

# e<sup>2</sup> studio ISDE v7.5.1

Release Note

Renesas Synergy™ Platform  
Synergy Tools & Kits  
Renesas Synergy™ e<sup>2</sup> studio

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## Renesas Synergy™ Platform

## e<sup>2</sup> studio ISDE v7.5.1 Release Note

### Scope

This document describes the release notes for the Renesas Synergy™ support in the **e<sup>2</sup> studio ISDE (Integrated Solution Development Environment) v7.5.1**. This version of e<sup>2</sup> studio supports SSP software executing on S7G2, S5D9, S5D5, S5D3, S3A7, S3A6, S3A3, S3A1, S128, S124, and S1JA MCU Groups.

**Note: This release of e<sup>2</sup> studio ISDE v7.5.1 does not include support for non-Synergy MCUs.**

### Release information

e <sup>2</sup> studio release version	v7.5.1
Supported Operating Systems	Microsoft® Windows® 7, Microsoft® Windows® 8, and Microsoft® Windows® 10

### Contents

1. Installing e <sup>2</sup> studio ISDE v7.5.1 .....	4
1.1 Using the Synergy Platform Installer .....	4
1.2 Using the Individual e <sup>2</sup> studio Installer.....	4
2. Migrating GCC 4.9 projects to GCC 7.2 .....	5
3. New Features and Updates in e <sup>2</sup> studio ISDE v7.5.1 .....	5
3.1 Enabled Stack Analysis Feature .....	5
3.2 Memory Usage View Shows Load Addresses .....	6
3.3 Expressions View .....	6
3.4 J-Link Debug Configuration.....	7
3.5 IO Register View.....	7
3.6 Percepio Tracealyzer Integration .....	8
3.7 Synergy Debug Configuration .....	9
3.8 Smart Browser.....	10
4. Synergy Hardware Platform Support .....	10
5. Issues Fixed in Release v7.5.1 .....	10
5.1 Build fails due to missing pin configuration for modified projects.....	10
5.2 Too many threads causes problems with ThreadX plugins and the GCC debugger.....	10
5.3 An error will occur depending on the address in the watch point setting.....	10
5.4 Compile error for r_dtc is not checked in configurator when migrating the project from SSPv1.6.0 to SSP v1.6.3.....	10
5.5 Cannot see all the threads in the debug view .....	11
5.6 No error logging on linker script installation failure .....	11
5.7 When changing device in Synergy Configurator, project is not updated in the Smart Browser.....	11

5.8	It takes much time to save IO Register information for Synergy device .....	11
6.	Known Issues in Release v7.5.1 .....	12
6.1	S128 e <sup>2</sup> studio trace buffer allocation is at the wrong RAM address .....	12
6.2	'Multiple definition' Linker errors occur when using both library and source for Express Logic components .....	12
6.3	GCC newlib-nano library does not support C++ exception .....	13
6.4	Build fails with 'secure builder required' error after migrating IAR v7.x tool chain project to IAR v8.x .	13
6.5	Configuration is not inherited when creating a new project using User Custom Board file .....	13
6.6	Cannot debug the program when selecting an option to download and debug after setting an ID code in the project .....	13
6.7	Pin Configuration (.pincfg) files in the SSP v1.3.z SK/DK/PK/ADK/ASK board packs are incompatible with the updated Pin Configurator XML files in SSP v1.4.0 (with regards to op-amps and comparators) .....	13
6.8	DAC8 output pin is not getting configured when it is configured through ISDE .....	14
6.9	CTS/RTS selection disabled for Asynchronous UART Operation Mode .....	14
6.10	Errors in Pin Configuration when using ADC with external reference for S1/S3 MCU Series .....	14
6.11	Cannot configure D00..D15 pins when Operation Mode is Mux Async for System:BUS .....	14
6.12	Projects with customized stacks will autofill the default modules in the stack when migrating to SSP v1.6.0 using e <sup>2</sup> studio v7.3 .....	14
6.13	Error received on renaming and importing the project .....	14
6.14	Option to export project in .tar format does not work as expected .....	14
6.15	Project Debug fails to execute .....	15
6.16	ITM Live Trace does not work after Trace (Trace View) is enabled (even if it is disabled) .....	15
6.17	Renaming and importing of 6.2 project into 7.x, then upgrading SSP selects different pin configuration .....	15
6.18	Copy and paste support in the Threads page of the Synergy editor needs e <sup>2</sup> studio to be restarted to work correctly .....	15
6.19	Trace View Filter and Find functionality does not work correctly with Synergy project .....	15
6.20	Headless build error with Synergy project .....	15
6.21	The "script" folder is not a source folder .....	16
6.22	CoreSight ITM: trace table disappears .....	16
6.23	e <sup>2</sup> studio crash relating to threads shown in debugger view .....	16
6.24	GDB Server will crash when Start address is larger than End address in Find/Replace/Fill Memory dialog .....	16
6.25	IAR Synergy ELF files do not have a .text section .....	16
6.26	System Explorer launch breaking e <sup>2</sup> studio .....	16
6.27	Unable to create a synergy project in Turkish Windows 8.1 .....	16
6.28	Synergy IAR static lib project cannot be converted to exe .....	17
6.29	Follow on issues for Linker Script Editor .....	17
6.30	Mouse over of variable crashes GDB server or makes e2 studio hang .....	17
6.31	Incremental build can break after renaming or copying a project .....	17
6.32	"Renesas Synergy Samples" on Welcome > Sample page links to incorrect location .....	17

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6.33	e² studio ThreadX control symbol addresses update when loading multiple elf files.....	17
6.34	Cannot launch debug session when breakpoint cannot be set.....	17
6.35	GDB Server will crash when Start address is larger than End address in Find/Replace/Fill Memory dialog .....	18
6.36	Disassembly view does not always update on initial opening.....	18
6.37	"Use Flash Breakpoints" does not work. ....	18
7.	Revision History.....	20

## 1. Installing e<sup>2</sup> studio ISDE v7.5.1

### 1.1 Using the Synergy Platform Installer

The easiest way to install the e<sup>2</sup> studio v7.5.1 along with the Synergy Software Package (SSP) and the GNU Arm® compiler v7.2.1 is to use the associated Synergy Platform Installer.

To download the Synergy Platform Installer, go to [www.renesas.com/synergy/ssp](http://www.renesas.com/synergy/ssp), sign in (or create a **MyRenesas** account if you do not already have one). In the **Download** section, click the **Download Platform Installer** button and select the option **e<sup>2</sup> studio** to download the zipped file. Unzip it, then double-click the installer and follow the directions on the screen.

The Synergy Platform Installer allows you to either do a **Quick** or a **Custom** installation.

The **Quick** installation option installs all the mandatory components with no user input required, while the **Custom** installation option provides options for you to select the optional components that you would like to install along with the mandatory components.

The following components will be installed with the Synergy Platform Installer with e<sup>2</sup> studio:

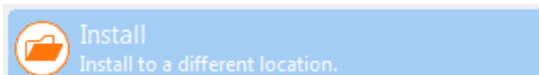
- Renesas Synergy Software Package (SSP) (mandatory component)
- e<sup>2</sup> studio ISDE v7.5.1 with support for Renesas Synergy (mandatory component)
- GCC 7.2.1 (optional, but recommended component)
- SSP User's Manual (optional, but recommended component)
- Express Logic GUIX Studio™ v5.4.2.9 (optional component)
- Express Logic TraceX® v5.2.0 (optional component)
- Other add-ons as required

After the installation is complete, run e<sup>2</sup> studio to get started.

