[Upgrade to revision] CS+ Integrated Development Environment V8.04.00	R20TS0593EJ0100 Rev.1.00 Jul. 16, 2020

Outline

The CS+ integrated development environment has been updated from V8.03.00 to V8.04.00.

1. Products and Versions to Be Updated

- ➢ CubeSuite+ Common Program: V1.00.00 to V1.03.00 and V2.00.00 to V2.02.00
- ➢ CS+ Common Program: V3.00.00 to V3.03.00, V4.00.00 to V4.03.00, V5.00.00, V6.00.00 to V6.01.00, V7.00.00, V8.00.01, V8.01.00 and V8.03.00

For how to check which version you currently have, refer to the following URL:
https://www.renesas.com/cs+_ver

2. Main Features of the Update

The following features have been newly added and improved in CS+ for CC.

- Addition of a sample script to the Python console (Target device: RH850, RX, and RL78 families)
- Improvement in the integrated editor functions (Target device: RH850, RX, and RL78 families)
- Addition of advanced debug functions for the Generic Timer Module (GTM) (Target device: RH850 family)

See below for the details of these features.

(1) Addition of a sample script to the Python console (Target device: RH850, RX, and RL78 families)

A sample Python script has been added as an aid for testing programs that communicate via UART.

This sample performs fuzz testing on a program that transmits and receives data via UART. It randomly generates input values and repeatedly tests that the data is transmitted and received correctly.

With a little customization, this sample script can also be used for testing other programs (such as those for communicating via CAN or BLE).
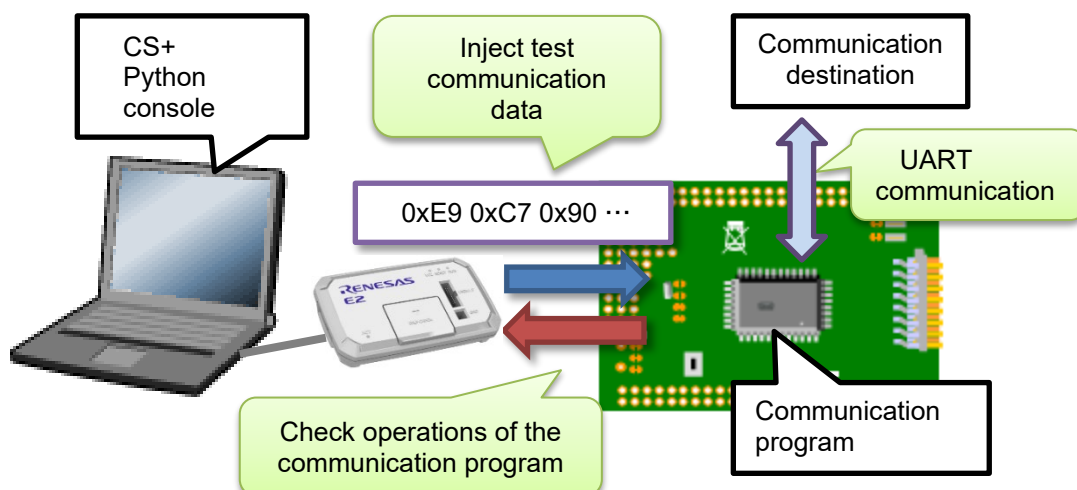

Figure 1. Example application of a fuzz test using the sample script

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(2) Improvement in the integrated editor functions (Target device: RH850, RX, and RL78 families)

The CS+ integrated editor has been improved as follows.

(a) Addition of a function to directly jump to a variable definition line

The [Jump to Function] menu has been enhanced and replaced by the [Jump to Function or Variable] menu. In V8.03.00 or older versions, you could only jump to a line defining a function. In V8.04.00, you can now jump to a line defining a variable (not just a function).
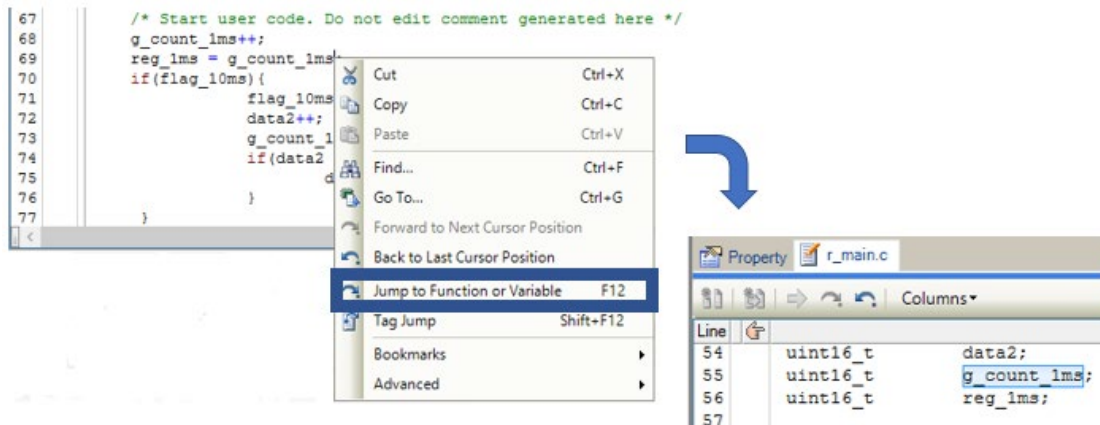

