SPARTAN™-3
FPGA

The Spartan™-3 Platform
World's Lowest Cost FPGAs

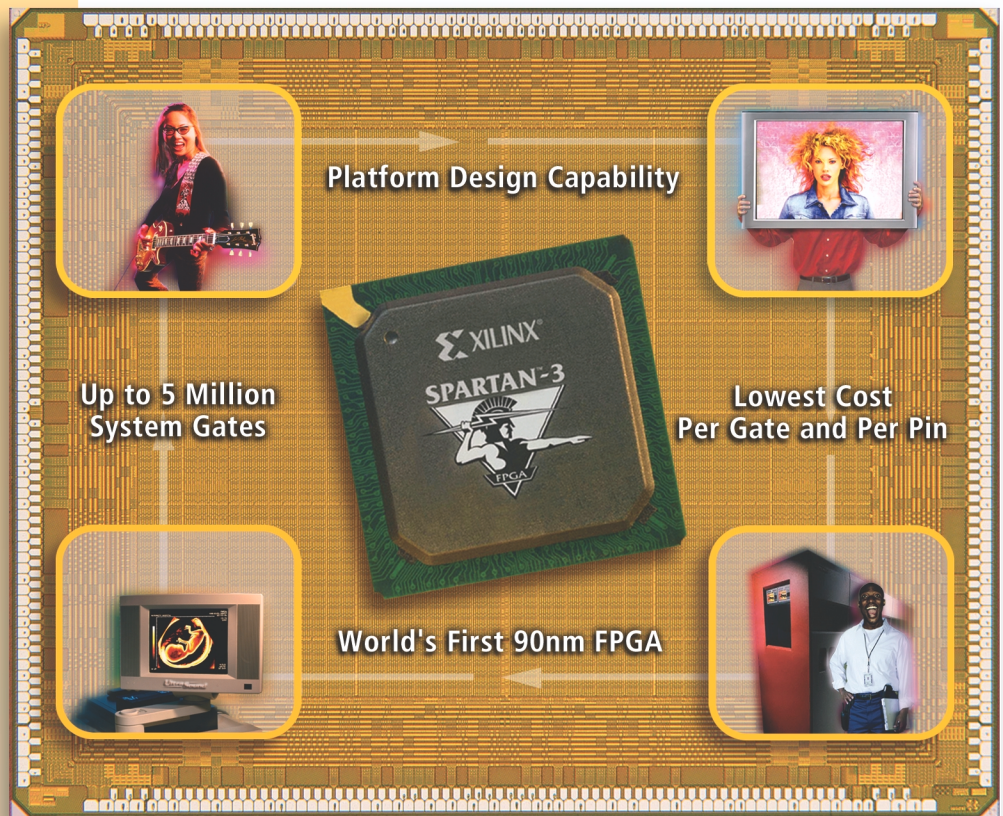Platform Design Capability

Up to 5 Million System Gates

Lowest Cost Per Gate and Per Pin

World's First 90nm FPGA

You want the lowest cost solution with the fastest time to market. ASICs are in decline because of high development costs and lengthy design cycles.

Xilinx redefines the logic landscape with the Spartan™-3 Platform FPGA family. Built on four generations of proven Spartan success in high volume applications, Spartan-3 FPGAs use 90nm technology to give you up to 5 million system gates with the lowest cost per gate and per I/O of any FPGA. You also get a platform with the capability to tackle tough connectivity, DSP, and embedded processing designs. Use our industry-leading ISE software tools and proven IP cores to develop your design quickly, and the ChipScope™ Pro logic analyzer to debug it.

With Spartan-3 FPGA cost advantages, you can now use FPGAs in production at much higher volumes than ever before.

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

Xilinx, the leader in programmable logic, once again redefines the FPGA. The Spartan-3 FPGA family, built on the success of four previous generations of low-cost Spartan FPGAs, offers a platform with a wide range of I/O and density options. Get fast time to market and low unit cost while avoiding long development time and high NRE cost 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/O pins – with package and density migration capability
  - Digital clock management – solves high speed design challenges
  - Embedded 18x18 multipliers-to support high-performance DSP applications

• Industry-Leading Design Tools and IP
  - ISE design tools that shorten design and verification time
  - ChipScope Pro system debugging environment
  - DSP development tools from The MathWorks and Cadence
  - Wide range of soft cores, including PCI and high-speed differential signaling with LVDS
  - Forward error correction and high-performance interfaces
  - 32-bit MicroBlaze™ and 8-bit PicoBlaze™ soft processors
  - IP migration capability from previous-generation Spartan designs

