

Designing an Integrated PCI Express System

2 days - 14 hours

OBJECTIVES

- After completing this training, you will have the necessary skills to:
 - 1 - Define the considerations of a PCI-e system
 - 2 - Select the appropriate core for your application
 - 3 - Use the wizard to create a PCI-e design
 - 4 - Access reference material and debugging tools and identify advanced features

PREREQUISITES

- Experience with PCIe specification protocol
- Knowledge of VHDL or Verilog
- Some experience with AMD implementation tools
- Some experience with a simulation tool, preferably the Vivado™ simulator

CONCERNED PUBLIC

- Technicians and Engineers in Digital Electronics
- All our training courses are given at a distance and are accessible to people with reduced mobility.
- Our partner AGEFIPH accompanies us to implement the necessary adaptations related to your disability.



NOTES

- Release date: 03/08/2023

CHAPTERS

DAY 1

- Objective 1
 - Packet Formatting Details {Lecture}
 - Endpoint Application Considerations {Lecture}
 - Root Port Applications {Lecture}
- Objective 2
 - Xilinx PCI Express Solutions {Lecture}
 - Connecting Logic to the Core {Lecture}
 - PCIe Core Customization {Lecture, Lab}

- Objective 3
 - Simulating a PCIe System Design {Lecture, Lab}

DAY 2

- Objective 3
 - Design Implementation and PCIe Configuration {Lecture, Lab}
 - PCI Express in Embedded Systems {Lecture, Lab}
- Objective 4
 - Application Focus: DMA {Lecture, Lab}
 - Debugging and Compliance {Lecture}
 - Interrupts and Error Management {Lecture}

TEACHING METHODS

- Inter-company online training :
 - Presentation by Webex by Cisco



- Provision of course material in PDF format
- Labs on Cloud PC by RealVNC



METHODS OF MONITORING AND ASSESSMENT OF RESULTS

- Attendance sheet
- Evaluation questionnaire
- Evaluation sheet on:
 - Technical questionnaire
 - Result of the Practical Works
 - Validation of Objectives
- Presentation of a certificate with assessment of prior learning

SUPPORT

- Authorized Trainer Provider AMD : Engineer Electronics and Telecommunications ENSIL
 - Expert AMD FPGA - Language VHDL/Verilog - RTL Design
 - Expert AMD SoC & MPSoC - Language C/C++ - System Design
 - Expert DSP & AMD RFSoc - HLS - Matlab - Design DSP RF
 - Expert AMD Versal - AI Engines - Heterogenous System Architect

PC RECOMMENDED

- Software Configuration :
 - WebEx Cisco
 - RealVNC Viewer
- Hardware configuration:
 - Vitis 2022.2
 - Recent computer (i5 or i7)
 - OS Linux 64-bits (Windows 10 compatible)
 - At least 16GB RAM
 - Display resolution recommended 1920x1080

PARTNERS



Authorized Training Provider

CONTACT

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