



Xilinx Platform Newsletter, September 2007

Top Story

Free Tool Simplifies Power Budgeting for FPGA Design

Get the information you need early in your design cycle. The XPower Estimator (XPE) enables you to quickly calculate FPGA power consumption projections based on the parameters of your design.

Device		Block Summary		Voltage Source Summary				
Part	Package	Block	Power (W)	Source	Voltage	Power (W)	Icc (A)	Iccq (A)
XCV500	FF324	CLOCK	0.000	Vccint	1.00	0.195	0.000	0.195
		LOGIC	0.000	Vccaux	2.5	0.095	0.000	0.038
		ID	0.000	Vcca 3.3	3.3	0.000	0.000	0.000
		BRAM	0.000	Vcca 2.5	2.5	0.000	0.000	0.000
		DCM	0.000	Vcca 1.8	1.8	0.000	0.000	0.000
		PLL	0.000	Vcca 1.5	1.5	0.000	0.000	0.000
		DSP	0.000	Vcca 1.2	1.2	0.000	0.000	0.000
		GTP	N/A	MSTAVcc	1	0.000	0.000	0.000
		TEMAC	N/A	MSTAVccqs	1.2	0.000	0.000	0.000
		PCIE	N/A	MSTAVvms	1.2	0.000	0.000	0.000
				MSTAVvms	1.2	0.000	0.000	0.000

Thermal Information		Power Summary	
Ambient Temp (°C)	50.0	Quiescent (W)	0.290
Airflow (LFM)	250	Dynamic (W)	0.000
Heat Sink	None	Total (W)	0.290
Custom GSA (°C/W)			
Board Selection	Medium (12"x10")		
# of Board Layers	8 to 15		
Custom GUB (°C/W)	1.4		
Board Temperature			
Effective GSA (°C/W)	6.5		
Max Ambient (°C)	83.2		
Junction Temp (°C)	51.8		

- Download your free copy of the XPE tool at www.xilinx.com/power
- View the [new online demo](#) to learn how to achieve accurate power estimates for Virtex™-5 FPGAs



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Quick Update

[Xilinx Serial Connectivity Seminars 2007](#)

Coming soon to a city near you: a FREE all-day event sponsored by Xilinx, with Agilent Technologies, Jungo, Linear Technology, Mentor Graphics, and Nu Horizons Electronics. Register today at www.xilinx.com/serialseminar.

[Dr. Howard Johnson Talks About Virtex-5 FPGAs](#)

In this new video series the acclaimed design consultant and signal integrity expert delivers an introduction to the the Virtex-5 family and explores how their system-level capabilities address design challenges.

On-demand Webcast Seminars:

- [Accelerate Delivery of Built-in Ethernet Solutions Using Xilinx FPGAs and Gigabit Ethernet Development Kit](#)
- [Discover How to Design With and Take Advantage of the PCI Express® Hard Block in the Virtex-5 FPGA](#)

- [Cost Effective Digital Radio Processing Solutions Using New Spartan-DSP and Virtex-5 SXT](#)

Development Tools

Free Downloadable Tools Evaluation Lets You Start Your FPGA Design Today!

ISE™ Foundation™ software integrates everything you need for designing with Xilinx FPGA and CPLD products. Evaluation installations are now available as a free download.

Download the [ISE Foundation 9.2i Evaluation](#) for these performance and productivity boosting benefits:

- Timing closure without floorplanning
- Improved pre-routing delay estimation enabling upstream tools to optimize true critical path
- Leveraging of the Virtex-5 diagonally symmetric interconnect to minimize routing delay
- Support for 6LUT architecture for improved performance, power, and utilization
- Physical synthesis optimizations

Design Tips

[Accelerate System Performance with Hybrid Multiprocessing and FPGAs](#)

Multiprocessing is becoming a key differentiator for FPGA-based processor architectures

[How to Support Multiple SD Devices Using CPLDs](#)

This tutorial details a scalable, auto-sensing bidirectional multiplexer-based CPLD-based design that allows host devices to support any number of SD devices.

Education

[Titanium Dedicated Engineering](#)

Receive expert assistance to help you partition your system for maximum performance, integrate custom IP with embedded PowerPC™ and/or MicroBlaze™ processors, and accelerate debug and verification.

XES: Xilinx Education Services

- [Designing a LogiCORE™-based PCI Express System](#)

Learn how to complete designs faster and more easily when building PCI Express interfaces when using IP from Xilinx.

- [Designing with PlanAhead™ Software](#)

This course focuses on how you can increase design performance and achieve repeatable results with the PlanAhead™ software tool.

- [Introduction to AccelDSP™ Synthesis Tool](#)

Learn how to synthesize an algorithm written in MATLAB® into a design optimized for a Xilinx FPGA. We cover how to use the floating-to-fixed point and design exploration features of the AccelDSP Synthesis Tool to achieve maximum results

- ... and much more. [Visit Xilinx Education Services \(XES\) to get details and register.](#)

Partner Spotlight

[Nu Horizons XpressTrack Customer Workshops](#)

The fall series of customer workshops includes classes on MicroBlaze and embedded PowerPC design, introduction to serial communications, and fundamentals of FPGAs.

[New Spartan-3A Display Solutions Kit](#)

Designed specifically for memory interfaces and DVI applications, this Inrevium board is available through Tokyo Electron Device and Nu Horizons.

[Accelerate DDR2 Interface Development with Virtex-5 FPGAs](#)

Available with Virtex-5 LX110, LX220, and LX330 FPGAs, this Inrevium board enables rapid evaluation of DDR2, DVI, and Cameralink interfaces.

[New Synplicity Techcast: ESL Synthesis Techniques For DSP Algorithms](#)

Learn about high-level ESL synthesis concepts to quickly create algorithms and optimize them for FPGA and ASIC implementation. [View the Techcast.](#)

[OBSAI/CPRI Development Platform](#)

Incorporating the new Xilinx OBSAI RP3/RP3-01 and CPRI reference designs, the Lyrtech OBSAI/CPRI Virtex-4 Development Platform allows users to create flexible CPRI and OBSAI RP3/RP3-01-compatible data sources, sinks, and bus translation bridges for serial RapidIO and Gigabit Ethernet interfaces.

[ASIC/SOC AMBA Prototyping Platform](#)

Offered by HiTech Global, the V5IP-7000 base board is populated with one Xilinx Virtex-5 LX330 FPGA, supporting peripherals, IO, and power distribution.

In the Press

Customers Building Products with Virtex FPGAs

[Samsung Picks Xilinx Processors For Digital Video Surveillance System](#)

Samsung Electronics will use the Xilinx Spartan-3E FPGA and MicroBlaze soft processor in its latest digital video surveillance system, in which the components will play a vital role in both the digital video recorder (DVR) and dome camera.

Partner Solutions for Virtex Design

[C-to-FPGA Compiler Adds Six New Xilinx Virtex-5 Computing Platforms](#)

The C-to-FPGA compiler from Impulse now supports six new Xilinx Virtex-5 FPGA-based platforms for embedded and high performance computing.

Virtex Design Solutions from Xilinx

[Free Reference Design Implements DDR2-400 for Spartan-3 FPGAs](#)

The 400 Mbps DDR2 memory interface reference design, including data capture circuitry and memory controller, is fully verified in hardware using Xilinx Spartan-3A FPGA high speed grade (-5) devices.

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