

Integrated Development Environment e² studio

How to install features additionally in e² studio

Introduction

e² studio, the integrated development environment for Renesas microcontrollers, is installed by downloading the installer from the Renesas website and running it. e² studio has functions to add features, add toolchains, and perform updates without having to run the installer again.

This document describes the operating procedure to add features, add toolchains, and perform updates on e² studio.

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1. Overview

1.1 Purpose

e² studio is an integrated development environment for Renesas microcontrollers based on the open source "Eclipse".

To install e² studio for the first time, download the installer from the Renesas website and run it. e² studio installer can not only install a new e² studio, but also additionally install device families, functions, toolchains, etc. to an already installed e² studio. Also, if the installer installs a newer version than the installed e² studio, you can update the installed e² studio.

e² studio has functions to add features, add toolchains, and perform updates without having to run the installer again.

This document describes the operating procedure to add features, add toolchains, and perform updates on e² studio.

1.2 Environment

Renesas have confirmed the operating procedure explained in this document in the following environment.

[OS]

- OS Windows 10 x64

[Tool]

- e² studio 2023-07, 2023-10

2. Install e² studio newly

To install e² studio for the first time, download the installer from the Renesas website and run it.

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

Starting with e² studio 2023-07, e² studio installer supports 3 installation types. User must select one installation type during installation. Each installation type has different features that you can install. The outline of 3 installation types is listed below.

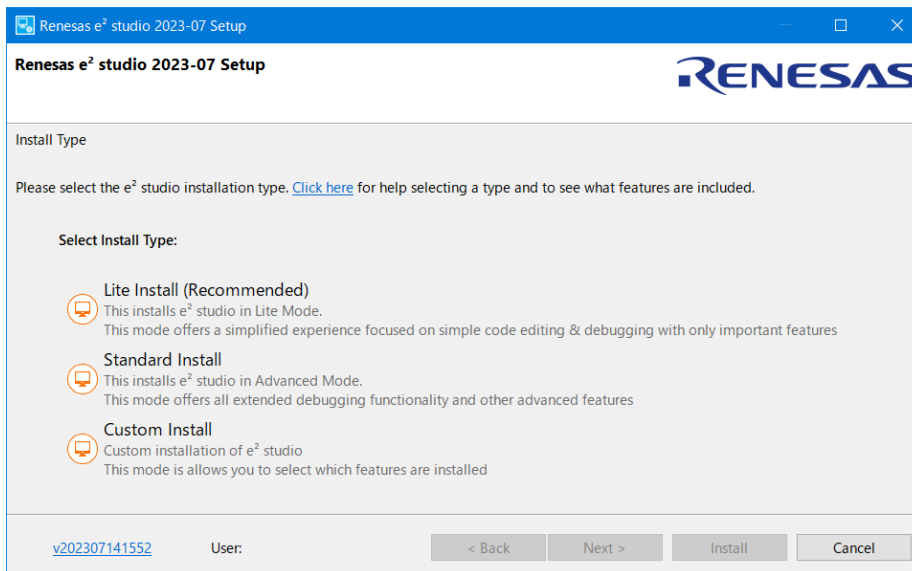


Figure 1

- **Lite Install (Recommended)**
This installation type offers a simplified experience focused on simple code editing and debugging with only important features.
- **Standard Install**
This installation type offers all extended debugging functionality and other advanced features.
- **Custom Install**
This installation type allows you to select which features installed.
Its behavior is the same as the previous installer.

For detailed installation instructions, please see the FAQ page below.

[Installation of e² studio | Renesas Customer Hub](#)

3. Update e² studio

There are 2 ways to update e² studio:

- Run the installer
You can update e² studio by running the installer that installs a newer version than the installed e² studio. Please select "Upgrade" in the installer. This way also allows you to add device families.
- Run the update function on e² studio
You can update e² studio by selecting the menu [Check for Updates] on e² studio. It is not possible to add device families, features, or toolchains at the same time as the updating. To add device families, features, toolchain, etc. on e² studio, see [4. Install various features additionally](#) and follow the operating procedure.

This chapter describes the operating procedure for the update function on e² studio.

- 1) Start e² studio.
- 2) When e² studio starts, select the menu [Help] > [Check for Updates].
A process will run to check for available updates.
* The process of checking for available updates may take some time.
- 3) When the process of checking for available updates is completed and an available update is found, the [Available Updates] dialog (wizard type) will appear. Check the features you want to update, and then click [Next >] button.

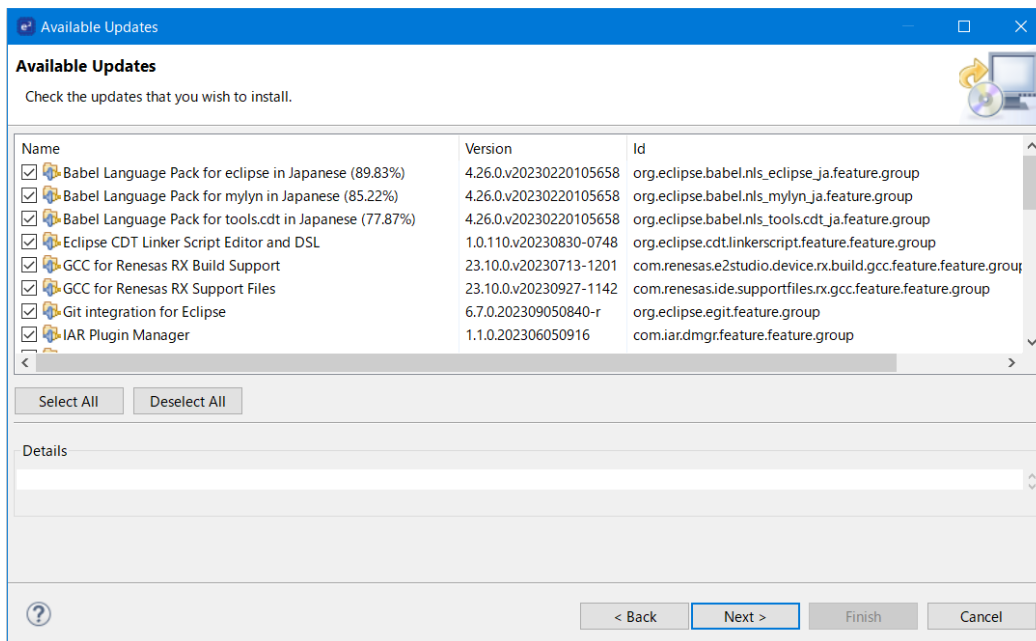


Figure 2

* If no available updates are found, the [Information] message will be displayed, so click the [OK] button. The update will be canceled.

