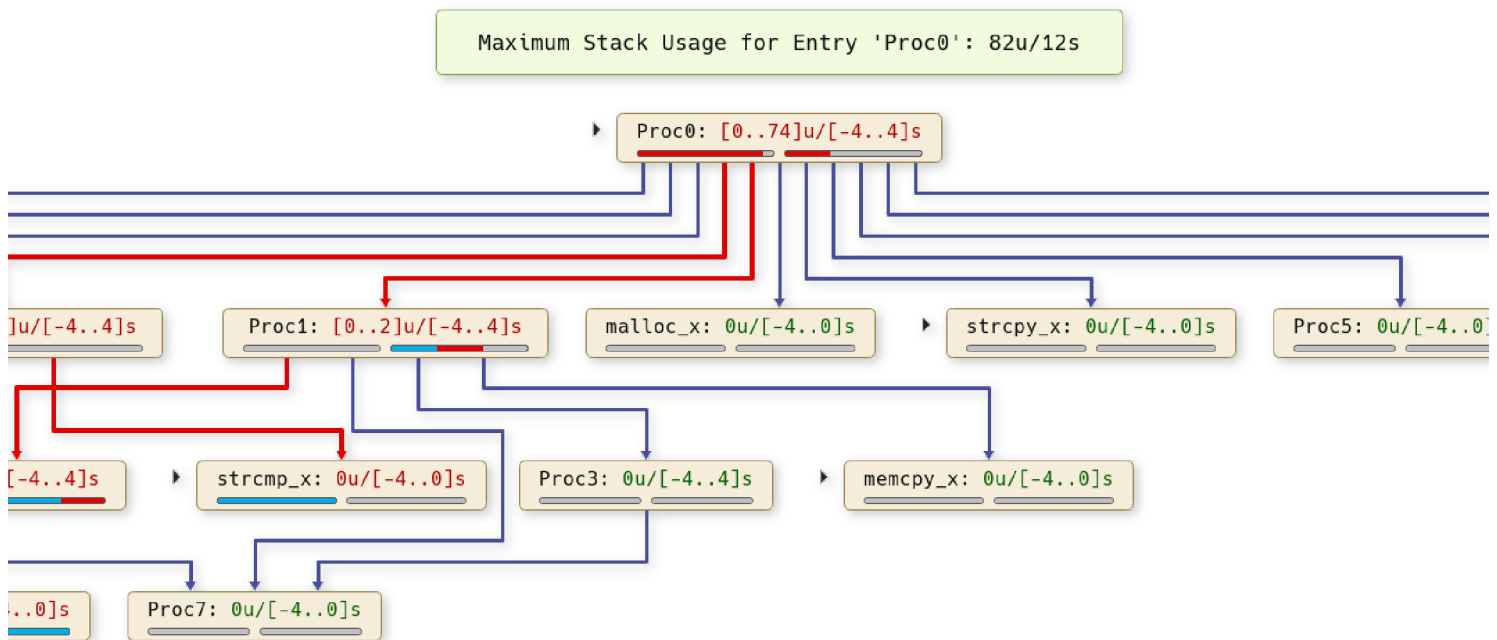


# Static stack-usage analysis for C16x/ST10

StackAnalyzer for C16x/ST10 statically determines the worst-case stack usage of tasks in safety-critical applications written or generated in C or C++ and compiled to run on (X)C16x processors from Infineon or ST.



## Your benefits

- StackAnalyzer lets you prevent stack overflow for all possible inputs and task executions under any circumstances — without wasting hardware resources.
- StackAnalyzer requires no code instrumentation, no testing, no measuring, no modification of your system, no modification of your toolchain, and it will not be misled by potential flaws in debug information.
- Using StackAnalyzer is essential in meeting current safety standards such as ISO 26262, DO-178B/C, IEC-61508, and EN-50128, where statically analyzing your stack usage is part of the architectural safety requirements.

## Key features

- Static analysis of binary files, exactly as they are executed in the final system.
- Clear and precise information on user-stack and system-stack usage by tasks, procedures, basic blocks, and individual instructions.
- Recursions, function pointers, inline assembly code, and library-function calls are all taken into account.
- Automatic recognition of dead code.
- Mature GUI with well-interconnected views for analysis results, statistics, code coverage, control flow, source code, assembly code, DWARF debug info, symbol tables, analysis configuration, and more.
- Command-line mode for easy integration into automated build processes.
- Exceptionally fast analysis of complex real-world software.
- Freely selectable entry points for the analysis, so you can focus on the worst-case path or other areas of interest, and speed up the analysis even further.
- Plugins for TargetLink and Jenkins.
- Seamless integration with other analysis tools from AbsInt — e.g. aiT for worst-case execution time analysis.

## Supported processor derivatives

- Infineon C166 family
- Infineon XC166 family
- Infineon XE166 family
- Infineon XC2xxx
- STMicroelectronics ST10 family
- STMicroelectronics Super10 family



All license variations always cover all of the above.

## Supported compilers

- Tasking C/C++ compiler
- Keil C/C++ compiler

The standard license only covers one compiler of your choice. Unlocking both compilers is possible at a surcharge.

## Also available for C16x/ST10

- [Static WCET analysis](#)
- [Timing profiling](#)
- [Memory safety analysis](#)

## Qualification support

Your usage of StackAnalyzer for C16x/ST10 can be qualified according to ISO 26262, DO-178B/C, and other safety standards. We offer [Qualification Support Kits](#) that help you simplify and automate your qualification process:

- Base QSK
- Optional compiler-specific add-on QSKs for
  - Tasking VX 2.4r1
  - Tasking VX 3.1r2

Additional compiler-specific QSKs can be developed on request.

## System requirements

- Windows: 64-bit Windows 10 or 11
- Linux: 64-bit RHEL 9 or compatible
- 4 GB of RAM (16 GB recommended)
- 4 GB of disk space
- The Linux version requires the `libxcb-*` family of libraries to be installed
- Support for macOS is possible on request for a surcharge

[Download](#)  
[this factsheet](#)

[Download](#)  
[StackAnalyzer flyer](#)

## Free trial

You can try StackAnalyzer for free, on your own applications, for a period of 30 days. Your free-trial package includes online training and tech support.

**Get started today.**

© [AbsInt](#).

URL: <https://www.absint.com/stackanalyzer/c16x.htm>