### 1.2 Using the Individual e<sup>2</sup> studio Installer

When the individual installer is available, to install e<sup>2</sup> studio v7.5.1 (without SSP), download the individual e<sup>2</sup> studio v7.5.1 installer (.zip) from [www.renesas.com/synergy/e2studio](http://www.renesas.com/synergy/e2studio). Unzip it, then double-click the installer and follow the directions on the screen.

Notes: 1. If you already have an older version of e<sup>2</sup> studio installed on your PC, it is highly recommended to make a clean installation of e<sup>2</sup> studio v7.5.1 at a different location. This will allow you to start an older version later if required, for example, for upgrading Synergy projects.



2. Make sure to include Synergy in the Device Family section of the installer.
  3. Do not deselect any of the **optional** components the installer presents to you in the **Components** section of the installer. These components are required for proper Synergy support.
  4. The latest GNU Arm® compiler that the Renesas Synergy Software Platform (SSP) has been tested with is also part of the installer.
  5. Unless you already have this compiler installed, it is highly recommended that you check the box to install this toolchain since the Renesas Synergy Software Package (SSP) has been tested with this version of GCC.
  6. Make sure to select **Add path to the environment variables** during the GCC Arm® installation. This ensures easy registration of the toolchain with e<sup>2</sup> studio.
  7. The individual e<sup>2</sup> studio v7.5.1 installer does NOT include the Renesas Synergy Software Package (SSP). There are separate SSP installers available for download as **Download Standalone Installer** on [www.renesas.com/synergy/ssp](http://www.renesas.com/synergy/ssp).
    - a. Make sure to close e<sup>2</sup> studio before running the SSP installer.
    - b. After you install SSP, your **SSP Evaluation License** will be in the following directory:
      - <e2\_studio\_base\_dir>\internal\projectgen\arm\Licenses\
- After the installation is complete, run e<sup>2</sup> studio.

## 2. Migrating GCC 4.9 projects to GCC 7.2

Projects created with GCC 4.9 can be migrated using the following steps.

1. Select the project in project explorer, right click and select **Properties**.
2. In **Toolchain** tab of **Settings**, verify that the “Use integrated toolchain version” check box is selected and the select the latest GCC version which is 7.2.1.
3. Click **Apply and Close**.

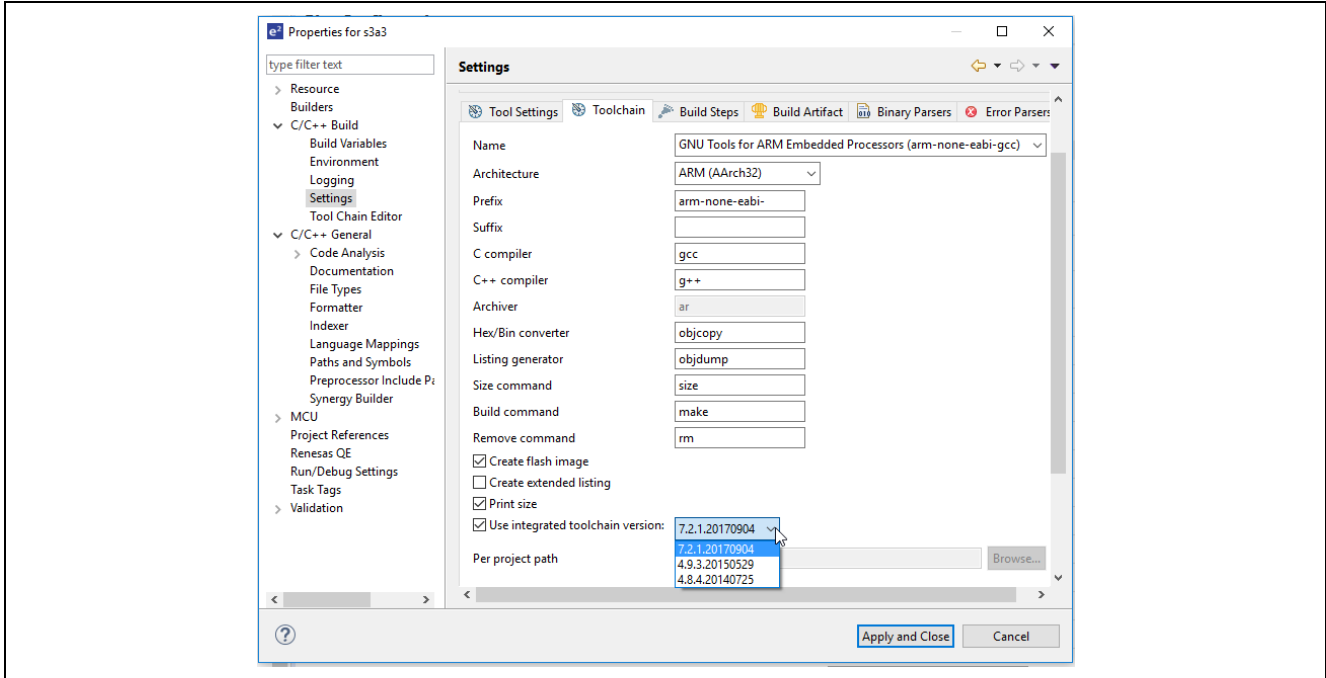


Figure 1. Selecting toolchain

4. Open the Synergy configurator and verify that the GCC version is the one selected in **Properties** view.
5. Generate the project, clean the project, and rebuild the whole project.

## 3. New Features and Updates in e² studio ISDE v7.5.1

### 3.1 Enabled Stack Analysis Feature

The Stack Analysis feature has been enabled to analyze stack information file output by GNU Arm Embedded toolchain. This feature can be used to check the function call structure and stack size, used by each function.

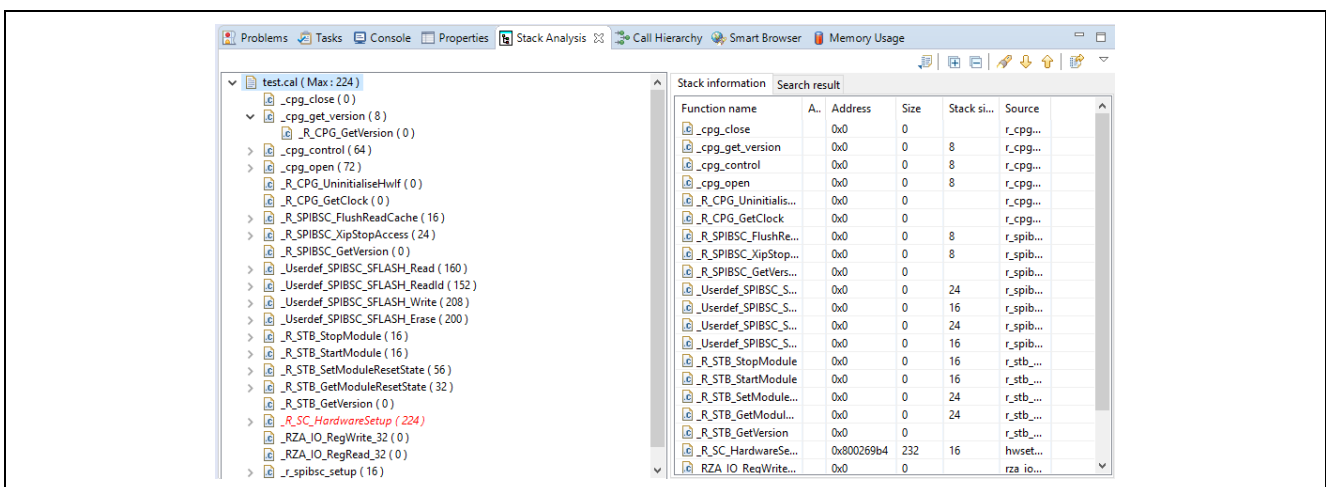


Figure 2. Stack analysis

### 3.2 Memory Usage View Shows Load Addresses

When using GCC toolchains for Arm®, the memory usage view can now show load addresses.