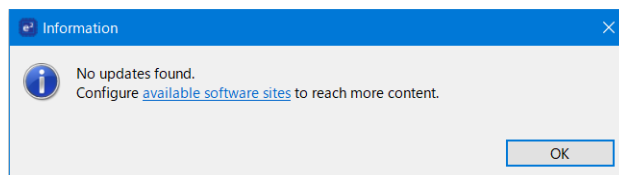


Figure 3

- 4) The [Update Details] page is displayed. Click the [Next >] button.
- 5) The [Review Licenses] page is displayed. Check the [I accept the terms of the license agreements] and click the [Finish] button.

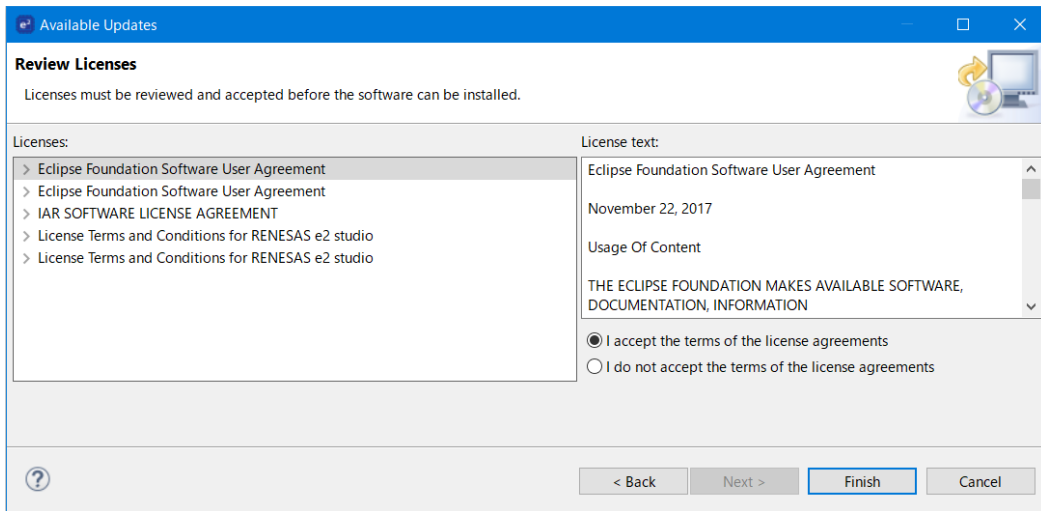


Figure 4

- 6) The update process will start.
* The update process may take some time.
- 7) During the update process, the [Trust] dialog will be displayed. Click the [Select All] button, then click the [Trust Selected] button.

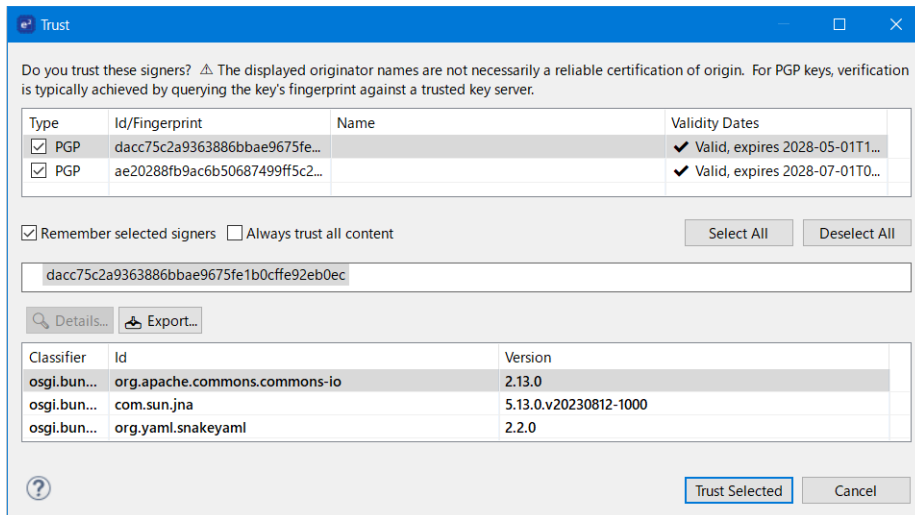


Figure 5

- 8) During the update process, the [Software Updates] message will be displayed. Click the [Restart Now] button.

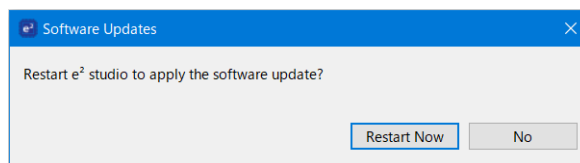


Figure 6

- 9) e² studio will restart.
Once e² studio has restarted, e² studio update is complete.

4. Install various features additionally

When installing various features additionally to an already installed e² studio, the operating procedure that need to be executed will differ depending on the features you want to add. This chapter describes the installation operating procedure for each feature you want to add. Make sure to check the reference for the feature you want to add in the table below and perform the correct operating procedure.

Features	Reference
Toolchains	4.1 Install toolchains additionally
QE (Quick and Effective tool solution)	4.2 Install QE (Quick and Effective tool solution) additionally
Plugins on Eclipse Marketplace	4.3 Install plugins additionally on Eclipse Marketplace
New software	4.4 Install new software additionally

* If you encounter any problems when performing these procedures, please check the FAQ pages listed in [5. Reference information](#).

4.1 Install toolchains additionally

Toolchains are installed by downloading the installer for each toolchain from a toolchain specific website and running it.

There is a function on e² studio to install toolchains additionally, that function allows you to install a toolchain without having to go through the trouble of searching and downloading a toolchain installer.

This chapter describes the operating procedure for that function to install toolchains additionally on e² studio.

- 1) Start e² studio.
- 2) When e² studio starts, select the menu [Help] > [Add Renesas Toolchains].
- 3) The [Renesas Toolchain Management] panel on the [Preferences] dialog is appeared. Click the [Download...] button.

