

LDRA Productivity Package for Industrial Controls

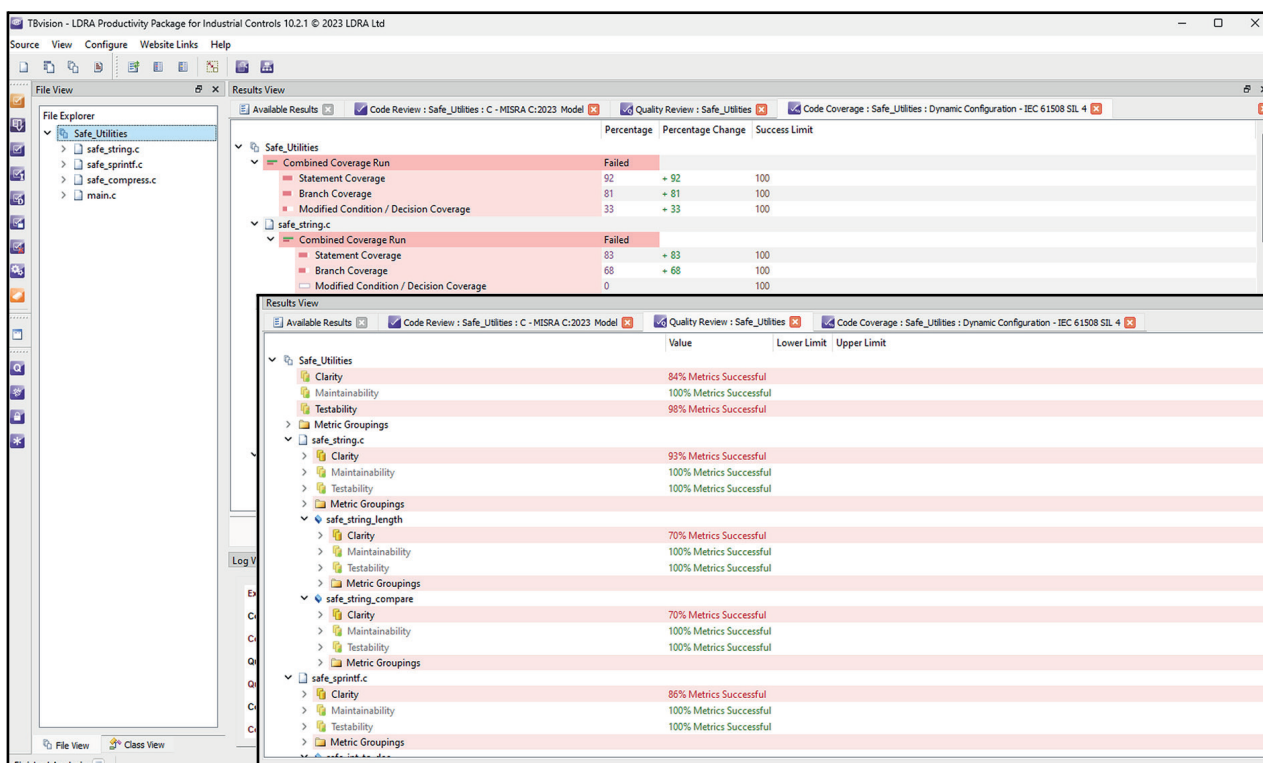
LDRA Productivity Package for Industrial Controls

The LDRA Productivity Package for Industrial Controls is a set of targeted capabilities drawn from the LDRA tool suite. It enables customers to achieve IEC 61508 compliance through to Safety Integrity Level 4, the highest level of assurance for industrial controls software, and to apply part 4-1 of the cybersecurity standard IEC 62443.



The package includes LDRA's best in class capabilities for the development and verification of industrial controls software. Its flexibility and scalability addresses the changing needs of the most demanding projects and enhances collaboration across large and small teams, making it ideal for use at any point in the software development lifecycle. The breadth of capabilities included in the package make it suitable for the development of industrial controls software to varying levels of assurance.

