To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: http://www.renesas.com

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RENESAS TECHNICAL UPDATE

Classification of Production	MPU&MCU		No	TN-SH7-483A/E	Rev	1
THEME	HCAN-2 Usage Notes for the SH7047 Series	Classification of Information	1. Spec change 2. Supplementation of Documents ③ Limitation on Usage 4. Change of Mask 5. Change of Production Line			
PRODUCT NAME	HD64F7047 HD6437049	Lot No. All	Reference Documents	SH7047 Series Hardware Manual (REJ09B0020-0100Z, Rev. 1.0)	Term of Validity Until the manual is updated	

We greatly appreciate your purchasing our semiconductor products. We would like to inform you of some additions and amendments to the notes on usage of the HCAN-2 module for SH7047-Series products. We are very sorry for any inconvenience this may cause, but please amend the points of your SH7047 hardware manual indicated below and include the addendum in the manual; be sure to take these points into consideration when using SH7047-Series products.

1. Changes to the HCAN-2 Usage Notes

(1) **[Original]** Section 15.8.8, Transmission Cancellation during SOF or Intermission

Setting the contents of TXCR at the SOF or in the intermission state causes a message transmission and TXACK to be set at the completion of the transmission. However, clearing the contents of TXCR and TXPR and setting the contents of ABACK are automatically performed. Despite that both transmission-cancellation and transmission-completion flags are set, incorrect data will not transmitted.

[Amended] Section 15.8.8, Notes on Usage of the Transmit Wait Cancel Register (TXCR)

1. If a TXCR setting to cancel transmission is made immediately after a transmission request (TXPR) has been issued at the SOF or during an intermission, cancelling of the message being prepared for transmission is not possible so that transmission will start and proceed normally. In such a case, however, incorrect clearing of the transmit wait register (TXPR) and transmit wait cancel register (TXCR) and setting of the flag in the cancel-acknowledge register (ABACK) may occur.

2. Furthermore, cancelling the transmission of mailbox 31 messages is not possible in event trigger transmission.
   Restriction: Mailbox 31 should be used for reception .

2. Newly Added Usage Notes

(1) Periodic Transmission

When ACK reception for the message being transmitted and a match between the timer and timer compare-match register 0 (TCMR0) coincide, subsequent transmission may not operate correctly.

Restriction: Do not use TCMR0 to drive periodic transmission.

(2) Cases when the Transmit Wait Register (TXPR) is Set during Transfer of EOF

If the TXPR register is set during transfer of EOF for the message being transmitted or received, normal transfer of the data may be inhibited.

- Coincidence with EOF during message reception: The reception might not proceed normally because the data received at the previous reception may not be stored at the reception of the next SOF.
- Coincidence with EOF during message transmission: The transmission might not proceed normally because the ID of the next data for transmission may have been damaged. Transmission will proceed normally when all of the TXPR bits are set at a time after all of the data for transmission have been transmitted.

The occurrence of the phenomena described above depends on the settings of the operating clock and baud rate for the HCAN2, the number of transmission mailboxes set in the TXPR register, and the number of times the mailboxes are accessed by the CPU after the TXPR register has been set.

Software Measure:

Program so that all bits of the TXPR register are set at the same time, wait until the transmission from all of the specified mailboxes and the reception from the CAN bus are completed, confirm that the TXPR has been cleared and RXPR set to 1, then set the TXPR again.

(3) Limitation on Access to the Local Acceptance Filter Mask (LAFM)

Read access to the local acceptance filter mask register (LAFM) during message transmission may damage the data in the register.

Software Measure:

Program so that the LAFM register is only accessed in the configuration mode (i.e., GSR3 = 1).

(4) Setting and Cancellation of Transmission During Bus-Idle State

After a transmission request has been issued (TXPR is set) while in the bus-idle state, if another transmission request is issued (TXPR is set) or the transmission is cancelled (TXCR is set) immediately before the SOF, transmission may not be carried out correctly.

Software Measure:

- Program so that all bits of the TXPR register are set at the same time, wait until the transmission from all of the specified mailboxes is completed, confirm that the TXPR has been cleared to 0, then set the TXPR again.

- To cancel transmission, allow more than 50 ns after the TXPR register has been set, then set the TXCR.

The value of the time interval from TXPR setting to TXCR setting, indicated above, is for a guide. For further details, please contact our sales office.