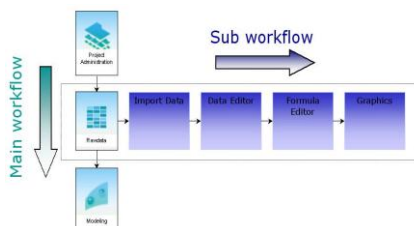SMART CALIBRATION

CAMEO TEST & MEASURE
ALL - IN - ONE POWERTRAIN CALIBRATION

CAMEO TEST & MEASURE is the online version of the Powertrain Calibration Software CAMEO to run intelligent engine calibration procedures (iProcedures) in a test bed environment. The CAMEO TEST & MEASURE software is the result of collaborations with major automotive manufacturers and contains all the best-in-class features required to run automated tests created using design of experiments methods.
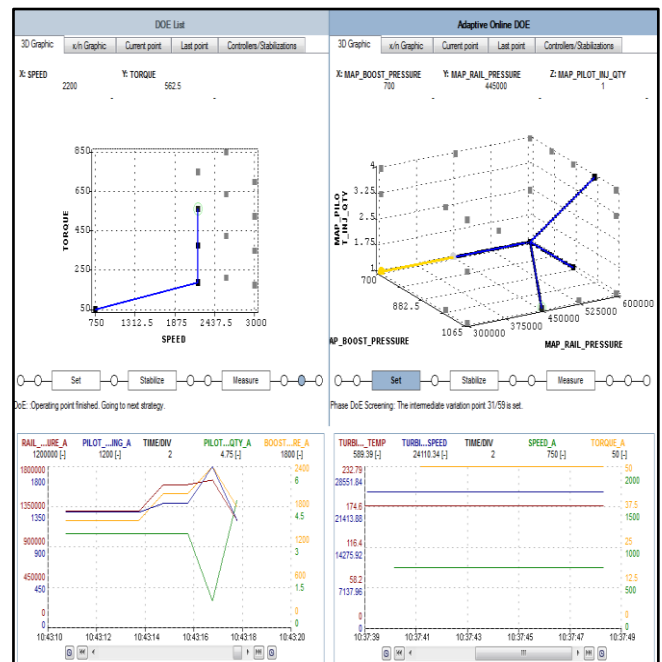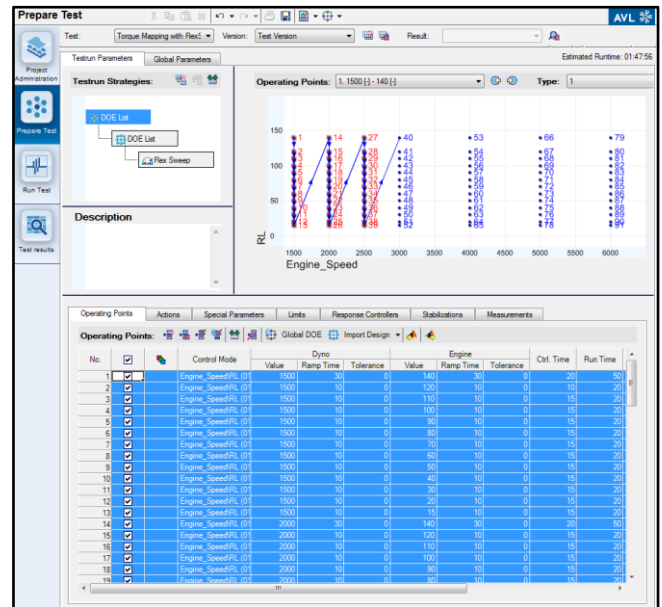

A major requirement for the CAMEO TEST & MEASURE software was the ability to break down the process of Powertrain calibration into manageable work steps, each containing a guided workflow with as much visual representation of information as possible. The software has been designed by automotive engineers specifically for the automotive industry. A main workflow and a sub workflow guide the customer through the calibration process.

The CAMEO TEST & MESURE software offers a wide range of functionality.