When a section is copied from Load Memory Address to Virtual Memory Address, the Load Memory Address is displayed as the **Load address** in the view (Virtual Memory Address is the **Start address**).

Section	Object	Symbol	Start address	End address	Size (byte)	Align	Attribute	Load address
.fvectors	Constant		0x00000000	0x0000002B	44	---	---	0x04030000
.text	Program		0x00000030	0x0000071F	1776	---	---	0x0403002C
.glue_7	Constant		0x00000720	---	0	---	---	0x0403071C
.glue_7t	Constant		0x00000720	---	0	---	---	0x0403071C
.vfp11_veneer	Constant		0x00000720	---	0	---	---	0x0403071C
.v4_bx	Constant		0x00000720	---	0	---	---	0x0403071C
.iplt	Constant		0x00000720	---	0	---	---	0x0403071C
.rvectors	Constant		0x00000720	---	0	---	---	---

Figure 3. Memory usage load addresses

### 3.3 Expressions View

Real-time refresh states of expressions being monitored in the **Expression** view are now saved between e² studio sessions. When users open e² studio, the real-time refresh state of each expression is in its prior state when e² studio was last closed.

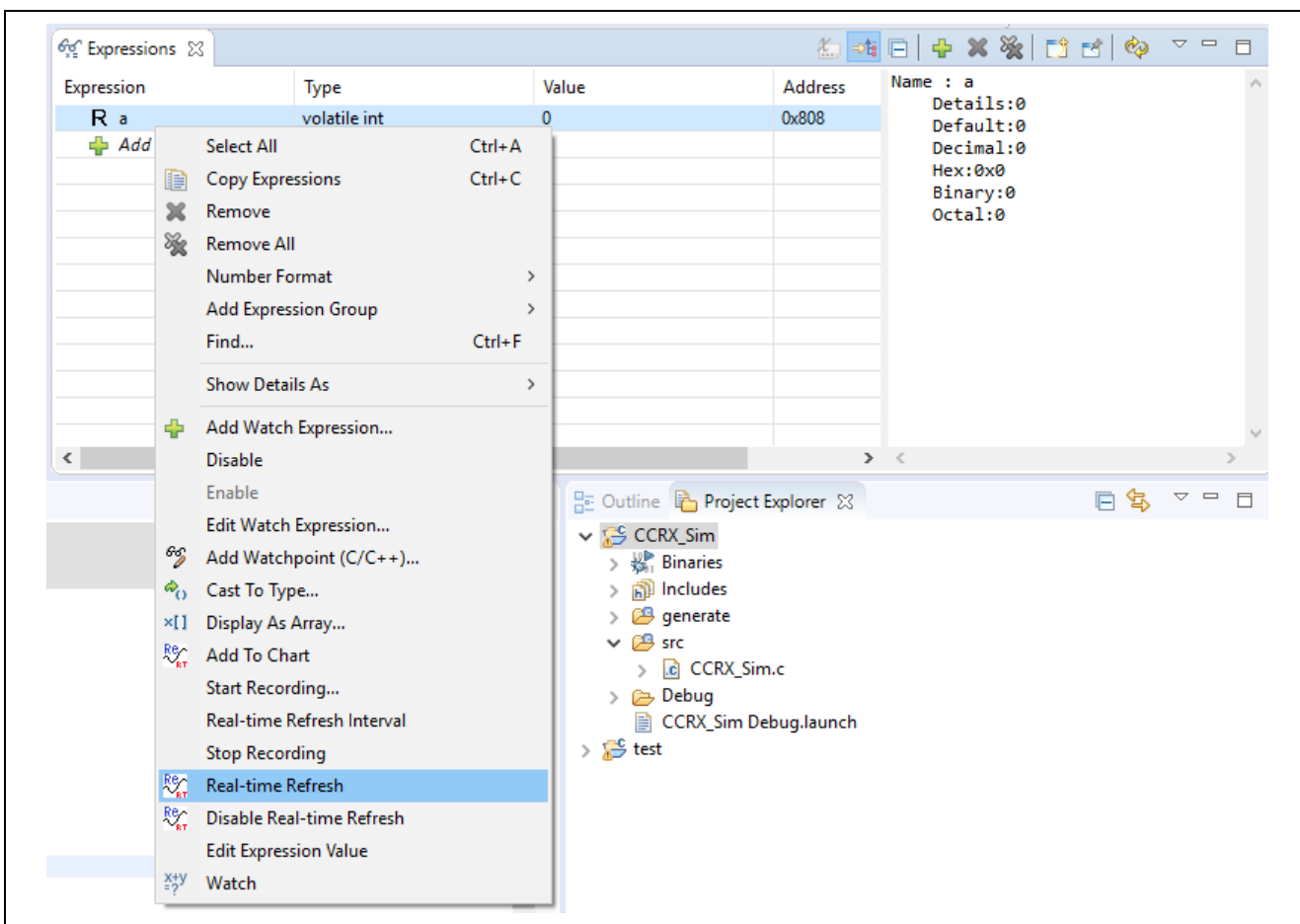


Figure 4. Real-time refresh



### 3.4 J-Link Debug Configuration

The user can choose the J-Link Debug Configuration type as either IP or USB.

