

RENESAS TECHNICAL UPDATE

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Renesas Electronics Corporation

Product Category	MPU/MCU		Document No.	TN-RZ*-A048A/E	Rev.	1.00
Title	RZ/T1 Group User's Manual: Hardware Correction of CKIOSET register description and Electrical Characteristics description in Bus state controller		Information Category	Technical Notification		
Applicable Product	RZ/T1 Group	Lot No.	Reference Document	RZ/T1 User's Manual: Hardware Rev.1.30 R01UH0483EJ0130 Rev.1.30		
		All lots				

Incorrect description of the CKIOSET register for bus state controller have been found.

This document describes correct description of CKIOSET register in User's manual.

And also, there are expressions in the electrical characteristics (bus timing) regarding CKIO pin, which may cause misunderstanding. We change expressions of electrical characteristics (bus timing) regarding CKIO pin (There is no change in specification itself).

1. CKIOSET register

1) Contents

Although it is written in the current user's manual that CKIO pin drive ability can be set by setting the CKIOSET register, in fact it does not affect the drive ability and it affects the timing of CKIO signal and the other output signals of Bus state controller. Because this register affects the timing of the output signals as address, there is a possibility that the electrical characteristics (bus timing) does not meet the specification when changing this register setting from initial value. CKIOSET register must be set "0h" (initial value).

CKIO pin drive ability can be set by setting the Driving Ability Control Register (DSCR).

3) Correction of User's Manual

[1] Correct descriptions of CKIOSET register.

Page	Chapter	Description										
423 of 2609	14.3.10	<p>[Current description] 14.3.10 CKIO Control Register (CKIOSET)</p> <p>This register is used to specify the driving ability of the CKIO clock. When CKIO is used at a frequency of or above 50 MHz, set the CKIO driving ability at 8mA (CKIOSET = 0h). When the CKIO is to be used at a frequency below 50 MHz, the CKIO can be set to 4mA. In this case, set the CKIOSET bits to Ah.</p> <p>The procedure for writing to CKIOSET is shown below. Execute the following access operations consecutively. Write 1 byte with any value to register CKIOKEY. Write 1 byte with any value to register CKIOKEY. Write 0000 000nh (where n = 0 or A) to CKIOSET[3:0]</p> <table border="1"> <thead> <tr> <th>Bit</th> <th>Symbol</th> <th>Bit Name</th> <th>Description</th> <th>R/W</th> </tr> </thead> <tbody> <tr> <td>b3-b0</td> <td>CKIOSET[3:0]</td> <td></td> <td>CKIO control 0x0: When CKIO driving ability is set at 8mA. 0xA: When CKIO driving ability is set at 4mA.</td> <td>R/W</td> </tr> </tbody> </table>	Bit	Symbol	Bit Name	Description	R/W	b3-b0	CKIOSET[3:0]		CKIO control 0x0: When CKIO driving ability is set at 8mA. 0xA: When CKIO driving ability is set at 4mA.	R/W
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[2] Correct "notes" for Bus state controller electrical characteristics (bus timing).

Page	Chapter	Description
2502 of 2609	47.4.3	<p>[Current description] Table 47.17 Note 1. Examine the fmax value of CKIO (external bus clock) together with the number of waits in accordance with system configuration. When CKIO is used at a frequency of or above 50 MHz, set the CKIO driving ability at 8 mA (CKIOSET = 0h). When the CKIO is to be used at a frequency below 50 MHz, the CKIO can be set to 4 mA. In this case, set the CKIOSET bits to Ah. Note 3. Values when SDRAM is used. Note 4. Values when CKIO driving ability is set at 8 mA/4 mA.</p>
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2. Change expressions of electrical characteristics (bus timing) regarding CKIO pin

1) Contents

As current expression of electrical characteristic regarding CKIO pin may cause misunderstanding, we change the expressions as follows (There is no change in specification itself).

2) Correction to User's Manual

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