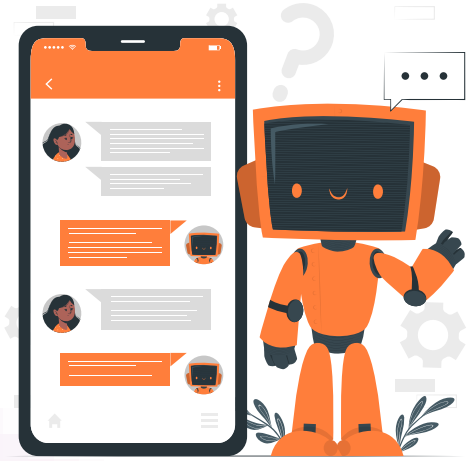
UX Instrument Cluster for Automotive

Objective

A scalable Instrument Cluster platform integrates features such as low-power, line-based graphic processing, functional safety, embedded Hardware Security Module (HSM), and Over-The-Air (OTA)software updatability. This ensures an engaging visual user experience while optimizing the overall cost of system ownership.



Result

Led the team in integrating the GUI with C++ HMI logic utilizing front-end third-party APIs. Orchestrated project delivery, successfully transitioning two product lines into production, involving direct engagement with clients and OEMs. Managed bug and feature request tracking, as well as task assignment.

Challenges

Having to deliver the User Experience keeping the design frameworkin context, all of that while sustaining the performance at the top level. Acceleration of the update cycles during the vehicle lifecycle and uplifting the upgradability overall.

Solution Highlights

Crafting the graphical user interface (GUI) front end involved utilizing Altia/Kanzi/QT design studios for three distinct product lines. Concurrently, intricate C++ wrapper APIs were engineered to establish seamless interfaces with the underlying middleware code.
The implementation further extended to the creation of a sophisticated simulation model utilizing native event-based Control code within Altia Design Studio. This intricate model not only facilitated the validation of specifications but also allowed UI designers to scrutinize and refine the GUI model with precision and focus.