

Preview ATZelextronik 07.-08.2022

COVER STORY | SIMULATION + TEST

Efficient diagnostic testing through simulation

Modern vehicles are computer-based networks on wheels. Driving and comfort functions are increasingly distributed over several control units, whereby most functions still consist of a mechanical part and the computer component. Testing this complex interaction of mechatronic components is essential and can be solved more efficiently through simulation. *Softing*

Methods for scenario-based test planning for the virtual validation of ADAS/AD functions

Virtual validation offers the possibility to create an infinite number of test scenarios. However, the biggest challenge is the development of appropriate tools to create, describe and manage realistic test scenarios. The article shows how the tool chain as well as the database for the test environment can look like. *AVL*

Test bench in the box as a service

The fact that customer needs play a special role for service companies is not new. The sometimes creeping transition from owning measurement and testing technology to leasing it as needed is also a trend that has been going on for some time. The article presents a modular and mobile test stand concept. *IAV*

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HANSEN REPORT

As a source for technology and business trends in the global automotive electronics industry, Paul Hansen highlights current industry topics within the framework of ATZelextronik and ATZelextronics worldwide.

DEVELOPMENT | EMBEDDED SYSTEMS

Master controller for the software-defined vehicle

With electrification, the range of functions for vehicle movement is increasing rapidly. Each new function is synonymous with more software. This is reflected in the trend towards a more centralised E/E architecture with fewer but more powerful control units. An important aspect of this is the simultaneous development of hardware and software. A scalable platform for this is presented. *Vitesco*

POWER ELECTRONICS

1200-SiC chips for automotive applications

Fast charging requires powerful electronics: 800V batteries typically use power semiconductors with a voltage class of 1200V. These are typically connected in parallel in the power semiconductor modules, must withstand low and high temperatures or even effects such as cosmic radiation. *Hitachi Energies*

Dates

Advertising deadline: 06/17/2022

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IN THE SPOTLIGHT

Wasserstoff statt Kohle: So wird der Stahl „grün“

Dank neuer Verfahren auf Basis von Wasserstoff als Reduktionsmittel kann die Stahlproduktion künftig weitestgehend klimaneutral erfolgen. Für die Automobilhersteller bietet sich damit die Möglichkeit, die Umweltbilanz ihrer Produkte über den gesamten Lebenszyklus weiter zu verbessern.

SOFTWARE

On the way to the software-defined vehicle

Increasingly, vehicle functions in automotive development are no longer mapped in hardware but in software. IBM presents the challenges of the software-defined car and shows how a hundred ECUs can be replaced by zonal E/E architectures, the Linux operating system and a handful of high-performance computers. *IBM*

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