

## Course Description

Alveo™ accelerator cards can help you achieve the highest performance, accelerate any workload, and deploy solutions in the cloud or on premises for data center workloads.

The focus of this course is on:

- Identifying the available Alveo accelerator cards and their advantages as well as the available software solutions stack
- Learning how to run designs on Alveo Data Center accelerator cards using the Vitis™ unified software platform
- Reviewing the available partner solutions in the cloud and on premises

**Level** – FPGA 2

**Course Duration** – 1 day

**Course Part Number** – FPGA-ALVEO

**Who Should Attend?** – Anyone who needs to accelerate their software applications using FPGAs.

### Prerequisites

- Basic knowledge of AMD-Xilinx FPGA architecture
- Comfort with the C/C++ programming language

### Software Tools

- Vitis unified software platform

### Hardware

- Architecture: Alveo accelerator cards

After completing this comprehensive training, you will have the necessary skills to:

- Describe the Alveo Data Center accelerator cards and list the advantages of these cards and the available software solutions stack
- Explain how the Vitis unified software platform helps software developers to focus on applications
- Describe the elements of the development flow, such as software emulation, hardware emulation, and system run as well as debugging support for the host code and kernel code
- Describe the partner solutions available in the cloud and on premises for the Alveo Data Center accelerator cards

## Course Outline

- **Alveo Data Center Accelerator Cards Overview**  
Describes the Alveo Data Center accelerator cards and lists the advantages of these cards and the available software solutions stack. {Lecture}
- **Getting Started with Alveo Data Center Accelerator Cards**  
Describes the hardware and software installation procedures for the Alveo Data Center accelerator cards. {Lecture}
- **Introduction to the Vitis Unified Software Platform**  
Explains how software/hardware engineers and application developers can benefit from the Vitis unified software environment and OpenCL framework. {Lecture}
- **Vitis IDE Tool Overview**  
Describes the elements of the development flow, such as software emulation, hardware emulation, and system run as well as debugging support for the host code and kernel code. {Lecture}
- **Alveo Accelerator Card Ecosystem Partner Solutions**  
Describes the partner solutions available in the cloud and on premises for Alveo Data Center accelerator cards. {Lecture}

- **Xilinx Real-Time Video Server Appliance (Optional)**  
Describes the Real-Time Video Server appliance reference architectures, the optimized software solution stack for video applications, and various features offered by Alveo card live transcoding. {Lecture}