AVL M.O.V.E PRODUCT LINE

AVL M.O.V.E SYSTEM CONTROL

INTEGRATION PLATFORM FOR IN-VEHICLE MEASUREMENT

Market Requirements

Current in-vehicle measurement installations consist of a multitude of different measuring devices. The devices are neither connected to a central data acquisition system nor can the measuring processes be automated comprehensively.

Due to divers interface technologies, the application of several PCs with different operating philosophies is confronting the user with a highly complex operation and data handling. Summing up the test data proves to be very complicated, which makes the effective usage of the measuring results difficult.

AVL M.O.V.E System Control meets this challenge and offers a robust and compact integration platform for in-vehicle measurement technologies that centrally collects all relevant measuring data such as

- Exhaust gas measuring values,
- Indicating data,
- Fuel consumption and
- Driveability indicators

and processes them in an efficient data post processing and evaluation tool.

Due to data consistency and the use of seamless methods AVL M.O.V.E enables the transition of real life data to the test bed. This approach closes the gap between vehicle test and other test environments.

Functional Overview

AVL M.O.V.E System Control is a robust, vehicle PC based system for controlling mobile measuring devices, central data acquisition and the calculation of the results.

Devices and sensors can be easily connected via a multitude of integrated standard interfaces.

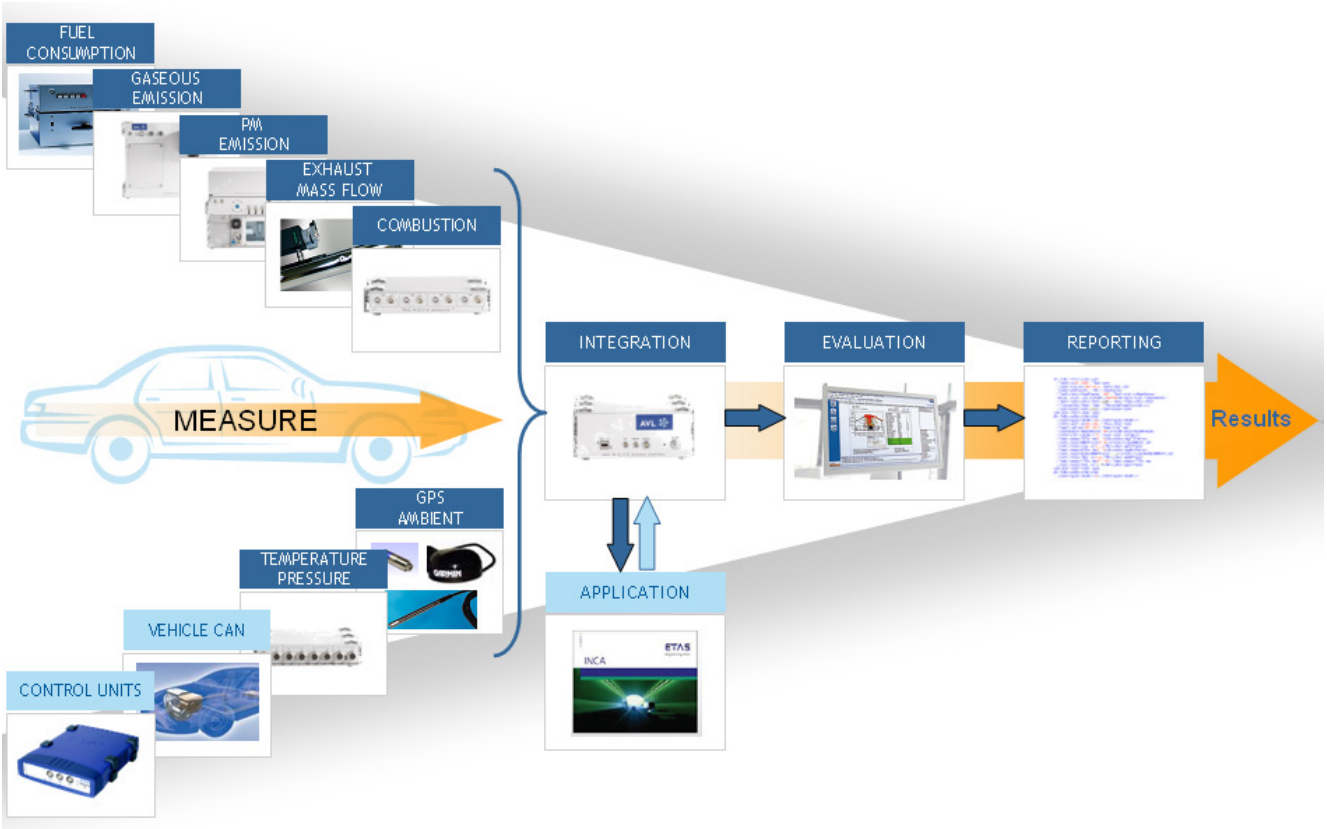
AVL M.O.V.E System Control can be fully integrated as a measuring device in INCA providing all measuring channels at the development engineer's disposal.

This development environment enables a complete automation of the test procedures by means of a powerful script function.

The evaluation and processing of testing data is done with AVL CONCERTO. For In-Use Testing (NTE, CO2 Window, work window) special evaluation packages are available as option.

