

[Notes]

R20TS0551EJ0100

Rev.1.00

Feb. 16, 2020

RE Software Development Kit

RE01 1500KB Group CMSIS Driver Package Rev1.00, Rev1.01

Restriction of the 2D Graphic Data Conversion Circuit Driver

Overview

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

1. “R_GDT_Shrink” function and “R_GDT_Fount” function of the 2D graphic data conversion circuit (GDT) driver

1. “R_GDT_Shrink” Function and “R_GDT_Fount” Function of the 2D Graphic Data Conversion Circuit (GDT) Driver

1.1 Applicable Products

- (1) RE01 1500KB Group CMSIS Driver Package

The product name, revision and document number of the applicable RE01 1500KB Group CMSIS Driver Package is as follows.

Table 1 RE01 1500KB Group CMSIS Driver Package List of Applicable Products

RE01 1500KB Group CMSIS Driver Package Product name	RE01 1500KB Group CMSIS Driver Package revision	Document number
RE01 1500KB Group CMSIS Driver Package Rev1.01	Rev.1.01	R01AN5278EJ0101
RE01 1500KB Group CMSIS Driver Package Rev1.00	Rev.1.00	R01AN4947EJ0100

- (2) Application note

The product name, revision and document number of the applicable application note is as follows.

Table 2 Application Notes List of Applicable Products

Application Note Product name	Application Note revision	Document number
R_GDT Driver Sample Code (Using CMSIS Driver Package) for RE01 1500KB Group	Rev.1.00	R01AN4755EJ0100
R_GDT Driver Color LCD Sample Code (Using CMSIS Driver Package) for RE01 1500KB Group	Rev.1.00	R01AN4810EJ0100

1.2 Applicable Devices

RE01 family: RE01 1500KB group

1.3 Details and Conditions

When calling one of the following functions, data is written to an unspecified location.

- “R_GDT_Shrink” function: The shrink API function
- “R_GDT_Fount” fuction: The font unfold API function

This results in problems such as data corruption and access to reserved addresses.

1.4 Workaround

(1) RE01 1500KB Group CMSIS Driver Package Rev1.01

You can avoid this problem by one of the following methods.

- Download the source code to modify the GDT Driver (r_gdt_api.c) to replace the GDT driver (r_gdt_api.c) included in the RE01 1500KB Group CMSIS Driver Package Rev1.01.
<Source Code to Modify GDT Driver in CMSIS Driver Package Rev1.01 for RE01 1500KB Group>
www.renesas.com/us/en/software/D4001306.html
- Modify the source file by following the procedure in 1.4(2).

(2) RE01 1500KB Group CMSIS Driver Package Rev1.00 and Application Note

Modify the access method for the variable used in the function in the following source file.

Codes before and after modification are shown in red in the source file.

File Location: Project file name/Driver/Src/r_gdt/r_gdt_api.c

Location: Around line 5100

Source file: "r_gdt_api.c"

Function name: v_gdt_cpuline_byte_rd_gdt_limit

• Before modification

```
static void v_gdt_cpuline_byte_rd_gdt_limit (uint32_t src_addr,
      uint32_t dest_addr, uint32_t valid_data_num, uint32_t total_data_num)
{
    volatile uint32_t * p_ptr_invalid;
    uint32_t i;

    for(i=0;i<total_data_num;i++) /* total data */
    {
        if(i<valid_data_num) /* valid data */
        {
            /* CPU trans valid data */
            *((uint8_t *)dest_addr) = *((uint8_t *)src_addr);
            dest_addr ++;
        }
        else
        {
            /* CPU trans invalid data */
            *((uint8_t *)p_ptr_invalid) = *((uint8_t *)src_addr);
        }
        src_addr ++;
    }
}
```

- After modification

```
static void v_gdt_cpuline_byte_rd_gdt_limit (uint32_t src_addr,
      uint32_t dest_addr, uint32_t valid_data_num, uint32_t total_data_num)
{
    volatile uint32_t p_ptr_invalid;
    uint32_t i;

    for(i=0;i<total_data_num;i++) /* total data */
    {
        if(i<valid_data_num) /* valid data */
        {
            /* CPU trans valid data */
            *((uint8_t *)dest_addr) = *((uint8_t *)src_addr);
            dest_addr ++;
        }
        else
        {
            /* CPU trans invalid data */
            p_ptr_invalid = *((uint8_t *)src_addr);
        }
        src_addr ++;
    }
}
```

1.5 Schedule for Fixing the Problem

The table below shows the schedule for modification of each product.

Table 3 Schedule for Modification

Product name	Revision	Document number	Schedule
RE01 1500KB Group CMSIS Driver Package Rev1.01	Rev.1.01	R01AN5278EJ0101	Will be fixed in the next version Rev.1.10. (Scheduled to be released in May 2020.)
RE01 1500KB Group CMSIS Driver Package Rev1.00	Rev.1.00	R01AN4947EJ0100	
R_GDT Driver Sample Code (Using CMSIS Driver Package) for RE01 1500KB Group	Rev.1.00	R01AN4755EJ0100	Fixed in the next version Rev.1.01. (Updated on January 24, 2020.)
R_GDT Driver Color LCD Sample Code (Using CMSIS Driver Package) for RE01 1500KB Group	Rev.1.00	R01AN4810EJ0100	Fixed in the next version Rev.1.01. (Updated on January 24, 2020.)

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Feb.16.20	-	First edition issued

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