QORIX

Building World-Class Automotive Middleware Stacks
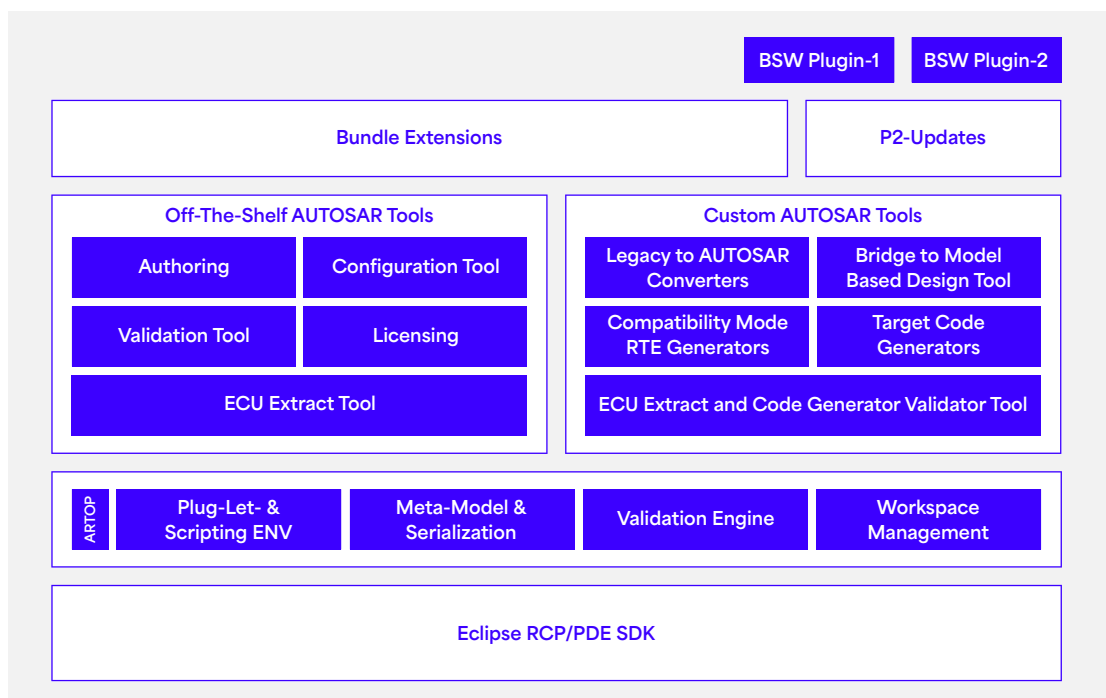
▶▶ Qorix Developer for Classic

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Qorix Developer Tool is an Eclipse-based tool built on top of Artop (AUTOSAR Tool Platform) framework to configure an AUTOSAR ECU. This software dynamically generates GUI controls for AUTOSAR components based on the ECU parameter definition file. It generates the ECU description file (of type '.xml' or '.arxml') using the ECU parameter definition file and the configuration specified in the GUI. Additionally, it validates the Extract (ECUC and Diagnostic) and generates the ECU description file followed by generation of output source and header files using built pug-ins. This tool ensures that both common and BSW-module specific code generation processes adhere to AUTOSAR standards, validating the generated code for compliance, correctness, and reliability to meet the defined requirements.
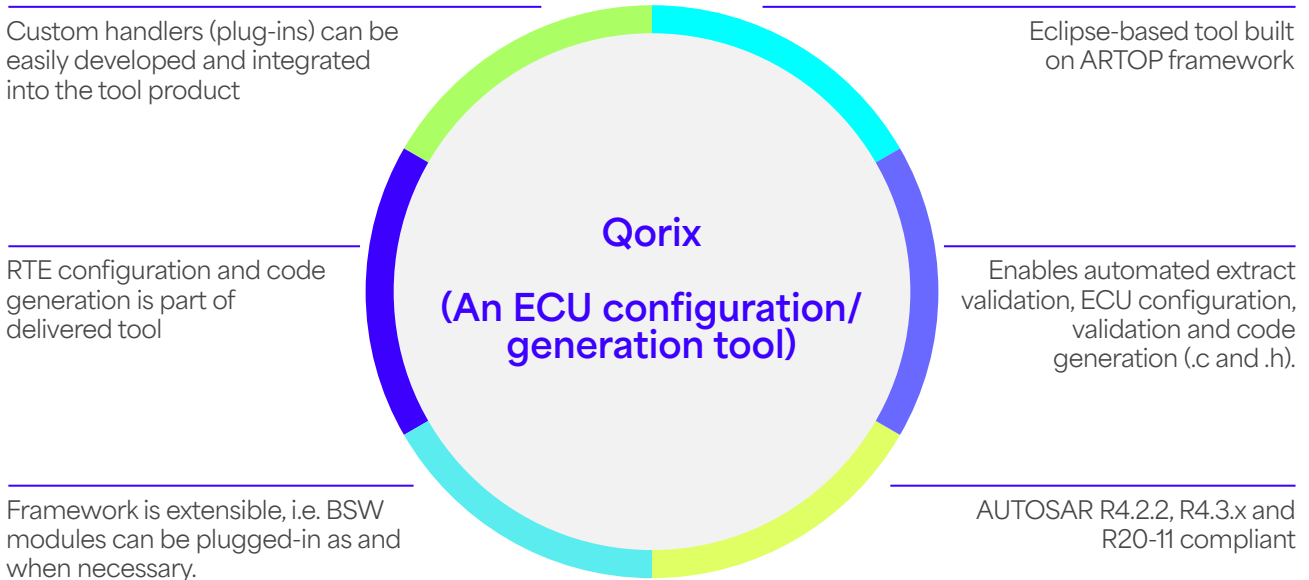
Tooling Platform Architecture

