



Embedded Studio IDE Installation for Nuclei Processor

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Contact Information

Should you have any problems with the information contained herein or any suggestions, please contact Nuclei System Technology by email support@nucleisys.com, or visit “Nuclei User Center” website <http://user.nucleisys.com> for supports or online discussion.

Revision History

Rev	Revision Date	Revised Section	Revised Content
1.0	2020/1/20	N/A	1. First version as the full English

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1. Introduction

1.1. Overview of Embedded Studio IDE and J-Link

The SES (Segger Embedded Studio) is a professional and excellent IDE (Integrated Development Environment), which support the standard GCC toolchain, have the best-in-class debugging functionalities with famous Segger J-Link. It also supports the open source OpenOCD debugging capability.

Nuclei processor core can be fully supported by Embedded Studio and the J-Link.

This document describes the installation steps for Segger Embedded Studio IDE, and the setup steps for Nuclei processor core.

2. Steps to install Embedded Studio and setup for Nuclei

This chapter describes the installation steps for Segger Embedded Studio IDE, and the setup steps for Nuclei processor core.

2.1. Download Embedded Studio for RISC-V

Download the Embedded Studio from SEGGER official website:

<https://www.segger.com/downloads/embedded-studio>, select the latest version for RISC-V, choose the right version for your OS, as an example depicted in Figure 2-1.

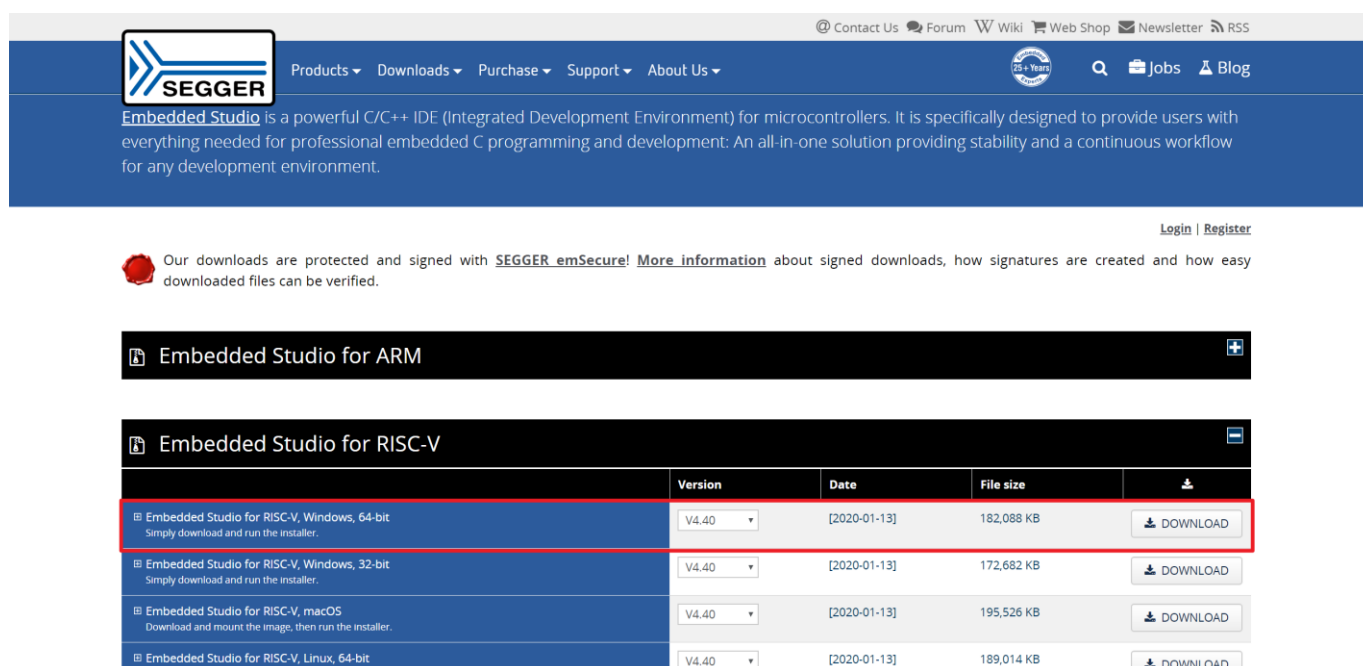


Figure 2-1 Download Embedded Studio for RISC-V

2.2. Install and Setup for Nuclei Toolchain

2.2.1. Create toolchain directory under Embedded Studio installation directory

After downloading it, double-click it and install it on your computer. Please remember your directory path you have installed Embedded Studio, we call this path as <YOUR_SES_INSTALL_PATH> to easy the description later.

Create a directory under <YOUR_SES_INSTALL_PATH> named as “Nuclei_Toolchain”, as an example depicted in Figure 2-2.

bin	2020/1/15 17:11
gcc	2020/1/15 17:11
html	2020/1/15 17:11
include	2020/1/15 17:11
lib	2020/1/15 17:11
llvm	2020/1/15 17:11
Nuclei_Toolchain	2020/2/3 18:25
samples	2020/1/15 17:11
source	2020/1/15 17:11
targets	2020/1/15 17:11

Figure 2-2 Create Nuclei_toolchain under Embedded Studio Installation Directory

2.2.2. Copy Nuclei Tools sub-directory into toolchain directory

Download the Nuclei version of build-tools, GCC and OpenOCD from Nuclei official website: <https://www.nucleisys.com/download.php>, choose the right version for your OS, as an example depicted in Figure 2-3.

