

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.

Contents

1. Overview	2
1.1 Purpose	2
1.2 Environment	2
2. Install e ² studio newly	3
3. Update e ² studio	4
4. Install various features additionally	6
4.1 Install toolchains additionally.....	6
4.2 Install QE (Quick and Effective tool solution) additionally.....	8
4.3 Install plugins additionally on Eclipse Marketplace	11
4.4 Install new software additionally.....	12
5. Reference information	16
Revision History.....	17

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.

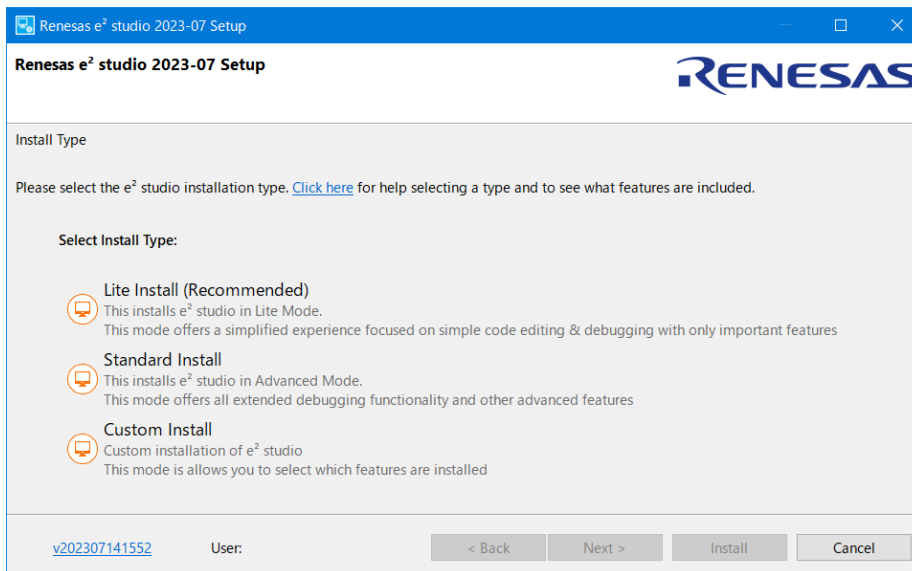


Figure 1

- **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.

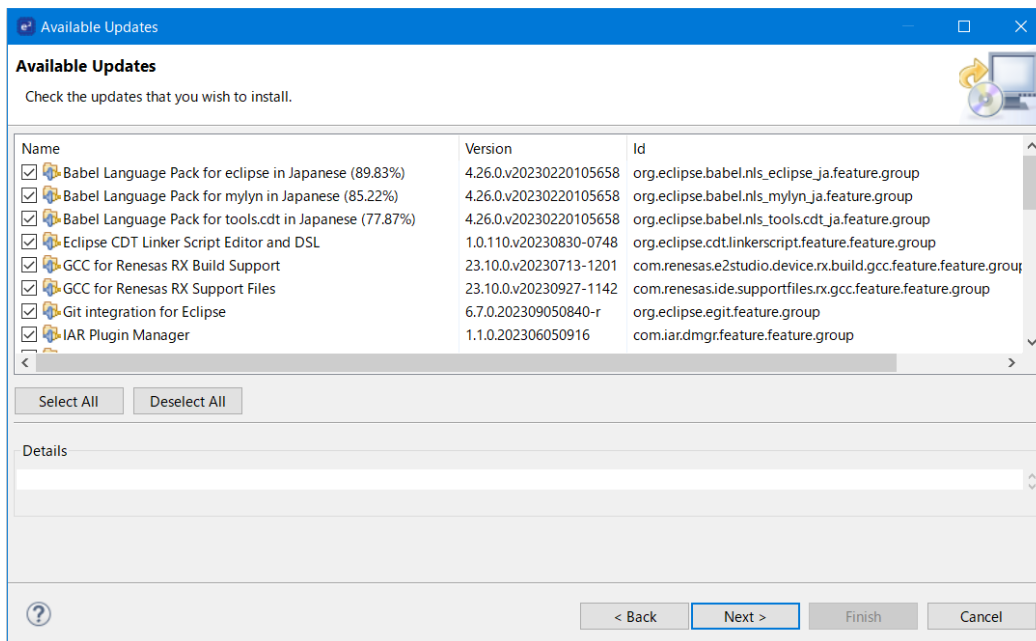


Figure 2

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

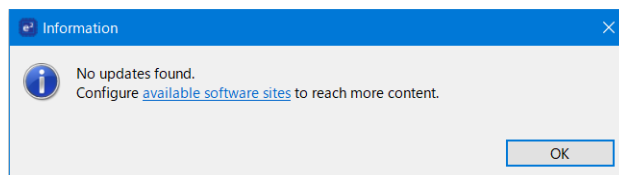


Figure 3

- 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.

