

[Upgrade to revision]

R20TS0242EJ0100

Rev.1.00

CS+ Integrated Development Environment V6.01.00

Jan. 16, 2018

Outline

We will be revising the CS+ integrated development environment from V6.00.00 to V6.01.00.

We have made functional improvements to further increase development efficiency.

- The description of API functions generated by the code generation function can now be easily referenced in the Smart Manual.
- The current consumption tuning solution (for easy measurement of current consumption) now supports the RX family.
- etc.

1. Products and Versions to Be Updated

- CubeSuite+ Common Programs V1.00.00 to V1.03.00 and V2.00.00 to V2.02.00
- CS+ Common Programs V3.00.00 to V3.03.00, V4.00.00 to V4.01.00, V5.00.00, and V6.00.00

For how to confirm which version you currently have, refer to the following URL.

https://www.renesas.com/cs+_ver

2. Topics of Revision Description

The functions described below have been newly added to CS+ for CC.

- Function of the Smart Manual to reference the description of API functions generated by the code generation function
- Smart Browser function which newly contains the [Context Help] tab that enables the view of the latest information on the Renesas website without using a Web browser
- Current consumption tuning solution that supports the RX family following the RL78 family

Refer to the following description for details.

(1) Enhancement of the Smart Manual Function (Applicable products: RX family and RL78 family)

A function to show the description of API functions has been added in the Smart Manual that displays the description of registers and hardware manuals.

This enhancement now allows you to see the description of API functions generated by the code generation function by simply moving the mouse cursor on the editor.

