000T	XC7VX330T	XC7VX415T	XC7VX485T	XC7VX550T	XC7VX690T	XC7VX980T	XC7VX1140T	XC7VH290T	XC7VH580T	XC7VH870T
Logic Resources	EasyPath™ Cost Reduction Solutions ⁽¹⁾	XCE7V585T	XCE7V1500T	XCE7V2000T	XCE7VX330T	XCE7VX415T	XCE7VX485T	XCE7VX550T	XCE7VX690T	XCE7VX980T	XCE7VX1140T	—	—	—
	Slices	91,050	229,050	305,400	51,000	64,400	75,900	86,600	108,300	153,000	178,000	44,375	90,700	136,900
	Logic Cells	582,720	1,465,920	1,954,560	326,400	412,160	485,760	554,240	693,120	979,200	1,139,200	284,000	580,480	876,160
	CLB Flip-Flops	728,400	1,832,400	2,443,200	408,000	515,200	607,200	692,800	866,400	1,224,000	1,424,000	355,000	725,600	1,095,200
Memory Resources	Maximum Distributed RAM (Kbits)	6,938	16,163	21,550	4,388	6,525	8,175	8,725	10,888	13,838	17,700	4,425	8,850	13,275
	Block RAM/FIFO w/ ECC (36Kbits each)	795	969	1,292	750	880	1,030	1,180	1,470	1,500	1,880	470	940	1,410
	Total Block RAM (Kbits)	28,620	34,884	46,512	27,000	31,680	37,080	42,480	52,920	54,000	67,680	16,920	33,840	50,760
Clocking	CMTs (1 MMCM + 1 PLL)	18	18	24	14	12	14	20	20	18	24	6	12	18
	Maximum Single-Ended I/O	850	850	1,200	700	600	700	600	1,000	900	1,100	300	600	650
I/O Resources	Maximum Differential I/O Pairs	408	408	576	336	288	336	288	480	432	528	144	288	312
	DSP48E1 Slices	1,260	1,620	2,160	1,120	2,160	2,800	2,880	3,600	3,600	3,360	840	1,680	2,520
Embedded Hard IP Resources	Gen2 PCI Express Interface Blocks	3	3	4	—	—	4	—	—	—	—	—	—	—
	Gen3 PCI Express Interface Blocks	—	—	—	2	2	—	2	3	3	4	1	2	3
	Agile Mixed Signal (AMS) / XADC	1	1	1	1	1	1	1	1	1	1	1	1	1
	Configuration AES / HMAC Blocks	1	1	1	1	1	1	1	1	1	1	1	1	1
	GTX 12.5Gb/s Transceivers ⁽²⁾	36	36	36	—	—	56	—	—	—	—	—	—	—
	GTH 13.1Gb/s Transceivers ⁽³⁾	—	—	—	28	48	—	80	80	72	96	24	48	72
	GTZ 28.05Gb/s Transceivers	—	—	—	—	—	—	—	—	—	—	8	8	16
Speed Grades	Commercial	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2
	Extended ⁽⁴⁾	-2L, -3	-2L, -2G	-2L, -2G	-2L, -3	-2L, -3	-2L, -3	-2L, -3	-2L, -3	-2L, -3	-2L, -2G	-2L, -2G	-2L, -2G	-2L, -2G
	Industrial	-1, -2	-1	-1	-1, -2	-1, -2	-1, -2	-1, -2	-1, -2	-1	-1	—	—	—
Configuration	Configuration Memory (Mbits)	153.9	319.9	426.6	106.1	131.5	154.7	219.2	219.2	269.4	367.2	91.8	183.6	275.4
	Package ⁽⁵⁾	Area	Available User I/O: 3.3V SelectIO™ Pins, 1.8V SelectIO Pins (GTX, GTH Transceivers)									1.8V SelectIO Pins (GTH, GTZ)		
Flip chip, fine pitch BGA (1.0 mm ball spacing)														
Footprint Compatible	FFG1157	35 x 35 mm			0, 600 (20, 0)	0, 600 (20, 0)	0, 600 (20, 0)		0, 600 (20, 0)					
	FFG1761	42.5 x 42.5 mm	100, 750 (36, 0)				0, 700 (28, 0)		0, 850 (36, 0)					
	FLG1761	42.5 x 42.5 mm		0, 850 (36, 0)										
	FHG1761	45 x 45 mm			0, 850 (36, 0)									
	FLG1925	45 x 45 mm			0, 1200 (16, 0)									
	FFG1158	35 x 35 mm				0, 350 (0, 48)	0, 350 (48, 0)	0, 350 (0, 48)	0, 350 (48, 0)					
Footprint Compatible	FFG1926	45 x 45 mm							0, 720 (0, 64)	0, 720 (0, 64)				
	FLG1926	45 x 45 mm								0, 720 (0, 64)				
	FFG1927	45 x 45 mm				0, 600 (0, 48)	0, 600 (56, 0)	0, 600 (0, 80)	0, 600 (0, 80)					
Footprint Compatible	FFG1928	45 x 45 mm								0, 480 (0, 72)				
	FLG1928	45 x 45 mm									0, 480 (0, 96)			
Footprint Compatible	FFG1930	45 x 45 mm					0, 700 (24, 0)		0, 1000 (0, 24)	0, 900 (0, 24)				
	FLG1930	45 x 45 mm									0, 1100 (0, 24)			
Ceramic flip chip, fine pitch BGA (1.0 mm ball spacing)														
	HCG1155	35 x 35 mm										300 (24, 8)	400 (24, 8)	
	HCG1931	45 x 45 mm											600 (48, 8)	650 (48, 8)
	HCG1932	45 x 45 mm											300 (48, 8)	300 (72, 16)

XMP084 (v4.4)

FFG: 1.0mm Flip-chip fine-pitch; FLG: 1.0mm Flip-Chip Fine Pitch (SSI); HCG: 1.0mm Ceramic Flip-Chip Fine Pitch

- Notes: 1. EasyPath™ solutions provide a fast and conversion-free path for cost reduction. 2. 12.5 Gb/s support in "-3E", "-2GE" speed/temperature grade; 10.3125 Gb/s support in "2C", "-2LE", and "-2I" speed grade. 3. 13.1 Gb/s support in "-3E", "-2GE" speed grade; 11.3 Gb/s support in "2C" and "-2LE" speed/temperature grades; 10.3125 Gb/s in "-2I" speed/temperature grades. 4. See data sheet for information on low-power operating modes. 5. Leaded package options ("FFxxx"/"FLxxx"/"FHxxx"/"HCxxx") available for all packages. 6. Please contact your Xilinx representative for the latest information.

Important: Verify all data in this document with the device data sheets found at www.xilinx.com/7