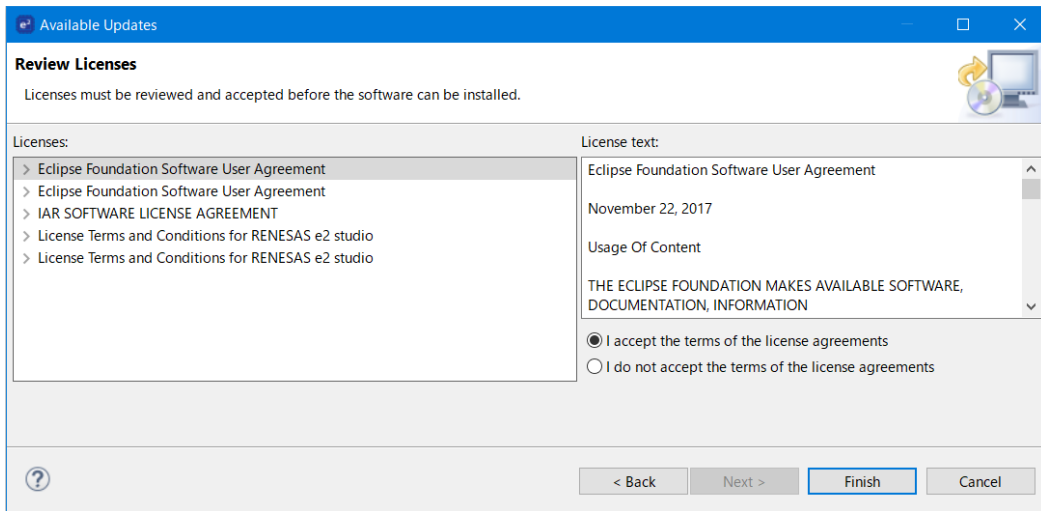


Figure 4

- 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.

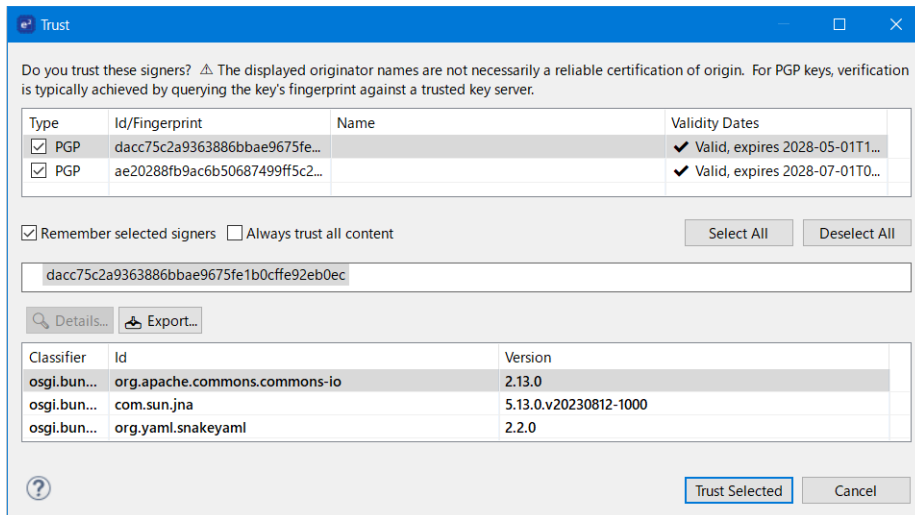


Figure 5

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

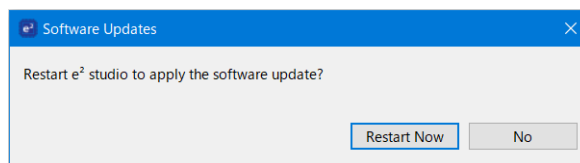


Figure 6

- 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.

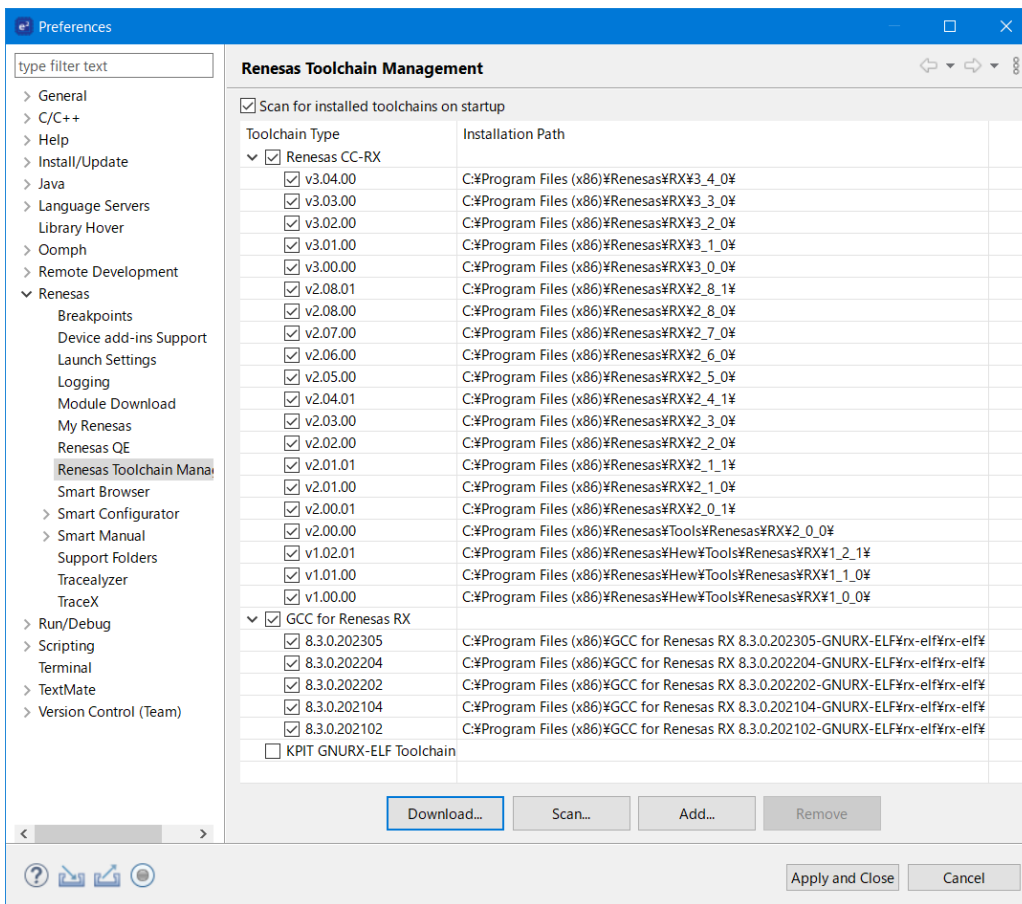


Figure 7

- 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.

