Date: Sep. 18, 2020

RENESAS TECHNICAL UPDATE

TOYOSU FORESIA, 3-2-24, Toyosu, Koto-ku, Tokyo 135-0061, Japan
Renesas Electronics Corporation

Product Category	MPU/MCU		Document No.	TN-RA*-A0005A/E	Rev.	1.00
Title	Errata for User's Manual: Hardware for HOCO		Information Category	Technical Notification		
Applicable Product	RA2A1 Group RA4M1 Group RA4W1 Group	Lot No. All	Reference Document	RA2A1 Group User's Manual Hardware Rev.1.00 RA4M1 Group User's Manual Hardware Rev.1.00 RA4W1 Group User's Manual Hardware Rev.1.00		

The following descriptions should be changed.

1. OSCSF

RA2A1 Page 132, RA4M1 Page 141, RA4W1 Page 131

- Incorrect

Note 1. The value after reset depends on the OFS1.HOCOEN bit setting.

When OFS1.HOCOEN = 0, the value after reset of HOCOSF bit is 0.

When OFS1.HOCOEN = 1, the HOCOSF value becomes 0 after reset is released, and the HOCOSF value becomes 1 after the HOCO oscillation stabilization wait time elapses.

- Correct

Note 1. The value after reset depends on the OFS1.HOCOEN bit setting.

When OFS1.HOCOEN = 1, the value after reset of HOCOSF bit is 0.

When OFS1.HOCOEN = 0, the HOCOSF value becomes 0 after reset is released, and the HOCOSF value becomes 1 after the HOCO oscillation stabilization wait time elapses.

- Incorrect

HOCOSF flag (HOCO Clock Oscillation Stabilization Flag)

The HOCOSF flag indicates the operating status of the counter that measures the wait time for the high-speed clock oscillator (HOCO). When OFS1.HOCOEN is set to 1, confirm that OSCSF.HOCOSF is also set to 1 before using the HOCO clock.

- Correct

HOCOSF flag (HOCO Clock Oscillation Stabilization Flag)

The HOCOSF flag indicates the operating status of the counter that measures the wait time for the high-speed clock oscillator (HOCO). When OFS1.HOCOEN is set to 0, confirm that OSCSF.HOCOSF is ~~also~~ set to 1 before using the HOCO clock.

2. HOCOCR

RA2A1 Page 130, RA4M1 Page 139, RA4W1 Page 129

- Incorrect

HCSTP bit (HOCO Stop)

The HCSTP bit starts or stops the HOCO clock. For the HOCO clock to operate, the High-Speed On-Chip Oscillator Wait Control Register (HOCOWTCR) must also be set.

After setting the HCSTP bit to start the HOCO clock, confirm that the OSCSF.HOCOSF is set to 1 before using the clock. When OFS1.HOCOEN is set to 1, confirm that the OSCSF.HOCOSF bit is also set to 1 before using the HOCO clock. A fixed stabilization wait time is required after setting the HOCO clock to start operation. A fixed wait time for oscillation to stop is also required.

The following limitations apply when starting and stopping operation:

- After stopping the HOCO clock, confirm that the OSCSF.HOCOSF bit is 0 before restarting the HOCO clock
- Confirm that the HOCO clock operates and that the OSCSF.HOCOSF bit is 1 before stopping the HOCO clock
- Regardless of whether the HOCO is selected as the system clock, confirm that the OSCSF.HOCOSF bit is set to 1 before executing a WFI instruction to place the MCU in Software Standby mode.

- Correct

HCSTP bit (HOCO Stop)

The HCSTP bit starts or stops the HOCO clock. For the HOCO clock to operate, the High-Speed On-Chip Oscillator Wait Control Register (HOCOWTCR) must also be set.

After setting the HCSTP bit to start the HOCO clock, confirm that the OSCSF.HOCOSF is set to 1 before using the clock. When OFS1.HOCOEN is set to 0, confirm that the OSCSF.HOCOSF bit is ~~also~~ set to 1 before using the HOCO clock. A fixed stabilization wait time is required after setting the HOCO clock to start operation. A fixed wait time for oscillation to stop is also required.

The following limitations apply when starting and stopping operation:

- After stopping the HOCO clock, confirm that the OSCSF.HOCOSF bit is 0 before restarting the HOCO clock
- Confirm that the HOCO clock operates and that the OSCSF.HOCOSF bit is 1 before stopping the HOCO clock
- Regardless of whether the HOCO is selected as the system clock, confirm that the OSCSF.HOCOSF bit is set to 1 before executing a WFI instruction to place the MCU in Software Standby mode while HOCOCR.HCSTP bit is 0.