

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-R8C-A057B/E	Rev.	2.00
Title	R8C/L3xA Group, R8C/L3xB Group, R8C/L3xC Group, R8C/L3xM Group Precaution of Wait mode		Information Category	Technical Notification		
Applicable Product	R8C/L3xA Group, R8C/L3xB Group, R8C/L3xC Group, R8C/L3xM Group	Lot No.	Reference Document	User's manuals : Hardware manual of applicable products		

This document described a Precaution of Flash wait mode for above mentioned applicable products.

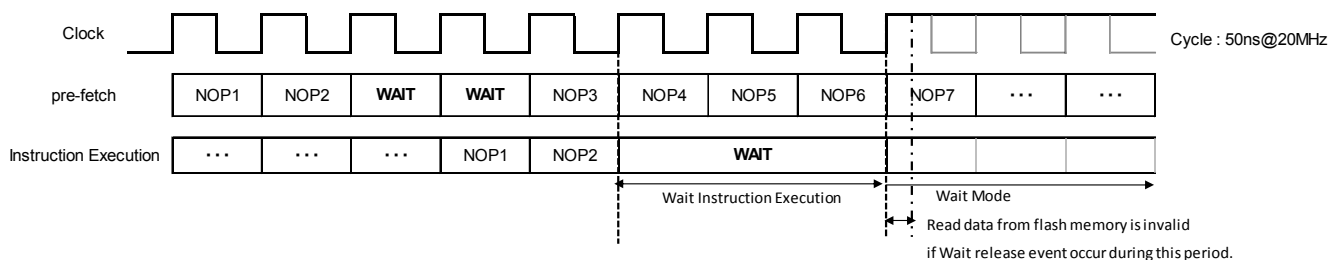
1. Applicable product

R8C/L3xA Group, R8C/L3xB Group, R8C/L3xC Group, R8C/L3xM Group

2. Precaution of wait mode

In case wait release factor apart from reset occur immediately after wait mode transition, (within 13ns after transition to wait mode is completed), read data from Flash memory is invalid.

In case the timing of wait release factor is managed and that timing does not occur immediately after wait mode transition, there is no problem. (ex. in case the time is managed by Timer and so on)



Note: Transition to the Wait mode is occur either WAIT instruction execution or set CM30 bit in CM3 (System clock control register3) to 1.