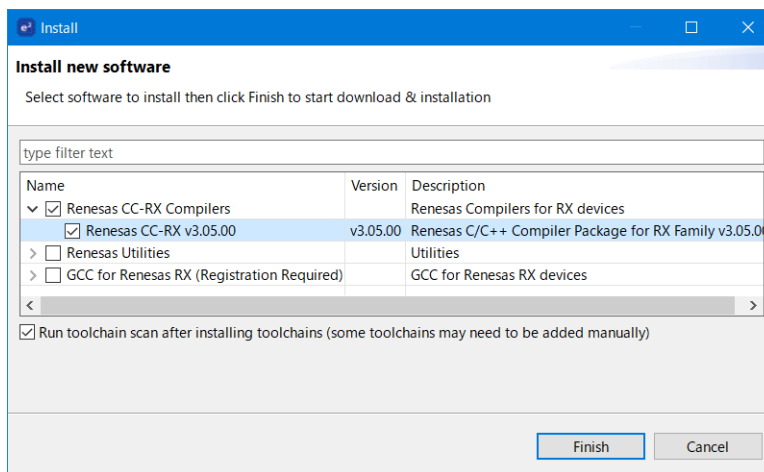


Figure 8

- 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.

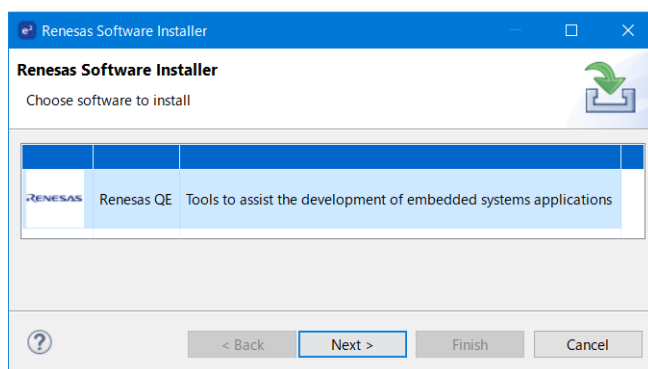


Figure 9

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

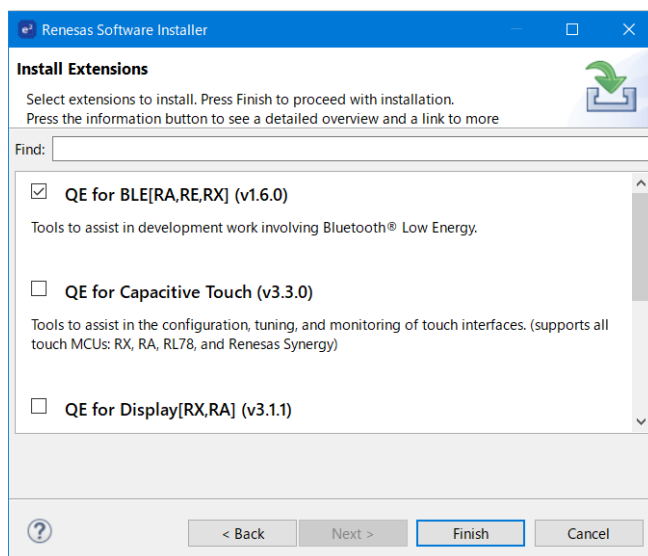


Figure 10

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

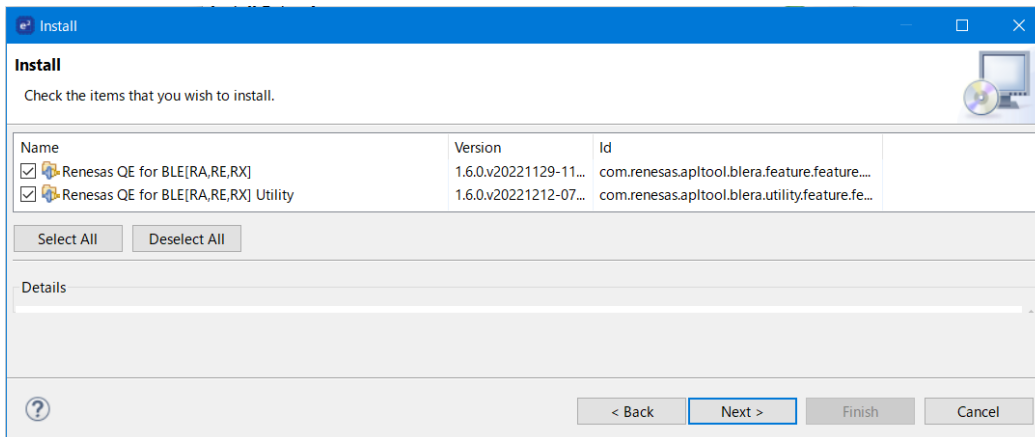


Figure 11

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.

