

[Notes]

R20TS0500EJ0100

Rev.1.00

Oct. 16, 2019

Smart Configurator for RH850

Outline

When using Smart Configurator for RH850, note the following points.

1. When using data CRC
2. When using one-pulse outputs

1. When Using Data CRC

1.1 Applicable Products

Smart Configurator for RH850 V1.0.0 or later

1.2 Applicable Devices

RH850 family: RH850/F1KM group

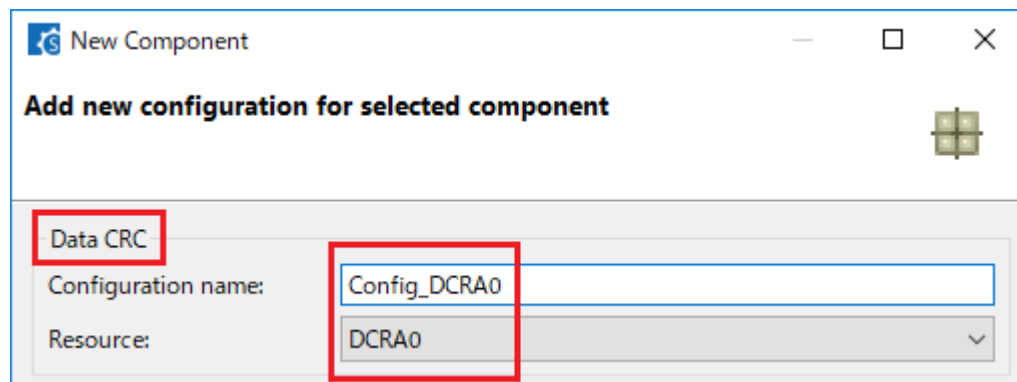
- RH850/F1KM-S1 group (48-pin, 64-pin, 80-pin, and 100-pin products)
- RH850/F1KM-S4 group (100-pin, 144-pin, 176-pin, and 233-pin products)

1.3 Details

Because unnecessary initialization code is generated when using the following data CRC function A (DCRA), CRC calculation is not carried out correctly.

- RH850/F1KM-S1 group: 48-pin and 64-pin products  
DCRA0
- RH850/F1KM-S1 group: 80-pin and 100-pin products  
DCRA0 to DCRA3
- RH850/F1KM-S4 group: 100-pin, 144-pin, 176-pin, and 233-pin products  
DCRA0 to DCRA3

■ When using DCRA unit 0



## 1.4 Workaround

Manually delete the unnecessary initialization code from the generated code in the following source file of data CRC function A<sup>(Note)</sup>:

- Functions in source file "<configuration-name>.c":
  - “void R\_<configuration-name>\_Create(void)”
  - “void R\_<configuration-name>\_Input32bitData(const uint32\_t \* data, uint32\_t data\_num)”
  - “void R\_<configuration-name>\_Input16bitData(const uint16\_t \* data, uint32\_t data\_num)”
  - “void R\_<configuration-name>\_Input8bitData(const uint8\_t \* data, uint32\_t data\_num)”

Note: If code is generated again, the previous state is restored. Modification is necessary each time you perform code generation.

The following is an example of the required modification when *<configuration-name>* is Config\_DCRAn in the RH850/F1KM group. Delete the unnecessary initialization code shown in red.

### Details of modification

```

void R_Config_DCRAn_Create(void)
{
    ...
    DCRAn.CIN = _DCRA_CLEAR_DATA;
    /* Synchronization processing */
    ...
}

void R_Config_DCRAn_Input32bitData(const uint32_t * data, uint32_t data_num)
{
    ...
    DCRAn.CIN = _DCRA_CLEAR_DATA;

    for(i=0; i<data_num; i++)
    ...
}

void R_Config_DCRAn_Input16bitData(const uint16_t * data, uint32_t data_num)
{
    ...
    DCRAn.CIN = _DCRA_CLEAR_DATA;

    for(i=0; i<data_num; i++)
    ...
}

void R_Config_DCRAn_Input8bitData(const uint8_t * data, uint32_t data_num)
{
    ...
    DCRAn.CIN = _DCRA_CLEAR_DATA;

    for(i=0; i<data_num; i++)
    ...
}
    
```

