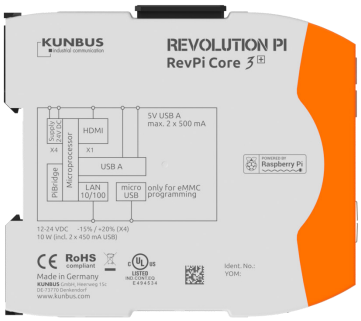
REVOLUTION PI

RevPi Core 3+

Article no.: 100299 (8 GB version)
Article no.: 100300 (16 GB version)
Article no.: 100301 (32 GB version)



Technical Data

Housing dimensions (HxWxD)	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	12-24 VDC -15 % / +20 %, reverse polarity protected [1]
Max. power consumption	10 W (incl. 900 mA total USB load) [2]
Operating temperature	-40 °C to +55 °C
Storage temperature	-40 °C to +85 °C
Humidity (40 °C)	up to 93 % (non-condensing)
Interfaces	2 x USB A (Total current consumption from both sockets max. 900 mA) [2] 1 x RJ45 10/100 Ethernet 1 x Micro-USB (solely for image transfer to eMMC) 1 x Micro HDMI 2 x PiBridge system bus
Connectors	1 x 4-pole screw-type terminal for power supply
Processor	Broadcom BCM2837B0 quad-core ARM Cortex-A53
Clock rate	1.2 GHz
Processor cooling	Passive with heat sink
RAM	1 GB
Flash memory	8 GB (article no.: 100299) / 16 GB (article no.: 100300) / 32 GB (article no.: 100301)
Compatible modules for system expansion	All RevPi IO modules and RevPi Gate modules can be connected via the PiBridge system bus
ESD protection	4 kV / 8 kV (according to EN 61131-2 and IEC 61000-6-2)
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)
Buffer time RTC	min. 24 h
Optical indicator	3 status LEDs (bi-color), two of them freely programmable
Conformity	RoHS
Markings and certifications	CE, UL

[1] 900 mA USB output current (sum of both USB outputs) is only available at input voltages >11 V. The bridging time required by EN 61131-2 of voltage dips of at least 10 ms is only guaranteed with a supply voltage of 20.4 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 generally below 4 W.

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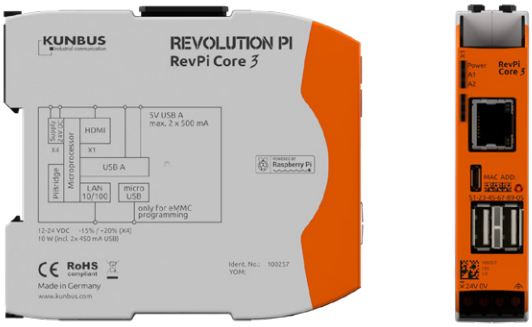
RevPi Core 3

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 EN 61131-2 requirements) [3]
Storage temperature	-40 °C to +85 °C (exceeds EN 61131-2 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 EN 61131-2 and IEC 61000-6-2)
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 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
Markings and certifications	CE, UL

[1] RevPi Core 3 can only drive 2 x 500 mA USB 5 V supply using input voltages greater than 11 V. EN 61131 demands a minimum of 10 ms tolerance against power failure which can only be guaranteed with input voltages form 20.4 V to 28.8 V. At 12 V input voltage this time decreases drastically, especially when driving loads by USB ports.

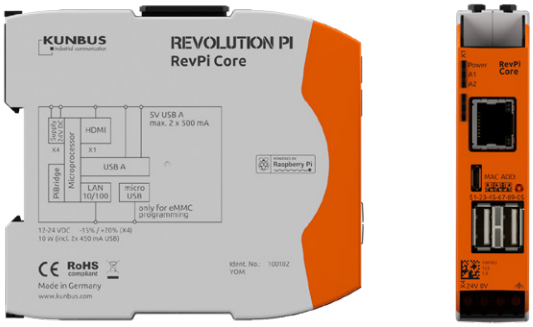
[2] The average power consumption without USB loads vary widely and depends on the specific use of interfaces, GPU and CPU. Not using the HDMI interface keeps the power consumption of RevPi Core 3 generally below 4 Watt.

[3] There should be no cutbacks of compute power at ambient tempertures 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.: 1000102



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 EN 61131-2 requirements) [6]
Storage temperature	-40 °C to +85 °C (exceeds EN 61131-2 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 EN 61131-2 and IEC 61000-6-2)
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 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
Markings and certifications	CE, UL

[4] RevPi Core can only drive 2 x 500 mA USB 5 V supply using input voltages greater than 11 V. EN 61131 demands a minimum of 10 ms tolerance against power failure which can only be guaranteed with input voltages form 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.