PLC2 Embedded

Expert Zynq-7000 SoC

Online Live

Power Workshop

Applicable Technologies	Requirements	Contact
Xilinx® Zynq®-7000 SoC	Basic knowledge of the programming languages VHDL, C and the Zynq®-7000 SoC architecture	Michael Schwarz P. +49 7664 91313-15 E. info@plc2.de

Fee (net per person)	Inclusive	Duration
OL € 2,800	Training material	5 days
PW € 3,250	Plus beverages during breaks Lunch	5 days

Workshop

The Power Workshop »Expert Zynq-7000 SoC« builds on the Power Workshop »Professional Zynq-7000 SoC«. This allows the attendees to deepen and extend their knowledge of Zynq®-7000 SoC architecture.
This course discusses in particular the handling of the specific tools provided by Vivado® and Vitis™. Additionally, several important peripheral components available as part of the processor system (PS) will be explained in more detail. Furthermore, the usage of the processor cores in Zynq®-7000 devices is discussed in more depth. The configuration possibilities of a DMA constitute another major topic. During this five day's class, the contents are further reinforced by the means of various exercises.

There are both embedded hardware issues in the Vivado® tool flow and embedded software deals with issues in which participants already should demonstrate knowledge.

Due to accompanying exercises, the course offers in-depth and practice-oriented training. Attendees of the online live course will do the practical exercises in the afternoon on their own.

Agenda

01. Embedded systems development review
02. Zynq®-7000 SoC processing system overview
03. Debugging using the ChipScope pro analyzer
04. JTAG to AXI master debug IP transactions
05. Block RAM memory controllers
06. External memory controllers for static memory
07. Memory controllers for dynamic RAM
08. AXI streaming interface
09. System data movement: low latency and high bandwidth
10. Advanced processor configurations
11. Software boot and PL configuration
12. HDL system simulation with an embedded processor
13. Advanced boot methodology and boot details
14. Advanced Cortex®-A9 processor services
15. Advanced DMA controller configuration on the Zynq®-7000 SoC
16. High-speed peripheral configuration on the Zynq®-7000 SoC
17. Low-speed peripherals on the Zynq®-7000 SoC
18. Ethernet support using LwIP stack

ZYNQ

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