

e² studio ISDE v7.3.0

Release Note

Renesas Synergy™ Platform
Synergy Tools & Kits
Renesas Synergy™ e² studio

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Renesas Synergy™ Platform

e² studio ISDE v7.3.0 Release Note

Scope

This document describes the release notes for the Renesas Synergy™ support in the **e² studio ISDE (Integrated Solution Development Environment) v7.3.0**. This version of e² studio supports SSP software executing on S7G2, S5D9, S5D5, S5D3, S3A7, S3A6, S3A3, S3A1, S128, S124, and S1JA MCU Groups.

Release information

e ² studio release version	v7.3.0
Supported Operating Systems	Microsoft® Windows® 7 and Microsoft® Windows® 10

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1. Installing e² studio ISDE v7.3.0

1.1 Using the Synergy Platform Installer

The easiest way to install the e² studio v7.3.0 along with the Synergy Software Package (SSP) and the GNU Arm[®] compiler v7.2.1 (7.2.1.2017q4) is to use the associated Synergy Platform Installer.

To download the Synergy Platform Installer, go to 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 **e² 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 e² studio:

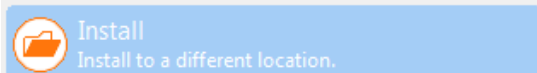
- Renesas Synergy Software Package (SSP) (mandatory component)
- e² studio ISDE v7.3.0 with support for Renesas Synergy (mandatory component)
- GCC 7.2.1 (optional, but recommended component)
- SSP User's Manual (optional, but recommended component)
- Express Logic GUIX Studio™ v5.4.2.9 (optional component)
- Express Logic TraceX[®] v5.2.0 (optional component)
- Other add-ons as required

After the installation is complete, run e² studio to get started.

1.2 Using the Individual e² studio Installer

When the individual installer is available, to install e² studio v7.3.0 (without SSP), download the individual e² studio v7.3.0 installer (.zip) from 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 e² studio installed on your PC, it is highly recommended to make a clean installation of e² studio v7.3.0 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 (7.2.1.2017q4) 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 e² studio.
 7. The individual e² studio v7.3.0 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.
 - a. Make sure to close e² 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 e² studio.

2. Using IAR Compiler in e² studio

See the *Installing IAR Compiler into e² studio and Migrating Projects between Compilers* document at www.renesas.com/synergy/e2studio for details on the following topics:

- Installing IAR compiler into e² studio
- Migrating IAR 7.x projects to IAR 8.x
- Migrating IAR projects to GCC
- Migrating GCC projects to IAR
- Migrating GCC 4.9 projects to GCC 7.2

3. New Features and Updates in e² studio ISDE v7.3.0

3.1 Updated SEGGER J-Link® Arm® DLL

The SEGGER J-Link® Arm® DLL distributed with e² studio has been updated to v6.34e.

3.2 Updated GCC Compiler

Toolchain GCC 7.2.1 is now supported on e² studio.

A project created with the toolchain GCC 4.9.3 can be migrated by selecting the integrated toolchain version to GCC 7.2.1 in the project properties settings.

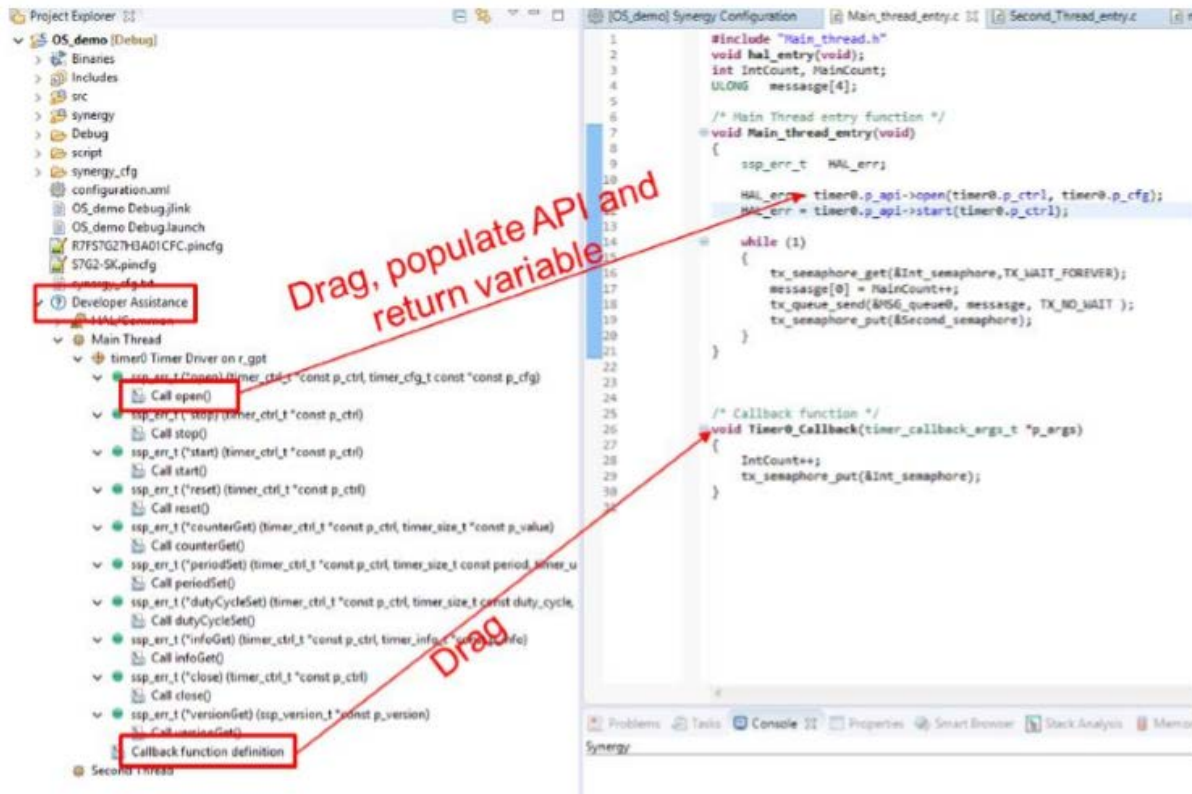
3.3 Developer Assist

A new feature has been added to assist new users to write application code based on the SSP by providing module and API (Application Programming Interface) reference documentation.