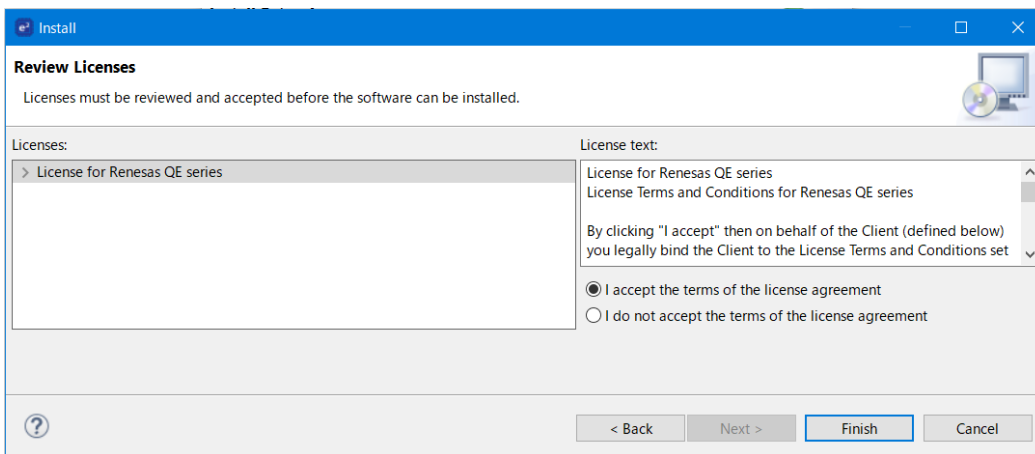


Figure 12

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.

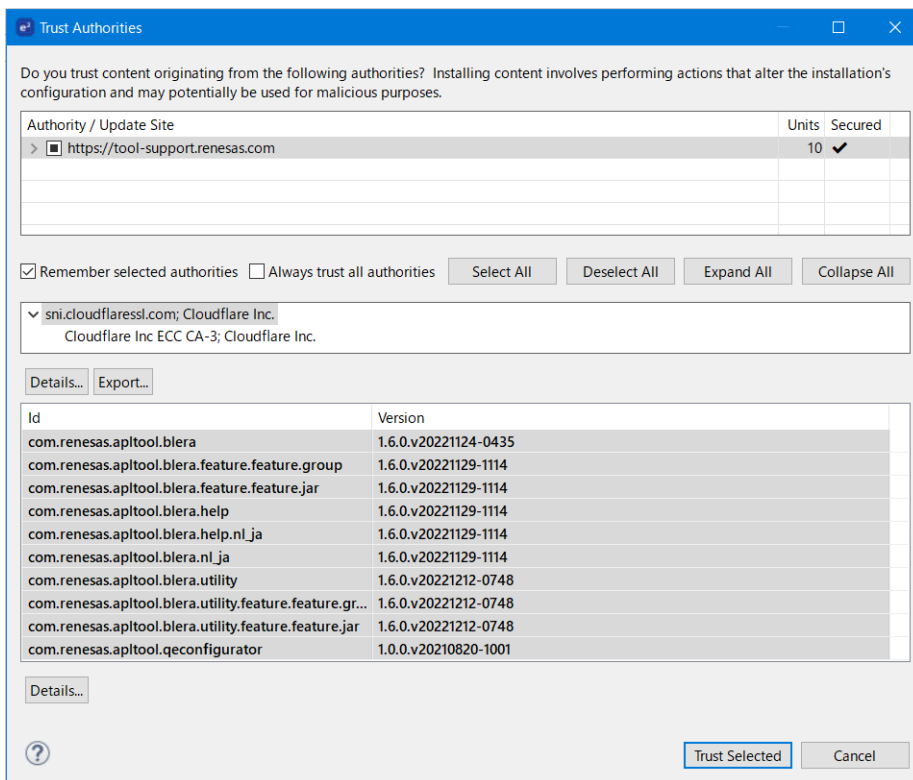


Figure 13

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

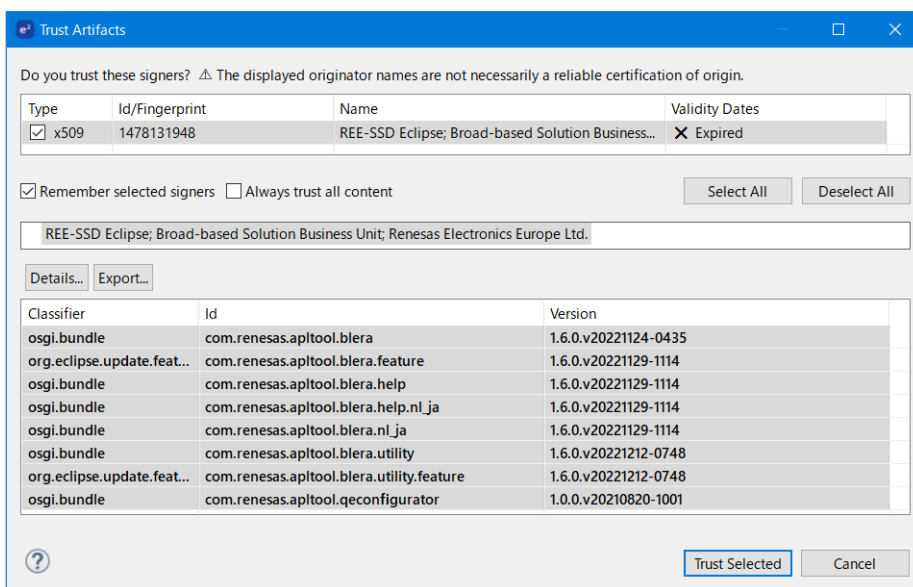


Figure 14

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

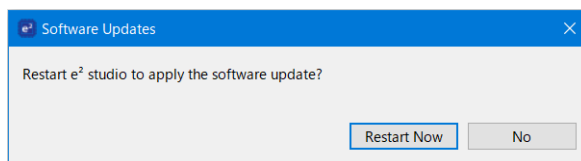


Figure 15

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.

