

# RZ Ecosystem Partner Solution

## CODESYS Control Runtime System



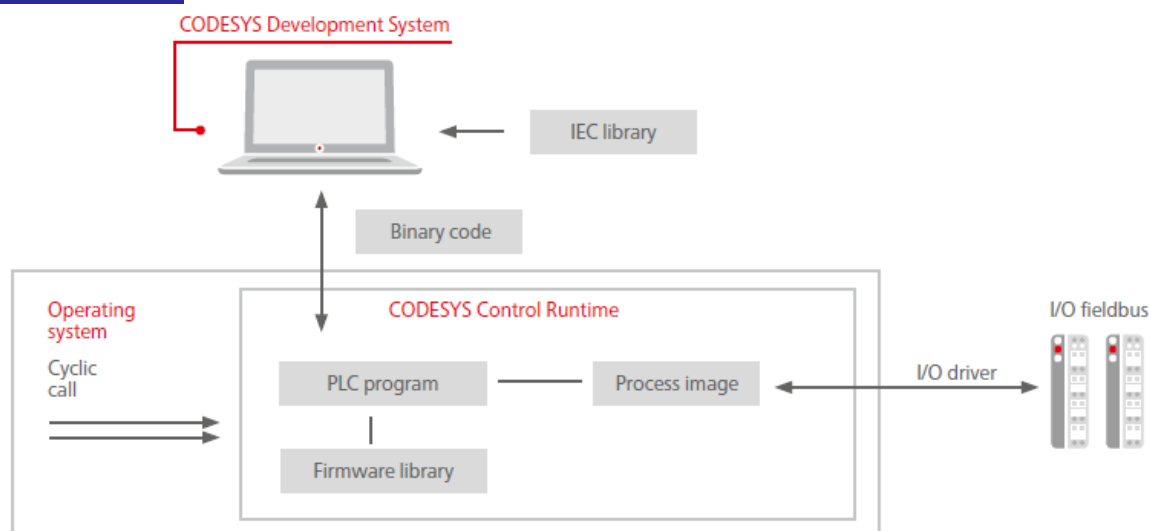
### Solution Summary

CODESYS Control Runtime System enables any embedded device to convert to IEC61131-3 controllers. The solution helps device manufacturers develop a customized IEC61131-3 controller with the functionality they need and is programmable using the CODESYS Development System. Demo software is available for CODESYS Control for Linux ARM SL and CODESYS Development System. The Control Runtime System solution is available for Renesas [RZ/N](#), [RZ/T](#), [RZ/G](#) and [RZ/V](#) series of MPUs.

### Features/Benefits

- The CODESYS Control for Linux ARM SL for RZ/N, RZ/T, RZ/G and RZ/V is downloaded from [here](#).
- Communication with the CODESYS Development System which is downloaded from [here](#).
- Loading, managing and executing the compiled and debugged application code with the CODESYS Development System
- Handling the I/O systems and fieldbuses
- Provision of security functions for data and know-how protection
- Execution of optional add-on products, such as CODESYS Visualization or CODESYS SoftMotion CNC+Robotics for sophisticated motion applications

### Diagrams/Graphics



### Target Markets and Applications

- Industrial automation for stationary / mobile machines
- Process automation
- Energy automation
- Building automation



CODESYS® is the leading manufacturer-independent IEC 61131-3 automation software for engineering control systems. Realizing an intelligent automation device with calculatable expenses and high market acceptance: Manufacturers of intelligent components benefit from the extensive features of CODESYS in the development of their devices. Please contact [CODESYS Support: Efficient solutions](mailto:sales@codesys.com) for any questions.

### **Easy adaptation to different system requirements and environments**

- Product available as a modular single-source runtime system for different device platforms
- Support for RA/RX/RZ-based devices and common operating systems(\*1) for industrial systems, including native usage of multicore architectures (multicore support)  
(\*1) In case of like RTOS and Bare-metal based system, customers should contact to [sales@codesys.com](mailto:sales@codesys.com).
- Manageable development expenses: Development of industrial controllers with pronounced technical characteristics by means of defined interfaces and qualified adaptation support
- Numerous available reference systems and platforms (e.g. for popular Arm® Cortex® systems)
- Easy implementation of specific device properties by means of library modules (e.g. for I/O functions)
- Adaptation and extendibility of the user interface by manufacturer-specific plug-in modules
- Integration into existing system architectures by means of lean proprietary interfaces or standards, such as OPC / OPC UA

### **Integrated functions for practice-oriented automation devices**

- Configuration of popular fieldbus systems, own I/O modules or drives (e.g. for CANopen®, EtherCAT®)
- Integrated visualization available: Generation and display of practice-oriented user interfaces
- Numerous optional add-on products (e.g. as motion controller, panel control, or communication gateway)
- Pre-certified software products for extending the standard controller to be a TÜV-certified safety controller compliant with IEC 61508 SIL2 or SIL3
- Configuration and project engineering of industry-specific communication protocols (e.g. BACnet®)

### **Reliable partner for successful automation devices**

- Product development by expert engineers and computer scientists using the Scrum method
- Practice-oriented support for the realization of automation devices from experienced project developers
- Fast response times to market demands with market-ready products: e.g. CNC add-on, integrated OPC UA server/client, TÜV-pre-certified safety control software
- Reliable maintenance, care, and quality assurance of all products and features by means of practical processes, ISO 9001-certified (since 2005)
- Long-term and confidential cooperation with device manufacturers from different branches and regions
- Transparent management with distinctive communication culture (e.g. by means of regular coordinating meetings at different levels, direct access to a database containing product improvement and ideas)
- High market acceptance of CODESYS-compatible automation devices thanks to wide distribution among tens of thousands of users worldwide
- Services for joint product marketing (e.g. at trade fairs, events, and online)