[Upgrade to version]

CS+ Integrated Development Environment V4.00.00

Outline

We will be revising the CS+ integrated development environment (formerly CubeSuite+) from V3.03.00 to V4.00.00.

1. Product 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 Program V3.00.00 to V3.03.00

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

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

2. Points Upgraded

The following points are to be upgraded.

2.1 CS+ common programs (with building, debugging, analysis, and other capabilities)

- The common programs of CS+ for CC (RX, RH850, and RL78) have been updated from V3.03.00 to V4.00.00.

- The common programs of CS+ for CA, CX (78K, RL78, and V850) have been updated from V3.01.00 to V3.02.00.

The main items updated in CS+ for CC V4.00.00 and CS+ for CA, CX V3.02.00 are as follows.

(1) Support for Windows

With the expiration of support for Windows 8, V4.00.00 of CS+ for CC and V3.02.00 of CS+ for CA, CX do not support Windows 8.

You need to consider migrating from Windows 8 to Windows 8.1 if you intend to continue using CS+.

(2) Version of the .NET Framework

We have changed the version of the .NET Framework (from Microsoft) with which CS+ is supposed to run.

Before: Microsoft .NET Framework 4

Now: Microsoft .NET Framework 4.5.2

(3) CS+ for CC (for RX, RH850, and RL78)

(a) Improved basic facilities

The following are the main items. Refer to the following release note for details. This information will be available from April 20.

http://www.renesas.com/products/software-tools/tools/ide/csplus.html#documents
CS+ Integrated Development Environment Package V4.00.00 Release Note

- We have started to supply new solutions shown below.

➢ Fault injection for detection: Pseudo-errors for debugging (applicable MCUs: RH850 family)

This feature is provided for generating pseudo-errors to check the response to errors which are difficult to reproduce on the real machine. You can use this feature to check the operation of a reset routine or a handler called in response to an error, or of functions to be called from within a handler, and debug the code as required.

> Network evaluation: Debugging of CAN reception (applicable MCUs: RH850 family)

  This feature is provided for facilitating debugging of the reception procedure of a channel by using the inter-channel communications facility of the RS-CAN module to continuously transmit frames over the CAN bus to a desired channel.

> Safety evaluation: Tool for checking exclusive control (applicable MCUs: RH850 family)

  This tool is used to check whether any functions access variables outside the exclusive control period. The CC-RH compiler for the RH850 family must be V1.04.00 or later.

- A facility for comparing performance in optimization has been added.

  We have added a new facility for measuring and comparing the ROM size or execution speed in cases where size or speed is given priority in optimization by the build tool. You can determine which build options should be used according to the results of comparison, which will depend on whether size or speed has priority in optimization.

- Safety evaluation: A table of access to variables by functions has been added.

- Enhanced [Error List] panel.

- Improved [Detailed Version Information] dialog box.

- Added a CS+ command-line option.

(b) Additions and modification to the build tool

- Application of a build option for multiple source files has been added.

- A facility for checking that an SYNCP instruction has been inserted at the beginning of an exception handler (for RH850G3M cores) has been added.

- The problem regarding the following point, of which we informed you in RENESAS TOOL NEWS Document No. 160301/tn1, has been fixed.

  > A batch build error is indicated even when building has been successful

  For details of the problem, refer to the URL below.

  http://www.renesas.com/doc/toolnews/eng/2016/160301tn1_e.pdf

- The problem regarding the following point, of which we informed you in RENESAS TOOL NEWS Document No. R20TS0004EJ0100, has been fixed.

  > The property setting of the error message file of the RH850 compiler (CC-RH) returning to its initial value

  For details of the problem, refer to the URL below.

  http://www.renesas.com/doc/toolnews/eng/2016/r20ts0004ej0100_cstnno.pdf

(c) Additions and modification to the debugging tool

- Simulation of peripheral modules in the RL78/G13 is now supported. (Applicable MCUs: RL78 only)

- A function for performance measurement has been added.

- A software break function for the RAM space has been added.

- Updating of the real-time display is now supported.