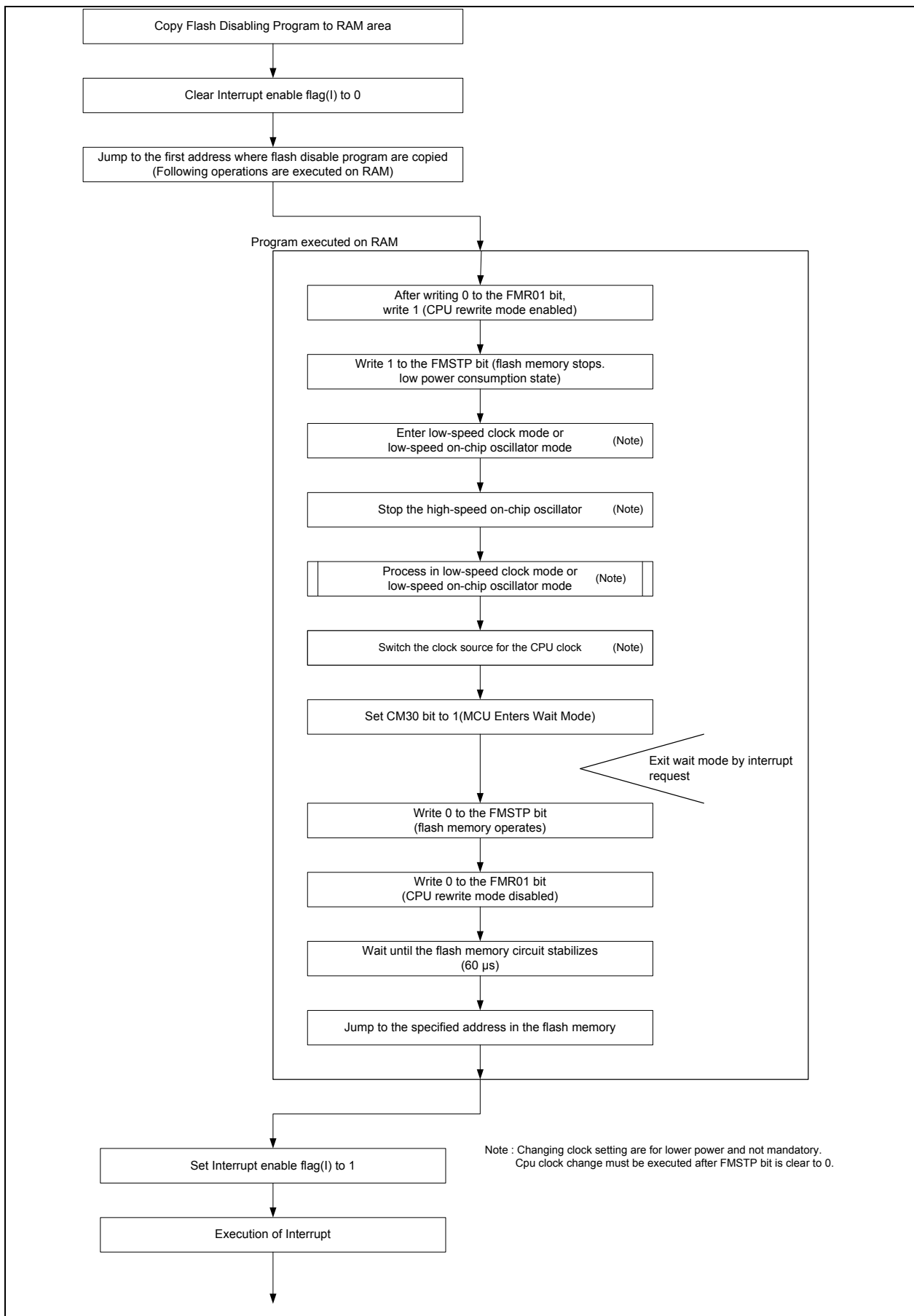
3. Software workaround

In case wait mode is used, WAIT instruction must be executed after disabling Flash program by copied code on RAM prior to those operation.

Please see "4. Flow chart of software workaround" for the detail.

4. Flow chart of software workaround

Flow chart of software workaround is described in Fig 1



Note : Changing clock setting are for lower power and not mandatory. Cpu clock change must be executed after FMSTP bit is clear to 0.

