

# Qualification Support Kit

The Qualification Support Kit provides the specification of the functional requirements of AbsInt tools in their operational context as well as a set of test cases showing the correct implementation of these requirements. It is particularly useful to create reports required for certification according to the DO-178 B/C standards by airworthiness authorities.

## Details

Safety-critical embedded systems in avionics have to be certified according to the DO-178B/ED-12B before their deployment as required by airworthiness authorities. The successor standard DO-178C already requires the usage of static analysis tools for guaranteeing safety-critical properties as the Worst-Case Execution Time (WCET) or the Worst-Case Stack Consumption. According to these two standards, all tools that are used for the development process of safety-critical systems need to be certified. Often this is called a qualification for which the tool itself as well as its own development process has to fulfill the correspondent requirements.

The tool qualification hereby consists of the specification of functional requirements of the tool in the operational context as well as test cases showing a correct implementation of these requirements. For this purpose AbsInt offers the "Qualification Support Kit (QSK)". It is divided into two major parts which depend on each other:

- Qualification support kit report package
- Qualification support kit test package

The report package consists of two HTML files, namely the so called "Operational Requirements Report" and the "Verification Test Plan". The requirements report lists all functional requirements of the tool to be qualified. For each requirement the verification test plan describes one or more test cases that should give confidence about the correct functional behavior of the tool. The reports are generated in HTML format in order to make the integration into your certification document(s) as easy as possible. The qualification support kit test package contains all test cases listed in the verification test plan report. Test case execution support including an evaluation of the results is directly integrated into the graphical user interfaces of aiT/StackAnalyzer/Astrée. The evaluation result is printed so that you can attach it to your certification document.

## Availability

The Qualification Support Kits are available for

- Astrée for C,
- RuleChecker for C,
- aiT for ARM, C16x, C28x, i386, LEON3, M68020, MPC5xx, e200, e300, MPC755s, PPC750, TriCore,
- StackAnalyzer for ARM, C16x, M68020, PPC, V850/RH850, x86,
- Valex for PPC,
- other targets on request.

## More information

- Visit our website: [www.absint.com](http://www.absint.com)
- Speak with a product specialist:  
call +49 681 383 600

## About AbsInt

AbsInt provides advanced development tools for embedded systems, and tools for analysis, optimization and verification of safety-critical software. Our customers are located in more than 40 countries worldwide. We have distribution agreements with major software distributors in Asia, North America, Middle East, and throughout Europe.

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