

# Designing with the Spartan-7 Family

Online Live

Workshop

Applicable Technologies	Requirements	Contact
Spartan®-7 FPGAs	Basic knowledge in VHDL Basic knowledge of digital design techniques	Michael Schwarz P. +49 7664 91313-15 E. info@plc2.de
Fee (net per person)	Inclusive	Duration
<b>OL</b> € 1,300	Training material	2 days
<b>WO</b> € 1,850	Plus Spartan®-7 evaluation board with sample solutions Beverages during breaks Lunch	2 days

## Workshop

The Xilinx® FPGA Spartan® family offers the most affordable price/performance ratio of Xilinx® FPGA technologies. It is therefore used in particular in products of high volume.

The FPGA design flow with the Vivado® tool suite, such as project management, HDL coding, and best methods are dealt with. Important topics such as synthesis and implementation options will also be discussed and how to analyze the project results.

The Spartan®-7 technology offers a performance increase of approximately 30 % and a power reduction of up to 50 % compared to the previous Spartan®-6 technology. This workshop will guide you through the architecture of the Spartan®-7 technology to allow the best optimization, whether resource-conserving or for high performances. The lab exercises are performed on the computer both simulatively and on the hardware.

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

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| <ul style="list-style-type: none"> <li>01. 7 series families architecture and Spartan®-7</li> <li>02. FPGA configuration</li> <li>03. CLB architecture</li> <li>04. Memory resources</li> <li>05. DSP resources</li> </ul> | <ul style="list-style-type: none"> <li>06. I/O resources</li> <li>07. Clock and reset management</li> <li>08. HDL coding techniques</li> <li>09. FPGA design flow using the Vivado® design suite</li> </ul> |
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