CAN Newsletter Online

PLATFORM

Hardware-in-the-loop solution

With the Conix HIL Solution, B-Plus automotive launched another module for its Conix Platform. The scalable solution is used for the development and validation of ADAS/AD platforms and sensors. Simulation of vehicle communication is done via CAN (FD).

Server rack with Conix HIL Solution (Source: B-Plus)

The solution's configuration options range from playback in a space-saving format to equipped HIL racks with bandwidth for 24/7 use, explained the company. The Conix HIL Solution combines software modules with hardware and can be used both as an open and closed loop ADAS/AD (advanced driver assistance systems/autonomous driving) HIL system.

In contrast to classic HIL systems, the Conix modules can be individually adapted and integrated to customer requirements, said the company. They also claimed that with the solution, the efficiency of product development and assurance processes can be increased. In addition, development periods can be shortened and the coverage of test cases, which cannot always be reliably reproduced in physical test scenarios, is increased.

This is the case when a HIL solution is used by eliminating a time-consuming process step in the test process. Real test drives are then replaced by simulations, which help to test and further develop the "device under test" (DUT) in real time. Only when all errors have been eliminated in this test step and all functions have been sufficiently tested, the final test does take place on the road.

The solution can be integrated in existing customer tools and processes and enables time-synchronous playback of raw sensor data, vehicle network information. It supports sensor technologies such as radar, lidar, and camera sensors. The physical layers supported include CSI2 (camera serial interface), GMSL2 (gigabit multimedia serial link), and FPD-III (flat panel display). The functional scope is rounded off by the simulation of vehicle communication via CAN(FD) and automotive Ethernet with the associated protocols.

Conix enables systematic analysis of vehicle data by collecting, evaluating, and presenting it in electronic form. From embedded software engineering to connected services, AI-supported data analysis and high-end validation solutions, a platform for the development of vehicle systems is provided. By combining the use of ready-made building blocks and engineering services, the platform can be formed/united into the solution.

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