

## Vehicle Interface Package 1.0

The Vehicle Interface package provides access to the CAN (Controller Area Network) network. CAN is a serial communication bus for real-time control applications. It is widely used for connecting the electronic control units in vehicles due to its low costs, high performance, and the availability of various CAN protocol implementations.

### Features

- Defines an OSGi API to access the CAN Network
- Works on top of socket-CAN, an open source implementation that provides a low level CAN framework for Linux
- Provides pure Java implementation of Linux sockets for development and test purposes
- Contains a CAN Player Tool for replaying previously recorded data (simulation for test purposes)

### Benefits

- Facilitates the creation of OSGi telematics applications that have to access data from the CAN network
- Ensures independence of the used CAN controller hardware

### ProSyst Vehicle Interface solution details

The Vehicle Interface works on top of socket-CAN. Socket-CAN is a Linux application, which runs as a kernel module. It hides the underlying CAN controller hardware and provides a special filtering mechanism so that only status or content changes are transmitted.

ProSyst's Vehicle Interface is based on the OSGi DMT API. It provides a single interface for OSGi based telematics applications to access vehicle related status information like VIN, vehicle speed, fog-light status, etc. This service API supports the application developers to query and if allowed to modify the data in the vehicle representation.

Since the different car manufacturers use different data bytes mappings, a flexible mechanism for defining those mappings is implemented. ProSyst provides a simple mapping model for testing.

### CAN Player tool

The CAN Player reads a textual file, containing different CAN frames, and plays the data through socket-CAN to the CAN bus.

### CAN Network Simulation

The Vehicle Interface package offers a pure Java implementation, which simulates socket-CAN for development and test purposes. The CAN player may send CAN frames through this simulation. In this way telematics applications can be developed and tested without having a real CAN network and hardware.

Additional capabilities and packages of mBedded Server and other ProSyst products are explained in the data sheets available for each product.

If you have any further questions, we would be pleased to be of help. Please contact us via [info@prosys.com](mailto:info@prosys.com) or visit our Developer Zone at [dz.prosys.com](http://dz.prosys.com)