

CAN Newsletter Online

SINGLE-BOARD COMPUTER

Embedded modules with CAN FD support

The TQMa8xx and TQMa8xxs embedded modules by TQ-Systems (Germany) feature three respectively two CAN FD interfaces.



The TQMa8xx module is based on the processor ARM Cortex-A35 core technology (Source: TQ-Systems)

The TQMa8xx module provides integrated graphics, a DSP (digital signal processor) for audio processing and security-related functions. For various requirements three CPU (central processing unit) variants with a dual-core or quad-core ARM Cortex-A35 processor are available. Each core offers a clock rate of up to 1,2 GHz. Beside of the three CAN FD interfaces, two Ethernet, three USB, four UART, and further communication interfaces are available. Additionally, up to four SPI, up to 32 GPIOs, and up to eight I²C ports are supported. Slots for an SD card and for PCIe are offered. The device features an up to 64-GiB eMMC memory, an up to 256-MiB quad SPI NOR, an Eeprom, as well as an up to 2-GB DDR3L.

The board dimensioning 55 mm x 44 mm provides a 280-pins board-to-board plug-in system. It also features a temperature sensor and an RTC (real time clock). The extended operating

temperature ranges from -40 °C to +85 °C. The unit requires a power supply of 3,3 V and consumes 4 W. Supported operating systems include Linux, QNX (on request), or Android (on request).

The TQMa8xxs module dimensioning 82 mm x 50 mm offers the [Smarc](#) 2.0/2.1 board-to-board plug-in system with 314 pins. It offers similar (but less) functionality and interfacing features as the TQMa8xx board.

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