*n* = unit number

## 1.5 Schedule for Fixing the Problem

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

## 2. When Using One-Pulse Outputs

### 2.1 Applicable Products

Smart Configurator for RH850 V1.0.0 or later

### 2.2 Applicable Devices

RH850 family: RH850/F1KM group

- RH850/F1KM-S1 group (48-pin, 64-pin, 80-pin, and 100-pin products)
- RH850/F1KM-S4 group (100-pin, 144-pin, 176-pin, and 233-pin products)

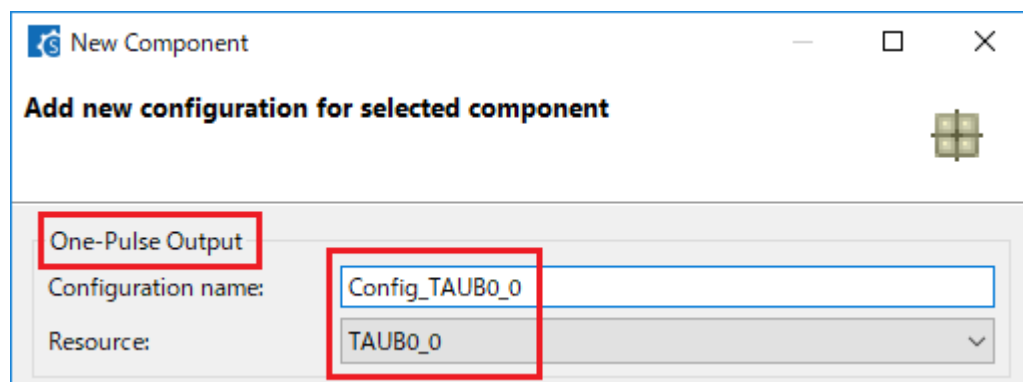
### 2.3 Details

Because interval timer mode is set in the TAUB $n$  channel mode OS register (TAUB $n$ CMOR $m$ )<sup>(Note)</sup> and TAUD $n$  channel mode OS register (TAUD $n$ CMOR $m$ )<sup>(Note)</sup> when using one-pulse outputs in the following timer array units, Smart Configurator does not operate properly.

Note:  $n$  = unit number,  $m$  = channel number

- RH850/F1KM-S1 group: 48-pin and 64-pin products  
TAUD0
- RH850/F1KM-S1 group: 80-pin and 100-pin products  
TAUB0 and TAUD0
- RH850/F1KM-S4 group: 100-pin and 144-pin products  
TAUB0 and TAUD0
- RH850/F1KM-S4 group: 176-pin and 233-pin products  
TAUB0, TAUB1, and TAUD0

- When using one-pulse outputs of channel 0 of TAUB0



## 2.4 Workaround

Manually modify the generated code in the following source file for one-pulse outputs<sup>(Note)</sup>:

Note: If code is generated again, the previous state is restored. Modification is necessary each time you perform code generation.

➤ For TAUB $n$ :

Function in source file "<configuration-name>.c":

"void R\_<configuration-name>\_Create(void)"

The following is an example of the required modification when <configuration-name> is Config\_TAUB $n$ \_ $m$  in the RH850/F1KM group. The modification is shown in red.

Before modification

```
void R_Config_TAUBn_m_Create(void)
{
    ...
    /* Set channel m setting */
    TAUBn.CMORm = ... | _TAUB_INTERVAL_TIMER_MODE | ...;
    ...
}
```

$n$  = unit number,  $m$  = channel number

After modification

```
void R_Config_TAUBn_m_Create(void)
{
    ...
    /* Set channel m setting */
    TAUBn.CMORm = ... | _TAUB_PULSE_ONECOUNT_MODE | ...;
    ...
}
```

$n$  = unit number,  $m$  = channel number

➤ For TAUDn:

Function in source file “<configuration-name>.c”:

“void R\_<configuration-name>\_Create(void)”

The following is an example of the required modification when <configuration-name> is Config\_TAUDn\_m in the RH850/F1KM group. The modification is shown in red.

Before modification

```
void R_Config_TAUDn_m_Create(void)
{
    ...
    /* Set channel m setting */
    TAUDn.CMORm = ... | _TAUD_INTERVAL_TIMER_MODE | ...;
    ...
}
```

After modification

```
void R_Config_TAUDn_m_Create(void)
{
    ...
    /* Set channel m setting */
    TAUDn.CMORm = ... | _TAUD_PULSE_ONECOUNT_MODE | ...;
    ...
}
```

## 2.5 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	Oct.16.19	-	First edition issued

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