

[Upgrade to Revision]

R20TS0988EJ0100

Rev.1.00

CS+ Integrated Development Environment V8.11.00

Jan. 16, 2024

Outline

The CS+ integrated development environment has been updated from V8.10.00 to V8.11.00.

1. Products to be Updated

- CubeSuite+ Common Program:
V1.00.00 to V1.03.00, 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 to V8.10.00

For how to check the version number, refer to the link below.

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

2. CS+ for CC: Improved Functionality and Changes

2.1 Enhanced Support for Renesas Compilers [RL78] [RH850] [RX]

The following compiler packages are now supported.

- C Compiler Package for RL78 Family [CC-RL] V1.13.00
- C Compiler Package for RH850 Family [CC-RH] V2.06.00
- C/C++ Compiler Package for RX Family [CC-RX] V3.06.00

For details of updates and points for caution on the compiler, refer to the release note for the compiler.

2.2 Addition of a feature for the output of dependency information

The /odp startup option has been added to CubeSuite+.exe for the output of dependency information files from the command line.

2.3 Elimination of an error when CS+ is started without the CC-RL¥ directory

Previously, when CS+ (CubeSuiteW+.exe) in a directory which is contained packed and saved a project and a development tool, was executed, then CS+ was not started with an error for no CC-RL subdirectory in the same directory (Tools¥CS+¥CC).

This error has been eliminated by ignoring present of CC-RL subdirectory, so that CS+ can now be started in such cases.

3. Other Tools: Improved Functionalities and Changes

3.1 CS+ Common Programs (Build, Debug, Analytical Features etc.)

- The common programs of CS+ for CC (for RX, RH850, and RL78 families) have been updated from V8.10.00 to V8.11.00.
- The common programs of CS+ for CA, CX has not been updated.

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

CS+ for CC has been updated from V8.10.00 to V8.11.00.

CS+ for CC V8.11.00 includes the following updates.

For details, see the release note at the link below. (It will be published on January 22.)

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

CS+ for CC V8.11.00 Release Note

(a) Added or Improved functionalities of the build tool

- Addition of a property for the `-use_mach` option [RL78]
The [Use MACH or MACHU instruction for multiply-accumulate operation] property for specifying the `-use_mach` CC-RL option has been added to the [Common Options] tabbed page. This option can be used in combination with CC-RL V1.11.00 or a later version.
- Addition of a property for the `-asmopt=-warning` option [RL78]
The [Displayed warning message] property for specifying the `-asmopt=-warning` CC-RL option has been added to the [Common Options] tabbed page.
- Improvement to a property for the `-show=struct linker` option [RH850][RL78]
The [Output information of members of struct or union] property for specifying the `-show=struct linker` option is now not displayed when the `-Optimize` option is specified.

(b) Added or Improved functionalities the debug tool

- Improvement to the Watch panel
When a label in an assembly file is registered in a watch-expression, a value (size of representation: 1 byte) is now displayed. If displayed value is not the expected one, change size of representation by using the context menu.
Pressing the [Ctrl] + [Space] keys while entering a watch-expression, the Watch panel displays candidates for the names of functions, variables before. The label names are displayed too.
The Watch panel has a feature for sorting watch-expressions by clicking on the heading of a column. To avoid incorrect operation by miss clicking the heading, this feature can be disabled from this version because state of pre-sorting cannot be return once sorting is executed. Sorting can be re-enabled by using the toolbar or context menu.
- Addition of encoding types
The following panels, new selectable encoding types have been added.
 - Watch panel
 - Memory panel
 - Local Variables panel
 - Call Stack panel
 The following encoding types have been added.
 - UTF-16 Big-Endian
 - UTF-16 Little-Endian
 - UTF-32 Big-Endian
 - UTF-32 Little-Endian
 However, note that UTF-16 in CS+ for CC V8.10.00 and earlier versions, is replaced by UTF-16 Big-Endian.

