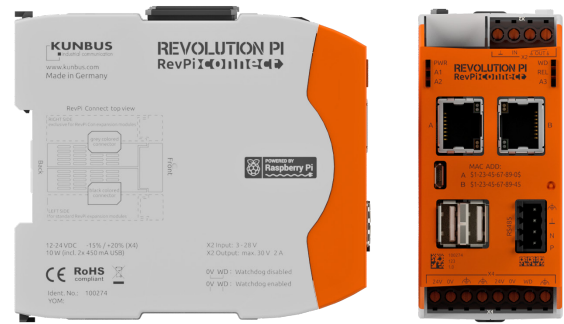


# REVOLUTION PI

## RevPi Connect

Article No.: 100274



## Technical Data

Housing dimensions (H x W x D)	96 x 45 x 110.5 mm
Housing type	DIN rail housing (for DIN rail version EN 50022)
Housing material	Polycarbonate
Weight	approx. 197 g / 224 g (incl. connectors)
IP Code	IP20
Power supply	12-24 V DC -15%/- +20%
Max. power consumption	20 Watt (incl. 1 A total USB output current) <sup>1</sup>
Operating temperature	-40 °C....+55 °C <sup>2</sup>
Storage temperature	-40 °C....+85 °C
Humidity (at 40°C)	93% (non-condensing)
Interfaces	2 x USB A (Total current draw from both sockets max. 1 A) <sup>3</sup> 2 x RJ45 10/100 Ethernet (using separate MAC addresses) 1 x RS485 screw-type terminal (not galvanically isolated) 1 x Micro-USB (solely for image transfer to eMMC) 1 x Micro HDMI 1 x PiBridge system bus 1 x ConBridge system bus
Connectors	1 x 4-pole screw-type terminal for relay contact and signal input 1 x 8-pole spring clamp connector for power supply
Processor	Broadcom BCM2837 quad-core ARM Cortex A53 (ARMv8)
Clock rate	1.2 GHz <sup>2</sup>
Processor cooling	Passive with heat sink
RAM	1 GByte
Flash memory	4 GByte

<sup>1</sup> The average power consumption without USB load varies greatly and depends on the use of the interfaces, the GPU and the CPU. It is usually well below 4 watts without HDMI.

<sup>2</sup> There should be no cutbacks of power at ambient temperatures below 20°C. At 25°C ambient temperature 3 cores may run with full clock speed while with 4 cores the clock frequency is lowered from 1.2 to 1.1 GHz after 10 to 20 minutes of full stress. At 40°C ambient temperature 4 cores under full stress will still work with 1 GHz while stressing just 1 core results in no down clocking. At 50°C ambient temperature 4 fully stressed cores are running at average 0.7 GHz, having short down clockings to 0.6 GHz and short up clockings to 0.9 GHz. 1 core under full stress does result in no down clocking. At 65°C ambient temperature and either 4 or 1 core under full stress results in an "emergency mode" with just 0.4 GHz, after longer periods even 0.3 GHz.

<sup>3</sup> 1 A USB output current (total of both USB outputs) is only available for input voltages >11 V. The bridging time of at least 10 ms required by EN 61131-2 is only guaranteed with a 20.4 to 28.8 V power supply. With a 12 V power supply, this time is significantly reduced, especially when power is drawn from the USB ports.

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Number of digital input channels	1
Input type	24 V control voltage (e.g. for power-good signal of a UPS)
Input thresholds	approx. 3.0V (0 -> 1) / 2.3V (1 -> 0)
Input protection	against overvoltage, negative voltages
Number of digital output channels	1
Output type	Relay contact, approval up to 30 V switching voltage (e.g. for power supply of a router)
Maximum current load of the contact	2A @ 30V DC (resistive load!)
Software integration of input and output	Via GPIOs and process image. Output is optionally switched by hardware watchdog
Hardware watchdog functionality	Can be disabled by bridging the 8-pin connector. Reset by toggling a GPIO or alternatively a bit in the process image
Hardware watchdog intervall	Trigger after approx. 60 seconds without toggling the reset bit
Compatible modules for system expansion	All RevPi IO modules and RevPi Gate modules can be connected via the PiBridge system bus. Various transceiver modules can be connected via the ConBridge system bus.
Protection of the power supply inputs	Reverse polarity protected, overvoltage protection
ESD protection	4 kV / 8 kV (according to EN61131-2 and IEC 61000-6-2)
EMI tests	Passed (according to EN61131-2 and IEC 61000-6-2)
Surge/Burst tests	Passed (according to EN61131-2 and IEC 61000-6-2)
Buffer time RTC	min. 24 h
Optical indicator	6 status LEDs (bi-color), two of them freely programmable
RoHS conformity	Yes
CE conformity	Yes