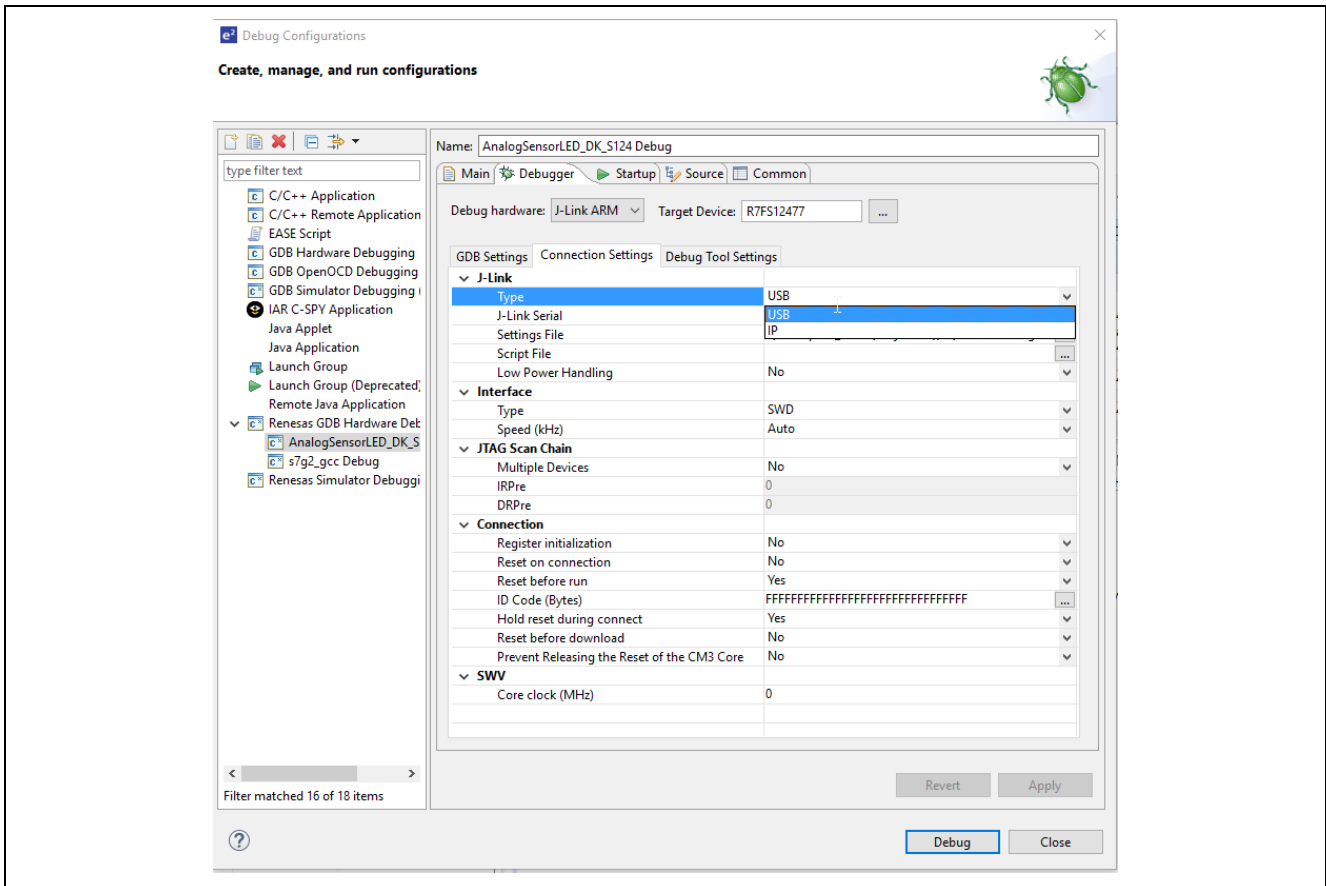


Figure 5. J-Link type — IP or USB

### 3.5 IO Register View

IO Register tree view now enables multiple selections at the same time. Multiple options can be selected as follows:

- To select all items: Hold down **Ctrl** button and press **A** on the keyboard.
- To select a group of items: Hold down **Shift** button and click to the last item.
- To select multiple items that are anywhere in the view: Hold down **Ctrl** button and click.

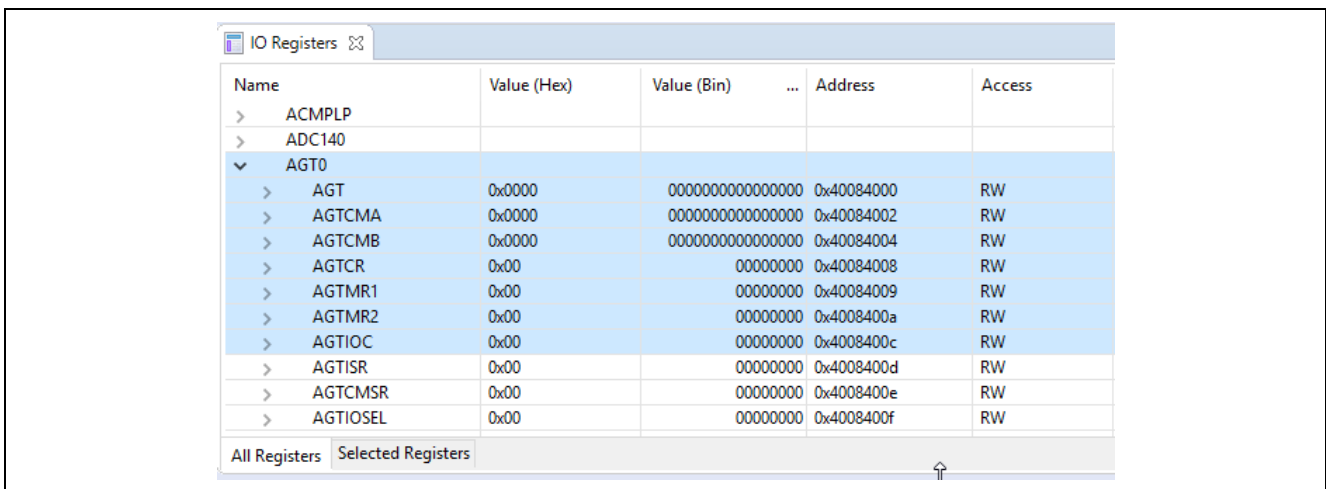
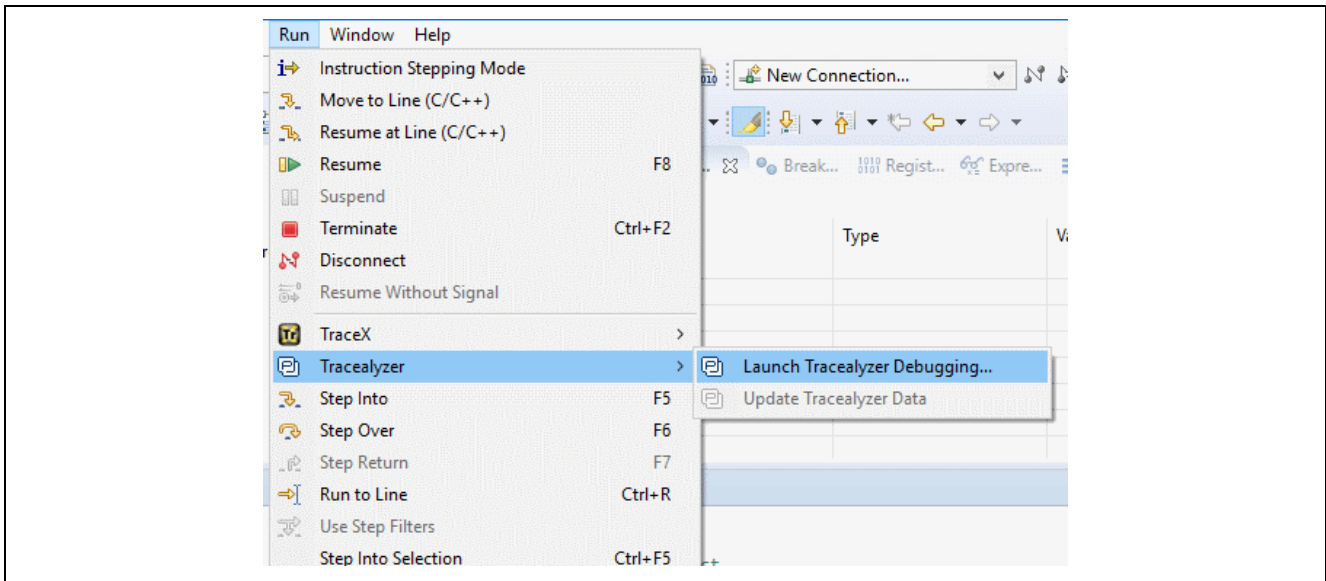


