

VIRTEX-7Q DEFENSE-GRADE FPGA



		Virtex®-7Q FPGAs				
Part Number		XQ7V585T	XQ7VX330T	XQ7VX485T	XQ7VX690T	XQ7VX980T
Logic Resources	Slices ⁽¹⁾	91,050	51,000	75,900	108,300	153,000
	Logic Cells ⁽²⁾	582,720	326,400	485,760	693,120	979,200
	CLB Flip-Flops	728,400	408,000	607,200	866,400	1,224,000
Memory Resources	Maximum Distributed RAM (Kb)	6,938	4,388	8,175	10,888	13,838
	Block RAM/FIFO w/ ECC (36 Kb each)	795	750	1,030	1,470	1,500
	Total Block RAM (Kb)	28,620	27,000	37,080	52,920	54,000
Clock Resources	Mixed Mode Clock Managers (MMCM)	18	14	14	20	18
I/O Resources	Maximum Single-Ended I/O ⁽³⁾	850	700	700	1,000	900
	Maximum Differential I/O Pairs	408	336	336	480	432
Embedded Hard IP Resources	DSP48E1 Slices	1,260	1,120	2,800	3,600	3,600
	PCI Express® Gen 2 Interface Blocks	3	–	4	–	–
	PCI Express Gen 3 Interface Blocks	–	2	–	3	3
	Analog Front End (XADC) / SysMon Blocks	1	1	1	1	1
	Configuration AES / HMAC Blocks	1	1	1	1	1
	GTX 10.3125 Gb/s Transceivers ⁽⁴⁾	36	–	28	–	–
Speed Grades	GTH 11.3 Gb/s Transceivers ⁽⁵⁾	–	28	–	48	24
	Extended Temp (0° to +100°C)	-2L	-2L	-2L	–	-2L
	Industrial Temp (–40° to +100°C)	-1, -2	-1, -2	-1, -2	-1, -2	-1
	Military Temp (–55° to +125°C)	-1	-1	-1	–	–
Package	Dimensions (mm)	Available User I/O: 3.3V SelectIO™ Pins, 1.8V SelectIO Pins (GTX, GTH Transceivers)				
RF1157	35 x 35	0, 600 (20, 0)	0, 600 (0, 20)		0, 600 (0, 20)	
RF1158	35 x 35				0, 350 (0, 48)	
RF1761	42.5 x 42.5	100, 750 (36, 0)	50, 650 (0,28)	0, 700 (28, 0)	0, 850 (0, 36)	
RF1930	45 x 45			0, 700 (24, 0)	0, 1000 (0, 24)	0, 900 (0, 24)

XMP091 (v1.1)

- Notes:**
1. A single Virtex-7 FPGA CLB comprises two slices, with each containing four 6-input LUTs and eight Flip-Flops, for a total of eight 6-LUTs and 16 Flip-Flops per CLB.
 2. Virtex-7 FPGA logic cell ratings reflect the increased logic capacity offered by the 6-input LUT architecture.
 3. Refer to data sheet for details on I/O standards support.
 4. 10.3125 Gb/s support in -2 speed grade.
 5. 11.3 Gb/s support in -2 speed grade.

This is preliminary product information, subject to change. Please contact A&D Marketing for the latest information.