

MICROSAR RTE with DaVinci Developer

The optimized Run-time Environment for Software Components conforming to the AUTOSAR Standard

Vector MICROSAR RTE is the powerful runtime environment for your ECUs whose applications are modularly implemented as AUTOSAR Software Components (SWCs). MICROSAR RTE conforms to the AUTOSAR RTE specification, so it fulfills the new standard for ECUs.

Properties and Advantages

The Vector MICROSAR RTE is a convincing implementation of the AUTOSAR RTE concept for use in production ECUs:

- > **Efficient implementation:**
MICROSAR RTE is generated for the specific ECU and offers an efficient implementation of RTE functionality.
- > **Scalability:**
Due to its many different configuration options, the MICROSAR RTE can be used in a wide variety of application areas.
- > **User-friendly configuration:**
DaVinci Developer is a convenient tool for configuring MICROSAR RTE using a graphic editor.
- > **Independent of the hardware:**
The MICROSAR RTE consists of hardware-independent code, so it is well-suited for all commonly used controllers.
- > **Batch-capable RTE generator with flexible control via command line parameters**
- > **Generates template files for implementing AUTOSAR Software Components (RTE Contract Phase)**

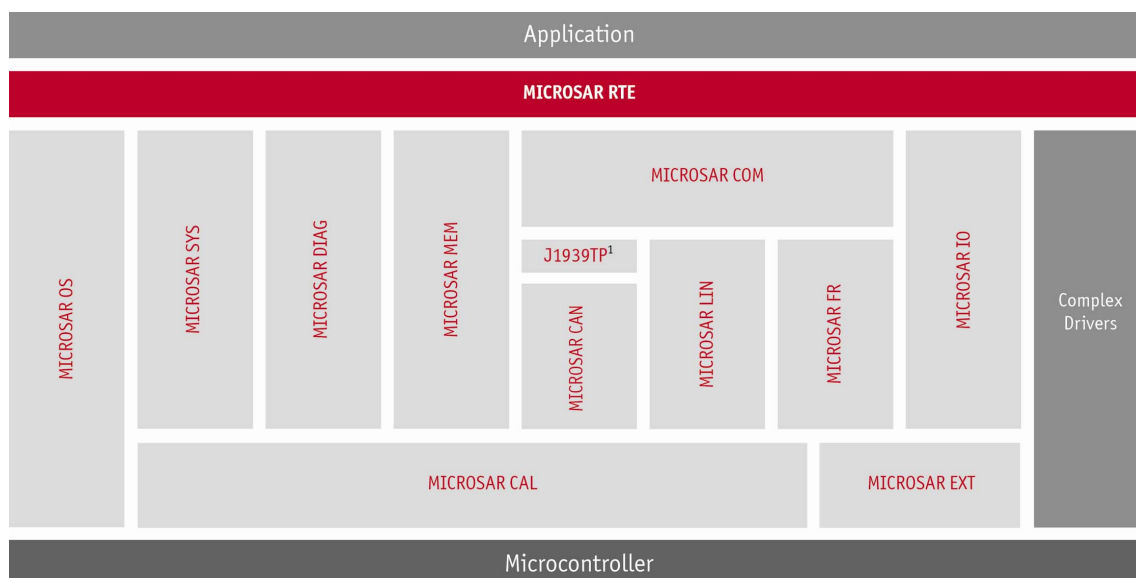
Functions

Vector MICROSAR RTE offers comprehensive functionality for integrating and executing AUTOSAR Software Components:

- > Sender/receiver communication (external/internal)
- > Client/Server communication (internal)
- > Inter-runnable variables and exclusive areas
- > Access to calibration parameters
- > Mode Management
- > Multiple instancing of atomic software components
- > Explicit and implicit (buffered) data access
- > Queues for Rx data
- > Timeout handling by polling or via wait points
- > Direct and serialized calls of operations
- > Supports simple and complex data types
- > Periodic or event-based activation of runnable entities
- > Supports all categories of runnable entities (1a, 1b, 2)
- > Supporting memory protection mechanisms of the AUTOSAR operating system

The Vector MICROSAR Product Line

The MICROSAR product line offers a comprehensive set of AUTOSAR Basic Software Modules. Based on Vector's proven embedded products, the MICROSAR products are a reliable foundation for developing AUTOSAR-conformant ECUs.