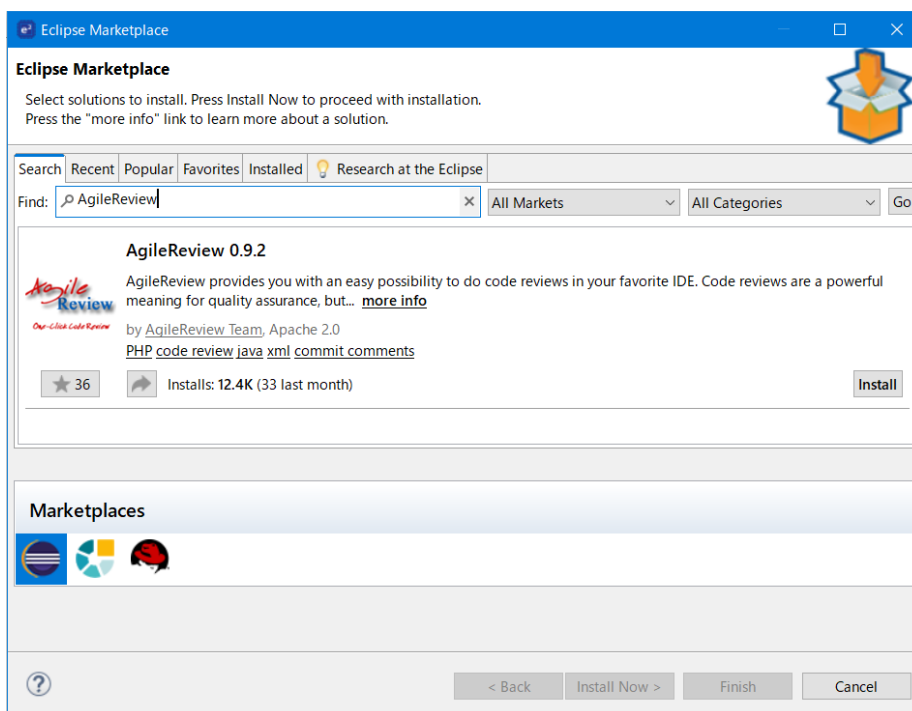


Figure 16

- 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.

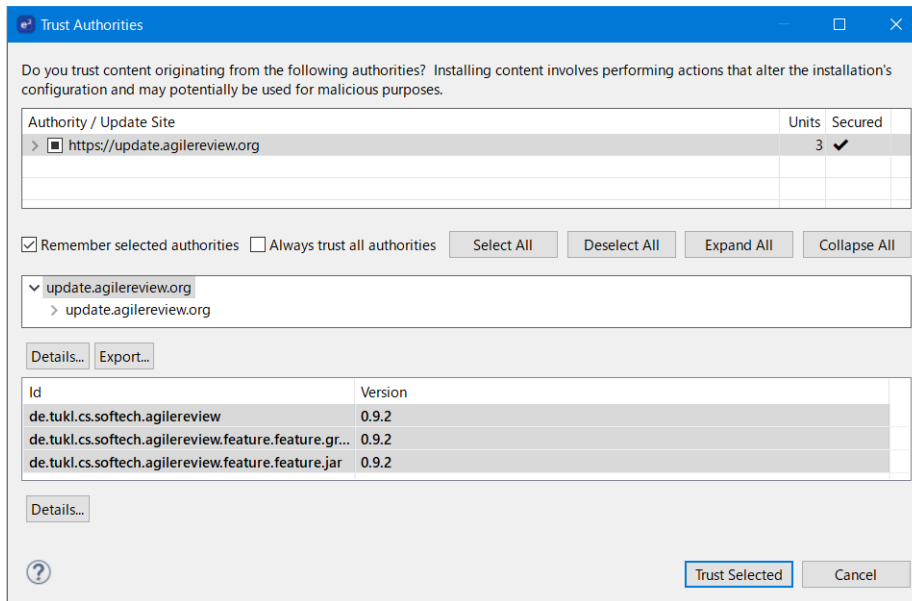


Figure 17

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

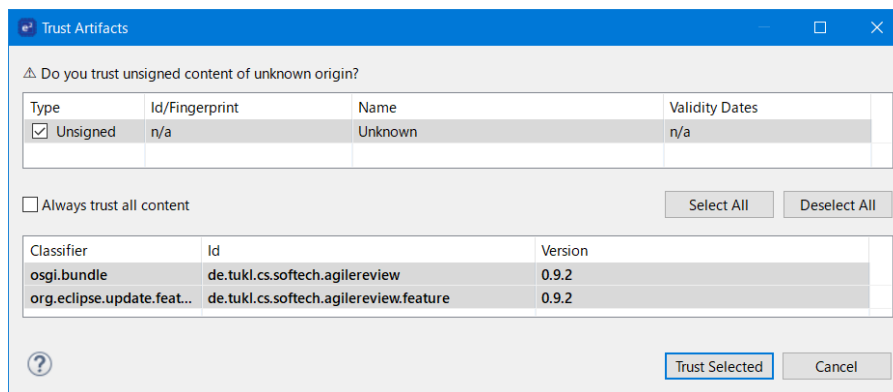


Figure 18

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

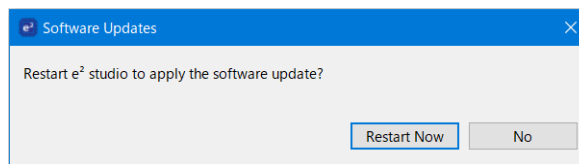


Figure 19

- 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.

