

## Outline

We have updated the e<sup>2</sup> studio integrated development environment from 2023-07 to 2023-10.

Major functional improvements and changes are as follows.

- Upgrade version of Eclipse platform, Java and CDT
- New device support : DA1453x group
- Improvements of FSP Configurator and Smart Configurator
- Improvements of Builder features
- Improvements of Debugger features

For an overview of the product, refer to the following URL:

<https://www.renesas.com/e2studio>

## 1. Products to Be Updated

- e<sup>2</sup> studio versions from 2020-04 to 2023-07

To check the version of e<sup>2</sup> studio, click the [Help] menu of e<sup>2</sup> studio > [About e<sup>2</sup> studio] to open the dialog box.

## 2. Description

The main contents of the upgrade are described below. Refer to the release note below for details. The release note is available in the [Documentation] list on the e<sup>2</sup> studio product page. It will be available from October 20<sup>th</sup>.

<https://www.renesas.com/search?keywords=R20UT5382>

### 2.1 New Features, Improved Functionality

We have improved and changed the following.

For details about the improvements, refer to “What is new in 2023-10?” in the release note listed above.

#### 2.1.1 New eclipse platform support

Updated eclipse platform and the version of CDT (C/C++ Development Tooling). Please refer to the following documents for details.

e <sup>2</sup> studio version	2023-07	2023-10	
eclipse	4.27(2023-03)	4.29(2023-09)	<a href="#">Eclipse Project 4.29</a>
JRE(JustJ)	17.0.6	17.0.8	<a href="#">JustJ JREs</a>
OpenJFX	17.0.6	17.0.6	<a href="#">OpenJFX</a>
CDT	11.1.1	11.3.1	<a href="#">CDT New &amp; Noteworthy</a>

### 2.1.2 New devices support

Devices of DA1453x group has been supported in e<sup>2</sup> studio 2023-10.

Debug support is provided in e<sup>2</sup> studio. Use SDK of the device group for build environment of the devices for build operations. Please refer to [DA1453x, DA14585/6 SDK Release Notes v.6.0.20.1138](#) for details.

### 2.1.3 Improvements of FSP Configurator and Smart Configurator

#### ➤ New version support of Smart Configurator

##### ✧ Smart Configurator for RX V2.19.0

Multiple interrupt is available in this version.

##### ✧ Smart Configurator for RL78 V1.8.0

New BSP revision support and user interface improvements have been added.

Please refer to each of Smart Configurator Release Note for details.

#### ➤ FSP Configurator : Clock frequency configuration dialog (Clocks tab) has been improved to more clearly show clock speeds. Such as 106666666Hz was seen in the dialog when calculation was invisible. Now it is shown as 106.67MHz in the case.

### 2.1.4 Improvements of Builder

The following improvements are implemented in e<sup>2</sup> studio 2023-10.

#### ➤ Started support of LLVM Embedded Toolchain for Arm (RA Family)

#### ➤ Supported multiple CRC output in mot/hex files in CC-RX/CC-RL/CC-RH projects with -crc option

Multiple output is supported in the following compiler versions (and in later versions):

##### ✧ CC-RX V3.05.00

##### ✧ CC-RL V1.12.00

##### ✧ CC-RH V2.05.00

### 2.1.5 Improvement of Debugger

The following improvements have been implemented in e<sup>2</sup> studio debugger. Each configuration is found in Debug Configurations dialog.

#### ➤ "CPSR value after reset" configuration (for Arm-core based Device Families)

In Debug Configuration dialog, CPSR (Current Program Status Register) configuration has been added in "Reset Behavior" category.

#### ➤ Added disconnection mode (RA Family with E2/E2Lite emulators)

Program can keep running (does not halt nor reset) with "Continue" disconnection mode when clicking [Disconnect] button (not Terminate button). The configuration is found in "Connection" category of Connection Settings tab.

#### ➤ Support of reset modes with E2/E2 Lite emulator with Arm-core based Device Families

The supported 4 reset modes with J-Link emulator are available with E2/E2 Lite emulator. The configuration is found in "Reset Behavior" category in "Debug Tool Settings" tab.

### 3. Updating Your Product

Download the installer from the e<sup>2</sup> studio product page (the following URL) and install the program. (2023-10 will be available from Oct 20<sup>th</sup>.)

<https://www.renesas.com/e2studio>

The installer is available in the [Downloads] section in the [Documentation & Downloads] list.

Note 1: When you have e<sup>2</sup> studio 2022-10 and older versions, newer e<sup>2</sup> studio versions should be installed to new location instead of using "Upgrade" installation.

The destination folder path should not include any multi-byte characters, extended ASCII (half byte character greater than 0x7f) characters or symbol characters other than "\_" (underscore).

Note 2: Windows version of this product supports 64-bit Windows.

This product does not work on a 32-bit Windows.

Note 3: For FSP/SSP supported device families and groups (RA, RZ/T2x, RZ/N2x, RZ/A2x, RZ/A3x, RZ/G2x, RZ/V2x and Renesas Synergy™), use the installer that includes the software packages.

Please refer to the following page for software packages and the installers :

Software - Middleware, Drivers, OS:

<https://www.renesas.com/design-support/software>

**Revision History**

Rev.	Date	Description	
		Page	Summary
1.00	Oct. 16.23	-	First edition issued
1.01	Oct. 17.23	2	Modified descriptions about supported debugging features
1.02	Oct. 19.23	2	Revised descriptions about support device

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