

Car Performance Test

Today, car tests are divided into categories according to distinct aspects of car development. Power train tests, comfort or climatic measurements, noise and vibration evaluations or chassis, break and suspension tests are just a few examples. For most such tests, engineers and technicians normally utilize specific measurement equipment. But what is to be done if the car has to be tested completely to evaluate particular relationships between the various functional aspects? For example between the car's suspension system, break system, gearbox and the noise it makes. A multi-purpose measurement system, which is specially tailored to car test requirements is needed.

Renault, as one of the biggest European car manufacturers, has decided on the imc CAN-bus systems CRONOS PL and CANSAS for exactly such tests. Every single networkable device can be used as a part of a decentralized and synchronized multi-purpose measurement system

Besides the flexibility required of system hardware, a modern software environment is also essential in a car performance test system. Furthermore, the measurement system should not only be able to acquire many analog signals, but it has to be able to measure CAN-bus signals, too.

In contrast to many other instruments, all imc networkable systems can be equipped with an absolutely synchronized CAN-bus interface to collect analog data alongside CAN-bus data.

Several hundred CAN messages can be acquired together with analog data during a test ride and all data can be displayed together no matter what their source is.

Other important features are a measurement system's self-start capability, 'hot-changeable' data storage media, and extensive triggering functions. An integrated Personal Analyzer provides the system with its most powerful functionality – online data evaluation and calculation. Online data reduction, FFTs, digital filters, class-counting functions (LDC), order tracking and an 'Event Log-book' are all featured in the broad scope of the nearly 100 online functions.

Once the measurement is done, all acquired values can be stored in a company-wide database or they can be used for further evaluations. Towards this end, RENAULT has chosen FAMOS, the useful data analysis and evaluation package with its more than 300 different mathematical analytical and statistical functions. Here too, diagrams, printouts and complete reports can be pre-defined and are only a mouse-click away.



CAN bus data &

analog data
(up to 500
channels)



analog data
(up to 400 channels)

