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 **mikhailmoiseev** Version 1.7.4 Some fixes for record constructors
 4ac7278 · 2 days ago 

 .github	Examples added	5 months ago
 cmake	Version 1.6.18. C++20 ...	9 months ago
 components/co...	Version 1.6.34. Loosely...	4 months ago
 designs	Version 1.7.0. Record i...	2 months ago
 doc	Version 1.7.0. Record i...	2 months ago
 gdb	Version 1.6.13. Extra r...	last year
 sc_elab	Version 1.6.20. Big liter...	7 months ago
 sc_tool	Version 1.7.4 Some fix...	2 days ago
 systemc	Version 1.6.18. C++20 ...	9 months ago
 .gitignore	Version 1.6.9. LLVM 18...	2 years ago
 CMakeLists.txt	Version 1.6.18. C++20 ...	9 months ago
 LICENSE.txt	Temporal assertions ini...	6 years ago
 README.md	Update README.md	3 days ago
 SECURITY.md	add required SECURIT...	2 years ago

This tool translates synthesizable SystemC code to synthesizable SystemVerilog.

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[#systemc](#)

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Releases

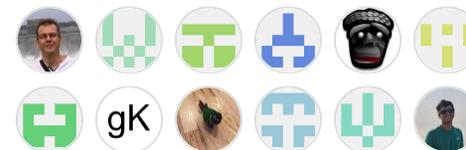
No releases published

Packages

No packages published

 contributing.md	Update contributing.md	5 years ago
 install.sh	Version 1.6.18. C++20 ...	9 months ago
 install2.sh	Version 1.6.18. C++20 ...	9 months ago
 install_icsc.sh	Version 1.6.18. C++20 ...	9 months ago

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Intel® Compiler for SystemC*

**Other names and brands may be claimed as the property of others.*

Introduction

The SystemC Compiler (ICSC) translates synthesizable SystemC design into equivalent SystemVerilog code.

The SystemC compiler checks a SystemC design for common coding mistakes and generates human-readable SystemVerilog code. The tool supports SystemC synthesizable subset in method and thread processes, and arbitrary C++ code in module constructors. ICSC is based on Clang/LLVM 18.1.8, supports C++ 11/14/17/20 standards and includes SystemC 3.0.1.

See more information at [Intel Compiler for SystemC wiki](#).

Single Source Library

The Single Source library consists of communication channels including Target/Initiator, FIFO, Pipe, Buffer, Register and others. The channels have functional interfaces similar to TLM 1.0.

There are [Single Source training slides](#).

See more information at [Single Source library](#).

Getting started

The SystemC Compiler can be installed at most Linux and Windows Subsystem for Linux (WSL). There is `install.sh` script that downloads and builds the compiler and the required dependencies at **Ubuntu 24.04**, **Ubuntu 22.04**, **Ubuntu 20.04**, **SLES15**, **SLES12** and others.

An instruction how to install and run ISCS is given at [Getting started](#).

Documentation

[User guide](#) document describes installation procedure, run tool options, preparation of SystemC design for synthesis, tool extensions and advanced verification features.

The SystemC Compiler supports [SystemC Synthesizable Subset](#). Details of SystemC/C++ subset supported are described at [SystemC/C++ supported](#).

Publications

- [Single Source library for high-level modelling and hardware synthesis](#), at DvCon'2024
- [Intel Compiler for SystemC and SystemC common library](#) at CHIPS tech summit

2022

- [Temporal assertions in SystemC](#) at DvCon'2020 and SystemC evolution day'2020
- [SystemC-to-Verilog Compiler: a productivity-focused tool for hardware design in cycle-accurate SystemC](#) at DvCon'2019

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