CODESYS Control RTE SL (for Beckhoff CX)

CODESYS Control RTE SL is a real-time software PLC for PC-based industrial controllers under Windows - programmable with the IEC 61131-3 development System CODESYS.

Product description

The product CODESYS Control RTE SL is a real-time software PLC for PC-based industrial controllers under Windows. The runtime system has its own real time kernel: deterministic behavior with jitter values in the µs region without additional hardware components or operating system extensions.

Interfaces

- CODESYS OPC UA Server

The following CAN-PCI cards are supported:

- Peak PCI: PCIe, MiniPCIe
- Ixxat: SJA1000 (PCI card)
- Automata: all PCI cards (1- and 2-channel)

Fieldbus support

With the delivery of the Runtime Package the following fieldbuses are supported:

- CODESYS CANopen Manager / Device
- CODESYS EtherCAT Master
- CODESYS EtherNet/IP Scanner / Adapter
- CODESYS J1939
- CODESYS Modbus TCP Master / Slave
- CODESYS Modbus Serial Master / Slave
- CODESYS PROFIBUS Master
- CODESYS PROFINET Controller / Device
- CODESYS Sercos III Master

Product options

The product can be extended by the following **chargeable** options:

- CODESYS SoftMotion SL
- CODESYS SoftMotion CNC+Robotics SL
- CODESYS WebVisu SL
- CODESYS TargetVisu SL

Detailed information can be found in the CODESYS Online Help.

Installation and configuration guides for the runtime system can be found in the RTE manual as part of the package or for direct download on the product website (CODESYS Control RTE SL).

The licensing of the runtime system can be realized in different ways:

1) Online licensing via CODESYS

Requirements:

- PC with CODESYS Development System and internet access
- Connected control system

Licensing is done via workstation / notebook with the CODESYS Development System and the connected control system. The license entries are edited via double-click on the device under “PLC settings” / “Edit licenses…” (Picture 1). The license activation is done under “Install licenses” / “Activate license” (Picture 2, upper choice / Picture 3) by entering of the ticket number and transfer of the license to the CODESYS Key or the Soft Key (free part of the CODESYS software).

2) Online licensing on the target system via browser

Requirements:

- Control system with internet access

Licensing is done on the control system via web browser on http://license.codesys.com (Picture 4). After entering of the ticket number the license can be activated on the CODESYS Key or the Soft Key (free part of the CODESYS software).

3) Offline licensing via context file

Requirements:

- Control system (no internet access needed)
- PC with CODESYS Development System with internet access and an option for data exchange

or

- Arbitrary PC with internet access and an option for data exchange

The context file (*.WibuCmRaC) can be created via two methods:

- In the CODESYS Development System via double-click on the device under “PLC settings” / “Edit licenses…” (Picture 1) / “Install licenses…” / “Request license” (Picture 2, middle option).
- In the CodeMeter Control Center (installed with the CODESYS Development System or download on http://www.wibu.com/) via selection of the license

container (CODESYS Key or Soft Key) under “License Update” or “Activate License” and “Create license request” (Picture 5 / Picture 6, upper option).

The activation of the license on the created context file is done via web browser on http://license.codesys.com. After entering of the ticket number and selection of the license container (CODESYS Key or Soft Key) the “Offline activation” has to be selected (Picture 7). After selection of the license request file created before (“Browse…”) the activation of the license is done via “Get License Update” (Picture 8). The updated context file (*.WibuCmRaU) can be stored to an arbitrary place (i.e. USB device).

The import of the updated context file can be done via two options:

- In the CODESYS Development System via double-click on the device under “PLC settings” / “Edit licenses…” (Picture 1) / “Install licenses…” and “Install license” (Picture 2, lower option).
- In the CodeMeter Control Center (installed with the CODESYS Development System or download on http://www.wibu.com/) via selection of the license container (CODESYS Key or Soft Key) under “License Update” respectively “Activate License” and “Import license update” (Picture 5 / Picture 6, middle option).

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 %period% from the date of purchase. After this time, the support entitlement expires.

https://support.codesys.com

Item:

CODESYS Control RTE SL (for Beckhoff CX)

Item number:

2302000001

Sales/Source of supply:

CODESYS Store
https://store.codesys.com

Included in delivery:

.zip file with Setup.exe (64 bit)

System requirements and restrictions

Programming System	Minimum CODESYS Development System V3.5 SP19 Patch 1 (recommended V3.5 SP20 or higher)
Runtime System	Minimum CODESYS Control RTE SL V3.5 SP19 Patch 1 or higher
Supported platforms and devices	Supported Windows Versions: Windows 10 / 11 / IoT Enterprise 32Bit or 64 Bit, with Multicore-CPUs The versions maintained by Microsoft are supported.
Additional Requirements	Installation of CODESYS Control RTE SL
Restrictions	Not released for use in containers or virtual machines (VMs)! Hyperthreading is not supported a and must be deactivated

	The following CAN-PCI cards are supported: • Peak PCI: PCIe, MiniPCIe (SJA1000-based) • Ixxat: SJA1000 (PCI card) • Automata: all PCI cards (1 and 2 channel) • Innodisk: PCIe CAN adapter • HMS: passive CAN cards The following Ethernet chipsets are supported: • Realtek • Intel (Pro1000 compatible) • Intel i210/i225/i226 (2,5G) Following Hilscher hardware is supported: • PROFINET Controller: Hilscher CIFX or netX 100/500 controller with firmware 3.x Efficency Cores (e-cores) are not supported and must be deactived
Licensing	 Application based license: The CODESYS Control SL runtime system can be licensed with an application-based license. The license is activated on a software-based license container (soft container) that is permanently bound to the device. Alternatively, the license can be stored on a CODESYS key (USB dongle). The size and functional scope of the IEC application are licensed. See the table of license tiers in the technical description. The license is activated on a software-based license container (soft container) permanently linked to the controller, or stored on a CODESYS Key (USB dongle) for portable licensing. Note: Without a license, the software runs in demo mode for two hours. After that, a manual restart is required.
Required Accessories	Optional: CODESYS Key

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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