POWERED BY Raspberry Pi

Open Source

Compact Control with CODESYS

RevPi Connect+ feat. CODESYS

The open source device for professional control tasks with the following features, among others:

CODESYS Control runtime

CODESYS WebVisu

Modular expandable

Two Ethernet interfaces

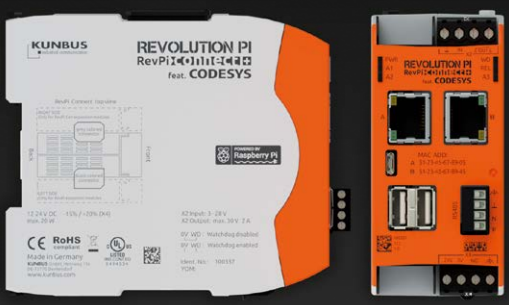
RS485 screw terminal

Hardware watchdog

Supports all common industrial network protocols

OPC UA

Customized Raspbian OS incl. Real-Time patch



Compact DIN rail housing with a width of just 45 mm

Equipped with the Raspberry Pi Compute Module 3+

Easy connection of expansion modules via plug-and-play

The RevPi Connect+ feat. CODESYS can be used as a powerful, industrial small controller for a variety of different automation tasks and represents a real alternative to complex and cost-intensive PLCs.

The RevPi Connect+ feat. CODESYS consists – as the name already indicates – of a RevPi Connect+ and a multicore capable CODESYS Control runtime system.

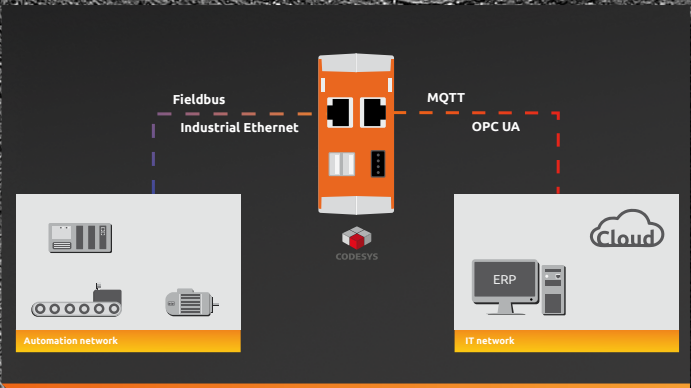
In addition to the RevPi Connect+ base module, all available digital and analog I/O expansion modules, as well as gateways* have been seamlessly integrated into CODESYS and can be controlled and configured via the integrated development environment.

The CODESYS Runtime inherently supports many fieldbus or Industrial Ethernet protocols such as PROFINET, EtherCAT, EtherNet/IP or CANopen and thus enables the use of the RevPi as a soft PLC in such networks.

With the included CODESYS WebVisu, user interfaces or visualization masks can be generated and displayed on PCs, tablets or smartphones via all common browsers. This eliminates the need for separate HMI software.

*** No RevPi Con MBus (item no.: 100281) and RevPi Con MBus VHP Gateway (item no.: 100281) support**

PROFINET® EtherNet/IP® EtherCAT®



Schematic diagram: shopfloor connection to a superordinate IT network

The RevPi Connect+ is equipped with the Raspberry Pi Compute Module 3+ and has a quad-core processor with 1.2 GHz, 1 GB RAM and 16 GB eMMC flash memory. A customized Raspbian with Real-Time Patch is used as the operating system. In addition to running the CODESYS Runtime, individual applications can of course still be programmed via Node-RED, Python or directly in C, among others - just like with the „normal" RevPi Connect+.

Two Ethernet interfaces enable the device to be simultaneously integrated in the automation and IT network, e.g. in order to transfer machine data from the shopfloor to the cloud or a higher-level IT system. In addition, the device is equipped with two USB ports, a 4-pin RS485 interface, a micro-HDMI socket and a micro-USB socket.

All RevPi expansion modules can be connected to the base unit via plug-and-play using a connector on top. This makes it possible to flexibly adapt the respective RevPi control system to growing requirements and to optimize it step by step.

Specifications

Processor	1.2 GHz Quad-Core
RAM	1 GB
eMMC flash memory	16 GB
Power supply	12 - 24 V DC
Size (L x W x H)	111 x 45 x 96 mm
Operating temperature	-40 °C…+55 °C
Storage temperature	-40 °C…+85 °C
Humidity	93 % (non-condensing)
Protection class	IP20
ESD protection	4 kV / 8 kV
EMI tests	Passed (according to EN 61131-2 and IEC 61000-6-2)
Surge / Burst tests	Passed (according to EN 61131-2 and IEC 61000-6-2)
UL certification	Yes, UL-File-No. E494534
Conformity	CE, RoHS
CODESYS-Runtime	Pre-installed and licensed multicore CODESYS Control runtime

Interfaces

2 x RJ45 Ethernet interfaces
2 x USB 2.0 sockets
1 x Micro HDMI socket
1 x Micro USB 2.0 socket (for firmware uploads only)
1 x RS485 screw terminal (4 pole)
1 x PiBridge (for RevPi expansion modules)
1 x ConBridge (for RevPi Con expansion modules)
1 x 24 V input for shutdown signals of a UPS
1 x freely programmable relay switching contact

Product	Item no.
RevPi Connect+ feat. CODESYS	100337

Available expansion modules

Name	Function	Item no.
RevPi DIO	Digital IO module	100197
RevPi DI	Digital Input module	100195
RevPi DO	Digital Output module	100196
RevPi AIO	Analog IO module	100250
RevPi MIO	Analog & digital IO module	100323
RevPi Con M-Bus	Wireless M-Bus module (868 MHz)	100281
RevPi Con M-Bus VHP	Wireless M-Bus module (169 MHz)	100282
RevPi Con CAN	CAN-Bus module	100286
RevPi Gate PROFINET IRT	Gateway PROFINET IRT Device / Slave	100074
RevPi Gate EtherNet/IP	Gateway EtherNet/IP Adapter / Slave	100066
RevPi Gate EtherCAT	Gateway EtherCAT Slave	100073
RevPi Gate POWERLINK	Gateway POWERLINK CN / Slave	100076
RevPi Gate Sercos III	Gateway Sercos III Slave	100075
RevPi Gate Modbus TCP	Gateway Modbus TCP Slave	100088
RevPi Gate PROFIBUS	Gateway PROFIBUS Slave	100069
RevPi Gate DeviceNet	Gateway DeviceNet Adapter / Slave	100071
RevPi Gate CANopen	Gateway CANopen Slave	100070
RevPi Gate Modbus RTU	Gateway Modbus RTU Slave	100090
RevPi Gate DMX	Gateway DMX Master / Slave	100237
RevPi Gate Serial	Gateway Serial Slave	100068

Errors excepted and possible alterations without prior notice. Similar images.

REVOLUTION PI

KUNBUS GmbH Heerweg 15C D-73770 Denkendorf

Tel +49 (0) 711 400 91 500 E-Mail info@kunbus.com
Fax +49 (0) 711 400 91 501 Web RevolutionPi.com