[Notes]

C Compiler Package for RH850 Family

Outline

When using the C compiler package for RH850 family CC-RH, note the following point.

1.   #pragma block_interrupt directive (No.27)

   * The number after the note is the note's identification number.

1.   #pragma block_interrupt Directive (No.27)

1.1   Applicable Products

CC-RH V1.07.00 to V2.01.00

1.2   Details and Conditions

A function that disables interrupts in the entire function by using the "#pragma block_interrupt" directive closes without releasing the interrupt-disabled state.

1.3   Examples

Below is an example of the error.

```
#pragma block_interrupt fun
void fun(){
  ...
}
```

[Assembly source when the phenomenon occurs]

```
_fun:
    .stack _fun = 0
    di
    ...
    jmp [r31]
    ei                 ;<- The location of this instruction is invalid.
```

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1.4   Workaround

At the exit of the function, use a built-in function "__EI()" that releases the interrupt-disabled state.

If the function has multiple exits, all the exits must have "__EI()".

```
#pragma block_interrupt fun

void fun(){

  ...

  __EI();            /* <- Add a built-in function that releases the interrupt-disabled state */

}
```

[Assembly source after the workaround is applied]

```
_fun:

    .stack _fun = 0

    di

    ...

    ei              ;<- An instruction to release the interrupt-disabled state is generated.

    jmp [r31]

    ei
```

1.5   Schedule for Fixing the Problem

This problem will be fixed in the next version. The release date has not yet been determined.

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Oct.01.19	-	First edition issued

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