Fig 1 Flow chart of software workaround

5. Product List

Group	Part No.	Group	Part No.	Group	Part No.	Group	Part No.
R8C /L3xA	R5F2L357ADFP	R8C /L3xB	R5F2L357BDFP	R8C /L3xC	R5F2L357CDFP	R8C /L3xM	R5F2L357MDFP
	R5F2L357ANFP		R5F2L357BNFP		R5F2L357CNFP		R5F2L357MNFP
	R5F2L358ADFP		R5F2L358BDFP		R5F2L358CDFP		R5F2L358MDFP
	R5F2L358ANFP		R5F2L358BNFP		R5F2L358CNFP		R5F2L358MNFP
	R5F2L35AADFP		R5F2L35ABDFP		R5F2L35ACDFP		R5F2L35AMDFP
	R5F2L35AANFP		R5F2L35ABNFP		R5F2L35ACNFP		R5F2L35AMNFP
	R5F2L35CADFP		R5F2L35CBDFP		R5F2L35CCDFP		R5F2L35CMDFP
	R5F2L35CANFP		R5F2L35CBNFP		R5F2L35CCNFP		R5F2L35CMNFP
	R5F2L367ADFA		R5F2L367BDFA		R5F2L367CDFA		R5F2L367MDFA
	R5F2L367ADFP		R5F2L367BDFP		R5F2L367CDFP		R5F2L367MDFP
	R5F2L367ANFA		R5F2L367BNFA		R5F2L367CNFA		R5F2L367MNFA
	R5F2L367ANFP		R5F2L367BNFP		R5F2L367CNFP		R5F2L367MNFP
	R5F2L368ADFA		R5F2L368BDFA		R5F2L368CDFA		R5F2L368MDFA
	R5F2L368ADFP		R5F2L368BDFP		R5F2L368CDFP		R5F2L368MDFP
	R5F2L368ANFA		R5F2L368BNFA		R5F2L368CNFA		R5F2L368MNFA
	R5F2L368ANFP		R5F2L368BNFP		R5F2L368CNFP		R5F2L368MNFP
	R5F2L36AADFA		R5F2L36ABDFA		R5F2L36ACDFA		R5F2L36AMDFA
	R5F2L36AADFP		R5F2L36ABDFP		R5F2L36ACDFP		R5F2L36AMDFP
	R5F2L36AANFA		R5F2L36ABNFA		R5F2L36ACNFA		R5F2L36AMNFA
	R5F2L36AANFP		R5F2L36ABNFP		R5F2L36ACNFP		R5F2L36AMNFP
	R5F2L36CADFA		R5F2L36CBDFA		R5F2L36CCDFA		R5F2L36CMDFA
	R5F2L36CADFP		R5F2L36CBDFP		R5F2L36CCDFP		R5F2L36CMDFP
	R5F2L36CANFA		R5F2L36CBNFA		R5F2L36CCNFA		R5F2L36CMNFA
	R5F2L36CANFP		R5F2L36CBNFP		R5F2L36CCNFP		R5F2L36CMNFP
	R5F2L387ADFA		R5F2L387BDFA		R5F2L387CDFA		R5F2L387MDFA
	R5F2L387ADFP		R5F2L387BDFP		R5F2L387CDFP		R5F2L387MDFP
	R5F2L387ANFA		R5F2L387BNFA		R5F2L387CNFA		R5F2L387MNFA
	R5F2L387ANFP		R5F2L387BNFP		R5F2L387CNFP		R5F2L387MNFP
	R5F2L388ADFA		R5F2L388BDFA		R5F2L388CDFA		R5F2L388MDFA
	R5F2L388ADFP		R5F2L388BDFP		R5F2L388CDFP		R5F2L388MDFP
	R5F2L388ANFA		R5F2L388BNFA		R5F2L388CNFA		R5F2L388MNFA
	R5F2L388ANFP		R5F2L388BNFP		R5F2L388CNFP		R5F2L388MNFP
	R5F2L38AADFA		R5F2L38ABDFA		R5F2L38ACDFA		R5F2L38AMDFA
	R5F2L38AADFP		R5F2L38ABDFP		R5F2L38ACDFP		R5F2L38AMDFP
	R5F2L38AANFA		R5F2L38ABNFA		R5F2L38ACNFA		R5F2L38AMNFA
	R5F2L38AANFP		R5F2L38ABNFP		R5F2L38ACNFP		R5F2L38AMNFP
	R5F2L38CADFA		R5F2L38CBDFA		R5F2L38CCDFA		R5F2L38CMDFA
	R5F2L38CADFP		R5F2L38CBDFP		R5F2L38CCDFP		R5F2L38CMDFP
	R5F2L38CANFA		R5F2L38CBNFA		R5F2L38CCNFA		R5F2L38CMNFA
	R5F2L38CANFP		R5F2L38CBNFP		R5F2L38CCNFP		R5F2L38CMNFP
	R5F2L3A7ADFA		R5F2L3A7BDFA		R5F2L3A7CDFA		R5F2L3A7MDFA
	R5F2L3A7ADFP		R5F2L3A7BDFP		R5F2L3A7CDFP		R5F2L3A7MDFP
	R5F2L3A7ANFA		R5F2L3A7BNFA		R5F2L3A7CNFA		R5F2L3A7MNFA
	R5F2L3A7ANFP		R5F2L3A7BNFP		R5F2L3A7CNFP		R5F2L3A7MNFP
R5F2L3A8ADFA	R5F2L3A8BDFA	R5F2L3A8CDFA	R5F2L3A8MDFA				
R5F2L3A8ADFP	R5F2L3A8BDFP	R5F2L3A8CDFP	R5F2L3A8MDFP				
R5F2L3A8ANFA	R5F2L3A8BNFA	R5F2L3A8CNFA	R5F2L3A8MNFA				
R5F2L3A8ANFP	R5F2L3A8BNFP	R5F2L3A8CNFP	R5F2L3A8MNFP				
R5F2L3AAADFA	R5F2L3AABDFA	R5F2L3AACDFA	R5F2L3AAMDFA				
R5F2L3AAADFP	R5F2L3AABDFP	R5F2L3AACDFP	R5F2L3AAMDFP				
R5F2L3AAANFA	R5F2L3AABNFA	R5F2L3AACNFA	R5F2L3AAMNFA				
R5F2L3AAANFP	R5F2L3AABNFP	R5F2L3AACNFP	R5F2L3AAMNFP				
R5F2L3ACADFA	R5F2L3ACBDFA	R5F2L3ACCDFA	R5F2L3ACMDFA				
R5F2L3ACADFP	R5F2L3ACBDFP	R5F2L3ACCDFP	R5F2L3ACMDFP				
R5F2L3ACANFA	R5F2L3ACBNFA	R5F2L3ACCNFA	R5F2L3ACMNFA				
R5F2L3ACANFP	R5F2L3ACBNFP	R5F2L3ACCNFP	R5F2L3ACMNFP				

※There is Factory Programming Product for each Product.