Figure 6. Multiple selections in IO register view

### 3.6 Percepio Tracealyzer Integration

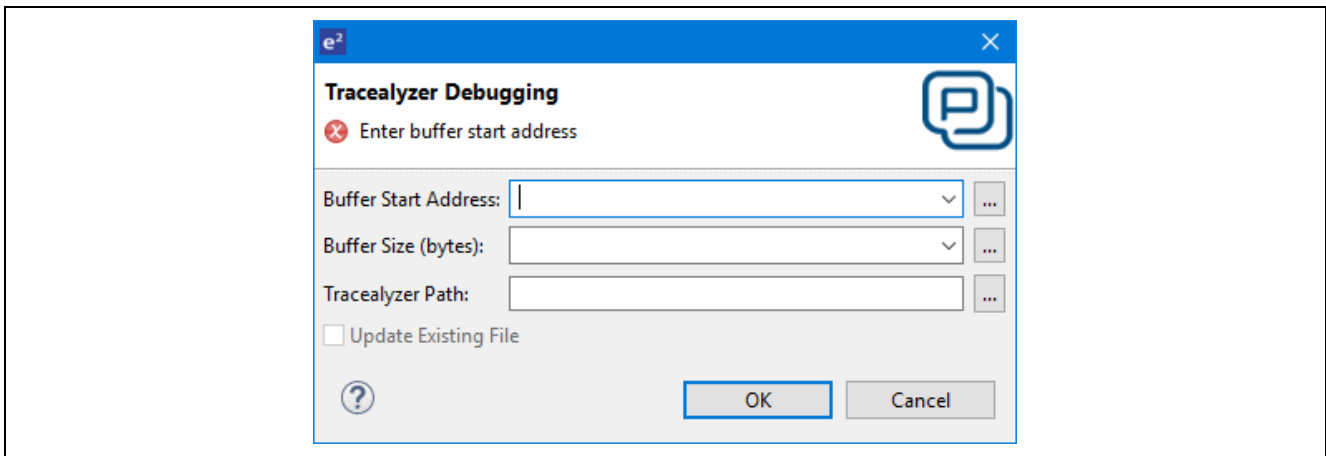
Percepio Tracealyzer trace tool integration has been added for Synergy.

This option is available from the **Run** menu as shown in the following graphic.



**Figure 7. Launching Percepio Tracealyzer**

When pressing the **Launch Tracealyzer Debugging...** menu item, the following dialog is displayed, allowing you to configure the setting for Launching Tracealyzer.



**Figure 8. Configuring Tracealyzer**

### 3.7 Synergy Debug Configuration

When debugging Synergy ThreadX projects with many threads, it is now possible to achieve faster debugging by enabling the **RTOS Debugging - Large Number of Threads** option under Debug Tool Settings > RTOS.

Enabling this option will show only the current thread and the main thread as suspended and report the non-executing threads as still running.

The information on other threads can be seen after manually suspending them, by selecting the thread and clicking on the suspend button.

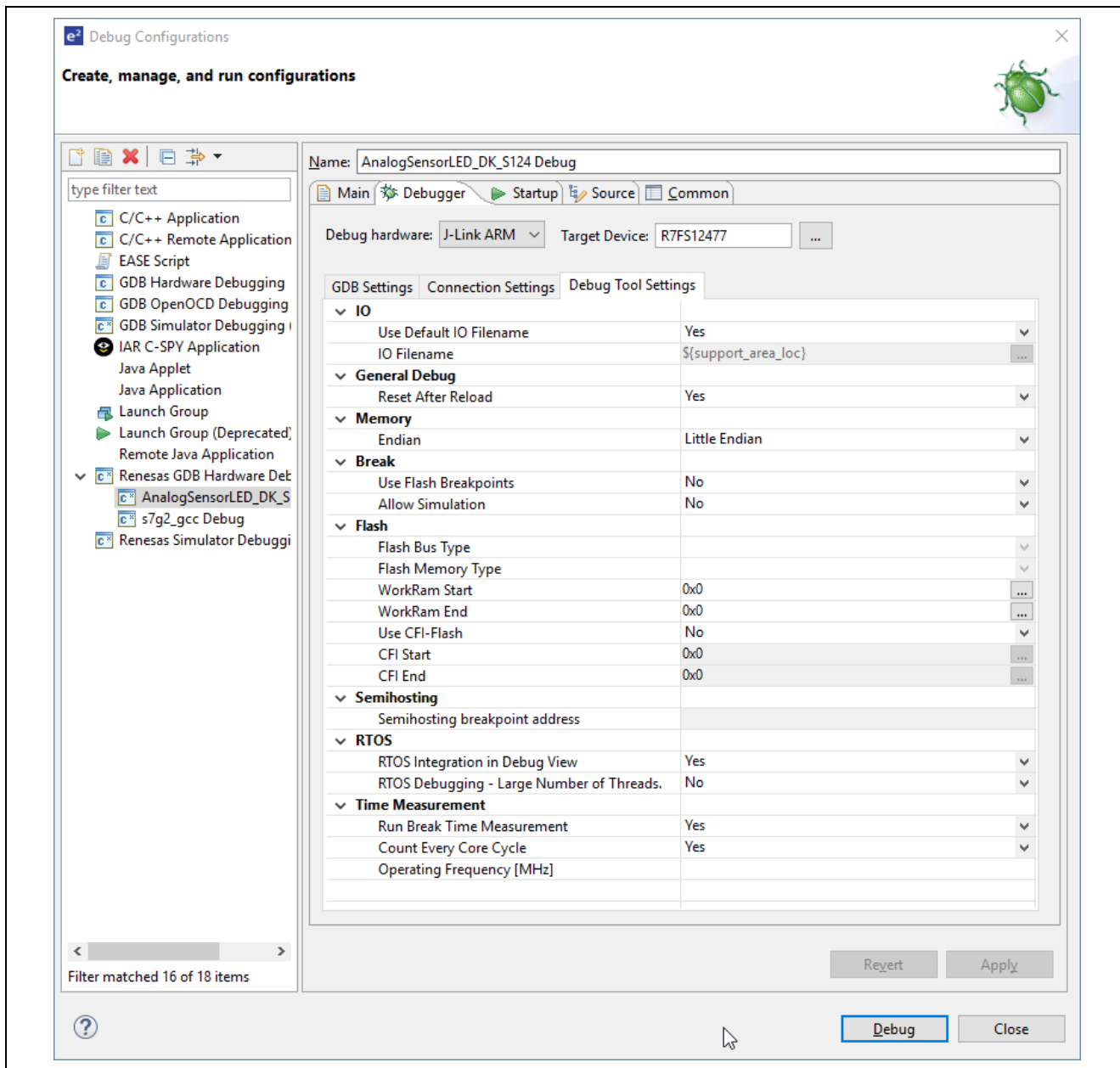


Figure 9. Configuration Large Number of Threads in RTOS

### 3.8 Smart Browser

With the Smart Browser, the hardware manual, application notes and so forth for any device with installed toolchains can be obtained without the needed for creating the project for that device.

By using the newly added **Get other device** button, you can access the list of all available devices for your selection.

