



Spartan-II

The World's Lowest Cost FPGAs

The lowest cost per I/O of any programmable solution

You are facing tremendous design challenges. Rapidly evolving standards, shifting market requirements, intense competition, and the demands for lower costs make your job more difficult than ever before. How do you create new consumer products on schedule and under budget, without losing your peace of mind?

To be successful in this tough, competitive marketplace, you need a fast, inexpensive, and flexible design solution that you can re-program in the lab and at your customer's site. You need fast, reliable performance, and the lowest cost per I/O pin in the industry – that's what you get with Spartan™-II FPGAs. There is no faster, safer, or lower cost way to develop next-generation consumer products.



The Lowest Cost Solution for Consumer Applications

Spartan-II FPGAs give you everything you need to create cost-optimized, flexible, feature-rich products; and you'll find they're far easier (and less expensive) to develop than any ASIC. With the Spartan-II family, you get:

- Densities from 50K to 600K system gates
- Superior I/O capabilities
 - Up to 514 I/O pins: – more than any other low-cost FPGA
 - Supports 19 standards, including LVDS, BUS LVDS, LVPECL, HSTL, and PCI
- Lowest cost per I/O of any programmable solution
- A seamless path for density or package migration
- A robust feature set – You get DLLs, distributed RAM, and block RAM, delivering the resources you need to develop today's digital convergence products.
- The MicroBlaze™ soft processor core – Reduce your overall design cost and device count with this low cost, easy-to-use soft processor solution (an excellent field programmable controller). Available with all the right tools.
- XtremeDSP™ – You get over one billion MACs per second/dollar, the most cost-effective programmable DSP solution.
- ISE software tools – You'll finish your design faster with the most utilized logic implementation tools in the industry.
- Extensive IP cores support – We offer a wide range of cores including 32/33 and 64/66 PCI and DSP algorithms, to increase your productivity and decrease design time.
- Available in the IQ extended temperature range (-40°C to +125°C) for automotive applications such as telematics, infotainment, and driver assistance systems.

So Many Advantages Over ASICs

The Spartan-IIIE family gives you many advantages over ASICs, including:

- No costly NRE charges
- Much shorter development times
- No time-consuming test vector generation
- Reduced design and verification costs
- Flexibility – Upgrade your system at any time, in the lab or even after it's shipped
- No lengthy prototype or production lead times
- Low inventory costs
- You can create universal boards that can easily be reprogrammed to serve many different markets.

The Spartan-IIIE advantages not only reduce your costs and your design time, they also make your product more valuable and more profitable.

Higher Design Productivity

The Spartan-IIIE solution includes ISE, the industry-leading development environment.

- **ISE Foundation™**
 - Complete design environment includes synthesis and verification tool
 - Support entire Spartan-IIIE family
 - Fastest compile times
 - Offers ASIC like design methodology
 - Also supports Virtex Series FPGAs, CoolRunner-II and XC9500 CPLDs
- **Free ISE WebPACK™**
 - Supports design up to 300K gates

See for Yourself

The Spartan-IIIE FPGA solution offers unprecedented system integration, bringing advanced system-level capabilities to cost-sensitive consumer products.

- Visit www.xilinx.com/spartan2e3 for further information on Spartan-IIIE
- Visit <http://www.xilinx.com/ipcenter> for a complete list of available IP
- Visit www.xilinx.com/ise for more information on our comprehensive software solutions

Spartan-IIIE Product Matrix

Device	XC2S50E	XC2S100E	XC2S150E	XC2S200E	XC2S300E	XC2S400E	XC2S600E
System Gates	50K	100K	150K	200K	300K	400K	600K
Logic Cells	1,728	2,700	3,888	5,292	6,912	10,800	15,552
Block RAM Bits	32K	40K	48K	56K	64K	160K	288K
Distributed RAM Bits	24K	37K	54K	73K	96K	150K	216K
DLLs	4	4	4	4	4	4	4
I/O Standards	19	19	19	19	19	19	19
Max Differential I/O Pairs	83	86	114	120	120	172	205
Max Single Ended I/O	182	202	265	289	329	410	514
Packages	TQ144	TQ144					
	PQ208	PQ208	PQ208	PQ208	PQ208		
	FT256	FT256	FT256	FT256	FT256	FT256	
		FG456	FG456	FG456	FG456	FG456	FG456
						FG676	FG676

Corporate Headquarters

Xilinx, Inc.
2100 Logic Drive
San Jose, CA 95124
Tel: (408) 559-7778
Fax: (408) 559-7114
Web: www.xilinx.com

Europe

Xilinx, Ltd.
Benchmark House
203 Brooklands Road
Weybridge
Surrey KT13 0RH
United Kingdom
Tel: 44-870-7350-600
Fax: 44-870-7350-601
Web: www.xilinx.com

Japan

Xilinx, K.K.
Shinjuku Square Tower 18F
6-22-1 Nishi-Shinjuku
Shinjuku-ku, Tokyo
163-1118, Japan
Tel: 81-3-5321-7711
Fax: 81-3-5321-7765
Web: www.xilinx.co.jp

Asia Pacific

Xilinx, Asia Pacific
Unit 1201, Tower 6, Gateway
9 Canton Road
Tsimshatsui, Kowloon,
Hong Kong
Tel: 852-2-424-5200
Fax: 852-2-494-7159
E-mail: ask-asiapac@xilinx.com

