

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>)

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

RENESAS TECHNICAL UPDATE

Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan
Renesas Technology Corp.

Product Category	MPU/MCU		Document No.	TN-MC*-A018A/E	Rev.	1.00
Title	Usage precautions of USB disconnection process at the time of using the peripheral controller function and Full-speed operations.		Information Category	Technical Notification		
Applicable Product	USB ASSP R8A66597, SH7265, SH7205, SH7262, SH7264, SH7764, SH7652, SH7651, SH7673, SH7672, SH7671, SH7670, SH7723, SH7724, SH77721	Lot No.	Reference Document	See below		
		All lots				
<p>1. Phenomenon</p> <p>When the USB detach cable at the time of receiving the Host packet in the case of using the peripheral controller function and Full-speed operations for the USB module of applicable product, status of DVSQ and RHST are aborted and the USB module can not execute USB communication at the time of the USB re-attaching.</p> <p>This phenomenon does not occur in the case of using the host controller function or the peripheral controller function and Hi-speed operations.</p> <p>2. Occurring Conditions</p> <p>The phenomenon will occur when conditions (1) , (2) , (3) and (4) are fulfilled at the same time.</p> <p>(1) USB module uses peripheral controller function (DCFM = 0)</p> <p>(2) USB module Full-Speed operation (RHST = 010)</p> <p>(3) When the USB detach cable at the time of receiving the Host packet.</p> <p>(4) When the USB D+ line pull-up is disabled (DPRPU = 1 -> 0 setting) after 3ms from (3) [USB bus DETACH]</p> <p>Notes: USB detach is USB Bus signal level. not VBINT interrupt.</p> <p>3. Solution</p> <p>When CPU detects the USB detach interruption, please process as follows.</p> <p>Notes: replace DPRPU=1->0 process as follows.</p> <p>(1) DPRPU = 0</p> <p>(2) Wait for 1us (1000ns)</p> <p>(3) DCFM = 1</p> <p>(4) Wait for 200ns</p> <p>(5) DCFM = 0</p> <p>Related Terms:</p> <p>DVSQ = INTSTS0:bit6-4, RHST = DVSTCTR0:bit2-0,</p> <p>DPRPU = SYSCFG0:bit4, VBINT = INTSTS0:bit15</p>						

Notes:

The name of peripheral controller is the same as function controller.

DCMF corresponds to SYSCFG bit6 , please though DCFM might not been described in the hardware manual according to the product.

Reference Document :

R8A66597 Datasheet Rev1.01 (REJ03F0229-0101)

SH7265 Group Hardware Manual Rev.2.00 (REJ09B0351-0200)

SH7205 Group Hardware Manual Rev.2.00 (REJ09B0372-0200)

SH7262 Group SH7264 Group Hardware Manual Rev.2.00 (REJ09B0445-0200)

SH7764 Group Hardware Manual Rev.2.00 (REJ09B0360-0200)

SH7652 Group Hardware Manual Rev.2.00 (REJ09B0440-0200)

SH7670 Group Hardware Manual Rev.2.00 (REJ09B0437-0200)

SH7723 Hardware Manual Rev.2.00 (REJ09B0405-0200-1)

SH7724 Hardware Manual Rev.0.50 (REJ09B0560-0050-1)