

Measurement and calibration tool

CANape version 16.0 by Vector enables the measurement and calibration of ECUs and ADAS (Advanced Driver Assistance Systems) sensors.

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For ADAS development, CANape records Lidar sensor data from Velodyne, Ibeo as well as Quanergy and displays this as informative point clouds (Photo: Vector)

The tool is used to optimize parameterization (calibration) of ECUs (electronic control units). Measurement signals can be acquired during system runtime. The physical interface between the tool and the ECU may be made e.g. via CAN.

With the tool calibration engineers can simplify their work and interactions with their ECUs. The storage of configuration files in containers accelerates important project transfer operations. Improvements have also been made in the field of ADAS development, in particular for the visualization of Lidar sensor data. According to Vector, the day-to-day exchange of CANape projects with colleagues or customers/suppliers is now faster and more secure. The user saves all the relevant information and files in a data container at the touch of a button – so nothing is left out when projects change hands.

The added vCDM option assists calibration data management tasks to improve data handling. Every user works with up-to-date data sets and change tracking information. Users now benefit from the full functionality of the vCDM server-based management system (for example, submitting revised calibration data or retrieving work packages) directly in CANape without having to open an additional tool.

Measurements often lead to many sequential measurement files. However, for analysis and interpretation, these sequentially recorded files must be displayed as a continuous measurement. CANape 16.0 automatically loads a sequence of files and joins them into a single contiguous measurement that can be visualized and analyzed as a whole. As a result, the laborious manual alignment and merging of the files by the user is a thing of the past.

Reliable object detection using Lidar sensors is a vital step on the way to autonomous driving. CANape now also captures Lidar data at the same time as other ADAS systems and displays this data as an informative point cloud. Alongside the already available capture of raw radar data, Lidar sensors from Velodyne, Ibeo Lux, and Quanergy M8 are also supported. The Scene Window provides various views, as well as rotation and zoom mechanisms. These permit rapid access to optimized object recognition algorithm analyses and the results of multi-sensor data fusion.

To manage measurement data and analyze it, the tool can be linked to Vector's vMDM measurement data management solution via the vMDM option. The measurement data is transferred from the user's PC to the vMDM server either manually or automatically, for example directly after a measurement in CANape. If there is no IP connection to the server during the test drive, vMDM buffers the upload and performs it automatically as soon as an active connection is available again.

Another option – "Thermodynamic State Charts" – allows air conditioning and cooling system developers to view thermodynamic state charts such as pressures at specific volumes. It is possible to select the thermo-physical properties from an extensive materials data library.

Vector is part of the Embedded World 2018. You can find them in hall 4, booth 510.

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