

VN8900 Converting Test Benches Worldwide in Record Time

Case Study ZF TRW



The Customer

ZF TRW is one of the world's largest automotive suppliers. It supplies over 40 prominent automotive OEMs with advanced systems related to vehicle safety. They include brake, steering and wheel suspension systems as well as complex occupant protection systems and on-board electronics.

The Challenge

Configure test benches used to test various ECUs worldwide with shorter setup times

At ZF TRW, the cost and effort required for ECU testing was continually increasing, because of both the number of ECUs and their extended functionality. Each ECU must pass countless electrical, functional, mechanical, environmental and EMC tests before product release. Test bench engineers were seeking a more flexible solution that would address this growing complexity, meet future needs and conform to available timeframes. The solution was to be implemented globally and uniformly at all business sites.

The Solution

Intelligent network interface is central focus

The modular VN8900 network interface from Vector plays a key role in the new concept of component-based test benches. Along with its high performance, it offers the additional crucial advantage of automated operation. CANoe remaining bus simulations and test sequences can be run on the VN8900 with the cost-effective extended license for CANoe stand-alones without having to connect a separate PC for CANoe control. Each test stand consists of a 19" cabinet with six plug-in rack modules, and each rack module integrates a VN8900. This means that each test stand can test up to six ECUs in parallel. CANoe remaining bus simulations that already exist in the development departments can be reused in the tests with just minimal modifications. The new approach reduces setup times drastically: from as many as eight months to change an ECU tester over from OEM1 to OEM2 to a time of two to three weeks. The time needed for changes shortly before the start of testing was also reduced: to less than one week.

A total of 32 test benches are currently in use worldwide at ZF TRW. In the future, they will also be used for tests of

radar and camera systems in the field of autonomous driving.

The Advantages

Drastically reduced setup times – faster projects

- > Test stands fit seamlessly into ZF TRW tool chain
- > Remaining bus simulations can be reused in tests with just minimal modifications
- > Setup times are drastically reduced
- > High level of stability and durability in long-term tests
- > Inexpensive CANoe stand-alone extended license enables autonomous operation of the VN8900
- > Broad and free support of the required OEM-specific protocols by Vector
- > Free updates of VN8900 to new CANoe stand-alone versions