- The problem regarding the following point, of which we informed you in RENESAS TOOL NEWS Document No. 160116/tn2, has been fixed.

  > The Value of the Time Display (Clock) in the Trace Panel Being Incorrect

  > Point for Caution When Printing the Contents of the Disassemble Panel

  For details of the problem, refer to the URL below.

  http://www.renesas.com/doc/toolnews/eng/2016/160116tn2_e.pdf

(d) Addition of functionality for the Python console

- The Python functions described below have been newly added. (Applicable MCUs: RH850 family)

Function name	Functional Overview
debugger.Performance.Delete	This function deletes a condition of performance measurement.
debugger.Performance.Disable	This function disables performance measurement.
debugger.Performance.Enable	This function enables performance measurement.
debugger.Performance.Get	This function references the result of performance measurement.
debugger.Performance.Information	This function displays performance measurement information.
debugger.Performance.Set	This function sets performance measurement.
debugger.PseudoError.Get	This function references ECM error information.
debugger.PseudoError.SetGo	This function sets conditions of a pseudo error and runs a program.
debugger.SoftwareTrace.Delete	This function deletes a software trace.
debugger.SoftwareTrace.Disable	This function disables a software trace.
debugger.SoftwareTrace.Enable	This function enables a software trace.
debugger.SoftwareTrace.Get	This function refers to the software trace data for the specified number of frames. This function also outputs the acquired software trace data to a file.
debugger.SoftwareTrace.Information	This function displays software trace information.
debugger.SoftwareTrace.Set	This function sets a software trace.
debugger.Timer.Detail	This function sets measurement conditions of a conditional timer.

- The following Python classes have been added. (Applicable MCUs: RH850 family)

Name of class	Class Overview
PerformanceCondition	This class creates conditions of performance measurement.
PerformanceEventInfo	This class holds performance measurement event information.
PerformanceInfo	This class holds performance measurement information.
PseudoErrorCondition	This class creates a pseudo error condition.
PseudoErrorInfo	This class holds ECM error information.
SoftwareTraceEventInfo	This class holds software trace event information.
SoftwareTraceInfo	This class holds software trace information.

(e) Additions of features to the I/O header file generation tool

- A feature to output I/O header files in consideration of μITRON has been added.

- A feature to output I/O header files which do not share module structure definitions has been added.

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

(a) Improvement of the debugging tools

- The problem regarding the following point, of which we informed you in RENESAS TOOL NEWS Document No. 160116/tn2, has been fixed.

  ➢ Point for caution when printing the contents of the disassemble panel

  For details of the problem, refer to the URL below.

  http://www.renesas.com/doc/toolnews/eng/2016/160116tn2_e.pdf

2.2   Code generators

2.2.1   RL78 code generator for CS+

The version has been upgraded from V2.10.00 to V2.11.00.

For details, go to:

- RL78 code generator for CS+ (CS+ for CC)

  http://www.renesas.com/cubesuite+/CSP_Code_Generator_for_RL78_CC.html

- RL78 code generator for CS+ (CS+ for CA, CX)

  http://www.renesas.com/cubesuite+/CSP_Code_Generator_for_RL78_CA_CX.html

  This information will be available from April 20.

2.2.2   RX code generator for CS+

The version has been upgraded from V1.09.00 to V1.10.00.

For details, go to:

- RX code generator for CS+

  http://www.renesas.com/cubesuite+/CubeSuitePlus_Code_Generator_for_RX.html

  This information will be available from April 20.

2.3   Device information file

2.3.1   RH850 device information file managed by CS+

The version has been upgraded from V3.00.04 to V4.00.00.

The following revisions were made in V4.00.00.

(1)   **Modification of device information**

The device information relevant to the following MCUs have been modified:

- RH850/F1H group of MCUs (RH850 family)

- RH850/P1H-C group of MCUs (RH850 family)

- RH850/P1M-C group of MCUs (RH850 family)

For details, go to:

http://www.renesas.com/cubesuite+/CubeSuitePlus_DevInfo_RH850.html

This information will be available from April 20.

2.3.2   RX device information file managed by CS+

The version has been upgraded from V1.10.00 to V1.11.00.

