SAFEDRIVE

Safety Alert Systems using Dedicated Short Range Communication for on Road Vehicles

An indigenous Dedicated Short Range Communication (DSRC) System for vehicles comprising of On Board Unit and Road Side Unit with DSRC Software Stack. The system would enable two-way communication that can contribute to safer driving and also provide various applications that use the secure Vehicle to Vehicle (V2V) communications and Vehicle to roadside Infrastructure (V2I) communications.

ON BOARD UNIT (OBU)

- Dual DSRC Radio
- Range up to 400 meters (LoS)
- Integrated with Bluetooth and GPS
- USB Interface for external devices
- Audio/Display alerts for drivers
- CAN Interface
- 7'' touch screen display (optional)
- Vehicle Battery powered
- Internal Battery backup
- Supports WAVE Standard
- Multi-channel synchronization
- Supports switching between control and service channels
- SDK for application development

ROAD SIDE UNIT (RSU)

- Dual DSRC Radio
- Supports WAVE standard
- Ethernet with POE
- Wi-Fi Interface
- Ingress Protection: IP65
- Pole / Wall mounting
- 4G LTE Backbone connectivity
- Power Source : 12V DC/Solar
- External sensor Interface : Fog / Rainfall

DSRC Software Stack

- IEEE 802.11p compliant MAC
- IEEE 1609.4 compliant Multichannel operation
- IEEE 1609.3 compliant Network services (WAVE Short Message Protocol)
- IEEE 1609.2 compliant Wireless Security

Applications

Extended Signage & Road Alerts using V2I communications | Low visibility alerts during foggy, rainy & low light conditions | Stranded/Stationery vehicle alerts | Upcoming road intersections, cross roads, curved roads , speed limit regions, blind spots & weather conditions | Road diversion alerts due to repairs & work in progress | Toll road ahead alerts & fare information

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