

IAV Macara

Editing, validating and visualizing calibration parameters

Modern vehicles have approximately 60,000 control unit parameters. In addition, there are also several hundred vehicle models. This means that without a special tool for data management, it is now impossible for the calibration engineer to maintain a clear picture of everything. This is precisely where IAV Macara comes in. The development tool not only automates many processes and reduces the number of errors. It also provides a quick overview of data changes, even if many vehicle models are involved.

IAV Macara helps the calibrator to view and analyze calibration data and simplifies everyday work by providing interfaces to other systems, a clearly structured visualization of calibration data and automated processes. And not only that: whereas earlier versions of IAV Macara focused on changing parameters, the latest product also provides the capability of viewing data on a very detailed and well-structured basis.

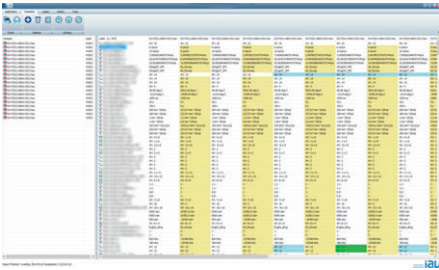
IAV Macara makes it possible to use various data sources as well as customer-specific, generic testing and analytical processes with reporting systems. With its wide range of functions and intuitive user interface, the tool reduces susceptibility to errors and simplifies the calibrator's everyday work.

In more than 35 years of automotive engineering, IAV has gained experience with complex systems and developed many digital tools and methods – from developers for developers. This guarantees that all tools are not only state of the art, but also easy to use.

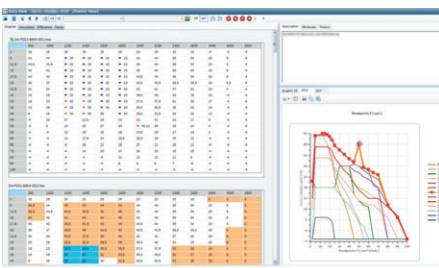


Product by IAV

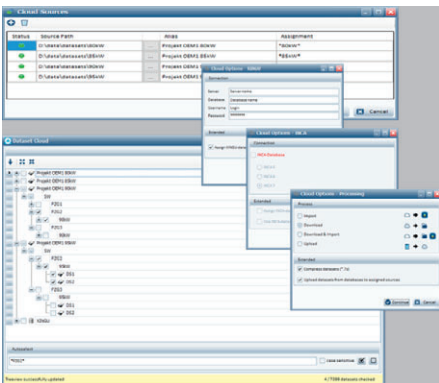
Data Changes at a Glance



Multiple dataset comparison



Viewing and changing data



Cloud functionality

Multiple dataset comparison

IAV Macara processes all commonly used data and exchange formats. The Paco and CDF formats can also be used for viewing metadata, such as degrees of maturity (scores) and calibration histories. The tool comes with extensive filtering and sorting functions based on comparison status, parameter types, parameter lists (LAB), responsibility matrices (RASIC) and A2L functions. In combination with grouping functions, index displays provide a fast and clearly structured visualization of the requisite information, even for a large number of datasets.

Viewing and changing data

Viewing the data of individual parameters is user-friendly and done directly from the comparison display. Appearing one below the other, the relevant parameters are visualized in a table for each active dataset, with any differences being color-highlighted. Two different visualization modes make it possible to select a predecessor comparison that clearly displays the history of data changes and hence the calibration history.

For viewing multidimensional parameters of different dimension, IAV Macara provides consistent visualization through interpolation or extrapolation and also displays values as differences or factors. Changing data is performed in the classic way in the table display (interpolation in x or y direction, division, multiplication, addition etc.) or directly within the relevant 2D graphic. Bit masks can be viewed and adjusted in a display of individual bits. The graphics also provide practical configuration and export capabilities.

Cloud functionality

To use different data sources, the relevant datasets can be selected from a central tree structure. This can be done using the file system's folders (local or network) as well as interfaces to the INCA database system or IAV Xingu dataset management system. Efficiency is enhanced by various options for automatically updating different data sources, compressing data and directly downloading data from the interfaced systems.

Processes and work methodology

IAV Macara permits customer-specific as well as generic testing and analytical processes with relevant reporting, for example error lists (Inhibit, MiL masking, X sets etc.), function displays based on A2L definitions, automated plausibility checks and validation of specific data, automated flash procedures, model codings, automatic display of parameters and measured variables when reviewing software structures and much more.

Benefits for the development process

- Automated processes, minimizing error susceptibility
- Ease of use despite the wide range of functions
- Huge time savings in connection with recurring activities
- Quick snapshot of data changes for many vehicle models
- Expertise from over ten years of development work
- Modular architecture for future demands