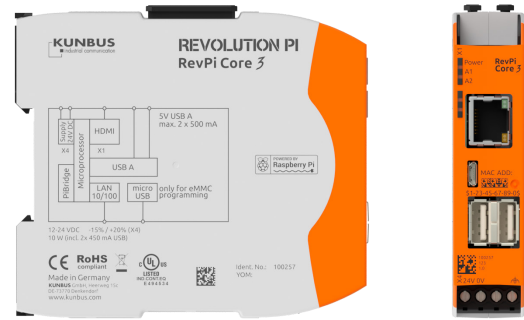


# REVOLUTION PI

## RevPi Core 3

Article no.: 100257



## 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 V DC -15 % / +20 %, reverse polarity protected <sup>1</sup>
Max. power consumption	10 W (incl. 900 mA total USB load) <sup>2</sup>
Operating temperature	-40 °C to +55 °C <sup>3</sup>
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) <sup>2</sup> 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 BCM2837 quad-core ARM Cortex-A53
Clock rate	1.2 GHz
Processor cooling	Passive with heat sink
RAM	1 GB
Flash memory	4 GB
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	CE, RoHS
UL certification	Yes, UL-File-No. E494534 Note: The device may only be supplied from circuits that comply with Class 2 or Safety Extra Low Voltage (SELV) according to Class 9.4 of UL 61010-1.

<sup>1</sup> 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.

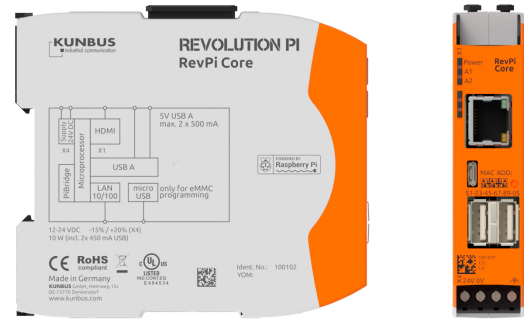
<sup>2</sup> The average power consumption without USB loads vary widely and depends on the specific use of interfaces, GPU and CPU. Not using the HDMI interface keeps the power consumption of generally below 4 W.

<sup>3</sup> 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 (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. 108 g
Protection class	IP20
Power supply	12-24 V DC -15 % / +20 %, reverse polarity protected <sup>1</sup>
Max. power consumption	10 W (incl. 900 mA total USB load) <sup>2</sup>
Operating temperature	-40 °C to +55 °C <sup>3</sup>
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) <sup>2</sup> 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 BCM2835 single-core ARM11
Clock rate	700 MHz
Processor cooling	-
RAM	512 MB
Flash memory	4 GB
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	CE, RoHS
UL certification	Yes, UL-File-No. E494534 Note: The device may only be supplied from circuits that comply with Class 2 or Safety Extra Low Voltage (SELV) according to Class 9.4 of UL 61010-1.

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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.