[Notes]
RX Family
Flash Module Using Firmware Integration Technology
RX Driver Package

R20TS0896EJ0100
Rev.1.00
Dec. 16, 2022

Outline

The application note for RX Family Flash Module Using Firmware Integration Technology (R01AN2184) sections 5.3.1.1 and 5.3.1.2 show inaccurate procedures.

1. Notes on the Application Note Sections "5.3.1.1 Programming Code Flash from RAM" and "5.3.1.2 Programming Code Flash Using the Dual Bank Function"

1.1 Applicable Products

(1) RX Family Flash Module Using Firmware Integration Technology (Flash Module)

Rev.4.90 (document No. R01AN2184EJ0490) and earlier

(2) RX Driver Package

The RX Driver Packages below include the Flash Modules in (1).

Rev.1.36 (document No. R01AN6515EJ0136) and earlier

(3) FIT Modules used in combination with the Flash Modules and their application notes

The problem may occur when certain FIT Modules are used with the Flash Modules in (1).

Examples:

- RX Family Firmware Update Module Using Firmware Integration Technology (R01AN5824EJ)
  https://www.renesas.com/us/en/search?keywords=R01AN5824
- RX Family TSIP (Trusted Secure IP) Module Firmware Integration Technology (R20AN0548EJ)
  https://www.renesas.com/us/en/search?keywords=R20AN0548

1.2 Details

After embedding the Flash Module by using the Smart Configurator of 1.3 Conditions below, an attempt to set a section by following "5.3.1.1 Programming Code Flash from RAM" or "5.3.1.2 Programming Code Flash Using the Dual Bank Function" on the application note might cause a build error.

Error example: F0563100: Section address overflow out of range: "PFRAM"

1.3 Conditions

The problem occurs when the Flash Module is embedded by using any of the Smart Configurators below.

(1) e^2 studio Smart Configurator Plug-in: V2.14.0 or later

(2) Smart Configurator for RX: V2.14.0 or later

1.4 Workaround

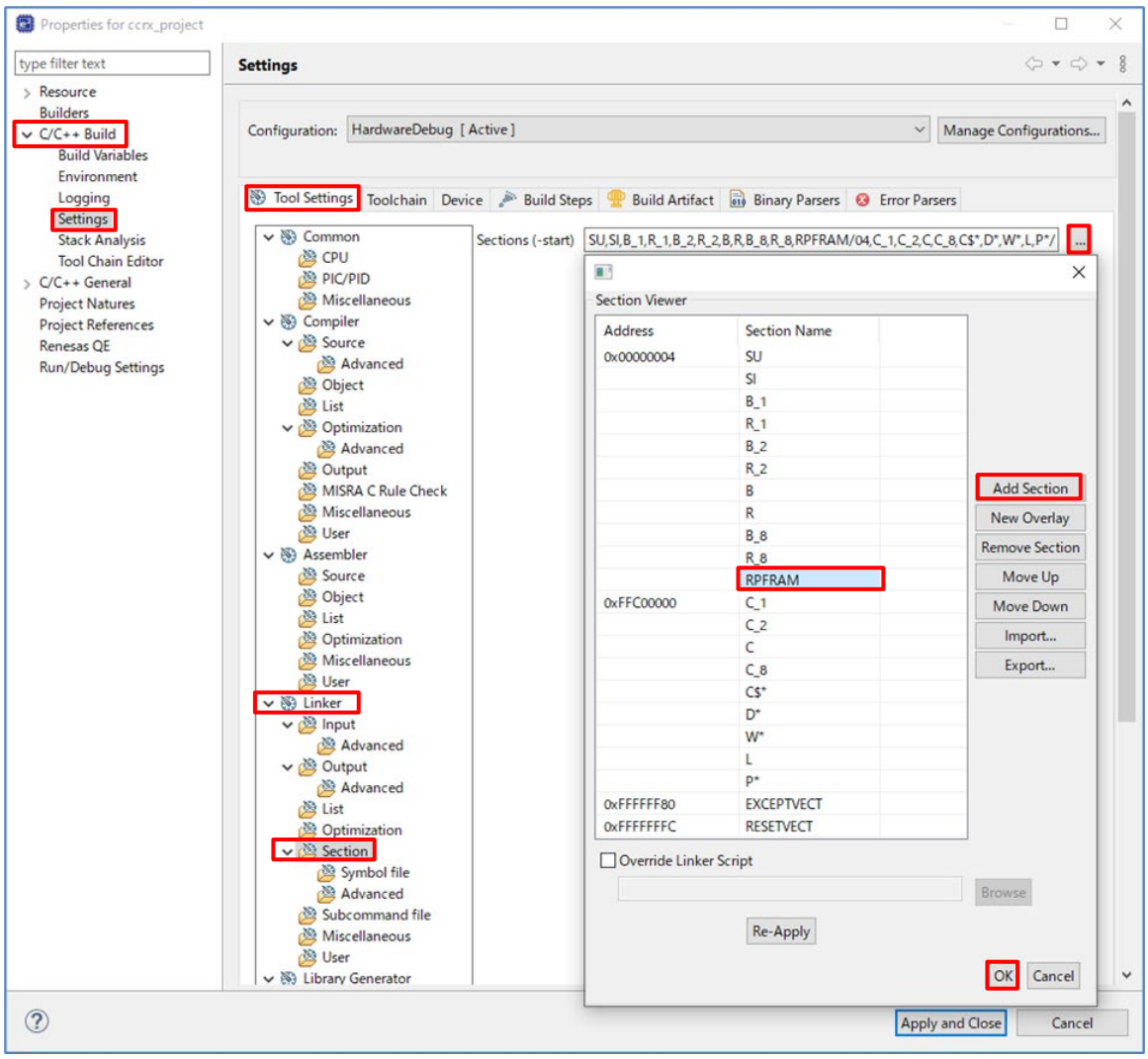
Take the following actions.

