Factsheet

ValueAnalyzer for ARM

Release 24.04i, b15309220

April 25, 2024

AbsInt

ValueAnalyzer is a static program analyzer for value analysis of register and memory contents. It is particularly useful for verifying the absence of illegal accesses to an embedded software system from within third-party modules provided as object code.

Key benefits

- The analysis is fully automatic and valid for all inputs. No input patterns need to be provided.
- The analysis performed by ValueAnalyzer is conservative, i.e. the results are safe. All illegal accesses that are present will also be reported.
- Supplied third-party software can be analyzed right away. It does not have to be integrated on the ECU.
- No debug information is required. The results are not affected by possible bugs in the debug output.
- Seamless integration with other analysis tools from AbsInt in an intuitive user interface.

Supported compilers

- ARM Developer Suite C/C++ compiler
- CompCert C Compiler
- GNU C/C++ Compiler (GCC)
- Green Hills C/C++ Optimizing Compiler
- IAR C/C++ compiler
- Keil MDK-ARM C/C++ compiler suite
- LLVM/Clang based ARM compilers such as the HighTec compiler
- Tasking C/C++ compiler
- Texas Instruments C/C++ compiler
- Wind River Diab C/C++ compiler

Supported architecture variants and extensions

- ARMv4 / ARMv4T
- ARMv5T / ARMv5TE
- ARMv6 / ARMv6T2
- ARMv7
- ARMv8
- ARMv9 up to and including ARMv9.3
- Advanced SIMD / "NEON"
- Thumb/Thumb-2
- VFP

Supported ARM families

- ARM7TDMI / ARM9TDMI
- StrongARM
- ARM9E / ARM10E
- XScale
- Cortex-A / Cortex-M / Cortex-R

System requirements

- Windows: x86-64 Windows 10 or newer
- Linux: x86-64 CentOS/RHEL 7 or compatible
- 4 GB of RAM (16 GB recommended)
- 4 GB of disk space

Also available

The following AbsInt products are also available for this target:

- aiT
- StackAnalyzer
- TimingProfiler
- TimeWeaver

More information

- Visit our website: 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.

Our headquarters

Science Park 1
66123 Saarbrücken, Germany
Phone: +49 681 383 600
Fax: +49 681 383 60 20
Email: info@absint.com
Web: www.absint.com