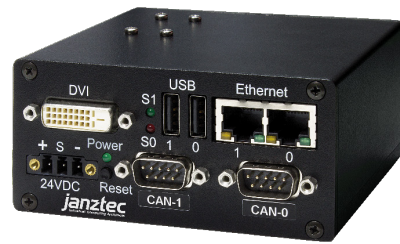janztec
Industrial Computing Architects

emPC-A/iMX6

Fanless and compact Multi-Core ARM-based Embedded Controller

PRODUCT DESCRIPTION

The emPC-A/iMX6 is a compact and fanless embedded controller system. It is based on the i.MX6Q ARM Cortex-A9 quad-core processor. The system combines a strong CPU unit with a fanless and robust system design, two ethernet ports and up to 4 D-SUB interfaces[1] for either CAN/CANopen or RS232/RS485, which makes it suitable for machine control or IoT gateway applications. emPC-A/iMX6 systems can be expanded with additional expansion boards. Optionally advanced security features are available.

FEATURES

Processor
- NXP i.MX6 quad-core CPU based on ARM Cortex -A9, 800 MHz
- ARM TrustZone Security Technology

Memory
- 2 GB DDR3 RAM system memory
- 128 kB battery-free NVRAM

Storage
- Internal 4 GB eMMC flash
- Internal CFast Socket for SATA SSD
- Internal SD card slot

External Interfaces
- 2 x 10/100/1000 MBit/s Ethernet
- 2 x USB (V2.0) with 500 mA power supply capacity
- Up to 4 x 9-pin D-SUB connectors for CAN or serial ports [1]
  - SJA1000 CAN Controller
  - Physical Layer ISO/DIS 11898-2
- DVI-D graphics interface
- Serial port with RTS/CTS only

Environment
- Ambient operating temperature range -40 °C ... 70 °C [2]
- Non-operating temperature range -40 °C ... 85 °C
- 5 % ... 95 % r.H., non-condensing
- Dimensions (w x h x d):
  - 2 D-SUB: 52 x 105 x 117 mm
  - 4 D-SUB: 72 x 105 x 117 mm

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[1] Available with 2 D-SUB: 2 x RS232 or 2 x CAN/CANopen or 1 x RS232 & 1 x CAN/CANopen
        4 D-SUB: additional 2 x RS232/485 or 2 x CAN/CANopen
   More interfaces on request.

[2] Up to 75 °C ensured with limited CPU load

PRODUCT DATASHEET

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Power Supply
• Input 9 ... 34 V_{DC}
• Power consumption ca. 6 W

Software
• Linux Debian
• CODESYS V 3.5 IEC 61131-3 runtime environment

Expansion
• Internal ix-bus 8/16 bit interface for I/O and low speed peripherals [3]
• Expansion boards available for additional I/O and other peripherals [3]

Certifications
• CE (Europe), NRTL (USA/Canada), ACMA (Australia), other Certifications on request

Options
• Security Features:
    • Signed and encrypted boot (High Assurance Boot)
    • Hardware random number generator
    • Hardware-accelerated cryptographic engine

PRODUCT DATASHEET

[3] Please see external datasheet for available expansion boards

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

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