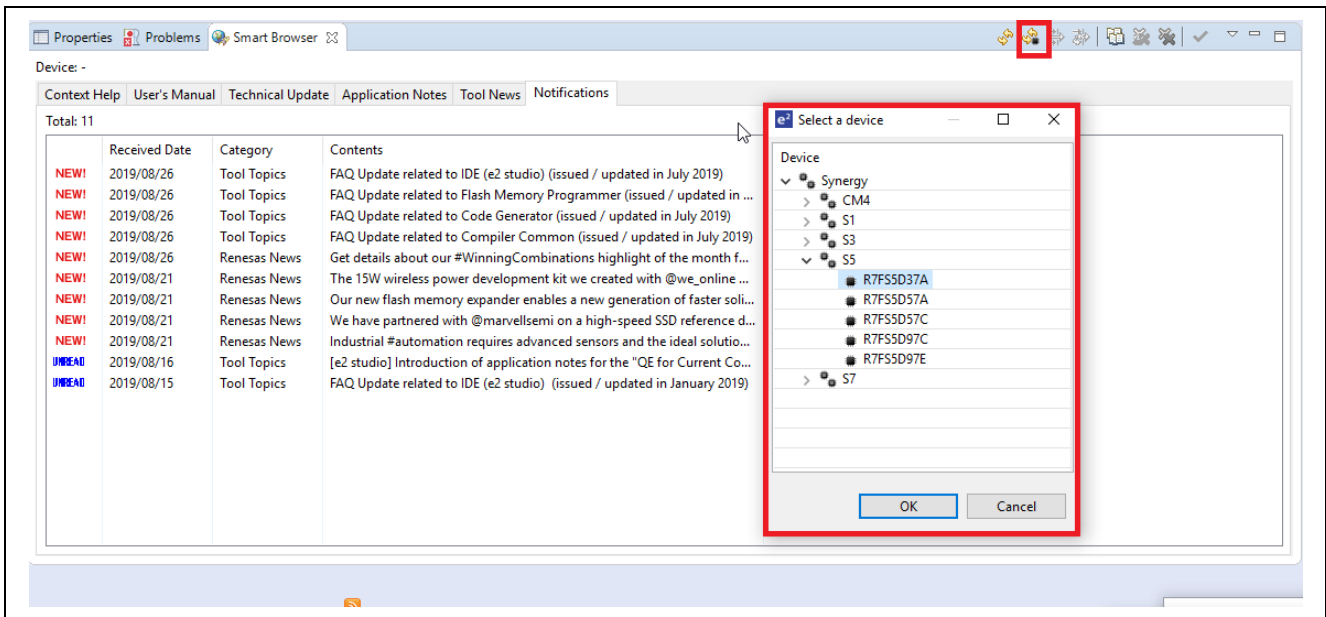


Figure 10. Selecting the device

## 4. Synergy Hardware Platform Support

MCU Groups supported are S7G2, S5D9, S5D5, S5D3, S3A7, S3A6, S3A3, S3A1, S124, S128, and S1JA.

## 5. Issues Fixed in Release v7.5.1

### 5.1 Build fails due to missing pin configuration for modified projects

Issue ID: 14528

Deleting the pincfg file related to the old device after switching the device in the bsp tab leads to failure in generating project content with the new device.

### 5.2 Too many threads causes problems with ThreadX plugins and the GCC debugger

Issue ID: 13854

When debugging a project with a large number of threads (for example, 150 threads) with the RTOS Resource View open, e<sup>2</sup> studio might hang and become unresponsive.

### 5.3 An error will occur depending on the address in the watch point setting.

Issue ID: 12584

An error occurs when setting watchpoint at certain addresses. Debug sessions cannot be started when the error watch points are still present.

### 5.4 Compile error for r\_dtc is not checked in configurator when migrating the project from SSPv1.6.0 to SSP v1.6.3

Issue ID: 15330

The project that has been created with SSP versions prior to SSP v1.6.3 and edited to remove default lower level module fails to build when migrating to SSP v1.6.3.

## 5.5 Cannot see all the threads in the debug view

**Issue ID:** 15536

Only the threads that have run count greater than 0 will be shown in the debug view. When one of the thread has run count of 0, all the threads after that check does not populate in the debug view

## 5.6 No error logging on linker script installation failure

**Issue ID:** IDE-28252

When linker script file is missing in the scripts folder of the project, no error message is shown in the error log.

## 5.7 When changing device in Synergy Configurator, project is not updated in the Smart Browser

**Issue ID:** IDE-18746

Changing the device in the Synergy editor does not refresh the selected device in the Smart Browser plugin. Manually refreshing the Smart Browser plugin does not fix this issue.

## 5.8 It takes much time to save IO Register information for Synergy device

**Issue ID:** IDE-25932

It may take much time (several minutes) to save IO Register information to file for devices which have a huge number of IO registers. During saving information, e<sup>2</sup> studio may not respond. Please wait until the file is generated

## 6. Known Issues in Release v7.5.1

### 6.1 S128 e<sup>2</sup> studio trace buffer allocation is at the wrong RAM address

**Issue ID:** 10664

If a user uses the trace buffer for debugging, and has data stored in the RAM at addresses above 0x2000 4000, that data is overwritten by the trace buffer when debugging.

**Applies to:** S128, S1JA

**Workaround:** The S128 linker script currently allocates 1K for the trace buffer at 0x2000 0000. This allocation could be removed, freeing the 1K incorrectly reserved for the trace buffer. The e<sup>2</sup> studio trace buffer function stores 1K of trace buffer data, beginning at 0x2000 4000, so 1K of RAM must not be used by the application if the trace buffer is used for debugging.

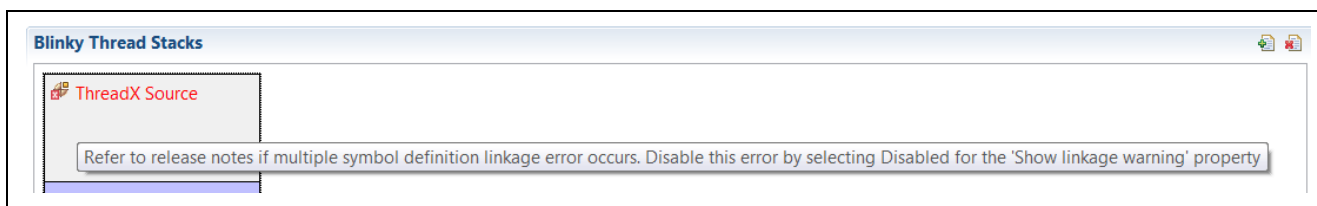
### 6.2 'Multiple definition' Linker errors occur when using both library and source for Express Logic components

**Issue ID:** 9808

By default, libraries are added to a project when adding an Express Logic X-Ware™ component (for example, 'ux' for USBX™). However, the user also has the option to add the source code for an X-Ware™ module to the project (for example, 'ux\_src' for USBX™).

Projects using both the source and library may experience 'multiple definition' Linker errors during build.

To make users aware of this, e<sup>2</sup> studio displays an error marker after adding source code for an X-Ware™ module to your project:



**Figure 11. Linker error prompt**

If your project builds fine after adding the source (that is, you do not get those linker errors), you can turn off the error marker in the **Properties** for the source module by using the following steps:

1. Click on the X-Ware source module in the **Threads** tab.
2. Go to the **Properties** view.
3. Scroll all the way down to the bottom of the properties.
4. Set the **Show linkage warning** property to **Disabled**.

If you do encounter these linker errors, perform the following steps to resolve them:

1. Access the linker settings in e<sup>2</sup> studio at Project > Properties > C/C++ Build > Settings > Tool Settings > Cross ARM C Linker > Libraries.
2. On the **Libraries** pane, remove the library for which you also included source code from the list so it will not get linked.
3. Click **Apply** and **OK**.
4. Rebuild your project. The build errors related to multiple definitions should be gone.

Note: You will have to do this each time a clean build is attempted or whenever project content is re-generated.

### 6.3 GCC newlib-nano library does not support C++ exception

**Issue ID:** 9596

Users cannot make C++ exception handling work with `libc_nano` library (if `'--specs=nano-specs'` specified in GCC linker option). The exception ends up in the default handler `__gnu_cxx::__verbose_terminate_handler()` instead of users' `catch(...)` handler.

