To our customers,

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On April 1st, 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.

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RENESAS TECHNICAL UPDATE

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Product Category	MPU&MCU		Document No.	TN-16C-A139A/E	Rev.	1.0
Title	R8C/14, 15, 16, 17 Groups Precautions on SFR Access Related to Voltage Monitor 2 Interrupt and Voltage Monitor 2 Reset		Information Category	Technical Notification		
Applicable Product	R8C/14, 15, 16, 17 Groups	Lot No.	Reference Document	-		
		All				

1. Precautions

As for the voltage monitor 2 circuit control register (VW2C), the voltage detection flag (VW2C2) may be set by rewriting the voltage monitor 2 digital filter disabled mode select bit (VW2C1) and voltage monitor 2 interrupt/reset generation condition select bit (VW2C7) simultaneously.

When rewriting the VW2C1 and VW2C7 bits simultaneously, set the VW2C2 bit to "0" after rewriting them.

Voltage Monitor 2 Circuit Control Register [1]

b7 b6 b5 b4 b3 b2 b1 b0

	Symbol VW2C	Address 0037h	After Reset[8] 00h	
Bit Symbol	Bit Name	Function		RW
VW2C0	Voltage Monitor 2 Interrupt / Reset Enable Bit[6]	0 : Disable 1 : Enable		RW
VW2C1	Voltage Monitor 2 Digital Filter Disabled Mode Select Bit[2]	0 : Digital filter enabled mode (digital filter circuit enabled) 1 : Digital filter disabled mode (digital filter circuit disabled)		RW
VW2C2	Voltage Change Detection Flag[3,4,8]	0 : Not detected 1 : Vdet2 pass detected		RW
VW2C3	WDT Detection Flag[4,8]	0 : Not detected 1 : Detected		RW
VW2F0	Sampling Clock Select Bit	b5 b4 0 0 : fRING-S divide-by-1 0 1 : fRING-S divide-by-2		RW
VW2F1		1 0 : fRING-S divide-by-4 1 1 : fRING-S divide-by-8		RW
VW2C6	Voltage Monitor 2 Circuit Mode Select Bit[5]	0 : Voltage monitor 2 interrupt mode 1 : Voltage monitor 2 reset mode		RW
VW2C7	Voltage Monitor 2 Interrupt / Reset Generation Condition Select Bit[7,9]	0 : When VCC reaches Vdet2 or above 1 : When VCC reaches Vdet2 or below		RW

NOTES :

1. Set the PRC3 bit in the PRCR register to "1" (rewrite enable) before writing to this register. When rewriting the VW2C register, the VW2C2 bit may be set to "1". Set the VW2C2 bit to "0" after rewriting the VW2C register.

2. When the voltage monitor 2 interrupt is used to exit stop mode and to return again, write "0" to the VW2C1 bit before writing "1".

3. This bit is enabled when the VCA27 bit in the VCA2 register is set to "1" (voltage detection 2 circuit enabled).

4. Set this bit to "0" by a program. When writing "0" by a program, it is set to "0" (It remains unchanged even if it is set to "1").

5. This bit is enabled when the VW2C0 bit is set to "1" (voltage monitor 2 interrupt / enables reset).

6. The VW2C0 bit is enabled when the VCA27 bit in the VCA2 register is set to "1" (voltage detection 2 circuit enabled). Set the VW2C0 bit to "0" (disable) when the VCA27 bit is set to "0" (voltage detection 2 circuit disabled).

7. The VW2C7 bit is enabled when the VW2C1 bit is set to "1" (digital filter disabled mode).

8. The VW2C2 and VW2C3 bits remain unchanged in the software reset, watchdog timer reset and voltage monitor 2 reset.

9. When the VW2C6 bit is set to "1" (voltage monitor 2 reset mode), set the VW2C7 bit to "1" (when VCC reaches to Vdet2 or below)(do not set to "0").