



Virtex and XC4000X Series FPGAs

Each Virtex family has its own unique features to meet different application requirements. All devices have both distributed RAM and block RAM, and between four and eight DLLs for efficient clock management.

- The Virtex family, consisting of devices that range from 50K up to 1 million logic gates, supports 17 I/O standards, and offers 5V PCI compliance.
- The Virtex-E family offers the highest logic gate count available for any FPGA, ranging from 50K up to 3.2 million system gates, and supports 20 I/O standards including LVPECL, LVDS, and Bus LVDS differential signaling.
- The Virtex-EM Extended Memory family consists of two devices that have a high RAM-to-logic gate ratio that is targeted for specific applications such as gigabit per second network switches and high definition graphics.

The XC4000X Series is part of the broad spectrum of Xilinx "XL" products unveiled September, 1998. As a result, Xilinx offers the broadest choice of 3.3 volt and 2.5 volt devices available from a single supplier, with densities ranging from 800 to 500,000 system gates. With 12 family members ranging from 30,000 to 500,000 system gates, the devices feature patented SelectRAM memory, with a highly flexible arrangement of logic, single-port, or dual-port memory.

Designed in an advanced 0.25 micron process, the XC4000X series delivers industry-leading performance while significantly reducing power consumption.

See www.xilinx.com for more information.

FPGA Product Selection Matrix															
DEVICES	KEY FEATURES	DENSITY							FEATURES						
		Logic Cells	Maximum Logic Gates	Typical System Gate Range	Max. RAM Bits	CLB Matrix	CLBs	Flip-Flops	Max. I/O	Output Drive (mA)	PCI Compliant	1.8 Volt	2.5 Volt	3 Volt	5 Volt
XC4013XLA	XC4000 Series: Density Leadership/High Performance/SelectRAM Memory	1368	13K	10K-30K	18K	24x24	576	1536	192	12/24	Y	-	-	-	X
XC4020XLA		1862	20K	13K-40K	25K	28x28	784	2016	205	12/24	Y	-	-	-	X
XC4028XLA		2432	28K	18K-50K	33K	32x32	1024	2560	256	12/24	Y	-	-	-	X
XC4036XLA		3078	36K	22K-65K	42K	36x36	1296	3168	288	12/24	Y	-	-	-	X
XC4044XLA		3800	44K	27K-80K	51K	40x40	1600	3840	320	12/24	Y	-	-	-	X
XC4052XLA		4598	52K	33K-100K	62K	44x44	1936	4576	352	12/24	Y	-	-	X	*
XC4062XLA		5472	62K	40K-130K	74K	48x48	2304	5376	384	12/24	Y	-	-	X	*
XC4085XLA		7448	85K	55K-180K	100K	56x56	3136	7168	448	12/24	Y	-	-	X	*
XCV50	Virtex Family: Density/Performance Leadership/BlockRAM Distributed RAM Select/I/O 4 DLLs	1728	21K	34K-58K	56K	16x24	384	1536	180	2/24	Y	-	-	X	*
XCV100		2700	32K	72K-109K	78K	20x30	600	2400	180	2/24	Y	-	-	X	*
XCV150		3888	47K	93K-165K	102K	24x36	864	3456	260	2/24	Y	-	X	I/O	*
XCV200		5292	64K	146K-237K	130K	28x42	1176	4704	284	2/24	Y	-	X	I/O	*
XCV300		6912	83K	176K-323K	160K	32x48	1536	6144	316	2/24	Y	-	X	I/O	*
XCV400		10800	130K	282K-468K	230K	40x60	2400	9600	404	2/24	Y	-	X	I/O	*
XCV600		15552	187K	365K-661K	312K	48x72	3456	13824	512	2/24	Y	-	X	I/O	*
XCV800		21168	254K	511K-888K	406K	56x84	4704	18816	512	2/24	Y	-	-	X	*
XCV1000		27648	332K	622K-1,124K	512K	64x96	6144	24576	512	2/24	Y	-	-	X	*
XCV50E		Virtex-E Family: Density/Performance Leadership/BlockRAM Distributed RAM Select/I/O+ 8 DLLs LVDS, BLVDS, LVPECL	1728	21K	47K-72K	88K	16x24	384	1536	176	2/24	Y	X	I/O	I/O
XCV100E	2700		32K	105K-128K	118K	20x30	600	2400	176	2/24	Y	X	I/O	I/O	**
XCV200E	5292		64K	215K-306K	186K	28x42	1176	4704	284	2/24	Y	X	I/O	I/O	**
XCV300E	6912		83K	254K-412K	224K	32x48	1536	6144	316	2/24	Y	X	I/O	I/O	**
XCV400E	10800		130K	413K-570K	310K	40x60	2400	9600	404	2/24	Y	X	I/O	I/O	**
XCV600E	15552		187K	679K-986K	504K	48x72	3456	13824	512	2/24	Y	X	I/O	I/O	**
XCV1000E	27648		332K	1,146K-1,569K	768K	64x96	6144	24576	660	2/24	Y	X	I/O	I/O	**
XCV1600E	34992		420K	1,628K-2,189K	1062K	72x108	7776	31104	724	2/24	Y	X	I/O	I/O	**
XCV2000E	43200		518K	1,857K-2,542K	1240K	80x120	9600	38400	804	2/24	Y	X	I/O	I/O	**
XCV2600E	57132		686K	2,221K-3,264K	1530K	92x138	12696	50784	804	2/24	Y	X	I/O	I/O	**
XCV3200E	73008	876K	2,608K-4,074K	1846K	104x156	16224	64896	804	2/24	Y	X	I/O	I/O	**	
XCV405E	Virtex Extended Memory Capabilities	10800	130K	1,068K-1,307K	710K	40x60	2400	9600	404	2/24	Y	X	I/O	I/O	**
XCV812E		21168	254K	2,569K-3,062K	1414K	56x84	4704	18816	556	2/24	Y	X	I/O	I/O	**

* I/Os are 5V tolerant

** 5 Volt tolerant I/Os with external resistor

X = Core and I/O voltage

I/Os = I/O voltage supported