1. 5.3.1.1 Programming Code Flash from RAM
   See the application note for Flash Module Rev. 4.90, page 84, "1. Add a 'RPFRAM' section in a RAM area". Change the procedure as follows.

Procedure on 5.3.1.1

1. Add a 'RPFRAM' section in a RAM area.

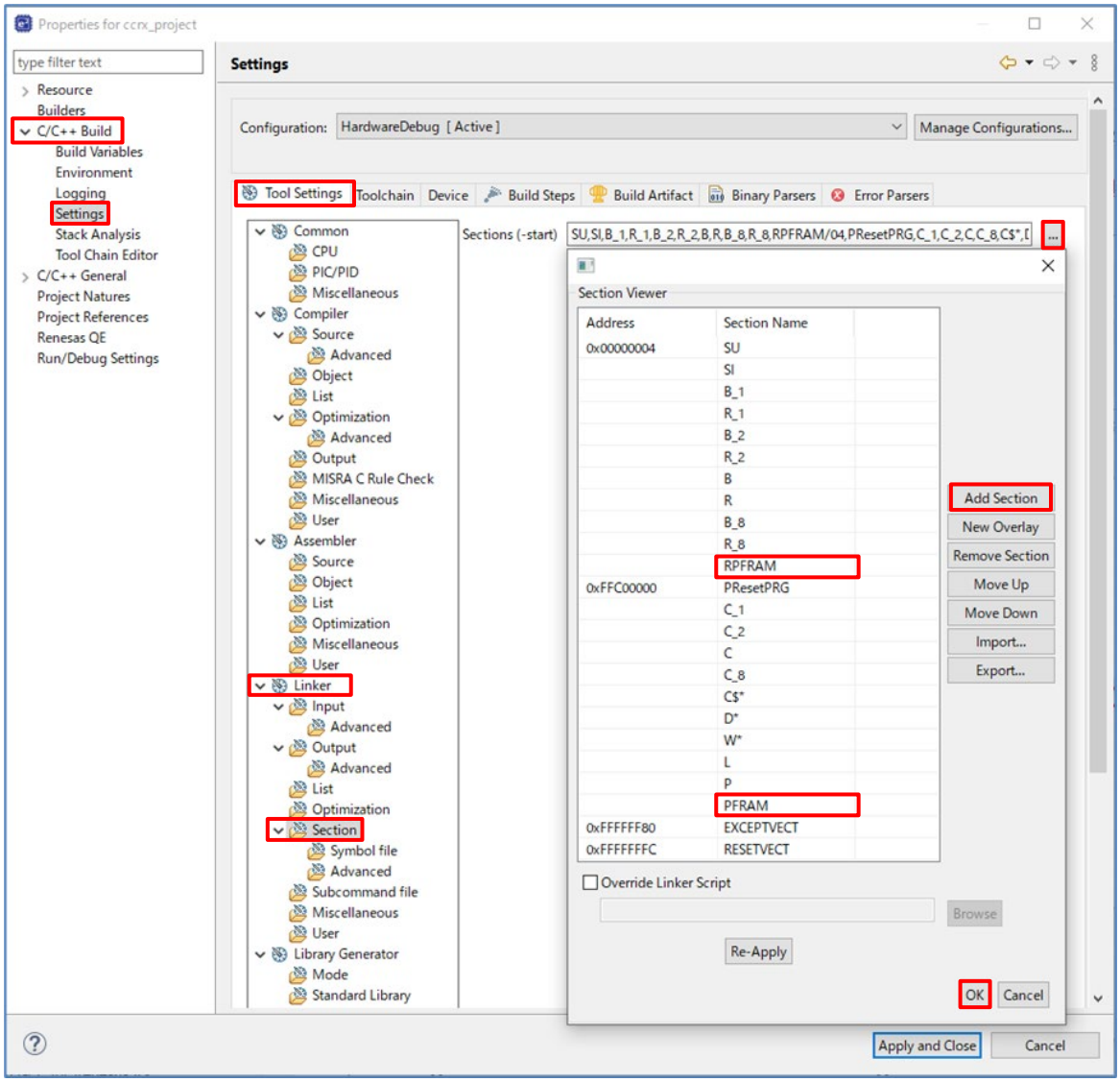
   (1) In Project Explorer, click the project you want to debug.
   (2) Click File > Properties to open the Properties window.
   (3) On the Properties window, click C/C++ Build > Settings.
   (4) Select the "Tool Settings" tab, click Linker > Section, and click the […] button to display the Section Viewer window.
   (5) On the Section Viewer window, click the [Add Section] button to add a 'RPFRAM' section in a RAM area, and then click the [OK] button.



Correct procedure

1. Add a 'RPFRAM' section in a RAM area.

(1) In Project Explorer, click the project you want to debug.
(2) Click File > Properties to open the Properties window.
(3) On the Properties window, click C/C++ Build > Settings.
(4) Select the "Tool Settings" tab, click Linker > Section, and click the […] button to display the Section Viewer window.
(5) On the Section Viewer window, click the [Add Section] button to add a 'RPFRAM' section in a RAM area.
(6) On the Section Viewer window, click the [Add Section] button to add a 'PFRAM' section in a ROM area, and then click the [OK] button.