Data can easily be recorded and reused in other test environments allowing a consistent test execution and the use of new test methodes. This leads to a significant reduction of development effort.

M.O.V.E Product Line – Key Is Integration



Functional Description

AVL M.O.V.E System Control includes sensors for acquiring environmental conditions (pressure, temperature and relative humidity) as well as a GPS sensor. Further measurement devices can be connected via integrated Ethernet, CAN and USB interfaces.

AVL devices are integrated by means of a generic device driver, which is also used on AVL test beds. This guarantees easy and consistent device integration within different testing environments.

CAN interfaces enable the connection of vehicle Bus-systems (e.g.: ECU or vehicle CAN).

The connection to the INCA system is done via the Open-Hardware-Interface (OHI).

Calculation
Based on the available measuring values further results can be calculated as required. Therefore the user can easily define and implement his algorithms or use existing templates.

Data recording
All measuring channels as well as all calculated channels are recorded and saved in one single file (AVL I-File Format).

Visualization
The graphical user interface provides all typical visualization objects (such as table, X/Y-Plot, Bar Chart, single values) which the user can freely configure according to his needs.

Automated Measurements
Control sequences, calculations, measurement processes, evaluations and report generation can be automated by means of a script function.

Reporting
Data post processing and the visualization is based on the powerful tool AVL CONCERTO. The CONCERTO PEMS options include all templates for in-use-testing and automatically generate the reports that are required by US EPA. This simplifies the data handling and reduces considerable the effort for data post processing.

Applications

- Consumption, emission and driveability optimization in the vehicle
- In-Use legislation
- Vehicle benchmark

Benefits at a glance

- Robust design for mobile operation in the vehicle
- Central device-handling
- Central data acquisition and uniform data evaluation
- Easy & flexible integration of further sensors and measuring devices

Technical Insight

	System Control
Dimensions [mm]	241 x 89 x 350
Temperature range	-20 … 60°C
IP security	IP44
Power supply	9…36 VDC Incl. puffer function for bridging short-term voltage drops
Power Consumption	50W
CPU	ATOM N270
Clock	1.6GHz
RAM	2GB
Memory	16GB SSD
USB 2.0	3
RS232	1
VGA	1
CAN 2.0 A & B	2
LAN [100MBit/s]	2 (extended to 5 by means of an internal switch)
I/O	4 x Digital I/O (galvanically not separated) Optional as extension: 3 x NiCrNi TC 1 x PT100 3 x Analog inlet +/- 10V (differential, galvanically not separated)
Ambient temperature	-40 °C … 80 °C
Ambient humidity	0 … 100% RH
Ambient pressure	0,5 … 1,5 bar
GPS	WAAS compatible Position: <3 Meter, 95% typical)

Scope of Supply

The standard scope of supply includes the following components:
1x AVL M.O.V.E System Control
1x GPS receiver
1x Pressure transducer (integrated in device)
1x Ambient temperature sensor
1x Humidity sensor
1x User manual (printed, English)

Not included in the scope of supply but optionally available:
1x Extension Unit for additional I/Os (3x temperatures, 4x analogue in)

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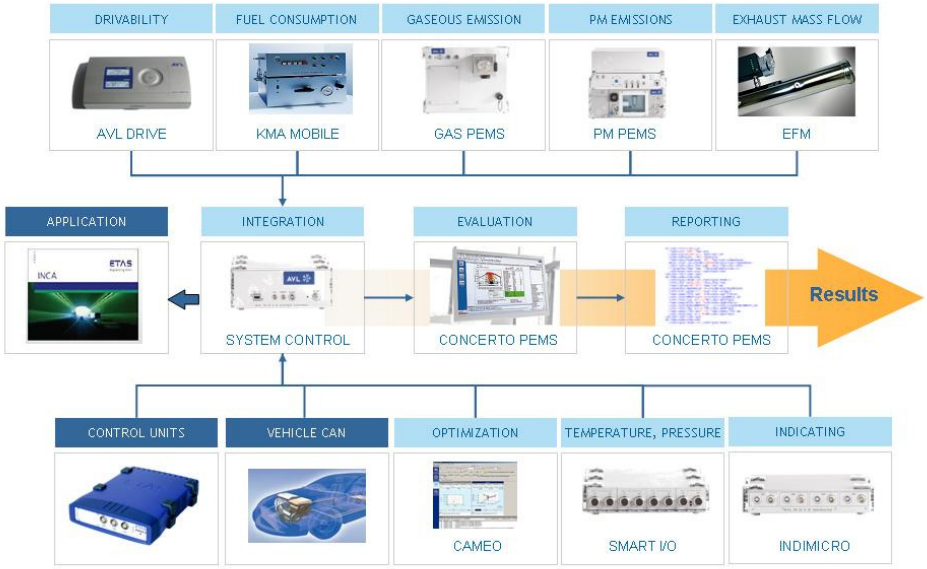

The AVL M.OV.E Product Line consists of:

- AVL M.O.V.E SYSTEM CONTROL
- AVL M.O.V.E PM PEMS
- AVL M.O.V.E GAS PEMS
- AVL M.O.V.E SMART-FEM
- AVL M.O.V.E IndiMicro
- AVL KMA Mobile
- AVL CONCERTO PEMS
- AVL DRIVE