

FPGA-ALVEO (v1.0)

Course Specification

Course Description

Xilinx 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 live instructor led training (online or in person)

Price – \$800 or 8 Xilinx Training Credits

Course Part Number – FPGA-ALVEO

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

Prerequisites

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

Software Tools

- Vitis unified software platform

Hardware

- Architecture: Xilinx Alveo accelerator cards

Check with [Morgan Advanced Programmable Systems, Inc.](#) for the specifics of the in-class lab board or other customizations. 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 Xilinx 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}

Register Today

Morgan Advanced Programmable Systems, Inc. (Morgan A.P.S.) delivers public and private courses in locations throughout the central US region; including Iowa, Illinois, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin.

Visit morgan-aps.com/training, for full course schedule and training information.



You must have your tuition payment information available when you enroll. We accept credit cards (Visa, MasterCard, or American Express) as well as purchase orders and Xilinx training credits.

Student Cancellation Policy

- Student cancellations received more than 7 days before the first day of class are entitled to a 100% refund. Refunds will be processed within 14 days.
- Student cancellations received less than 7 days before the first day of class are entitled to a 100% credit toward a future class.
- Student cancellations must be sent [here](#).

Morgan A.P.S. Course Cancellation Policy

- We regret from time-to-time classes will need to be rescheduled or cancelled.
- In the event of cancellation, live on-line training may be offered as a substitute.
- Morgan A.P.S. may cancel a class up to 7 days before the scheduled start date of the class; all students will be entitled to a 100% refund.
- Under no circumstances is Morgan A.P.S. responsible or liable for travel, lodging or other incidental costs. Please be aware of this cancellation policy when making your arrangements.
- For additional information or to schedule a private class contact us [here](#).

Online training with real hardware

During the Covid-19 period, some companies do not allow their staff to participate in live in-person training.

- Consequently, Morgan Advanced Programmable Systems, Inc. has set up a training VPN where engineer participants can take classes online using the same computers and devCards used during in-person training.
- Even better, and upon request, you can use these computers after hours on training days to experiment with labs. This is not possible for in-person training.
- Additionally, just like in-person training, the laptops and devCards, tools, OS, and licensing are set up in advance.
- In some ways, live online-training is better than in-person...for example, you can grant the instructor permission to look at your



Vivado, PetaLinux terminal, or Vitis for extended periods of time if your lab is not going exactly as planned to a missed step.

- This is often more comfortable than two engineers crowding around a laptop screen.
- Taking remote training also allows you to learn some tips and tricks for working remote. Whether your devCard is in the lab down the hall, or across the world via VPN, you can control your Xilinx based device quickly and efficiently.