CODESYS PLC Software

IEC 61131
IEC 61375
UIC 556

FUNCTIONS

The CODESYS® Software is designed for efficient programming of PLC applications of Trainnet® Systems. It is also used for simulation, commissioning and debugging. It complies with the IEC 61131standard.

KEY FEATURES

CODESYS is the state-of-the-art software-based Programmable Logic Controller (PLC) that enables you to create advanced train control applications and distributed control systems.
It offers a combination of a highly efficient and robust runtime environment as well as an intuitive and productive application development environment (Workbench). The Workbench has extensive monitoring and debugging features and supports simulation and online changes for rapid development.

The CODESYS Workbench supports all of the standard IEC 61131 control program languages extended with the Continuous Function Chart (CFC). You may use any or all of the control languages in your application as it best suits your needs.

The supported languages are:
→ Function Block Diagram (FBD)
→ Structured Text (ST)
→ Continuous Function Chart (CFC)
→ Ladder Logic Diagram (LD)
→ Sequential Function Chart (SFC)
→ Instruction List (IL)

EFFICIENT AND SECURE DEVELOPMENT

CODESYS Application is compiled to binary which means small Application size and fast execution time. CODESYS supports multitasking with individual execution cycle times. Comprehensive information security features are natively built-in in CODESYS, e.g. communication and project file encryption and user management. CODESYS can be run on most Trainnet® CPUs, e.g. CPG, CPS and RMM. CODESYS Configuration Tool developed by EKE-Electronics makes it easy to administer large PLC applications.

The CODESYS series of toolkits give you the ability to write your own I/O drivers and supports "C" user programs. Functions and function blocks written in C can be called directly from any of the supported languages.

We have already developed number of functions and function blocks that are designed for rail applications. For instance for communication over various train networks such as TRDP and other most typically used Ethernet protocols, WTB with UIC 556 and MVB.

We can develop custom functions and function blocks that match your needs. We can provide tools and training to help you develop your own train application. We can also help you to build more advanced capabilities to integrate your own I/O devices and C Functions.

ADVANCED FEATURES

CODESYS can perform unprecedented functions such as database and file operations. It also supports object-oriented programming for advanced application development. CODESYS Visualization helps in creating easy-to-adopt views for commissioning and debugging. CODESYS online store offers vast selection of ready-made add-ons such as development tools and drivers for databuses and 3rd party devices.

TECHNICAL REQUIREMENTS

Programming System
CODESYS Development System V3.5

Operating System
Windows 8 / 10 (32/64 Bit)

Recommended System Properties
2.5 GHz Processor
8 GB RAM
4 GB available HD space

Hard Drive
20 GB

Ports
Ethernet

CODESYS