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# RENESAS TECHNICAL UPDATE

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| Product Category | MPU/MCU | | Document No. | TN-RX*-A147A/E | Rev. | 1.00 |
|---|---|---|---|---|---|---|
| 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<br>RX630 Group, RX63N Group,<br>RX631 Group, RX63T Group,<br>RX210 Group, RX21A Group,<br>RX220 Group, RX230 Group<br>RX231 Group, RX23T Group<br>RX110 Group, RX111 Group<br>RX113 Group, RX130 Group | Lot No.<br>All lots | Reference Document | See below. | | |

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 SPII 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.

[Related Documents]

| Series | Group | Related Documents | Rev. | Control Code | 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 |
| | 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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