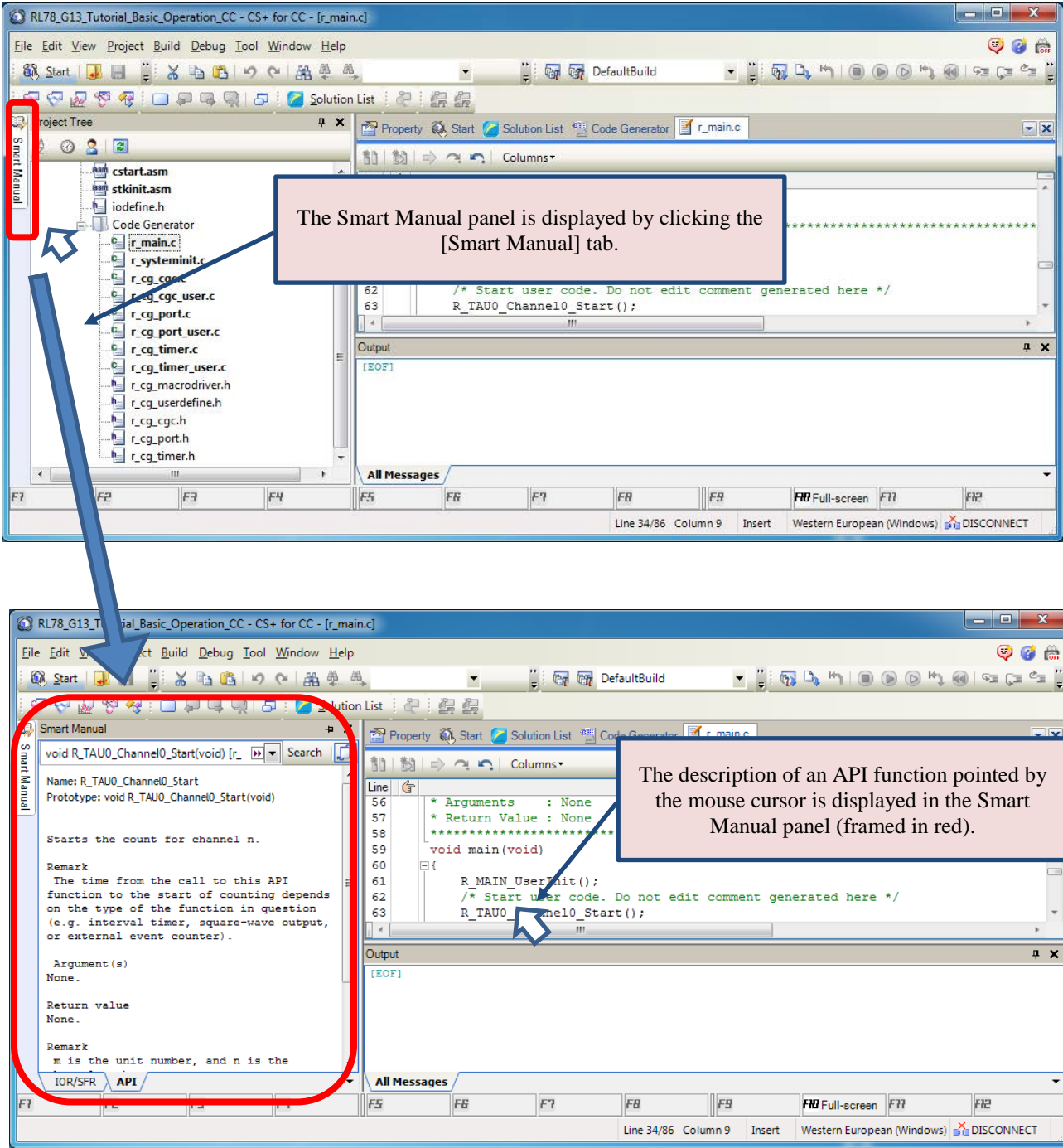


Figure 1 Function of the Smart Manual to Display the Description of API Functions

(2) Enhancement of the Smart Browser Function

The [Context Help] tab has been added to the Smart Browser.

This enhancement allows you to refer to the latest information on the Renesas website that is useful for work such as main project creation, active project change, and debug tool connection without using a Web browser.

This tab enables automatic search for FAQs related to errors displayed in the error dialog or posts on [the Renesas Rulz community site](#), to provide possible solutions.