This relies on new RDS files to be installed as part of the SSP.

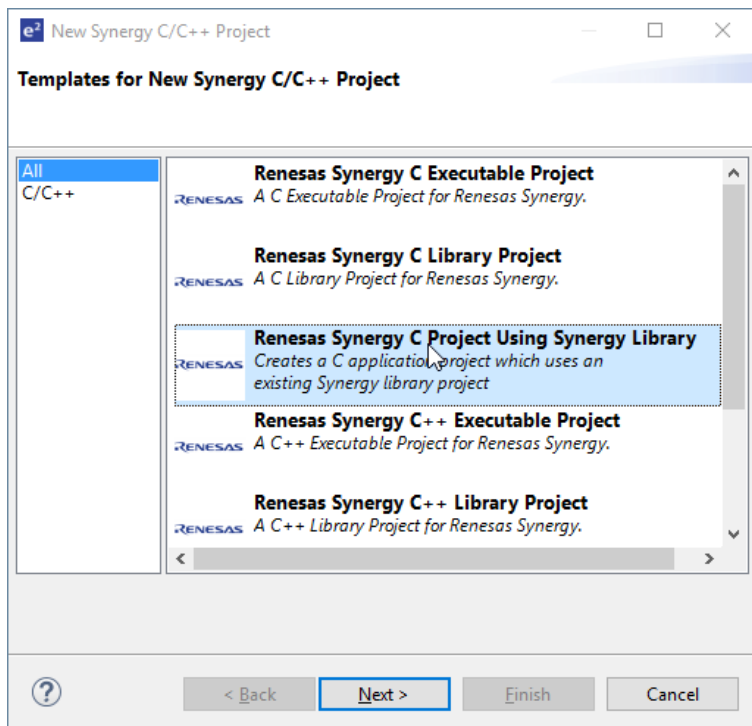
Information is automatically generated from the configuration.xml file.

It is possible to drag and drop API calls and callback functions onto the source code as shown in the following graphic.



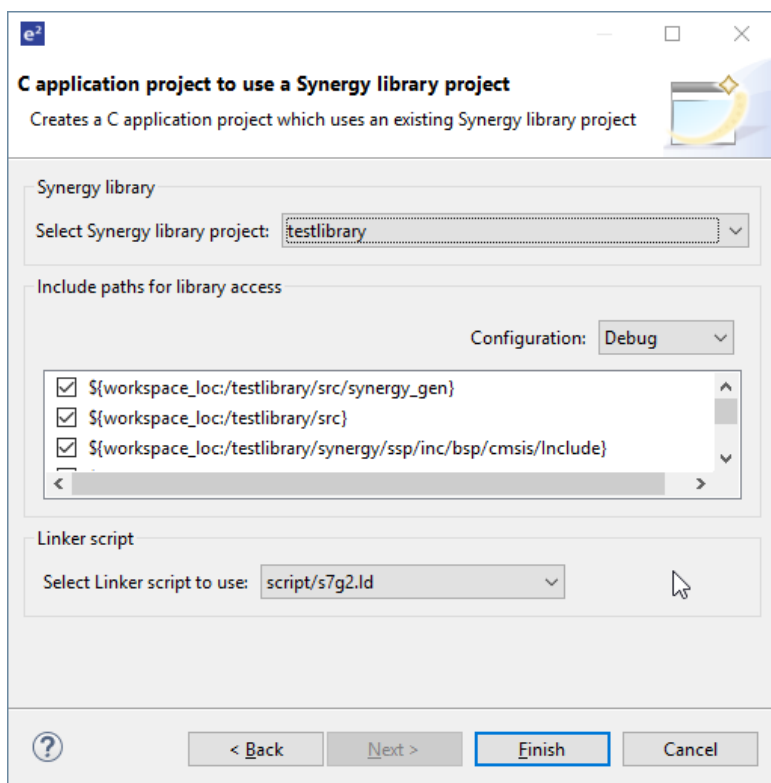
3.4 Added New Project Type

A new project type has been added to help generate an application project setup for using an existing Synergy Software Platform (SSP) library as shown in the following graphic.



The library must exist in the workspace you are using. These libraries will then appear within the wizard for selection.

When selected, the include paths that are required for setup are automatically displayed as shown in the following graphic.



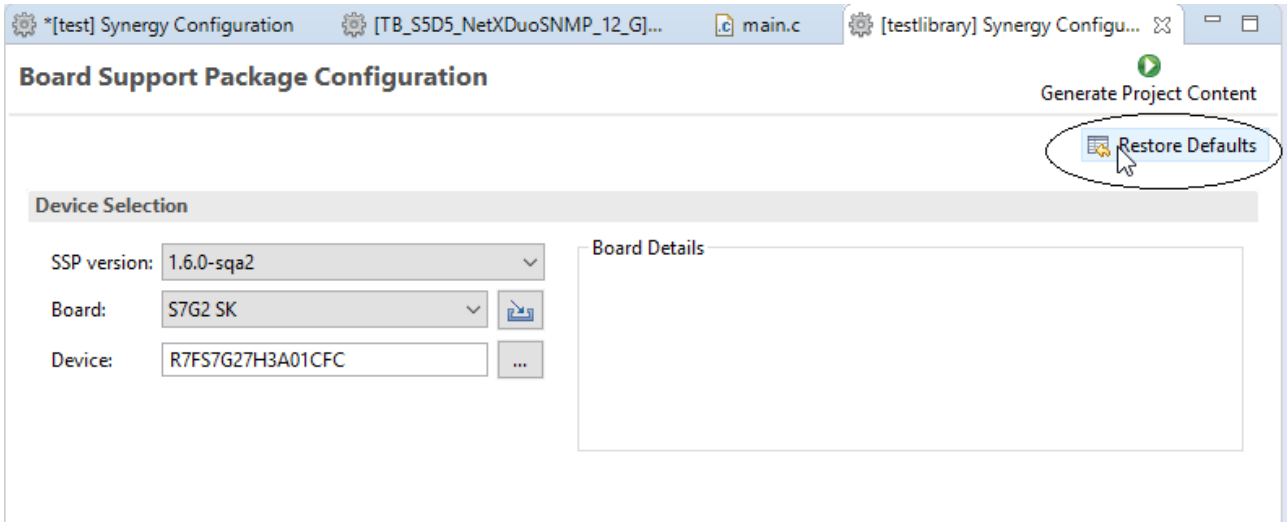
When **Finish** is clicked, the project is created with the build setting ready to use the Synergy library.

