

# RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-16C-A248A/E	Rev.	1.00
Title	Updates on R32C/100 Series User's Manuals Regarding software reset, and watchdog timer reset		Information Category	Technical Notification		
Applicable Product	R32C/120 Group, R32C/121 Group R32C/142 Group, R32C/145 Group R32C/151 Group, R32C/152 Group R32C/153 Group, R32C/156 Group R32C/157 Group R32C/160 Group, R32C/161 Group	Lot No.	Reference Document	User's Manuals: Hardware of Applicable Products		
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This document describes updates on description in "Resets" of the User's Manual: Hardware of the above groups. Texts indicated in red below are added after the last paragraphs in sections 5.2 and 5.3.

The following page numbers are based on R32C/121 Group. See the table on the last page for the numbers of the other groups.

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Descriptions in "5.2 Software Reset" and "5.3 Watchdog Timer Reset" are modified as follows:

## 5.2 Software Reset

The CPU, SFRs, and pins are initialized when the PM03 bit in the PM0 register is set to 1 (the MCU is reset). Then, the CPU executes the program from the address indicated by the reset vector. Figure 5.4 shows the PM0 register. Set the PM03 bit to 1 while the PLL clock is selected as the CPU clock source and the main clock oscillation is completely stable.

The level of the output port may temporarily become undefined when the software reset is executed. After a few nano-seconds (max 10ns), the port becomes an input port (high impedance).

## 5.3 Watchdog Timer Reset

The CPU, SFRs, and pins are initialized when the watchdog timer underflows while the CM06 bit in the CM0 register is 1 (reset when watchdog timer underflows). Then, the CPU executes the program from the address indicated by the reset vector.

The level of the output port may temporarily become undefined when the watchdog timer reset occurs. After a few nano-seconds (max 10ns), the port becomes an input port (high impedance).

&lt;Reference &gt;

Applicable Products	Manual and Document Number	Page Number
R32C/120 Group	R32C/120 Group User's Manual: Hardware Rev.1.20 (R01UH0216EJ0120)	Page 62 of 592
R32C/121 Group	R32C/121 Group User's Manual: Hardware Rev.1.20 (R01UH0217EJ0120)	Page 77 of 608
R32C/142 Group, R32C/145 Group	R32C/142 Group and R32C/145 Group User's Manual: Hardware Rev.1.10 (R01UH0218EJ0110)	Page 101 of 664
R32C/151 Group	R32C/151 Group User's Manual: Hardware Rev.1.20 (R01UH0219EJ0120)	Page 81 of 628
R32C/152 Group	R32C/152 Group User's Manual: Hardware Rev.1.20 (R01UH0220EJ0120)	Page 95 of 642
R32C/153 Group	R32C/153 Group User's Manual: Hardware Rev.1.20 (R01UH0221EJ0120)	Page 109 of 656
R32C/156 Group	R32C/156 Group User's Manual: Hardware Rev.1.20 (R01UH0222EJ0120)	Page 80 of 625
R32C/157 Group	R32C/157 Group User's Manual: Hardware Rev.1.20 (R01UH0223EJ0120)	Page 94 of 639
R32C/160 Group	R32C/160 Group User's Manual: Hardware Rev.1.20 (R01UH0225EJ0120)	Page 58 of 577
R32C/161 Group	R32C/161 Group User's Manual: Hardware Rev.1.20 (R01UH0226EJ0120)	Page 72 of 591