

COSIDE®

The Design Environment for Heterogeneous Systems



The design platform **COSIDE®** by COSEDA Technologies GmbH is the perfect tool to develop and design innovative heterogeneous hardware and software systems.

This software tool is the first commercial design environment based on the SystemC and SystemC AMS standards to model and simulate highly complex analog and digital systems.

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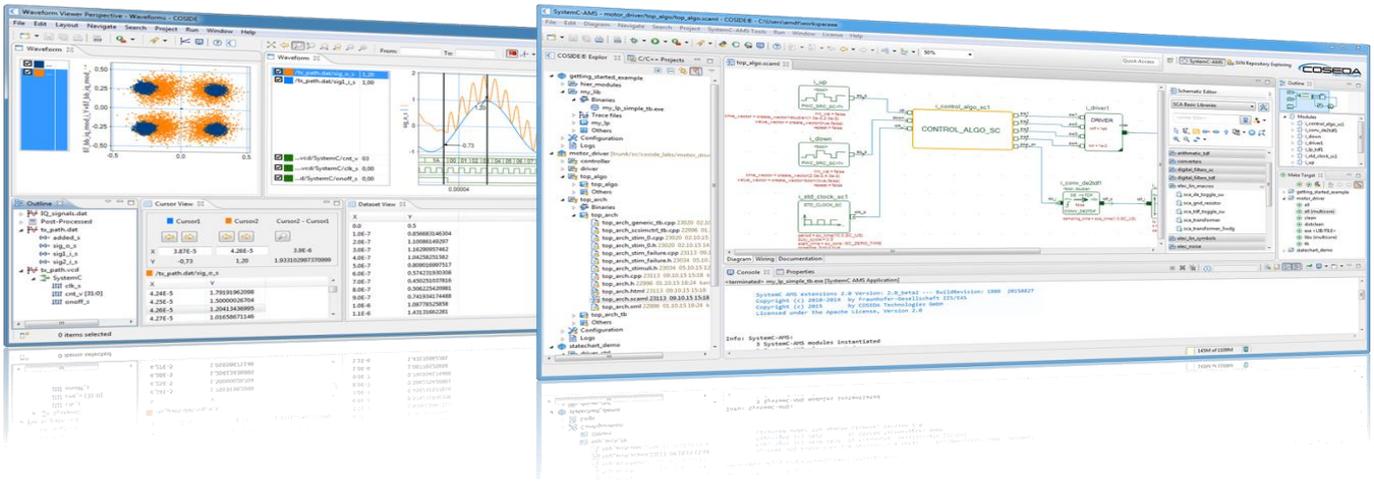
Closing the Gap

COSIDE® is closing the gap between the analog and digital world and between idea, concept and implementation in the design process of complex electronic systems within a heterogeneous environment. It allows a holistic design approach by considering the different worlds of development jointly. COSIDE® enables overall system modeling and virtual prototyping. COSIDE® makes innovative system level design, modeling and simulation as well as verification methods easily and efficiently available to our customers.

COSIDE® Enables You to:

- Easily create virtual prototypes for mixed signal domains

- Master state-of-the-art design methods
- Lower the entry level to sophisticated system-level technologies
- Efficiently model and verify your systems
- Discover critical design flaws at an early stage of the development cycle
- Handle even the largest and most complex systems
- Analyze and optimize your systems before the real hardware is available
- Improve the collaboration between your soft- and hardware teams
- Provide executable IP protected specifications to your customers
- Run an arbitrary number of license free simulations
- Exchange and reuse models
- Simulate extremely fast
- Increase the quality of your models
- Debug your HW/SW system as a whole



Current Applications

- Safety-critical automotive systems (TIER1 and TIER2)
- Communication and RF systems
- Control systems
- High-speed interfaces
- Smart cards

Main Features of COSIDE®

- Combination of analog and mixed-signal HW & SW
- Simple and fast model export to numerous simulation tools (Matlab, Cadence, Synopsys, etc.)
- Available for Windows as well as for Linux workstations
- Automated process of creating a virtual prototype
- System integration and block-level verification
- Easy-to-use schematic design entry
- Wide selection of predefined basic library elements
- Extremely fast simulation capabilities
- Support of an ISO 26262 conform design process
- Automated code generation
- Scriptable mixed signal wave viewer
- Regression testing
- Integrated version control
- Generation of IP protected customer models (black-box-executable model)
- Monte Carlo simulation on system-level

- UVM and assertion-based mixed-signal verification and regression test
- Formal verification
- SystemC AMS Spice integration
- IEEE 1666-2011 SystemC TLM support

Motivation for Using COSIDE®

Time and cost reductions combined with a significant increase of quality are the key benefits for users of the SystemC AMS platform. SystemC AMS in combination with COSIDE® is an approach for solving highly complex industrial tasks and academic problems.

- **Time to market reduction** is a significant competitive advantage over all industries. Parallel development of hard- and software components and a significant reduction of the simulation time are just two important reasons.
- **Cost reduction** is achieved as a result of a shorter development time and, moreover, in a simple PC setup in-stead of complex physical test equipment.
- **Quality improvement** is the result of verification enhancement. The new verification possibilities of software components, analog/mixed-signal systems and complex hard-/software systems are one of the greatest benefits of COSIDE®.

With COSEDA to System Level Design

Customer proximity is our strength. Our experienced service team is focused on your individual needs and can react with a maximum of flexibility. We accompany the entire implementation process of COSIDE® and offer additional service contracts and training possibilities to qualify designers for the latest solutions as well as for future tasks in system level design.

- **Conception and implementation:** The COSEDA Technologies Team demonstrates the performance of COSIDE® within the process of an evaluation to show its feasibility. We also provide comprehensive technical assistance to accompany the transfer and to guarantee an efficient implementation of COSIDE®.
- **After-sales service:** We offer individual and customer specific services. Our customers have the option to take advantage of technical support for new developments.
- **Trainings and workshops:** We offer additional workshops and custom trainings to qualify designers for COSIDE® as well as for future tasks in system level design.

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