POWERED BY
Raspberry Pi

Open Source

IIoT GATEWAY

RevPi Connect

No appetite for restrictions?

Use RevPi Connect to realize your IIoT ideas!

Freely programmable

Modular expandable

Two Ethernet interfaces

RS485 screw terminal

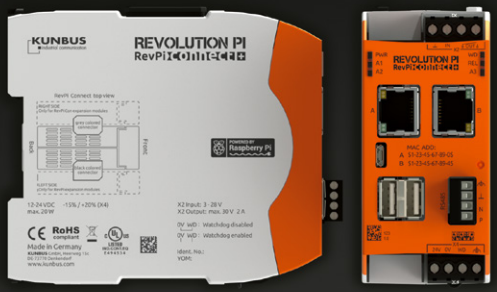
Hardware watchdog

Supports all common industrial network protocols

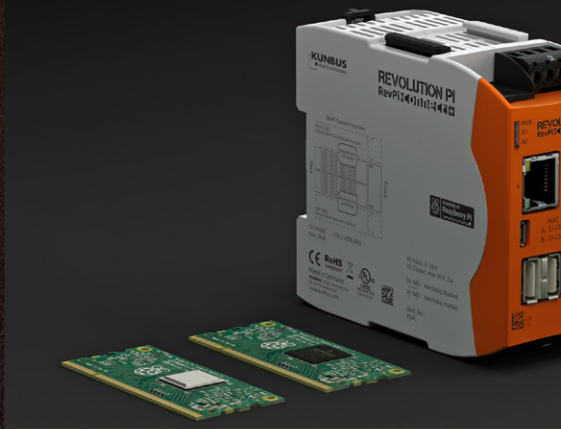
OPC UA & MQTT

Node-RED

Python



Compact DIN rail housing with a width of just 45 mm



Equipped with the Raspberry Pi Compute Module 3 / 3+

Easy connection of expansion modules via plug and play

The open source IIoT gateway RevPi Connect gives users maximum freedom when implementing IIoT projects due to its open platform concept (including full root rights).

Equipped with the Raspberry Pi Compute Module 3 resp. 3+, the device has a quad-core processor with 1.2 GHz, 1 GB RAM and up to 32 GB eMMC flash memory. A specially modified Raspbian version with a real time patch is available as an operating system. Common IIoT protocols like MQTT and OPC UA are supported. Individual applications can be programmed via, amongst other things, Node-RED, Python or directly in C.

RevPi Connect can also be upgraded with PROFINET, EtherNet/IP, EtherCAT, Modbus TCP and Modbus RTU functionality without the use of expansion modules.[1]

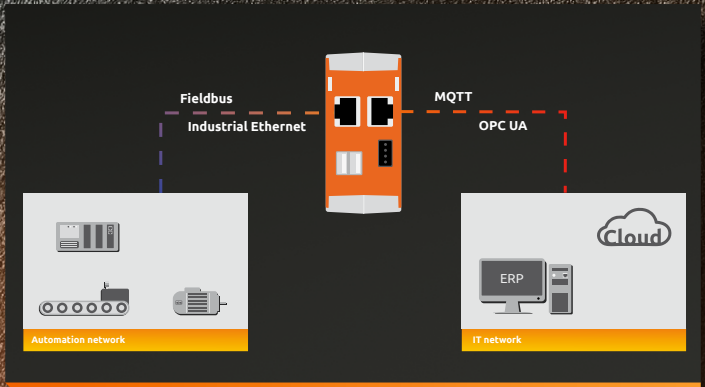
Two Ethernet interfaces enable the device to be simultaneously integrated within the automation network and the IT network to transmit machinery data from, for example, the shop floor to the Cloud or a superordinate IT system.

A freely configurable hardware watchdog monitors the

[1] depending on the protocol, paid software licenses may be required.

Supported fieldbus and industrial Ethernet protocols

PROFINET® EtherNet/IP® EtherCAT®



Schematic diagram: shopfloor connection to a superordinate IT network

status of the IIoT gateway, a relay output serves to ensure that connected devices or expansion modules can be monitored or reset respectively. The device additionally has a 24 V input to receive shutdown signals of an UPS.

The modular design of the RevPi Connect enables the 45 mm wide base device to be fitted with suitable expansion modules such as IOs, fieldbus gateways and radio modules like for example ones for Bluetooth. The expansion modules can be joined up – plug and play – with the base device via a socket positioned at the top and can be easily configured using a graphical user interface.

Integration within fieldbus or industrial Ethernet networks can be done using, amongst other things, gateway expansion modules suitable for all major industrial networks.

Optional control and HMI software additionally enable the IIoT gateway to be upgraded to a small industrial controller.

Specifications

Processor	1.2 GHz Quad-Core
RAM	1 GB
eMMC flash memory	4 / 8 / 16 / 32 GB
Power supply	12 - 24 V DC
Size (L x W x H)	111 x 45 x 96 mm
Operating temperature	-25 °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)
Conformity	CE, RoHS
UL certification	Yes, UL-File-No. E494534

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

Base modules

Name	Item no.
RevPi Connect+ (with 8 GB eMMC flash memory)	100302
RevPi Connect+ (with 16 GB eMMC flash memory)	100303
RevPi Connect+ (with 32 GB eMMC flash memory)	100304
RevPi Connect+ feat. CODESYS (with 16 GB eMMC flash memory)	100337
RevPi Connect (with 4 GB eMMC flash memory	100274

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

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