CAN *Newsletter Online*

CANopen STACK

Integration into development platform

Emtas (Germany) has presented the integratable CANopen stack for the latest Dave version and the ARM Cortex-M powered XMC industrial micro-controller portfolio of Infineon Technologies (Germany).
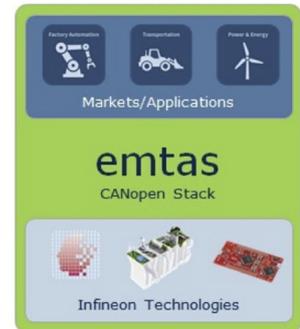
FOUR WEEKS AGO, THE LATEST DAVE (Digital Application Virtual Engineer) was presented at the Embedded World 2015. Emtas has now released the first version of the CANopen driver package using Infineon's Dave (version 4) for the CANopen protocol stack implementing CiA 301 version 4.2.

The CANopen driver supports all members of the XMC4000 MCU portfolio ranging from XMC4108 to XMC4500 with a MultiCAN module that offers up to three CAN nodes with up to 64 message objects. The XMC4108 series features one CAN interface, 64 kiB Flash, 20 kiB RAM, up to 125 °C ambient temperature, and a 80 MHz clock for peripherals. Additional it provides ARM Cortex-M4 with built-in DSP and SFPU, MPU, DMA, a programmable hardware interconnect Matrix in combination with Timers/PWMs/POSIF, analog-mixed signals and communication features. It comes in a 7 mm x 7 mm VQFN-48 package.

(Photo: Emtas)

As the largest device in Infineon's XMC4000 family, the XMC4500 series offers three CAN interfaces, 120 MHz, 1 MiB Flash, additional peripherals including Ethernet, USB, SDIO/SD/MMC, and an external bus unit.

The CANopen driver and protocol stack ensures use of the CANopen protocol in full CAN mode, basic CAN mode, or basic CAN mode with hardware RX FIFO. It is MISRA-C conform according to the latest CiA communication profile 301 version 4.2 for classic CAN and NMT master functionality following CiA 302-2 including CiA 305 LSS services.

According to the company, the product is well suited to developing devices following the CiA device profiles and to developing Energybus products. The CANopen development process is supported by tools to generate the object dictionary and test tools for automated device tests.