



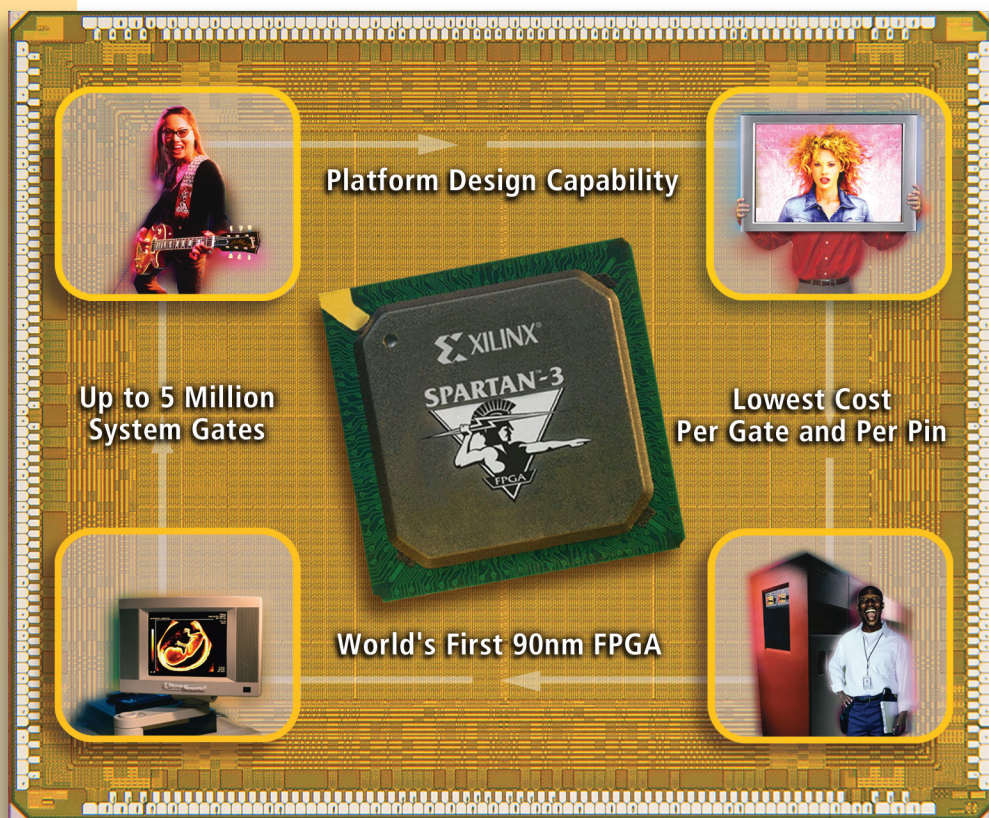
The Spartan™-3 Platform FPGA Family

The World's Lowest-Cost FPGAs

Today's electronic systems need to be brought to market more quickly, within budget, and with feature-sets that outperform competing products.

Xilinx Spartan-3 FPGAs deliver the ideal solution, using 90nm process technology and staggered I/O pads to give you up to 5 million system gates and up to 784 I/Os with the lowest cost per gate and lowest cost per I/O of any FPGA. To address low-power challenges, Spartan-3L reduced-power devices lower quiescent power consumption by up to 98% and include an exclusive Hibernate mode.

With all their cost and feature advantages, you can now use Spartan-3 FPGAs in higher volume than ever before. Plus, we make it easy to start your FPGA design immediately with the US \$99 Spartan-3 Starter Kit.



The World's Lowest Cost per Gate and the Lowest Cost per I/O

The Spartan-3 FPGA family, the fifth generation in the groundbreaking Spartan series, offers a platform with a wide range of I/O and density options. This enables you to achieve fast time-to-market and low unit cost while avoiding the high risks of ASICs.

• Advanced, Low-Cost Features

- Eight devices ranging from 50K to 5M system gates
- Up to 1.8 Mbits of block RAM
- From 63 to 784 I/Os with package and density migration
- Digital clock management for high-speed design challenges
- Embedded 18x18 multipliers for high-performance DSP applications

• Spartan-3L Reduced-Power FPGAs

- Three devices with up to 98% lower power consumption
- Exclusive Hibernate mode fits seamlessly with systems using power-management

