Extensive testing and debugging of embedded software

Stuttgart, GERMANY, 2014-05-08 – The completely revised AUTOSAR basic software package MICROSA R AMD (AUTOSAR Monitoring and Debugging) from Vector now provides extensive testing and debugging functions for AUTOSAR ECUs. The package contains the "Diagnostic Log and Trace" and "Debugging" modules as defined in AUTOSAR 4.x, and also the useful extra "Runtime Measurement Module". Together with the CANoe.AMD test tool, MICROSA R AMD gives ECU developers convenient access to valuable information on runtimes and statuses of the application and basic software. In test environments it is now easier to compare internal ECU parameters to external parameters and bus communication.

MICROSA R AMD consists of the three modules RTM, DLT and DBG. The Runtime Measurement Module (RTM) is an extension of the AUTOSAR standard and permits the measurement of runtimes at any points in the application and the basic software (BSW). Typical applications include the determination of interrupt or task runtimes. CANoe.AMD controls the measurement and generates an HTML report with the measurement results including statistical information (CPU Load, Min, Max, average runtime).

The Diagnostic Log and Trace Module (DLT) derived from AUTOSAR has been optimized for use in slim embedded systems. It informs the developer about freely definable events and statuses in an ECU which are transmitted to CANoe.AMD as text output. Events from the Development Error Tracer (DET) and the fault memory (DEM) can also be transmitted via the DLT module to CANoe.AMD.
The debug (DBG) interface permits live access to the BSW statuses. Rather than having to perform a test to ascertain these statuses, they are now read directly out of the ECU memory via the bus system and presented in CANoe.AMD.

Communication between a Test PC with CANoe.AMD and the ECU takes place by way of the standardized measurement and calibration protocol XCP. An XCP implementation is available from Vector for all standard network protocols (CAN, Ethernet, FlexRay or LIN).

More product related information: [www.vector.com/microsar](http://www.vector.com/microsar)

[Figure 1a: MICROSAR AMD provides easy access to internal ECU information]
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