

emPC-A/RPI4

Industrial Embedded Controller powered by Raspberry Pi Compute Module 4



PRODUCT DESCRIPTION

Janz Tec's emPC-A/RPI4 is a device which uses a Raspberry Pi Compute Module 4 inside. This module is mounted on a self-developed carrierboard providing a 24 V power supply, a CAN interface, a real-time clock, digital inputs and outputs and an additional RS232/RS485 interface. Due to the modular design of our Raspberry Pi 4, customer-specific extensions can be realized quickly and with reduced development effort.

FEATURES

Processor

- Powered by Raspberry Pi Compute Modul 4
- Quad-Core CPU based on ARM Cortex-A72 with 4 x 1.5 GHz, 64-bit SoC

Memory

- Up to 8 GB LPDDR4 RAM system memory

Storage

- Externally accessible µSD card slot ¹⁾
- Up to 32 GB eMMC ¹⁾

Interfaces

- 2.4/5.0 GHz IEEE 802.11 b/g/n/ac wireless
- Bluetooth 5.0, BLE
- LTE/4G (optional)
- GNSS (optional)
- 1 x I/O connector, providing:
 - 1 x CAN-FD „isolated“
 - 1 x RS232 or switchable to RS485
 - 4 x digital inputs (24 V_{DC}) „isolated“
 - 4 x digital outputs (24 V_{DC}) „isolated“
- 1 x 10/100/1000 Mbit/s Ethernet
- 2 x USB (v2.0)

- 1 x HDMI graphics interface
- 1 x 9-pin D-SUB connector for serial debug console (RS232 only with Rx/D and Tx/D)
- TPM 2.0 chip
- Real-time clock, battery buffered
- Extension module with different interfaces (optional)

Environment

- Ambient operating temperature -20 °C ... 45 °C / 60 °C ²⁾
- Non-operating temperature range -20 °C ... 75 °C
- Dimensions (WxDxH) 117 x 93.5 x 35 mm
- 5 % ... 95 % r.H., non-condensing
- Desktop, Wall or DIN rail mounting
- IP 20 protection
- Fanless cooling concept

Power Supply

- Input 9 ... 32 V_{DC}

Software

- Raspberry Pi OS
- CODESYS V3 runtime environment
- MQTT support

¹⁾ It is not possible to use both

²⁾ depends on the use condition
(see manual for details)

EMPC-A/RPI4

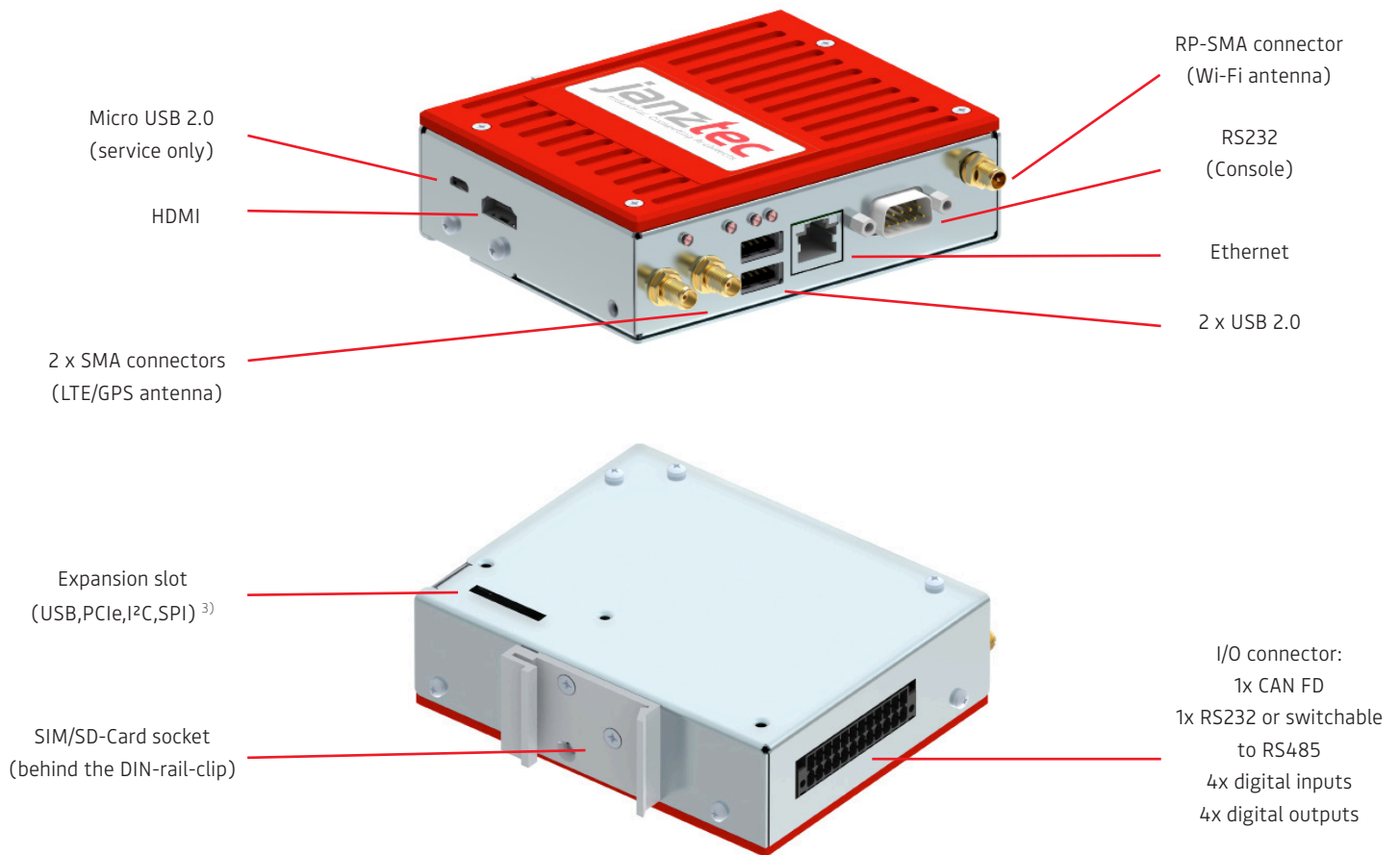
Certifications

- CE/RED

Industrial Approvals

- DIN EN 61000-4-3
 - 10V/m (80MHz bis 1GHz) w/o LTE/GSM
 - 3V/m (80MHz bis 1GHz) with LTE/GSM

- DIN EN 61000-4-4(Burst)
 - DC Power inputs and Outputs $\pm 2kV$
 - Signal and Control lines (exc. USB) $\pm 1kV$
- DIN EN 61000-4-5 (Surge)
 - $\pm 1kV$ line to earth
- DIN EN 61000-4-6
 - 10V test level



Product name	Ordering number
emPC-A/RPI4 2GB RAM	SY-EPC-RPI420
emPC-A/RPI4 2GB RAM / LTE	SY-EPC-RPI42L
emPC-A/RPI4 4GB RAM / LTE	SY-EPC-RPI44L

³ optionally possible for customer development
(extensions for example with DIOS/ETH/USB)

Customized Solutions Feel free to contact Janz Tec's sales team for special requirements and features:

Janz Tec AG Im Dörener Feld 8 33100 Paderborn Germany
P +49 5251 1550-0 F +49 5251 1550-190 mail@janztec.com

© 2025 Janz Tec AG

All rights reserved. All other brands or names are property of their respective holders. Specifications are subject to change without notice.

Rev. 2025/05
Page 02/02

JANZTEC.COM