

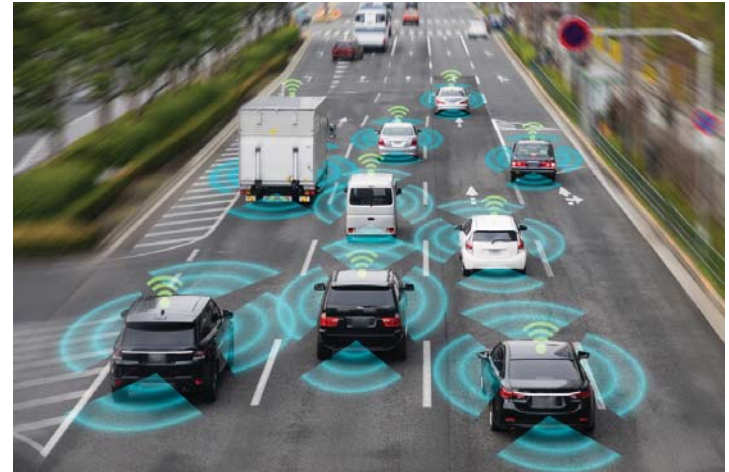
OPPORTUNITIES ADDRESSED

Futuristic urban mobility and intelligent transportation systems requiring V2X applications for driver assistance and safer commute

- V2X application feature development
- Radio agnostic V2X application framework
- Stack & feature porting to custom hardware
- Cloud Big Data Framework – Data collection and analysis
- Vehicle integration
- HMI development
- Cyber security analysis

Validation of features in complex on road usecases

- V2X Emulator can reproduce real-world conditions in the lab, and test V2X ECUs and AR-V2X for cost effective field testing
- Expansive test system covering functional, performance & security scenarios



- Security testing against Sybil attack, time elapsed certificates, data playback, data alteration, and GNSS spoofing
- Load testing for highways and heavy traffic scenarios with up to 50 cars

V2X Architecture Definition, Applications Development, and Validation for a European OEM

Architecture definition and development

- Radio agnostic and platform independent architecture

V2X algorithm and application development

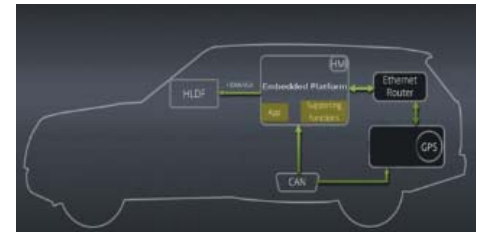
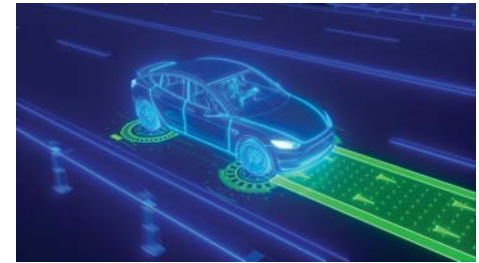
- Emergency Electronic Brake Light (EEBL)
- Intersection Collision Risk Warning (ICRW)
- Emergency Vehicle Warning (EVW)
- Collaborative Parking (CoP)
- Green Light Optimal Speed Advisory (GLOSA)
- In Vehicle Signage (IVS)
- Cooperative Adaptive Cruise Control (CACC)
- Road Work Warning (RWW)
- Floating car data
- Convoy assist and sensor sharing

V2X application integration in vehicle and testing

- Bench testing using Veins simulator
- Integrated V2X module and antenna in vehicle
- Vehicle level testing in test track and road scenarios
- Data logging and analysis
- Tested V2X interoperability among multiple OEM

Standards followed

- European Telecommunications Standards Institute (ETSI)
- Car2Car (C2C) consortium



Images are for illustration purposes only



MARKET
UK



BUSINESS BENEFIT
Quicker time-to-market



DELIVERY MODEL
Fixed, onsite



WHAT'S NEXT
System integration and production ready architecture