- Improvement to the operation for the stack area during debugging [RL78]
 Applies to: OCD(Serial) for devices of RL78/G10, RL78/G1N, and RL78/G1M
 The phenomenon, a debug tool reprogrammed part of the stack area when the following debugging operations were executed, has been improved.
 - Executing an instruction which changes the stack pointer (SP) during step execution
 - Changing the stack pointer (SP) in the CPU Register panel
- Improvement to the operation for measuring current consumption [RL78]
 Applies to: E2 emulator for devices of RL78/G22, RL78/G23, RL78/G24, RL78/F23, and RL78/F24
 When monitoring points were enabled in the Editor panel and measurement starts in the Measuring Current Consumption panel, the [The command cannot be executed since the user program is running. (E2440000)] error occurs and the debugger does not stop. This phenomenon has now been improved.
 The phenomenon, the [The command cannot be executed since the user program is running. (E2440000)] error occurs and the debugger does not stop when monitoring points were enabled in the Editor panel and measurement was started in the Measuring Current Consumption panel, has been improved.
- Extension of the range of products for which the simulation of current drawn is supported [RL78]
 Applies to: Simulators
 The products for the following MCU group have been added for the simulation of current drawn.
 - RL78/G24
- Addition of types of components supported on the [Virtual Board] panel [RL78]
 Applies to: The simulators for devices of RL78/G10, RL78/G11, RL78/G12, RL78/G13, RL78/G13A, RL78/G14, RL78/L12, RL78/G1F, RL78/G23, RL78/G15, RL78/G22, RL78/G16 and RL78/G24
 The following component types which support [Virtual Board] panel, has been added.
 - Pulse Input Device
 - Modbus Communication Device (UART)
 For details, see the user's manual at the link below. (The manual is applicable as of January 22.)
<https://www.renesas.com/cs+ document>
 CS+ V8.11.00 Integrated Development Environment User's Manual: RL78 Debug Tool
- Improvement to the operation of the [Virtual Board] panel after the MCU has been changed [RL78]
 Applies to: The simulators for devices of RL78/G10, RL78/G11, RL78/G12, RL78/G13, RL78/G13A, RL78/G14, RL78/L12, RL78/G1F, RL78/G23, RL78/G15, RL78/G22, RL78/G16 and RL78/G24
 When microcontroller of a project using the [Virtual Board] panel is changed, the [Virtual Board] panel runs started with taking over virtual components of panel before changing of the microcontroller.
 This also applies to the case when the microcontroller is changed in converting the project in the Project Convert Setting dialog box which is displayed when a common project file (*.rcpc) exported from the MCU Simulator Online is opened.
- Improvement to the operation of /lang startup option [RL78]
 Applies to: The simulators for devices of RL78/G10, RL78/G11, RL78/G12, RL78/G13, RL78/G13A, RL78/G14, RL78/L12, RL78/G1F, RL78/G23, RL78/G15, RL78/G22, RL78/G16 and RL78/G24
 The phenomenon, if "ja-JP" is specified for /lang in a non-Japanese OS, text in the simulator GUI was displayed in English, has been improved. Now the text appears in Japanese.
- Improvement to serial communications between the [Virtual Board] panel and the simulator GUI [RL78]
 Applies to: The simulators for devices of RL78/G10, RL78/G11, RL78/G12, RL78/G13, RL78/G13A, RL78/G14, RL78/L12, RL78/G1F, RL78/G23, RL78/G15, RL78/G22, RL78/G16 and RL78/G24
 The peripheral I/O redirection register (PIOR) can be manipulated by a program or debugger operations to re-assign specific multiplexed pin functions to alternative port pins. However, changing the assignment of serial interface functions to port pins had previously disabled normal connections through the [Serial] window or the serial communication component of the [Virtual Board] panel. This has been rectified so that such connections are enabled by setting port pins changed by peripheral I/O redirection register (PIOR) in the [Serial] window or the serial communication component.

- Update of the simulators [RL78]

For details, see the release note at the link below. (It will be published on January 22.)

<https://www.renesas.com/cs+ document>

- RL78/G10 Simulator V3.09.00 Release Note
- RL78/G11 Simulator V2.09.00 Release Note
- RL78/G12 Simulator V2.09.00 Release Note
- RL78/G13, G13A Simulator V2.09.00 Release Note
- RL78/G14 Simulator V2.09.00 Release Note
- RL78/G15 Simulator V1.03.00 Release Note
- RL78/G16 Simulator V1.01.00 Release Note
- RL78/G1F Simulator V1.08.00 Release Note
- RL78/G22 Simulator V1.03.00 Release Note
- RL78/G23 Simulator V1.07.00 Release Note
- RL78/G24 Simulator V1.02.00 Release Note
- RL78/L12 Simulator V1.09.00 Release Note

(c) Improved the Python console

- Added the functions of external communication features between the Python 3 execution environment

The following functions that control CS+ from Python 3.x have been added.

csplus.add_event_listener	Registers the listeners receive notifications of events generated in CS+.
csplus.remove_event_listener	Removes registrations of listeners which have been registered by add_event_listener.

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

There are no changes of CS+ for CA, CX in this update.

3.2 Device Information

Device information has been updated as follows.

3.2.1 CS+ Device Information for RX Family

The information has been updated from V3.13.00 to V3.14.00.

