FPGA Design

FPGA Design of IC's and System Controllers

Are you a semiconductor company looking:

- To validate your design before incurring NREs?
- To develop hardware and firmware before your silicon is back from foundry?
- For a reference design to illustrate potential use of your new chip?

FPGA design tool

Are you an OEM seeking:

- To develop a system based on FPGAs?
- To reduce board cost by building a SoPC (System on Programmable Chip)?
- To replace discontinued ASICs?

Whether you require design services for ASIC prototyping, want to build a SoPC or re-target an obsolete part to FPGA, we are capable of handling your designs and SoC requirements. We can easily adapt to clients methodologies for different applications like DSP, Aerospace, Embedded Processor, Bus Interface, Memory, Peripherals, Cryptography, and ATE. We offer a capability of developing your innovative concept into an IC and a demonstration platform. We can fulfill all stages of your FPGA design needs from the initial specification to final test. In addition, we can develop a demonstration platform composed of hardware and software that can be used to test and characterise the performance of your concept. We offer:

- Concept and specifications
- Placement & Routing
- VHDL/Verilog testbench generation
- Static timing analysis
- VHDL/Verilog coding and verification
- Programming
- Top level simulation, verification
- Development of interface protocols
- Synthesis to target technology
- ATE testing
- IP selection, incl. 3rd Party IP integration
- On-site and off-site support
- Functional system verification

FPGA Prototyping and Evaluation - Proof of Concept

As the complexity of electronic systems grows, design verification is becoming more important. With the use of FPGA-based evaluation platforms, the verification complexity can be increased and the time required can be reduced. Furthermore, it allows you to start developing your software, giving you additional security and proof of concept. Through the combination of hardware and software, the overall system verification will be achieved in less time. The design and manufacturing of a board includes:

- Board definitions and specifications
- PCB assembly and verification
- Interface protocol design
- Hardware integration
- Component definitions and specifications
- Software implementation
- Schematic capture and netlist generation
- ATE testing and debugging
- Synthesis to target technology
- Assembly
- Bill of material generation

Contact enquiry (at) tyndall (dot) ie for all Business Development enquiries