

# ExpressWorkshop FPGA

## Programmable Logic made easy

FPGAs and CPLDs conquer more and more application areas. The Express workshop “Programmierbare Logik leicht gemacht” is specially designed for the designer having no or little knowledge of logic design using VHDL with FPGAs and CPLDs. Therefore deliberately omitted this workshop on detailed discussion of the description language VHDL but will focus primarily on the basic application of the language in practice. The XILINX authorized design and training center PLC2 is cooperating in XILINX Expert program and XILINX consumer education program. PLC2 is Specialist in XILINX technology for more than 15 years.

### Applicable technologies

Spartan-3 FPGAs

### Requirements

Basic knowledge of digital technology are helpful

### Duration and Cost

Duration: 1 day

Cost: € 180, – net per person, including detailed training material, drinks in the breaks and lunch.

## Agenda

### The architecture of the Spartan-3 FPGAs

- IOBs
- CLBs (LUT, SRL16, distributed RAM)
- BlockRAM
- SelectIO resource: IOB

### Introduction to the ISE design software

### Introduction to VHDL

- Levels of Abstraction
- Language Concept
- HDL Design Flow
- VHDL Simulation
- VHDL Synthesis

### Modeling with VHDL

- VHDL Design Units
- Entity
- Architecture
- Implementation options
- Synthese
- MAP
- Place & Route