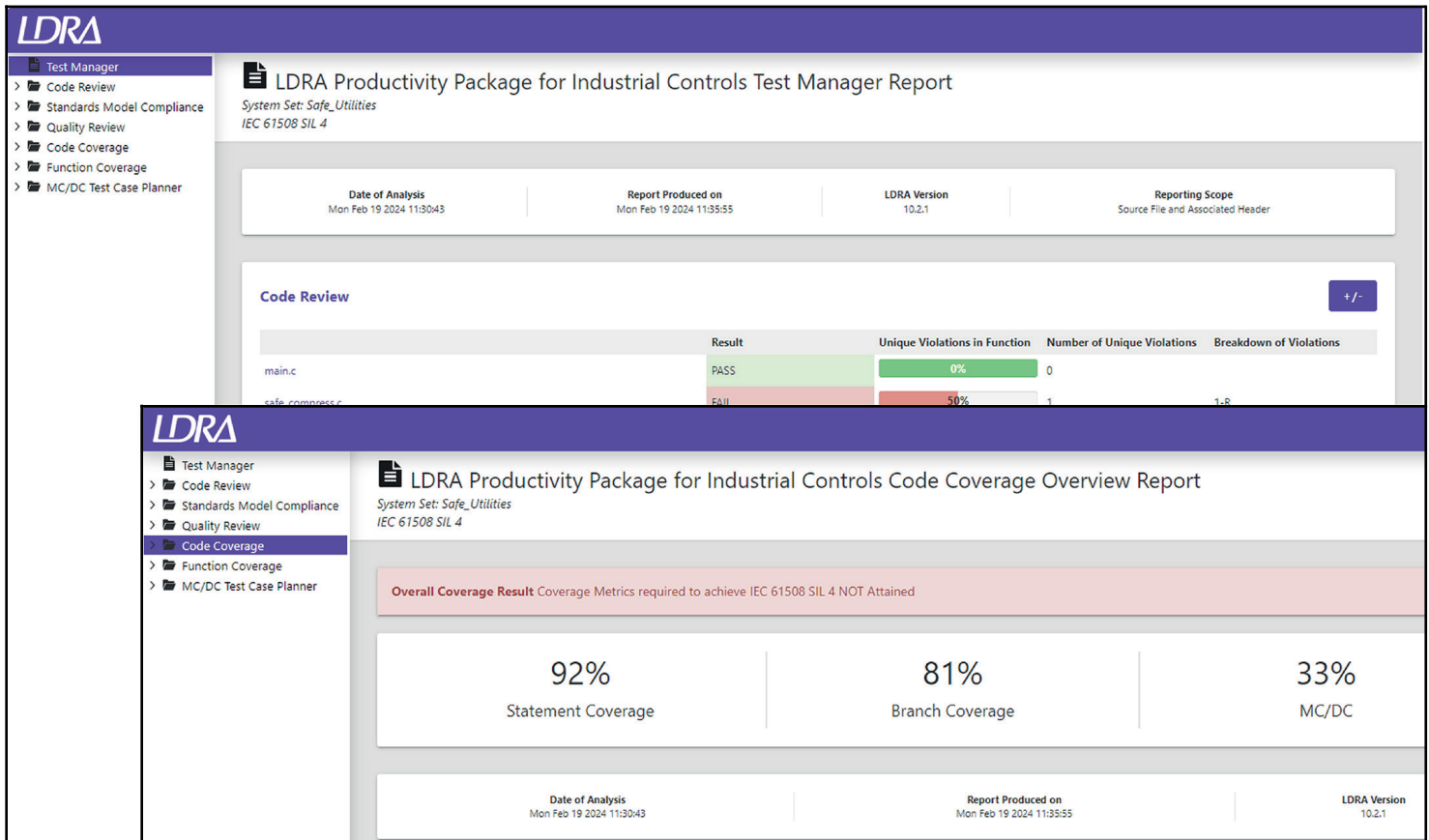
The LDRA Productivity Package for Industrial Controls embraces both static and dynamic analysis techniques to encompass a wide range of essential features designed to ensure compliance with functional safety and security standards.



Static code analysis is used to evaluate code quality and gather critical metrics. It enables checking against the rules defined by coding standards such as MISRA, CERT, and CWE, in addition to user configurable rules sets.

Dynamic analysis capabilities include unit, integration and system level testing on simulators and target hardware alike. Structural coverage analysis including MC/DC enables the assessment of coverage statistics and the implementation of requirements-based and on-target testing, while the analysis of data coupling and control coupling helps to ensure that source code is implemented in accordance with its developer's intentions.

Reporting of both static and dynamic analyses is tuned to industry requirements and formatted to reflect the objectives of IEC 61508 and IEC 62443-4-1. Optional add-on capabilities including requirements traceability, web-based project reporting of testing and analysis results, worst-case execution time analysis, tool qualification packages, and object to source code traceability and coverage. These capabilities complement the base productivity package to provide a comprehensive toolkit for ensuring the highest level of assurance in the development of industrial control software, meeting the rigorous standards of IEC 61508 and IEC 62443-4-1.



The LDRA Productivity Package for Industrial Controls at a glance:

- Functional safety and security standards compliance with IEC 61508 and IEC 62443-4-1
- Static code analysis including key quality, complexity and testability metrics
- Coding standards compliance including MISRA, CERT, and CWE for both C and C++, along with many other commercially available coding standards
- The ability to define custom coding standards
- Dynamic structural coverage analysis including MC/DC
- Unit and system level testing on target hardware
- Requirements-based and on-target testing
- Security analysis and reporting, including taint analysis
- Data coupling and control coupling analysis
- Can be extended through add-on capabilities including requirements traceability, web-based project-level reporting, tool qualification packages, and object to source code traceability and coverage
- Breadth of capabilities meets the needs of most industrial controls software development and verification projects
- Flexibility and scalability to support projects at any point in the lifecycle

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