• Lowest Cost Configuration Solution
  - Platform Flash PROMS deliver in-system programmable configuration for under $1 per Mbit
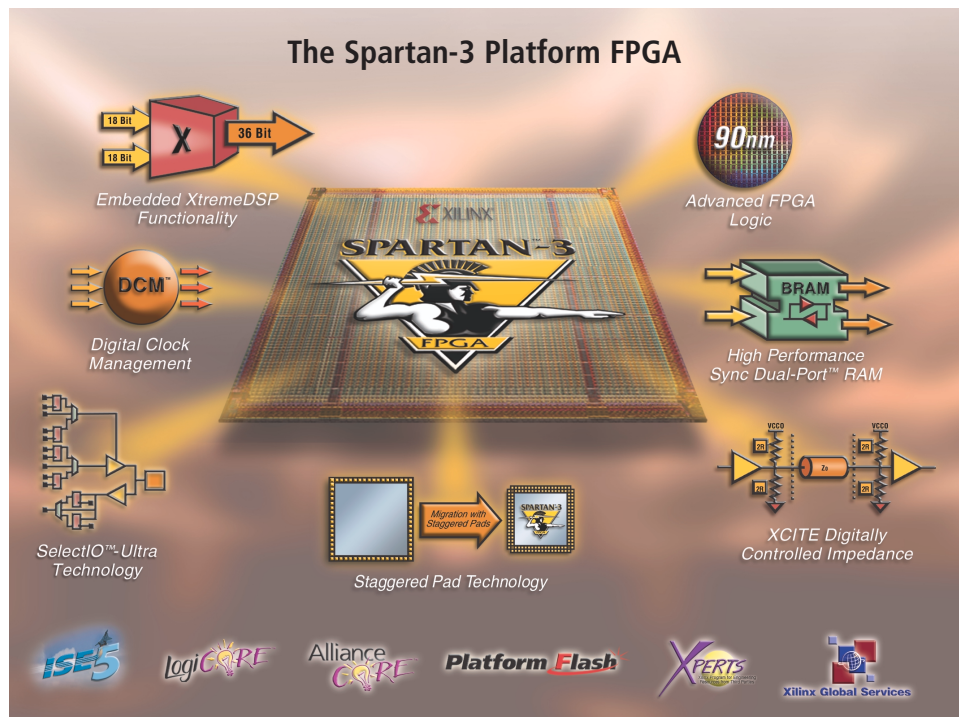
XILINX®

Optimize Cost

The Spartan-3 family, built on advanced 90 nm technology, is the lowest-cost logic solution for a wide range of applications. Numerous soft processors allow you to increase design integration, while Block RAM and embedded 18x18 multipliers help you create high-performance DSP applications.

Reduce Design Risk

You can take advantage of Xilinx Global Services to get the support you need, when you need it. Services include live and on-line education, telephone hotline support, personalized on-line information, on-site consulting, and Xilinx Design Services.

Maintain Existing IP

The Spartan-3 FPGA family is based on existing Xilinx architectures, you can easily use your existing IP from previous Spartan architectures to help you finish even faster.

The Spartan-3 Platform FPGA

Embedded XtremeDSP Functionality

90nm Advanced FPGA Logic

Digital Clock Management

BRAM High Performance Sync Dual-Port™ RAM

SelectIO™ Ultra Technology

Staggered Pad Technology

XCITE Digitally Controlled Impedance

ISE5   LogiCORE   AllianceCORE   Platform Flash   Xperts   Xilinx Global Services

Take the Next Step

Visit our website *www.xilinx.com/spartan3* for more information or call your local sales office or distributor for a presentation and software demonstration.

The Spartan-3 FPGA Family

Device	XC3S50	XC3S200	XC3S400	XC3S1000	XC3S1500	XC3S2000	XC3S4000	XC3S5000
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
18 x 18 Multipliers	4	12	16	24	32	40	96	104
Block RAM Blocks	4	12	16	24	32	40	96	104
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
I/O Standards	23	23	23	23	23	23	23	23
Max Differential I/O Pairs	56	76	116	175	221	270	312	344
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				
FG456	23 X 23 mm			264	333	333			
FG676	27 X 27 mm				391	487	489		
FG900	31 X 31 mm						565	633	633
FG1156	35 X 35 mm							712	784

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The Programmable Logic Company℠

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