

Release Notes: LLVM FOR RENESAS RISC-V 17.0.2.202407

19th of July, 2024

CyberThor Studios Ltd. is releasing the LLVM for Renesas RISC-V 17.0.2.202407, a cross compiler tool for Renesas RISC-V micro-controllers.

SALIENT FEATURES

The LLVM for Renesas RISC-V 17.0.2.202407 toolchain is based on:

- ❖ LLVM 17.0.2 [released]
- ❖ Compiler-rt 17.0.2 [released]
- ❖ Libcxx 17.0.2 [released]
- ❖ Libcxx-abi 17.0.2 [released]
- ❖ Newlib 4.3.0 [released]

The latest patches are applied to the LLVM sources.



ABOUT LLVM FOR RENESAS RISC-V 17.0.2.202407

Release Version:	LLVM for Renesas RISC-V 17.0.2.202407
Release Date:	19th of July, 2024
Platforms Supported:	Windows 7 or later Ubuntu 20.04 or later (or compatible distribution)
Language:	C, C++
Targets:	Renesas RISC-V MCU
Object File Format:	ELF



This section describes the fixes made in the LLVM for Renesas RISC-V 17.0.2.202407 release.

1. [Improvement] Added linux support

Toolchain now supports Ubuntu 20.04 or later (or compatible distribution)

2. [Bug fix] Floating point multilib selection

When specifying the f or d extensions together with the imac extensions, the driver was trying to use the supplied imafc/ilp32f multilib, without falling back to other versions if ilp32 was specified. This resulted in compile and link errors. The current release fixes this.

Notes:

The LLVM for Renesas RISC-V toolchain on the Windows platform requires the presence of the x86 Microsoft Visual C++ Redistributable package for Visual Studio 2015-2022.

This can be downloaded and installed from the official site:

https://aka.ms/vs/17/release/vc_redist.x86.exe

This installer does not provide an option to integrate the LLVM RISC-V toolchain with e2 studio, as the e2 studio IDE will automatically detect the LLVM RISC-V toolchain installation on start-up for integration. Alternatively, you may use the 'Toolchain Management' feature in e2 studio to achieve this.

For details on e2 studio please visit the following link below:

<https://www.renesas.com/eu/en/software-tool/e-studio>



KNOWN ISSUES IN LLVM FOR RENESAS RISC-V 17.0.2.202407

The following is a list of known issues for the tools we include for the LLVM for Renesas RISC-V 17.0.2.202407 toolchain:

1. Other issues, non-specific to LLVM for Renesas RISC-V

For better understanding regarding the status of the toolchain please visit <https://github.com/llvm/llvm-project/issues> .



FREE SUPPORT FOR LLVM FOR RENESAS RISC-V 17.0.2.202407

For free technical support, please register at
<https://llvm-gcc-renesas.com>

For your feedback and suggestions, please visit
<https://llvm-gcc-renesas.com/help/contact-us/>