3.5 Updated Synergy Editor

This section lists the updates made to the Synergy Editor.

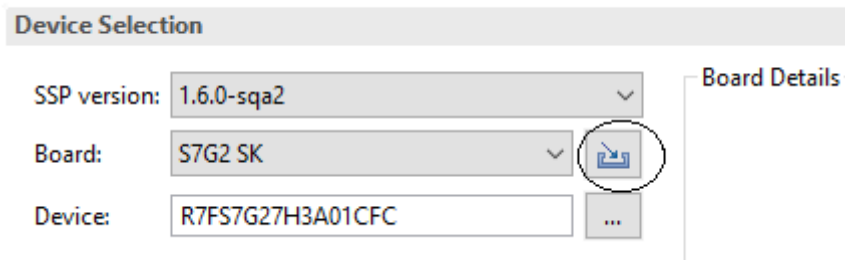
3.5.1 Restore Defaults

The Synergy Editor has a new feature to restore the BSP properties to default values as seen in the following graphic.



3.5.2 Import CMSIS Component

A link to the Import CMSIS Component has been added to the **BSP** tab of the Synergy Editor. This is to improve accessibility of the import CMSIS component functionality when needing to add a custom board to the IDE.



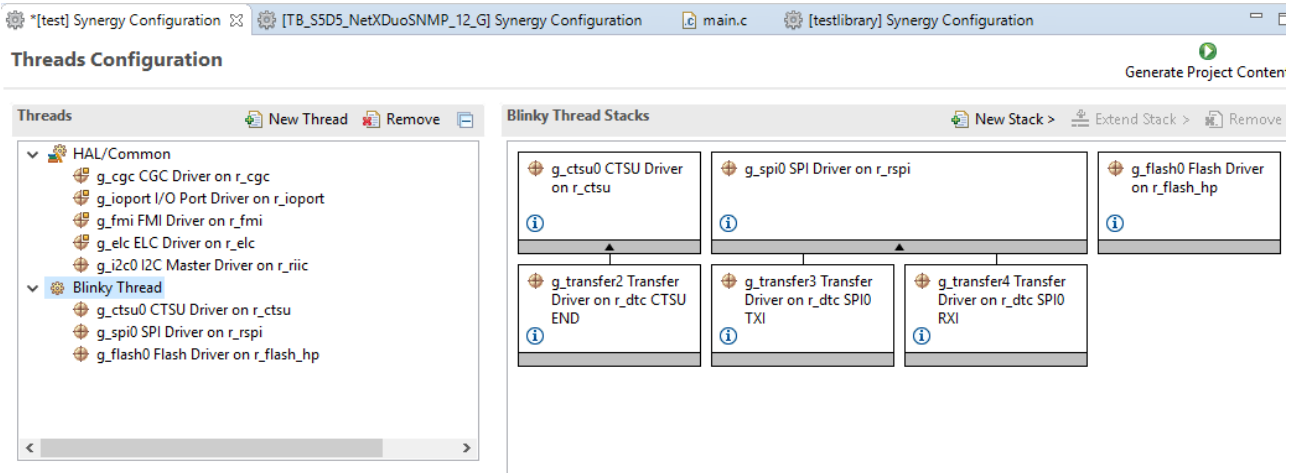
3.5.3 Easy Navigation of Threads

The threads page user interface has been updated to navigate through the threads and Synergy software stacks more effectively.

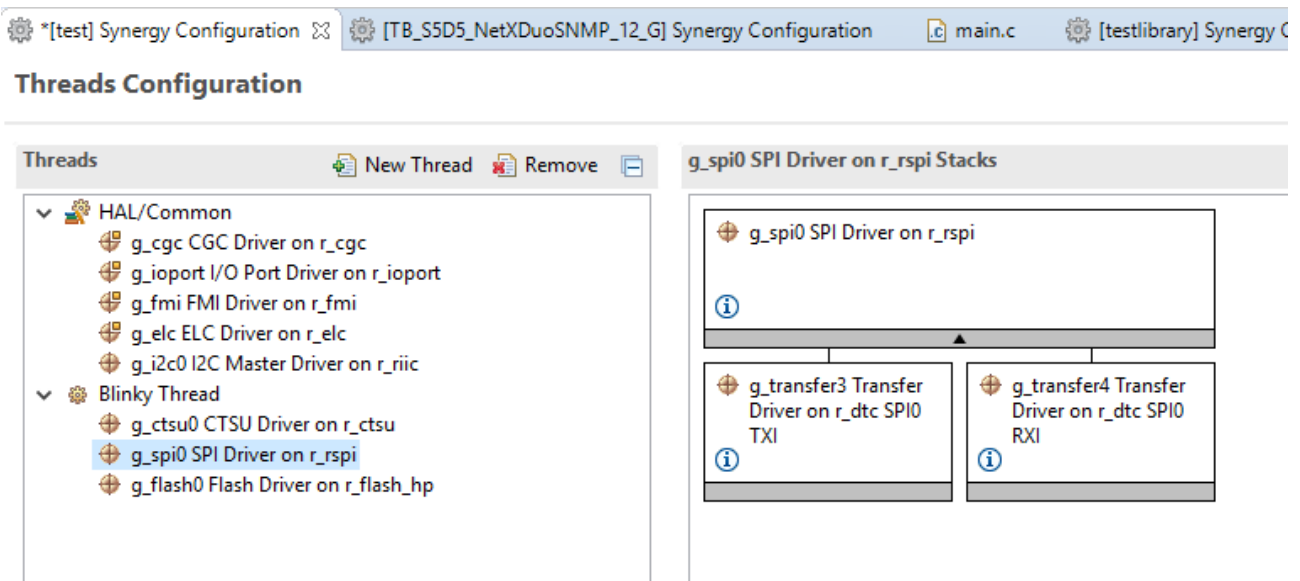
Previously, thread selection was a flat list that only allowed each thread to be selected. In this case, all software stacks are shown in the graphical area.