		BSW Plugin-1	BSW Plugin-2

Bundle Extensions	P2-Updates

Off-The-Shelf AUTOSAR Tools		Custom AUTOSAR Tools	
Authoring	Configuration Tool	Legacy to AUTOSAR Converters	Bridge to Model Based Design Tool
Validation Tool	Licensing	Compatibility Mode RTE Generators	Target Code Generators
ECU Extract Tool		ECU Extract and Code Generator Validator Tool	

ARTOP	Plug-Let- & Scripting ENV	Meta-Model & Serialization	Validation Engine	Workspace Management

Eclipse RCP/PDE SDK

Key Highlights

Production-ready 4.x, 20-11 tool	4.x,20-11 safety certified	23-11 tool in development	ASIL D safety compliant
Extendable for OEM customizations	Easy to integrate and interoperable	Flexible license models	12 OEMs have approved/used Qorix Classic tool

Features

Custom handlers (plug-ins) can be easily developed and integrated into the tool product

Eclipse-based tool built on ARTOP framework

RTE configuration and code generation is part of delivered tool

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(An ECU configuration/ generation tool)

Enables automated extract validation, ECU configuration, validation and code generation (.c and .h).

Framework is extensible, i.e. BSW modules can be plugged-in as and when necessary.

AUTOSAR R4.2.2, R4.3.x and R20-11 compliant

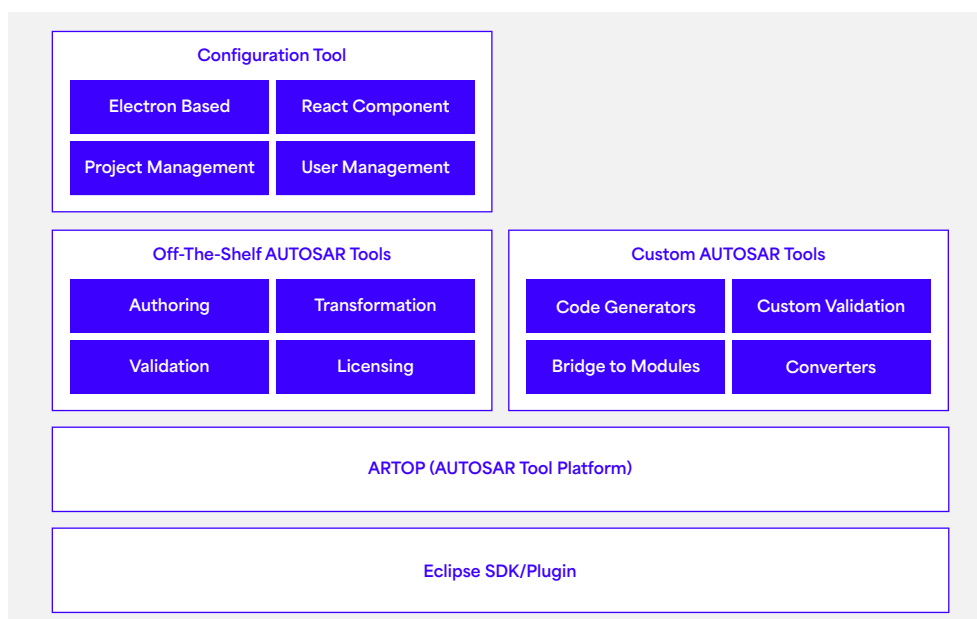# Building World-Class Automotive Middleware Stacks

