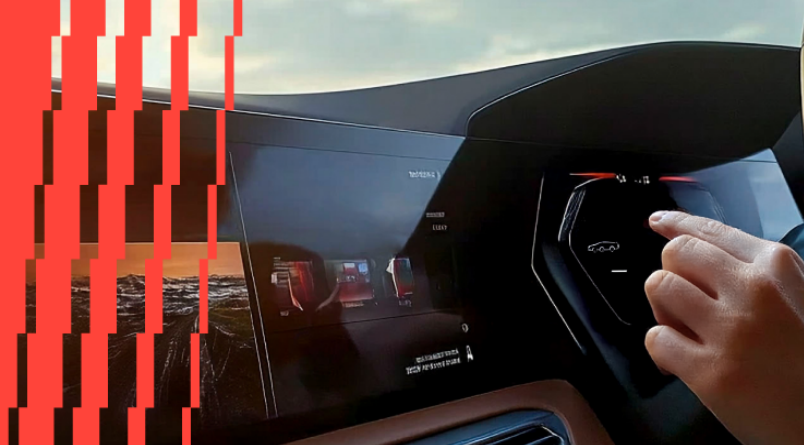




# QNX for Automotive

The Foundation for the Software-Defined Vehicle



**275M+**

Deployed vehicles on the road

**45+**

Automakers trust us

**270+**

Vehicle makes & models

**25+**

Years in automotive

**100%**

SOP deadline success rate

## The Problem

### Software-Defined Vehicles Increase Complexity, Cost, and Risk

- Vehicle architectures are evolving from many discrete ECUs toward domain controllers, zonal controllers, and central high-performance compute nodes, driving software complexity.
- Brands are differentiated by in-cabin experience (cockpit, connectivity, acoustics) while programs simultaneously pursue new revenue models enabled by vehicle data and cloud services.
- Safety and security requirements are uncompromising; mixed-criticality functions must coexist without sacrificing reliability or certification timelines.

## The Technology

### A Safety-First Foundation Built for Mixed-Criticality and Consolidation

### QNX OS 8.0 + QNX Hypervisor 8:

A POSIX-based RTOS that “looks and feels like Linux,” paired with microkernel-based virtualization to consolidate diverse OSs (QNX, Linux, Android) on a single SoC using industry standards like VirtIO, while maintaining separation and isolation.

- Manage mixed-criticality: isolate safety and non-safety subsystems (e.g., cluster + infotainment) with hardware virtualization extensions (AArch64 and x86-64).
- Reduce cybersecurity exposure: microkernel architecture offers a smaller attack surface vs. monolithic kernels, plus access control, encryption support, and self-verifying filesystems.
- Cybersecurity assurance: certified to ISO/SAE 21434; also holds TISAX and ISO/IEC 27001 certifications

### Pre-Certified Safety Building Blocks:

QNX OS for Safety and QNX Hypervisor for Safety are certified by TÜV Rheinland to ISO 26262 ASIL D, enabling teams to certify only the safety-critical components they build—reducing effort, cost, and time-to-market. QNX OS for Safety is also pre-certified to IEC 61508 SIL 3.

- Safety-certified VirtIO drivers (Hypervisor for Safety) support efficient, standards-based sharing of devices across guests.
- Safety communication & storage add-ons: QNX Filesystem for Safety (POSIX read-only, ISO 26262 ASIL B) and Black Channel Communications Technology (ISO 26262 ASIL D).

## The Solution

### A Portfolio That Accelerates Delivery of High-Value Vehicle Domains

#### From Foundation to Pre-Integrated Domain Solutions:

Build on QNX foundational products (SDP 8.0/OS 8.0, Hypervisor 8, Advanced Virtualization Frameworks) and adopt ready-to-use automotive software to reduce integration burden and program risk.

- **QNX Cabin:** Hardware-portable, pre-integrated digital cockpit reference implementation; increases portability and supports cloud-first development to reduce cost and accelerate time-to-market.
- **QNX Sound:** Holistic vehicle soundscape environment (hands-free calling, alerts, noise reduction, sound generation, media playback) with a cloud-enabled tool suite and extension mechanism for partners.
- **QNX Platform for ADAS:** Modular, sensor/processor-agnostic framework built on QNX OS for Safety (ISO 26262 ASIL D) to enable reuse across hardware platforms.
- **QNX Accelerate:** Cloud-hosted versions of foundational products to streamline collaboration and reduce embedded development bottlenecks.
- **Alloy Kore:** A lightweight technical platform with a simplified approach to system configuration and standardized application development for deployment across various ECU types.

## Why Executives Choose QNX

- **Reduced Program Risk:** Proven track record across automotive architectures with 100% SOP deadline success rate.
- **Global Services Capacity:** Prototyping, BSP/driver work, optimization, safety cases and hazard analysis, penetration testing, architecture reviews, integration and migration support.
- **Longevity and Trust:** Founded in 1980; QNX (a division of BlackBerry) provides a trusted foundation for safety- and security-critical embedded systems across industries.

## About QNX

QNX, a division of BlackBerry Limited, enhances the human experience and amplifies technology-driven industries, providing a trusted foundation for software-defined businesses to thrive. The business leads the way in delivering safe and secure operating systems, hypervisors, middleware, solutions, and development tools, along with support and services delivered by trusted embedded software experts. QNX® technology has been deployed in the world's most critical embedded systems, including more than 275 million vehicles on the road today. QNX® software is trusted across industries including automotive, medical devices, industrial controls, robotics, commercial vehicles, rail, and aerospace and defense. Founded in 1980, QNX is headquartered in Ottawa, Canada.

Learn more at [qnx.com](https://qnx.com) →

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