RENESAS TECHNICAL UPDATE

1753, Shimonumabe, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8668 Japan
Renesas Electronics Corporation

Product Category	MPU/MCU			Document No.	TN-SH7-A850A/E	Rev.	1.00
Title	Notes about compression processing of Jpeg Codec Unit			Information Category	Technical Notification		
Applicable Product	SH7268 Group SH7269 Group	Lot No.		Reference Document	SH7268 Group, SH7269 Group User'sManual: Hardware Rev1.00 (R01UH0048EJ0100)		
		All					

We would like to inform you of the notice about compression processing of Jpeg Codec Unit.

【Notice】

When the remainder that divides the amount of output coded data by 8 is 1~6 bytes in compression, the last 1~6 bytes data may not be normally transferred.
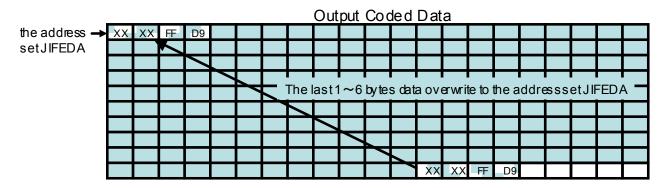
When it is not normally transferred, the last 1~6 bytes data overwrite to the address set JPEG Interface compression destination address register(JIFEDA).

※This module handles the output of coded data in 16-bit units.

For this reason, if the coded data have an odd code length, the final code for output will be H'D9FF.(H'FF is added)

When the remainder that divides the amount of output coded data by 8 is 1,3,5 bytes in compression, (the last 1,3,5 bytes + H'FF) data overwrite to the address set JIFEDA.

[Image]

【Workaround】

In compression you need to confirm whether output coded data is normally transferred. If it is not normally transferred, you need to correct error data. Refer to the following flow chart for how to correct error data.
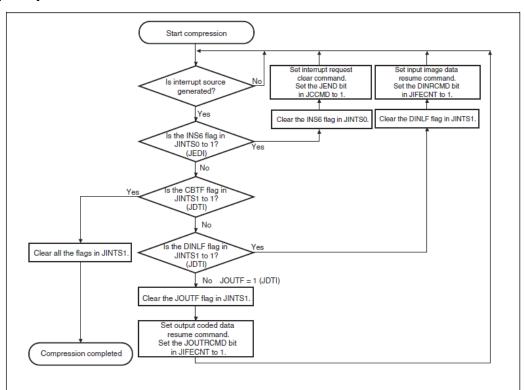
【Flowchart】

[Before]

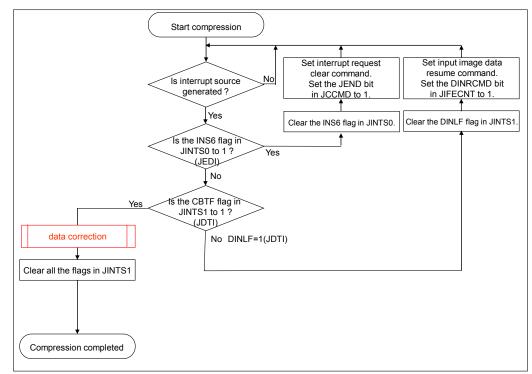
Figure 41.3   Compression Process Flow

[After]

Figure 41.3 Compression Process Flow

[data correction]

```
        ( Start data correction )

        [ Read JCDTCU,JCDTCM,JCDTCD ]        *1

  No  < output coded data mod 8 = 1~6 ? >    *2
            | Yes

        [ Read the last output coded data from RAM ]   *3

        < Is the last coded data          No
           to 0xFFD9(EOI) ? >                   *4
            | Yes

        [ Read the data in address set JIFEDA ]   *5

  Yes < Is the data in the address set
        JIFEDA to expected data ? >              *6
            | No

        [ Correct the last 1~6 bytes data ]      *7

        [ Correct the data in address set JIFEDA ]   *8

        ( Data correction completed )
```

*1) Read the amount of output coded data.

*2) Confirm whether the remainder that divides the amount of output coded data by 8 is 1~6 bytes.

*3) Read the last output coded data in the address calculated from the amount of output coded data.

*4) Confirm whether the last coded data is 0xFFD9(EOI).

*5) Read the remainder data calculated from *2 in the address set JIFEDA.

*6) Confirm whether the data in the address set JIFEDA is expected data. Expected data is 0xFFD8(SOI),0xFFDB(DQT),0x00XX (XX: qualification table is two→0x84, three→0xC5).

*7) Correct the last 1~6 bytes data, because it was not normally transferred.

*8) Correct the data in address set JIFEDA, because it was overwritten.

※If the coded data have an odd code length, the final code for output will be H'D9FF.(H'FF is added) For this reason, when the remainder that divides the amount of output coded data by 8 is 1,3,5 bytes in compression, correct 2,4,6 bytes data in address set JIFEDA.

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