

Digital Circuit Implementation using FPGA

Data processing, system control and real-time monitoring have become indispensable to the modern industrial environment. Digital electronics has rendered the widely used analog controllers obsolete. Field programmable controllers like FPGA have introduced versatility and flexibility in control. While many of us may be stuck behind age-old microcontrollers, Currents provides you the opportunity to enter the digital era. Using FPGA, you can build your own digital circuits, you can simulate processors and interface memory devices to your ultimate control platform, that is FPGA.

This workshop is aimed at training you in basic digital electronics, encoding and decoding tasks using HDL, and bolstering you with the ability to implement digital blocks as well as processor blocks.

Participants will also learn memory device interfacing and file accessing. This workshop would also serve as valuable bridging course to those aiming towards specializing in digital electronics. Moreover, we would also equip you to with all necessary knowledge and materials to pursue projects in this field.

What can you expect from this workshop?

1. Introduction to basic electronics.
2. Encoding and Decoding using FPGA.
3. Basic HDL Coding Techniques
4. Learn Hardware Descriptive Language (HDL) using simulation software.
5. Virtex and Spartan FPGA HDL Coding Techniques
6. Digital circuits using FPGA.
7. Working with PlanAhead
8. Implementing designs with PlanAhead
9. Area Constraints using PlanAhead
10. Routing Problems and Routing Optimization using PlanAhead
11. Processor block implementation
12. Development of a control system using FPGA.

Duration: 14 hours spread over two Days.

Eligibility: Anyone interested can participate.

Fees: Rs. 1200/- per head.

Software will be given to all participants.

