# Smart Configurator for RZ V1.16.0

Release Note

## Introduction

Thank you for using the Smart Configurator for RZ.

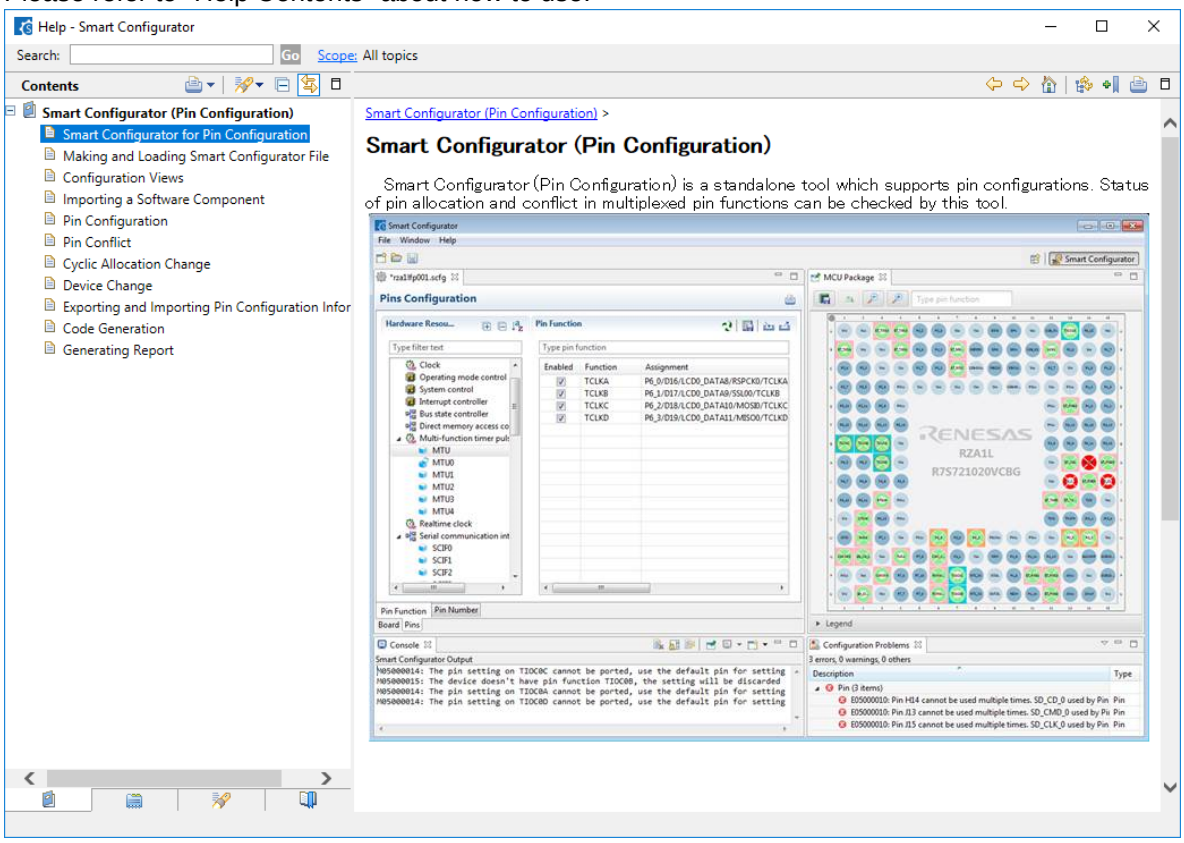
This document describes the restrictions and points for caution. Read this document before using the product.

## Contents

# 1. Introduction

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 64-bit, Windows® 8.1 64-bit)
- Processor: 1 GHz or higher (must support hyper-threading, multi-core CPUs)
- Memory capacity: 2 GB or more recommended.
- 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

Please note that from V1.11.0, Smart Configurator for RZ will be released as a 64-bit product build. The switch to 64-bit means that it is no longer possible to run this version of the tool on Windows 8.1 and Windows 10 32-bit versions.

# 2. Support List

## 2.1 Supported Devices List

Below is a list of devices supported by the Smart Configurator for RZ V1.15.0.

