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## Chapter 1. Target Devices

The target devices supported by the CA78K0R are listed on the Website.

Please see this URL.

CubeSuite+ Product Page:

<http://www.renesas.com/cubesuite+>

## Chapter 2. User's Manuals

Please read the following user's manuals together with this document.

Manual Name	Document Number
CubeSuite+ V2.01.00 RL78, 78K0R Coding Edition	R20UT2774EJ0100
CubeSuite+ V2.00.00 RL78, 78K0R Build Edition	R20UT2623EJ0100
CubeSuite+ V2.01.00 Message	R20UT2687EJ0100

## Chapter 3. Key Word for Uninstallation

There are two ways to uninstall this product.

- Use the integrated uninstaller (uninstalls CubeSuite+)
- Use separate uninstaller (uninstalls this product only)

To use the separate uninstaller, select the following from the Control Panel:

- Add/Remove Programs (Windows XP)
- Programs and Features (Windows Vista, Windows 7, Windows 8)

Then select "CubeSuite+ CA78K0R V1.70".

## Chapter 4. Changes

This chapter describes change of CA78K0R.

There is a possibility that the code is changed by the following.

### 4.1 Changes of CA78K0R

This section describes changes of CA78K0R from V1.60 to V1.70.

#### 4.1.1 Increase in the Maximum Value for the Linker

The maximum value for "Number of symbols (local + public + internally generated)" of the linker was increased.

Before change: 65,535

After change: 2,147,483,647

The limits on symbols for the tools listed below, which handle output files from the linker, were also extended accordingly.

- ROMization Processor
- Object Converter
- List Converter
- Variables/Functions Information File Generator

#### 4.1.2 Enhancement of Function for the RL78-S1 Core

The function for checking directives in assembly when microcontrollers with the RL78-S1 core are specified as the target was enhanced. The following directives now lead to errors.

- SEL RB1, SEL RB2, SEL RB3

#### 4.1.3 Remedies for Conditions Leading to Points for Caution

We have remedied the conditions that led to the nine points for caution listed below.

- Caution on incorrect code being output for the processing of multiple casts of floating-point constants
- Caution on incorrect code being output for processing of the near/far qualifier for array pointers
- Caution on incorrect code being output from multiplication, division, remainder arithmetic, and indirect reference expressions
- Caution on the assert function not operating normally
- Caution on Return of an Error When a One-Bit-Wide Bit Field is Used in a Conditional Expression
- Caution on the conversion of character strings by the strtol and strtoul functions producing incorrect numerical values
- Caution on incorrect address reference being made in the case of reference to a symbol resolved by the assembler for the RL78-S1 core
- Caution on incorrect code being output for the CALL directive
- Caution on the BR and CALL directives producing errors

## Chapter 5. Cautions

This section describes cautions for using CA78K0R V1.70.

### 5.1 Cautions for CA78K0R

#### 5.1.1 Caution for Startup Routine

The startup routine includes a process of initializing the stack area, and this may lead to a reset by the watchdog timer depending on the size of the stack area.

[Workaround]

Disable operation of a watchdog timer in the watchdog timer enabling register with a *hdwinit* function.

Enable operation of a watchdog time after the process of startup routine.

#### 5.1.2 Caution for Stack usage tracer

The stack usage tracer calculates the size of the stack to be used by the following runtime library on the assumption that the device supports the extended instruction set.

- ldiv, ldivr, ldivr, ldivr
- lrem, lrem, lremr, lremr
- divuw, divuw

If the device you are using does not support the extended instruction set, adjust the stack size according to "6.14 Library Stack Consumption List" in "RL78, 78K0R Coding"

## Chapter 6. Restrictions

This section describes the restrictions for the CA78K0R.

### 6.1 Restrictions for the CA78K0R

None.

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