Figure 2. Using the [Jump to Function or Variable] menu to jump to a variable definition line

(b) Improvement in automatic character code recognition

The automatic character code determination process has been improved so that a character code is determined more correctly.

(3) Addition of advanced debug functions for the Generic Timer Module (GTM) (Target device: G4MH core of the RH850 family)

The following debug functions have been added for the GTM:

(a) Debug functions equivalent to those for CPU cores are now available for the GTM, such as disassemble display and memory display.

- With Disassemble, you can now debug a code inside the GTM without analyzing the machine language. (Figure 3. Disassemble display part)

- You can display information equivalent to those for CPU cores, such as memory, IOR, and register display for the GTM. (Figure 3. Memory display part)

(b) Immediate debugging with easy settings

- You can debug a GTM with the following settings (see Figure 4).

[Connect Settings] tab in the Property panel of the emulator ->[Connection with Target Board] category

(i) [Debug the GTM function] -> [Yes]

(ii) [MCS to be debugged] -> Select the MCS channel

In the debug manager (Figure 3. Debug manager part), select a CPU core or MCS channel to be debugged. At the bottom of the Debug Manager, the status of the selected core or channel is shown.

Note that the GTM debug functions are supported by the E2 emulator and IE850A emulator.
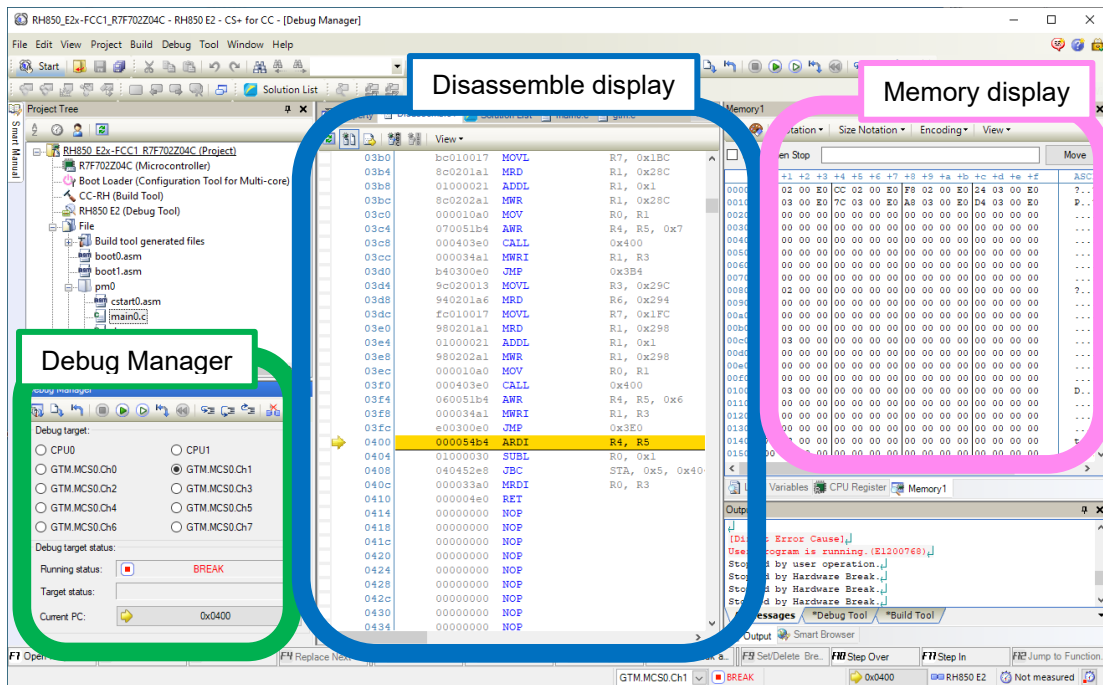
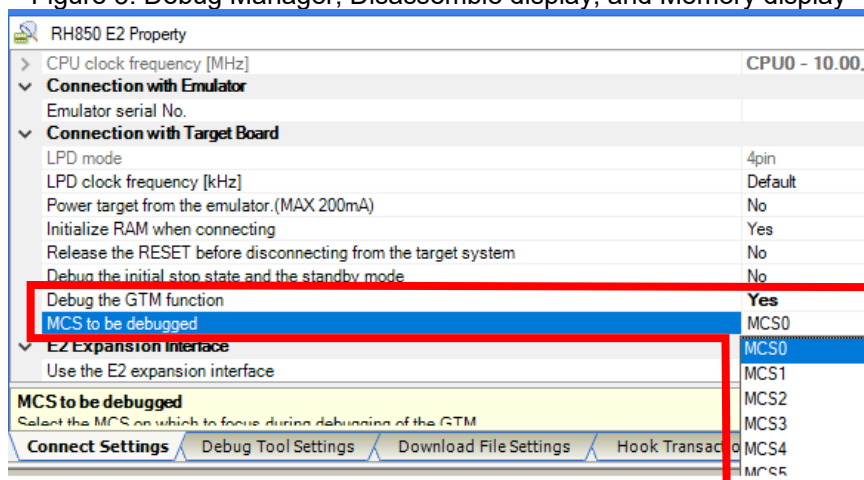Figure 3. Debug Manager, Disassemble display, and Memory display

