Data Sheet CODESYS UML

CODESYS UML allows to create the application in two languages, the UML class diagram and the UML state diagram.

CODESYS UML is part of the tool bundle CODESYS Professional Developer Edition.

Product description

The UML (Unified Modeling Language) is a graphical language for specification, design and documentation of object oriented software. UML provides a generally intelligible discussion basis between programming and other company divisions within system development.

UML consists of 14 different diagram types in two main categories: structure diagrams and behavior diagrams. Structure diagrams schematically illustrate the architecture of software and are basically meant for modeling and analysis (e.g. project design, specification of system requirements or documentation). Behavior diagrams are executable models with distinct syntax and semantics, which directly generate application code („model driven architecture“).

CODESYS UML extends the CODESYS Development System with two new diagrams of the Unified Modeling Language: the class diagram and the state diagram, for the 32 Bit and 64 Bit version of the CODESYS Development System in one package.

Class diagram

The class diagram belongs to the group of UML structure diagrams. With the additional graphical editor object oriented structures of CODESYS projects can be illustrated or designed. The different object classes (e.g. function blocks or interfaces) including the used variables or methods and their relations are clearly displayed (Picture 1).

The existing project structure can be directly imported form the CODESYS device tree into a new class diagram. Nevertheless the project structure can also be built up from the scratch with the different class and relation elements:

- Class (POU)
- Interface
- Variable declaration
- Property
- Method
- Generalization (EXTENDS)
- Realization (IMPLEMENTS)
- Association (POINTER)
- Composition (VAR)

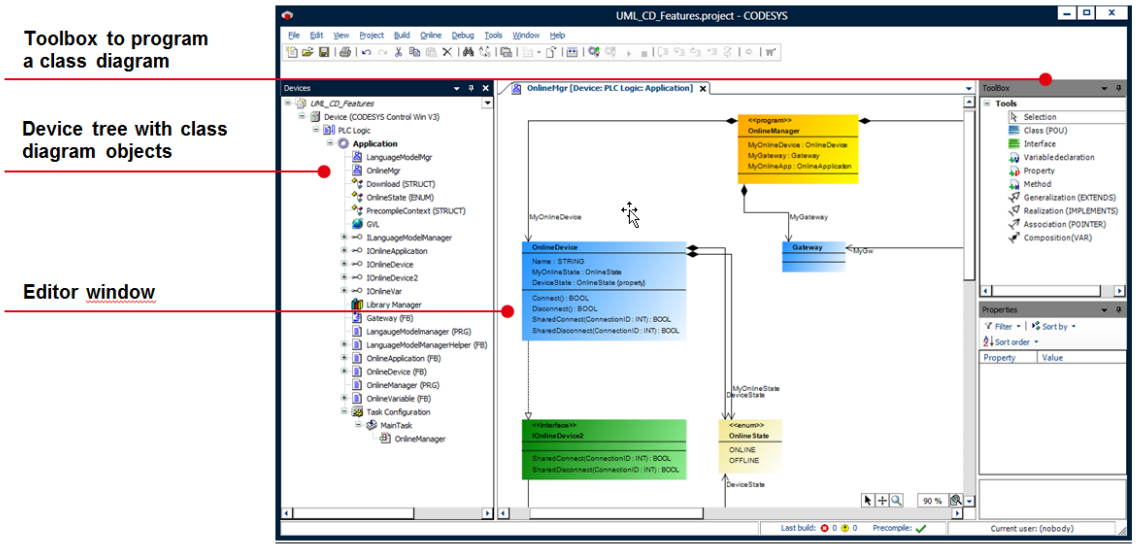
New objects within the class diagram editor are automatically added to the CODESYS device tree.

