vADASdeveloper

Developing Multisensor Applications Quickly and Conveniently

What is vADASdeveloper?
vADASdeveloper provides an infrastructure for developing algorithms for advanced driver assistance systems (ADAS) and automated driving. The tool reduces your workload in developing sensor data fusion applications. The runtime environment acquires sensor data, logs it and can replay the data for stimulation. Here the sensor data and the results of algorithms are clearly displayed in a bird’s eye perspective and in the video image.

vADASdeveloper accelerates the development process, increases the quality of the systems and gives the ECU developer a high degree of flexibility.

Overview of Advantages

> Universal solution from data recording to algorithm development, stimulation and quick visualization of processing results
> vADASdeveloper gives you the infrastructure you need to focus on your algorithms
> Debugging of algorithms by Visual Studio integration
> Rapid prototyping of applications with multiple sensors
> Embedding in existing development environments
> Extensive sensor components for integrating cameras, radar/LIDAR systems and Vector network interfaces
> For configurable object overlaying predefined 2D/3D graphics objects and a point cloud object for LIDAR sensors are available without coding effort
> Easy to incorporate C/C++ and MATLAB/Simulink software components
> Support of commonly used data formats such as MDF and ADTF DAT
> Seamless integration of the “BASELABS Create Embedded” component library which makes it easy to use complex algorithms

Highlights of Version 4.0

> Added support for .protobuf serialized data objects and raw data (byte array) from MDF files recorded with CANape
> Graphic files can now be used as GFX graphic objects
> New ADAS Explorer to toggle GFX graphic objects during runtime

Adaptable visualization capabilities for each domain, views for dynamic and static objects as well as point clouds
New Camera Calibration Wizard for enhanced camera calibration
Improved support of native C++ components and algorithms
Improved New Component Wizard

Application Areas
- Development of ADAS multisensor applications with data fusion from multiple sensors using C#
- Environment detection and logging of multiple sensors
- Detection and tracking of objects
- Image processing for systems used in lane or traffic sign recognition, etc.
- Precise detection of vehicle position
- Testing and evaluation of system prototypes by powerful functions for data fusion, recording and replay

Functions
The following functions assist you in developing multisensor applications:
- Any typical sensors, like cameras, radar, LIDAR, CAN, etc., can be conveniently integrated and graphically linked. You can also flexibly integrate customer-specific sensors.
- Sensor data can be easily recorded and replayed with highly precise time stamps.
- Clear and configurable display of results with superimposed camera images (acquired objects, text overlays, driving lanes), bird’s eye perspective, diagrams, etc.

Visual Studio integration enables fast implementation, debugging and testing of the application in a single tool
Very user friendly because of customized GUI design for test drives
Scalable decentralized recorder solution for recording even very high data rates (> 1 GBps) for XCP on Ethernet, video, and radar raw data
Data fusion code for series ECUs via "BASELABS Create Embedded"

Runtime License
The optionally available Runtime License allows the execution of all vADASdeveloper applications. Example: Recording live data in many vehicles or validation of algorithms with large quantities of offline data in test environments.

Universal Tool Chain
The following products offer you support in developing ADAS systems: CANape, CANape Driver Assistance, VX1000, BASELABS Create Embedded, CANoe, MICROSAR.

More information: www.vector.com/vADASdeveloper

Efficient implementation, debugging and testing of multisensor applications