

# Smart Configurator for RZ V1.10.0

## Release Note

### Introduction

Thank you for using the Smart Configurator for RZ.

This document describes the restrictions and points for caution. Read this document before using the product.

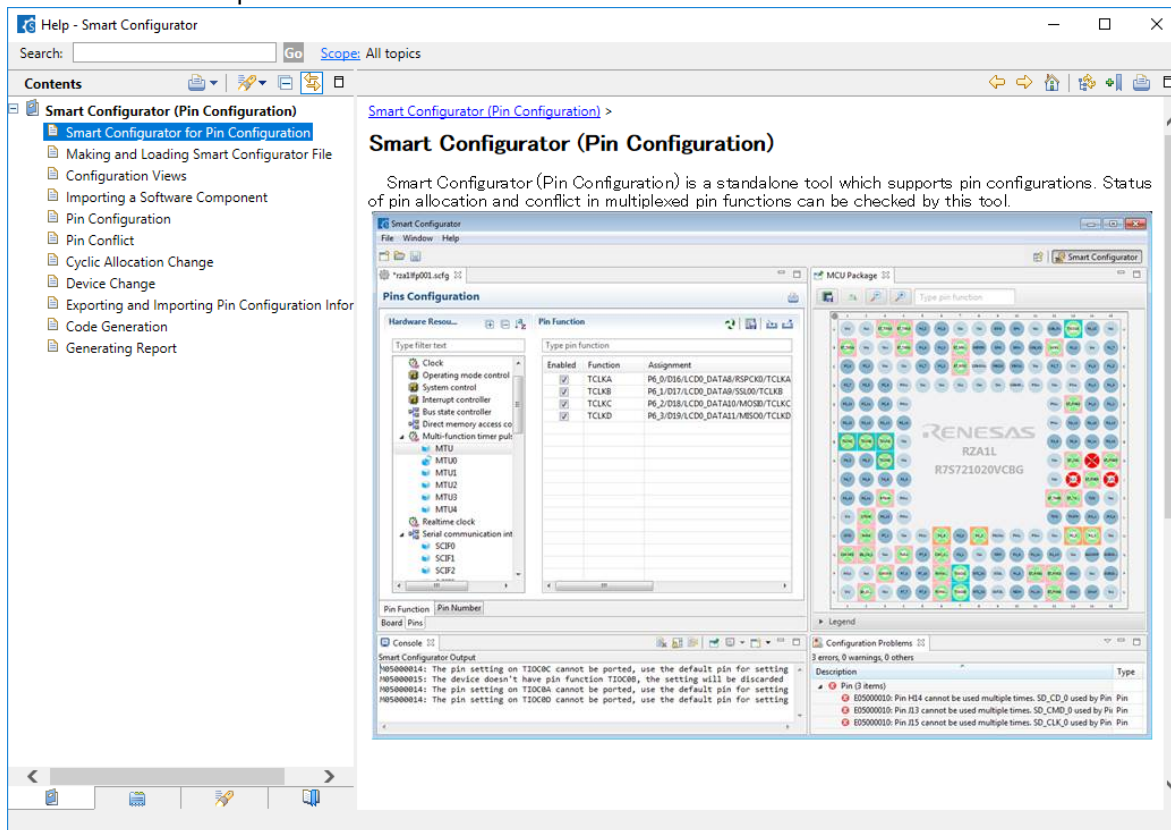
### Contents

1. Introduction.....	2
1.1 System Requirements .....	2
1.1.1 PC.....	2
2. Support List .....	3
2.1 Supported Devices List .....	3
3. Changes .....	7
3.1 New Support.....	7
3.1.1 Added support for new device package RZ/V2L.....	7
3.1.2 Pin assignments in DTSi file now generated in sorted order .....	7
3.2 Correction of issues/limitations.....	8
4. List of [Notes] RENESAS TOOL NEWS.....	8
5. Points for Limitation .....	9
5.1 List of Limitation.....	9
5.2 Details of Limitation .....	9
5.2.1 Note on missing pins for I2C0, I2C3 and I2C5.....	9
6. Point for Caution.....	10
6.1 List of Caution.....	10
6.2 Details of Caution .....	10
6.2.1 Functions not supported by RZ/A1 package.....	10
6.2.2 Projects created using Smart Configurator for RZ V1.3.0 and before .....	10

