XILINX XPERTS XILINX Program for Engineering Resources from Third Parties

PLC2 PROGRAMMABLE LOGIC COMPETENCE CENTER

ZYNQ

PowerWorkshop Professional ZYNQ-7000 SoC

The ZYNQ-7000 SoC technology of XILINX appeals a lot to the world of embedded applications.

This 5 day PowerWorkshop "Professional ZYNQ-7000 SoC" is designed for both, hard- and software designers who wish to successfully complete embedded projects with a ZYNQ-7000 device as their target hardware platform.

Besides an extensive description of the internal architecture, this class covers, amongst others, the handling of the XILINX development tool specific to the ZYNQ -7000 technology. Moreover, there's a detailed discussion of the ARM-centric processor system (PS) and its AXI based interconnect structures to the programmable logic (PL). Yet another topic covered is the creation and integration of your own AXI4 based peripheral component.

The second part of these 5 days covers mainly software aspects of the ZYNQ-7000 device such as creating a software project with the Software Development Kit (SDK). Further topics are e.g. interrupt handling, address management, creation of software drivers, debugging, profiling and the boot process of a ZYNQ-7000 system.

Like for all Workshops of the PowerWorkshop series, various exercises help to reinforce the learned concepts.

Applicable technologies

XILINX ZYNQ-7000 SoC

Requirements

Knowledge of VHDL and FPGA technology

Basic knowledge of the programming language C

Duration and Cost

Duration: 5 days

Cost: € 3.100,- net per person including detailed training material, drinks in the breaks and lunch

Agenda

- Embedded Design Overview
- IP Integrator and the PS Configuration Wizard
- Software Development Using SDK
- Introduction to AXI
- Interrupts
- Adding Hardware to an Embedded System
- Cortex-A9 Processor Basics
- Designing a Custom Peripheral
- Using the Create and Package IP Wizard to Build a Custom AXI Peripheral
- Bus Functional Model Simulation
- Software Platform Development
- Software Development Using SDK
- Writing Code in the XILINX Environment
- Address Management
- Software Interrupts
- Software Platform Download and Boot
- Application Debugging
- Application Profiling
- Writing a Custom Device Driver
- Advanced Services and Operating Systems
- Project Management with the XILINX Design Tools