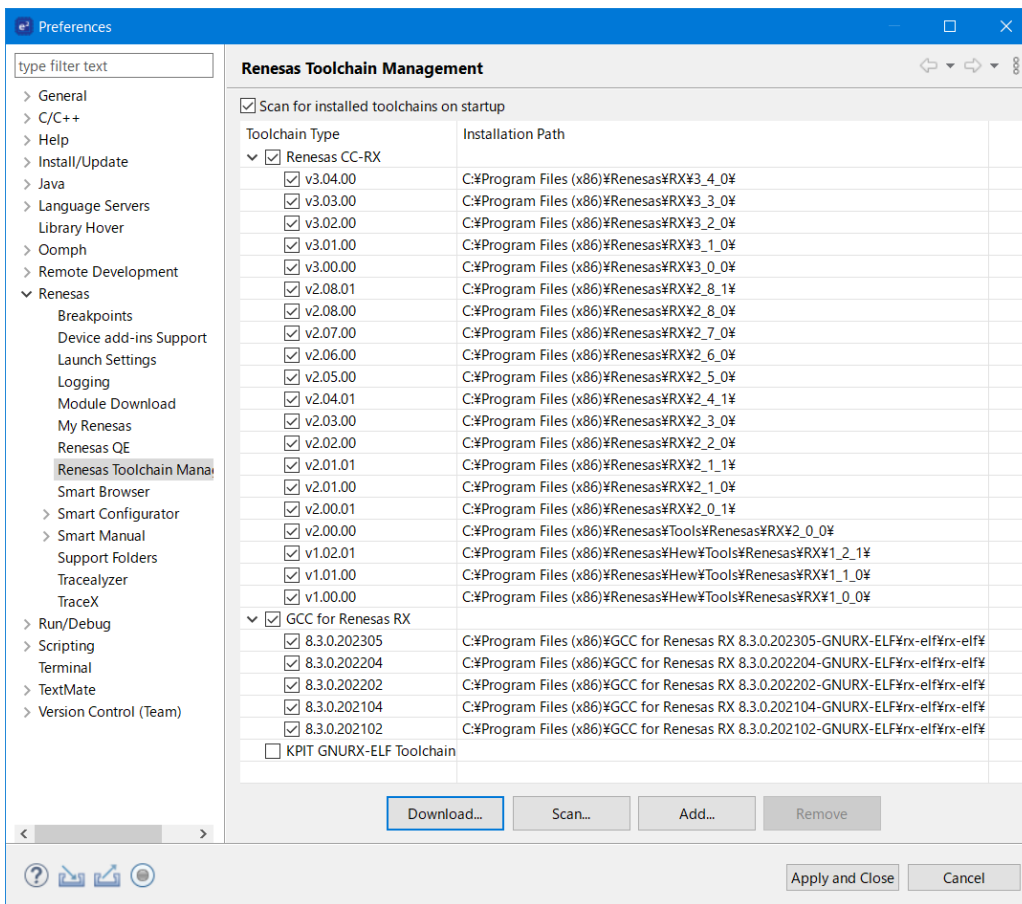


Figure 7

- 4) The [Install] dialog is appeared. Check the toolchain name you want to install additionally, and then click the [Finish] button.
 * Check the [Run toolchain scan after installing toolchains (some toolchains may need to be added manually)] checkbox to run a toolchain scan after installing toolchains and make the installed toolchains available to your project. Checking this checkbox is our recommendation.

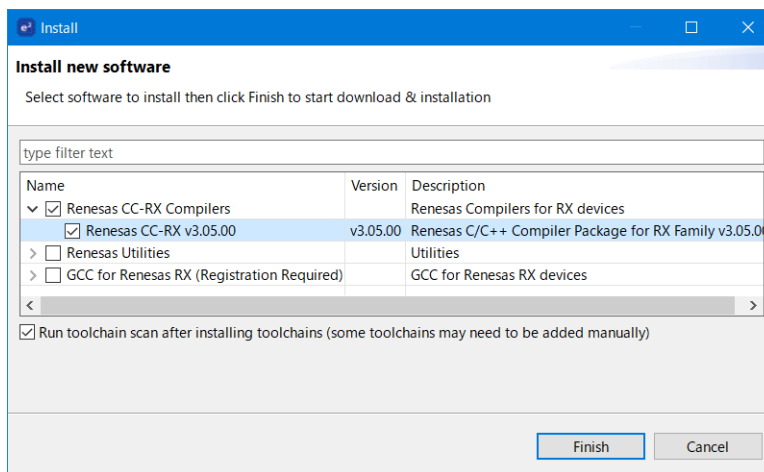


Figure 8

- 5) The toolchain installer will be automatically downloaded and run. Follow the installer wizard instructions to proceed with the toolchain installation.
- 6) When the installation is complete, the [Renesas Toolchain Management] panel on the [Preferences] dialog is displayed.

- 7) (If you checked the [Run toolchain scan after installing toolchains (some toolchains may need to be added manually)] checkbox in step 4, this step is not necessary, and you can proceed to the next step) Click the [Scan] button. The installed toolchains are scanned and the toolchain you installed is added to the toolchains list.
- 8) Click the [Apply and Close] button.

The toolchain installation is complete.

4.2 Install QE (Quick and Effective tool solution) additionally

Installing QE tools for assisting in application development expands the functionality of the e² studio and easily starts applications. A QE provides a GUI that will guide you in setting up the various functions you require and incorporates knowhow for the development of the given functions.

There are 2 ways to install QE additionally: by running QE installer and by running QE installation function on e² studio.

This chapter describes the operating procedure for QE installation function on e² studio.

- 1) Start e² studio.
- 2) When e² studio starts, click the menu [Renesas Views] > [Renesas Software Install].
- 3) The [Renesas Software Installer] dialog is appeared. Select "Renesas QE", and then click [Next >] button.

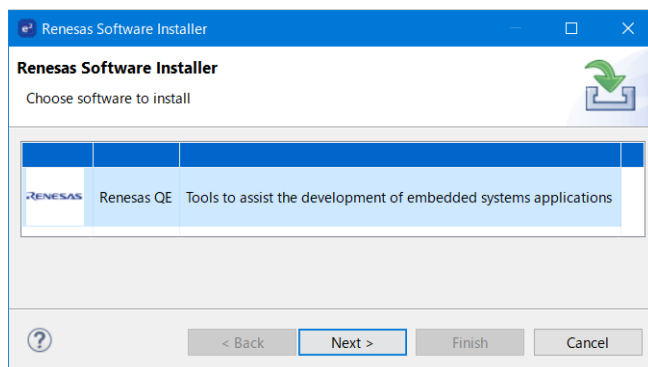


Figure 9

- 4) The [Install Extensions] page is displayed. Check the checkbox of QE you want to install, then click the [Finish] button.