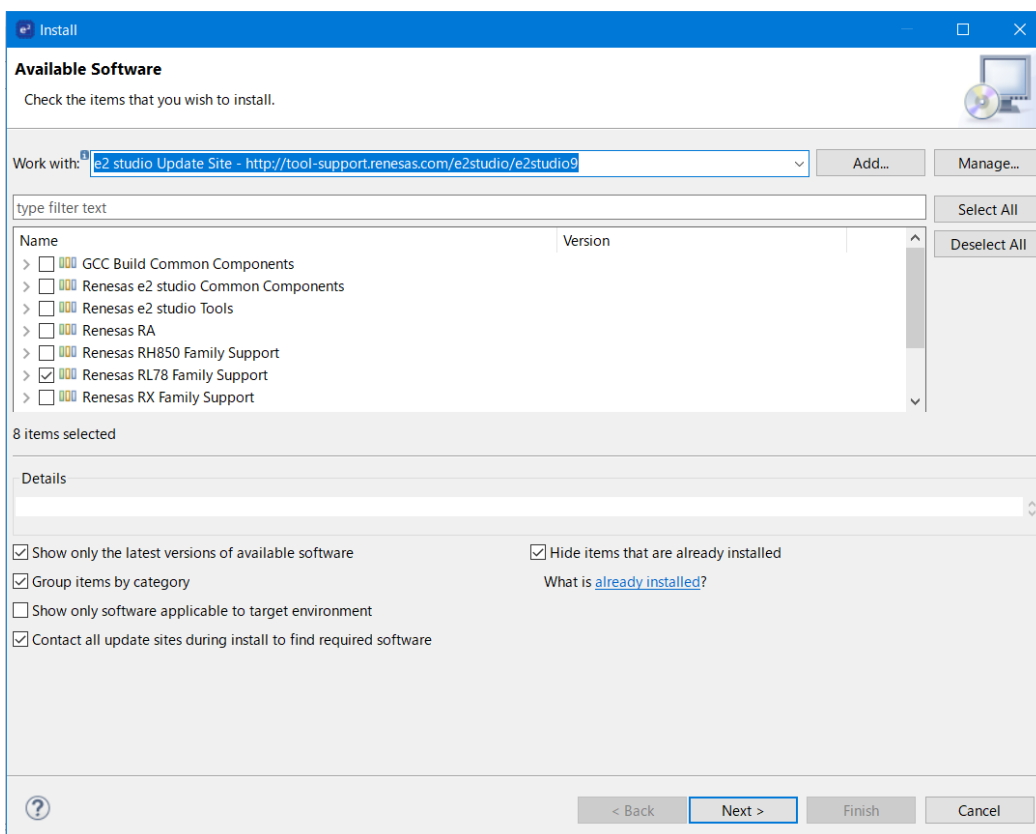


Figure 20

- 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.

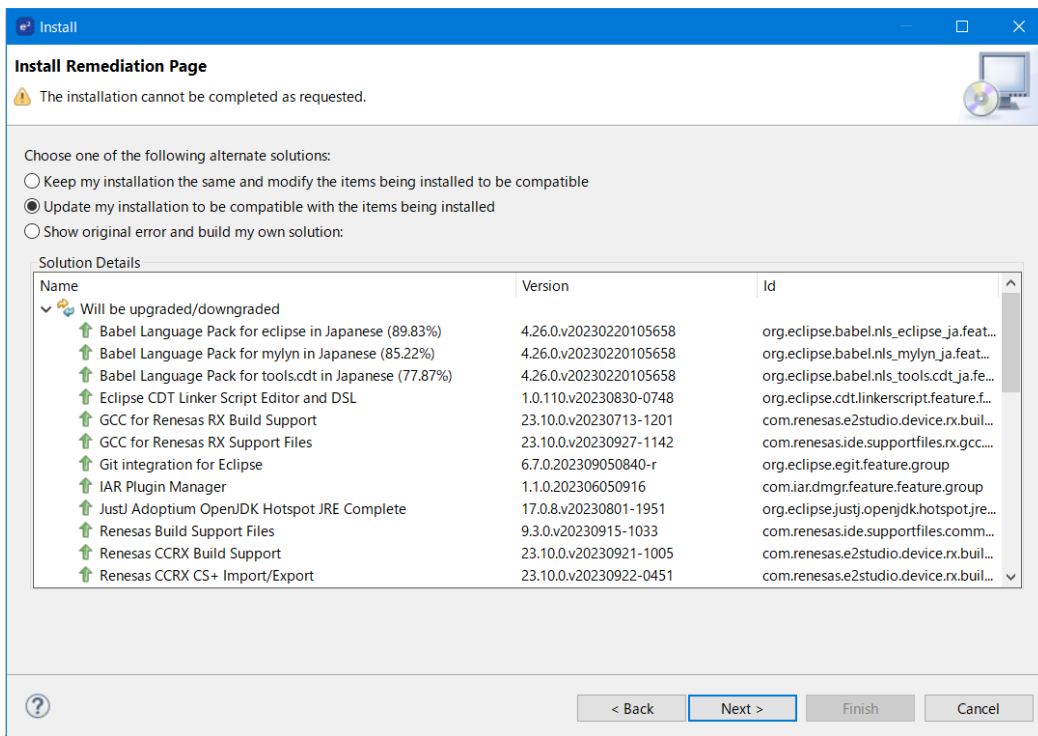


Figure 21

- 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.

