

To our customers,

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## Old Company Name in Catalogs and Other Documents

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On April 1<sup>st</sup>, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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# RENESAS TECHNICAL UPDATE

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RenesasTechnology Corp.

Product Category	MPU&MCU	Document No.	TN-16C-A147A/E	Rev.	1.00
Title	R8C/14, 15, 16, 17, 18, 19, 1A, 1B Groups Precautions on Prescaler Register, Timer Register Reloads during Counting Timer X, Timer Z	Information Category	Technical Notification		
Applicable Product	R8C/14, 15, 16, 17, 18, 19, 1A, 1B Groups	Lot No.	—		
		Reference Document			

## 1. Precautions (Timer X)

As for the Timer X, when writing to the TX and PREX registers during counting, the value is written to the reload register in the input timing of the next count source ((1) and (4) in the Figure), it is transferred to the counter in the input timing of the 2nd count source ((2) and (5) in the Figure) and counting restarts in the input timing of the 3rd count source ((3) and (6) in the Figure).

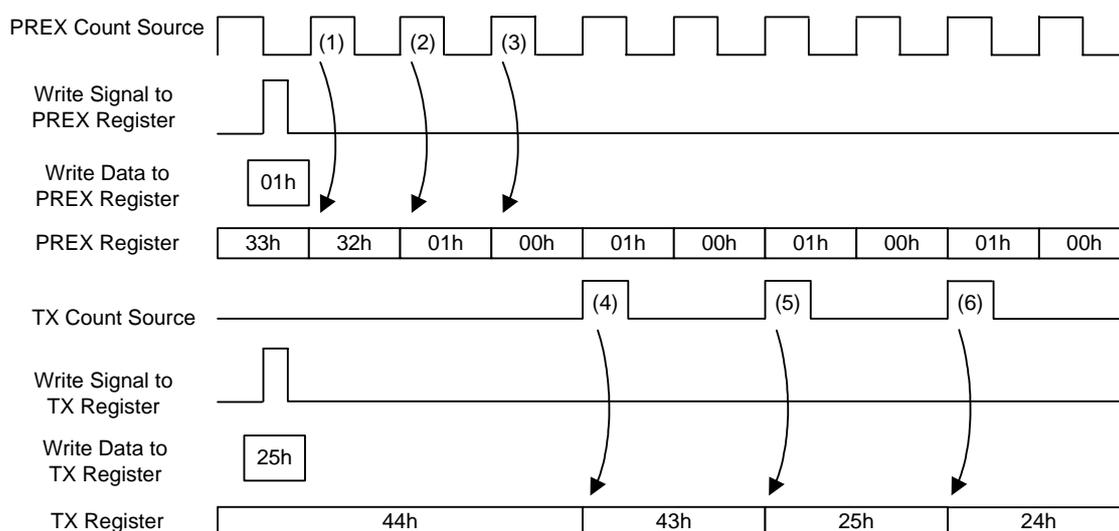
## 2. Precautions (Timer Z)

When selecting the TZWC=0 (writing to the reload register and counter) with the Timer Z, note that there are the same precaution as the Timer X.

## 3. Rewrite Operation Sequence

The rewrite operation sequence in the PREX and TX registers are as follows:

Write operation timing during the count operations of Timer X and Timer Z  
(However, when selecting TZWC=0 for the Timer Z.)



### [Description of Operation]

- (1) Though the value written in the PREX register is maintained, it is not reflected in the PREX register.
- (2) The PREX register is updated.
- (3) Counting the PREX register restarts.
- (4) Though the value written in the TX register is maintained, it is not reflected in the TX register.
- (5) The TX register is updated.
- (6) Counting the TX register restarts.