

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 Electronics Corporation

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RENEASAS TECHNICAL UPD

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Product Category	MPU&MCU	Document No.	TN-SH7-A533A/E	Rev.	1.0
Title	One-channel 32-buffer HCAN, One-channel 64-buffer HCAN-II Limitation of use	Information Category	Technical Notification		
Applicable Product	SH7055F SH7058F	Lot No.	Reference Document	SH7055F-ZTAT Hardware Manual (ADE-602-155C Rev.4.0) SH-2E SH7058 F-ZTAT Hardware Manual (REJ09B0046-0300H Rev.3.00)	
		All lots			

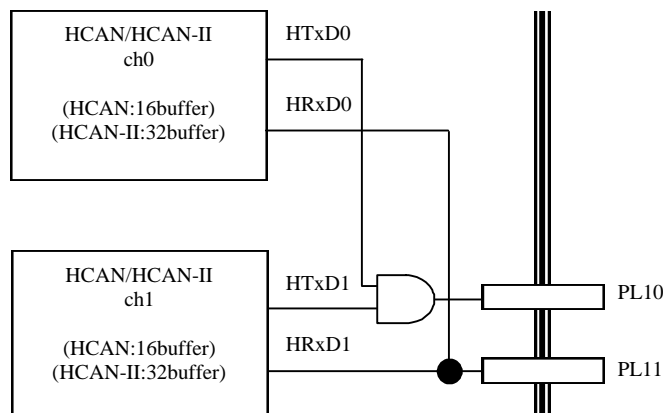
SH7055F has two on-chip HCAN channels and SH7058F has two on-chip HCAN-II channels, which can be used in either of following ways :

SH7055F:

- (a) Two-channel 16-buffer HCAN
- (b) One-channel 32-buffer HCAN

SH7058F:

- (a) Two-channel 32-buffer HCAN-II
- (b) One-channel 64-buffer HCAN-II



When above way(b) is carried out, following should be taken notice.

1. When message is transmitted to the CAN bus without connecting to other node, ACK error will not be occurred.
For example, when message is transmitted from ch0 in above diagram, ch1 transmits ACK in ACK field.
Ch1 which already received the message on CAN bus transmits ACK in ACK field according to the CAN protocol and ch0 receives the ACK.
For a countermeasure, please set the channel that will not transmit the message to reset state (MCR0=1).
2. Internal arbitration which determines transmission order is independently carried out by ch0 and ch1, respectively.
HCAN has 15-transmission buffers per channel and HCAN-II has 31-transmission buffers per channel.
However, internal arbitration can not be carry out in the range of the 30-transmission buffers (HCAN) and 62-transmission buffers(HCAN-II).
3. Please do not set the same transmission message ID to ch0 and ch1.
The same ID messages will be transmitted from two channels after arbitration on CAN bus.