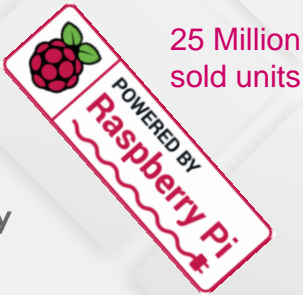


KUNBUS GmbH
 Revolution Pi Summary



1

Revolution Pi – Raspberry Pi goes industry



The idea: Bringing the Raspberry Pi into the industry

- It is **industrial** grade like a PLC (EN61131-2)
- It is **open source**
- It is a complete **modular** automation system (**digital and analog IOs, fieldbus and Ethernet, wireless**)
- It is a **platform** for **services and applications**
- It is **IoT and Industry 4.0**

2

The Core/Connect Family

- LINUX, Rasbian with Real Time Patch
- Free programmable (Python, C+, Java)
- 10.7 up to 28.8V power supply
- 4, 8, 16 or 32 GByte eMMC flash memory
- Modbus TCP and Modbus RTU master and slave functionality
- Operating temperature: -40 to +55 °C
- ESD protection: 4 kV / 8 kV
- IP20
- EMI, Surge & burst according to EN61131-2 and IEC 61000-6-2
- Crypto-Chip for security
- Bridge-Connector for connecting expansion modules (IO's and network)
- Internal cycle time between 2 and 50ms
- Compute Modul B+
- MQTT/ OPC UA for Cloud Connecting

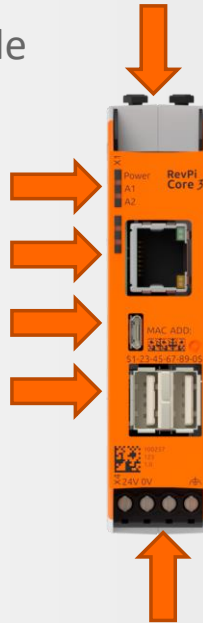


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Industrial communication

3

Revolution Pi Base Module Core 1 and Core 3

1. 2 USB ports, max 1 A
2. Status LEDs
3. 1 Ethernet port
4. 1 micro HDMI
5. Power supply on X4 connector
6. Micro USB port

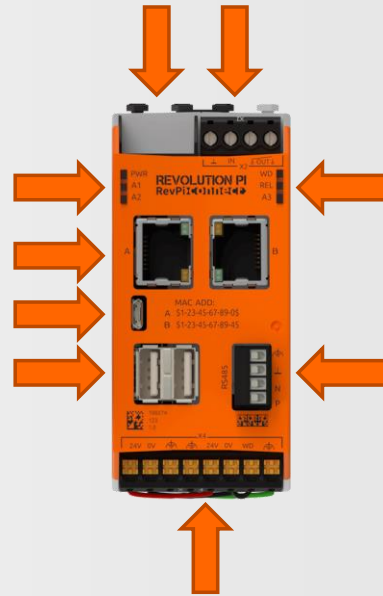


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Industrial communication

4

Revolution Pi Base Modul Connect

1. Block for UPS digital input, relay (output)
2. Status LEDs for watchdog, relay and User-LED
3. 2 Ethernet ports (eth01, eth02)
4. RS485 port
5. Power supply with WD-Disable
6. 2 USB ports, max 1 A
7. Micro USB port
8. Power- and 2 User-LEDs
9. 1 micro HDMI



5

The Core Family

- 4 analog inputs
- 2 analog outputs
- 2 RTD/PT100 channels
- Free configurable
- DI =16 digital IN
- DO =16 digital OUT
- DIO =14 digital IN/OUT

- Gateway



Up to 5 moduls

Up to 5 moduls

- **Digital inputs**
 - PNP type sensors, counter or encoder
 - Up to 6 digital inputs as counter
 - Up to 6 digital encoder
 - Voltage 0V to 24V
- **Digital outputs**
 - direct outputs 0/24V
 - PWM (pulse-width modulation)

