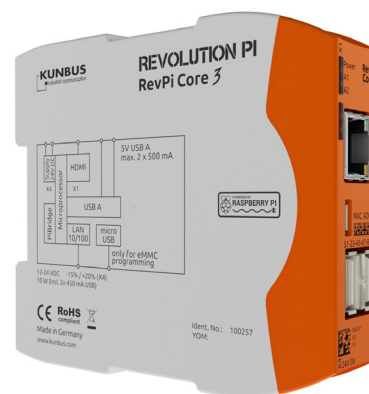


REVOLUTION PI

RevPi Core 3

Article No.: 100257



Technical Data

Housing dimensions (H x W x D)	96 x 22.5 x 110.5 mm
Housing type	DIN rail housing (for DIN rail version EN 50022)
Housing material	Polycarbonate
Weight	approx. 115 g
Protection class	IP20
Power supply	min. 10.7 V - max. 28.8 V ¹
Max. power consumption	10 Watt (incl. 2 x 450 mA USB load) ²
Operating temperature	-40 °C to +55 °C (exceeds EN61131-2 requirements) ³
Storage temperature	-40 °C to +85 °C (exceeds EN61131-2 requirements)
Humidity (40°C)	up to 93% (non-condensing)
Interfaces	2 x USB 2.0 A (each can be charged with 500mA) 1 x Micro-USB 1 x Micro HDMI 1 x RJ45 (Ethernet) 10/100 Mbit/s
Processor	BCM2837, 1.2 GHz, quad-core
RAM	1 GByte
Flash	4 GByte
Polarity protection	Yes
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 using power supply , Ethernet line und IO lines)
Buffer time RTC	min. 24 h
Optical indicator	Three status LEDs (bi-color), two of them freely programmable
Operating system	customized Raspbian incl. RT-Patch

¹ RevPi Core 3 can only drive 2 x 500 mA USB 5 V supply using input voltages greater than 11 V. EN61131 demands a minimum of 10 ms tolerance against power failure which can only be guaranteed with input voltages from 20.4 V to 28.8 V. At 12 V input voltage this time decreases drastically, especially when driving loads by USB ports.

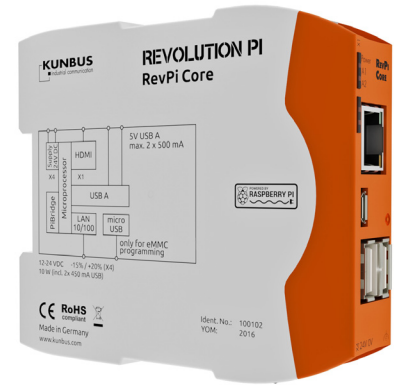
² The average power consumption without USB loads vary widely and depends on the specific use of interfaces, GPU and CPU. Not using the HDMI interface keeps the power consumption of RevPi Core 3 generally below 4 Watt.

³ There should be no cutbacks of compute power at ambient temperatures under 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.

REVOLUTION PI

RevPi Core

Article No.: 100102



Technical Data

Housing dimensions (H x W x D)	96 x 22.5 x 110.5 mm
Housing type	DIN rail housing (for DIN rail version EN 50022)
Housing material	Polycarbonate
Weight	approx. 108 g
Protection class	IP20
Power supply	min. 10.7 V - max. 28.8 V ⁴
Max. power consumption	10 Watt (incl. 2 x 450 mA USB load) ⁵
Operating temperature	-40 °C to +55 °C (exceeds EN61131-2 requirements) ⁶
Storage temperature	-40 °C to +85 °C (exceeds EN61131-2 requirements)
Humidity (40°C)	up to 93% (non-condensing)
Interfaces	2 x USB 2.0 A (each can be charged with 500mA) 1 x Micro-USB 1 x Micro HDMI 1 x RJ45 (Ethernet) 10/100 Mbit/s
Processor	BCM2835, 700 MHz, single-core
RAM	500 MByte
Flash	4 GByte
Polarity protection	Yes
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 using power supply , Ethernet line und IO lines)
Buffer time RTC	min. 24 h
Optical indicator	Three status LEDs (bi-color), two of them freely programmable
Operating system	customized Raspbian incl. RT-Patch

⁴ RevPi Core can only drive 2 x 500 mA USB 5 V supply using input voltages greater than 11 V. EN61131 demands a minimum of 10 ms tolerance against power failure which can only be guaranteed with input voltages from 20.4 V to 28.8 V. At 12 V input voltage this time decreases drastically, especially when driving loads by USB ports.

⁵ The average power consumption without USB loads vary widely and depends on the specific use of interfaces, GPU and CPU. Not using the HDMI interface keeps the power consumption of RevPi Core generally below 4 Watt.

⁶ Not having heavy USB loads and providing a free heat emission of the housing we have operated RevPi Core up to 65 °C at 24 V input supply voltage without any problems. We can't guarantee cold start of a cooled down system at ambient temperatures less than -30 °C using 24 V power supply voltage.