

Software Development Kit (SDK)



On-Board-Unit Installation and User Guide MobiWAVE SDK v4.0.0

Overview

The MobiWAVE™ family of products include Savari's U.S. (WAVE) and EU (ETSI) compliant On-Board-Units (OBUs) and Vehicle-to-Vehicle (V2V) and Vehicle-to-Infrastructure (V2I) applications. Built on an open platform, MobiWAVE OBUs are customizable for any application. MobiWAVE OBUs run Savari On-Board Operating System (SOBOS), a custom Linux distribution.

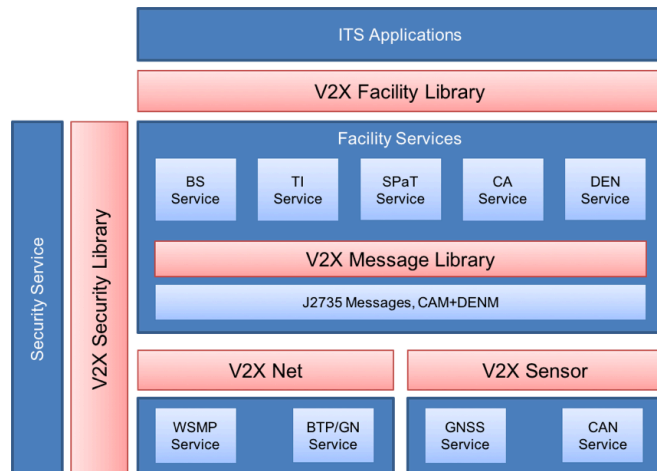
Savari's MobiWAVE software development kit (SDK) provides feature-rich libraries for developing V2V and V2I applications for MobiWAVE. This SDK Guide provides an overview of the software architecture and a detailed description of the APIs provided.

Sample applications using the API described in this guide can be found in the SDK. Not all libraries in this guide may be included in your version of the SDK.

Specifications

Compatibility	Linux Distribution
1609.1, 1609.2, 1609.3, 1609.4 and SAE J2735 – US EN 302 636-4-1, 5-1, 637-2, 637-3, TS 103 097 - ETSI	Ubuntu 14.04 LTS OR pre-built Ubuntu VMware VMDK image

V2X Library



V2X Security Library

Provides functions to cryptographically sign and verify messages, and provides functions to support LCM.

V2X Facility Library

Provides API interface to the facility-layer services (Basic Safety, Traveler Information and so on).

V2X Message Library

Provides APIs to encode and decode SAE J2735 or CAM+DENM messages. The encode API function takes message structure as input and outputs an encoded message buffer. The decode API function takes the encoded buffer as input and outputs message structure filled with decoded values.

V2X Net/ V2X Network Service Library (WME)

Implements the WSMP SAP interface as specified by the 1609.3 specification. This library provides the function to send Wace Short Message (WSM) requests to the WSMP layer and receive WSM indication from WSMP layer.

V2X Sensor Service Library

Provides functions to obtain sensor information from V2X sensors (GNSS & CAN sensor APIs).

V2X Common Library

Provides a set of API functions and definitions common to the rest of the V2X libraries. These include debugging, error codes, error message and so on.

Benefits, Key Features and Applications

Benefits	Key Features	Applications
Many years of testing at USDOT CAMP Field deployed with USDOT (such as UMTRI)	Use of C and Linux Standards-compliant	20+ V2V and V2I (e.g. FCW, IMA, CSW) Customizable by client