**Workaround:** Do not use `'--specs=nano-specs'` option for C++ project. Alternatively, refer to the GNU Arm Embedded Toolchain community to find another solution at <https://answers.launchpad.net/gcc-arm-embedded/+question/230716>.

### 6.4 Build fails with 'secure builder required' error after migrating IAR v7.x tool chain project to IAR v8.x

**Issue ID:** 11556

Synergy builder is excluded from the tool command pattern when changing the toolchain from IAR 7.x to IAR 8.x, which leads to a build error that the secure builder is required when trying to build the project after migrating.

**Workaround:**

The following workaround can be used to migrate projects with IAR 7.x to IAR 8.x:

1. Add environment variable `SECURE_BUILD_COMMAND`: `${renesas.support.targetLoc:synergy-build} /isdebuild`
2. Update Command Line pattern IAR C/C++ Compiler for Arm setting if the following command is missing: `${SECURE_BUILD_COMMAND}`
3. Update Command Line pattern IAR C/C++ Assembler for Arm if the following command is missing: `${SECURE_BUILD_COMMAND}`

### 6.5 Configuration is not inherited when creating a new project using User Custom Board file

**Issue ID:** 12857

Creating a project with a custom board pack might not reflect the customized values set for the properties in that custom board pack.

**Workaround:** None

### 6.6 Cannot debug the program when selecting an option to download and debug after setting an ID code in the project

**Issue ID:** 12845

After setting an ID code and building the program, selecting **Download and debug** in EWSYN or **Debug** in e² studio fails to debug the downloaded program.

**Workaround:** When the debug fails, select the option to **Debug without download** in EWSYN or **Debug** in e² studio again to successfully debug the program.

### 6.7 Pin Configuration (.pincfg) files in the SSP v1.3.z SK/DK/PK/ADK/ASK board packs are incompatible with the updated Pin Configurator XML files in SSP v1.4.0 (with regards to op-amps and comparators)

**Issue ID:** 10864

The Pin Configuration tab in the configurator cannot be used to configure the opamp or analog comparators for every use case.

Applies to: S124, S128, S3A3, S3A7, S5D5, S5D3, S5D9, S7G2 MCU Groups

**Workaround:** Configure the pins manually in user-defined code

## 6.8 DAC8 output pin is not getting configured when it is configured through ISDE

**Issue ID:** 12261

DAC8 output pin is not being configured when it is configured through ISDE.

**Applies to:** S1JA, S128, and S3A3 MCUs

**Workaround:** Configure DAC8 output pin manually.

## 6.9 CTS/RTS selection disabled for Asynchronous UART Operation Mode

**Issue ID:** 14698

Selecting the operation mode as UART will disable the choice for CTS/RTS pin

## 6.10 Errors in Pin Configuration when using ADC with external reference for S1/S3 MCU Series

**Issue ID:** 14452

**Applies to:** S1JA, S124, S128, S3A3, S3A7, S3A6

The current driver uses AVCC0 as the reference voltage for the internal ADC. When internal voltage measurement or VREFH0, VREFL0 is selected, pin conflict is observed in the tools and the driver does not support this feature.

## 6.11 Cannot configure D00..D15 pins when Operation Mode is Mux Async for System:BUS

**Issue ID:** 15545

When "Mux Async Bus 8bit" or "Mux Async Bus 16bit" is selected as the operation mode for System:BUS - > BUS0 peripheral on the **Pins** tab, the multiplexed data/addresses sent/received are enforced on pins A00..A15 and the choices for D00..D15 are disabled.

## 6.12 Projects with customized stacks will autofill the default modules in the stack when migrating to SSP v1.6.0 using e<sup>2</sup> studio v7.3

**Issue ID:** 14436

Some of the old projects with customized stacks might fail after migrating to e<sup>2</sup> studio v7.3 because the default modules get repopulated in the stack.

**Workaround:** The user explicitly needs to delete the modules that are repopulated after migration

## 6.13 Error received on renaming and importing the project

**Issue ID:** 15093

Using the option "Rename and Import existing c/c++ project" fails to import the project intermittently and gives an error message.

**Applies to:** All MCUs

**Workaround:** None

## 6.14 Option to export project in .tar format does not work as expected

**Issue ID:** 12925

When exporting the project, selecting .tar format option does not export the project in tar format, but exports it in .zip format.

**Workaround:** Edit the archive file name by replacing the .zip with .tar and the project will be exported in .tar format.



## 6.15 Project Debug fails to execute

**Issue ID:** 15606

Sometimes when starting to debug a project, the program receives an interrupt and stops executing.

**Workaround:** Click reset or restart button to continue running the program.

## 6.16 ITM Live Trace does not work after Trace (Trace View) is enabled (even if it is disabled)

**Issue ID:** IDE-24657

The ITM Live Trace view does not work after the Trace is enabled in the standard Trace window, even if it is subsequently disabled.

**Workaround:** Terminating and re-starting the debug session with trace disabled in the trace window will then re-enable ITM Live Trace output.

## 6.17 Renaming and importing of 6.2 project into 7.x, then upgrading SSP selects different pin configuration

**Issue ID:** IDE-23242

In the Synergy Configuration editor, when upgrading SSP version, or changing the board, where the selected device is not the default device for the selected board, an incorrect Pin Configuration may be selected on the Pins tab.

**Workaround:** If upgrading the SSP version or changing the board when in the Configuration editor, check that the required Pin Configuration is still selected on the **Pins** tab. If not, re-select the required Pin Configuration from the drop-down list.

## 6.18 Copy and paste support in the Threads page of the Synergy editor needs e<sup>2</sup> studio to be restarted to work correctly

**Issue ID:** IDE-11337

In certain situations, copy/paste actions may stop working in the Threads page of the Synergy editor.

**Workaround:** If this happens, close the Synergy editor and re-open it. Copy and paste should then work correctly.

## 6.19 Trace View Filter and Find functionality does not work correctly with Synergy project

**Issue ID:** IDE-9057

Filter and Find functionality in Trace View is currently not supported for Arm-based devices.

## 6.20 Headless build error with Synergy project

**Issue ID:** IDE-8980

When using the `eclipse.exe` tool and running headless builds, an error in a message box may appear that states 'An error has occurred. See the log file <name>.log'. This is due to the `eclipse.exe` not picking up the correct Java version.

**Workaround:** To work around this issue, copy `eclipse.ini` to `eclipsec.ini` and execute the headless build again.

## 6.21 The "script" folder is not a source folder

**Issue ID:** IDE-28354

When using the Synergy device family with SSP, the "script" folder, which contains the linker script files is not configured as a source folder. This means that this file when modified does not cause a rebuild of the project.

**Applies to:** All MCUs

**Workaround:** Clean your project and then rebuild it to avoid problems.

## 6.22 CoreSight ITM: trace table disappears

**Issue ID:** IDE-27850

When the content of the trace data is changed, the user is asked to refresh the updated data. After the update, the trace data editor is closed.

**Applies to:** All MCUs

**Workaround:** The user needs to open the editor again to see the updated trace data.

## 6.23 e<sup>2</sup> studio crash relating to threads shown in debugger view

**Issue ID:** IDE-28705

In some circumstances, when operating with many ThreadX threads that are also using large structures, it can cause problems when refreshing the debug view after the debugger is suspended. In some cases, the e<sup>2</sup> studio application may appear to freeze and become unresponsive.