The following revisions were made in V1.11.00.

(1)   **Addition of supported MCUs**

RX24T groups

R5F524TAAxFP

R5F524TAAxFF

R5F524TAAxFN

R5F524T8AxFP

R5F524T8AxFF

R5F524T8AxFN

(2) **Modification of device information**

The device information relevant to the following MCUs have been modified:

- RX63N group

- RX631 group

- RX23T group

- RX230 group

- RX231 group

For details, go to:

http://www.renesas.com/cubesuite+/CubeSuitePlus_DevInfo_RX.html

This information will be available from April 20.

2.3.3   RL78 device information file managed by CS+

The version has been upgraded from V3.00.05 to V4.00.00.

The following revisions were made in V4.00.00.

(1)   Addition of Pin Assignment Information

The pin assignment information for the following MCUs are added.

- RL78/F15 group of MCUs (RL78 family)

For details, go to:

http://www.renesas.com/cubesuite+/CSP_DevInfo_RL78.html

This information will be available from April 20.

2.4   CS+ utility

The version has been upgraded from V3.01.01 to V3.02.00.

For details, go to:

http://www.renesas.com/cubesuite+/CubeSuitePlus_Utilities.html

This page will be updated on April 20.

3.   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 to CS+ V3.03.00.
However, we are unable to lift the restrictions on the evaluation edition of CC-RL in response to a
customer holding a license for an earlier RL78, 78K family C compiler package (CA78K0R, CA78K0).
You need to purchase the commercial edition of RL78 family C compiler package (with IDE) V1 (CC-
RL) if you wish to have the restrictions on the evaluation edition lifted.
Refer to 5. Purchasing the Product for details.**

3.1 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 on and after April 20.

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

M0120001

Installation is suspended because "CubeSuiteW+.exe" is running.

It will be resumed next time you start the tool.

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(2) Download the software tools you want from the web site at:
http://www.renesas.com/cs+_download

The program will be available from April 20.

3.2 For CubeSuite+ V2.00.00 to 2.02.00

Update this in the same way as is described above under 3.1.

3.3 For CubeSuite+ V1.03.00 or earlier

Download and install the evaluation edition of CS+ for CC V4.00.00 or CS+ for CA, CX V3.02.00 from the following URL:

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

The programs will be available from April 20.

4. 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:
http://www.renesas.com/cs+_download

The installer will be available on this page from April 20.

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

Note: Even if you have a license for V1 of the CA78K0R or CA78K0RL78 C compiler (conventional C compiler for RL78, 78K family), the restrictions on the evaluation edition of V1 of the RL78 family C compiler package (CC-RL) will not be lifted, since the latter is a new product with significantly enhanced capabilities.
If you wish to lift the restrictions, please purchase the commercial edition of V1 of the RL78 family C compiler package (CC-RL).

5. How to Purchase the Software

Purchase a compiler product which includes CS+.

To check the prices or order the product, contact your local Renesas Electronics marketing office or distributor with the following information.

The compiler products which include CS+ are as follows.

- RH850 Family C Compiler Package (with IDE) Professional edition

- RH850 Family C Compiler Package (with IDE) Standard edition

- RX Family C/C++ Compiler Package (with IDE) Professional edition

- RX Family C/C++ Compiler Package (with IDE) Standard edition

- RL78 Family C Compiler Package (with IDE) Professional edition

- RL78 Family C Compiler Package (with IDE) Standard edition

- RL78, 78K Family C Compiler Package (with IDE)

- V850 Family C Compiler Package (with IDE)

For an overview of the products, visit our Web site at:

http://www.renesas.com/products/tools/coding_tools/swpkg/index.jsp

Note: Since the CS+ which is included with a compiler product might not be the latest version, you may need to upgrade it with reference to 3. Updating Your Product, before using it.

Revision History

| Rev. | Date | Description | |
		Page	Summary
1.00	Apr. 16, 2016	-	First edition issued

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Renesas Electronics Corporation

■Inquiry

http://www.renesas.com/en-hq/support/contact.html

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