Figure 4. Setting the GTM debug function

3. Description of the Update

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

- CS+ for CC (for RX, RH850 and RL78) Common Programs has been updated from V8.03.00 to V8.04.00.

CS+ for CC V8.04.00 includes the following updates.

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

V8.03.00 has been updated to V8.04.00.

The main updated items are as follows. Refer to the release note for more details. (Scheduled to be released on July 20.)

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

CS+ for CC V8.04.00 Release Note

(a) Additional features and improvement of the build tools

- The following version of the RH850 compiler from Green Hills Software Inc. is now supported.
  · 2020.1.5

  For more information about GHS compilers, contact Green Hills Software, Inc.
  http://www.ghs.com/

- Improvement of the problem that CS+ runs a rapid build repeatedly. (Target device: RL78 family)

  File dependencies have been updated so that a rapid build will not be repeatedly run. For details, refer to the following URL:

  https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ts0565

  [Notes] CS+ Integrated Development Environment

(b) Improvement of the debug tools

- Support for the RH850 compiler from Green Hills Software, Inc.

  The following version is now supported.

  · 2020.1.5

- Additional microcontrollers supported by peripheral module simulation function
  The following microcontrollers are now supported.

  · RL78/G1F group

  For details, refer to the release note. (Scheduled to be released on July 20.)

  https://www.renesas.com/cs+_document
  Simulator for RL78/G1F V1.00.00 Release Note

- Additional components supported by the Virtual Board panel
  The Virtual Board panel supports more components.

  · 8x8 segment LCD for the integrated driver
  For details, refer to the User's Manual. (Scheduled to be released on July 20.)
  https://www.renesas.com/cs+_document
  CS+ V8.04.00 Integrated Development Environment User's Manual: RL78 Debug Tool

- The following issue described in RENESAS TOOL NEWS Document No. R20TS0554EJ0100 has been fixed.

  1. When using timer RD for controlling the event count period for timer RJ in event counter mode
     For details, refer to the following URL:

  https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ts0554

  [Notes] e^2 studio Simulator for RL78/G14, CS+ Simulator for RL78/G14

- Improvement in HALT mode cancellation operation in the peripheral simulation function (Target device: RL78 family)
  For details, refer to the release note. (Scheduled to be released on July 20.)
  https://www.renesas.com/cs+_document
  CS+ for CC V8.04.00 Release Note

- Improvement in time measurement after the simulator standby mode is cleared (Target device: RL78 and RH850 families)
  For details, refer to the release note. (Scheduled to be released on July 20.)
  https://www.renesas.com/cs+_document
  CS+ for CC V8.04.00 Release Note

(c)   Improvement of Python console

-        Python functions have been added and existing Python functions have been extended.

3.2   Device Information

3.2.1   CS+ Device Information for RH850 Family

V8.03.01 has been updated to V8.04.00.

V8.04.00 includes the following updates.

(1)   Addition of Supported Devices

The following devices are now supported.

-        RH850/U2A8 group

(2)   Correction of Device Information

The device information for the following MCU groups has been corrected.

-        RH850/U2A16 group
-        R7F702Z19A

For details, refer to the URL below. (Scheduled to be released on July 20.)
https://www.renesas.com/cs+/eng/CSPlus_DevInfo_RH850.html

3.2.2   CS+ Device Information for RL78 Family

V8.03.00 has been updated to V8.04.00.

