

PowerWorkshop

Professional PCI for XILINX FPGAs

Like the other PLC2 PowerWorkshops, “PCI Professional for XILINX FPGAs” has a high practical content. It is designed for FPGA developers who want to implement PCI interfaces on the module. The PCI LogiCore cell from XILINX is a completely verified IP cell with guaranteed function and timing behavior, which allows the user new possibilities for the implementation of PCI interfaces. After a comprehensive introduction to the PCI standard, you will learn how target/initiator implementations are realized with the PCI LogiCore cell. In the broad-based practical section, you will then develop complex PCI applications on your own and verify them after subsequent implementation by porting them onto real systems/PCI test boards. As well as the test board, each participant will be given all the necessary equipment such as a development computer with design software, as well as the nec-

essary PCI software drivers for verifying the correct functioning of the module. This gives them the best possible idea of the real and practical job of the developer. Naturally you can also work on concrete assignments as part of the practical section.

Applicable technologies

All XILINX FPGA technologies available for the PCI core cells

Requirements

Detailed knowledge of the ISE design system Fundamentals VHDL

Duration and Cost

Duration: 5 days

Cost: € 2700, – net per person, including detailed training material, drinks in the breaks and lunch.

Agenda

PCI Fundamentals

- PCI Local Bus Architecture
- PCI Signals
- Basic Bus Operations
- PCI Addressing and PCI Bus Commands

Designing a PCI System

- Overview of XILINX PCI LogiCore Operations
- The User Configuration Module
- The User Application Interface
- Target / Initiator Transactions

Building FIFOs for XILINX PCI LogiCore

- Generic and special FIFOs

Designing a Target Engine

Designing an Initiator Engine

Part verification practice with communication / download in real Hardware

Development, implementation and verification communication Target a PCI interface.

Development, implementation and verification communication initiator of a PCI interface.