



# Accelerating Automotive Software Development with Wipro's Virtual Vehicle Validation Platform (V3P)

Accelerate. Automate. Innovate.



As the Automotive Software contributes to 20% of overall vehicle re-calls, which necessitate OEMs and Tier-1s to “left-shift” their validation at early stage of product development to detect bugs. As of today, the test bench hardware to be made available for every developer at early stage is impossible.

## Wipro's Virtual Vehicle Validation Platform (V3P)

To overcome the hurdle Virtual ECU based solution is being developed along with versatile test framework to connect to different Industry vECU vendors named as “Virtual Vehicle Validation Platform (V3P)”

### AI-Driven Test Scripts Generator:

It automates the creation of test scripts directly from requirements, ensuring that tests are aligned with the specified needs and reducing manual effort.

### Keyword-Driven Test Framework:

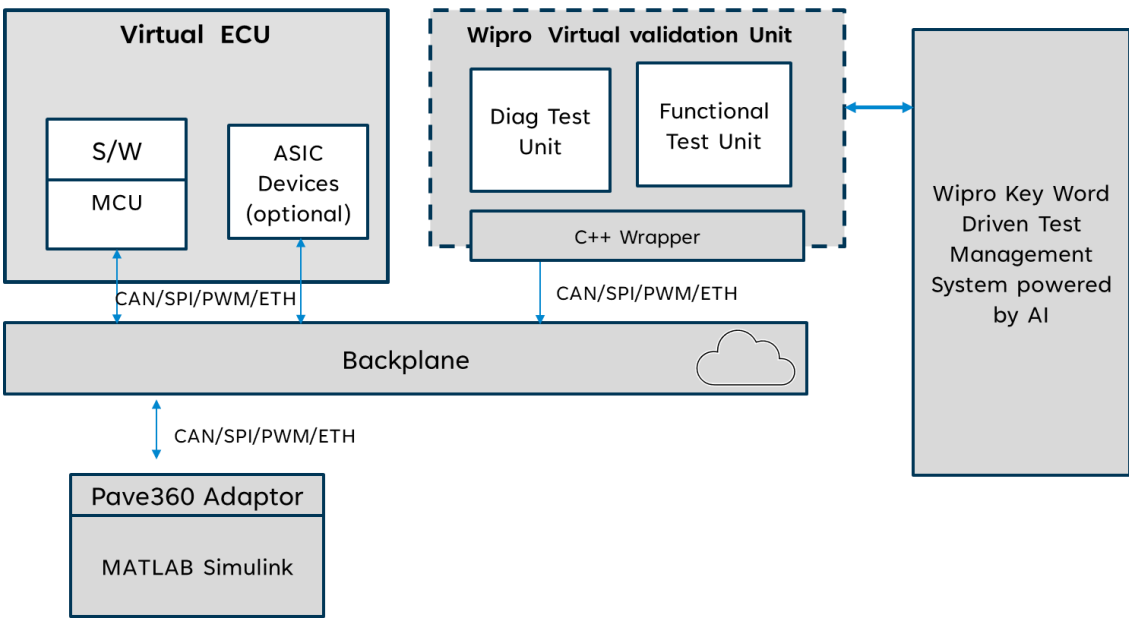
Supports testing at various stages of product development, ensuring that each phase meets the specified requirements.

### Domain-Specific Test Unit

The units are designed to be adaptable to different virtual environments, making the platform versatile and compatible with various existing tools like Synopsys Virtualizes, Siemens PAVE360, and Vlabworks VLAB VDMs.

# Solution overview

By providing a unified validation framework, V3P can facilitate Hardware-in-the-Loop (HIL) testing in virtual environments, which is a significant advancement. This approach not only enhances the transparency and quality of the development process but also helps in reducing costs by minimizing the need for physical hardware. Here are some standout features of Wipro V3P:



## Salient Features



All levels of ECU Virtualization  
(upto level 4)



System Metrics Analysis



Power and Performance Analysis



Safety and Reliability



CI/CD Integration



Platform Agnostic tool (PAVE360 /  
Synopsys Silver / VLAB VDM..)



Configurable, Re-usable, Scalable  
components



ALM toolchain integration



Standardized Communication  
Interface(ASAM)

## Business Benefits



### Fail Cheap and Faster

Different levels of fidelity for verification and validation, to identify and address issues early, reducing costs and time.



### Cost efficiency

Reducing the reliance on physical hardware and performing early-stage validation /verification



### Improved Quality and Compliance

Extensive verification in various simulated environments to identify potential issues early, leading to a higher quality product



### Transparency in Product Development

Unified pipeline ensures that all stakeholders have visibility into the development process, enhancing collaboration and accountability.

Contact [Wipro-Automotive-V3P@wipro365.onmicrosoft.com](mailto:Wipro-Automotive-V3P@wipro365.onmicrosoft.com) today for having a discovery workshop on how we can accelerate your development through a be-spoke solution.



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