RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-RA*-A0063	A/E	Rev.	1.00
Title	RA6T2 Group Correction of the condition for ADC Self-calibration		Information Category	Technical Notifica	tion		
		Lot No.					
Applicable Product	RA6T2 Group	All	Reference Document	RA6T2 Group User's Manual : Hardware Rev.1.20			
ADC Self-	calibration condition when sample and	hold settin	ng is change	d had been mod	ified.		
[Modified]							
Table 36.7	List of conditions under which S	Self-calibra	tion should l	be performed			
	List of conditions under which sunder which sunder which self-calibration is required	Self-calibra		-circuit Gain/Offse	de sa cir et Of	nannel dicatec mple-a rcuit Ga fset alibratic	nd-hold iin and
	under which self-calibration is required	Self-calibra	Internal Calibrat √	-circuit Gain/Offse	de sa cir et Of	dicated mple-a rcuit Ga fset	nd-hold iin and
Conditions After reset re After releasi	under which self-calibration is required elease ng the module stop		Internal Calibrat ✓ ✓	-circuit Gain/Offso tion Calibratio	de sa cir et Of n Ca	dicated mple-a rcuit Ga fset	nd-hold iin and
Conditions After reset re After releasi	under which self-calibration is required		Internal Calibrat ✓ ✓	-circuit Gain/Offse tion Calibratio	de sa cir et Of n Ca	dicated mple-a rcuit Ga fset	nd-hold iin and
Conditions After reset re After releasi When return mode When chang	under which self-calibration is required elease ng the module stop		Internal Calibrat	-circuit Gain/Offse tion Calibratio	de sa cir et Of n Ca	dicated mple-a rcuit Ga fset	nd-hold iin and
Conditions After reset re After releasin When return mode When chang (When clock When chang	under which self-calibration is required elease ng the module stop ing from Software Standby mode or Deep Soft ged the ADCLK setting	ware Standby	Internal Calibrat ✓ ✓ ✓ ✓	-circuit Gain/Offse Calibratio	de sa cir et Of n Ca v	dicated mple-a rcuit Ga fset	nd-hold iin and
Conditions After reset re After releasi When return mode When chang (When chang (When chang (When chang (When chang	under which self-calibration is required elease ng the module stop ing from Software Standby mode or Deep Soft ged the ADCLK setting source or frequency is changed) ged the operation mode or the scan mode of the	ware Standby	Internal Calibrat V V V V V	-circuit Gain/Offse tion / / / / /	de sa cir et Of v v v	dicated mple-a rcuit Ga fset	nd-hold iin and

Note: \checkmark : Self-calibration should be performed.

—: Self-calibration is not required.

Note 1. When any of ADSHCRm.SHENn bits are set to 1, or any of ADSHCRm.SHENn bits are changed, perform the channel-dedicated sample-and-hold circuits self-calibration (m = 0, 1. n = 0 to 2, 4 to 6). Not required if the channel-dedicated sample-and-hold circuits are not used.



[Original]

Table 36.7

List of conditions under which Self-calibration should be performed

Conditions under which self-calibration is required	Internal-circuit Calibration		Channel dedicated sample-and-hold circuit Gain and Offset Calibration *1
After reset release	1	>	1
After releasing the module stop	1	>	1
When returning from Software Standby mode or Deep Software Standby mode	1	1	1
When changed the ADCLK setting (When clock source or frequency is changed)	1	1	1
When changed the operation mode or the scan mode of the A/D converter (When changed ADMDR.ADMDm bit ($m = 0, 1$))	1	1	—
When changed A/D successive approximation time (When changed ADCNVSTR.CSTm bit ($m = 0, 1$))	1	1	_
When changed the operation setting of the channel-dedicated sample-and-hold circuit *1	_	_	1

Note: \checkmark : Self-calibration should be performed.

 —: Self-calibration is not required.
Note 1. When any of ADSHCRm.SHENn bits are set to 1, or any of ADSHCRm.SHENn bits are changed, perform the channel-dedicated sample-and-hold circuits self-calibration (m = 0, 1. n = 0 to 2, 4 to 6). Not required if the channel-dedicated sample-and-hold circuits are not used.

