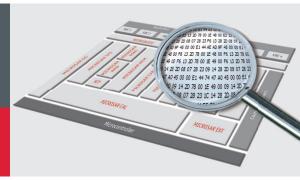


Integration of External Functions of a Microcontroller with vSBC Driver for System Basis Chips

Case Study vSBC



vSBC is a driver implementation for system basis chips. It is part of the Vector AUTOSAR solution MICROSAR.

The Challenge

Integration of external functions into an AUTOSAR project requires a suitable driver.

The AUTOSAR architecture of an automotive electronic control unit (ECU) contains several dedicated basic software components like transceiver drivers for CAN / LIN as well as for handling watchdog functionalities. Semiconductor vendors are combining these different functionalities to a solution, in so called system basis chips. A suitable driver is necessary to be able to integrate these external functions into an AUTOSAR project.

The Solution

vSBC driver from Vector.

Vector has many years of experience in developing basic software components and also drivers, especially for communication related peripherals. The vSBC driver offers the following functionalities:

- > Designed to be used in an AUTOSAR 4 environment.
- > For devices with built-in CAN / LIN transceiver functionalities, the vSBC driver offers abstraction of CAN / LIN transceiver related hardware features. This enables 1:1 mapping to AUTOSAR.
- > Abstraction of watchdog related hardware features covered by watchdog driver. This enables 1:1 mapping to AUTOSAR.
- > Additional SBC functionalities, which are not part of the AUTOSAR architecture, can be realized by using a RAW-API.

The Advantages

Only one driver for serial bus interfaces is needed.

- > vSBC driver is developed according to Vector's certified development process to be able to realize ISO 26262 applications up to ASIL D.
- > Independent of the microcontroller the software is executed with, only one driver for serial bus interface (e.g. SPI, I²C) is needed.
- > Independent of other Vector software products. There is no need to use Vector's MICROSAR basic software.
- > Configurable with any AUTOSAR configuration editor, e.g. DaVinci Configurator Pro from Vector.

Availability

Please contact Vector for detailed availability information of drivers for system basis chips.

www.vector.com/microsar

