

To our customers,

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## Old Company Name in Catalogs and Other Documents

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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>)

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# RENESAS TECHNICAL UPDATE

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|                    |                                     |         |                      |  |      |      |
|--------------------|-------------------------------------|---------|----------------------|--|------|------|
| Product Category   | MPU/MCU                             |         | Document No.         | TN-SH7-A715A/E   | Rev. | 1.00 |
| Title              | Notes on use of LCDC external clock |         | Information Category | Technical Notification   |      |      |
| Applicable Product | SH7727 Group                        | Lot No. | Reference Document   | SH7727 hardware manual Rev5.00 (REJ09B0254-0500)<br>SH7727 hardware manual Rev6.00 (REJ09B0254-0600) |      |      |
|                    |                                     | All     |                      |  |      |      |

There are usage notice about a LCDC external clock of SH7727 hardware manual Rev.5.00.

When in clock mode 2 (crystal resonator used) and an external clock (LCLK) is used as the LCD clock, changes in the state of the LCDC output pin can cause noise that affects the crystal oscillator circuit, resulting in unstable PLL operation and possible malfunction.

In such a case, implement one of the following measures:

- (1) Use an internal clock as the LCD clock when in clock mode 2.
- (2) When using an external clock (LCLK) as the LCD clock, select a mode other than clock mode 2 (external input on EXTAL pin).

There are the amendments of the SH7727 hardware manual Rev.6.00.

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Original:

changes in the state of the LCLK output pin can cause noise that affects the crystal oscillator circuit

Amended:

changes in the state of the LCDC output pin can cause noise that affects the crystal oscillator circuit