[Notes]

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

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

e^2 studio Code Generator Plug-in,

AP4 Coding Assistance Tool for RL78,

Applilet3 Coding Assistance Tool for RL78

Outline

When using the products in the title, note the following point.

1. When using the data flash library

1. When Using the Data Flash Library

1.1 Applicable Products

➢ CS+ Code Generator for RL78 V2.15.00 (CS+ for CC V6.01) and later
➢ CS+ Code Generator for RL78 V2.15.00 (CS+ for CA,CX V4.01) and later
➢ Code Generator plug-in V2.10.0 (e^2 studio V6.2.0) and later
➢ AP4 for RL78 V1.15.00 or later
➢ Applilet3 for RL78 V1.14.00 or later

1.2 Applicable Devices

➢ RL78 family:
RL78/G11, RL78/G12, RL78/G13, RL78/G14, RL78/F12, RL78/F13, RL78F14,
RL78/F15, and RL78/I1E group

1.3 Details

The code generated for the CPU operating frequency and flash programming mode is erroneous if "Used" is selected in [Setting of data flash library] in [Data flash].

Although CPU operating frequency and flash programming mode setting code is generated in the R_FDL_Create function, CPU operating frequency and flash programming mode setting variables are cleared by RAM clear processing before executing the R_FDL_Open function.

For this reason, the CPU operating frequency and flash programming mode may not be set correctly in the data flash library, and so data flash may not be programmed or read correctly.
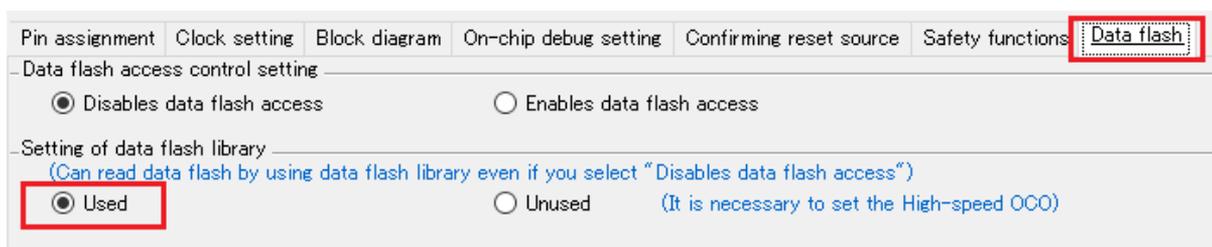

Figure 1 Setting of data flash library

1.4 Workaround

Add CPU operating frequency and flash programming mode setting code to the R_FDL_Open function.

Note: When code is generated again, generated code returns to the state before correction. Therefore, correct the source file each time you generate code.

・Source file: r_cg_pfdl.c

・Function to be corrected : void R_FDL_Open

・Function to be referenced : void R_FDL_Create

Below is an example of modification when the CPU operating frequency is 32MHz and the flash programming mode is full speed mode. Modification is shown in red.

Before modification:

```
/*************************************************************************
* Function Name: R_FDL_Create
* Description  : This function initializes the flash data library.
* Arguments    : None
* Return Value : None
*************************************************************************/
void R_FDL_Create(void)
{
    gFdlDesc.fx_MHz_u08 = _32_HOCO_CLOCK_MHz;  /* Comment omitted */
    gFdlDesc.wide_voltage_mode_u08 = _FULL_SPEED_MODE; /* Comment omitted */
}


/*************************************************************************
* Function Name: R_FDL_Open
* Description  : This function opens the RL78 data flash library.
* Arguments    : None
* Return Value : None
*************************************************************************/
void R_FDL_Open(void)
{
    PFDL_Open(&gFdlDesc);
    gFdlStatus = 1;
}
```

After modification:
 Copy the entire code in the R_FDL_Create function to the R_FDL_Open function.

```
/***********************************************************************
* Function Name: R_FDL_Create
* Description  : This function initializes the flash data library.
* Arguments    : None
* Return Value : None
***********************************************************************/
void R_FDL_Create(void)
{
    gFdlDesc.fx_MHz_u08 = _32_HOCO_CLOCK_MHz;  /* Comment omitted */
    gFdlDesc.wide_voltage_mode_u08 = _FULL_SPEED_MODE; /* Comment omitted */
}



/***********************************************************************
* Function Name: R_FDL_Open
* Description  : This function opens the RL78 data flash library.
* Arguments    : None
* Return Value : None
***********************************************************************/
void R_FDL_Open(void)
{
    gFdlDesc.fx_MHz_u08 = _32_HOCO_CLOCK_MHz;  /* Comment omitted */
    gFdlDesc.wide_voltage_mode_u08 = _FULL_SPEED_MODE; /* Comment omitted */
    PFDL_Open(&gFdlDesc);
    gFdlStatus = 1;
}
```

1.5 Schedule for Fixing the Problem

This problem will be fixed in the next version. (Scheduled to be released in January 2020.)

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Sep.16.19	-	First edition issued

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