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 – Heteregenous System Architect

PC RECOMMENDED

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

PARTNERS

AMD
Authorized Training Provider

CONTACT

Administratif / Formateur : (+33) 06 74 52 37 89
info@mvd-training.com

Qualiopi processus certifié
RÉPUBLIQUE FRANÇAISE
La certification a été délivrée au titre de la catégorie d'action suivante :
ACTIONS DE FORMATION