



Data Sheet CODESYS Control for BeagleBone SL

The product "CODESYS Control for BeagleBone SL" extends the Linux environment of a BeagleBone Black with the functions of a CODESYS programmable PLC.

Product description

The CODESYS runtime environment contained in the product is specially adapted to the Beaglebone Black, the community supported hardware. With a CODESYS single device license (SL), users can permanently realize a PLC device and use functions of the freely available development environment CODESYS Development System to configure it in IEC 61131-3.

Benefits

The software package contains an extension for the CODESYS programming environment, with which an update mechanism is integrated in order to install the runtime environment on the BeagleBone Black without LINUX knowledge. The installation of the CODESYS Runtime component on the BeagleBone Black takes place in the form of a Debian package, directly from the CODESYS Development System. The supplied examples supplement the software package with useful applications that facilitate the first steps in the application.

With the integrated CODESYS "Wink" mechanism, the hardware can be clearly assigned to an existing gateway connection by flashing the LED.

Detailed information can be found in the [CODESYS Online Help](#).

Interfaces

- CODESYS OPC UA Server, as full version for data exchange.
- GPIOs and analog inputs, supported as local interfaces.

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 SL
- CODESYS SoftMotion CNC+Robotics SL

-

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 BeagleBone SL

Item number:

2302000013

Sales/Source of supply:

CODESYS Store
<https://store.codesys.com>

Included in delivery:

- Package for the CODESYS Development System including CODESYS Control, license agreement and device description
- License Key

System requirements and restrictions

Programming System	CODESYS Development System V3.5.17.0 or higher
Supported Platforms/ Devices	<ul style="list-style-type: none"> • BeagleBone Black (Version C and later), BeagleBone Green, BeagleBone Blue, BeagleBone Enhanced • Running on official debian-based linux images from https://beagleboard.org <p>Note: Use the tool “Device Reader” to find out the supported features of your device (free of charge component of CODESYS Development System).</p>
Additional Requirements	<ul style="list-style-type: none"> • CANopen can only be used with an additional CAN-CAPE

- 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

- CODESYS WebVisu: Port 9090
 - No device support for BeagleBoard-X15
 - Not released for use in containers or virtual machines (VMs)!
-

Licensing



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.

In demo mode, the software runs for two hours without a license. 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.

Creation date: 2024-06-03