

INSIDERS' GUIDE:

FPGAs, Tools, and Boards



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Appendix D: FPGA Tool Vendors

FPGA design is not easy, and so there are many companies that provide design tools to ease your design. This Appendix identifies the primary FPGA tools vendors with links to their websites for more information. Note: Rating information is a very rough indication of company size, frequency of news updates, and relevance to practical embedded systems designers.

APPENDIX D: FPGA TOOL VENDORS

Agility Design Solutions Inc.

Agility speeds the development of signal processing algorithms offering complete solutions for algorithm acceleration, prototyping and implementation in both software and hardware. The solutions include Agility's unique software technologies for MATLAB to C and C to FPGA synthesis and a rich portfolio of synthesizable algorithmic functions and FPGA hardware platforms. Agility completes the solutions with services delivered by a team of...

Web. <http://www.agilityds.com/>

Score. 3

Aldec Inc.

Industry-leader in electronic design and offers a patented technology suite including: design entry, HDL simulators, hardware-assisted verification, design rule checking, co-simulation, co-verification, IP Cores, DO-254 compliance tool sets and engineering specialty solutions. Aldec tools handle: Verilog, SystemVerilog, VHDL, SystemC, Assertions, ultra-fast debugging, code coverage and linting. [FPGA, ASIC, CPLD]

Web. <http://www.aldec.com/>

Score. 5

Altium

Altium is the industry's leading developer of unified electronic product development solutions that enable all electronic engineers, and their organizations, take maximum advantage of emerging design technologies to bring smarter products to market faster. Founded in 1985, Altium is headquartered in Sydney, Australia with sales offices in the United States, Europe, Japan, China, and resellers in all other major markets. [FPGA, PCB]

Web. <http://www.altium.com/>

Score. 5

Blue Pearl Software, Inc.

Innovative, high performance tools that generate accurate timing exception constraints automatically, before synthesis, validate existing timing exceptions and find functional problems in RTL code. Cobalt Timing Constraint Generation enables faster timing closure for complex chips. [ASIC, FPGA, EDA, RTL, Verilog, Timing, Linting]

Web. <http://www.bluepearlsoftware.com/>

Score. 3

Byte Paradigm

Provides PC-based instruments to test and debug electronic and embedded systems. Byte Paradigm focuses at providing hardware tools that enhance the engineer's productivity for system design, prototype functional validation and characterization and in-the-field support. Byte Paradigm products range features pattern generators, logic/state analyzers, protocol exercisers and analyzers, with a common target: offer flexible... [FPGA]

Web. <http://www.byteparadigm.com/>

Score. 3

Concept Engineering

Concept Engineering was, founded in 1990 to develop and market innovative schematic generation and viewing technology for use with logic synthesis, verification, test automation and physical design tools. The company's customers are primarily original equipment EDA tool manufacturers (OEMs), in-house CAD tool developers, semiconductor companies, IC/ASIC designers and FPGA designers. Concept Engineering's products deliver the fastest, highest...

Web. <http://www.concept.de/>

Score. 3

CriticalBlue

CriticalBlue delivers Cascade, an embedded system design tool that synthesizes optimized programmable coprocessors to accelerate embedded software within FPGAs, structured ASICs and platform SoCs. Cascade analyzes executable software code to identify functions to be offloaded from the main processor onto a coprocessor.

Web. <http://www.criticalblue.com/>

Score. 3

Dynalith Systems Co., Ltd.

Dynalith Systems provides innovative verification solutions that include functional & behavioral level verification, cost-effective HW accelerator, and virtual prototyping: iNTUITION for prototyping and acceleration, iPROVE for acceleration and virtual prototyping, and iTUTOR and iNCITE for education/training. With these solutions, design in FPGA can be run along with HDL simulator, high-level language (C/C++, SystemC, Matlab, Simulink)...

Web. <http://www.dynalith.com/>

Score. 3

EVE (Emulation and Verification Engineering)

EVE offers ZeBu, a high-performance verification platform for ASIC, FPGA, IP, and Embedded Systems. Designed around a pioneering hardware-assisted architecture to debug hardware and validate software of SoC designs of 1 to 100 millions ASIC gates, ZeBu supports interactive read/write internal access to the design without compiling internal probes, co-verification with a HDL/C/C++ test benches at signal and transaction level up to 12MHz. . .

Web. <http://www.eve-team.com/>

Score. 3

GateRocket, Inc.

GateRocket offers the industry's first Device Native verification solution for Field Programmable Gate Arrays (FPGAs). This product can cut in half the time it takes to develop the electronic products that enrich our lives every day. As FPGAs become larger and ever more complex, electronic design engineers face a crisis in their inability to adequately verify and test these advanced designs. GateRocket provides a new, Device Native...

Web. <http://www.gaterocket.com/>

Score. 3

Impulse Accelerated Technologies, Inc.

Impulse leads the market in C-to-FPGA tools and development services. Compatible with standard C environments, Impulse C allows software developers to rapidly move C applications to FPGA coprocessors, including partitioning, optimization, and FPGA hardware generation. Interconnections between FPGA coprocessors and host processors are generated automatically for individual FPGAs, FPGA/uP coprocessing and clusters.

