

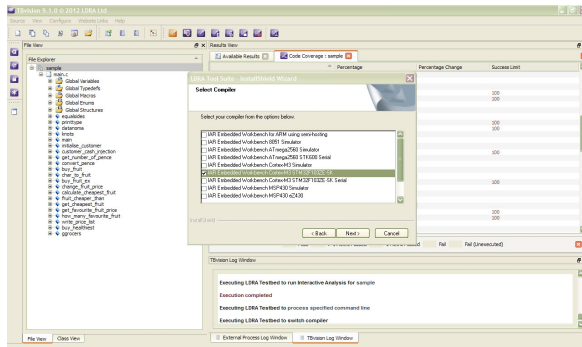


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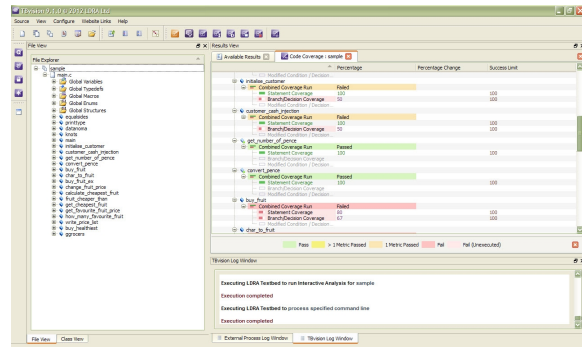
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This press release and associated images (in high-resolution compressed jpeg format) can be downloaded from www.hughescom.net.



Screenshot 1: LDRA tool suite integration with IAR Embedded Workbench for different targets



Screenshot 2: LDRA tool suite automatically imports the IAR Embedded Workbench project for Static and Dynamic analysis

LDRA and IAR Systems Target IEC 61508 and IEC 62304 Certification of Small-footprint Architectures

Interface of LDRA tool suite and IAR Embedded Workbench extends rich array of tools for ARM, 8051, AVR, M32C, RL78 and MSP430

Wirral, UK. 26 June 2012. LDRA, the leading provider of automated software verification, source code analysis and test tools, has extended the interface between the LDRA tool suite and IAR Embedded Workbench. With support for platforms such as ARM, 8051, AVR, M32C, RL78, MSP430 and their evaluation boards, LDRA provides complete validation and testing capabilities, ensuring that smaller embedded systems based on these architectures can be certified to the IEC 61508 industrial safety, IEC 62304 medical, and DO-178C avionics standards despite limited resources.

The interface between the LDRA tool suite and the IAR Embedded Workbench IDE offers users a rich array of tools rarely available in small-footprint environments. With out-of-the-box support for IAR C-SPY Simulator, the LDRA tool suite can be configured to automatically import and perform static analysis on the generated code. LDRA's dynamic analysis and unit testing run on the simulator and the target using IAR C/C++ Compiler and IAR C-SPY Debugger to download and execute the code on the target.

For certifying systems to the most stringent levels, the LDRA tool suite can perform complete code coverage, ensuring that all parts of an application have been fully tested. The LDRA tool suite also provides test harness creation, results capture and report generation. Artifacts created during analysis can be imported into LDRA's TBreq and TBmanager requirements traceability tools, showing progress of system requirements across the software-development lifecycle. The LDRA tool suite fully documents all aspects of analysis, test and requirements traceability, automatically generating the documentation needed for standards compliance.

"Extending full simulation capabilities is particularly important with small-footprint devices," explained Mats Ullstrom, IAR Systems' Product Director. "Not only do we gain the typical advantages of testing before hardware is available, but it allows developers to fully test the application and eliminate errors and inefficiencies prior to testing on the target. Executing these tests using the speed and efficiency of a host system saves considerable expense when the on-target testing of a small-footprint device is more challenging."

“Architectures with very little resources continue to power many applications,” confirmed Ian Hennell, LDRA Operations Director. “When these devices must meet certification standards, development teams typically lack the tools they need to automate their application development and certification process. This integration ensures that developers have the resources they need to successfully reach certification compliance for industrial, medical or avionics standards, even when their platforms have limited memory.”

Because of the limited resources of some of these platforms, LDRA offers developers alternative methods for creating efficient testing solutions. With evaluation boards such as AVR STK600 and STM32F103ZE where targets have limited memory, the LDRA tool suite streams the data back to the host via the serial port. Further, static analysis and unit testing on both simulator and target can be completely automated and run from a script. Developers can test identical instrumented executables and test harnesses on a target and simulator environment, greatly speeding time to market.

IAR Embedded Workbench reaches beyond the capabilities of native tool chains, providing full ANSI C compliance, support for embedded C++ as well as host-controlled I/O facilities not typically available for these microcontrollers. The LDRA tool suite leverages these capabilities, reading IAR project files and using these files to speed static analysis efforts via included paths, macros and other settings. In addition, the project files are used to compile, control IAR’s simulation and device-programming environments, execute on target, and extract the results. With this integration, developers gain a head start on performing system and unit tests using the capabilities already available in the IAR infrastructure. Working together, the LDRA tool suite and IAR Embedded Workbench provide seamless solutions to customer test automation needs.

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About LDRA

For more than 40 years, LDRA has developed and driven the market for software that automates code analysis and software testing for safety-, mission-, security- and business-critical markets. Working with clients to achieve early error identification and full compliance with industry standards, LDRA traces requirements through static and dynamic analysis to unit testing and verification for a wide variety of hardware and software platforms. Boasting a worldwide presence, LDRA is headquartered in the UK with subsidiaries in the United States and an extensive distributor network. For more information on the LDRA tool suite, please visit: www.ldra.com.

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