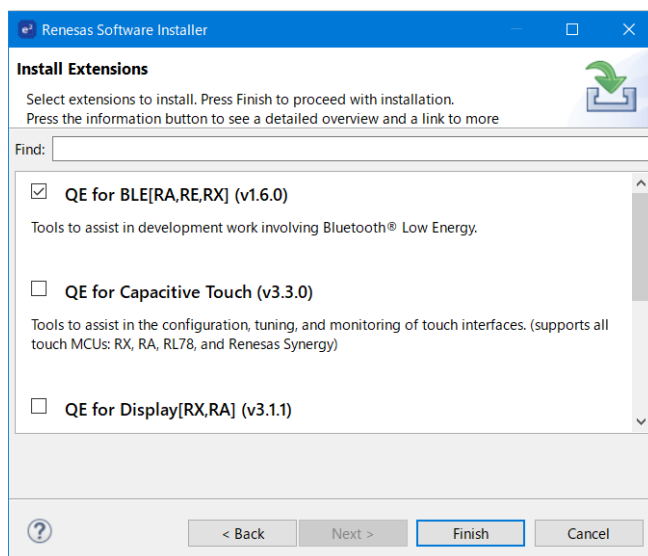


Figure 10

5) The [Install] dialog is appeared. Click the [Next >] button.

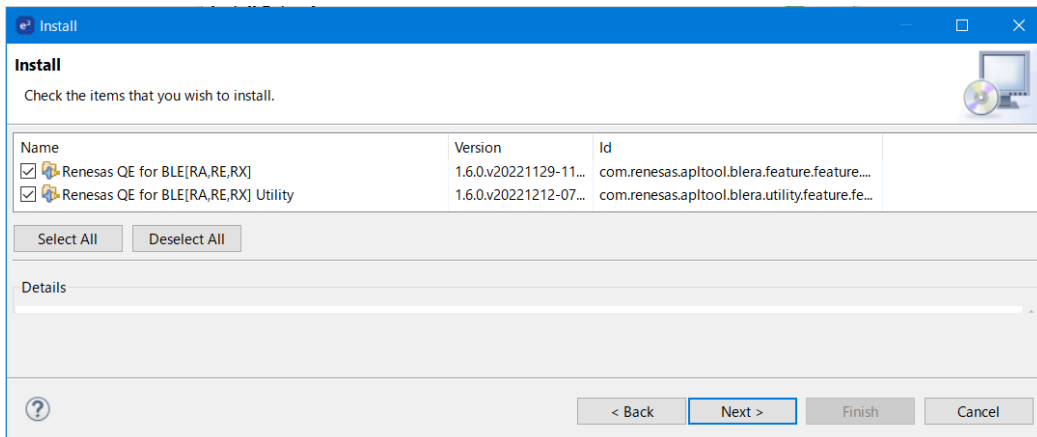


Figure 11

6) The [Update Details] page is displayed. Click the [Next >] button.

7) The [Review Licenses] page is displayed. Check the [I accept the terms of the license agreements] and click the [Finish] button.

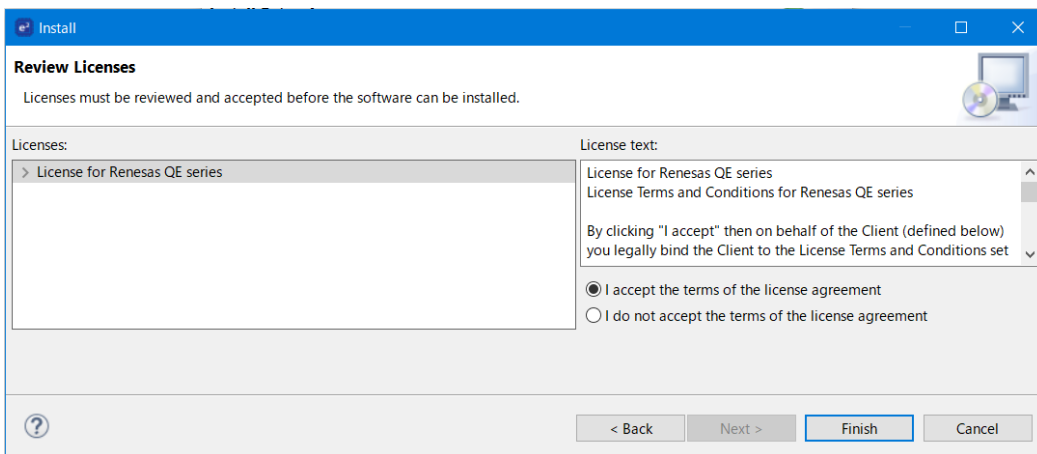


Figure 12

8) The install process will start. t

* The install process may take some time.

9) During the update process, the [Trust Authorities] dialog will be displayed. Click the [Select All] button, then click the [Trust Selected] button.

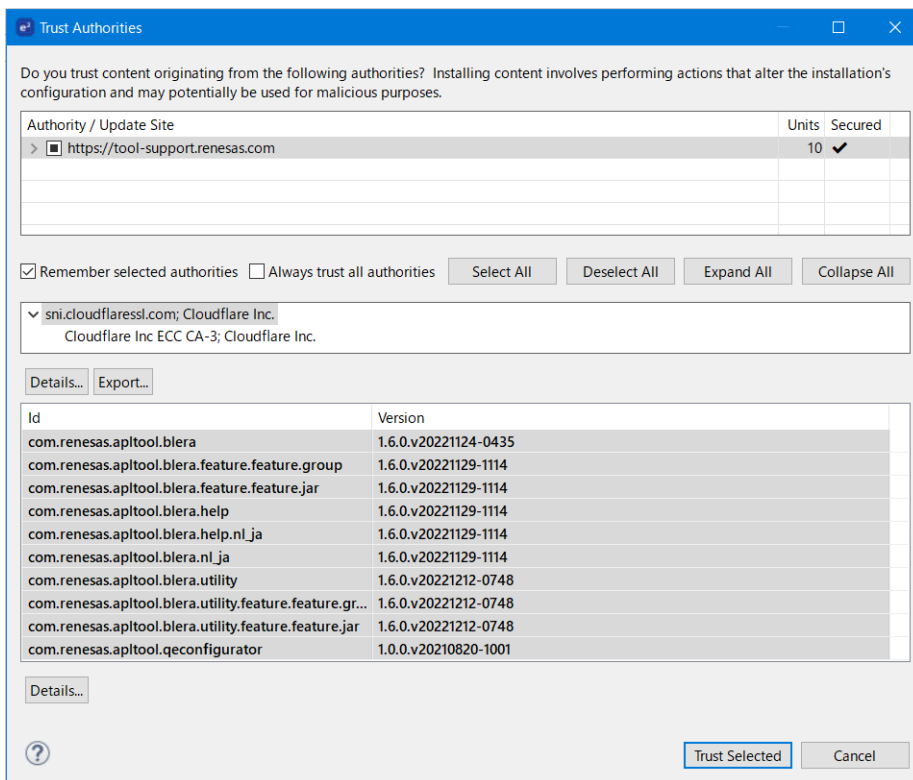


Figure 13

- 10) During the update process, the [Trust Artifacts] dialog will be displayed. Click the [Select All] button, then click the [Trust Selected] button.

