VECTOR

Cypress Boosts Productivity with VectorCAST Embedded Test Management

Case Study - Cypress

The Customer

Founded in 1982, Cypress is the leader in advanced embedded system solutions for the world's most innovative automotive, industrial, home automation and appliances, consumer electronics and medical products. Headquartered in San Jose, California, programmable systems-on-chip, general-purpose microcontrollers, analog ICs, wireless and USB-based connectivity solutions and reliable, high-performance memories help engineers design differentiated products and get them to market first.

The Challenge

Faced with a complex development environment and compressed schedules, Cypress Semiconductor needed to update their existing test framework. The solution needed to be reliable, easier to use than their existing tools, and provide the ability to run the same tests of their application code against multiple configurations.

The Solution

Cypress chose the VectorCAST platform to automate and manage their embedded software testing process. Additionally, the VectorCAST solution provides Cypress with the necessary tools and process support for compliance with ISO 26262.

The Results

With VectorCAST, Cypress is now able to run all tests nightly using multiple compilers and multiple source code configurations. Test results for each configuration are available in a single report, giving unprecedented visibility into release readiness.

Streamlining Complex Development Processes

Market demand and input from their customers prompted the Cypress Semiconductor development team to improve their embedded development-testing infrastructure.

Cypress determined that the key to streamlining their embedded development testing process would be to automate testing and code coverage, and reduce the time spent managing the testing process. The solution needed to be flexible enough to integrate into their existing development infrastructure and reliable enough to manage testing of all their applications.

"Increasingly we are required to develop and test our application code under consideration of specific customer requirements. This fact, together with an internal mandate to thoroughly test all deployed application configurations, led us to investigate the latest available testing technology," said Sven Natus, Manager of Software Development, at Cypress Semiconductor.

After a thorough evaluation of several commercial testing tools, Cypress determined that the VectorCAST embedded software test platform was the ideal solution for their needs.

Increasing Productivity through Embedded Test Management

A key factor for Cypress in choosing the VectorCAST platform was the VectorCAST/Manage Embedded Test Management (ETM) application.

VectorCAST/Manage controls and documents the testing process providing developers with timely feedback on all test activities. Using VectorCAST/Manage, Cypress's development teams execute the same test cases on multiple configurations every night and produce a single status report.

With VectorCAST, Cypress derives more value from its existing investment in infrastructure. An extensive range of supported environments enabled a seamless and rapid integration of the VectorCAST tools into the Cypress heterogeneous development environment which includes Green Hills Software® MULTI®, and Polarion® ALM™.

Delivering Business Value with Improved Decision Making

Since deploying VectorCAST, Cypress Semiconductor has realized significant business value. By enabling better visibility into the development process, VectorCAST has helped Cypress in their effort to streamline their development while maintaining stringent quality standards.

"VectorCAST is a very important component in our embedded software development process allowing us to detect defects early and assure the right level of quality for our demanding customers," Natus continues. "The open interface of VectorCAST gives us the necessary flexibility to adapt it to all of our embedded development environments, including integration with our ALM tool."