



## Autotalks Connects Vehicles Free of Charge

Dual-mode DSRC based V2X / External-vehicle WiFi chipset enables free highspeed connectivity



Connected vehicles is a mega trend in automotive. The main applications are safety, telematics and infotainment. Safety communication has to be free, as is the case with DSRC based V2X and should to be installed in all new light vehicles in the US as recommended by forthcoming regulation.

The growth of non-safety connected vehicle applications is limited by data cost. Many vehicles include unutilized cellular modem hardware as a result of drivers' unwillingness to pay for cellular data plans. Currently, WiFi is used for in-vehicle distribution of data.

External-vehicle WiFi can provide free high-speed connectivity for applications that require sporadic connectivity. Connectivity is widely available, for example when parked at home in range of one's home access point, or in range of a public hot spot while pumping gas at a gas station, ordering food at a drive-thru, or parking at a shopping mall.

With external-vehicle WiFi, profits can also be made by enabling telematics applications. For example, OEM can provide diagnostic services, alert the driver of recommended upcoming maintenance, and more. These services can be provided regardless to whether or not the driver is paying cellular fees.

Up-to-date security information (credentials and revocation lists) is crucial to keeping vehicle and passengers safe while using V2X communication. DSRC based V2X is expected to operate during the entire vehicle lifetime for achieving the network effect. External WiFi relieves the



OEM from paying lifetime cellular fees, and does not impose an additional financial burden and/or annoyance on the driver of paying the monthly fees.



## External-Vehicle WiFi Free of Charge

External WiFi required communication range and speed can be achieved only with an external antenna. While common belief is that the costs of external WiFi additions are low, in practice, the cost is higher as connectors, RF cables and installation must be accounted for. DSRC installation eliminates these major incremental cost factors as they are included for DSRC operation.

Autotalks' 2nd generation chipset, CRATON2 and SECTON, provides WiFi (802.11a/b/g/n/ac) completely free of charge. The WiFi connectivity is available either concurrently with DSRC based V2X when the vehicle is mobile, or instead of DSRC, when the vehicle is parked. WiFi is supported while maintaining the secure operation environment of DSRC.

## Advantages of Autotalks WiFi Offering

Zero cost is not the only advantage:

- Mobility optimized WiFi – Although unintuitive, parked vehicles should use mobility optimized WiFi to overcome interferences from radio waves reflections from other vehicles in vicinity.
- Dual-band operation – Supporting both 2.4GHz and 5GHz.
- Diversity – Supporting TX and optimal RX diversity for dual-antenna system, for covering any angle around the vehicle.
- Higher co-existence – Outdoor devices are exposed to higher level of interferences from nearby WiFi networks. Autotalks enhanced adjacent channel rejection and tight transmission mask assure that the solution is both sustaining high interferences and minimizing the interferences it creates.