

To our customers,

---

## Old Company Name in Catalogs and Other Documents

---

On April 1<sup>st</sup>, 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 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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

Send any inquiries to <http://www.renesas.com/inquiry>.

# HITACHI SEMICONDUCTOR TECHNICAL UPDATE

Classification of Production	Development Environment		No	TN-OS*-074A/E	Rev	1
THEME	HI7700/4 The restriction matter at the time of undefined interruption	Classification of Information	1. Spec change 2. Supplement of Documents ③. Limitation of Use 4. Change of Mask 5. Change of Production Line			
PRODUCT NAME	HS0770ITI41SRE, HS0770ITI41SRB, HS0770ITI41SRS, HS0770ITI41SRE-E, HS0770ITI41SRB-E, HS0770ITI41SRS-E	Lot No. V1.00r1, V1.01r1, V1.0Ar1, V1.0Br1, V1.0Cr1, V1.0.04, V1.0.05	Reference Documents	HI7000/4 series User's Manual (ADE-702-248A)		Effective Date  Forever

Please care about a restriction matter given in the following appending data about undefined interruption.

[Attached document]

" [HI7700/4] The restriction matter at the time of undefined interruption " (HI7700/4-INTDWN-030225(E))"

**[HI7700/4] The restriction matter at the time of undefined interruption**

**1. Phenomenon**

If undefined interruption occurs when no interrupt handler is performed, the parameter "inf1" (R6 register : PC at the interruption) and "inf2" (R7 register : SR at the interruption) passed to the system-down routine will become inaccurate.

**2. Countermeasure**

Please modify the file "*nnnn*\_intdwn.src" which is stored in the "hiuser\sh*nnnn*" folder as follows.

[Note] "*nnnn*"      Bold-faced-italic *nnnn* is the CPU name used for the sample file name.  
 Example: The actual file for SH7729 is "7729\_intdwn.src".

```
;*****
;* NAME      = __kernel_undefint      ;*
;* FUNCTION  = undefined interrupt routine ;*
;*****
```

**\_\_kernel\_undefint:**

(Omission)

```
mov.l  @(EXPEVT, r5), r5      ; get EXPEVT code
mov.l  #SYSDWN16, r4         ; get error type
mov.l  @(36, r15), r6        ; get PC
mov.l  @(40, r15), r7        ; get SR
```

Please replace these 2-lines the following.

```
stc    r6_bank, r0 ; get R6_bank1
and    #'3f, r0    ; get nest counter
cmp/eq #1, r0     ; if nest == 1
bt     undefint020 ; then undefint020
mov    r15, r1     ; get frame address
undefint010:
mov.l  @(36, r1), r6 ; get PC
mov.l  @(40, r1), r7 ; get SR
```

(Omission)

```
mov.l  #__kernel_sysdwn, r0
jsr    @r0          ; call __kernel_sysdwn
nop
```

;

.pool

(Omission of the rest)

Please add the 4-lines just before ".pool."

```
undefint020:
stc    r7_bank, r0 ; get R7_bank1
bra    undefint010
mov.l  @r0, r1     ; get frame address
```