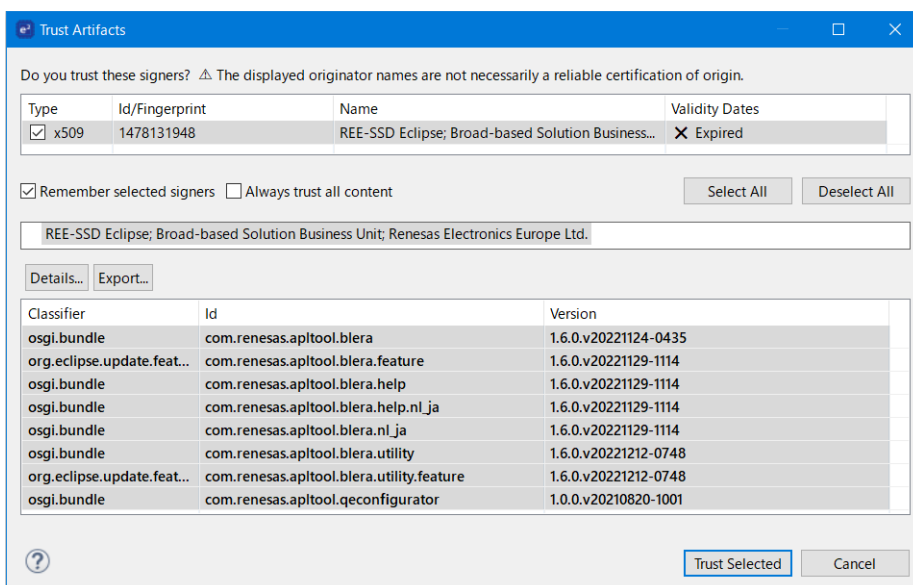


Figure 14

- 11) During the update process, the [Software Updates] message will be displayed. Click the [Restart Now] button.

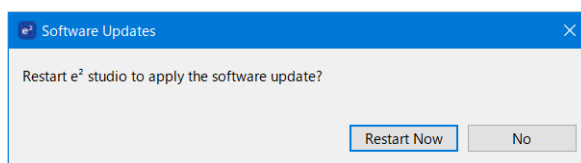


Figure 15

12) e² studio will restart.

Once e² studio has restarted, QE installation is complete.

4.3 Install plugins additionally on Eclipse Marketplace

The Eclipse Marketplace publishes a large number of plugins available for Eclipse. Users can freely use plugins through the Eclipse Marketplace. Plugins available for Eclipse are basically available for e² studio as well. However, Renesas do not guarantee its operation, so please use it at your own responsibility.

There are 2 ways to install plugins in e² studio through the Eclipse Marketplace:

- Run the Eclipse Marketplace function on e² studio
- Drag and drop plugin on the Eclipse Marketplace website ([New and Updated Solutions | Eclipse Plugins, Bundles and Products - Eclipse Marketplace | Eclipse Foundation](#)) into e² studio

This chapter describes the operating procedure for the Eclipse Marketplace function on e² studio.

- 1) Start e² studio.
- 2) When e² studio starts, select the menu [Help] > [Eclipse Marketplace...].
- 3) The [Eclipse marketplace] window is appeared. Find the plugin you want to install using the search function on the window.
- 4) When you find a plugin you want to install, click the [Install] button for that plugin item.

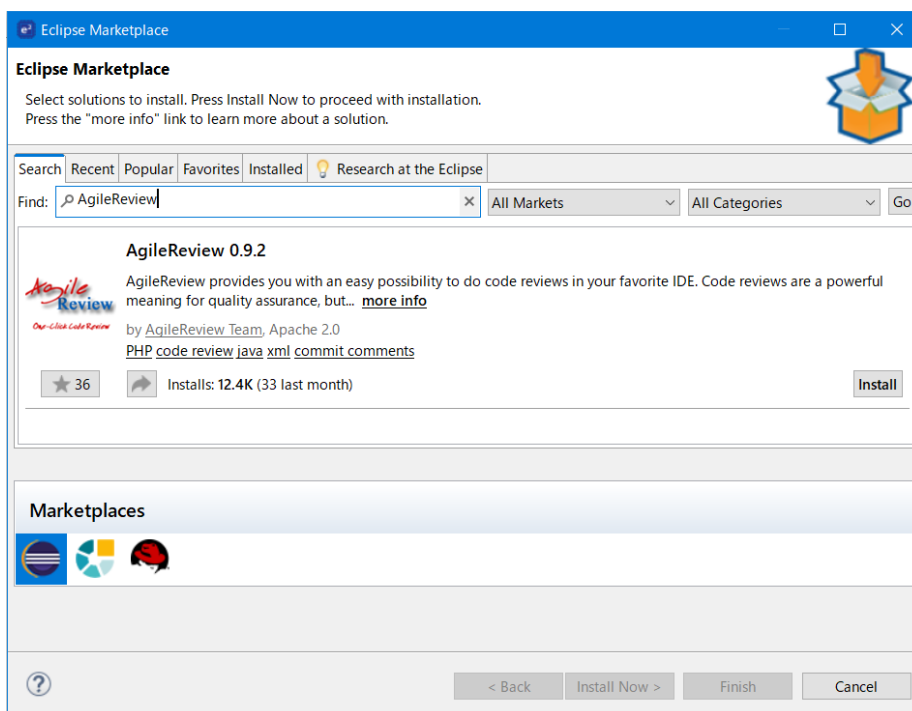


Figure 16

- 5) Install process will start. Please follow the on-screen instructions to agree to the license.
* The install process may take some time.
- 6) During the update process, the [Trust Authorities] dialog will be displayed. Click the [Select All] button, then click the [Trust Selected] button.