## 1. Introduction

The Smart Configurator for RZ is a standalone GUI-based tool for setting the assignments of pin functions to pins in the design of hardware specifications. The assignments of pins can be set up from a GUI, which also checks and offers solutions for cases of contention for the same pins by multiplexed functions.

Please refer to "Help Contents" about how to use.



### 1.1 System Requirements

The operating environment is as follows:

#### 1.1.1 PC

- IBM PC/AT compatibles (Windows® 10, Windows® 8,1)
- Processor: 1 GHz or higher (must support hyper-threading, multi-core CPUs)
- Memory capacity: 2 GB or more recommended. Minimum requirement is 1 GB or more (64-bit Windows requires 2 GB or more)
- Hard disk capacity: 300 MB or more spare capacity
- Display: 1024 x 768 or higher resolution, 65,536 or more colors
- All other necessary software environments in addition to Windows OS
  - Java Runtime Environment

## 2. Support List

### 2.1 Supported Devices List

Below is a list of devices supported by the Smart Configurator for RZ V1.10.0.

**Table 1. Supported Devices**

RZ/A1L group	
PIN	Device name
176pin	R7S721020VCBG, R7S721020VCFP, R7S721020VLFP
208pin	R7S721021VCFP, R7S721021VLFP
RZ/A1LU group	
PIN	Device name
176pin	R7S721030VCBG, R7S721030VCFP, R7S721030VLFP
208pin	R7S721031VCFP, R7S721031VLFP
233pin	R7S721031VCBG, R7S722031VLBG
RZ/A1LC group	
PIN	Device name
176pin	R7S721034VCBG
Following documents.	
Manual Name	Document Number
RZ/A1L, RZ/A1LU, RZ/A1LC Group User's Manual: Hardware	R01UH0437EJ0300

RZ/A1H group	
PIN	Device name
256pin	R7S721000VCBG, R7S721000VCFP, R7S721000VLFP
324pin	R7S721001VCBG, R7S721001VLBG
RZ/A1M group	
PIN	Device name
256pin	R7S721010VCBG, R7S721010VCFP, R7S721010VLFP
324pin	R7S721011VCBG, R7S721011VLBG
Following documents.	
Manual Name	Document Number
RZ/A1H, RZ/A1M Group User's Manual: Hardware	R01UH0403EJ0200

RZ/G1M group	
PIN	Device name
831pin	R8A77430
Following documents	
Manual name	Document Number
RZ/G1M User's Manual: Hardware	R01UH0626EJ0100

RZ/G1C group	
PIN	Device name
501pin	R8A77470
Following documents	
Manual name	Document Number
RZ/G1C User's Manual: Hardware	R01UH0695EJ0100

RZ/G1E group	
PIN	Device name
501pin	R8A77450
Following documents	
Manual name	Document Number
RZ/G1E User's Manual: Hardware	R01UH0544EJ0100

RZ/G1H group	
PIN	Device name
831pin	R8A77420
Following documents	
Manual name	Document Number
RZ/G1H User's Manual: Hardware	R01UH0627EJ0100

RZ/G1N group	
PIN	Device name
831pin	R8A77440
Following documents	
Manual name	Document Number
RZ/G1N User's Manual: Hardware	R01UH0628EJ0100

RZ/G2E group	
PIN	Device name
552pin	R8A774C0
Following documents	
Manual name	Document Number
RZ/G2E User's Manual: Hardware	R01UH0848EJ0080

