

LDRA Productivity Package for Functional Safety

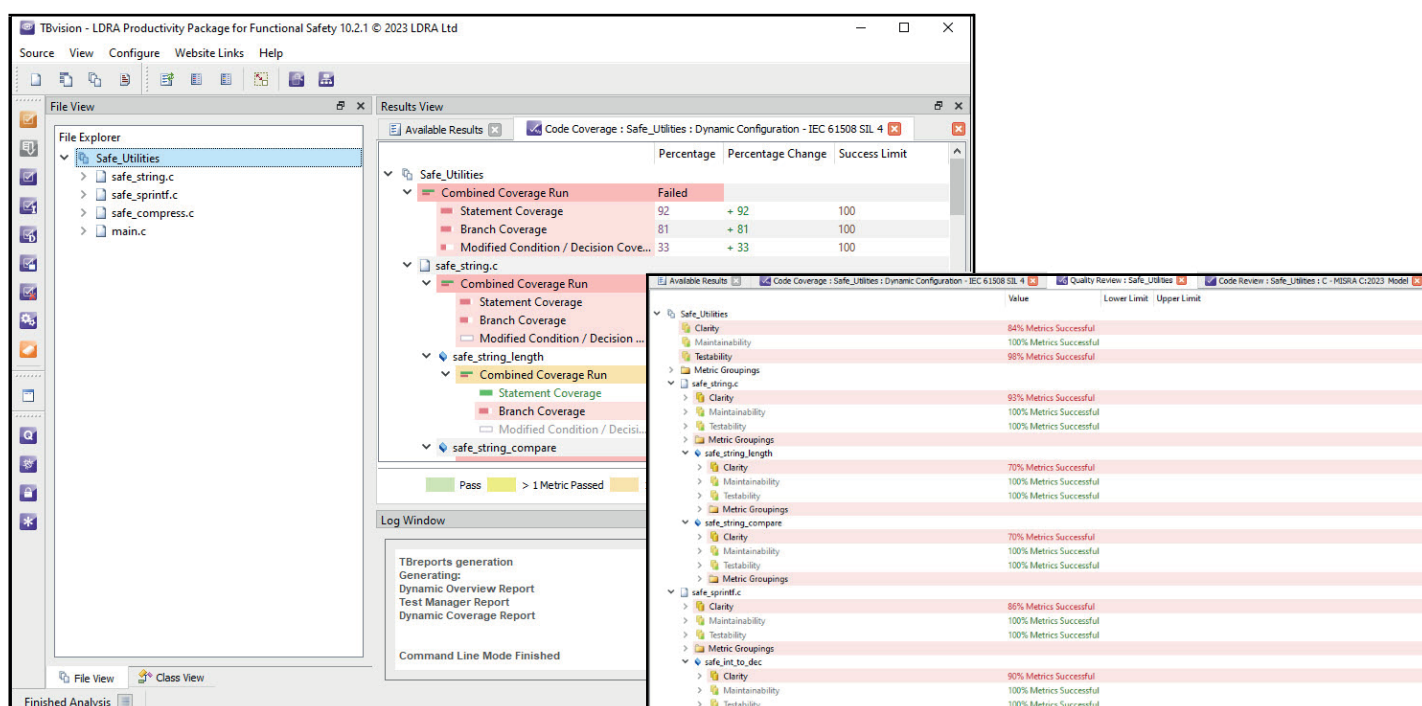
LDRA Productivity Package for Functional Safety

The LDRA Productivity Package for Functional Safety is a set of targeted capabilities drawn from the LDRA tool suite enabling customers to achieve IEC 61508, ISO 26262, SAE J3061, ISO/SAE 21434 & IEC 62304 compliance through to the highest level of assurance for each standard.



The package includes LDRA's best in class capabilities for the development and verification of sector-specific applications, including medical device and automotive software. The package's 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 use across the functional safety sectors for the development of software to varying levels of assurance.