The main features are:

- Execution of the standard [i]Procedures based on Full Factorial and DoE Test Designs (DoE Variation List) with the aim to minimize the testing effort

- Possibility to extend the CAMEO TEST & MEASURE software with further optional [i]Procedures as self adapting Online DoE or Flexible Sweep [i]Procedures

- Visualization of the testing effort

- Interaction with ECU application systems based on standardized interfaces to adjust ECU labels such as maps, curves or single values in a step-by-step, ramp or gradient mode

- Interaction with AVL automation system PUMA to trigger and receive requested measurements and to control dynometer

- Standardized and free definable limit monitoring strategies with calibration related reactions for any channel as typically Knock, Cylinder Peak Pressure, Exhaust Gas temperature to protect the engine when variating ECU labels

- Full automatic interaction to the automation and application system to trigger any kind of reaction based on the calibration progress (typically examples are to purge the emission bench; purge or to run Burn-off points).

- Possibility to extend the CAMEO TEST & MEASURE software with a realtime interface to run Controllers for typically MFB, Knock or Lambda Control

- Possibility to extend the CAMEO TEST & MEASURE software with interfaces for procedures to support dynamic calibration

- Possibility to extend the CAMEO TEST & MEASURE software with interfaces to implement external program code or to modify existing procedures by the user

Your advantages at a glance

- One software environment with an unique look-and-feel to cover the ECU calibration workflow
- CAMEO TEST & MEASURE provides a single point of entry for all control unit calibration procedures
- Flexible licencing and add-on functionality for all engine types
- Optional programming interfaces are available for the user to create bespoke solutions
- Standardized interfaces are available to the testbed, the application unit and the database
- Complete calibration libraries can be configured by the user using the standard CAMEO software

Compatibility

CAMEO offers interfaces for the communication with external systems and programs:

- ASAP-2 based interface for the import of A2L-description files
- ASAP-3 interface for the exchange of data with an applications system
- ASAM MCD3 MC interface to exchange data and to trigger events on the application system, such as recorder
- PUMA Interface to communicate to AVL Automation System PUMA Open V1.x and PUMA-5.6 (Note: the Automation system PUMA must be equipped with the PUMA-CAMEO Interface and the PUMA software must be updated to the latest Hotfix of the related main release)
- ASAM-ODS interface for the import of test measurement data
- CAMEO-DRIVE interface to interact directly with AVL-DRIVE to run dynamic driveablility calibration tasks

Recommended options / extensions

- iPROCEDURE ONLINE ADAPTIVE DOE
- iPROCEDURE ONLINE FLEXSWEEP
- CAMEO MATLAB SCRIPTING INTERFACE
- REALTIME EXTENSION TO CAMEO TESTBED
- DIESEL RTC PACKAGE
- CAMEO ADVANCED COMBUSTION CONTROLLER
- CAMEO LAMDA CONTOLLER
- CAMEO REALTIME SOFTWARE DEVELOPMENT KIT

- CAMEO IDOE PROGRAMMING INTERFACE
- CAMEO PRESSURE WAVE CALIBRATION
- CAMEO .NET PROGRAMMING INTERFACE
- CAMEO ENGINE RESPONSE CONTROLLER

Related products

To guarantee the functioning of the powertrain calibration workflow by the CAMEO software, AVL recommends supplementing the product CAMEO TEST & MEASURE with the following further CAMEO products:

- CAMEO TEST CONFIGURATOR to create automated calibration testruns
- CAMEO MODEL & MAP to create models from the testing results and to perform the optimization work and to make maps and curves based on the optimization results.
- CAMEO FLOATING LICENCE SERVER
- CAMEO CENTRAL DATABASE
- CAMEO EMISSION CYCLE OPTIMIZATION
- CAMEO MODEL EXPORT

Scope of Supply

- CAMEO Data DVD
- CAMEO information folder
- License file (after notification of the MAC address)

Please also visit us at www.avl.com/cameo or contact one of our technical offices for further details.