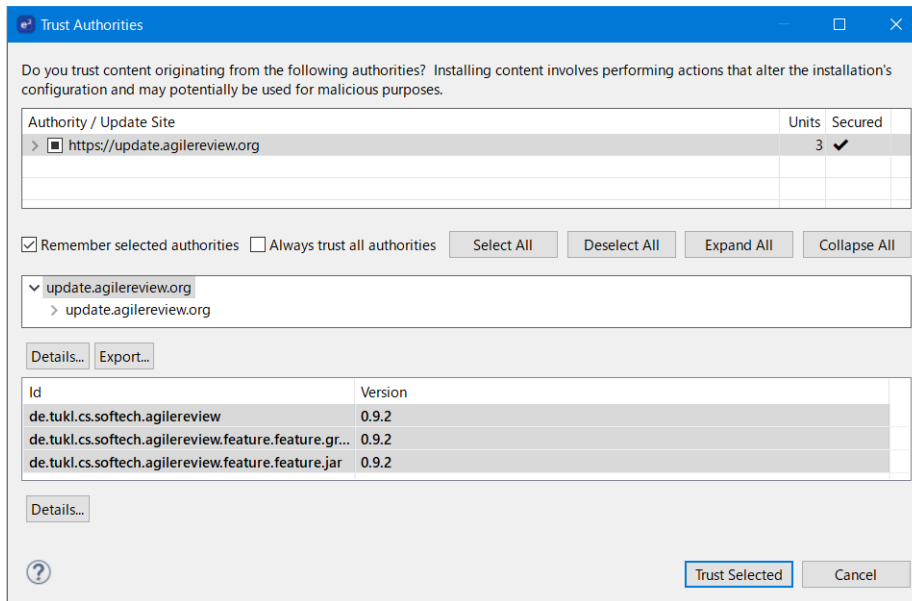


Figure 17

- 7) During the update process, the [Trust Artifacts] dialog will be displayed. Click the [Select All] button, then click the [Trust Selected] button.

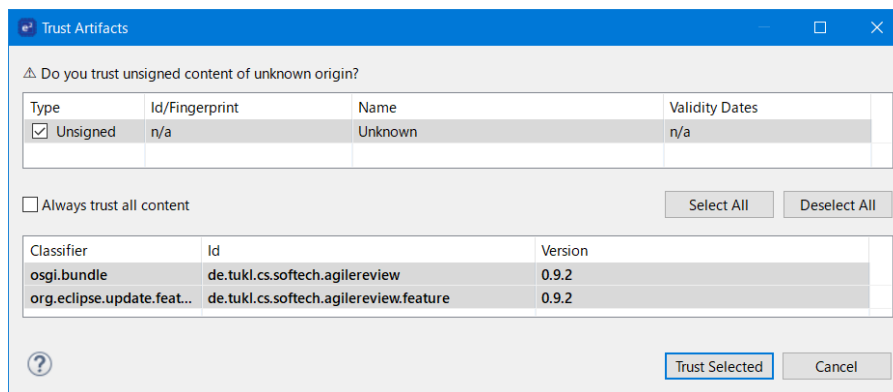


Figure 18

- 8) During the update process, the [Software Updates] message will be displayed. Click the [Restart Now] button.

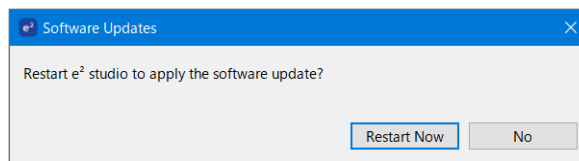


Figure 19

- 9) e² studio will restart.
Once e² studio has restarted, plugin installation is complete.

4.4 Install new software additionally

e² studio has a function to install features additionally. You can run this function to install features additionally that you did not select during installation. You can also install software additionally whose location are known.

This function requires you to select the software you want to install module by module. If the selected module has dependencies with other modules, you will need to install related modules additional or update to adjust

versions between modules. Using this function requires advanced knowledge of the software you are installing. Therefore, when installing features additionally instead of running this function unless there is a special reason.

- 1) Start e² studio.
- 2) When e² studio starts, select the menu [Help] > [Install New Software...].
- 3) The [Install] dialog is appeared. Please do one of the following:
 - Install features with known location.
Please enter the location\ in the [Work with:] textbox.
 - Install features additionally provided by e² studio.
Please select "e² studio Update Site" in the [Work with:] drop-down list.
- 4) The modules will appear in the list. Select the module you want to install, and then click the [Next >] button.

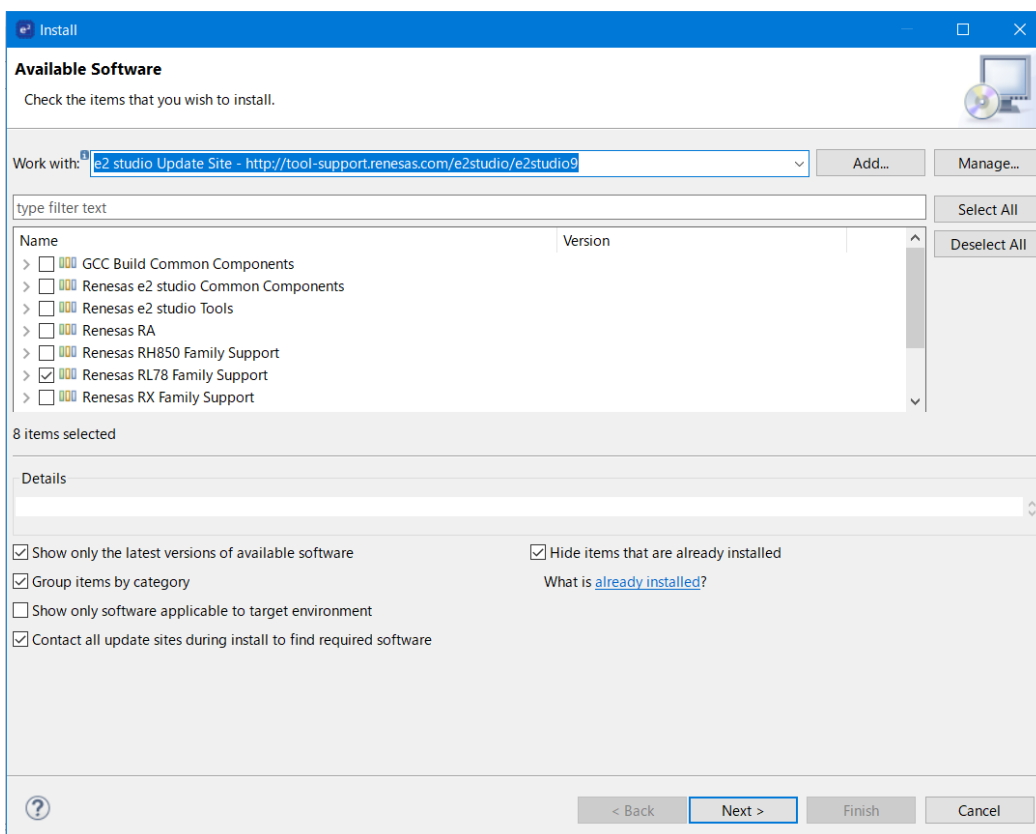


Figure 20

- 5) If dependencies between modules need to be adjusted, the Install Repair Page page will be displayed. Select one of the alternative solutions and click the [Next] button. If no dependency coordination between modules is required, this page will not be displayed.