Web. <http://www.impulsec.com/>

Score. 3

Mentor Graphics Corporation

Mentor Graphics is a technology leader in electronic design automation (EDA), providing software and hardware design solutions that enable companies to develop better electronic products faster and more cost-effectively. The company offers innovative products and solutions that help engineers overcome the design challenges they face in the increasingly complex worlds of board and chip design. [FPGA, ASIC, Embedded, RTOS, PCB]

Web. <http://www.mentor.com/>

Score. 5

Mirabilis Design

VisualSim enables quick performance analysis, power evaluation and architecture exploration for the design of electronics and real-time software. VisualSim is used for designing Large Complex Systems, ICs, Processors, FPGA, Real-Time Software and Network Systems. VisualSim is a graphical modeling and simulation environment. Models of the proposed system are constructed by engineers in VisualSim using parameterized modeling library and...

Web. <http://www.mirabilisdesign.com/>

Score. 3

National Instruments

National Instruments builds on industry-standard technology to create real-time, embedded solutions. NI customers can deterministically acquire data and then analyze and present their results across their enterprise or across the Internet using the networked measurement capabilities of NI LabVIEW, a leading graphical programming environment for measurement and automation applications. [data acquisition, test and measurement, FPGA]

Web. <http://www.ni.com/>

Score. 5

Orange Tree Technologies Ltd

Orange Tree Technologies are leaders in hardware and software products and design services for the high performance embedded computing markets. We are specialists in high speed digital design including the use of programmable logic (FPGAs and CPLDs) for digital signal processing. [VHDL, Verilog, Xilinx, PCI, PMC and USB]

Web. <http://www.orangetreetech.com/>

Score. 3

Samplify Systems

Samplify's high-speed FPGA-based compression dramatically improves system performance, reduces design complexity, and lowers system cost. Samplify's portfolio of patented algorithms compress and decompress signals in real time with lossless, fixed-rate, and fixed-quality options. Samplify breaks data transfer and storage bottlenecks across a wide-range of embedded applications including COTS, military, medical imaging, homeland security,...

Web. <http://www.samplify.com/>

Score. 3

Synfora

Synfora, Inc. is the premier provider of algorithmic synthesis tools used to design complex systems-on-chips (SoCs) and FPGAs. Synfora's technology helps to reduce design costs, dramatically speed chip development, and reduce time-to-market. Synfora serves customers worldwide in the audio, video, imaging, wireless, and security segments of the integrated circuit (IC) design market. The company's investors are ATA Ventures, Foundation...

Web. <http://www.synfora.com/>

Score. 3

Synplicity, Inc.

Innovative synthesis, verification, and physical implementation software solutions for designers of programmable logic, ASICs, Structured / Platform ASICs, and SoCs. The industry's most widely used FPGA synthesis solution, Synplify Pro uses a true timing-

driven approach to synthesis. All products support industry-standard design languages (VHDL and Verilog) and run on most popular computing platforms.

Web. <http://www.synplicity.com/>

Score. 4

Taray Inc.

Taray is an innovative provider of cutting edge EDA tools and design services to the FPGA design community. Since its inception in 2002, Taray has focused on solving FPGA and board design problems critical to the success of its customers. Its flagship Memory Interface Generator tool for FPGAs has been successfully integrated in the Xilinx [PCB Design]

Web. <http://www.tarayinc.com/>

Score. 3

Tektronix, Inc.

Tektronix, Inc. is a test, measurement and monitoring company providing measurement solutions to the telecommunications, computer and semiconductor industries worldwide. Tektronix enables its customers to design, build, deploy and manage next-generation global communications networks and Internet technologies. [oscilloscopes, probes, logic analyzers, mobile protocol analyzers, spectrum analyzers. FPGA test and debug]

Web. <http://www.tektronix.com/>

Score. 4

Temento Systems S.A.

Temento Systems S.A. is an innovative provider of Test, Debug and Verify Solutions for FPGA, System On Chip (SoC), Boards and Hardware Platforms. Temento Systems products are used by different functional teams (Development, Industrialization, Manufacturing, Maintenance) and in major companies from various industrial sectors worldwide : Semi-conductor, Telecommunications, Consumer Electronics, Computer, Automotive, Aerospace.

Web. <http://www.temento.com/>

Score. 3

The Mathworks

Developer of technical computing and Model-Based Design software for engineers and scientists in industry, government, and education. With an extensive product set based on MATLAB® and Simulink®, The MathWorks provides software and services to solve challenging problems and accelerate innovation in automotive, aerospace, communications, financial services, biotechnology, electronics, instrumentation, process, and other ... [FPGA, EDA]

Web. <http://www.mathworks.com/>

Score. 5

Trango Virtual Processors

Designed for security and real-time performance, TRANGO's secure virtualization solution enables silicon vendors and OEMs to securely and simultaneously run multiple operating systems and applications on both single and multi core platforms. This allows them to: Integrate a rich OS like Windows CE or Linux into existing products Isolate proprietary code and drivers from GPL licensed code Secure and certify critical components...

Web. <http://www.trango-vp.com/>

Score. 3