Now, the threads are shown as a tree. This means that you can still select the entire content of a thread or choose an individual software stack. When choosing an individual software stack, only that software stack is shown in the graphical view.

In the following example, the user has selected the thread and 3 software stacks are shown:

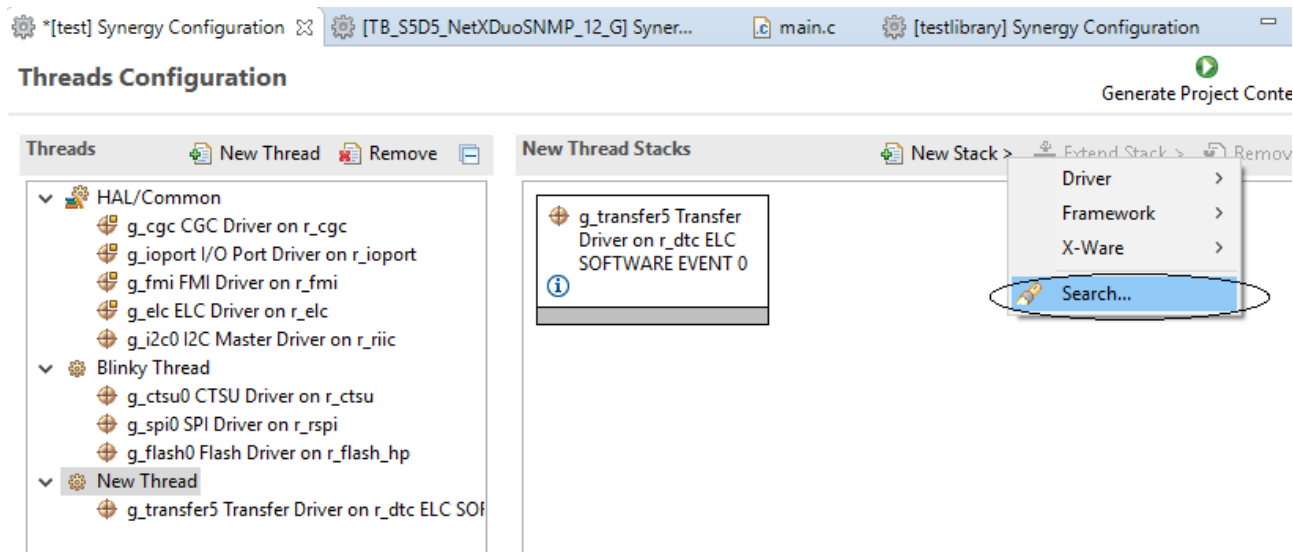


In the following example, the user has selected the exact software stack, and in this case, only the selected stack is shown.

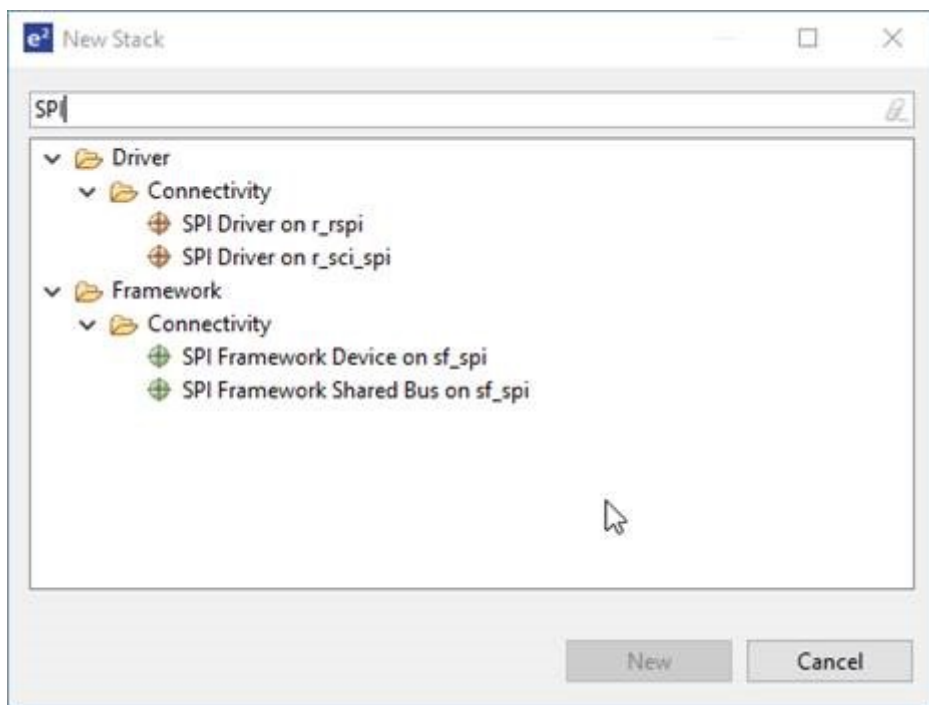


3.5.4 Module Search

To improve usability, the **Add New Synergy Module** functionality on the threads page has been improved. A new **Search...** menu is added to the **New Stack** menu hierarchy as seen in the following graphic.

