AUTOSAR

AUTOSAR (AUTomotive Open System ARchitecture) is a worldwide development partnership of automotive interested parties founded in 2003. It pursues the objective of creating and establishing an open and standardized software architecture for automotive electronic control units (ECUs). Goals include the scalability to different vehicle and platform variants, transferability of software, the consideration of availability and safety requirements, a collaboration between various partners, sustainable utilization of natural resources, and maintainability throughout the whole "Product Life Cycle"

Software architecture

AUTOSAR uses a three-layered architecture:

* Basic Software: standardized [software modules](https://en.wikipedia.org/wiki/Modular_programming) (mostly) without any functional job itself that offers services necessary to run the functional part of the upper software layer.
* [Runtime environment(RTE)](https://en.wikipedia.org/wiki/Runtime_environment): [Middleware](https://en.wikipedia.org/wiki/Middleware) which abstracts from the network [topology](https://en.wikipedia.org/wiki/Topology_(electrical_circuits)" \o "Topology (electrical circuits)) for the inter- and intra-[ECU](https://en.wikipedia.org/wiki/Electronic_control_unit) information exchange between the application software components and between the Basic Software and the applications.

* Application Layer: application software components that interact with the runtime environment.