

An editor's glance at the XC4000XLA FPGA family

Xilinx introduces new XC4000XLA FPGA family with 65 percent die size and 75 percent price reduction over industry-leading XC4000XL family

The XC4000XLA family is a derivative of the popular 3.3-volt XC4000XL family targeted for high-performance, low-voltage applications. All 11 members of the XC4000XL family have been in production for a year and receiving overwhelming demand for their capabilities, density capacities, and low-power benefits. The XC4000XLA continues the Xilinx standard of superior high performance set with the preceding family at a reduced cost, die size, and improved performance.

Technology description:

- based on an advanced 0.25 micron, 3.3-volt process from Seiko
- complete redesign of the XC4000XL family delivering reduced die size and price and increased performance

Key features:

- 65 percent die size reduction over the XC4000XL devices
- 55 to 76 percent price reduction over the XC4000XL devices
- 30 percent power reduction over the XC4000XL devices
- up to 30 percent performance improvement over the XC4000XL devices
- high-performance synchronous DRAM (SDRAM) 100 MHz support and beyond
- footprint compatible across multiple package options
- one millimeter ball grid array package offering

<i>Product availability:</i>	Logic cells	System gates	Maximum I/Os	Price *	low volume availability
XC4013XLA	1368	10k - 13k	192	\$11.80	now
XC4020XLA	1862	13k - 40k	224	13.90	98Q4
XC4028XLA	2432	18k - 50k	256	23.80	98Q4
XC4036XLA	3078	22k - 65k	288	31.50	now
XC4044XLA	3800	27k - 80k	320	39.00	98Q4
XC4052XLA	4598	33k - 100k	352	46.50	98Q4
XC4062XLA	5472	40k - 130k	384	55.00	now
XC4085XLA	7448	55k - 180k	448	75.00	now

* Pricing for 100,000-plus unit quantities in mid-1999

Package options:

160-, 208-, 240-, and 304-pin quad flat packs; 256-, 352-, 432-, and 560-pin ball grid arrays (BGA); one millimeter ball grid array

Configuration solutions:

The Xilinx XC1704L and XC1702L SPROM in 44-pin very thin quad flat packs (VQ44) support these higher density devices

- largest SPROMs for FPGAs in the industry in serial configuration bit size—only 2 and 4Mb SPROM offering
- easiest to design as FPGA designer generates and downloads the bitstream
- lowest cost configuration solution for FPGA designers, saving board space and other combinations

Software support:

Available now in the latest version, version 1.5, both the Foundation and Alliance Series software

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