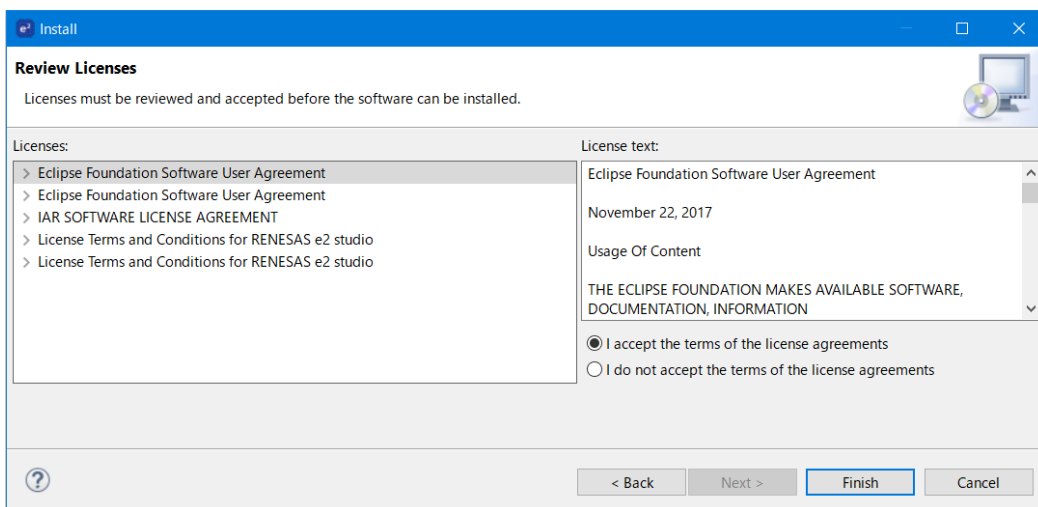


Figure 22

- 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.

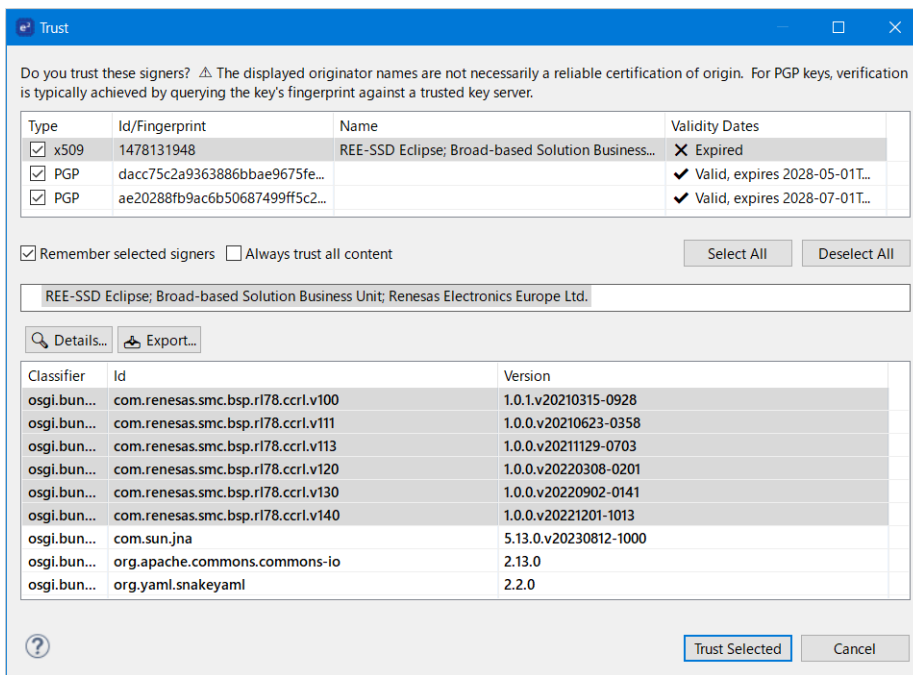


Figure 23

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

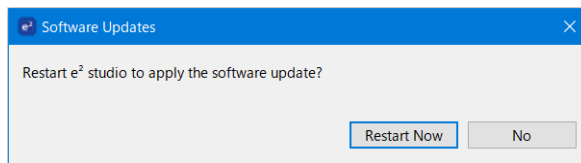


Figure 24

- 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.