V3.14.00 includes the following update.

- (a) Corrected the information
 - RX26T group

For details, refer to the link below. (It will be published on January 22.)

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

3.2.2 CS+ Device Information for RL78 Family

(1) CS+ for CC

The information has been updated from V8.10.02 to V8.11.00.

V8.11.00 includes the following update.

- (a) Corrected the information

The following device information has been corrected.

- RL78/G22 group
- RL78/G24 group

For details, refer to the link below. (It will be published on January 22.)

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

(2) CS+ for CA, CX

There are no changes of CS+ for CA, CX in this update.

3.2.3 CS+ Device Information for RH850 Family

The information has been updated from V8.10.00 to V8.11.00.

V8.11.00 includes the following updates.

(a) Added supported devices

The following supported devices have been added.

- RH850/F1KM-S1 (support for ISELED) (12 products)
- RH850/F1KM-S2 (support for ISELED) (3 products)
- RH850/F1KM-S4 (support for ISELED) (6 products)

(b) Correction of the device information

The following device information has been corrected.

- RH850/U2B6

For details, refer to the link below. (It will be published on January 22.)

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

4. Updating the Product

CS+ can be updated online free of charge. The update method varies depending on the version/revision. See the following and update accordingly.

Note 1: For update of CubeSuite+ to CS+ V3.01.00 or later, the free evaluation edition of the CC-RL build tool is provided.

The license for the C Compiler Package for the RL78 and 78K families (CA78K0R, CA78K0) does not lift the restrictions on the CC-RL free evaluation edition.

In order to lift the restrictions, purchase the commercial edition of the C Compiler Package for RL78 Family V1 (CC-RL).

Note 2: The license for the C Compiler Package for RH850 Family V1 (CC-RH) does not lift the restrictions on the free evaluation edition of V2 (CC-RH) of the package.

In order to lift the restrictions, purchase the commercial edition of the C Compiler Package for RH850 Family V2 (CC-RH).

Note 3: The licenses for the C/C++ Compiler Package for RX Family V1 and V2 (CC-RX) do not lift the restrictions on the free evaluation edition of V3 (CC-RX) of the package.

In order to lift the restrictions, purchase the commercial edition of the C/C++ Compiler Package for RX Family V3 (CC-RX).

Note 4: For how to purchase a compiler package, see [section 6](#).

4.1 CS+ V3.00.00 or Later

Update in either of the following ways.

- (1) Open the Windows Start menu, select [Renesas Electronics CS+], and then run Update Manager. (The service is available as of January 22.)

Note:

If you have started CS+ with the Rapid Startup function enabled, exit CS+, and then run Update Manager.

If the Rapid Startup function is enabled and CS+ is shown in the Windows notification area, the following error message appears.

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 tool from the link below. (Tools are available as of January 22.)

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

4.2 CubeSuite+ V2.02.00 or Earlier

Update Manager does not support CubeSuite+ V2.02.00 and earlier.

Download and update to CS+ for CC V8.11.00 from the link below. (V8.11.00 is available as of January 22.)

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

5. Free Evaluation Edition of the Compiler

The compiler included in this product is the free evaluation edition.

Before purchasing a compiler license, you can try its functions and performance with the free evaluation edition.

The free evaluation edition of CS+ for CC is available for download at the link below. (The installer is available as of January 22.)

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

You can convert the free evaluation edition to the commercial edition by entering a license for CubeSuite, CubeSuite+, or a compiler package.

6. Purchasing the Compiler License

If you use the CS+ IDE for developing products, a compiler package is required. Purchase the one that suits the intended purpose.

Contact your local Renesas Electronics sales office or distributor and inform them of which product you wish to purchase.

For product pricing, contact the sales office or distributor.

CS+ supports the following packages.

- C Compiler Package for RH850 Family Professional Edition
- C Compiler Package for RH850 Family Standard Edition
- C/C++ Compiler Package for RX Family Professional Edition
- C/C++ Compiler Package for RX Family Standard Edition
- C Compiler Package for RL78 Family Professional Edition
- C Compiler Package for RL78 Family Standard Edition
- C Compiler Package for the RL78 and 78K Families
- C Compiler Package for V850 Family

Note:

The compiler packages no longer include the installation medium (CD/ DVD) from January 2022.

The installers are available for download at the Renesas website. For information, see [section 4](#), Updating the Product.

For details of the packages, refer to the following links:

- 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 the RL78 and 78K Families: https://www.renesas.com/rl78_78k_c

For the compiler licenses, refer to the link below.

https://www.renesas.com/compiler_licenses

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Jan.16.24	-	First edition issued

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