No.1 SYSTEM SIMULATOR

VMPF-G

Virtual Multi-ECU System Verification Solution

Detects ECU software errors before the road test
Simulates car control systems configured with multiple ECUs
Reduced cost and space requirements compared to HILS

VMPF-G uses a virtual ECU software verification environment called 'SPILS' (Simulator-based processor In the Loop Simulation) to simulate multi-ECU car control systems. This program can be used during the initial development process, and is useful for detecting ECU software errors and ECU communication protocol / failsafe testing. The simulations are generated by executing the target code with GAIO's ISS connected to the MATLAB/Simulink vehicle models.
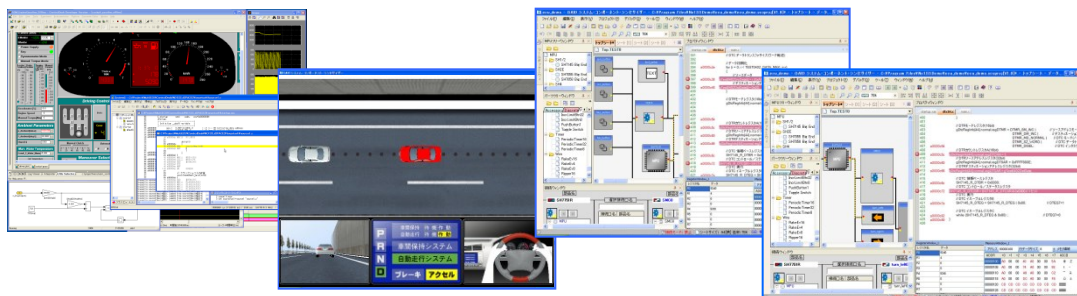
Performs Multi-ECU Car System Verification during the Early Development Phase

It is believed that multi-ECU car systems can only be tested through a road test or by using an extraordinarily large HILS system. This often leads to numerous errors being discovered in the latter stages of development because sufficient testing of the ECU systems cannot be conducted earlier on. To overcome this limitation a method for testing car systems in the early stages of development would be more preferable.

VMPF-G is such a solution with its multi-ECU system verification capability. Because ECU hardware is not required, testing can be performed during the initial design phase using just the target code and vehicle models. In addition, VMPF-G is compatible with CAN, LIN and FlexRay communication systems.

Practical and Affordable Multi-ECU Verification Solution

If you were to build a HILS verification system for an entire multi-ECU vehicle design, it would cost several hundred million dollars and require a large facility just for one complete system. This of course is not a very practical solution.

VMPF-G is a complete software verification solution that can perform multi-ECU simulations over a computer network. In comparison to a HILS system, using VMPF-G can significantly reduce necessary space and costs.

Position of VMPF-G in Automotive V-Based Dev

GAIO promotes the virtual verification environment as portrayed on the pink-colored line of the following automotive V-based development figure. By using a virtual testing environment embedded software can be tested for errors before the target hardware is completed, resulting in faster development and higher quality.

GAIO TECHNOLOGY CO.,LTD.

Headquaters (Tennouzu Office):
Tennouzu First Tower 25F
2-2-4 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-0002 Japan
Tel: +81-3-4455-4767