

# Parasoft C/C++test Qualification Kit for DO-178B/C



Tool Operational Requirements (TOR)



Tests and test data



Test results and test methodology

## What are DO-178B and DO-178C?

DO-178B and DO-178C are guidelines that describe the objectives of software development lifecycle (SDLC) processes associated with developing software for airborne systems. The guidelines were prepared by RTCA ([www.rtca.org](http://www.rtca.org)) and EUROCAE ([www.eurocae.net/](http://www.eurocae.net/)) and are recognized by authorities, such as FAA, EASA, and Transport Canada, to certify the airworthiness of airborne electronic systems.

## What role does DO-178B/C play in the SDLC?

As part of the DO-178B/C compliance process, organizations must take steps to ensure that the tools employed during the SDLC accurately and consistently perform their functions as intended. Tools that must be qualified include those “used to help develop, transform, test, analyze, produce, or modify another program, its data, or its documentation.”

## How does Parasoft support DO-178B/C?

Parasoft C/C++test is widely used in DO-178B/C projects to analyze and/or test software through a variety of software quality practices, including static analysis, flow analysis, unit test generation and execution, and code coverage. Parasoft’s comprehensive solution helps organizations achieve DO-178B/C compliance by providing:

- End-to-end quality management with the most comprehensive solution available
- A continuous compliance process integrated into the workflow and across the SDLC
- Unparalleled process consistency, visibility and auditability
- Comprehensive requirements traceability

## Why do I need a qualification kit?

RTCA recognizes the potential impact development and quality tools can have on avionics software when inappropriately applied. To mitigate these risks, avionics software makers and vendors must complete a process that results in a qualification kit. The kit clearly defines and operationally verifies expected tool behavior against actual tool behavior in the customer’s development environment. Active participation is required of the vendor and the customer to create the qualification kit.

## How do I qualify Parasoft for DO-178B/C?

Parasoft is committed to helping organizations achieve their compliance goals. Parasoft will create and deliver a qualification kit that includes the following components:

- **Tool Operational Requirements (TOR):** Specifies C/C++test functionality and operational environment (host operating system, target architecture, etc.); the extent of TOR is dependent on how you intend to use Parasoft C/C++test
- **Tests and test data:** Verifies TOR in the operational environment
- **Test results and test methodology:** For comparison of expected tool results against actual results in your environment



## Next steps

Contact your Parasoft representative to get started with your DO-178B/C Qualification Kit.

USA PARASOFT HEADQUARTERS / 101 E. Huntington Drive, Monrovia, CA 91016 / Phone: (888) 305-0041 / Email: [info@parasoft.com](mailto:info@parasoft.com)