COMMUNIQUÉ de PRESSE

«ISIT develops its stacks offer for the CANopen protocol»

Toulouse, le 11/06/2020. Leveraging its widely recognized expertise in the CAN / CANopen protocol field, and its experience in the development of a certifiable CANopen Safety stack, ISIT is introducing new versions to meet a wider range of customer projects.

Initiated by Bosch in 1991 and standardized in 1993 (ISO 11898), the CAN bus has experienced uninterrupted growth since its inception, going far beyond the automotive field. Its robustness, its reliability, its simplicity and the low cost associated with its implementation have made it the ideal protocol for controlling real-time networks that do not require very high bandwidth for data. The CANopen protocol, corresponding to layer 7 of the OSI model, provides flexible and high-performance services for configuration, diagnosis, network supervision and process data exchanges. Defining specific profiles greatly simplifies the design of interoperable systems and products. CANopen is currently used in a large number of application fields, such as medical equipment, all-terrain vehicles, defense equipment, maritime electronics, railway applications or even building automation or control. elevators for example.

After introducing the only COTS certifiable CANopen Safety stack (IEC61508 / DO 178) available on the market, ISIT now offers 2 new versions of this protocol stack:

• A *CANopen Safety version* without certification kit and without safety manual: this version allows designers to benefit from the robustness and development quality of a certified product, but for a fraction of the cost. However, the application developed above this stack cannot be certified later.

• A *CANopen "standard" version*: this version supports the entire CANopen protocol, without the "safety" extensions associated with the CiA304 (or EN 50325-5) standard. However, the code development basis is the same, and the product therefore has the same software quality.

In both cases, the CANopen ISIT stack is available in Slave and Master / Slave versions, in binary pre-ported to a target or in source code.

The stack consists of a hardware dependent part, mainly the CAN driver, and a hardware independent part which communicates with the driver's message queues. The hardware dependent part consists of software for controlling the CAN controller and the timing functions necessary for operation. This modular architecture allows easy and fast porting to a new targets (CPU, variant, CAN controller, RTOS, etc.) and makes the application developed by the client independent of the target for the protocol part.

The CANopen ISIT stack is available for Texas Instruments TMS570 CPUs and ST processors in the STM32 family. Other targets are already on the development roadmap.

About ISIT: At the core of Real Time

Member of the CiA (CAN in Automation), ISIT has more than 15 years of experience in the CAN and CANopen protocols and has solid skills and recognized know-how in the field of Real Time Embedded Systems, Software Quality Assurance and Industrial Networks.

ISIT provides training on CAN and CANopen protocols (as well as other industrial protocols) and on safety standards such as IEC 61508, EN 5128, IEC 62304/82304, DO-178 or ISO 26262 .

ISIT has many references in the development of certified products in the military, industrial, medical and aeronautical fields and offers its customers its expertise in all phases of the project: training, specification, implementation, validation and certification.

Located in Toulouse, a few minutes away from the international airport and the main Airbus sites, ISIT is a value-added distributor specializing in the marketing of hardware and software tools, used in design offices and on production sites, for development and deployment of critical embedded real-time systems.

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