



# The Automotive Communication Framework Leader for Software-Defined Vehicles

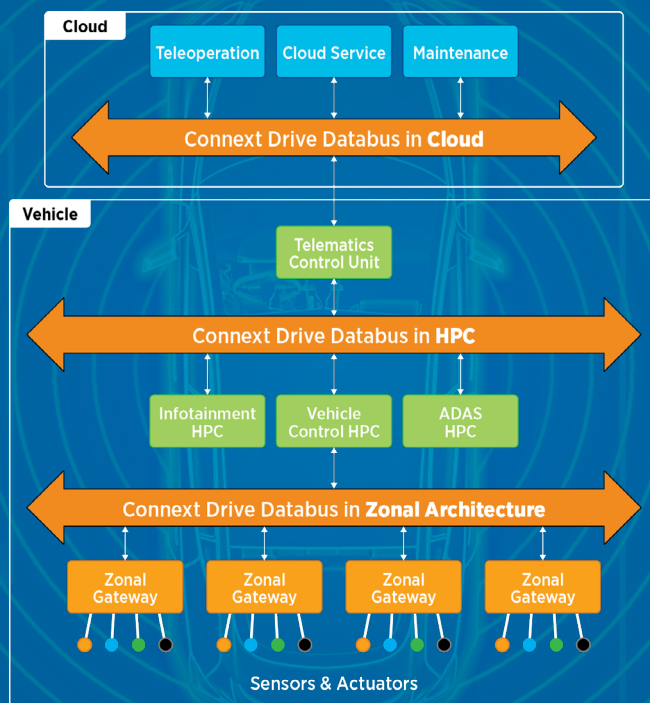
Real-Time Innovations (RTI) is the global leader in **communication framework software** based on the Data Distribution Service (**DDS™**) standard for data-centric **middleware** technology. Privately-held, RTI has the largest engineering team in the world dedicated to DDS, with professional services and global support to help drive project success. This focus provides RTI customers with a communication framework that allows them to **manage risk**, while increasing the **scalability, modularity** and **reusability** of their solutions with the **highest levels of safety** and **cybersecurity**.

In automotive, RTI works with over **25 automotive vendors** who use our technology to accelerate their software-defined vehicle programs. Today, RTI is in **production with 10 vehicle manufacturers** around the world who rely on RTI software to design zonal, ADAS and telematics architectures as they **evolve in the software-defined** era. RTI technology provides OEMs with an essential component for a variety of **reference platforms** from leading Tier-1 suppliers.

RTI can win customer confidence because of the successful deployment of its solution in diverse autonomous systems, such as passenger vehicles; EV startups; flying taxi services; autonomous ships; underwater robots; and land, sea, and air defense systems.

— — —  
2023 ENABLING TECHNOLOGY  
LEADERSHIP AWARD, FROST & SULLIVAN

Figure 1. Data-centric software-defined vehicle architecture



RTI is enabling the industry transition to software-centric design through its collaboration in standards organizations such as **AUTOSAR, AVCC®, COVESA, OMG®** and **SOAFEE**, as well as with the leading automotive technology providers. This work enables interoperability across technology platforms for lower costs, productivity gains across global development teams and faster time-to-market.

We invite your project teams to take Connex Drive for a test drive.

[rti.com/drive](https://rti.com/drive)

## RTI Connex Drive: From Prototype to Production

**Connex Drive®** is an automotive-grade communication framework **based on the DDS standard** for **middleware** that distributes vehicle dataflow in real time to **ensure vehicle safety and performance**.

**Specifically designed for the automotive industry**, Connex Drive provides dedicated software components for key software-defined vehicle (SDV) use cases: ECUs, zonal gateways, high performance compute in ADAS, digital cluster and vehicle control, as well as telematics, cloud implementations and OEM-specific applications. RTI's development processes for Connex Drive have been officially certified to **ISO 26262 ASIL D**, offering manufacturers an accelerated path to building safety-critical systems for electric and autonomous vehicles.