**Applies to:** All MCUs

**Workaround:** In such cases, go to Debug Configuration > Debug Tool Settings, and switch off the RTOS Integration in the Debug View.

## 6.24 GDB Server will crash when Start address is larger than End address in Find/Replace/Fill Memory dialog

**Issue ID:** IDE-8875

e<sup>2</sup> studio can crash when the memory view Find/Replace/Fill feature has a start address larger than the end address.

## 6.25 IAR Synergy ELF files do not have a .text section

**Issue ID:** IDE-25278

When loading Symbols from multiple .elf files compiled using the IAR toolchain, the user will need to add ".text" before the place in FLASH\_region command inside the .icf script, for example, {code} ".text": place in FLASH\_region { block LOCK\_LOOKUP, ro, ro section .rodata, block QSPI\_NON\_RETENTIVE\_INIT\_BLOCK, block RAM\_INIT\_CODE, block USB\_DEV\_DESC\_BLK }; {code}.

## 6.26 System Explorer launch breaking e<sup>2</sup> studio

**Issue ID:** IDE-8627

On some systems, you may encounter an error when launching the system explorer from the Project Explorer context menu. If using this causes e<sup>2</sup> studio to freeze or context menus to stop displaying, you should terminate the e<sup>2</sup> studio process.

## 6.27 Unable to create a synergy project in Turkish Windows 8.1

**Issue ID:** IDE-8555

When using Turkish Windows with Synergy you may experience problems creating a project.

**Workaround:** Use the English language settings for your host OS and re-try if you experience this.

## 6.28 Synergy IAR static lib project cannot be converted to exe

**Issue ID:** IDE-17642

When generating a Synergy static library project using the IAR toolchain, it is not possible to change the build artifact to executable (IAR). e<sup>2</sup> studio gives the impression that the operation was successful, however, when building, no object files are generated.

## 6.29 Follow on issues for Linker Script Editor

**Issue ID:** IDE-12123

The Linker Script Editor may report errors when using some Wild Identifiers such as `1file.o` and `*filename.o`.

**Workaround :** Although these are valid file names and valid identifiers according to the Linker Script syntax, they need to be quoted when using the Linker Script Editor(for example, `1file.o` and `*filename.o`).

## 6.30 Mouse over of variable crashes GDB server or makes e2 studio hang

**Issue ID:** IDE-24867

With certain projects that use RTOS Integration in Debug View and expose threads that contain only the `0xffffffff` frame in the **Debug Tree** view, mouse hovering over strings or macros defined as strings can cause the debug session to become unresponsive or GDB to crash.

## 6.31 Incremental build can break after renaming or copying a project

**Issue ID:** IDE-18639

After renaming or copying a project, incremental build might be broken and the project will perform a full build every time. If this occurs, then:

1. Open project properties and go to **C/C++ Build > Refresh Policy**
2. Delete the old name of project folder, then add the new project name.

## 6.32 "Renesas Synergy Samples" on Welcome > Sample page links to incorrect location

**Issue ID:** IDE-28739

Selecting "Renesas Synergy Samples" in the **Welcome screen/Samples** will incorrectly display help for the **Smart Browser** view.

## 6.33 e<sup>2</sup> studio ThreadX control symbol addresses update when loading multiple elf files

**Issue ID:** IDE-25376

When using Synergy with ThreadX, debugging problems can be caused when using multiple load modules. Subsequent changes to the ThreadX table are not recognized by the debugger and this can cause incorrect thread data to be displayed.

**Workaround:** To avoid this, ensure that the ThreadX table data is within the first load module downloaded by e<sup>2</sup> studio. If this does not remedy the issue, you can disable the Debug view ThreadX debugging within the debug configuration.

## 6.34 Cannot launch debug session when breakpoint cannot be set

**Issue ID:** IDE-9101

If GDB is unable to set a breakpoint during the launch, then the whole launch will be aborted.

**Workaround:** Removing the breakpoint(s) will allow the launch to complete successfully.

### 6.35 GDB Server will crash when Start address is larger than End address in Find/Replace/Fill Memory dialog

**Issue ID:** IDE-8875

e<sup>2</sup> studio can crash when the memory view Find/Replace/Fill feature has a start address larger than the end address.

### 6.36 Disassembly view does not always update on initial opening

**Issue ID:** IDE-7423

In some cases, the disassembly view does not refresh correctly on suspend. When this problem happens refreshing the disassembly view does not fix the problem.

**Workaround:** To restore the functionality, close and re-open the view.

### 6.37 "Use Flash Breakpoints" does not work.

When using Synergy and RZ devices (with a J-Link connection), the **Use Flash Breakpoints** option on the Debug Configuration is currently ignored and the setting will default to **No**.

**Workaround:** Use a J-Link script file with the J-Link\_ExecCommand ("DisableFlashBPs") command to override this setting.

## Website and Support

Visit the following vanity URLs to learn about key elements of the Synergy Platform, download components and related documentation, and get support.

Synergy Software	<a href="http://www.renesas.com/synergy/software">www.renesas.com/synergy/software</a>
Synergy Software Package	<a href="http://www.renesas.com/synergy/ssp">www.renesas.com/synergy/ssp</a>
Software add-ons	<a href="http://www.renesas.com/synergy/addons">www.renesas.com/synergy/addons</a>
Software glossary	<a href="http://www.renesas.com/synergy/softwareglossary">www.renesas.com/synergy/softwareglossary</a>
Development tools	<a href="http://www.renesas.com/synergy/tools">www.renesas.com/synergy/tools</a>
Synergy Hardware	<a href="http://www.renesas.com/synergy/hardware">www.renesas.com/synergy/hardware</a>
Microcontrollers	<a href="http://www.renesas.com/synergy/mcus">www.renesas.com/synergy/mcus</a>
MCU glossary	<a href="http://www.renesas.com/synergy/mcuglossary">www.renesas.com/synergy/mcuglossary</a>
Parametric search	<a href="http://www.renesas.com/synergy/parametric">www.renesas.com/synergy/parametric</a>
Kits	<a href="http://www.renesas.com/synergy/kits">www.renesas.com/synergy/kits</a>
Synergy Solutions Gallery	<a href="http://www.renesas.com/synergy/solutionsgallery">www.renesas.com/synergy/solutionsgallery</a>
Partner projects	<a href="http://www.renesas.com/synergy/partnerprojects">www.renesas.com/synergy/partnerprojects</a>
Application projects	<a href="http://www.renesas.com/synergy/applicationprojects">www.renesas.com/synergy/applicationprojects</a>
Self-service support resources:	
Documentation	<a href="http://www.renesas.com/synergy/docs">www.renesas.com/synergy/docs</a>
Knowledgebase	<a href="http://www.renesas.com/synergy/knowledgebase">www.renesas.com/synergy/knowledgebase</a>
Forums	<a href="http://www.renesas.com/synergy/forum">www.renesas.com/synergy/forum</a>
Training	<a href="http://www.renesas.com/synergy/training">www.renesas.com/synergy/training</a>
Videos	<a href="http://www.renesas.com/synergy/videos">www.renesas.com/synergy/videos</a>
Chat and web ticket	<a href="http://www.renesas.com/synergy/resourcelibrary">www.renesas.com/synergy/resourcelibrary</a>

## 7. Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Aug.27.19	-	Initial release
1.01	Sep.10.19	-	Second release

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e<sup>2</sup> studio ISDE v7.5.1 Release Note

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# Renesas Synergy™ Platform e<sup>2</sup> studio ISDE v7.5.1 Release Note



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