Notice

1. Descriptions of circuits, software and other related information in this document are provided only to illustrate the operation of semiconductor products and application examples. You are fully responsible for the incorporation or any other use of the circuits, software, and information in the design of your product or system. Renesas Electronics disclaims any and all liability for any losses and damages incurred by you or third parties arising from the use of these circuits, software, or information.
 2. Renesas Electronics hereby expressly disclaims any warranties against and liability for infringement or any other claims involving patents, copyrights, or other intellectual property rights of third parties, by or arising from the use of Renesas Electronics products or technical information described in this document, including but not limited to, the product data, drawings, charts, programs, algorithms, and application examples.
 3. No license, express, implied or otherwise, is granted hereby under any patents, copyrights or other intellectual property rights of Renesas Electronics or others.
 4. You shall be responsible for determining what licenses are required from any third parties, and obtaining such licenses for the lawful import, export, manufacture, sales, utilization, distribution or other disposal of any products incorporating Renesas Electronics products, if required.
 5. You shall not alter, modify, copy, or reverse engineer any Renesas Electronics product, whether in whole or in part. Renesas Electronics disclaims any and all liability for any losses or damages incurred by you or third parties arising from such alteration, modification, copying or reverse engineering.
 6. Renesas Electronics products are classified according to the following two quality grades: "Standard" and "High Quality". The intended applications for each Renesas Electronics product depends on the product's quality grade, as indicated below.
 - "Standard": Computers; office equipment; communications equipment; test and measurement equipment; audio and visual equipment; home electronic appliances; machine tools; personal electronic equipment; industrial robots; etc.
 - "High Quality": Transportation equipment (automobiles, trains, ships, etc.); traffic control (traffic lights); large-scale communication equipment; key financial terminal systems; safety control equipment; etc.
- Unless expressly designated as a high reliability product or a product for harsh environments in a Renesas Electronics data sheet or other Renesas Electronics document, Renesas Electronics products are not intended or authorized for use in products or systems that may pose a direct threat to human life or bodily injury (artificial life support devices or systems; surgical implantations; etc.), or may cause serious property damage (space system; undersea repeaters; nuclear power control systems; aircraft control systems; key plant systems; military equipment; etc.). Renesas Electronics disclaims any and all liability for any damages or losses incurred by you or any third parties arising from the use of any Renesas Electronics product that is inconsistent with any Renesas Electronics data sheet, user's manual or other Renesas Electronics document.
7. No semiconductor product is absolutely secure. Notwithstanding any security measures or features that may be implemented in Renesas Electronics hardware or software products, Renesas Electronics shall have absolutely no liability arising out of any vulnerability or security breach, including but not limited to any unauthorized access to or use of a Renesas Electronics product or a system that uses a Renesas Electronics product. RENESAS ELECTRONICS DOES NOT WARRANT OR GUARANTEE THAT RENESAS ELECTRONICS PRODUCTS, OR ANY SYSTEMS CREATED USING RENESAS ELECTRONICS PRODUCTS WILL BE INVULNERABLE OR FREE FROM CORRUPTION, ATTACK, VIRUSES, INTERFERENCE, HACKING, DATA LOSS OR THEFT, OR OTHER SECURITY INTRUSION ("Vulnerability Issues"). RENESAS ELECTRONICS DISCLAIMS ANY AND ALL RESPONSIBILITY OR LIABILITY ARISING FROM OR RELATED TO ANY VULNERABILITY ISSUES. FURTHERMORE, TO THE EXTENT PERMITTED BY APPLICABLE LAW, RENESAS ELECTRONICS DISCLAIMS ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THIS DOCUMENT AND ANY RELATED OR ACCOMPANYING SOFTWARE OR HARDWARE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE.
 8. When using Renesas Electronics products, refer to the latest product information (data sheets, user's manuals, application notes, "General Notes for Handling and Using Semiconductor Devices" in the reliability handbook, etc.), and ensure that usage conditions are within the ranges specified by Renesas Electronics with respect to maximum ratings, operating power supply voltage range, heat dissipation characteristics, installation, etc. Renesas Electronics disclaims any and all liability for any malfunctions, failure or accident arising out of the use of Renesas Electronics products outside of such specified ranges.
 9. Although Renesas Electronics endeavors to improve the quality and reliability of Renesas Electronics products, semiconductor products have specific characteristics, such as the occurrence of failure at a certain rate and malfunctions under certain use conditions. Unless designated as a high reliability product or a product for harsh environments in a Renesas Electronics data sheet or other Renesas Electronics document, Renesas Electronics products are not subject to radiation resistance design. You are responsible for implementing safety measures to guard against the possibility of bodily injury, injury or damage caused by fire, and/or danger to the public in the event of a failure or malfunction of Renesas Electronics products, such as safety design for hardware and software, including but not limited to redundancy, fire control and malfunction prevention, appropriate treatment for aging degradation or any other appropriate measures. Because the evaluation of microcomputer software alone is very difficult and impractical, you are responsible for evaluating the safety of the final products or systems manufactured by you.
 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.
 11. Renesas Electronics products and technologies shall not be used for or incorporated into any products or systems whose manufacture, use, or sale is prohibited under any applicable domestic or foreign laws or regulations. You shall comply with any applicable export control laws and regulations promulgated and administered by the governments of any countries asserting jurisdiction over the parties or transactions.
 12. It is the responsibility of the buyer or distributor of Renesas Electronics products, or any other party who distributes, disposes of, or otherwise sells or transfers the product to a third party, to notify such third party in advance of the contents and conditions set forth in this document.
 13. This document shall not be reprinted, reproduced or duplicated in any form, in whole or in part, without prior written consent of Renesas Electronics.
 14. Please contact a Renesas Electronics sales office if you have any questions regarding the information contained in this document or Renesas Electronics products.

(Note1) "Renesas Electronics" as used in this document means Renesas Electronics Corporation and also includes its directly or indirectly controlled subsidiaries.

(Note2) "Renesas Electronics product(s)" means any product developed or manufactured by or for Renesas Electronics.

(Rev.5.0-1 October 2020)

Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu,
Koto-ku, Tokyo 135-0061, Japan
www.renesas.com

Trademarks

Renesas and the Renesas logo are trademarks of Renesas Electronics Corporation. All trademarks and registered trademarks are the property of their respective owners.

Contact information

For further information on a product, technology, the most up-to-date version of a document, or your nearest sales office, please visit:
www.renesas.com/contact/.