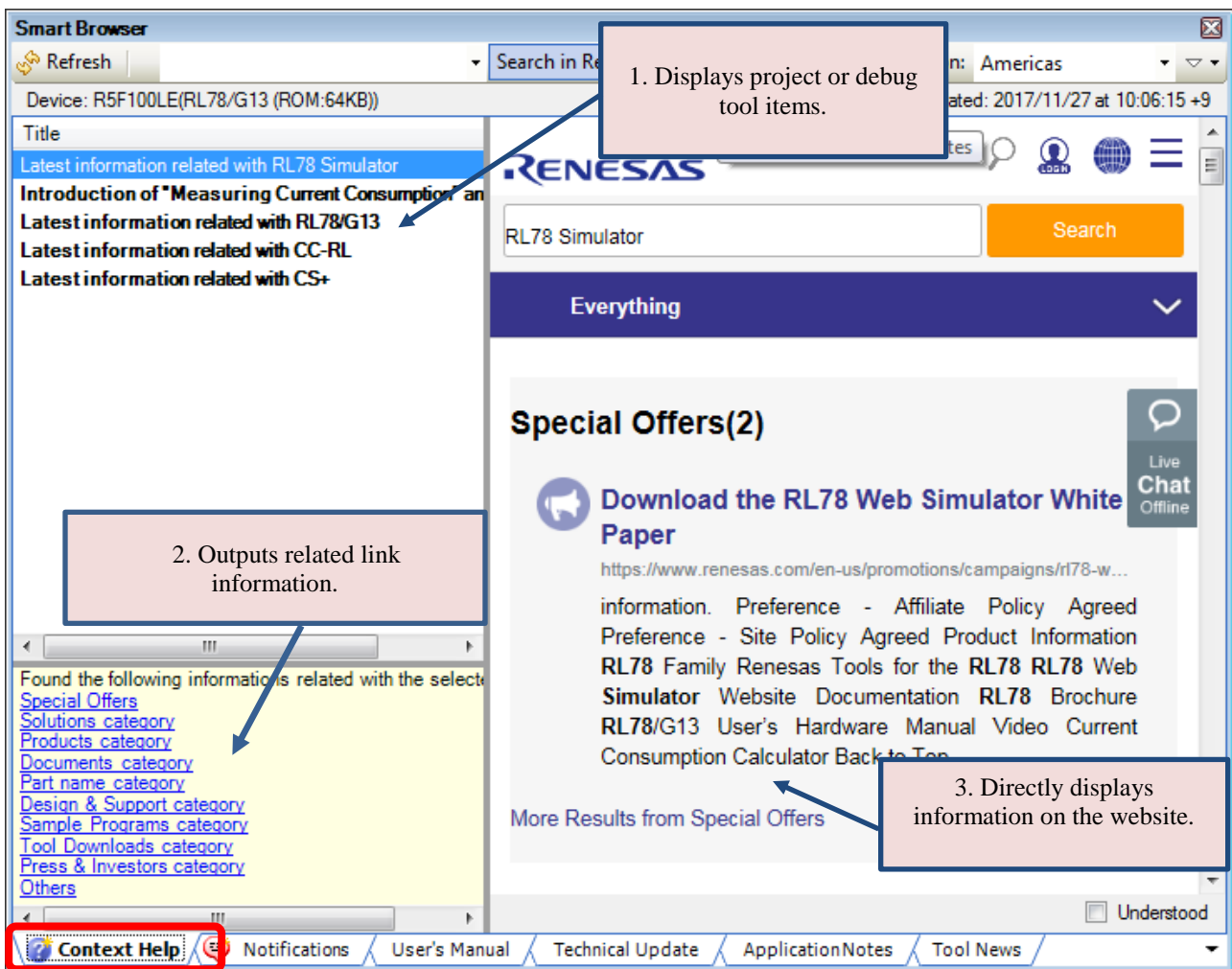


Figure 2 Context Help Function of the Smart Browser

(3) Current Consumption Tuning Solution

(Applicable condition: When the E2 emulator is used for the RL78 family or RX family^(Note))

The RX family can now be debugged with the E2 emulator as well as the RL78 family.

This enhancement makes the function of measuring current consumption available to the RX family^(Note), which allows current drawn by a system to be easily measured without using an ammeter.

Additionally, you can specify conditions (for example, if the current value exceeds a given value or if a predefined time has elapsed with a given value) to detect excessive current, and stop the program.

You can use monitor points (colored vertical lines in Figure 3), in a similar manner to the setting of breakpoints, to monitor the relationship between the behavior of the program and current consumption. This contributes to shortening of times required for the current-tuning process.

Note: Only the RX100 and RX200 series



Figure 3 Function of Measuring Current Consumption

3. Description of Upgrade

3.1 CS+ Common Programs (with building, debugging, analysis, and other capabilities)

- The common programs of CS+ for CC (for RX, RH850, and RL78) have been upgraded from V6.00.00 to V6.01.00.
- The common programs of CS+ for CA,CX (for 78K, RL78, and V850) have been upgraded from V4.00.01 to V4.01.00.

The items updated in CS+ for CC V6.01.00 and CS+ for CA,CX V4.01.00 are as follows.

(1) CS+ for CC (for RX family, RH850 family, and RL78 family)

The version has been upgraded from V6.00.00 to V6.01.00.

Main improvements are shown below.

For more details, refer to the Release Note (to be released on January 22).

https://www.renesas.com/cs+_document

CS+ for CC V6.01.00 Release Note

(a) Improvement of basic functions

In addition to the topics of revision description, CS+ now supports the following features.

- Output of optional information for the compiler qualification service in the **Smart Report dialog box**
- Enabling startup of License Manager from CS+ using the Launch License Manager menu

(b) Additions to the build tool

Support for the following versions of compilers has been added:

- Compiler for RH850 Family (CC-RH) V1.07.00
- Compiler for RX Family (CC-RX) V2.08.00
- Compiler for RL78 Family (CC-RL) V1.06.00

(c) Improvement of the debugging tools

- The following problem (informed in RENESAS TOOL NEWS Document No. R20TS0205EJ0100) has been fixed.

1. When the E2 emulator is used for the RL78 family

For details about the problem, refer to the following URL.

<https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ts0205>

- The following problem (informed in RENESAS TOOL NEWS Document No.R20TS0211EJ0100) has been fixed.
 1. When the abs File is downloaded in the RX family, a critical error occurs and the disassemble panel displays the X mark.
 2. After the abs file is downloaded in the RX family, the address column is not displayed on the assembler source panel and source lines cannot be debugged.For details about the problems, refer to the following URL.
<https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ts0211>
- The following problem (informed in RENESAS TOOL NEWS Document No. R20TS0220EJ0100) has been fixed.
 1. When QE for Current Consumption, a tool for current consumption measurement, is used for the RL78 familyFor details about the problem, refer to the following URL.
<https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ts0220>
- The following problem (informed in RENESAS TOOL NEWS Document No. R20TS0224EJ0100) has been fixed.
 1. Editor panel and Disassemble panel during debuggingFor details about the problem, refer to the following URL.
<https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ts0224>
- The processing for executing programming of RH850 multi-core device has been improved.
- The timestamp value acquiring of the software trace at the time of RH850 multi-core device debugging has been improved.

