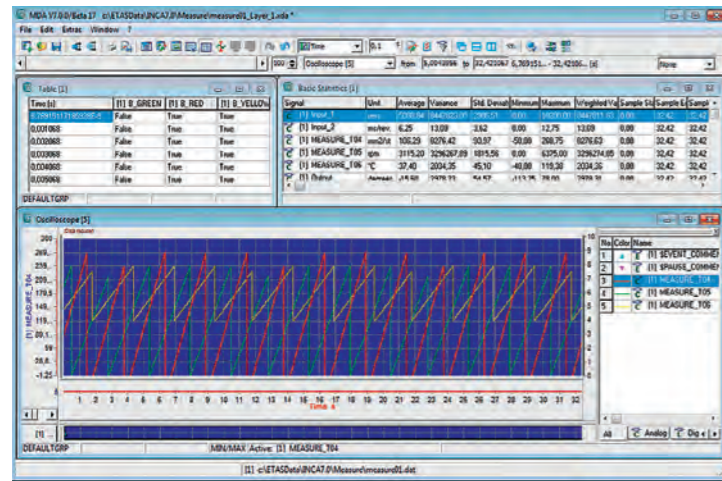


Extended Functions

AUTOSAR authoring users can enjoy the substantial improvements offered by the new **ISOLAR-A basic package**.

It comes with new editors, importers (DBC, FIBEX, LDF, and ODX), automatic features, validations, and exporters (system-based, ECU Extract, RTE Configurations). The BCT add-on helps users configure the basic AUTOSAR software with importers (e.g., ECU Extract), editors, and validations, as well as with C code generation for COMASSO* basic software modules. Both packages support single and multi-core electronic control units and can also be operated using command lines.

*) COMASSO e. V. is a registered association that supports the common implementation and use of the AUTOSAR standard (<http://www.comasso.org>)



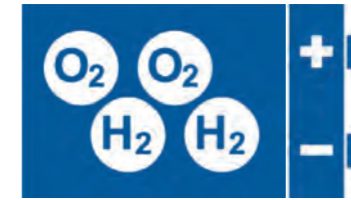
Comprehensive Analysis

With **MDA 8**, the new **software for analyzing measurement data**, users can efficiently analyze measurements with extremely high data volumes. A preliminary version of MDA 8 (MDA 8 preview) has been available since September 2015. It exhibits the tool's high processing speeds and makes it possible to test the new operating concepts that ETAS has developed together with users. MDA 8 preview can be installed in parallel to MDA V7.x and used for free. Further use cases will be supported as part of the planned quarterly service packs. In particular, Service Pack 1 (December 2015) will include conversion of MDF4 measurement files into MDF3.

