janz**tec**
Industrial Computing Architects

emPC-A/RPI3

Industrial Embedded Controller
powered by Raspberry Pi 3, Model B

PRODUCT DESCRIPTION

Janz Tec's emPC-A/RPI3 is a device which uses an original Raspberry Pi 3 model B module inside. This module is mounted on a self-developed mainboard providing a 24 V power supply, a CAN interface, a real-time clock, digital inputs and outputs and an additional RS232/RS485 interface. A microSD card (not included) is required for operation.

FEATURES

Processor
- Powered by Raspberry Pi 3, Model B
- Quad-Core CPU based on ARM Cortex-A53 with 4 x 1.2 GHz [1]
- Fanless cooling concept
- Real-time clock, battery buffered

Memory
- 1 GB DDR2 RAM system memory

Storage
- Externally accessible µSD card slot

Internal Interfaces
- CYW43438 WiFi/WLAN on Board
- 1 x I/O connector, providing:
  - 1 x CAN (ISO/DIS 11989-2, opto-isolated, termination settings via jumper, SocketCAN supported)
  - 1 x RS232 (Rx, Tx, RTS, CTS) or switchable to RS485 (half-duplex, termination settings via jumper)
  - 4 x digital inputs (24 V_{DC})
  - 4 x digital outputs (24 V_{DC})

External Interfaces
- 1 x 10/100 Mbit/s Ethernet
- 4 x USB (V2.0)
- 1 x 9-pin D-SUB connector for serial debug console (RS232 only with RxD and TxD)
- 1 x HDMI graphics interface

Environment
- Ambient operating temperature 0 °C … 35/40 °C [2]
- Non-operating temperature range -20 °C … 75 °C
- 5 % … 95 % r.H., non-condensing
- Dimensions (w x d x h): 99.8 x 96.7 x 30.0 mm
- Desktop, Wall or DIN rail mounting

Power Supply
- Input 9 … 32 V_{DC}

Software
- Raspbian lite operating system
- CODESYS V3 runtime environment
- CANopen protocol stack and tools

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[1] CPU performance will be reduced by software in our standard OS image to 4 x 600 MHz for protecting the system against overheating. Using only 1 core with full 1.2 GHz is also possible, see hardware manual for more detailed information.

[2] Temperature range depends on mounting situation of the device.

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

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