



CODESYS Corporation

CODESYS® in Mobile Automation **IEC 61131-3 Software Suite for** **On- & Off-Highway Vehicles,** **Mining, and Heavy Equipment**



CODESYS MOBILE



IN AUTOMATION

CODESYS HAS BEEN CONTRIBUTING TO THE FIELD OF MOBILE AUTOMATION FOR MANY YEARS

CODESYS controllers can be found in many construction machines, cranes, forklift, trucks, and industrial trucks as well as in open pit mining equipment.

CODESYS is used in underground construction operations such as drilling, blasting, and special air monitoring.

For mobile machines, CODESYS is the leading development system for engine control units (ECUs). With CODESYS, such an electronic control unit controls a series of actuators of an internal combustion engine to ensure optimal engine performance.



CODESYS MOBILE

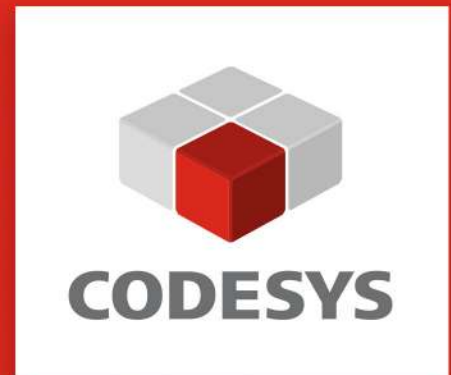


IN AUTOMATION

ADVANTAGES

- CODESYS is a manufacturer-independent comprehensive and flexible system. All components for mobile automation applications are integrated directly in CODESYS, including editors for all IEC 61131-3 compliant implementation languages, compilers for native machine codes, a powerful debugger, and a clear project configuration. Add-ons can further supplement these components for efficient application development.
- CODESYS real-time is characterized by a predictable (deterministic) time behavior of a microseconds jitter. If a real-time sets the task (by configuration) to execute certain routines within a predefined time frame, in CODESYS this happens to a hundred microsecond cycle time.
- CODESYS is used in applications for compact IP67 controllers in rough environments.
- CODESYS offers integrated configurators and protocol stacks in form of portable CODESYS libraries for all standard fieldbuses in the mobile machines industry like CAN / CANopen / J1929.
- The CODESYS TargetVisu is ideally suited for the operation and maintenance of mobile machines directly on the controller.
- The integrated safety (DIN IEC 61508) and redundancy functions in CODESYS are ideal for high availability and safety-critical applications.

CODESYS



CODESYS Visualization for hardware-independent HMIs

The CODESYS Development System integrates a powerful editor for HMI screens such as operator or maintenance panels for mobile automation. CODESYS offers two options:

- HMI screens can be displayed directly on a local display (CODESYS Target Visu)
- and displayed as a WEB application on any device with a web browser (CODESYS WEB Visu).

WEB Visu screens can be displayed locally or remote via network, in a browser window or full screen in kiosk mode.

Because the CODESYS visualization editor is integrated with the PLC programming system, the HMI screens become part of the PLC program, it can directly access and display the data of all CODESYS control applications. The CODESYS visualization can easily be ported to a new device type, simply by changing the target device in the project and rebuilding the application - the same way a PLC program can easily be ported to a new target device.

With the latest version of the CODESYS WEB Visu, custom HTML-5 elements can now be integrated as active control elements using Java Script. This is opening up the CODESYS visualization to the vast possibilities of web-based animations, graphics, and custom controls.

Operator panels with CODESYS visualization have been proven in thousands of specialty vehicles, machines, and production lines worldwide.