RZ/G2M group	
PIN	Device name
1022pin	R8A774A0
Following documents	
Manual name	Document Number
RZ/G2M User's Manual: Hardware	R01UH0846EJ0080

RZ/G2N group	
PIN	Device name
1022pin	R8A774B0
Following documents	
Manual name	Document Number
RZ/G2N User's Manual: Hardware	R01UH0847EJ0080

RZ/G2H group	
PIN	Device name
1022pin	R8A774E0
Following documents	
Manual name	Document Number
RZ/G2 Series, 2nd Generation User's Manual: Hardware	R01UH0808EJ0100

RZ/G2L, G2LC group	
PIN	Device name
456pin 551pin 361pin	R9A07G044L (15mm) R9A07G044L (21mm) R9A07G044LC
Following documents	
Manual name	Document Number
RZ/G2 Series, 2nd Generation User's Manual: Hardware	R01UH0914EJ0041

RZ/V2L group	
PIN	Device name
456pin 551pin	R9A07G054L (15mm) R9A07G054L (21mm)
Following documents	
Manual name	Document Number
RZ/V2 Series, 2nd Generation User's Manual: Hardware	R01UH0914EJ0041 R01UH0936EJ0040

### 3. Changes

This chapter describes the changes for Smart Configurator for RZ V1.10.0.

#### 3.1 New Support

##### 3.1.1 Added support for new device package RZ/V2L

Smart Configurator for RZ now supports new device package R9A07G054L (15mm) and R9A07G054L (21mm) from the RZ/V2L device group

##### 3.1.2 Pin assignments in DTSi file now generated in sorted order

The generated content in the DTSi file is now sorted by group name.

In V1.9.0:

```
r9a07g0_pinconfdtsi x
1 /*
2  * Device Tree Source for Pin setting
3  *
4  * Copyright (C) 2021 Renesas Electronics Corporation
5  *
6  * This file is licensed under the terms of the GNU General Public License
7  * version 2. This program is licensed "as is" without any warranty of any
8  * kind, whether express or implied.
9  */
10
11 &pfc {
12     .adc_pins: adc {
13         .groups = "adc_a";
14         .function = "adc";
15     };
16     .irq_pins: irq {
17         .renesas,groups = "irq2_a";
18         .renesas,function = "irq";
19     };
20     .cam_pins: cam {
21         .renesas,groups = "cam_data8/cam_data10/cam_data12/cam_data16", "cam_d
22         .renesas,function = "cam";
23     };
24 };
```

In V1.10.0:

```
r9a07g0_pinconfdtsi x
1 /*
2  * Device Tree Source for Pin setting
3  *
4  * Copyright (C) 2021 Renesas Electronics Corporation
5  *
6  * This file is licensed under the terms of the GNU General Public License
7  * version 2. This program is licensed "as is" without any warranty of any
8  * kind, whether express or implied.
9  */
10
11 &pfc {
12     .adc_pins: adc {
13         .groups = "adc_a";
14         .function = "adc";
15     };
16     .cam_pins: cam {
17         .renesas,groups = "cam_data8/cam_data10/cam_data12/cam_data16", "cam_d
18         .renesas,function = "cam";
19     };
20     .irq_pins: irq {
21         .renesas,groups = "irq2_a";
22         .renesas,function = "irq";
23     };
24 };
```

[Target]

RZ/G1C, G1E, G1H, G1M, G1N, G2E, G2H, G2L, G2LC, G2M, G2N, V2L

### 3.2 Correction of issues/limitations

There are no correction of issues and limitations for Smart Configurator for RZ V1.10.0.

### 4. List of [Notes] RENESAS TOOL NEWS

[Notes] Below is a list of notifications delivered by RENESAS TOOL NEWS.