Connex Drive supports the co-location of different technologies by operating natively on DDS, or by providing direct **integrations within AUTOSAR Classic and AUTOSAR Adaptive and interoperability with ROS 2**. Based on the rising importance of Continuous

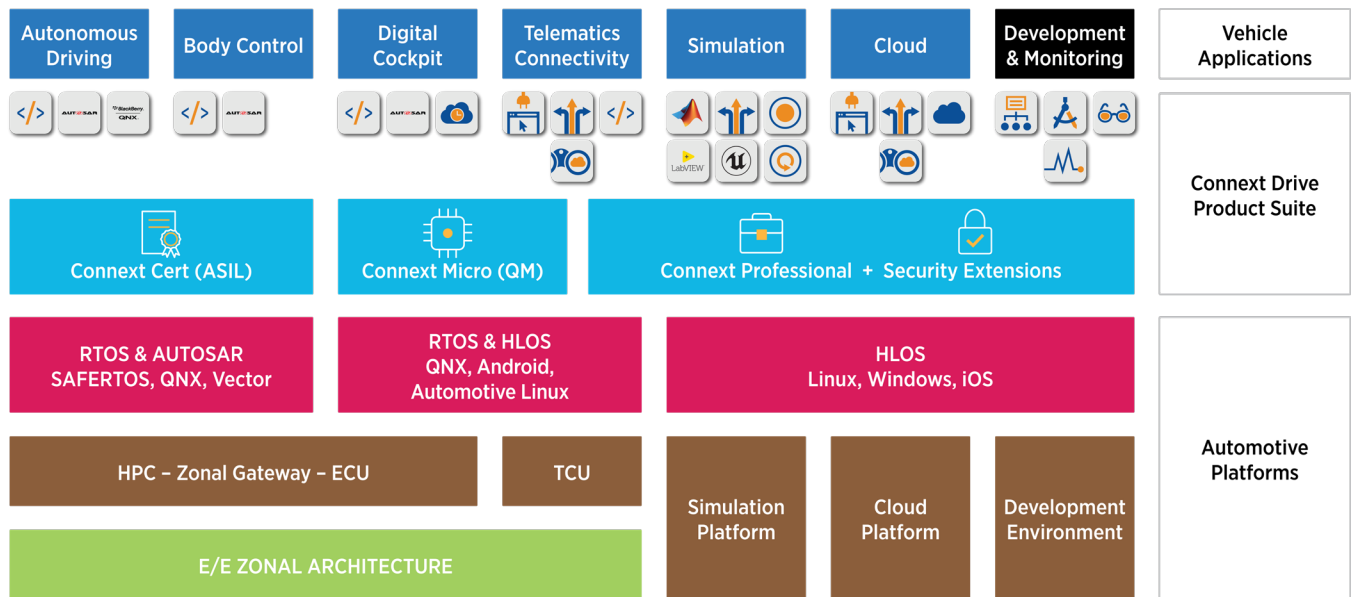
Integration and Continuous Delivery (CI/CD) in automotive, Connex Drive supports communication of **Microservices** in **Container** and **Virtual Machine**-based environments.

In addition, Connex Drive includes a suite of **Tools** that help distributed and autonomous system developers to expedite and ease the **entire development lifecycle** from prototype to production.

The Connex Drive licensing model supports suppliers at each phase, reducing development cost, risk and time to market. This is due to a **flexible licensing model** and **extensive platform support** that includes, but is not limited to, the following:

- **Cores:** Arm and Tricore™
- **Operating Systems:** Android, Automotive Grade Linux, iOS, QNX, SAFERTOS®, VxWorks®, Windows
- **Compilers:** Green Hills, HighTec, Tasking
- **AUTOSAR Vendors Integrations:** Elektrobit, ETAS, Siemens Embedded, Vector

Figure 2. RTI Connex Drive Software Stack



RTI, Real-Time Innovations and the phrases "RTI Runs a Smarter World" and "Your systems. Working as one," are registered trademarks or trademarks of Real-Time Innovations, Inc. All other trademarks used in this document are the property of their respective owners. ©2024 RTI. All rights reserved. EB-001 V3 0424