

## Hardware Platforms

Zed-Board Zynq-7000 Development Board



### Features:

- Zynq-7000 EPP XC7Z020-CLG484
- Memory:
  - 512 MB DDR3
  - 256 Mb Quad-SPI Flash
  - 4 GB SD card
- Onboard USB-JTAG Programming
- 10/100/1000 Ethernet
- USB OTG 2.0 and USB-UART
- PS & PL I/O expansion (FMC, Pmod™, XADC)
- Multiple displays (1080p HDMI, 8-bit VGA, 128 x 32 OLED)
- I<sup>2</sup>S Audio CODEC

## Organizing Committee

### Patron

Prof. Sangram Mudali

*Director*

Prof. Geetika Mudali

*Placement Director*

### Convener

Prof. A K Panda

### Coordinator

Prof. M Suresh

### Co-coordinators

Mr. Mukesh Kumar Sukla

Mr. Mitu Baral

Mr Manoj Kumar Senapati

## Resource Persons

Ms.Sadiya, National Manager

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*For further enquires and communication*

Co-ordinator

National Workshop on Embedded Design Flow  
Using XILINX ZYNQ SoC

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## National Workshop on Embedded Design Flow using XILINX ZYNQ SOC

*April-9<sup>th</sup> & 10<sup>th</sup>, 2015*



Organized by



National Institute of Science & Technology  
Palur Hills, Berhampur, Odisha, INDIA.

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*In Association with*



## About NIST

The National Institute of Science & Technology was setup in 1996 and being managed by the SM Charitable Educational Trust with the aim to create Engineering minds capable of mastering the global challenges of tomorrow's technology by promoting higher technical education. It is approved by AICTE and affiliated to BPUT. Within a short span of time, NIST has produced 4 BOYSCAST scholars, 2 Full Bright scholars, 3 Samant Chandrashekhar Young Scientist Awardees and more than 20 Post-Doctorate scholarships have been awarded to the institute faculty. The institute received a number of grants from AICTE, DST, UGC, MHRD, CSIR and private IT companies for projects, Staff and Faculty Development Programmes. NIST has established TIFAC-CORE Center of Excellence in "3G/4G Communication Technologies" with a grant of about Rs.10 Core sponsored by DST & Industry Partners.

## About CoreEL Technologies

CoreEL Technologies (I) Pvt Ltd, CoreEL is a customer Application Specific Products & Solutions company offering Intellectual Property (IP) Hardware, Software & Engineering Services to customers, enabling them to Design Manufacture and Market world class electronic products. The portfolio of offerings include IP cores, System Design, Architecture, Validation, Sustenance, Prototype Manufacturing, Next-Gen products, Semiconductor solutions & Distribution of EDA Tools & COTS products. CoreEL; founded in 1999, an ISO 9001:2008 certified headquartered at Bangalore India.

## About CUP

CoreEL University Program provides Eco-System support to Indian Academia in Engineering Higher Education, in the field of Embedded Systems thereby

enabling the delivery of quality education. CoreEL achieves this by providing state of the art products from XILINX, MENTOR Graphics, MATLAB, ANSYS, VxWorks, Speedgoat (RCP, HIL simulation & development), PCB Design Tools from Mentor, VLSI, Embedded Students Training, Faculty Training etc., with multiyear application engineering support on these products, faculty & student training, providing industry specific inputs to update the curriculum & helping Universities set up Centers of Excellence in Embedded Systems.

## Eligibility

Faculty from AICTE approved Engineering Colleges with relevant background. Candidates from industries and R&D organizations will also be considered. PG students in related discipline are also eligible.

## Boarding and Lodging

Boarding and lodging will be provided freely during the program to the outside participants near gopalpur on request.

## Registration Details

Registration for the course can be made by sending the duly filled Registration form. Registration is free Working lunch and tea will be provided.

## How to Apply

- 1) Fill in the Online Registration Form available at [www.nist.edu/XUP](http://www.nist.edu/XUP).
- 2) Send the scanned copy of the registration form with a covering letter duly signed by the Principal/HoD of your institution to "[ncdc@nist.edu](mailto:ncdc@nist.edu)" on or before February 25, 2015.
- 3) Send original form to the coordinator before April 2, 2015.
- 4) You will receive a confirmation mail about your registration through mail before April 5, 2015.

## Important Dates

Last date for online Regd. : **March 25, 2015**

Intimation of selection : **April 5, 2015**

## Course Content

### Day 1:

- Introduction to Embedded System Design using Zynq
- **Lab 1: Simple Hardware Design**
  - Create a Vivado project and use IP Integrator to develop a basic embedded system for a target board.
- Zynq Architecture
- Extending the Embedded System into Programmable Logic
- **Lab 2: Adding Peripherals in Programmable Logic**
  - Extend the hardware system by adding AXI peripherals from the IP catalog.
- Adding Your Own IP Peripheral
- **Lab 3: Creating and Adding Your Own Custom IP**
  - Use the Manage IP feature of Vivado to create a custom IP and extend the system with the custom peripheral.

### Day 2:

- Software Development Environment
- **Lab 4: Writing Basic Software Applications**
  - Write a basic C application to access the peripherals.
- Software Development and Debugging
- **Lab5: Advanced software writing**
- **Lab 6: Cross debug**