CAN Newsletter Online

PROTOCOL STACKS AND TOOLS

Expanded CANopen driver support for STM32G4

Port (Germany) extended its CANopen driver portfolio by support of the STM32G4xx family from ST Microelectronics.

The STM32G4 series combines a 32-bit Arm Cortex-M4 core with three different hardware accelerators (Source: ST Microelectronics)

The STM32G4 series features a 32-bit, 170-MHz Arm Cortex-M4 core with FPU (floating point unit) and DSP (digital signal processing) instructions. It also offers an ART (adaptive real-time) accelerator, CCM-SRAM routine booster, and mathematical accelerators.

The CANopen driver supports company's CAN Multiline functionality, so that several CAN channels can be operated simultaneously. The software supports 11-bit and 29-bit CAN-Identifiers. The Keil ARMCC v. 5.26 µVision5 is used as compiler/IDE (integrated development environment). The driver was designed for use of the HAL (hardware abstraction layer) drivers (STM32cube_fw_g4_v1.1.0) from the STM32cubeg4 firmware package.

Together with company's CANopen stacks, the CANopen NMT (network management) master and/or CANopen NMT slave functionality can be used. For integration of the CANopen library in connection with the introduced CANopen driver, the CANopen Design tool (will be called Industrial Communication Creator in the future) is available. The tool is suited for development of CANopen applications and programming of the CANopen devices. It generates an object dictionary and an initialization function code in C programming language. An electronic data sheet and the documentation of the project are created as well. It is also used to configure the CANopen library and the CANopen driver packages.

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