

HARDWARE SOFTWARE CO – DESIGN LABORATORY

This Research Laboratory provides a complete platform for estimation and profiling of the resources required for heterogeneous application development in order to enhance the performance of the system. Generally, software is used for features and flexibility, while hardware is used for performance monitoring of any embedded system.

This lab is equipped with different Software and hardware modules namely Visual Studio 2008, Xilinx VIVADO, Xilinx ISE, Anvyl Spartan 6 Board, Spartan 3 FPGA Board, Virtex 5 Board and Vmod CAM and accessories, Xilinx Zynq-7000 SOC Video and Imaging Kit.

HARDWARE SOFTWARE CO – DESIGN LABORATORY (developed by Dr. Mahendra V under through Monograph funding)

Hardware Software Co-design Laboratory is established to design high speed systems which support hardware as well as software implementation of real time application. The lab is equipped with tool like XILINX VIVADO, XILINX ISE, XILINX EDK, XILINX SDK, XILINX SYSTEMGENERATOR and also XILINX VIRTEX 5, SPARTAN 6, SPARTAN 3 FPGA boards to support hardware implementation of the real time applications. The resources are made available for the faculty as well as to students for their research in the area of hardware software co-design, wherein students are exposed to learn the concepts of design high speed systems on FPGA.



Research work in this domain:

S.No	Working Topic	Faculty	Project	Funded by	Status
1	Establishment of Research Environment in the area of Hardware Software Co-design	PI: MahendraVucha	Monograph Project	Christ Funded 4.45 Lakhs Period:18 months	Completed

Facilities available

Software: Visual Studio 2008 (Platform for C++&.NET), Xilinx ISE, Xilinx VIVADO,
Total Users: 25

Hardware: Anvyl Spartan 6 Board, Spartan 3 FPGA Board, Virtex 5 Board and Vmod CAM and accessories, Xilinx Zynq-7000 SOC Video and Imaging Kit.

Anvyl Spartan 6 Board

The Anvyl FPGA development platform is a complete, ready-to-use digital circuit development platform based on a speed grade -3 Xilinx Spartan-6 FPGA.

Spartan 3 FPGA Board

The Spartan-3E Starter Board provides a powerful and highly advanced self-contained development platform for designs targeting the Spartan-3E FPGA from Xilinx.



Virtex 5 Board and Vmod CAM and accessories

System-on-a-chip design of Virtex 5 integrates an image flow processor and enables selectable output formats, scaling, and special effects. The integrated PLL (phase-locked loop) and microprocessor offer a flexible serial control interface.

Xilinx Zynq-7000 SOC Video and Imaging Kit

Digilent's Genesys board brings the Xilinx's Virtex-5 FPGA to a uncomplicated design platform. With gigabit ethernet, high-speed memory, high-resolution audio & video circuits and a host of USB connectivity options, the Genesys board includes proven circuits used in the most demanding designs.

