**ISIT_COBASE**

# ISIT CANopen protocol Stack

**Rapid implementation of CANopen protocol in an embed. App**



ISIT offers a **CANopen protocol stack** software compliant with the CiA-301.

Developed in ANSI-C and independent of the hardware (except for CAN driver), it eases the rapid development of master and slave devices, including the necessary services like SDO, PDO, NMT (network management), LSS (layer setting services).

The **ISIT CANopen stack** is available in Slave and Master/Slave versions, in pre-ported binary on a target or in source code.

The **CANopen stack** consists of a hardware-dependent part, primarily the CAN driver, and a hardware-independent part (CANopen protocol) that communicates with the driver's message queues. The hardware dependent part consists of CAN controller control software.

Hardware access is done via a stack-independent driver, which is already available for many CPU and CAN controllers (*ST Microelectronics*, Infineon, TI, Renesas, etc.) with and without an operating system. Adaptation to new hardware/software platforms can be done with minimal effort. The **CANopen stack** can be used without OS (Bare Metal) or with different real-time operating systems such as ThreadX, FreeRTOS, Keil RTX, embOS or TI-RTOS, as well as with Linux (SocketCAN, can4linux)



## ISIT CANopen protocol Stack - Features and Benefits:

- ▶ OS and CPU independent core architecture
- ▶ ANSI-C Source code available (Except for binary version)
- ▶ Compliant with CiA 301 standard (EN50325-4) for CANopen master and slave development
- ▶ Generic easy-to-use API, compatible with Safety versions
- ▶ Same code as certified version (except DR-303 and LSS)
- ▶ EDS Editor provided
- ▶ Can be upgraded with CANopen Safety extension (CiA-304 / EN50325-5) up to certified version

## ISIT CANopen protocol Stack - Functions overview:

- ▶ SDO expedited, segmented and block modes
- ▶ PDO synchronous/asynchronous modes
- ▶ PDO static/dynamic mapping
- ▶ NMT Error control : Heartbeat consumer/producer
- ▶ EMCY producer (Consumer in Master version only)
- ▶ NMT commands (Master version only)
- ▶ Any slave profile can be created by providing EDS file
- ▶ Basic LSS protocol supported
- ▶ LED Handling (DR-303)

## ISIT CANopen protocol Stack - Content of the delivery:

- ▶ CANopen stack : Software provided in binary (preconfigured) or source code for the stack and the driver
- ▶ Usage documentation
- ▶ Support and maintenance included for 90 days

## ISIT CANopen protocol Stack - Additional services:

- ▶ Trainings on CAN/CANopen protocols
- ▶ Operating System and CPU porting
- ▶ Integration with customer hardware/application
- ▶ Application development

## Contact us :

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