MICROSAR EXT

Controlling of external hardware by a uniform interface

The AUTOSAR basic software package MICROSAR EXT contains drivers for controlling external components. It is easy to integrate these drivers in the AUTOSAR basic software within the Abstraction Layer.

Properties and Advantages

The drivers implement interfaces conforming to specifications for the AUTOSAR Hardware Abstraction. This lets you extend the hardware periphery of the microcontroller and integrate it within the AUTOSAR basic software.

Application Areas

The various MICROSAR basic software modules are using the drivers to control external hardware. Besides supporting bus transceivers for LIN, CAN and FlexRay, external memory media are also supported. If other external hardware needs to be implemented project-specifically, this can be performed in the context of project work or as an extension to MICROSAR EXT.

Functions

The drivers provide an optimized implementation for controlling the external hardware. The drivers rely on MICROSAR CAL. MICROSAR CAL (SPI, DIO, etc.) lets you port the external drivers to different microcontrollers easily and quickly. It also lets you create a simple configuration while preventing redundancies from occurring in relation to the hardware drivers.

Special functions

- On drivers with interrupt support, the various OSEK/AUTOSAR-OS interrupt categories can be configured individually.
- Handling of critical areas can be adapted to a wide variety of requirements, e.g. to minimize interrupt latency times.
- All drivers offer additional (individually configurable) checks for error detection in application development and integration.
- All drivers may be configured easily and quickly with MICROSAR EAD.
- The drivers can also be implemented in non-AUTOSAR environments by adapting the interfaces to other software components.
- The drivers are scalable in their functional scope, so that unutilized features do not occupy memory unnecessarily.
- All drivers are post-build configurable, i.e. the specific driver that is needed can be selected at runtime from the different configurations of a driver.

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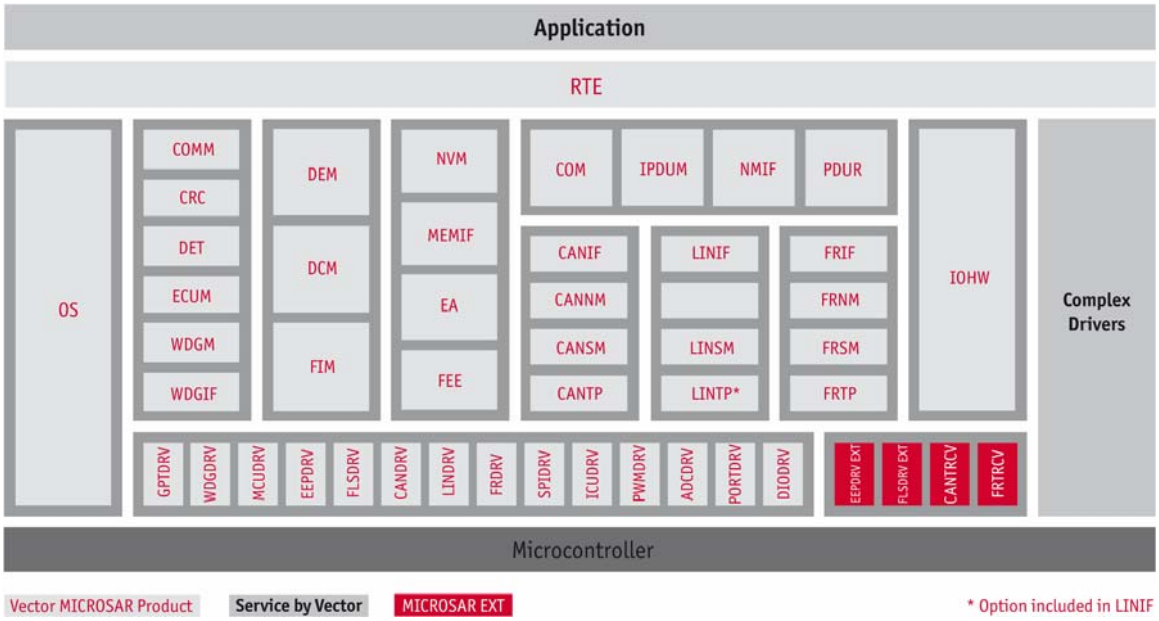
- Fls – The Flash Driver is used to read and write the data of an external flash chip. The chip may be connected via the SPI driver or directly to the data bus.
- Eep - The EEPROM driver is used to read and write the data of an external EEPRO chip. The chip can be connected via the SPI driver or directly to the data bus here.



MICROSAR EXT Modules

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Training Events

As part of our training program we offer various courses and workshops on the topics of AUTOSAR and FlexRay conducted in our classrooms or at your company site.
To obtain further information on the Internet about individual training events and schedules go to: www.vector-academy.de.

Contact and Availability

Our basic software modules for automotive ECUs are available for a wide variety of commonly used microcontrollers. For additional information please visit: www.microsar.de or contact us directly.

- CanTrcv - The CAN Transceiver driver handles the wakeup and switches the transceiver to the relevant operating states. Other AUTOSAR CAL drivers may also be needed for handling wakeup and switching of the transceiver.
- FrTrcv – The FlexRay Transceiver Driver handles the wakeup and switches the transceiver to the relevant operating states. Other AUTOSAR CAL drivers may also be needed for handling wakeup and switching of the transceiver.

Configuration

The MICROSAR Configuration Suite supports you in configuring the drivers. It assists you in putting together a runnable system very quickly. Errors in operation and configuration of the drivers are detected early in the configuration phase. This eliminates invalid configurations that are not runnable prior to the development or integration.

Product Components

- Object files and C header files
- Command line based generator for the software modules
- Documentation/Operating instructions/Readme
- Sample programs

Maintenance

We offer supplemental maintenance contracts for all MICROSAR products. They cover adaptation of the software to specification updates and thereby guarantee long-term protection of investments.

License

The MICROSAR licensing model applies.

Additional Services

- Consultation on system design and integration
- Integration of basic software in existing ECUs
- Extension of standard modules according to customer wishes
- Hotline, special workshops and training courses on the topics of embedded software and AUTOSAR.