

# LDRAcover™

## Structural coverage analysis for optimal test effectiveness

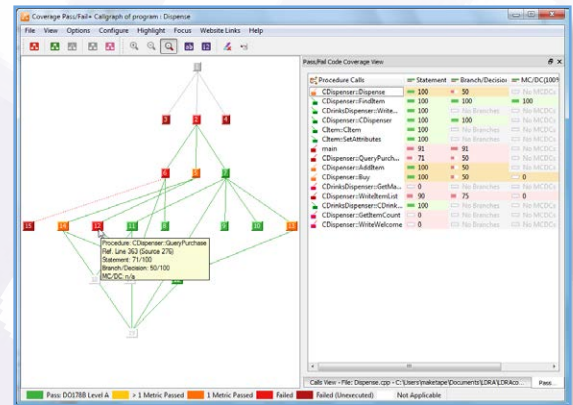
Supporting C/C++, Ada and Java

### What is LDRAcover?

LDRAcover is the LDRA code coverage reporting tool. It provides users with the ability to quickly and easily view code coverage results such as callgraphs, flowgraphs, and code coverage reports in an interactive easy-to-use interface with powerful filtering capabilities.

LDRAcover provides test planning documents and colour-coded graphs to help you achieve the desired level of coverage, ranging from procedure/function calls to safety-critical modified condition/decision coverage.

LDRAcover also supports the verification of systems running customer provided test cases. These system tests can execute within LDRAcover, in a simulator or some other host-based environment or on a target platform.

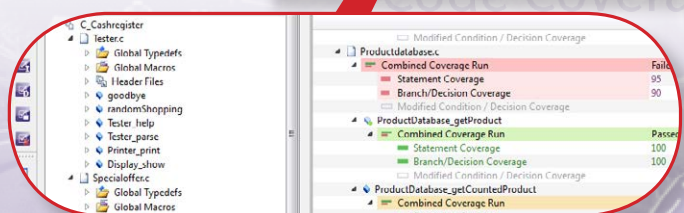
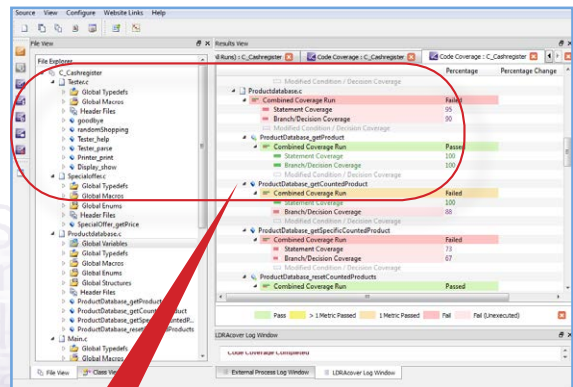


### Key Features

- View results in callgraphs, flowgraphs, code review reports, quality review reports, code coverage reports and summary reports.
- Address the rigorous structural coverage objectives of standards such as DO-178B/C (Avionics) up to and including Level A.
- Metrics Summary provides a tabular list of code complexity and currently achieved source-code coverage for each subprogram.
- The key deliverable is the measurement of testing effectiveness, which details the statement, branch/decision and test path coverage levels within the software.

### Benefits

- Effectively manage and measure code verification progress and gauge remaining effort
- Improve confidence in code reliability and robustness
- Quickly pinpoint inadequately tested software
- Reduce regression testing costs
- Improve code efficiency
- Reduce testing resources
- Increase product quality
- Shorten time-to-market



# LDRA Capabilities

## Coverage Metrics

*LDRAcover* provides the following industry standard coverage metrics:

- Statement
- Branch/Decision
- Procedure/Function Call
- Branch/Decision Condition
- Branch/Decision Combination
- Modified Condition/Decision Coverage (MC/DC for DO-178B/C Level A)

## Test Planning

- MC/DC Test Case Planner - Details the steps necessary to achieve DO-178B/C Level A, MC/DC

*LDRAcover* enables visualisation of your system by:

- Callgraphs which provide the ability to drill down to procedure/functions, graphically display procedure/function call coverage and dynamic callgraphs allow visualisation of test coverage.
- Flowgraphs which provide annotations that display decision criteria, as well as graphical displays of statement and branch/decision coverage.

## Reports

The automatically generated reports can be configured for pass/fail coverage levels, in a procedure by procedure layout or file layout.

The details available are:

- Annotated source code listings
- System overview reports
- Coverage metrics provided for:
  - Procedures
  - Files
  - Systems

Item	Percentage	Percentage Change	Success Limit
Dispense.cpp			
Combined Coverage Run	Failed		
Statement Coverage	89	+ 89	100
Branch/Decision Coverage	80	+ 80	100
Modified Condition / Decision Coverage	33	+ 33	100
main			
Combined Coverage Run	Failed		
Statement Coverage	91	+ 91	100
Branch/Decision Coverage	91	+ 91	100
Modified Condition / Decision Coverage			
CDispenser::GetItemCount			
Combined Coverage Run	Failed		
Statement Coverage	0		100
Branch/Decision Coverage			
Modified Condition / Decision Coverage			
Chem::Chem			
Combined Coverage Run	Passed		
Statement Coverage	100	+ 100	100
Branch/Decision Coverage			
Modified Condition / Decision Coverage			
Chem::SetAttributes			
Combined Coverage Run	Passed		
Statement Coverage	100	+ 100	100
Branch/Decision Coverage			
Modified Condition / Decision Coverage			
CDispenser::Dispenser			
Combined Coverage Run	Passed		
Statement Coverage	100	+ 100	100
Branch/Decision Coverage	100	+ 100	100
Modified Condition / Decision Coverage			

### Certification and Certified Quality Products

LDRA holds an excellent track record in tool qualifications and provides customers pursuing certification with a qualifiable code and object code coverage solution to facilitate the compliance process. This enables LDRA to automate independent verification (run tests on target), trace requirements and ultimately show which certification objectives are being satisfied. Beyond the product offering, LDRA also provides Certification Services to facilitate and ensure the certification of LDRA's customer products.

LDRA itself has an ISO 9000/9001:2008 certification reinforcing LDRA's long standing commitment to software and management quality.

For more information about *LDRAcover* or to arrange a demonstration:

W: [www.ldra.com](http://www.ldra.com) E: [info@ldra.com](mailto:info@ldra.com)