**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/G Series, 2nd Generation User's Manual: Hardware | R01UH0808EJ0100 |

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

| RZ/V2L group | |
|---|---|
| PIN | Device name |
| 456pin<br>551pin | R9A07G054L (15mm)<br>R9A07G054L (21mm) |
| Following documents | |
| Manual name | Document Number |
| RZ/V2L Group User's Manual: Hardware | R01UH0914EJ0041<br>R01UH0936EJ0040 |

| RZ/G2UL group | |
|---|---|
| PIN | Device name |
| 361pin<br>361pin | R9A07G043U (Type-1)<br>R9A07G043U (Type-2) |
| Following documents | |
| Manual name | Document Number |
| RZ/G2UL Group User's Manual: Hardware | R01UH0968EJ0050 |

| RZ/Five group | |
|---|---|
| PIN | Device name |
| 266pin<br>361pin | R9A07G043F00GBG<br>R9A07G043F01GBG |
| Following documents | |
| Manual name | Document Number |
| RZ/Five Group User's Manual: Hardware | R01UH0986EJ0050 |

| RZ/G3S group | |
|---|---|
| PIN | Device name |
| 359pin<br>361pin | R9A08G045S (14mm)<br>R9A08G045S (13mm) |
| Following documents | |
| Manual name | Document Number |
| RZ/G3S Group User's Manual: Hardware | R01UH1014EJ0100 |

## 2.2 New Support

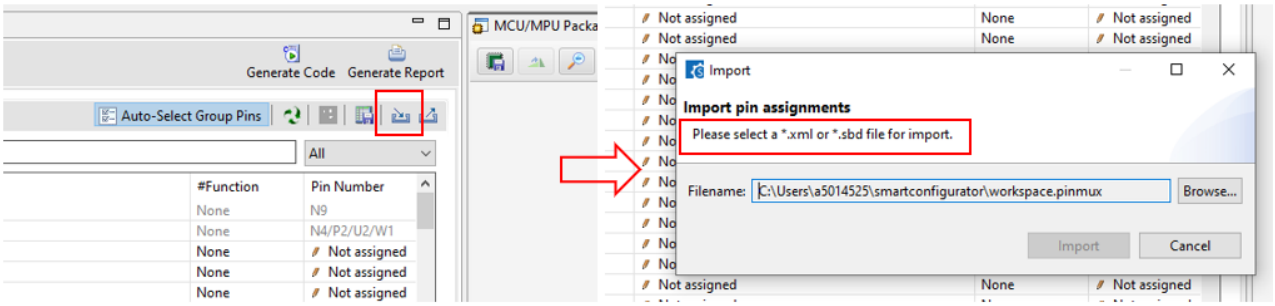
### 2.2.1 Add support for new device package RZ/G3S

Smart Configurator for RZ now supports new device package R9A08G045S (14mm) and R9A08G045S (13mm) from the RZ/G3S device group.

# 3. Changes

## 3.1 Added support for pin conflict checking with RZ/G3S FSP projects.

Smart Configurator for RZ supports pin conflict checking for RZ/G3S multicore devices that run FSP or Linux on different CPU cores. This new feature can be enabled by importing the FSP secure bundle to enable conflict checking between the pin assignments on FSP and Linux device tree file.



