

RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-RX*-A0147B/E	Rev.	2.00
Title	Addition of a way to confirm the completion of the transmission of all data through the serial peripheral interface (RSPI)		Information Category	Technical Notification		
Applicable Product	RX71M Group, RX64M Group, RX634 Group, RX630 Group, RX63N Group, RX631 Group, RX63T Group, RX210 Group, RX21A Group, RX220 Group, RX230 Group, RX231 Group, RX23T Group, RX110 Group, RX111 Group, RX113 Group, RX130 Group	Lot No.	Reference Document	See below		
		All				

For confirming the completion of the transmission of all data while the serial peripheral interface (RSPI) is in master mode, the manual only describes the case where the interrupt is used. However, the user can confirm the completion of the transmission of all data without using the interrupt, so we will add a description of this to the manual. The following paragraph is to inform you of the change to the manual.

■ Details of manual revision

The RX630 Group User's Manual: Hardware is taken as the example in describing the details of the correction.

- On page 1346, the description in red will be added to section 35.3.10.1, Master Mode Operation, (9) Software Processing Flow, (a) Transmit Processing Flow.

When transmitting data, the CPU will be notified of the completion of data transmission by enabling the SPI interrupt after the last writing of data for transmission.

The completion of data transmission can also be checked by polling to see if the SPSR.IDLNF flag has become 0, instead of using the SPI interrupt. However, one cycle of PCLK is required for the time from when data for transmission is written in the SPDR register to when the IDLNF flag becomes 1. After the last data is written in the SPDR register, discard the value of the SPSR register once not to judge the condition with the IDLNF flag which has not yet become 1, and read and use the value of the SPSR.IDLNF flag to confirm the completion of data transmission.

Reference Documents

Series	Group	Manual Title	Rev.	Document Number	Page
RX700	RX71M	RX71M Group User's Manual: Hardware	1.00	R01UH0493EJ0100	2348
RX600	RX64M	RX64M Group User's Manual: Hardware	1.00	R01UH0377EJ0100	2331
	RX634	RX634 Group User's Manual: Hardware	1.00	R01UH0495EJ0100	1264
	RX630	RX630 Group User's Manual: Hardware	1.60	R01UH0040EJ0160	1346
	RX63N, RX631	RX63N Group, RX631 Group User's Manual: Hardware	1.80	R01UH0041EJ0180	1622
	RX63T	RX63T Group User's Manual: Hardware	2.10	R01UH0238EJ0210	1435
RX200	RX210	RX210 Group User's Manual: Hardware	1.50	R01UH0037EJ0150	1233
	RX21A	RX21A Group User's Manual: Hardware	1.10	R01UH0251EJ0110	1053
	RX220	RX220 Group User's Manual: Hardware	1.10	R01UH0292EJ0110	990
	RX230, RX231	RX230 Group, RX231 Group User's Manual: Hardware	1.00	R01UH0496EJ0100	1530
	RX23T	RX23T Group User's Manual: Hardware	1.10	R01UH0520EJ0110	879
RX100	RX110	RX110 Group User's Manual: Hardware	1.10	R01UH0421EJ0110	766
	RX111	RX111 Group User's Manual: Hardware	1.20	R01UH0365EJ0120	1015
	RX113	RX113 Group User's Manual: Hardware	1.02	R01UH0448EJ0102	1111
	RX130	RX130 Group User's Manual: Hardware	1.00	R01UH0560EJ0100	969

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