CAN *Newsletter Online*

CONTINUING PRODUCT LINE

Instant access to CANopen with CANopen modules

Earlier this year, Emsa (Embedded Systems Academy) inherited the CANopen IA product line from Essolutions (Embedded Systems Solutions). A CANopen FD version is also planned.

CANopen IA M0 starter kit (Source: Emsa)

The product line goes back about 20 years and at the time the products were based on the Philip's XA architecture. The current products are using the NXP LPC11Cxx micro-controllers (ARM Cortex M0). Right from the beginning, Emsa provided the firmware and support software for these products making themself a natural candidate to continue this product line after Essolutions discontinued their operation.

The base product is a 31,5 mm x 20 mm 48-pin module offering seven configurable ports with four connectors each. Depending on the port number, a port can be configured to be:

- Digital input or output (four signals)
- Remote access (serial UART, TTL)
- Internal analog input (four times 8-bit or 10-bit resolution)
- External analog input (four times 12 bit, I^2C connected external)
- External analog output (four times 12 bit, I^2C connected external)

Emsa, now enhances the features of this product line. The latest firmware release version 2.2 added remote access support to a host system via a serial TTL channel. This allows the module to be used as a CANopen communication processor in systems that can use a regular serial channel to communicate with the communication processor. A further enhancement added 8-bit resolution access to the analog inputs (default use is 10-bit resolution) now supporting a variety of CANopen joystick implementations.

An entry starter kit is now available, offering basic access to the functionality provided by the CANopen IA M0 module. All 48 pins of the module are made available on standard header rows, all marked with the matching pin names. For quick tests, switches and LEDs can be connected to any of those pins using jumper cables provided.

A CANopen FD version of the module is currently under development and scheduled for release early 2022.

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