01

Customize the runtime system to fit your hardware
- Support of all industrially used CPU platforms (32-/64-bit)
- Ready-to-use for standard operating systems, other operating systems optional
- Support of virtualization by means of container/hypervisor
- Reference platforms for embedded systems
- Expert support for customization and implementation

02

Define the functionality
- Integrated security features
- Option to brand label and extend IDE by existing or self-developed add-ons

03

Profit from the benefits
- Proven products and innovative technologies
- Scalable expansion stages from low-cost to high-end
- Market-leading, manufacturer-independent IEC 61131-3 platform
- Large know-how community with 300,000+ users on all continents
- Experienced partners providing sophisticated software and qualified service

Qualified support whenever you need it, for example for:
- Driver development
- Development/adaptation/extension of libraries
- Software testing
- Integration of available stand-alone applications
- Development of specific editors, configurators, additional tools

Easy-to-use SDK for scalable functionality

Competitive edge thanks to short time-to-market
The IEC 61131-3 automation suite for all requirements

CODESYS

The controller technology is an open and user-friendly platform for all automation systems. It uses CODESYS in controllers and as an IDE for all automation tasks. The company has chosen CODESYS as the best IEC 61131-3 platform available on the market.

CODESYS is suitable for:
- Preparation of the system for simplified administration of controllers via WEB.
- PROFINET and EtherNet/IP as fieldbuses.
- Lean communication API with dedicated service tool.
- Multicore support.
- Motion control for engineering CNC and robotics applications in the 3D CNC and robotics engineering.
- Visualization for machine operation via browser.
- EtherCAT as fieldbus protocol.
- Different designs, including top-hat rail mounting and panel controllers.
- Industrial PCs with Windows on x86-compatible CPUs.
- Partially modular design with pluggable I/O modules.
- Use of x86 and ARM architectures.
- Windows- and Linux-based controllers, partly in virtualized environments.
- Accelerated safety certification thanks to optional support services.
- Safety controller with an expansion package pre-certified according to IEC 61508 SIL3, partly modular.
- Source code management with Git, fully integrated into the PLC development environment.
- Embedding of functionality in a brand labeled .NET-based development environment.
- Integrated EtherCAT safety solution to enable users to develop safety functions in the PLC.
- Distribution of the CODESYS Development System with application-specific library.
- EN ISO 13849 up to PL d application-specific libraries.
- Libraries for data exchange with public clouds.
- Operation / monitoring of the controller on remote PCs.
- OPC UA and Modbus for data exchange with higher-level and external systems.
- BACnet and KNX for communication with compatible devices and I/Os.
- CANopen / CANopen Safety as fieldbus protocols for functional and safe applications.
- Licensing mechanism for additional software components, such as application-specific libraries.
- Tools for static code analysis and test automation to facilitate safety acceptance.
- Delivery of the development environment with pre-installed device descriptions.
- Composition of the application using predefined software modules.
- Increase of failure safety thanks to the integrated redundancy function.
- Implementation without operating system, with Linux and VxWorks.
- Embedded platforms with ARM Cortex, PowerPC, and TriCore CPUs.
- Modularly expandable compact controllers.
- Electronic Control Units (ECUs) based on Infineon AURIX TC29X or Texas Instruments TMS570.
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YOUR BASIC PACKAGE

CODESYS Control Runtime Toolkit

Your hardware with a tailor-made runtime system
Alternatively:
Your Linux platform with virtualization layer and runtime container images

CODESYS Development System

Free development environment for your automation solution, customizable to specific requirements

YOUR ADDITIONAL OPTIONS

Provide your device with precisely the functions that are relevant to you and your target groups.

Fieldbuses and communication protocols for any field of application
Pre-certified safety components for simplified implementation of safety controls
Technologies for Industry 4.0 and IIoT including a cloud-based administration platform
State-of-the-art visualization for different platforms
Powerful features for motion, CNC and robotics
Extensions of the development environment according to your needs
Security features and redundancy functions

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Note: Not all CODESYS features are available in all territories. For more information on geographic restrictions, please contact sales@codesys.com.