VISUALIZATION

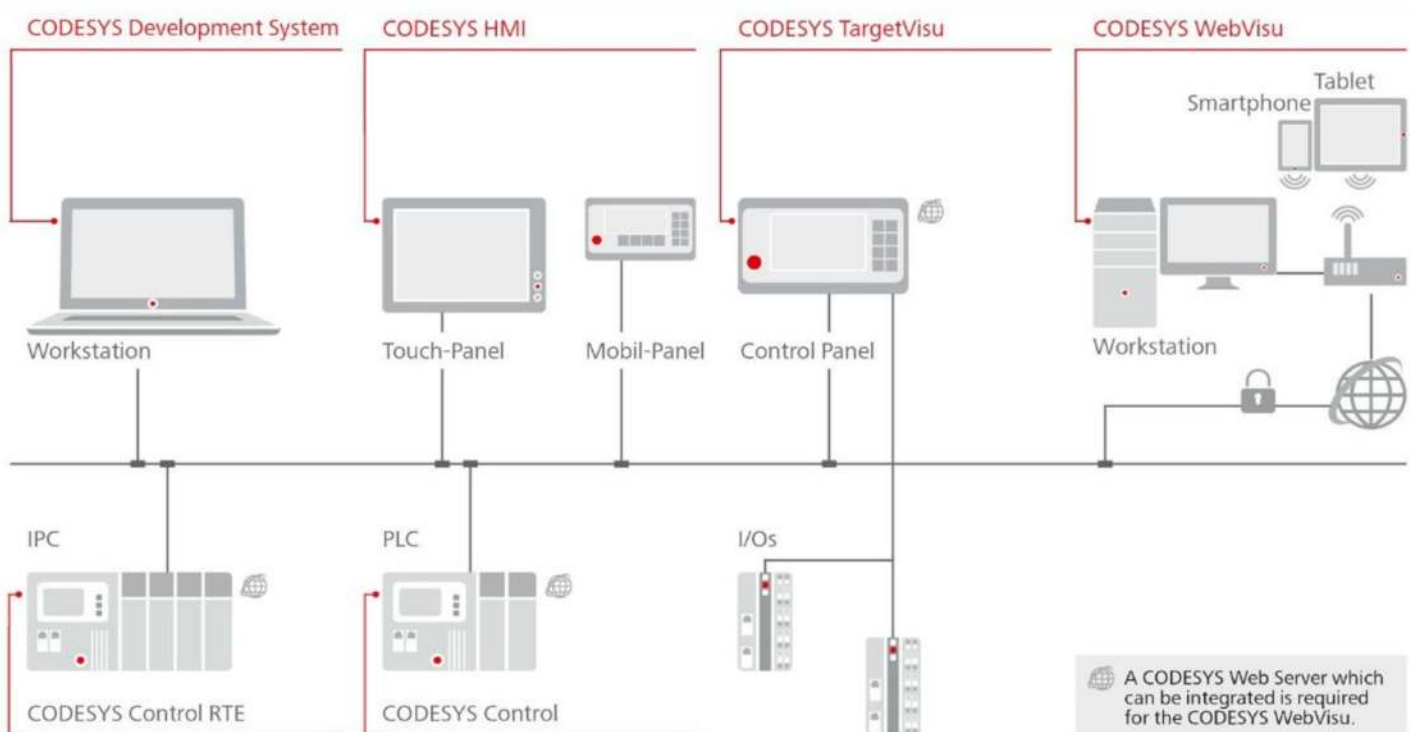
Proven in thousands of specialty vehicles, machines & production lines

Control and Visualization in ONE TOOL

One HMI project - many platforms:

HMI screens can be displayed on various platforms: from laptops and panel PCs to tablets or smartphones, and on PC devices - even in parallel. The user interfaces and HMI screens can be designed to automatically adapt to different display screen sizes.

User interfaces with powerful security features such as user authentication and different levels of access to screen elements are supported and complement the comprehensive security features built-in as standard in CODESYS SoftPLCs.



CODESYS



CODESYS is your Software Partner for IEC 61508 PLCs

CODESYS provides a complete safety solution for manufacturers development safety controllers based on IEC 61508 SIL2 and SIL3 standards. The engineering platform is the basis of the CODESYS product families for visualization, motion, CNC, robotics, control, fieldbus configuration, and safety programming.

CODESYS is a pioneer when it comes to integrating a whole range of different functionalities into one single tool. The integrated SIL2 and SIL3 Safety solutions are standard in CODESYS.

CODESYS Safety offers a complete safety solution for manufacturers committed to developing safety controllers based on IEC 61508 SIL2 and SIL3 standards. Using CODESYS Safety can significantly reduce the manufacturers development costs and improve certification efficiency. CODESYS has extensive expertise and years of experience in the Safety control field and can provide strong safety software support to safety control manufacturers.

The Safety Runtime System can be easily transplanted to different hardware platforms. The safe operation system developed according to the IEC 61508 standard adopts a componentized design and can easily run on different hardware platforms such as Tri Core, ARM, or PowerPC.

CODESYS has an independent team dedicated to the development of CODESYS Safety modules. During software development, the developers conducted a rigorous risk analysis for the safety control application area to ensure that CODESYS Safety meets the specified safety requirements.

SAFETY

Integrated Safety Solutions
for all Areas of Applications



Safety



CODESYS



THE LEADING SOFTWARE PLATFORM FOR IEC 61131-3 COMPLIANT PROJECT ENGINEERING

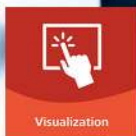
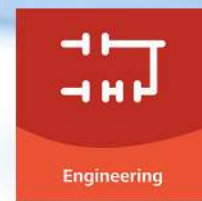
There are many reasons to choose CODESYS. It is a powerful manufacturer-independent IEC 61131-3 development environment with numerous user-friendly functions for the programming and configuration of automation projects.

The CODESYS Development System contains fully integrated backend functions, such as compilers, debuggers, a simulator and variable trace. Thus, control applications can be developed, tested and commissioned without any additional tools.