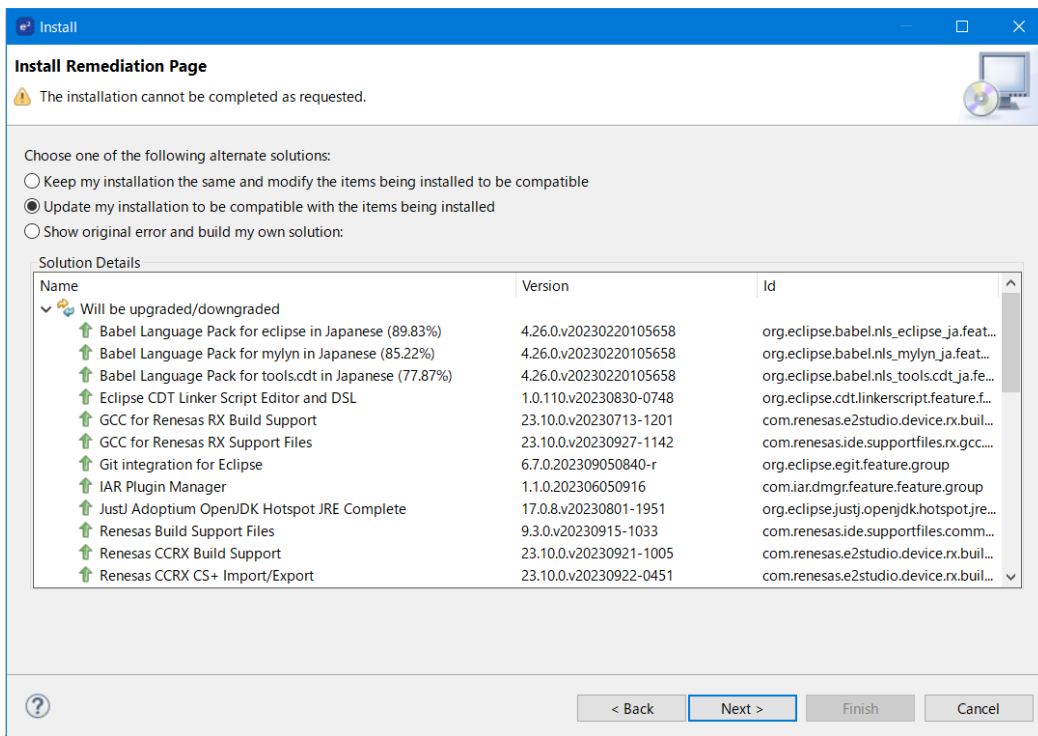


Figure 21

- 6) The [Update Details] page is displayed. Click the [Next >] button.
- 7) The [Review Licenses] page is displayed. Check the [I accept the terms of the license agreements] and click the [Finish] button.

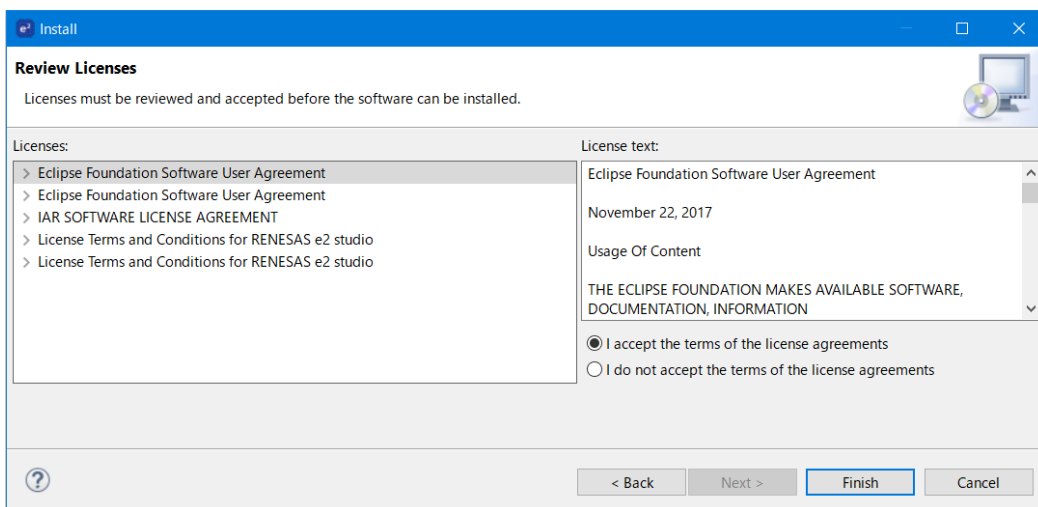


Figure 22

- 8) The installation process will start.
* The installation process may take some time.
- 9) During the update process, the [Trust] dialog will be displayed. Click the [Select All] button, then click the [Trust Selected] button.

