XHIL STUDIO

Test automation suite

XHIL STUDIO is a software testing tool that automates test procedures for automotive ECU hardware and software components. It is based on VeriStand.

Essential in-vehicle functionalities increasingly depend on software, demanding rigorous software development methods to ensure quality, safety and security requirements are met. For compliance with international standards such as ASPICE, AUTOSAR and ISO 26262, manufacturers and first-tier suppliers are required to conduct different types of testing procedures in multiple testing environments.

Integration testing and Hardware In the Loop are core elements of any assessment procedure but sometimes carried out manually, resulting in time-consuming and expensive operations with potentially imprecise results.

XHIL STUDIO streamlines the definition and validation of embedded software in the critical implementation and testing phases. The tool’s automated testing capabilities help to significantly reduce costs and uncertainties while shortening the time-to-market and guaranteeing software quality and standard compliance.

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Benefits

Increased productivity
Capture/playback tests enable automated script generation

High-quality results
Runs automated and complete regression tests

Cost efficient
Usable when National Instruments hardware is present, with test case reusability in HIL phases

High flexibility
Easy extension of functionalities to suit future project requirements

Investment protection
Both system and test cases can be reused

Shorter time-to-market
Tests can be scheduled and executed automatically 24/7
**Key Features**

**Automatic test execution**
Executes repetitive test procedures without human intervention

**Modular architecture**
System assembly according to customer-specific requirements

**High scalability**
Easily adapts to different ECU sizes

**Extendible system**
Flexible integration of existing and/or third party models and tools

**Variable configuration**
Supports quick configuration changes to test different ECU types with the same system

**User-friendly design**
Easy implementation, configuration and use bypassing the creation of VeriStand panels

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**How the system works**

National Instruments PXI stimulates the System Under Test performing signal conditioning and automatically acquires and records the respective output signals.

XHIL STUDIO supports end-users in practical and effective management of their daily hardware/software integration and validation activities.

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**Key differentiators**

By combining the advantages of a HIL system with a low-cost test design, it enables the automation of the integration testing phase, filling the gap between SIL and HIL.

XHIL STUDIO runs tests repeatedly and quickly, allowing for an early identification of possible defects while eliminating the uncertainty of manual testing.

XHIL STUDIO generates reports on the executed tests and enables their playback.