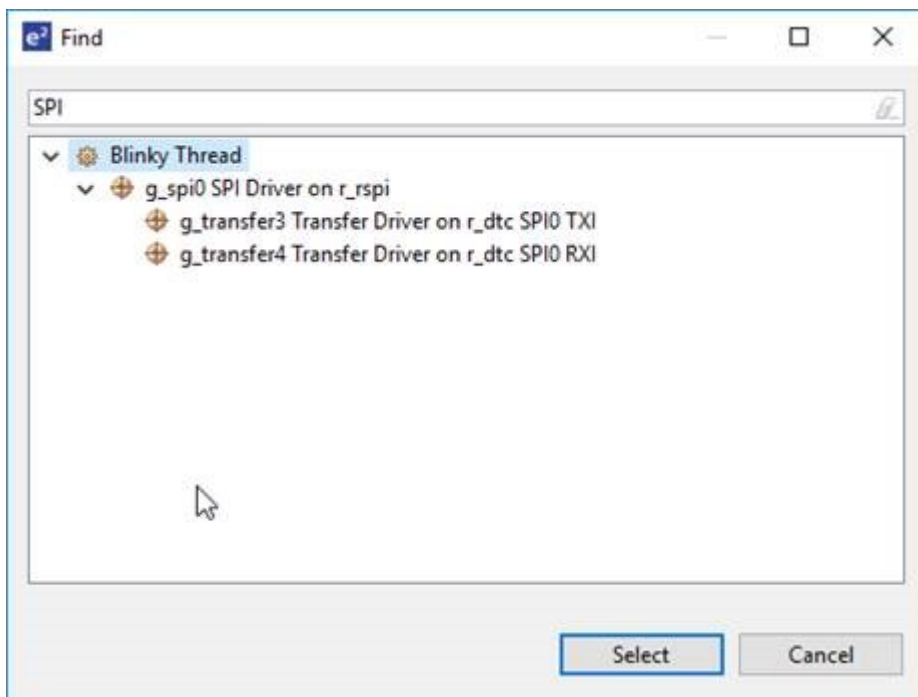


Clicking **Search...** opens a dialog allowing you to search and filter on the available SSP modules. In the following example, **SPI** is entered and the result is as shown.



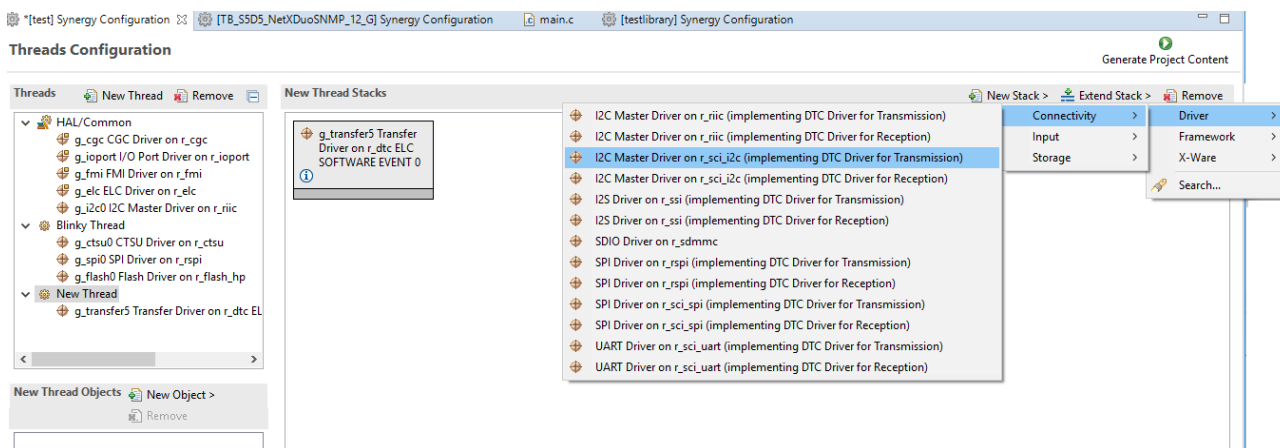
In addition to this functionality, a search of software stacks already created has also been implemented. This can be accessed by using the **CTRL+F** shortcut or **Edit >Find** menu when the **Threads** tab is focused. A dialog is shown with your configured stacks.

Then, when you type a search condition, the matching parts of the software stack are shown. Selecting the correct module and pressing the **Select** button automatically highlights the module in the Threads page as shown in an example graphic that follows.



3.5.5 Build Software Stacks from a Driver to Framework Level

The Synergy Editor has been improved to also allow you to build software stacks from a driver to framework level. Originally, the specification was designed so that you would choose the upper level interface and then the tooling builds the software stack down to the driver level. In some cases, it may make sense to build software frameworks from the driver layer up to framework layer. This option is now available from the **Extend Stack >** functionality when a module is selected.



3.5.6 Module Descriptions Files

In previous versions of e² studio, the files that held the configuration data values for the Synergy modules were copied to the project directory in the folder `.moduledescriptions`.

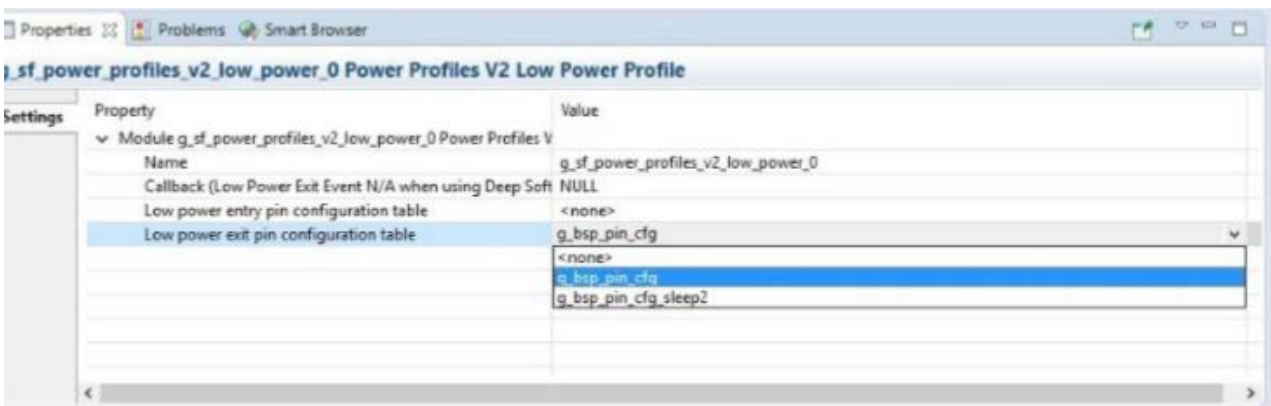
This made it possible to use the project even when the required SSP pack was not installed. However, it also increased the project directory size.

