

Factsheet



TimeWeaver for PPC

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TimeWeaver estimates the worst-case execution times of tasks by combining local timing information from instruction-level traces with a global static worst-case path analysis. The resulting time bounds are valuable for soft real-time systems and provide feedback for optimizing worst-case performance.

Key benefits

TimeWeaver gives detailed information about the execution time and time-critical paths, including

- global end-to-end time, based on the maximum observed trace segment times combined to an overall bound,
- end-to-end bounds for specific functions, depending on trace points,
- coverage of the control-flow graph by the input traces,
- maximum possible and maximum observed iteration counts for loops,
- time variance of each trace segment over all traces.

TimeWeaver offers a powerful user interface, with fully integrated graphical and textual viewers for control flow, analysis results, source code, assembly code, and configuration files. You can:

- interactively explore analysis results,
- save and restore analysis scenarios,
- export customizable reports for documentation and certification purposes,
- start all analyses from the same GUI and handle all the tools with the same look and feel.

Supported compilers

- CodeWarrior C/C++ (NXP)
- CompCert C Compiler
- DDC-I SCORE Compiler
- GNU C/C++ Compiler (GCC)

- AdaCore GNAT Pro Compiler (C/C++ and Ada source code)
- Green Hills Optimizing Compiler (C/C++ and Ada source code)
- HighTec GNU C/C++ Compiler
- Wind River Diab C/C++ Compiler

Supported processor derivatives

TimeWeaver/PPC works for all PowerPC boards able to emit execution traces containing Nexus trace messages (IEEE-ISTO 5001, class 2 or higher). For example, the following boards support such trace messages:

- PowerPC QorIQ P204x/P30xx/P40xx/P50xx (e500mc core)
- PowerPC QorIQ T series (e5500/e6500 core)
- PowerPC Qorivva line
MPC55xx/MPC56xx/MPC57xx (e200 core)

System requirements

- Windows: x86-64 Windows 10 (1809) or newer
- Linux: x86-64 RHEL 9 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:

- StackAnalyzer
- TimingProfiler
- ValueAnalyzer



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