Issue date	Document No.	Description	Applicable MCUs	Fixed version
2019/12/16	<a href="#">R20TS0520</a>	Incorrect display of peripheral function names "Camera Serial Interface" and "SPI Multi I/O Bus Controller" on pin function tab	RZ/G2E	V1.8.0



## 5. Points for Limitation

This section describes points for limitation regarding the Smart Configurator for RZ V1.10.0.

### 5.1 List of Limitation

No.	Descriptions	RZ/A1	RZ/G1	RZ/G2	RZ/V2
1	<a href="#">Note on missing pins for I2C0, I2C3 and I2C5</a>	/	/	○	/

### 5.2 Details of Limitation

#### 5.2.1 Note on missing pins for I2C0, I2C3 and I2C5

In the Hardware Resource panel in the Pin Function tab, the following peripheral channel and pins are not displayed.

- I2C0 peripheral: SCL0, SDA0
- I2C3 peripheral: SCL3, SDA3
- I2C5 peripheral: SCL5, SDA5

This issue will be fixed in the next release.

The screenshot shows the 'Pin configuration' window with the 'Pin Function' tab selected. On the left, the 'Hardware Resource' panel shows a tree view where 'I2C bus interface' is expanded, and 'I2C1', 'I2C2', 'I2C4', and 'I2C6' are highlighted with a red box. The main table lists the following items:

Enabl...	Group	Function	Assignment	Pin I
<input type="checkbox"/>	I2C1	SCL1	Not assigned	Not
<input type="checkbox"/>	I2C2	SCL2	Not assigned	Not
<input type="checkbox"/>		SCL4	Not assigned	Not
<input type="checkbox"/>	I2C6	SCL6	Not assigned	Not
<input type="checkbox"/>	I2C1	SDA1	Not assigned	Not
<input type="checkbox"/>	I2C2	SDA2	Not assigned	Not
<input type="checkbox"/>		SDA4	Not assigned	Not
<input type="checkbox"/>	I2C6	SDA6	Not assigned	Not

[Target]

RZ/G2M

## 6. Point for Caution

This chapter describes the cautions for Smart Configurator for RZ V1.10.0.

### 6.1 List of Caution

No.	Descriptions	RZ/A1	RZ/G1	RZ/G2	RZ/V2
1	<a href="#">Functions not supported by RZ/A1 package</a>	✓	-	-	-
2	<a href="#">Projects created using Smart Configurator for RZ V1.3.0 and before</a>	-	✓	-	-

✓ :Applicable, -:Not Applicable

## 6.2 Details of Caution

### 6.2.1 Functions not supported by RZ/A1 package

RZ/A1 package does not support code generation and board configuration.

[Target]

RZ/A1H, A1L, A1LC, A1LU, A1M

### 6.2.2 Projects created using Smart Configurator for RZ V1.3.0 and before

Projects created using Smart Configurator for RZ V1.3.0 and before do not have [Group] information. Please confirm [Group] after opening those projects.

[Workaround]

None.

[Target]

RZ/G1C, G1E, G1H, G1M, G1N

**Revision History**

Rev.	Date	Description	
		Page	Summary
1.6.0	July.22.19	-	First edition issued
1.7.0	October.21.19	4	Updated information for Smart Configurator for RZ V1.7.0 - Added new device support for RZ/G2N
1.7.1	December.20.19	8, 9	Added new limitation of 5.2.1
1.8.0	August.05.20	7 8 11	Updated information for Smart Configurator for RZ V1.8.0 - Added new device support for RZ/G2H - Added correction of issues/limitations 3.2.1 and 3.2.2 - Removed limitation of 5.2.1
1.9.0	April.20.21	6,7	Updated information for Smart Configurator for RZ V1.9.0 - Added new device support for RZ/G2L, G2LC
1.10.0	July.20.21	6,7,9	Updated information for Smart Configurator for RZ V1.10.0 - Added new device support for RZ/V2L - Added new for limitation of 5.2.1

# 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](http://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/](http://www.renesas.com/contact/).