CANopen FD protocol stack and tools

After the release of the CANopen FD specification CiA 1301 1.0, Emtas has announced its CANopen FD master/slave protocol stack.

Based on its CANopen protocol stacks, Emtas has developed its CANopen FD Master/Slave protocol stack, which can be used to develop CANopen FD master and slave devices. The stack is delivered as source code for various targets and licensed under a royalty-free license.

The CANopen FD protocol stack has been implemented according to the CiA 1301 specification version 1.0. CiA’s CANopen SIG “Application layer” has developed it with active participation of Emtas’ engineers. The released stack supports all CANopen FD features such as PDOs with up to 64 byte, the extended EMCY message, the improved error history, and the Universal SDO (USDO) service, which includes possibilities such as broadcast and routing of USDO messages. The stack can be used on various embedded micro-controllers, which already support CAN FD. It has been tested on a STM32H7, NXP LPC546xx, Microchip's Atmel SAM C21 and with Microchip's external CAN FD controller MCP2517FD. In addition to these embedded platforms the protocol stack can also be used on Windows or Linux with various CAN FD interfaces from different manufacturers.

Together with the stack, the company has updated its CANopen Devicedesigner – a PC tool to design CANopen and CANopen FD devices. This tool generates code for the object dictionary and configuration header files to configure the stack. In the future, it will generate the EDS files based on the object dictionary of the devices to ensure the implementation and documentation are congruent. The EDS specification is still under development.

Also Emtas’ CANopen Deviceexplorer (CDE) has been updated for CANopen FD. The CDE is a CANopen FD configuration and analysis tool. Supporting CANopen and CANopen FD the tool is available for Windows, Linux, and OS X. Emtas is part of the SPS IPC Drives 2017 in hall 6 booth 125. The exhibition takes place from November 28 to 30.