

Course Description

This one-day workshop introduces you to software design and development for Xilinx embedded processor systems. You will learn the basic tool use and concepts required for the software phase of the design cycle, after the hardware design is completed.

Only essential theory is introduced in order to lay a foundation for the material and topics covered in this workshop, which complements more detailed training found in subsequent Xilinx courses.

Level – Embedded Software 3

Course Duration – 1 day

Price – \$600 or 6 Xilinx Training Credits

Course Part Number – CUST-EMBD-SW-13

Who Should Attend? Software and hardware design engineers interested in system design and implementation, board support package creation, and software application development and debugging. This course is not for the hardware-only embedded designer.

Prerequisites

- C or C++ programming experience, including general debugging techniques
- Conceptual understanding of embedded processing systems including device drivers, interrupt routines, writing / modifying scripts, user applications, and boot loader operation

Software Tools

- Xilinx ISE® Design Suite: Embedded or System Edition 13.1

Hardware

- Architecture: Spartan®-6 and Virtex-6 FPGAs*
- Demo board: Spartan-6 FPGA SP605 or Virtex-6 FPGA ML605 board*

* This workshop focuses on the Spartan-6 and Virtex-6 architectures. Check with your local Authorized Training Provider for the specifics of the in-class lab board or other customizations.

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

- Implement an effective software design environment for a Xilinx embedded system using the Xilinx SDK tools
- Write a basic user application using the Xilinx Software Development Kit (SDK) and run it on the embedded system
- Use Xilinx debugger tools to troubleshoot user applications
- Apply software techniques to improve operability
- Reduce embedded software development time

Course Outline

- Course Agenda
- Software Platform Development
- Writing Code in the Xilinx Environment
- Software Development Using SDK
- **Lab 1(optional):** Application Development
- Address Management
- Interrupts
- Software Platform Download and Boot
- Application Debugging
- Writing a Custom Device Driver
- **Lab 2(optional):** Writing a Device Driver

Lab Descriptions

Labs for this workshop are optional and will be presented at the discretion of the instructor.

- **Lab 1(optional):** Application Development – Create a simple software application project from source files for a software loop-based stopwatch. Research hardware and software documentation to complete the application; then download it to hardware.
- **Lab 2(optional):** Writing a Device Driver – Create the skeleton driver framework, add an LCD device driver to the BSP, and verify proper device driver operation via a download to hardware test.

Register Today

To register for this course or to see a list of currently scheduled classes, please visit our secure [Online Store](#).

To request a public or private class, inquire about course offerings, or any other specific Xilinx training needs, please contact Faster Technology through one of the following:

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