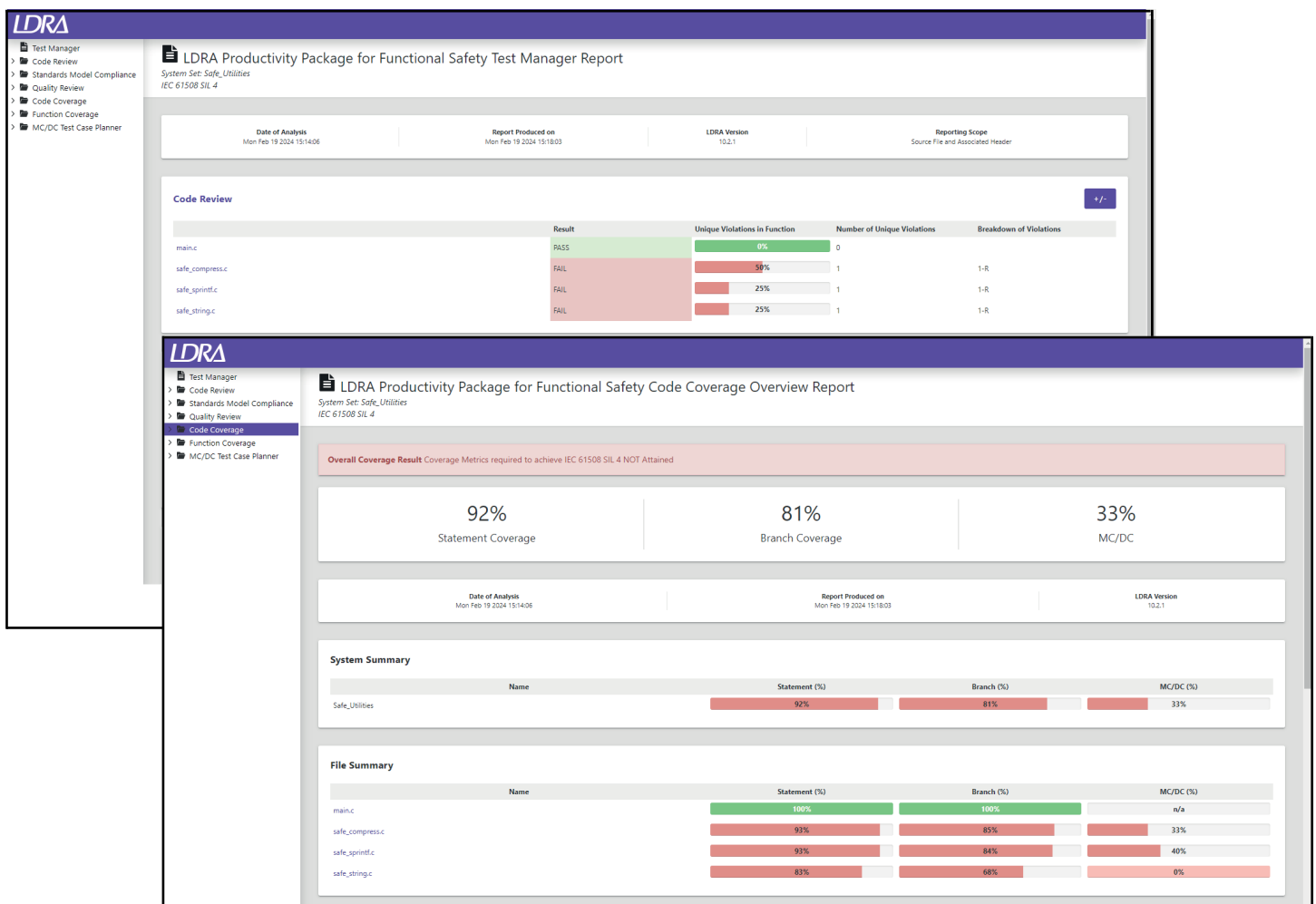
The LDRA Productivity Package for Functional Safety embraces both static and dynamic analysis techniques to encompass a wide range of essential features designed to ensure compliance with functional safety and security standards.



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 each supported standard. 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 as required by each standards highest safety critical level. These capabilities complement the base productivity package to provide a comprehensive toolkit for ensuring the highest level of assurance in the development of critical software, meeting the rigorous standards of the associated governance in each standard.



The LDRA Productivity Package for Functional Safety at a glance:

- Functional safety and security standards compliance such as IEC 61508, ISO 26262, SAE J3061, ISO/SAE 21434 and IEC 62304
- Static code analysis including key metrics collection and analysis
- 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 with support for one target environment
- Automatic test case generation, test harness generation, and stub generation
- Data coupling and control coupling analysis
- Function coverage and call coverage reporting
- Other add-in capabilities available such as requirements traceability, (worst-case execution) timing analysis, web-based project-level reporting, tool qualification packages, and support for additional target environments
- Breadth of capabilities meets the needs of most safety critical software development and verification projects
- Flexibility and scalability to support projects at any point in the lifecycle

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