PROFIBUS

Modbus

PROFINET

EtherCAT

EtherNet/IP

ETHERNET POWERLINK

SERCOS
the automation bus

CC-Link

DMX

CANopen

DeviceNet

RS-4xx

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6

The Connect Family

- Similar to Core

- CAN Bus
- Wireless M-Bus
- Wireless M-Bus long range



Up to 5 moduls

1 CON
modul

PROFIBUS

Modbus

PROFIBUS

EtherCAT

EtherNet/IP

ETHERNET
POWERLINK

sercos
the automation bus

CC-Link

DMX

CANopen
DeviceNet

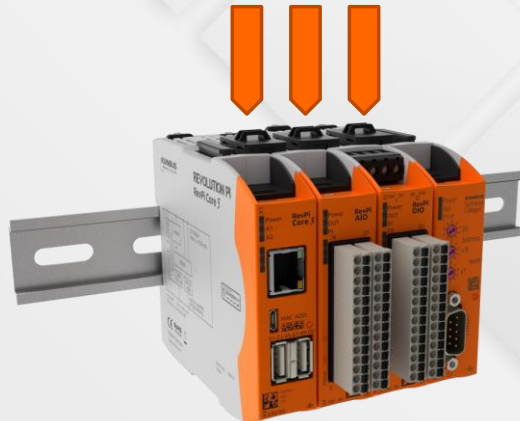
RS-485
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7

Plugging together



POWER

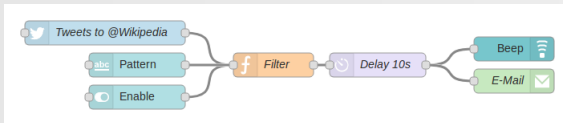


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8

Possibilities

- Codesys
- logi.CAD 3
- NodeRed
- PYTHON
- JAVA
- C, C+, C#
- VNC
- Teamviewer
- PROCON-WEB IoT (GTI) HMI/SCADA



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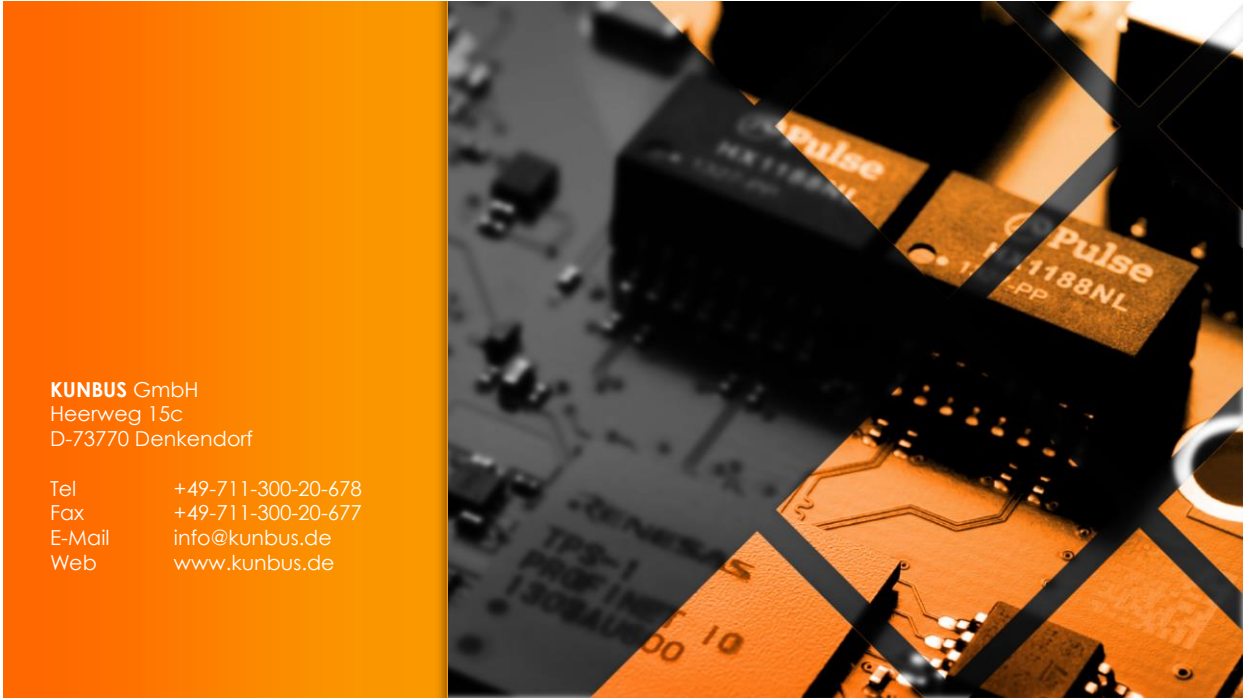
9

Success?

- More than 3000 customer within 2 years
- Awarded platform
 - Best IPC at IAS Shanghai 2018 (1.st place)
 - Best IPC at IAS Shanghai 2019 (RevPi Connect)
 - TOP100 „Top innovator 2017“
 - Electronic Award 3.nd prize (Product of the year 2017, Category: automation)
 - LB Bank Landespreis „Young Enterprises“ Top 10
 - Innovation award „Landkreis Esslingen“, 2.nd place 2018

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