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Product category	MPU/MCU	Document No.	TN-RX*-A083A/E	Rev.	1.00
Title	Usage Notes on Group-A Priority Control of 12-Bit A/D Converter		Information category	Technical Notification	
Applicable Product	RX63T Group	Lot No.	Reference Document	RX63T Group User's Manual: Hardware Rev.2.10 (R01UH0238JJ0210)	
		All lots			

Thank you for your valued patronage and best wished for your continued success in business.

It turned out that there are some restrictions on Group-A priority control of the 12-bit A/D converter (144/120/112/100pin packages). We would like to inform you of the restrictions and countermeasures.

■Usage Notes

- (1) When operating under group-A priority control in the group-scan mode, specify the frequency ratio between the peripheral module clock (PCLKB) and A/D conversion clock, ADCLK (=PCLKD) as indicated below.
 - a) PCLKB = PCLKD (Set the same value to the SCKCR. PCKB [3:0] and SCKCR. PCKD[3:0])
 - b) PCLKB/2 = PCLKD (Set a value which +1 is added to the one set to the SCKCR. PCKB [3:0] to the SCKCR. PCKD[3:0])
- (2) When operating under the setting other than those mentioned in (1), write 1 to the PGSC bit of the newly-released ADGSPMR register before use.
Specifications of the ADGSPMR register are shown in the next page.

A/D Group Scan Priority Control Register (ADGSPMR)

Address S12AD: ADGSPMR 0008 90FCh

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
	PGSC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Value after reset	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Bit	Symbol	Bit name	Description	R/W
b14-b0	—	Reserved	These bits are read as 0. The write value should be 0.	R/W
b15	PGSC	Clock frequency setting bit when operating under group-A priority control	0: When operating under group-A priority control, frequency ratio between PCLK and ADCLK is 2:1 or 1:1. 1: When operating under group-A priority control, frequency ratio between PCLK and ADCLK is 4:1 or over.	R/W

ADGSPMR should always be accessed in 16-bits.

Adhere to the above-mentioned restriction; otherwise the following errors may occur.

- (1) Under group-A priority control, if a group-A trigger is input during A/D conversion for group B, A/D conversion for group B is discontinued and A/D conversion for group A proceeds. In this case, on the completion of the A/D conversion, S12GBADI interrupt request may be generated instead of generating S12ADI interrupt request.
- (2) While double-trigger mode is selected in group-scan mode, if a group-A trigger is input during A/D conversion for group B under group-A priority control, A/D conversion for group B is discontinued and A/D conversion for group A proceeds. In this case, on the completion of the A/D conversion, S12GBADI interrupt request may be generated and a wrong data register as a storage destination may be selected, instead of generating S12ADI interrupt request.