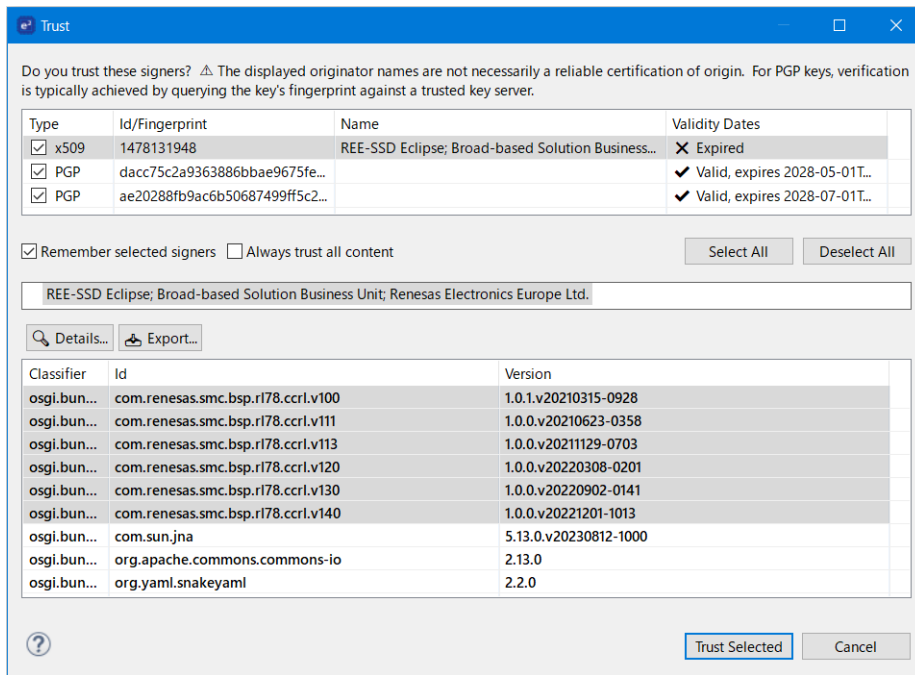


Figure 23

- 10) During the update process, the [Software Updates] message will be displayed. Click the [Restart Now] button.

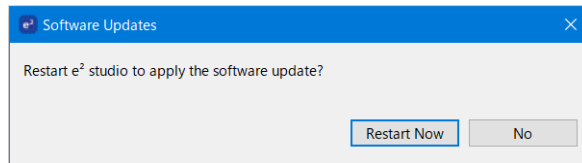


Figure 24

- 11) e² studio will restart.

Once e² studio has restarted, the installation is complete.

5. Reference information

The following FAQ page is related to the information explained in this document. Please take a look at them as well.

- Installation of e² studio
[Installation of e² studio | Renesas Customer Hub](#)
- How to Install a Generic Eclipse Plug-in on e² studio
[How to Install a Generic Eclipse Plug-in on e² studio | Renesas Customer Hub](#)
- Adding features later in installed e² studio
[Adding features later in installed e² studio | Renesas Customer Hub](#)
- How can I install and update compilers for e² studio
[How can I install and update compilers for e² studio? | Renesas Customer Hub](#)
- e² studio FAQs
[e² studio FAQs | Renesas Customer Hub](#)

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Nov.16.23	All	New create

General Precautions in the Handling of Microprocessing Unit and Microcontroller Unit Products

The following usage notes are applicable to all Microprocessing unit and Microcontroller unit products from Renesas. For detailed usage notes on the products covered by this document, refer to the relevant sections of the document as well as any technical updates that have been issued for the products.

1. Precaution against Electrostatic Discharge (ESD)

A strong electrical field, when exposed to a CMOS device, can cause destruction of the gate oxide and ultimately degrade the device operation. Steps must be taken to stop the generation of static electricity as much as possible, and quickly dissipate it when it occurs. Environmental control must be adequate. When it is dry, a humidifier should be used. This is recommended to avoid using insulators that can easily build up static electricity.

Semiconductor devices must be stored and transported in an anti-static container, static shielding bag or conductive material. All test and measurement tools including work benches and floors must be grounded. The operator must also be grounded using a wrist strap. Semiconductor devices must not be touched with bare hands. Similar precautions must be taken for printed circuit boards with mounted semiconductor devices.

2. Processing at power-on

The state of the product is undefined at the time when power is supplied. The states of internal circuits in the LSI are indeterminate and the states of register settings and pins are undefined at the time when power is supplied. In a finished product where the reset signal is applied to the external reset pin, the states of pins are not guaranteed from the time when power is supplied until the reset process is completed. In a similar way, the states of pins in a product that is reset by an on-chip power-on reset function are not guaranteed from the time when power is supplied until the power reaches the level at which resetting is specified.

3. Input of signal during power-off state

Do not input signals or an I/O pull-up power supply while the device is powered off. The current injection that results from input of such a signal or I/O pull-up power supply may cause malfunction and the abnormal current that passes in the device at this time may cause degradation of internal elements. Follow the guideline for input signal during power-off state as described in your product documentation.

4. Handling of unused pins

Handle unused pins in accordance with the directions given under handling of unused pins in the manual. The input pins of CMOS products are generally in the high-impedance state. In operation with an unused pin in the open-circuit state, extra electromagnetic noise is induced in the vicinity of the LSI, an associated shoot-through current flows internally, and malfunctions occur due to the false recognition of the pin state as an input signal become possible.

5. Clock signals

After applying a reset, only release the reset line after the operating clock signal becomes stable. When switching the clock signal during program execution, wait until the target clock signal is stabilized. When the clock signal is generated with an external resonator or from an external oscillator during a reset, ensure that the reset line is only released after full stabilization of the clock signal. Additionally, when switching to a clock signal produced with an external resonator or by an external oscillator while program execution is in progress, wait until the target clock signal is stable.

6. Voltage application waveform at input pin

Waveform distortion due to input noise or a reflected wave may cause malfunction. If the input of the CMOS device stays in the area between V_{IL} (Max.) and V_{IH} (Min.) due to noise, for example, the device may malfunction. Take care to prevent chattering noise from entering the device when the input level is fixed, and also in the transition period when the input level passes through the area between V_{IL} (Max.) and V_{IH} (Min.).

7. Prohibition of access to reserved addresses

Access to reserved addresses is prohibited. The reserved addresses are provided for possible future expansion of functions. Do not access these addresses as the correct operation of the LSI is not guaranteed.

8. Differences between products

Before changing from one product to another, for example to a product with a different part number, confirm that the change will not lead to problems. The characteristics of a microprocessing unit or microcontroller unit products in the same group but having a different part number might differ in terms of internal memory capacity, layout pattern, and other factors, which can affect the ranges of electrical characteristics, such as characteristic values, operating margins, immunity to noise, and amount of radiated noise. When changing to a product with a different part number, implement a system-evaluation test for the given product.

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10. Please contact a Renesas Electronics sales office for details as to environmental matters such as the environmental compatibility of each Renesas Electronics product. You are responsible for carefully and sufficiently investigating applicable laws and regulations that regulate the inclusion or use of controlled substances, including without limitation, the EU RoHS Directive, and using Renesas Electronics products in compliance with all these applicable laws and regulations. Renesas Electronics disclaims any and all liability for damages or losses occurring as a result of your noncompliance with applicable laws and regulations.
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(Note2) "Renesas Electronics product(s)" means any product developed or manufactured by or for Renesas Electronics.

(Rev.5.0-1 October 2020)

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