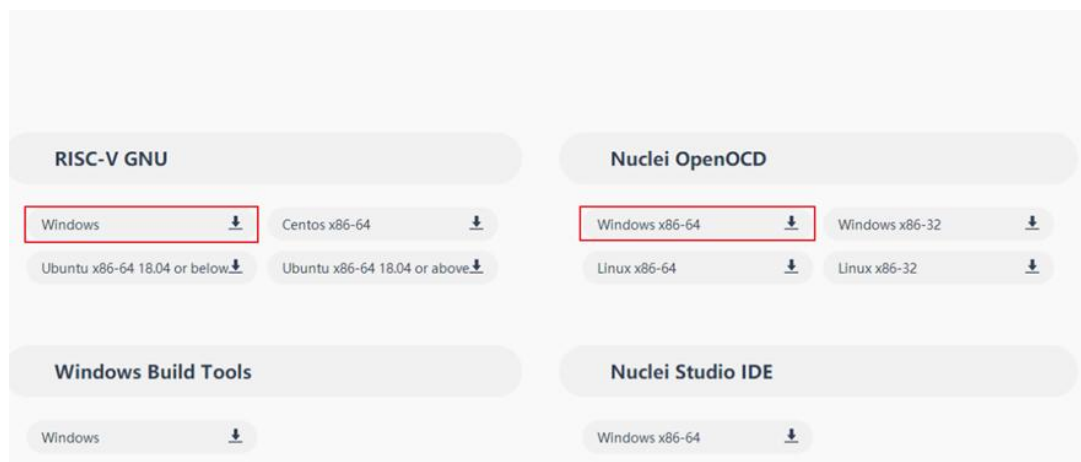


Figure 2-3 Download Nuclei Tools

After downloading it, decompress it, and copy them into the “Nuclei_Toolchain” directory under <YOUR_SES_INSTALL_PATH> as depicted in Figure 2-2. And please make sure the sub-directory name is exactly same as the one in the Figure 2-4.


 gcc	2020/1/17 17:21
 openocd	2020/1/17 17:20

Figure 2-4 Create OpenOCD and GCC into Nuclei_Toolchain directory

2.3. Download J-Link Software

Download J-Link software from SEGGER official website:

<https://www.segger.com/downloads/jlink/#Documentation>, choose J-Link as depicted in Figure 2-5. After download JLink, double-click it and install it on your computer.

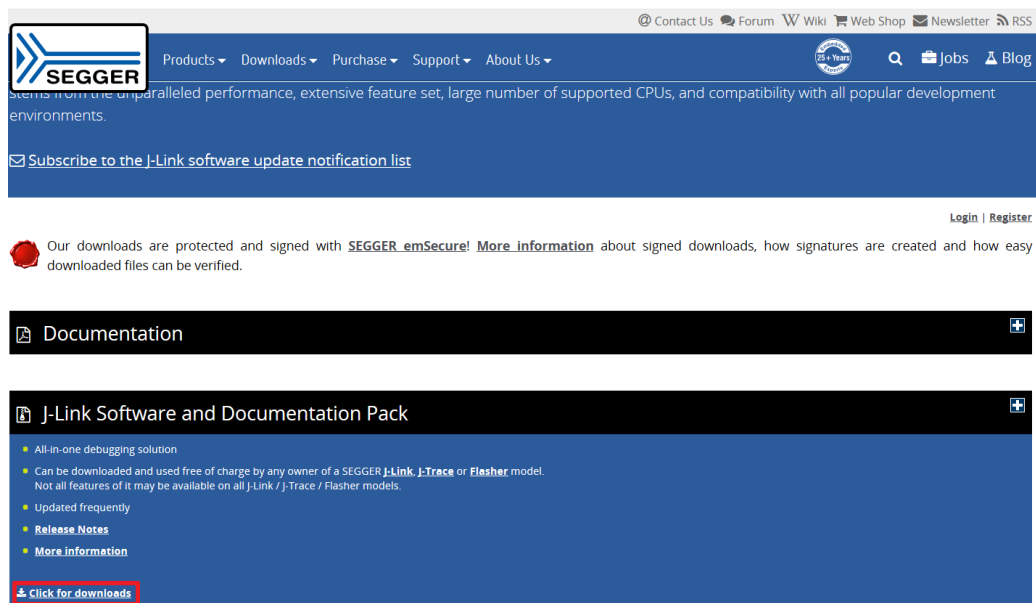


Figure 2-5 Choose J-Link to download

3. Nuclei Development and Debug with Embedded Studio

After the steps describe in above chapter, you are ready to develop and debug Nuclei processor core with Embedded Studio.

3.1. Development Usage Tips of Embedded Studio IDE

For the detailed usage tips of embedded software development in Embedded Studio, user can visit its official website

<https://www.segger.com/products/development-tools/embedded-studio/> or

[https://wiki.segger.com/Embedded Studio](https://wiki.segger.com/Embedded_Studio) or

<https://www.segger.com/downloads/embedded-studio>.

This document will not repeat its content here.

3.2. How to Debug Nuclei with J-Link Debugger-Kit

The Nuclei processor core based SoC prototype or the real-chip can be developed and debugged with Segger J-Link Debugger-Kit, which supports lots of professional debug features.

For the detailed usage tips, please see the relevant Nuclei processor core IP's IDE quick-start document or the real-chip's IDE quick-start document.

3.3. How to Debug Nuclei with Nuclei HBird Debugger-Kit

The Nuclei processor core based SoC prototype or the real-chip can be developed and debugged with Nuclei HBird Debugger-Kit, which is a low-cost debugger hardware.

For the detailed usage tips, please see the relevant Nuclei processor core IP's IDE quick-start document or the real-chip's IDE quick-start document.