

RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-SY*-A0053A/E	Rev.	1.00
Title	Errata for User's Manual: Hardware for HOCO		Information Category	Technical Notification		
Applicable Product	Renesas Synergy™ S124 MCU Group Renesas Synergy™ S128 MCU Group Renesas Synergy™ S1JA MCU Group Renesas Synergy™ S3A1 MCU Group Renesas Synergy™ S3A3 MCU Group Renesas Synergy™ S3A6 MCU Group Renesas Synergy™ S3A7 MCU Group Renesas Synergy™ S7G2 MCU Group	Lot No.	Reference Document	S124 Microcontroller Group User's Manual Rev.1.30 S128 Microcontroller Group User's Manual Rev.1.10 S1JA Microcontroller Group User's Manual Rev.1.40 S3A1 Microcontroller Group User's Manual Rev.1.20 S3A3 Microcontroller Group User's Manual Rev.1.10 S3A6 Microcontroller Group User's Manual Rev.1.20 S3A7 Microcontroller Group User's Manual Rev.1.40 S7G2 Microcontroller Group User's Manual Rev.1.40		
		All				

The following descriptions should be changed.

1. OSCSF

S124 Page 115, S128 Page 122, S1JA Page 133, S3A1 Page 150, S3A3 Page 155, S3A6 Page 142, S3A7 Page 149, S7G2 Page 171

- 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. HOCOOCR

S124 Page 113, S128 Page 120, S1JA Page 132, S3A1 Page 148, S3A3 Page 153, S3A6 Page 140, S3A7 Page 147, S7G2 Page 166

- 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 HOCOOCR.HCSTP bit is 0.**