State diagram

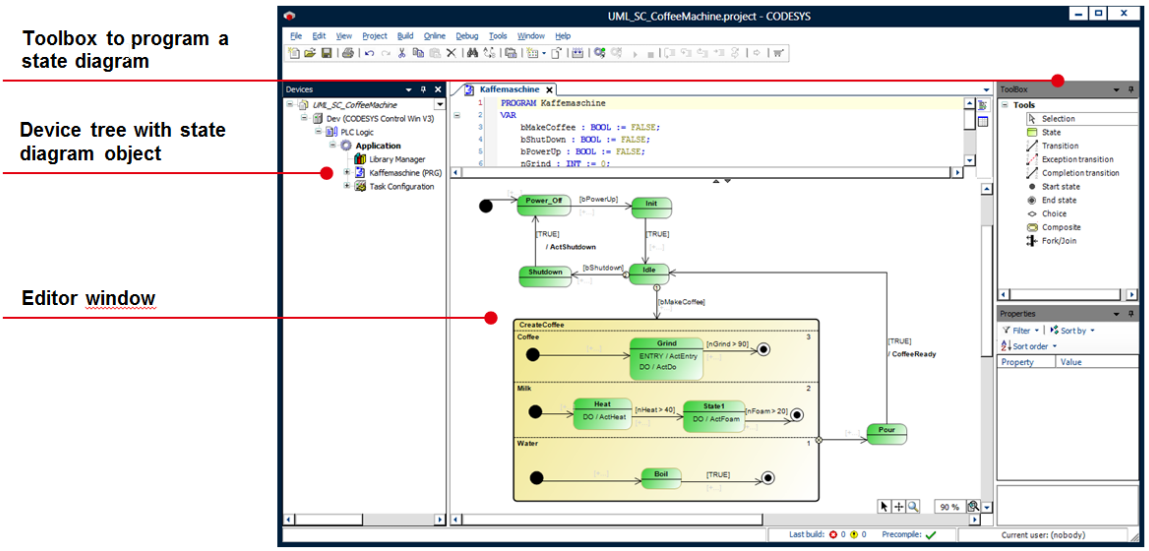
The state diagram belongs to the group of UML behavior diagrams. It is a graphical editor to specify and design the sequence of discrete events (Picture 2). In contrast to class diagrams during compile of state diagrams executable application code is generated. The state diagram editor comes along with a range of state and transition elements:

- Start state
- End state
- State
- Composite
- Fork / Join
- Choise
- Transition
- Completion transition
- Exception transition

When the application is running the state diagram is switched in accordance to the plc cycle. Moreover an independent switching behavior can be realized with so called intra-cycle state diagrams. In online mode the state diagram is animated. Thus the current state of the sequence can be monitored at any time.



Picture 1: CODESYS Development System with integrated class diagram editor



Picture 2: CODESYS Development System with integrated state diagram editor

General information

Supplier:

CODESYS GmbH
Memminger Strasse 151
87439 Kempten
Germany

Support:

This product includes a free addition to an otherwise paid support entitlement of one hour of support.
The redemption must be made within 1 year from the date of purchase. After this time, the support entitlement expires.

https://support.codesys.com

Item:

CODESYS UML

Item number:

2101000001

Sales/Source of supply:

CODESYS Store
https://store.codesys.com

Included in delivery:

- Package for the CODESYS Development System including license agreement and online help
- License key

System requirements and restrictions

Programming System	CODESYS Development System V3.5.19.30 or higher
Runtime System	-
Supported Platforms/ Devices	-
Additional Requirements	Subscription of the CODESYS Professional Developer Edition.
Restrictions	64 Bit support with version 4.0.3.0 and higher
Licensing	see CODESYS Professional Developer Edition
Required accessories	Optional: CODESYS Key

Detailed compatibility information

Version	Programming System Version
4.4.0.0	3.5.19.30 - newest
4.3.0.0	3.5.19.30 - newest
4.2.2.0	3.5.16.0 - newest
4.2.1.1	3.5.16.0 - newest
4.2.1.0	3.5.16.0 - newest
4.2.0.1	3.5.12.0 - newest
4.1.1.0	3.5.12.0 - newest
4.1.0.0	3.5.3.0 - newest
4.0.5.0	3.5.3.0 - newest
4.0.4.0	3.5.3.0 - newest
4.0.3.0	3.5.3.0 - newest
4.0.2.1	3.5.3.0 - newest
4.0.2.0	3.5.3.0 - newest
4.0.1.1	3.5.3.0 - newest
4.0.1.0	3.5.3.0 - newest
4.0.0.3	3.5.3.0 - newest
4.0.0.2	3.5.3.0 - newest
4.0.0.1	3.5.3.0 - newest
4.0.0.0	3.5.3.0 - newest

Note: Technical specifications are subject to change. Errors and omissions excepted. The content of the current online version of this document applies.

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