

PLECS WORKSHOP

Real-Time Simulation Using the PLECS RT Box
Plexim GmbH, April 8, 2020

08:30	Registration and Installation of Necessary Features
09:00	Overview and Introduction to RT Box Workflow using PLECS <ul style="list-style-type: none">▶ PLECS overview▶ Ideal switch concept▶ From PLECS offline models to RCP and HIL▶ Code Generation
09:30	RT Box Introductory Exercise <ul style="list-style-type: none">▶ PLECS RT Box features Exercise: Introductory exercise using I/O ports
10:00	RT Box Specs and Library Blocks
10:15	Break
10:30	Real-time Simulation of a Voltage Source Inverter (VSI) <ul style="list-style-type: none">▶ PLECS model creation using the target blocks library▶ Deployment on the RT Box Exercise: Voltage Source Inverter (VSI)
12:00	Lunch
13:00	Timing Overview and Step Size Selection <ul style="list-style-type: none">▶ Example of a Buck Converter using continuous, switched implementation▶ Step size and calculation time▶ Motivation for sub-cycle averaging using PWM capture module▶ Example of a Buck Converter with sub-cycle averaged configuration
13:45	Model Optimization <ul style="list-style-type: none">▶ Sub-cycle averaging and power modules▶ Model separation Exercise: Model splitting using a DTC example
15:00	Break
15:15	Virtual Prototyping <ul style="list-style-type: none">▶ Concept of virtual prototyping▶ Extension of VSI with controls Exercise: Virtual prototyping
16:00	Q&A - End of Workshop
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Location	Plexim GmbH, 3rd Floor, Zeppelin Wing, Technoparkstrasse 1, 8005 Zurich, Switzerland
Note	This workshop addresses to anyone who already has experience with the simulation software PLECS.