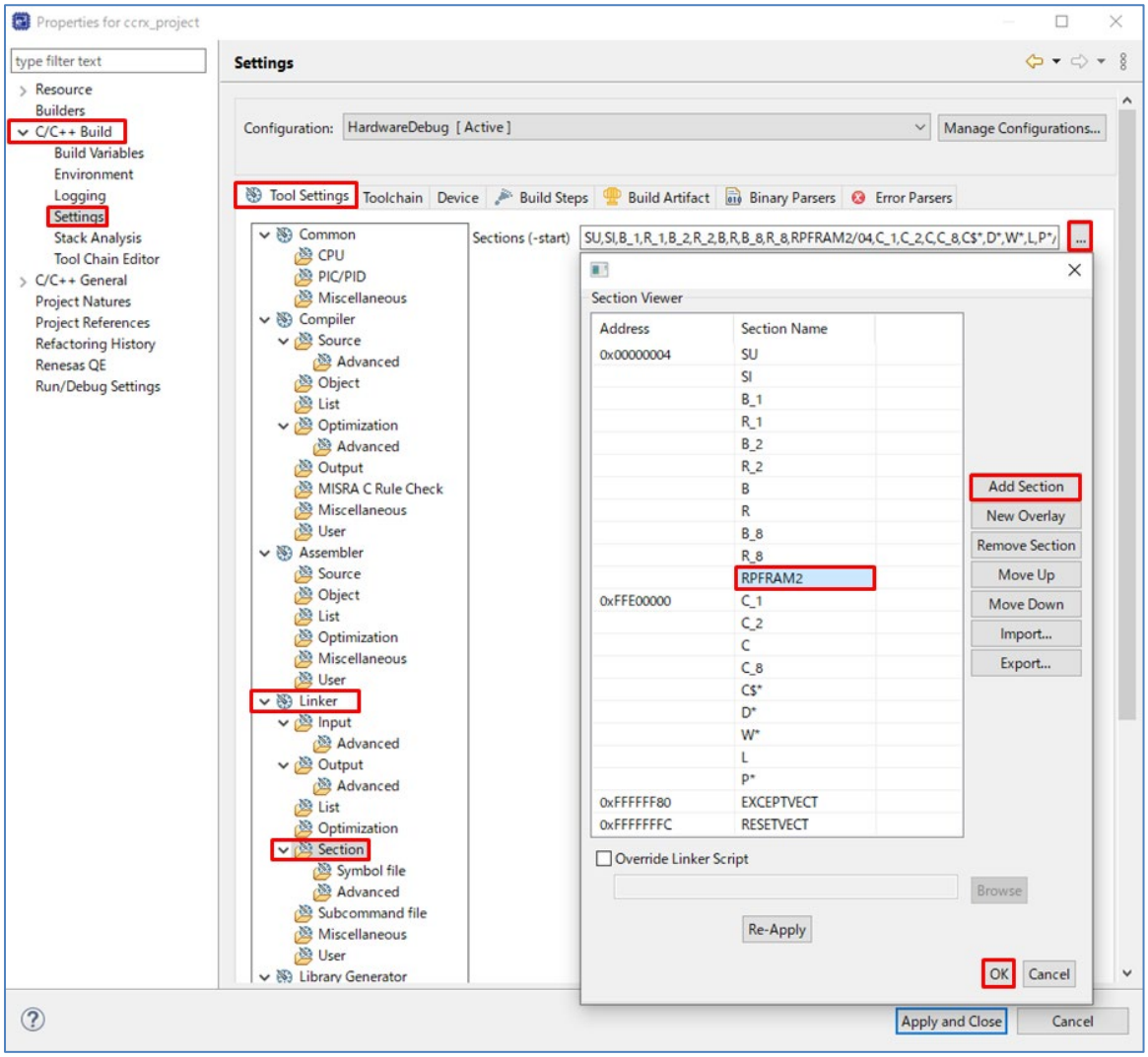


2. 5.3.1.2 Programming Code Flash Using the Dual Bank Function
See the application note for Flash Module Rev. 4.90, page 86, "1. Add a 'RPFRAM2' section in a RAM area". Change the procedure as follows.

