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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RENESAS TECHNICAL UPDATE

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Product Category	MPU&MCU		Document No.	TN-SH7-A573A/E	Rev.	1.00
Title	Notice of Multi mode of A/D conversion		Information Category	Technical Notification		
Applicable Product	SH7760 (HD6417760)	Lot No. All lots	Reference Document	SH7760 Hardware Manual (ADE-602-291 Rev.1.0)		

The A/D converter of the SH7760 has the following notice.

1. Condition

In multi mode of the A/D conversion, it is impossible to start the A/D conversion by the ADTRG# input because the A/D start bit (ADCSR.ADST) is not set by the ADTRG# trigger input. Use single mode (ADCSR.MDS[1:0]=00) or scan mode (ADCSR.MDS[1:0]=11) to start the A/D conversion by the external trigger input to the ADTRG# pin.

2. Workaround

In the case that the A/D conversion is started by the external trigger inputs in multi mode, use the external interrupt inputs instead of the ADTRG# pin input and set the ADCSR.ADST to start A/D conversion in the interrupt handing routine.

Example: A/D conversion start by external trigger input (does not use ADTRG#) and note

When using the A/D converter in multi mode, use the IRQ, IRL or GPIO interrupt input and set the ADCSR.ADST by the CPU. Then A/D conversion start timings are delayed with the interrupt response time (refer to table 9.8 in the reference document) from the external interrupt input. Therefore, it is necessary to take the delay of the response time into account for the interrupt signal output timing from the external device to trigger. When the CPU is in power-down modes, the transition time from power-down mode to normal mode is also necessary.