(2) CS+ for CA,CX (for 78K, RL78 family, and V850 family)

The version has been upgraded from V4.00.01 to V4.01.00.

Main improvements are shown below.

For more details, refer to the Release Note (to be released on January 22).

https://www.renesas.com/cs+_document

CS+ for CA,CX V4.01.00 Release Note

(a) Improvement of basic functions

- A function for checking the version of the .NET Framework from Microsoft Corporation has been added.

(b) Improvement of the debugging tools

- The processing for analyzing information on debugging, which is used during the downloading or display of symbols in the [Watch] panel, has been improved.

3.2 Build Tools

3.2.1 CC-RH (Compiler for RH850 Family)

The version has been upgraded from V1.06.00 to V1.07.00.

For details, see the following URL (to be updated on January 22).

https://www.renesas.com/cs+/eng/CSPlus_CC-RH.html

To use CC-RH V1.07.00, install V2.00.00 or later of License Manager.

3.2.2 CC-RX (Compiler for RX Family)

The version has been upgraded from V2.07.00 to V2.08.00.

For details, see the following URL (to be updated on January 22).

https://www.renesas.com/cs+/eng/CSPlus_CC-RX.html

To use CC-RX V2.08.00, install V2.00.00 or later of License Manager.

3.2.3 CC-RL (Compiler for RL78 Family)

The version has been upgraded from V1.05.00 to V1.06.00.

For details, see the following URL (to be updated on January 22).

https://www.renesas.com/cs+/eng/CSPlus_CC-RL.html

To use CC-RL V1.06.00, install V2.00.00 or later of License Manager.

3.3 Code Generators

3.3.1 CS+ Code Generator for RH850

The version has been upgraded from V1.02.00 to V1.03.00.

For details, see the following URL (to be updated on January 22).

- CS+ Code Generator for RH850

https://www.renesas.com/cs+/eng/CSPlus_Code_Generator_for_RH850.html

3.3.2 CS+ Code Generator for RX

The version has been upgraded from V1.14.00 to V1.15.00.

For details, see the following URL (to be updated on January 22).

- CS+ Code Generator for RX

https://www.renesas.com/cs+/eng/CSPlus_Code_Generator_for_RX.html

3.3.3 CS+ Code Generator for RL78

The version has been upgraded from V2.14.00 to V2.15.00.

For details, see the following URL (to be updated on January 22).

- CS+ Code Generator for RL78 (CS+ for CC)

https://www.renesas.com/cs+/eng/CSPlus_CC_Code_Generator_for_RL78.html

- CS+ Code Generator for RL78 (CS+ for CA,CX)

https://www.renesas.com/cs+/eng/CSPlus_CACX_Code_Generator_for_RL78.html

3.4 Device Information

3.4.1 CS+ Device Information for RH850

The version has been upgraded from V6.00.01 to V6.01.00.

The following revisions are made in V6.01.00.

(1) Addition of supported MCUs

The following MCU group has been added to the support line:

- RH850/F1KH group (RH850 family)

(2) Modification of device information

The device information in the following MCU group has been modified:

- RH850/F1KM group (RH850 family)

For details, see the following URL (to be updated on January 22).

https://www.renesas.com/cs+/eng/CSPlus_DevInfo_RH850.html

3.4.2 CS+ Device Information for RX

The version has been upgraded from V2.02.00 to V2.03.00.

The following revisions are made in V2.03.00.

(1) Addition of supported MCUs

The following MCU groups have been added to the support line:

- RX651 group (RX family)
- RX65N group (RX family)

(2) Modification of device information

Information on registers displayed in the I/O header file for the C language and in the IOR panel for debugging has been updated for the MCU groups listed below.

- RX651 group (RX family)
- RX65N group (RX family)

For details, see the following URL (to be updated on January 22).

https://www.renesas.com/cs+/eng/CSPlus_DevInfo_RX.html

3.4.3 CS+ Device Information for RL78

The version has been upgraded from V6.00.00 to V6.01.00.

The following revisions are made in V6.01.00.

(1) Addition of supported MCUs

The following MCU group has been added to the support line:

- RL78/G11 group (RL78 family)

(2) Modification of device information

The device information in the following MCU groups have been modified:

- RL78/I1C group (RL78 family)
- RL78/G1D group (RL78 family)

For details, see the following URL (to be updated on January 22).

https://www.renesas.com/cs+/eng/CSPlus_DevInfo_RL78.html

3.5 Quick and Effective Tool Solution (QE)

The version has been upgraded from V2.00.00 to V3.00.00.

