



COSYM V2.3.0

Release Notes

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1 Introduction

1.1 Safety Notice

Please adhere to the ETAS Safety Advice for COSYM V2.3.0, which is available within the COSYM Product.

ETAS GmbH cannot be made liable for damage which is caused by incorrect use and not adhering to the safety instructions.



DANGER

Indicates an immediate danger with a high risk of death or serious injury, if not avoided.



WARNING

Indicates a possible danger with a high risk of death or (serious) injury, if not avoided.



CAUTION

Indicates a hazard with low risk of minor or moderate physical injury if not avoided



NOTE

Important hint for the user.

NOTICE

Indicates practices with risk of damage to property if not avoided.

1.2 Definitions and Abbreviations

DVD

Digital Versatile Disc

EHI

ETAS Help Desk International – This is an ETAS defect tracking tool.

Raise the defects on the ETAS support link:

https://www.etas.com/de/support/support_overview.php

FMU

Functional Mock-up Unit

LCO

LABCAR-OPERATOR

HW

Hardware

KIR

Known Issue Report – For severe Problem Reports, which occur after a re-release, ETAS has introduced the Known Issue Report to inform affected customer immediately. The current Known Issues of former versions can be found on the ETAS website: <http://www.etas.com/kir>

PR

Problem Report

RTPC

Real-time PC

SW

Software

VECU

Virtual Electronic Controlling Unit

1.3 Conventions

The following typographical conventions are used in this document:

<code>OCI_CANTxMessage msg0 =</code>	Code snippets are presented on a gray background and in the Courier font. Meaning and usage of each command are explained by means of comments. The comments are enclosed by the usual syntax for comments.
Choose File → Open .	Menu commands are shown in boldface.
Click OK .	Buttons are shown in boldface.
Press <ENTER>.	Keyboard commands are shown in angled brackets.
The "Open File" dialog box is displayed.	Names of program windows, dialog boxes, fields, etc. are shown in quotation marks.
Select the file <code>setup.exe</code>	Text in drop-down lists on the screen, program code, as well as path- and file names are shown in the Courier font.
A <i>distribution</i> is always a one-dimensional table of sample points.	General emphasis and new terms are set in italics.

1.4 User Documentation

The [COSYM V2.3.0 User's Guide](#) in PDF format can be found on the DVD.

1.5 References

[COSYM V2.3.0 Software Compatibility List](#)

[COSYM V2.3.0 Installation and Administration Guide](#)

[ETAS RTPC V6.4.1 User's Manual](#)

[ETAS RTPC V6.4.1 Release Notes](#)

[COSYM V2.3.0 CAR V1.0 HelpManual](#)

2 Product Definition

2.1 Functions at a Glance

Co-simulation of Systems (COSYM) is built to integrate and simulate mechatronic systems consisting of control as well as plant models. COSYM offers an integration and simulation platform for Hardware-in-the-Loop (HiL) and Software-in-the-Loop (SiL) with real-time and soft real-time simulation respectively. COSYM enables users to work with Graphical User Interface (GUI) which helps to interact with the Product efficiently. COSYM users can also work without GUI using the provided Application Programming Interfaces (APIs).

COSYM allows the user to integrate and simulate models based on the Functional Mock-up Interface (FMI) Version 2.0 for Co-Simulation. FMUs from 3rd party model development tools which are FMI compliant can be imported into a COSYM project. COSYM allows the integration and simulation of virtual ECUs (vECUs), along with plant models. The virtual ECUs supported by COSYM are generated from ETAS ISOLAR-EVE Product, which are imported and integrated in COSYM via the Functional Mock-up Interface (FMI) Standard.

ETAS Experiment Environment (ETAS EE) controls the simulation and the results are visualized using the various instruments, which are available in ETAS EE.

In HiL environment, a real-time simulation can be performed by running the supported ETAS-RTPC version on a VirtualBox or PXIe system.

As a precursor to HiL testing, SiL enables virtualization of not only the plant model but also the ECUs and buses. Therefore, even without any hardware, functionality of the closed-loop system can be evaluated.

COSYM-CAR enables you to provide the configuration details in the format compatible to COSYM to continue with the simulation workflow. COSYM delivers COSYM-CAR V1.0 along with COSYM deliverables as an add-on application. You can install it separately and use it to make the network and restbus configuration based on AUTOSAR.

2.2 General Description

2.2.1 System Prerequisites

The system prerequisites are documented in the [COSYM V2.3.0 User's Guide](#). Please refer to the section, "2.4 System Requirements".

2.2.2 Software Prerequisites

To install COSYM V2.3.0, Windows 10 (64-bit) is required. All additional dependencies are part of the COSYM V2.3.0 installer and are installed automatically. The interoperability of COSYM V2.3.0 with other applications is described in the [COSYM V2.3.0 User's Guide](#). Please refer to the section, "2.3.2 Interoperability with other Applications".

Additionally, COSYM supports Windows Server 2019 (64-bit) for COSYM SiL use case only. It is necessary to launch COSYM in administrator mode by right-clicking on COSYM and click **Run as administrator**.

2.3 Delivery

The software is delivered with an installation routine on two DVDs. The software documentation files are available in the Portable Document (PDF) format, which requires Adobe® Reader®. You can download the actual version from Adobe®. (<http://www.adobe.de/products/acrobat/readstep2.html>).