Qorix Developer for Adaptive

The Qorix Developer for AUTOSAR Adaptive is an advanced toolset designed to support the development and integration of AUTOSAR Adaptive software components. Building upon a robust foundation, this toolset addresses the unique needs of the AUTOSAR Adaptive platform, catering to modern automotive applications requiring high computational power, such as autonomous driving and advanced infotainment systems. The Qorix Developer is crucial for organizations transitioning to AUTOSAR Adaptive, providing a hands-on approach to understanding and implementing the platform's complex features. It helps bridge the gap between Classic and Adaptive AUTOSAR by offering a comprehensive toolset that can be used for training, development, and integration purposes. By focusing on the key aspects of AUTOSAR Adaptive, such as service-oriented architecture and dynamic system behavior, the Qorix Developer plays a pivotal role in the successful adoption and deployment of AUTOSAR Adaptive technologies in the automotive industry.
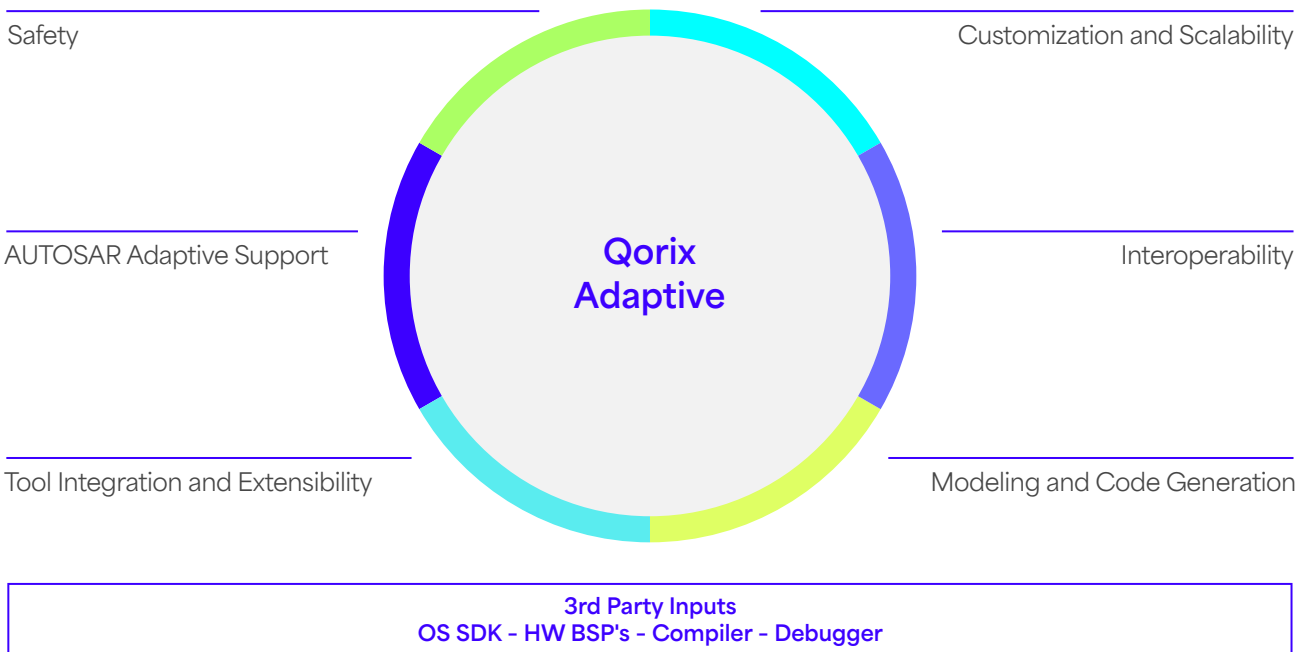
Tooling Platform Architecture

Configuration Tool

Electron Based	React Component
Project Management	User Management

Off-The-Shelf AUTOSAR Tools

Authoring	Transformation
Validation	Licensing

Custom AUTOSAR Tools

Code Generators	Custom Validation
Bridge to Modules	Converters

ARTOP (AUTOSAR Tool Platform)

Eclipse SDK/Plugin

Key Highlights

Communication over IPC and SOMEIP	ECU Boot timings	Diagnostics events reporting and communication
AUTOSAR Adaptive specification compliant UCM Master	Subordinate with tooling support for vehicle package generation	Tooling support for Adaptive AUTOSAR methodology and integration with 3rd party tools
Support for safety critical functions	SDKs available for virtual platforms to support parallel developments	Safety qualification in progress

Features

Safety

Customization and Scalability

Qorix Adaptive

AUTOSAR Adaptive Support

Interoperability

Tool Integration and Extensibility

Modeling and Code Generation

3rd Party Inputs
OS SDK - HW BSP's - Compiler - Debugger

Qorix is a technology company that offers innovative and powerful middleware solutions to the mobility ecosystem, especially in the transformation towards software-defined vehicles (SDV). Qorix helps automotive manufacturers and suppliers to manage the ever-increasing complexity of software while maintaining complete control over their architecture. Qorix middleware ensures a global, secure and powerful software ecosystem that can be rapidly deployed in future vehicles. The product portfolio includes standard compliant AUTOSAR Classic and Adaptive solutions and QORIX's own "Performance" stack that is particularly designed for the requirements of future software-defined vehicles. Qorix employs over 250 employees worldwide, focusing on global software product delivery for OEM and Tier-1 programs. Established as joint venture of KPIT Technology Ltd. and ZF, with Qualcomm as a strategic shareholder, Qorix leverages KPIT's expertise in software development and ZF's proficiency in automotive systems to drive innovation in the automotive industry.

For further information, please visit **www.qorix.ai**

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