The following revisions are made in V3.00.00.

- (1) The functions of measuring CAN bus reception processing times and measuring current consumption have been improved. (Applicable product: the E2 emulator)

For details, see the following URL (to be updated on January 22).

https://www.renesas.com/cs+/eng/CSPlus_QE.html

4. Updating Your Product

Online updating is available free of charge. The method of updating depends on the edition of CS+.

Note: An evaluation edition of the CC-RL build tool is included if you update from CubeSuite+ to CS+ V3.01.00 or later. However, we are unable to lift the restrictions on the evaluation edition of CC-RL in response to customers holding licenses for earlier C compiler packages for RL78 and 78K families (CA78K0R, CA78K0). You need to purchase the commercial edition of C compiler package for RL78 family (with IDE) V1 (CC-RL) if you wish to have the restrictions on the evaluation edition lifted. Refer to section 6 for details

4.1 For CS+ V3.00.00 or Later

To update your program, use either of the following methods:

- (1) On the Start menu, select Programs and then Renesas Electronics CS+ to start the Update Manager. This service will be available from January 22.

Note: If your CS+ has been launched with rapid startup enabled, exit the CS+ once, and then run the Update Manager. If the CS+ is resident in the notification area of Windows (system tray) due to rapid startup, an error occurs and produces the following message:

```
M0120001
"CubeSuiteW+.exe"
Installation is suspended because "CubeSuiteW+.exe" is running.
It will be resumed next time you start the tool.
```

- (2) Download the software tools you want from the web site at the URL below. The program will be available from January 22.
https://www.renesas.com/cs+_download

4.2 For CubeSuite+ V2.00.00 to 2.02.00

Update this in the same way as is described in 4.1 above.

4.3 For CubeSuite+ V1.03.00 or Earlier

Download and install the evaluation edition of CS+ for CC V6.01.00 or CS+ for CA,CX V4.01.00 from the following URL. The programs will be available from January 22.

https://www.renesas.com/cs+_download

5. Evaluation Edition

Before purchasing the compiler product, you can evaluate its performance and functionality by using the evaluation edition.

Download the evaluation edition of CS+ for CC or CS+ for CA,CX from the following URL.
(The installers will be available from January 22.)

https://www.renesas.com/cs+_download

You can turn the evaluation edition into the commercial edition when installing the evaluation edition, by inputting a license for CubeSuite, CubeSuite+, or compiler products.

Note: Even if you have a license for V1 of the C compiler package for RL78 and 78K families (CA78K0R or CA78K0), the restrictions on the evaluation edition of V1 of the C compiler package for RL78 family (CC-RL) will not be lifted. If you wish to lift the restrictions, please purchase the commercial edition of V1 of the C compiler package for RL78 family (CC-RL).

6. Purchasing the Product

Purchase a compiler product which includes CS+.

For product ordering, contact your local Renesas Electronics marketing office or distributor with the following information.

For product pricing, make inquiries in the same manner.

The compiler products which include CS+ are as follows.

- C Compiler and IDE for RH850 Family Professional edition
- C Compiler and IDE for RH850 Family Standard edition
- C/C++ Compiler and IDE for RX Family Professional edition
- C/C++ Compiler and IDE for RX Family Standard edition
- C Compiler and IDE for RL78 Family Professional edition
- C Compiler and IDE for RL78 Family Standard edition
- C Compiler and IDE for RL78, 78K Family
- C Compiler and IDE for V850 Family

Note: Since the CS+ which is included with a compiler product might not be the latest version, you may need to update it with reference to section 4 before using it.

Although CS+ is not included with a compiler product with an annual license, you can use CS+ by installing an evaluation edition of CS+ for CC. For how to download an evaluation edition, refer to section 4.

For orderable part names, refer to the product page at the URL below.

C Compiler Package for RH850 Family: https://www.renesas.com/rh850_c

C/C++ Compiler Package for RX Family: https://www.renesas.com/rx_c

C Compiler Package for RL78 Family: https://www.renesas.com/rl78_c

C Compiler Package for V850 Family: https://www.renesas.com/v850_c

C Compiler Package for RL78 and 78K Families: https://www.renesas.com/rl78_78k_c

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Jan. 16, 2018	-	First edition issued

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■Inquiry

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