Powerful Addition

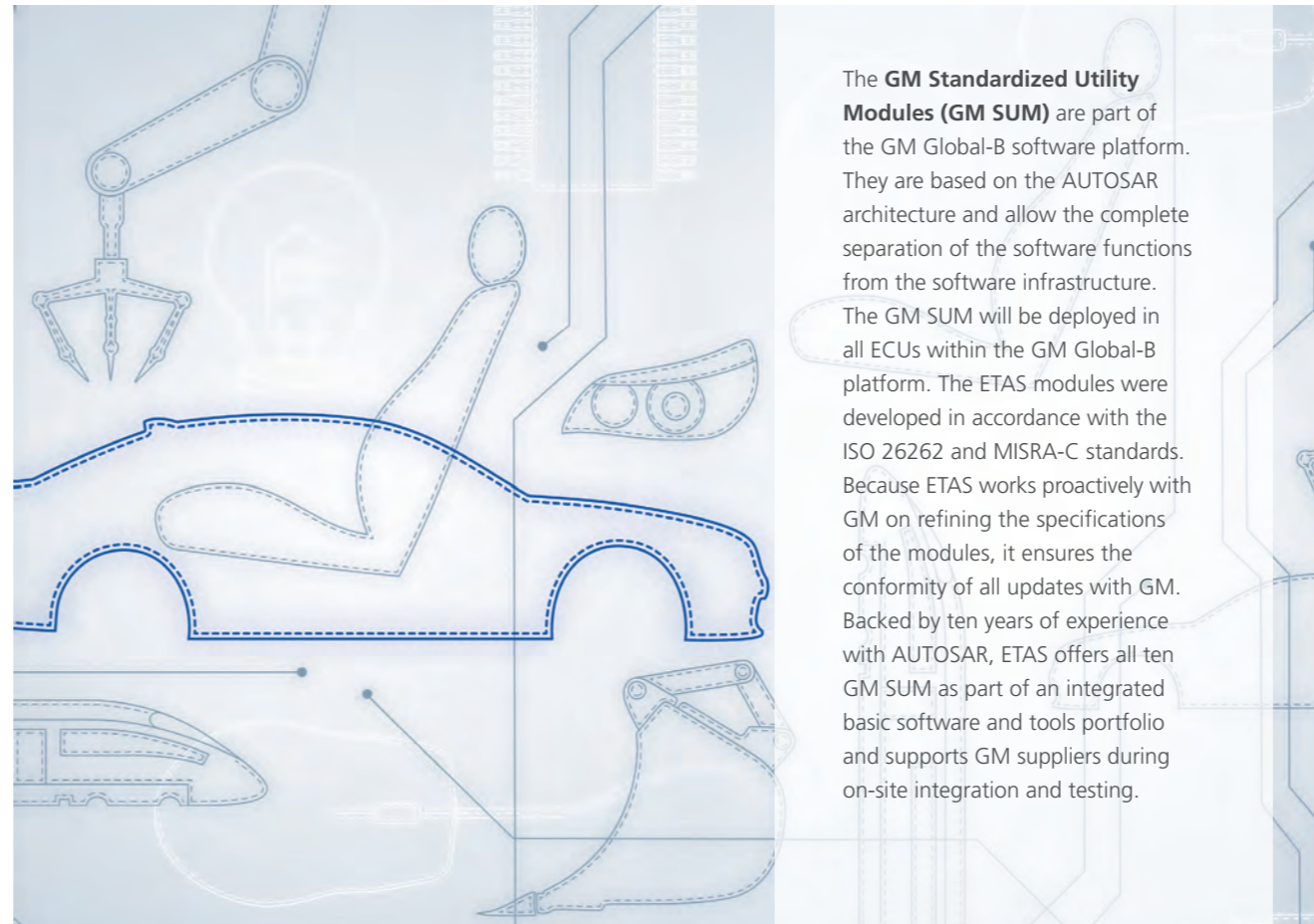
Powerful new features have been added to the flexible and open ETAS LABCAR test system: the **ES5321 PWM I/O Board** and the **ES5338 Wheel Speed Sensor Simulation Board** are scheduled for market launch in December 2015. These fast PCI Express-based boards are characterized by high accuracy and signal quality. They can be used in the chassis, powertrain, body electronics, and electrical drives (ES5321) domains.

New Simulation Model



The **Polymer Electrolyte Membrane Fuel Cell (PEM-FC) model** for the ETAS LABCAR test system simulates a complete fuel cell system for automotive applications. From the transport of water/nitrogen through the membrane to the influence of low ambient temperatures, this model takes relevant physical phenomena into account and makes it possible to test numerous ECU tasks such as flushing the anode coils, water management of the fuel cell stack, or cold-starting the system. Thanks to the model's modular design, customer-specific adaptations are easily implemented. Its high accuracy makes the validated model ideally suited for end-to-end use – from function development to precalibration on HiL systems.

Available Modules



The **GM Standardized Utility Modules (GM SUM)** are part of the GM Global-B software platform. They are based on the AUTOSAR architecture and allow the complete separation of the software functions from the software infrastructure. The GM SUM will be deployed in all ECUs within the GM Global-B platform. The ETAS modules were developed in accordance with the ISO 26262 and MISRA-C standards. Because ETAS works proactively with GM on refining the specifications of the modules, it ensures the conformity of all updates with GM. Backed by ten years of experience with AUTOSAR, ETAS offers all ten GM SUM as part of an integrated basic software and tools portfolio and supports GM suppliers during on-site integration and testing.

INCA for Off-Highway

New features have been integrated for deploying INCA in chassis, body control, and off-highway applications: a polling mode for **measurement data acquisition** plus the **monitoring** of SAE J1939 messages on the CAN bus. The new polling mode enables the use of INCA for measurements on ECUs that do not provide sampling mechanisms for data acquisition, such as the DAQ lists of the XCP protocols. In this case, the new INCA polling engine cyclically polls for the transmission of measurement data to the ECU in the CCP and XCP formats. The polling mode can also be used in parallel with DAQ measurements to increase the number of variables that are to be recorded simultaneously. The second new INCA feature is the monitoring of SAE J1939 messages on the CAN bus. The SAE J1939 protocol is frequently used in the drivetrain as well as in the communication between the tractor vehicle and trailer for commercial vehicles and mobile machinery. All of the new features described are already available in INCA.