

AbsInt provides **state-of-the-art development tools** for embedded systems focusing on validation, verification, and certification of safety-critical and security-relevant software.

Our software tools are used to satisfy verification obligations of **safety and security norms** in all industry domains, including DO-178C, ISO 26262, ISO 21434, IEC 61508, IEC 60880, and EN 50716. They find critical software defects, and contribute to improving **software quality**.

**Astrée** is a static program analyzer that proves the absence of **run-time errors** in safety-critical C/C++ code (incl. data races, divisions by zero, out-of-bounds array accesses, erroneous pointer accesses and manipulations, and arithmetic overflows). It contributes to demonstrating **freedom of interference**, computes code metrics, and verifies compliance with MISRA C/C++, SEI CERT C/C++, and other **coding standards**.

**StackAnalyzer** determines the worst-case stack usage of tasks and interrupt service routines and can formally prove the absence of **stack overflows**.

**CompCert** is a **formally verified** optimizing **C compiler**. The unprecedented confidence in the correctness of the compilation process enhances development efficiency and supports compliance with the highest software assurance standards.

**TimingProfiler** computes **execution time estimates** for programs without the need to repeatedly provide test inputs, execute, and measure.

**aiT WCET Analyzer** statically computes **worst-case execution time guarantees** for tasks on timing-predictable processors.

**TimeWeaver** performs non-invasive hybrid WCET analysis to compute upper **worst-case execution time bounds** on high-performance multicore processors.

**AbsInt Angewandte Informatik GmbH** was founded in 1998 and is a privately-held company based in Saarbrücken, Germany. For more than a quarter of a century, we have been supplying customers from all over the world and from various industries, including aerospace, automotive, defense, medical, and energy.

