

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 an 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 ¹⁾

Memory

- Up to 8 GB LPDDR4 RAM system memory

Storage

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

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
 - 1 x RS232 or switchable to RS485
 - 4 x digital inputs (24 V_{DC})
 - 4 x digital outputs (24 V_{DC})
- 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)
- Soldered Trusted Platform Module 2.0
- Real-time clock, battery buffered
- Extension module with different interfaces (optional)

Environment

- Ambient operating temperature -20 °C ... 45 °C / 60 °C
- Non-operating temperature range -20 °C ... 75 °C
- Dimensions (WxDxH) 117,0 x 93,5 x 35,0 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 CPU performance may will be reduced by software in our standard OS image for protecting the system against overheating.