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

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (http://www.renesas.com)

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Date: Jul.07.2005

RENESAS TECHNICAL UPDATE

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Product Category	MPU&MCU		Document No.	TN-SH7-A557A/E	Rev.	1.00
Title	Prohibition for padding Insertion function of SH7710 /SH7712/ R4J7710ABG internal Ethernet DMAC		Information Category	Technical Notification		
Applicable Product	HD6417710 HD6417712 R4J7710ABG	Lot No. ALL	Reference Document	SH7710 Hardware manual (REJ09B0079-0100Z Rev.1.00)		

There are following errors regarding padding insertion function of Ethernet Direct Memory Access Controller (E-DMAC) in SH7710/SH7712/R4J7710ABG. So padding insertion function of E-DMAC should be prohibited to use.

[Phenomenon]

1. Error that the first data of receive frame are stored in Receive Buffer with 4 bytes shifted

This error might happen when Receive Frame Counter Overflow or Receive FIFO Overflow happened while receiving frame under the condition that padding function of E-DMAC is set. This time, there is a case that the frame are stored in Receive Buffer with 4 bytes of inappropriate data added ahead of the correct receive frame when restarting after this overflow is cancelled. Whether this error happens or not depends on the total frame data length including padding insertion data length, and it happens when total frame data length(the number of bytes) is not a multiple of 4 bytes.

2. Error that receive function of E-DMAC stops

When too many collisions occurred on connected network and then many short frames are received under the condition that padding function of E-DMAC is set, E-DMAC moves to the state of not receiving frames.

[Others]

Related TECHNICAL UPDATE: Limitation for use of SH7710 internal Ethernet DMAC (TN-SH7-A543A/E)