Data Sheet CODESYS Control for Raspberry Pi SL

CODESYS Control for Raspberry Pi SL is an adapted CODESYS Control runtime system for the Raspberry Pi (PLC extension), for non-commercial use. If the device is to be used commercially, application based licenses must be used.

Product description

CODESYS Control for Raspberry Pi SL contains a CODESYS Control application for all Raspberry Pi, including the Compute Module (see http://www.raspberrypi.org/) as well as the capability to use the extension modules and several devices/breakouts with SPI, I²C or 1-wire communication interface.

This product can be installed with the included CODESYS Deploy Tool plug-in via the CODESYS Development System on the Raspberry Pi's Linux system. After each restart the runtime system will be started automatically. If no valid full license can be found, CODESYS Control runs for two hours without functional limitations before shut down.

Detailed information can be found in the Online Help.

Interfaces

The CODESYS device description does support the following components:

- CODESYS OPC UA Server, as full version for data exchange
- CANopen via EL6751 Gateway
- Raspberry Pi Camera
- I²C interface, with SenseHat, SRF02, Adafruit PWM, MPU6050 Gyro, MPU9150 Gyro, AK8975 Compass
- SPI interface, with MCP3008, MCP23S17, PiFace Digital, PiFace Control Display
- One-wire interface, with DS20B18
- GPIO

Visualization

- CODESYS WebVisu, is included as full version in the delivery of the runtime package.

SL Extension

The SL Extension Package is included in the Runtime Package and offers additional functions:

- Integration of existing C code
- Implementation of external functions
- Support of start/stop switches
- Usage of local I/Os

• Use of external event tasks
• Connect persistent memories (Retains)

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 PROFINET Controller / Device

Product options

Further products can be licensed for a fee:

- CODESYS BACnet SL
- CODESYS KNX SL
- CODESYS Redundancy SL
- CODESYS SoftMotion
- CODESYS SoftMotion Light SL

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General information

Supplier:

CODESYS GmbH
Memminger Strasse 151
87439 Kempten
Germany

Support:

Technical support is not included with this product. To receive technical support, please purchase a CODESYS Support Ticket.

https://support.codesys.com

Item:

CODESYS Control for Raspberry Pi SL

Item number:

2302000009

Sales/Source of supply:

CODESYS Store
https://store.codesys.com

Included in delivery:

- Package for the CODESYS Development System including CODESYS Control, license agreement, online help and device description
- License Key
- CODESYS Deploy Tool (AddOn for the CODESYS Development System)

System requirements and restrictions

Programming System	CODESYS Development System V3.5.17.0 or higher
Supported Platforms/ Devices	All Pi models Note: Use the tool "Device Reader" to find out the supported features of your device (free of charge component of CODESYS Development System).
Additional Requirements	• The CODESYS Control requires a network interface (LAN, WLAN), especially with the Raspberry Pi Compute Module and the Raspberry Pi ZERO. • If the product is used for industrial purposes, it is the responsibility of the system manufacturer to ensure compliance with the necessary specifications.

- The operating system Raspberry Pi OS (32-bit or 64-bit) https://www.raspberrypi.org/downloads/
- Dynamic libraries needed by the CODESYS Control Runtime binary:
  - libm.so.6
  - libpthread.so.0
  - libdl.so.2
  - librt.so.1
  - libc.so.6
  - libgcc_s.so.1

Restrictions	- The combination of Raspberry Pi and a CODESYS Runtime is for private use, test and teaching purposes. Commercial use is not permitted. - Not released for use in containers or virtual machines (VMs)! - CODESYS Control for Raspberry Pi SL does not support GPIOs for the Raspberry Pi 5
Licensing	**Private license**. More details can be found in the License Agreement. Single device license: The license can be used on the target device/PLC on which the CODESYS runtime system is installed. Licenses are activated on a software-based license container (soft container), which is permanently connected to the controller. Alternatively, the license can be stored on a CODESYS Key (USB dongle). By replugging the CODESYS Key, the license can be used on any other controller. Note: In demo mode, the software runs for two hours without a license. After that, a manual restart is required.
Required Accessories	- SD-card (minimum 4GB) - 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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