From this version of e² studio, the `.moduledescriptions` are now stored once at an application level. If you import an existing project into the latest e² studio, it will continue to use the `.moduledescriptions` in your project. If this is not available for some reason, or you create a new project, the editor will use the application stored in `.moduledescriptions`.

3.6 Synergy Pin Structures as enum in Properties View

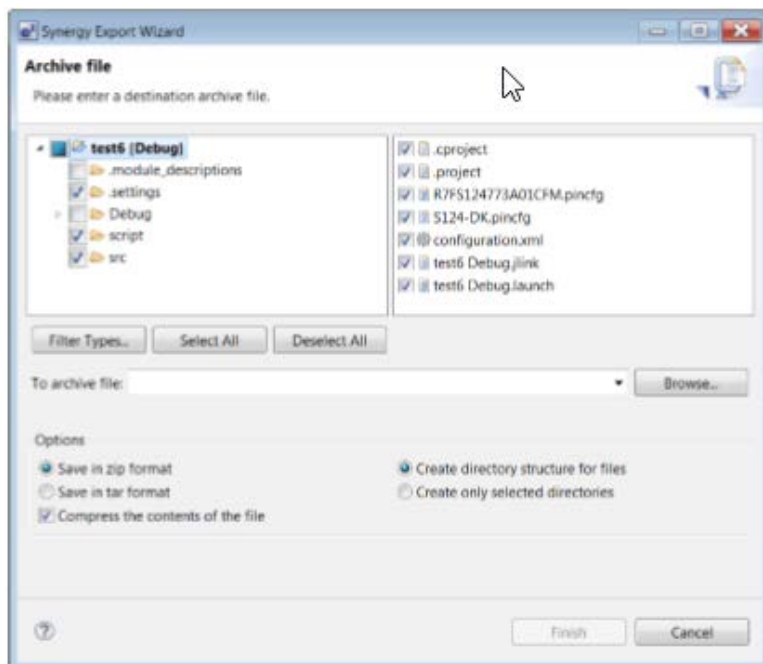
Pin configurations setup in the Synergy Pin view are now made available in the **Properties** view.

The generated data file name as listed in the **Pins** view is made available in the power profile pin configuration **Properties** page.



3.7 Synergy Project Explorer

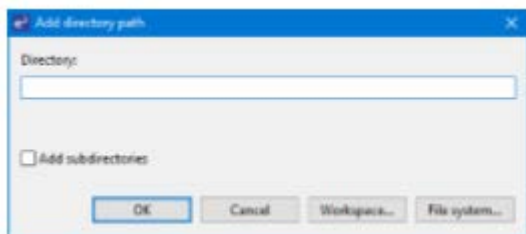
An improvement to the Synergy Project Exporter has been made to ensure that you do not accidentally include build directories and temporary data by default when exporting Synergy projects, as shown in the following graphic.



3.8 Customer Included File Paths

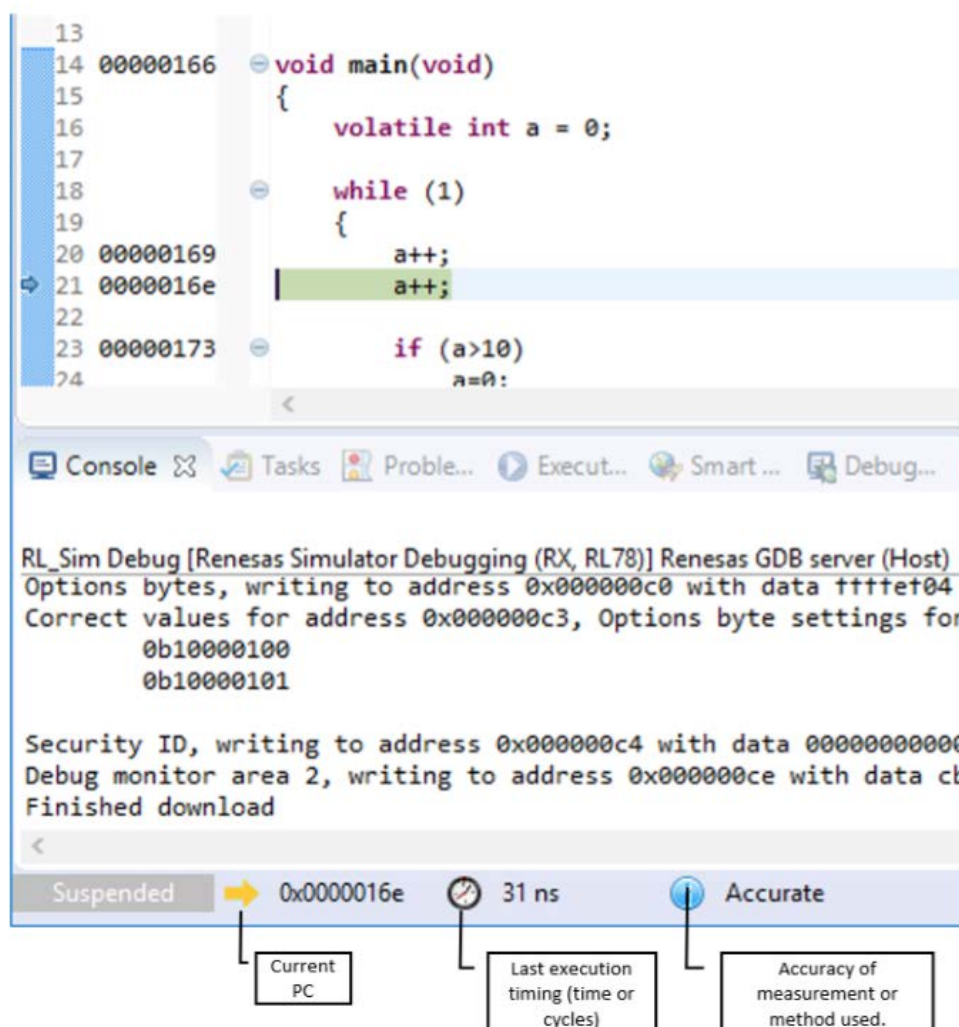
A new feature has been added in e² studio to support the faster addition of multiple include paths.

