



Virtex-II Pro™ FPGAs

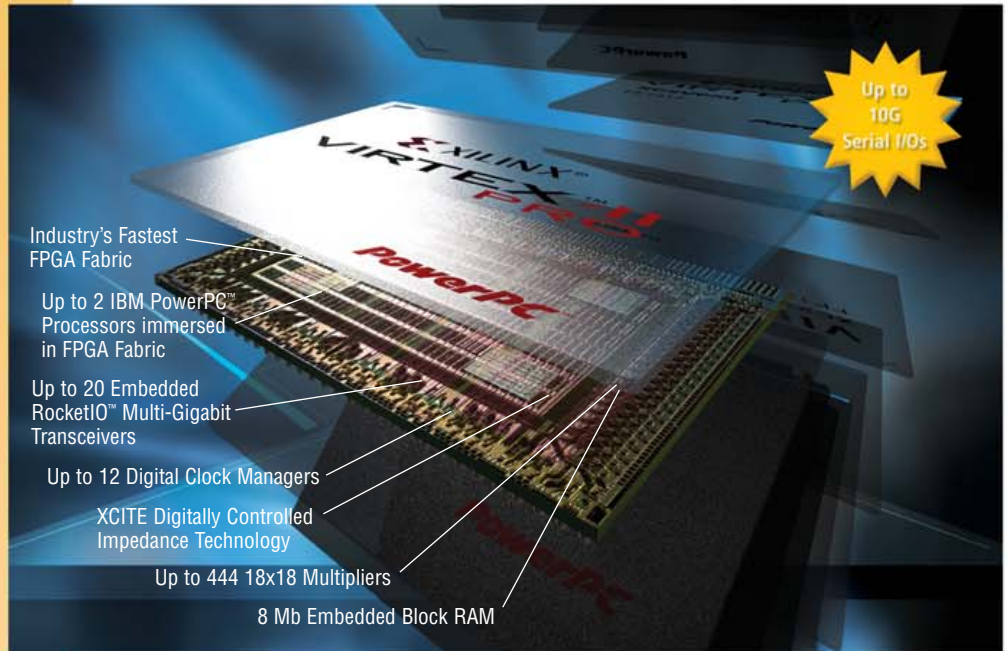
The Highest System Performance

The Lowest System Cost

Today's high performance systems use complex logic, processors, and third-party IP, plus they require support for multiple connectivity standards including gigabit-per-second serial I/O. These systems must be fast, flexible, and low cost to meet the increasing demands of customers. That's why you need a design platform that you can use for a wide range of high-density, high-performance applications – a platform designed to minimize your time, effort, and cost.

Virtex-II Pro™ FPGAs deliver the fastest programmable logic available, with the advanced features you need, the highest logic density you can get, and more block RAM than any competing product.

This is the ultimate connectivity platform, offering a wide range of single-ended and differential I/O options, as well as multi-gigabit serial, now supporting up to 10Gbps transceivers. Plus, you get single or multiple IBM PowerPC cores for embedded applications. There is no better solution for fast, flexible, designs, delivering the lowest possible system cost.



The Most Powerful FPGA in the Industry

Because all the critical system components are located on one Virtex-II Pro device, you gain a significant performance and productivity advantage, and an outstanding value. The Virtex-II Pro solution delivers:

- **Superior Programmable Logic**
 - The highest density and highest performance programmable logic
 - Built on a 0.13-micron, 9-layer copper process technology
- **Advanced System Features**
 - 8 Mbits of embedded Block RAM and 1.4 Mbits of distributed RAM
 - Up to 12 Digital Clock Managers for on-chip and off-chip system clocks
 - XCITE I/O impedance technology for improved signal integrity and reduced board space
- **Ultimate Connectivity**
 - 622 Mbps to 10.3125 Gbps serial transceivers – in Virtex-II Pro & Virtex-II Pro X
 - Complete parallel connectivity using 28 single-ended and differential electrical I/O standards
 - Bridge from existing and emerging I/O standards to maximize system performance
- **TeraMAC/s DSP Performance**
 - Up to 444 18X18 embedded multipliers
 - Extensive library of DSP algorithms and tools
- **Advanced Processing**
 - Multiple 400MHz, 600+DMIPS embedded IBM PowerPC 405 Processor hard cores
 - Industry's fastest soft processing solution – the Xilinx MicroBlaze™ processor
 - Easy to use embedded development tools and RTOS support
- **Complete design solutions**
 - Easy-to-use, high-performance design tools and kits deliver best quality-of-results
 - Broad library of pre-verified intellectual property cores saves development time
 - Entry-level to advanced education courses makes it easy to get started
 - Award winning 24x7 technical support, online and phone hotline, minimizes design risk
 - Extensive design expertise and design services available when you need it
 - Broad partnership programs ensure your access to industry leading solutions



Virtex-II Pro – Lower Cost and Easier to Use

In addition to the most advanced features and the highest performance you can get, Virtex-II Pro FPGAs give you:

- **Built-in cost reduction path** – Reduce unit costs up to 80% for volume applications, with the Virtex-II Pro EasyPath solution.
- **Industry-Leading Design Tools** – Increase your productivity with ISE logic design suite plus a robust IP library of over 200 cores from Xilinx and our partners.
- **Realtime Debugging** – You can debug your design at full hardware speeds while you continue to optimize your hardware design, using ChipScope™ Pro.
- **Education and support** – Global training classes for beginners and advanced users, industry leading support, and design services.

Take the Next Step

Visit our website or call your local sales representative for more information.

For the latest information on the Virtex-II Pro family of FPGAs go to www.xilinx.com/virtex2pro, www.xilinx.com/virtex2prox



For the latest information on the Virtex-II Pro EasyPath solution, go to www.xilinx.com/easypath



The Virtex-II Pro Family

Device	2VP2	2VP4	2VP7	2VP20	2VPX20	2VP30	2VP40	2VP50	2VP70	2VPX70	2VP100
EasyPath Cost Reduction						XCE2VP30	XCE2VP40	XCE2VP50	XCE2VP70	XCE2VPX70	XCE2VP100
Logic Cells	3,168	6,768	11,088	20,880	22,032	30,816	43,632	53,136	74,448	74,448	99,216
BRAM (Kbits)	216	504	792	1,584	1,584	2,448	3,456	4,176	5,904	5,544	7,992
PowerPC™ Processors	0	1	1	2	1	2	2	2	2	2	2
3.125Gbps RocketIO Transceivers	4	4	8	8	0	8	12	16	20	0	20
10.3125Gbps RocketIO X Transceivers	0	0	0	0	8	0	0	0	0	20	0
Multiplier Blocks	12	28	44	88	88	136	192	232	328	308	444
DCMs	4	4	4	8	8	8	8	8	8	8	12
Config (Mbits)	1.31	3.01	4.49	8.21	8.21	11.36	15.56	19.02	26.1	26.1	33.65
Max SelectIO	204	348	396	564	556	644	804	852	996	992	1164
Package	SelectIO										
FG256	140	140	140								
FG456	248	156	248	248							
FG676	416			404		416	416				
FF672	396	204	348	396							
FF896	556			396	556	552	556				
FF1152	692			564		644	692	692			
FF1148*	812						804	812			
FF1517	964							852	964		
FF1704	1040								996	992	1040
FF1696*	1200										1164

*Note: FF1148 and FF1696 packages support higher user I/O and zero RocketIO™ Multi-Gigabit Transceivers

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