

V2X Applications Overview

Vehicle-to-Phone (V2P) Communication

Intelligent Transportation Apps for Greater Mobility and Safety



Savari's hardware product families and software stack enable a range of V2X applications, which are displayed on a vehicle's infotainment platform or on the driver's tablet or smartphone.

V2X applications include Vehicle-to-Vehicle (V2V), Vehicle-to-Infrastructure (V2I) and Vehicle-to-Phone (V2P) applications, all aimed at increasing traffic safety and efficiency. The goal is to eliminate traffic-related fatalities by deploying life-saving V2X applications in all cars.

A rich feature set makes Savari's offering unique:

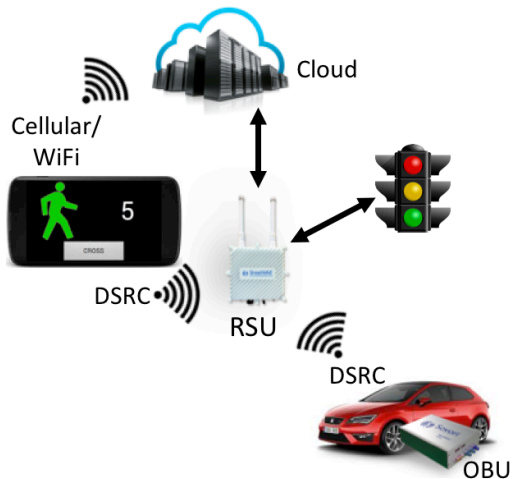
- Radio agnostic solutions supporting leading radio vendors
- Numerous applications
- Trial bed and market experience
- Built-in IP for positioning, map matching, target filtering and tracking at multiple levels
- Built-in IP for accurate situational awareness

Vehicle-to-Phone Applications: SmartCross

The V2P approach encompasses a broad set of road users, including pedestrians, children being pushed in strollers, people using wheelchairs or other mobility devices, passengers embarking and disembarking buses and trains, and people riding bicycles.

Savari's V2P applications focus on making pedestrians and bicyclists active participants in the V2X landscape, especially in Smart City scenarios. Pedestrians and bicyclists are connected to vehicles and traffic lights through their smartphones. Through Savari's cloud solution, pedestrians and bicyclists are connected to the V2X environment, whether using DSRC or non-DSRC phones.

Savari features two pedestrian applications today. First, it alerts drivers of vehicles at the intersection of an approaching and distracted pedestrian violating the do-not-cross signs or crossing the road in unmarked areas. The alert appears on the car's infotainment display or the driver's tablet or smartphone, giving the driver life-saving reaction time.



Second, Savari, sponsored by the U.S. Department of Transportation (USDOT), has designed and developed SmartCross, an application that interfaces with traffic signal systems. By communicating with the intersection traffic signal controller, the pedestrian requests a walk phase to cross the road. In addition to providing an alert when it's safe to walk, the application also provides automatic extension of the walk phase, which could be critical and life-saving to a mobility- or visually-impaired individual.

The graphic to the left indicates the SmartCross ecosystem, which is SAE J2735 compliant and compatible with the CVRIA architecture. The Road-Side-Unit (RSU) is typically linked to the traffic light controller via an Ethernet connection.

Savari's smartphone application is fully compatible with cellular/WiFi and DSRC-enabled smartphones.