The **Add directory path** dialog has been modified to include an **Add subdirectories** option as shown in the following graphic. When you browse to a directory or enter a path using Eclipse placeholders, the subsequent subdirectories are scanned and added to the build settings.



3.9 Run Break Timer

A new feature has been added to e² studio to help you understand the last execution performance. This offers a way to quickly and automatically see the last execution performance timing in the e² studio status bar.



The view above shows the current program counter (PC), the last execution timing either in time or CPU cycles, and the accuracy or the measurement method used.

The following table shows the support available for various Synergy devices, with respect to the Run Timer Break feature.

Device	Debugger	Support
Synergy S1 Series (Cortex M0/M0+)	J-Link	System Time
Synergy S3, S5, S7 Series	J-Link	Data Watchpoint and Trace Unit – Cycle Count and number of overflows calculated using the System Time

3.10 Headless Build

When using e² studio to perform a headless build with the SSP, it can be difficult to setup a brand-new workspace and configure the license file location.

This has been improved by using a command line parameter on the e² studio command line as follows:

```
-vmargs -Dcom.renesas.synergyLicenseFile="<absolute path to license file>"
```

3.11 SSP Network Install

It is now possible to install the SSP in a shared network location and make e² studio installation point to that location by editing the `e2 studio.ini` file and adding the following line at the end of the file.

```
-Dcom.renesas.synergyPacksFolder=\\myServer\myPath\to\packs
```

On start-up, e² studio will read the installed packs from this location rather than the packs folder underneath the application folder.

3.12 Memory Usage View

When using updated device support files in e² studio or the Synergy Software Platform (SSP), the Memory Usage View now supports the graphical view to show usage in the ROM and RAM memory areas.

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 v7.3.0

5.1 Build refers to the old library after changing the board and building the project

Issue ID: 12724

Project build still refers to the old library that was deleted when the device is changed and project is regenerated.

5.2 Cannot import stacks to an empty thread

Issue ID: 12606

Importing stacks from a file does not show the available stacks when importing to a new empty thread.

5.3 ID byte programming with SEGGER J-Link DLL 6.32

Issue ID: 12356, 12863

Support for ID byte programming for S5D5, S5D3, and S128 devices is not available in SEGGER J-Link DLL version 6.32.

5.4 Errors in migrating project created with SSP v1.5.0-rc.1 to SSP v1.5.1

Issue ID: 13454

A project created with the SSP v1.5.0-rc.1 pack does not pick up the 1.5.0 packs that are not available in the SSP v1.5.1 patch, when migrating to SSP v1.5.1. This results in a build failure due to missing packs.

5.5 SSP v1.5.1 + build.2 standalone distribution installer does not navigate to the SSP User's Manual from e² studio SSP icon

Issue ID: 13505

The SSP User's Manual does not launch when clicking on the SSP icon in the Summary tab of the Synergy Configurator for projects created or migrated to patch versions.

5.6 Memory Usage view shows no information on Memory Usage

Issue ID: 11528

Memory usage view of diagnostic perspective in e² studio v7.3.0 shows no information on memory usage for any Synergy project.

5.7 Headless build issue with respect to Synergy license file

Issue ID: 11651

When using the headless build functionality with Synergy, the build will not execute unless the license file for the SSP is defined correctly.

5.8 e² studio allows importing of projects with spaces in the project name

Issue ID: 9845

e² studio v7.3.0 allows importing of projects with spaces (that is, blank characters) in the project name, that may lead to build errors.

5.9 Synergy project editor crashes on attempt to migrate a project with no module_description and old SSP version in the tool with only a new major version of SSP

Issue ID: 11740

In e² studio v7.3.0, if you import a project that was exported without the `.module_descriptions` folder, and the SSP version that the project was originally created with is not installed (only a new major version is installed), then the Synergy Configuration Editor crashes on opening `configuration.xml` (during an attempt to upgrade the project).

5.10 Configuration.xml being deleted during code generation

Issue ID: 12529

Generating the project content after changing the board in the BSP tab of a project created with a custom board pack, deletes the configuration.xml file of the project.

5.11 RTOS Resources view can cause e² studio to hang when you navigate to the Stacks tab in the view

Issue ID: 9517

When viewing the **Stacks** tab in the RTOS Resources view while debugging projects that include threads with large stack sizes, the RTOS Resources view may stop working, causing e² studio to stop responding.

5.12 RTOS Resources View can cause e² studio to hang (Stacks tab)

Issue ID: 9517

When viewing the **Stacks** tab in the **RTOS Resources** view while debugging projects that include threads with large stack sizes, the **RTOS Resources** view may stop working, causing e² studio to stop responding.

5.13 Correct error message not shown when build fails with big error message

Issue ID: 13792

When the error message is too big while building the project, an error "Buffer size too small" is shown instead of the actual build errors.

5.14 Build issues when importing a project and editing the thread stacks by removing some modules

Issue ID: 14479

The project build failed as it was referring to libraries that were deleted when a thread is modified by deleting the stack that the libraries were created with and adding a different stack. This issue is now fixed with the tools patch.