**MICROSAR RTE –
the link between
application and
Basic Software**

¹ Available extensions for AUTOSAR 3.0

Training Courses

We offer various training courses and workshops on AUTOSAR in our classrooms or at your business site.

For further information on individual training events and dates on the Internet go to: www.vector-academy.com.

Supplemented by DaVinci design tools for AUTOSAR, the Vector AUTOSAR solution offers the perfect way to introduce you to AUTOSAR technology.

Application Areas

The MICROSAR RTE is an ideal solution for ECUs in which AUTOSAR Software Components are used. It provides the link needed to combine platform-independent applications with the Basic Software.

DaVinci Developer

DaVinci Developer is a professional tool for designing AUTOSAR Software Components and for configuring and generating the MICROSAR RTE. Easy-to-use graphic editors let the user create applications as AUTOSAR Software Components and define their interfaces quickly and clearly. Any inconsistencies are automatically detected while configuring the components.

Other functionalities let the user:

- > Graphically define atomic software components or compositions
- > Define port interfaces and data types
- > Define runnable entities with activation events and port access
- > Allocate runnable entities to operating system tasks
- > Reuse components or interfaces via the library concept
- > Import AUTOSAR XML (System Description Template, Software Component Template)

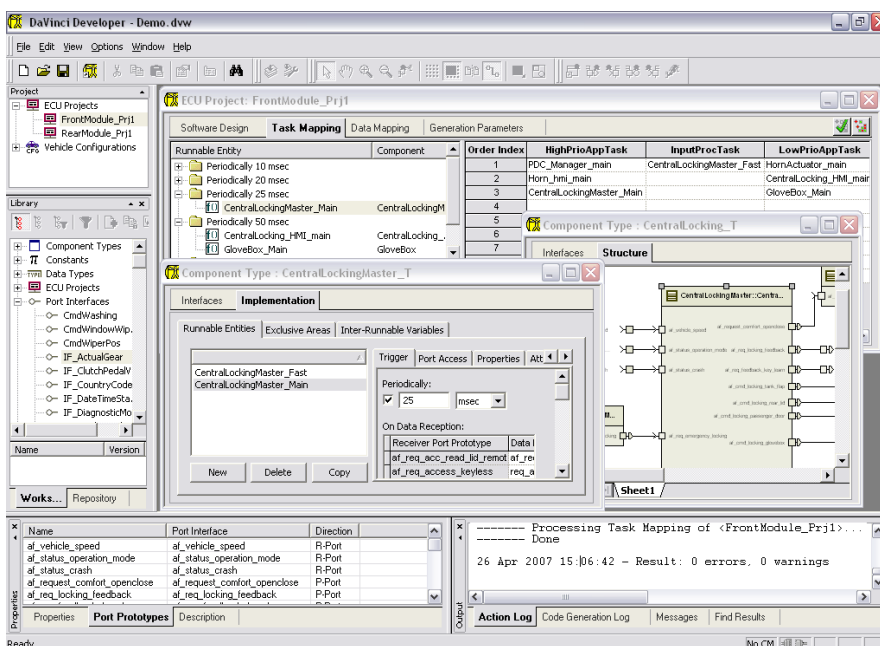
- > Import signals from commonly used network description formats (DBC, FIBEX, LDF)
- > Map port data to network signals
- > Save the RTE configuration as part of an ECU Configuration Description in accordance with AUTOSAR
- > Consistency check of the RTE configuration

DaVinci Developer works together seamlessly with DaVinci Configurator Pro. This means that the RTE configuration is saved in a way that matches the configuration of the ECU's Basic Software. This yields a consistent, complete ECU configuration description in AUTOSAR-conformant XML format.

Optional Services

Vector can support you in optimally integrating the MICROSAR RTE into your ECU architecture. We can offer you the following upon request:

- > Consultation in migrating current projects to an AUTOSAR compatible architecture
- > Customer-specific adaptations and developments



**DaVinci Developer –
configuration tool for
the MICROSAR RTE**