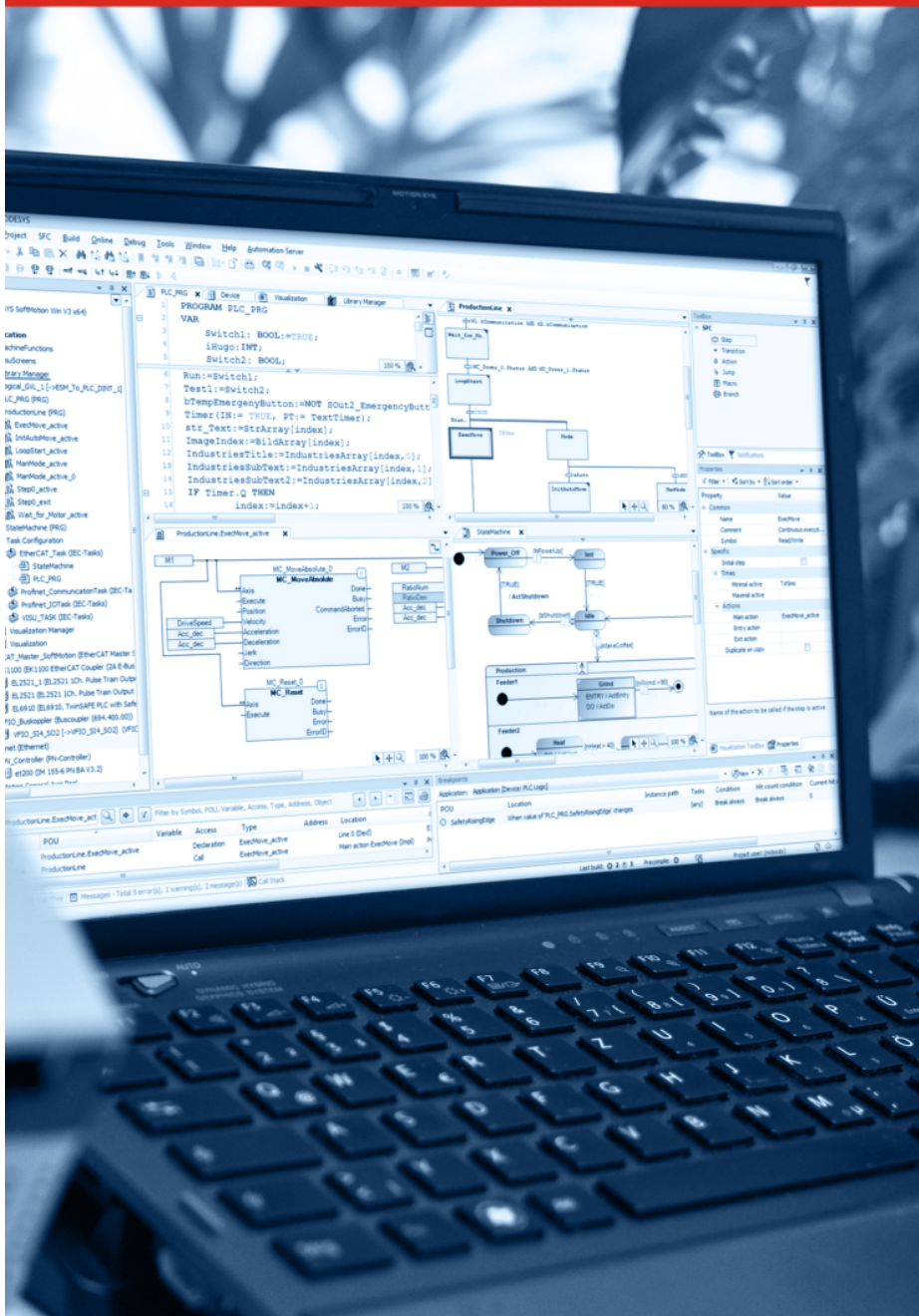
The latest version of CODESYS can be downloaded free of charge from our CODESYS North America Store: <https://us.store.codesys.com/>

The CODESYS Development System combines classic programming of controller applications with professional software development for Industry 4.0 / Industrial Internet of Things (IIoT).

More than 500 device manufacturers rely on CODESYS, in addition to about 100,000 end-users from a wide variety of industries: process, energy, factory, mobile, embedded



DEVELOPMENT SYSTEM



and building automation. This makes CODESYS the most used manufacturer-independent development environment employed around the world in millions of machines and plants.

All components for industrial automation applications are integrated directly in CODESYS, including editors for all IEC 61131-3 compliant implementation languages, compilers for native machine codes, a powerful debugger, and a clear project configuration. Add-ons can further supplement these components for efficient application development.

The engineering platform is the basis of the CODESYS product families such as visualization, motion control, fieldbus configuration, and safety programming.



CODESYS Corporation

CODESYS Corporation

200 Cummings Center | Suite 272-D

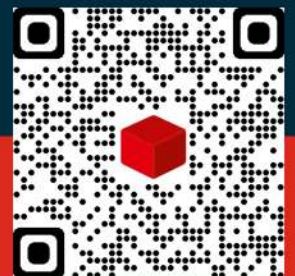
Beverly, MA 01915 | USA

+1 978 473 7600

NorthAmerica@CODESYS.com

US.Store.CODESYS.com

CODESYS.US
CODESYS Corporation, a member of the CODESYS Group



CODESYS Group | We *software* Automation.