



ECARX + Ekxide + Qorix Performance. Crafted from S-CORE.

In-Vehicle Infotainment (IVI) and ADAS on One Platform – With Real Mixed-Criticality Separation

Who this is for

OEMs and Tier-1 suppliers evaluating domain convergence (IVI + ADAS), mixed-criticality execution and real-time behaviour on centralized SDV compute architectures.

What the demo shows

This demonstrator is built on the Qorix Performance Stack – a safety-aligned runtime platform that enables deterministic execution, mixed-criticality behaviour and high-performance communication across virtualized automotive environments.

- ▶ IVI and ADAS workloads executing on a single Qualcomm SA8797P automotive SoC, separated via the QNX Hypervisor
- ▶ Qorix Performance providing deterministic, safety-aligned execution for real-time ADAS flows (sensor → perception → logic)
- ▶ Smooth IVI rendering operating in parallel without compromising timing or safety boundaries
- ▶ Zero-copy inter-virtual-machine (inter-VM) communication integrated into Qorix Performance, implemented in collaboration with Ekxide using iceoryx2
- ▶ Ultra-low-latency data exchange without OS or network-stack overhead

Why it matters

ECUS are consolidating. OEMs aim to reduce hardware, integrate domains and move toward centralized compute architectures - without losing determinism or safety guarantees.

This demonstrator shows how:

- ▶ A single SoC can execute mixed-criticality workloads predictably
- ▶ Qorix Performance provides the safety-aligned runtime platform enabling real-time ADAS and IVI on shared compute
- ▶ Ekxide's iceoryx2 enables zero-copy communication across hypervisor boundaries, supporting high-bandwidth, low latency use cases
- ▶ Domain convergence becomes practical without sacrificing timing, safety separation or system stability

In essence: It is a glimpse of the next generation of automotive compute architectures - domain convergence driven by deterministic runtime and high-performance communication.

▶▶ A concrete blueprint for next-generation SDV platforms.

IVI and ADAS. One platform. Real-time, deterministic and mixed-criticality – enabled by the Qorix Performance Stack.