The 'DVD 1' contains the following items in the folder 'data':

Directory	Meaning / Explanation
COSYM Installation	COSYM V2.3.0 setup files
Manuals	Documentation files
	- Hardware
	- Software
	- OSS
	- Pages

The 'DVD 2' contains the following items in the folder 'data':

Directory	Meaning / Explanation
ASCET ADD ON	ASCET AddOn for COSYM
COSYM CAR	COSYM-CAR V1.0 setup files
MISC folder	Miscellaneous files/folders

2.4 Installation

Please refer to [COSYM V2.3.0 Installation and Administration Guide](#) for installing COSYM V2.3.0, COSYM-CAR V1.0, setting up a PXIe system and SiL Linux system. The compatibility to other tools is documented in the [COSYM V2.3.0 Software Compatibility List](#).

2.5 Licensing

Please note that, COSYM V2.3.0 requires software license activation. Besides the perpetual product licenses that you obtain, when you purchase COSYM, ETAS offers fully functional time-limited evaluation licenses.

In order to obtain your software license certificates you need the MAC address of an installed network adapter. We recommend you to choose an adapter that is always present in your system (e.g. the main company network adapter). Please make sure that this adapter is also present, if you remove e.g. your laptop from the docking station.

During the ordering process, ETAS provides you with a license activation number (the so-called Entitlement ID). With this information, the MAC address and the user name, please do one of the following:

- Visit <http://www.etas.com/support/licensing> and generate your license certificate based on the information mentioned above.
- Mail the information mentioned above to licenses.de@etas.com or one of the contact addresses provided in [Section 4](#).

The information that you submit permits ETAS to generate the software license certificate, i.e. the license key. It will not be used for any other purpose.

Please copy the license key into a text file with the extension `*.lic` (e.g. `COSYM_HiL.lic`) and store it on your hard disk. When starting COSYM, it will ask you for the location of this file. If you have further questions regarding the installation procedure, please contact ETAS for assistance.

2.5.1 3rd Party Software in COSYM-CAR

COSYM-CAR uses third-party software components. Licensing information for these components can be found in the `3rdPartyLicenseInformation` directory.

To obtain License information of individual plug-ins that are used by COSYM-CAR, please click the [Help](#) menu → [About COSYM-CAR 1.0](#) → [Installation Details](#) → [Plug-ins tab](#).

3 Changes

3.1 What's New

COSYM V2.3.0 introduces several new concepts and features and is shipped with an extended user interface. The main new features are:

- Support of PXIe HiL
- Calibration with INCA on COSYM SiL
- Enhanced Library concept by considering HW related models in COSYM
- Configuring (AUTOSAR & dbc) Rest Bus Models for CAN/CAN-FD on COSYM SiL and PXIe
- Seamless reuse of CAN/CAN-FD restbus model across HiL and SiL in COSYM
- ASAM XiL MA Port (core APIs) for COSYM SiL and PXIe
- GUI for AUTOSAR RBS configuration in COSYM (CAN, CAN-FD)
- Enhanced support of Virtual ECUs based on COSYM vNET interface (Support of BOA interface is removed)
- Live Network traffic (CAN, CAN-FD) monitoring in Wireshark for XiL with COSYM
- Network CAN, CAN-FD traffic recording (PCAP) for XiL with COSYM
- Support of arrays (maps and curves) and enum datatypes for parameters in COSYM
- Support of Windows Server 2019 in COSYM SiL
- Generate executable simulation for Linux on a Windows PC with COSYM
- Removed dependency to Visual Studio for COSYM
- Support of ISOLAR-EVE V3.4 virtual ECUs based on vNET CAN

COSYM-CAR V1.0 is as add-on to COSYM V2.3.0, which introduces many new features for supporting to CAN Network. Those new features are:

- AR Explorer
 - Abstract explorer to view system description elements
 - Invocation point for system editor, NM Importer and Exporter
- System Description Importer
 - Support for creation of AR project
 - Import System Description and NM Configuration
- System Editor
 - Tester View: View the content of system description specific to testers
 - CM, ECU View: View the content of complete system description
 - SUT configuration
 - Network Configuration view
 - Editing support for user manipulation parameter of NM configuration
- NM Import and Export
 - Support for Import and Export of NM Configuration

3.2 Compatibility with Earlier Releases

COSYM V2.3.0 is shipped with ETAS RTPC V6.4.1. As LABCAR-OPERATOR V5.4.11 is also shipped with ETAS RTPC V6.4.1, both the products can be installed on the same computer.

While importing projects from LABCAR-OPERATOR, please ensure that folder names and project names do not contain spaces, as recommended by LABCAR-OPERATOR. If the project folder or the project name contain spaces, trying to import such a project is not possible.

LCO Projects from LABCAR-OPERATOR versions 5.4.1 to 5.4.11 can be imported into COSYM. Parallel installation of COSYM V2.3.0 to LABCAR-OPERATOR versions V5.4.1 to V5.4.10 is not recommended, as COSYM installation will upgrade the ETAS Experiment Environment version V3.7.11.

3.3 Known Issue Reports

If a product issue develops, ETAS will prepare a Known Issue Report (KIR) and post it on the internet. The report includes information regarding the technical impact and status of the solution. Therefore, you must check the KIR applicable to this ETAS product version and follow the relevant instructions prior to operation of the product.

The Known Issue Report (KIR) can be found here: <http://www.etas.com/kir>

3.4 Known Issues

Known issues of COSYM V2.3.0 and COSYM-CAR V1.0 are documented in the [COSYM V2.3.0 User's Guide](#). Please refer to section 17.19.

4 ETAS Contact Addresses

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ETAS Subsidiaries and Technical Support

For details of your local sales office as well as your local technical support team and product hotlines, take a look at the ETAS website:

ETAS subsidiaries Internet: www.etas.com/en/contact.php

ETAS technical support Internet: www.etas.com/en/hotlines.php