Procedure on 5.3.1.2

1. Add a 'RPFRAM2' section in a RAM area.

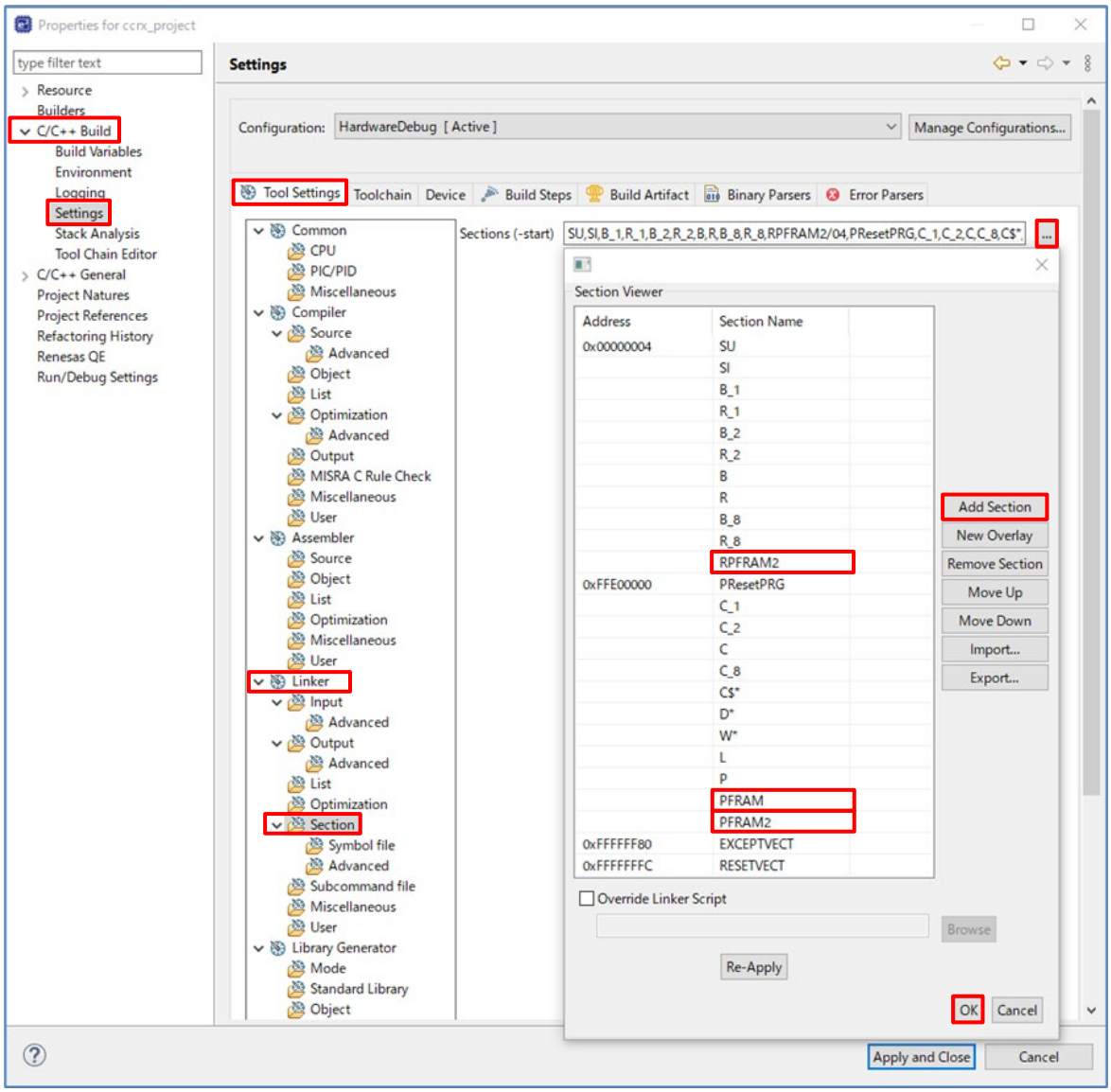
(1) In Project Explorer, click the project you want to debug.
(2) Click File > Properties to open the Properties window.
(3) On the Properties window, click C/C++ Build > Settings.
(4) Select the "Tool Settings" tab, click Linker > Section, and click the […] button to display the Section Viewer window.
(5) On the Section Viewer window, click the [Add Section] button to add a 'RPFRAM2' section in a RAM area, and then click the [OK] button.



Correct procedure

1. Add a 'RPFRAM2' section in a RAM area.

(1) In Project Explorer, click the project you want to debug.
(2) Click File > Properties to open the Properties window.
(3) On the Properties window, click C/C++ Build > Settings.
(4) Select the "Tool Settings" tab, click Linker > Section, and click the […] button to display the Section Viewer window.
(5) On the Section Viewer window, click the [Add Section] button to add a 'RPFRAM2' section in a RAM area.
(6) On the Section Viewer window, click the [Add Section] button to add a 'PFRAM' section in a ROM area.
(7) On the Section Viewer window, click the [Add Section] button to add a 'PFRAM2' section in a ROM area, and then click the [OK] button.



1.5 Schedule for Fixing the Problem

The procedures will be corrected in the application note for the next version.

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Dec.16.22	-	First edition issued

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Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu,
Koto-ku, Tokyo 135-0061, Japan
www.renesas.com

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