6. Known Issues in Release v7.3.0

6.1 S128 e² 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 e² 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 Enabling additional hex output in IAR compiler in e² studio breaks link stage

Issue ID: 14427

Build fails when enabling the hex output in project properties of a project created with the IAR8.x compiler.

Workaround: Removing the quotation marks around the linker configuration file in the project properties fixes the issue.

6.3 An error will occur depending on the address in the watchpoint setting

Issue ID: 12584

An error occurs when setting the watchpoint at certain addresses. Debug session cannot be started when the error watchpoints are still present.

Workaround: Remove the watchpoint from breakpoints view and start debug session.

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

Issue ID: 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.

To fix this issue, change the device, close the e² studio application and restart it. Then, the Smart Browser will have the correct device set.

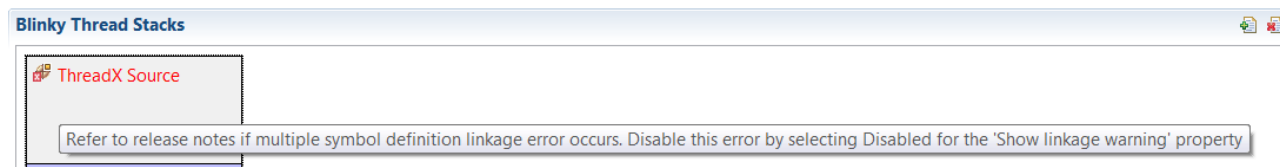
6.5 'Multiple definition' Linker errors occur when using both library and source for Express Logic components

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, e² studio displays an error marker after adding source code for an X-Ware™ module to your project:



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 e² 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.

6.6 Problems with Synergy Expressions showing incorrect values

Issue ID: IDE-7111

In some cases, when you are debugging with Synergy, the **Expressions** view can disagree with the underlying value of the variable in the memory view. To avoid this, enable the real-time refresh feature in the **Expressions** View, or remove and add back the variable into the **Expressions** view.

6.7 IAR Error Parser does not recognize errors triggered by the #error directive

Issue ID: IDE-7551

The IAR Error Parser does not recognize errors triggered by the #error directive and cannot be configured to do so by the user. This can be resolved by enabling the GCC error parser.

6.8 Switching board/device on the BSP tab changes project settings immediately, even if Synergy configuration is not saved

Issue ID: IDE-10147

When using the Synergy configurator, if the board and/or the device is changed on the **BSP** tab, the project options will change immediately if the core type was changed (for example, from a Cortex-M4 (S3A7, S7G2) to a Cortex-M0+ (S124)). These project option changes will be retained even if the Synergy configuration is not saved.

6.9 Repeated setting of Trace Start and Stop Eventpoints can lead to a situation where the Eventpoints fail to set

Issue ID: IDE-9612

On Synergy devices, repeated setting of Trace Start and Stop Eventpoints can lead to a situation where the Eventpoints fail to set.

Workaround: Disconnect from the target and reconnect.

6.10 Default Core Clock for SWV usage needs to be set manually

Issue ID: IDE-9393

On Synergy devices, the default **Core Clock** value for SWV usage must be manually set to the same as the system clock (in MHz). For S7 devices (where the trace clock is halved), this should be set at half the system clock. For S5 devices, the trace clock divider must be set to /4 and the trace clock speed set to 60 MHz.

6.11 Using a placeholder in the Synergy license dialog causes an exception

Issue ID: IDE-8726

Using a placeholder in the Synergy license dialog causes an exception. Use a full path to the file instead.

6.12 Trace view can sometimes fail with 0 records for Synergy S3 devices

Issue ID: IDE-8461

On Synergy S3 MCU Series-based devices, the trace data display in the **Trace** view can sometimes fail with 0 records.

6.13 Enabling BSD sockets in ThreadX® source corrupts data in RTOS Resources view and Debug view

Issue ID: IDE-12878

When enabling BSD sockets in the ThreadX® source code (through the **Threads** tab in the Synergy Project Editor in the **Properties** view), updates to the **RTOS Resources** view and the e² studio **Debug** view will no longer work correctly.

6.14 ALERASE ID code unlock does not work correctly

Issue ID: IDE-12571

Currently, the use of the special ALERASE ID code unlock does not work correctly with e² studio. The device will remain locked.

Workaround: Use the ALERASE code in the RFP tool instead. See www.renesas.com/rfp.

6.15 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>.

6.16 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}`

6.17 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

6.18 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.

6.19 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

6.20 Projects with customized stacks will autofill the default modules in the stack when migrating to SSP 1.6.0 using e² studio 7.3

Issue ID: 14436

Some of the old projects with customized stacks might fail after migrating to e² studio 7.3 due to autofill of default modules.

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

6.21 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.

6.22 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 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-list.

6.23 Copy and paste support in the Threads page of the Synergy editor needs e² studio to be restarted to work correctly

Issue ID: IDE-11337

In certain situations, it is possible for the copy/paste actions to stop working in the Synergy editor, Threads page.

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

6.24 [Trace view] The Filter + Find feature seems not work correctly with Synergy project

Issue ID: IDE-9057

Trace find and filter functionality is currently not supported for ARM-based devices.

6.25 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.

6.26 ISDE User Experience Improvement

Issue ID: 12826

If the Synergy Configuration screen is maximized in e² studio, the property window will not be updated.

Applies to: All MCUs

Workaround: Minimize the Synergy Configuration screen before clicking on elements when editing properties.

6.27 Selecting .tar format does not export the project in tar format

Issue ID: 12925

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

Applies to: Not Applicable

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

6.28 Projects that do not have Synergy builder selected in properties can lead to build errors

Issue ID: 14105

Projects that do not have the Synergy builder selected in the project properties can lead to build errors after deleting the Synergy folder and building the project.

Applies to: All MCUs

Workaround: Select the Synergy builder in project properties.

6.29 Build fails due to failure of Generate Project Content for modified projects in e² studio and GCC 7.2

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.

Applies to: All MCUs

Workaround: None

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

7. Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Feb.28.19	-	Initial release
1.01	Apr.02.19	-	Second release

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