• Industry-Leading Design Tools and IP

- ISE design tools and ChipScope™ Pro system debugging environment shorten design and verification time
- Web Power Tool and XPower offer accurate, detailed power estimation and analysis
- 32-bit MicroBlaze™ and 8-bit PicoBlaze™ embedded processors with the easy-to-use Embedded Development Kit (EDK)
- System Generator for DSP and DSP Intellectual Property (IP) cores for pushbutton DSP system development
- Hundreds of pre-verified, pre-optimized IP cores and reference designs

• Easy-to-Use, Low-Cost FPGA Development Systems

- Complete Spartan-3 Starter Kit, available for only \$99 USD

Optimized Cost

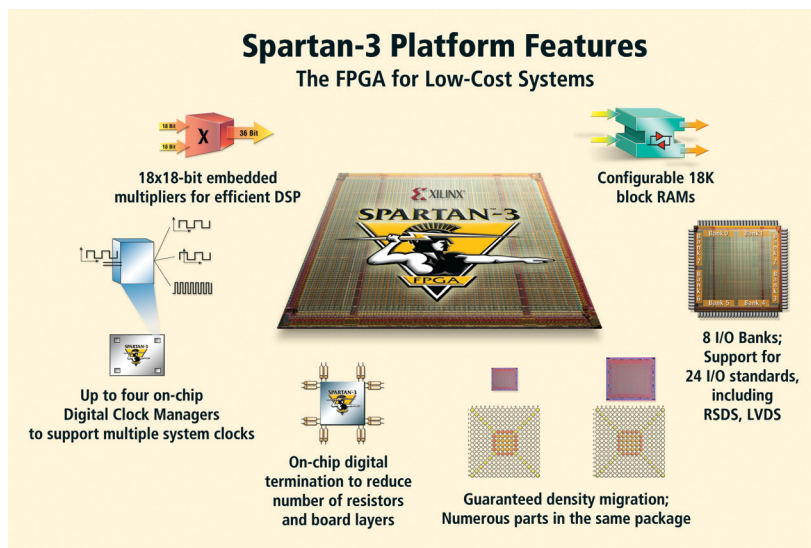
The Spartan-3 family provides the lowest cost per gate and lowest cost per I/O of any FPGA.

Full-Featured

Spartan-3 FPGAs add more value with numerous platform features like embedded 18x18 multipliers, up to 1.8 Mb of block RAM, and embedded 32-bit and 8-bit soft processors. In addition, digitally controlled impedance, digital clock managers, and 24 supported I/O standards solve board design challenges.

Reduced-Power Spartan-3L Devices

Three reduced-power Spartan-3L devices reduce quiescent power consumption by up to 98% to enable lower-cost cooling systems, smaller, less-expensive enclosures, and higher system reliability. Plus, an exclusive Hibernate mode fits seamlessly with systems using power-management.



Spartan-3 FPGA Family

Spartan-3	XC3S50	XC3S200	XC3S400	XC3S1000	XC3S1500	XC3S2000	XC3S4000	XC3S5000
Spartan-3L	—	—	—	XC3S1000L	XC3S1500L	—	XC3S4000L	—
System Gates	50K	200K	400K	1000K	1500K	2000K	4000K	5000K
Logic Cells	1,728	4,320	8,064	17,280	29,952	46,080	62,208	74,880
Block RAM Bits	72K	216K	288K	432K	576K	720K	1,728K	1,872K
Distributed RAM Bits	12K	30K	56K	120K	208K	320K	432K	520K
DCMs	2	4	4	4	4	4	4	4
Multipliers	4	12	16	24	32	40	96	104
I/O Standards	24	24	24	24	24	24	24	24
Max Single Ended I/O**	124	173	264	391	487	565	712	784

Package and I/O Offerings

	XC3S50	XC3S200	XC3S400	XC3S1000	XC3S1500	XC3S2000	XC3S4000	XC3S5000
VQ100 14 x 14 mm	63	63						
TQ144 20 x 20 mm	97	97	97					
PQ208 28 x 28 mm	124	141	141					
FT256 17 x 17 mm		173	173	173*				
FG320 23 x 23 mm			221	221*	221*			
FG456 23 x 23 mm			264	333*	333*			
FG676 27 x 27 mm				391	487*	489	489	489
FG900 31 x 31 mm						565	633*	633
FG1156 35 x 35 mm							712	784

* Also available in Spartan-3L

** See Package and I/O Offerings for Spartan-3L maximum values

Take the Next Step

Visit our website at www.xilinx.com/spartan3 or call your local sales office or distributor for more information about Spartan-3 FPGAs. To start your FPGA design immediately, check out Spartan-3 development systems at www.xilinx.com/s3boards.

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