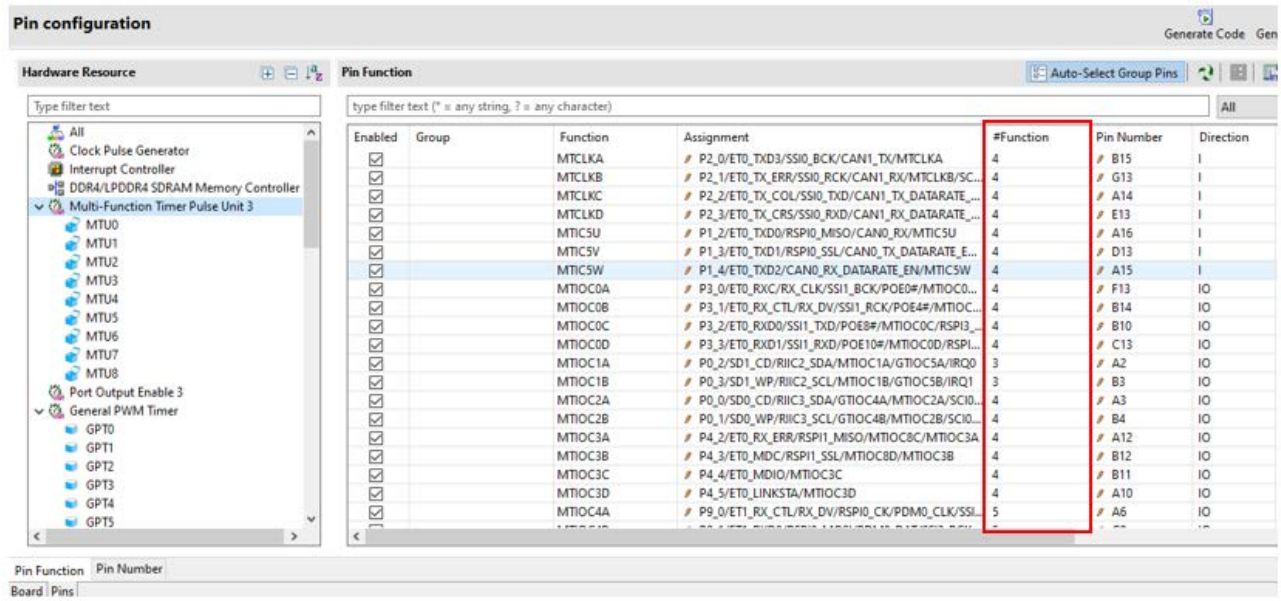

After an SBD file is imported, the pin assignments of FSP projects can be checked against the Linux device tree pin assignments. Pin conflicts will be displayed as an error in the MCU/MPU Package View and Pins page.


[Target]
RZ/G3S

## 3.2 Add new column to display Function number in Pin function page

A new column “#Function” has been added to the Pin function page. This column shows the function number of the assigned pin function.

The function number in this new column provides information useful for setting the port function control (PFC) registers. Please refer to the hardware manual General Purpose Input Output Port (GPIO) chapter for more details on how to reference this information.




[Target]
RZ/G2L, RZ/G2UL, RZ/V2L, RZ/V2H, RZ/Five, RZ/G3S

## 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 | R20TS0520 | 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 |
| 2021/7/16 | R20TS0739 | Missing pins for I2C0, I2C3 and I2C5 of RZ/G2M | RZ/G2M | V1.10.1 |

## 5. Points for Limitation

There are no limitations for Smart Configurator for RZ V1.16.0.

# 6. Point for Caution

This chapter describes the cautions for Smart Configurator for RZ V1.16.0.

## 6.1 List of Caution

| No. | Descriptions | RZ/A1 | RZ/G1 | RZ/G2 | RZ/V2 |
|---|---|---|---|---|---|
| 1 | Functions not supported by RZ/A1 package | ✓ | - | - | - |
| 2 | Projects created using Smart Configurator for RZ V1.3.0 and before | - | ✓ | - | - |

✓: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. | Section | Description |
|---|---|---|
| 1.6.0 | - | First edition issued |
| 1.7.0 | - | Updated information for Smart Configurator for RZ V1.7.0<br>- Added new device support for RZ/G2N |
| 1.7.1 | - | Added new limitation of 5.2.1 |
| 1.8.0 | - | Updated information for Smart Configurator for RZ V1.8.0<br>- Added new device support for RZ/G2H<br>- Added correction of issues/limitations 3.2.1 and 3.2.2<br>- Removed limitation of 5.2.1 |
| 1.9.0 | - | Updated information for Smart Configurator for RZ V1.9.0<br>- Added new device support for RZ/G2L, G2LC |
| 1.10.0 | - | Updated information for Smart Configurator for RZ V1.10.0<br>- Added new device support for RZ/V2L<br>- Added new for limitation of 5.2.1 |
| 1.10.1 | - | Updated information for Smart Configurator for RZ V1.10.1<br>- Added correction of issues/limitations 3.2.1<br>- Removed limitation of 5.2.1 |
| 1.11.0 | - | Updated information for Smart Configurator for RZ V1.11.0<br>- Updated system requirements in 1.1.1<br>- Added new device support for RZ/G2UL in 2.2.1<br>- Added correction of issues/limitations 3.2.1, 3.2.2 and 3.2.3 |
| 1.12.0 | - | Updated information for Smart Configurator for RZ V1.12.0<br>- Added correction of issues/limitations 3.1.1 - 3.1.7<br>- Added new limitation of 5.2.1 |
| 1.13.0 | - | Updated information for Smart Configurator for RZ V1.13.0<br>- Added correction of issues/limitations 3.1.1 - 3.1.4 |
| 1.14.0 | - | Updated information for Smart Configurator for RZ V1.14.0<br>- Added new device support for RZ/Five |
| 1.15.0 | 3 | Updated information for Smart Configurator for RZ V1.15.0<br>- Added support for new DTSi output format supporting 5.10-CIP in 3.1<br>- Added a new button for “Auto-Selection of Group Pins” in 3.2 |
| 1.16.0 | 2, 3 | Updated information for Smart Configurator for RZ V1.16.0<br>- Added new device support for RZ/G3S in 2.2.1.<br>- Added information on new feature for pin conflict checking with RZ FSP projects in 3.1.<br>- Added support for new column to display function number in 3.2. |

# 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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