V8.04.00 includes the following updates.

(1)   Addition of Supported Devices

The following devices are now supported.

-        RL78/G1M group

-        RL78/G1N group

For details, refer to the URL below. (Scheduled to be released on July 20.)
https://www.renesas.com/cs+/eng/CSPlus_DevInfo_RL78.html

3.3   Quick and Effective tool solution

V3.03.00 has been updated to V9.04.00.
For details, refer to the URL below. (Scheduled to be released on July 20.)
https://www.renesas.com/cs+/eng/CSPlus_QE.html

3.4   Emulator Utility

The Emulator Utility has been updated to V1.03.00 from V1.01.00 (CS+ for CA,CX) and V1.02.00 (CS+ for CC).

The following revisions are made in V1.03.00.

-        A self-checking program for the E2 emulator Lite has been newly added.
-        Failure analysis on the E2 emulator Lite is now possible.

For details, refer to the URL below. (Scheduled to be released on July 20.)
http://tool-support.renesas.com/autoupdate/support/eng/cs_plus/Emulator_Utilities_List.html

4.   Updating Your Product

Online update is available free of charge. The update method varies depending on the edition of CS+.

Note 1. An evaluation edition of the CC-RL build tool will be included when 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 package for RL78 and 78K families (CA78K0R, CA78K0).

You will 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.

Note 2. Even if you have a license for V1 of the C compiler package for RH850 family (CC-RH), the restrictions on the evaluation edition of V2 of the C compiler package for RH850 family (CCRH) will not be lifted.

If you wish to lift the restrictions, please purchase the commercial edition of V2 of the C compiler package for RH850 family (CC-RH).

Note 3. Even if you have a license for V1, V2 of the C/C++ compiler package for RX family (CC-RX), the restrictions on the evaluation edition of V3 of the C/C++ compiler package for RX family (CC-RX) will not be lifted.

If you wish to lift the restrictions, please purchase the commercial edition of V3 of the C/C++ compiler package for RX family (CC-RX).

Note 4. Refer to section 6 for how to purchase the product.

4.1   For CS+ V3.00.00 or Later

Update your program in either of the following methods.

(1)   On the Windows Start menu, select Renesas Electronics CS+ and then start Update Manager to install the update. (This service will be available from July 20.)

> 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 and install the desired software tools from the URL below.

(Download will be available as of July 20.)

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

4.2   For CubeSuite+ V2.00.00 to V2.02.00

Update the tool in the same way as in 4.1.

In the description, change the name from "Renesas Electronics CS+" to "Renesas Electronics CubeSuite+".

4.3   For CubeSuite+ V1.03.00 or Earlier

CubeSuite+ V1.03.00 or earlier versions do not support Update Manager.

Download the free evaluation edition of CS+ for CC V8.04.00 or CS+ for CA,CX V4.04.00 to install the update. (Download will be available as of July 20.)

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

5. Free Evaluation Edition

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

Download the free evaluation edition of CS+ for CC or CS+ for CA,CX from the following URL.

(The installer will be available from July 20.)

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

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

Note 1. Even if you have a license for V1 of the C compiler package for RL78 and 78K families (CA78K0R, 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).

Note 2. Even if you have a license for V1 of the C compiler package for RH850 (CC-RH), the restrictions on the evaluation edition of V2 of the C compiler package for RH850 family (CCRH) will not be lifted.

If you wish to lift the restrictions, please purchase the commercial edition of V2 of the C compiler package for RH850 family (CC-RH).

Note 3. Even if you have a license for V1, V2 of the C/C++ compiler package for RX family (CC-RX), the restrictions on the evaluation edition of V3 of the C/C++ compiler package for RX family (CC-RX) will not be lifted.

If you wish to lift the restrictions, please purchase the commercial edition of V3 of the C/C++ compiler package for RX family (CC-RX).

6.   Purchasing the Product

CS+ is included in the compiler products. Please purchase a compiler product.

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

For product pricing, make inquiries in the same manner.

The compiler products that 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 may 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 complier product with an annual license, you can use CS+ by installing a free evaluation edition of CS+ for CC. For how to download the free evaluation edition, refer to section 5.

For more information, see 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

Information about compiler licenses is available at the following web page:

https://www.renesas.com/compiler_licenses

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Jul.16.20	-	First edition issued

Corporate Headquarters

TOYOSU FORESIA, 3- 2- 24 Toyosu,

Koto-ku, Tokyo 135- 0061, Japan

www.renesas.com

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Contact information

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www.renesas.com/contact/

TS Colophon 4.1