

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>

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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*-A016A/E	Rev.	1.00
Title	Usage notes on I ² C bus interface 2 (IIC2) in multi-master operation		Information Category	Technical Notification		
Applicable Product	See below	Lot No.	Reference Document	See below		
		All lots				

We would like to inform you of the following two points when the I²C bus interface 2 (IIC2) included in the applicable products listed in the following table is used in the multi-master.

Usage Notes:

1. Restriction on Setting of Transfer Rate in Use of Multi-Master

In multi-master usage when the IIC transfer rate setting of this LSI is lower than those of the other masters, unexpected length of SCL may occasionally be output. To avoid this, the specified value must be greater than or equal to the value produced by multiplying the fastest transfer rate among the other masters by 1/1.8. For example, when the transfer rate of the fastest bus master among the other bus masters is 400 kbps, the transfer rate of the IIC of this LSI must be set to at least 223 kbps (= 400/1.8).

2. Restriction on Use of Bit Manipulation Instructions to Set MST and TRS when Multi-Master is Used

When master transmission is selected by consecutively manipulating the MST and TRS bits in multi-master usage, an arbitration loss during execution of the bit-manipulation instruction for TRS leads to the contradictory situation where AL in ICSR is 1 in master transmit mode (MST = 1, TRS = 1).

Ways to avoid this effect are listed below.

- Use the MOV instruction to set MST and TRS in multi-master usage.
- When arbitration is lost, confirm that MST = 0 and TRS = 0. If the setting of MST = 0 and TRS = 0 is not confirmed, set MST = 0 and TRS = 0 again.

2. Applicable Product and Reference Document

Applicable Product		Reference Document Title	Rev.	Document No.
Series	Group			
H8/300H Tiny Series	H8/3687	H8/3687 Group Hardware Manual	Rev.5.0	REJ09B0027-0500
	H8/3694	H8/3694 Group Hardware Manual	Rev.5.0	REJ09B0028-0500
	H8/36049	H8/36049 Group Hardware Manual	Rev.3.0	REJ09B0060-0300
	H8/36912	H8/36912 Group, H8/36092 Group Hardware Manual	Rev.3.0	REJ09B0105-0300
	H8/36064	H8/36064 Group Hardware Manual	Rev.2.0	REJ09B0068-0200
	H8/36087	H8/36087 Group Hardware Manual	Rev.2.0	REJ09B0160-0200
	H8/36109	H8/36109 Group Hardware Manual	Rev.1.0	REJ09B0240-0100
	H8/36094	H8/36094 Group Hardware Manual	Rev.1.0	REJ09B0268-0100
	H8/36077	H8/36077 Group Hardware Manual	Rev.1.0	REJ09B0216-0100
H8/300H Super Low Power Series	H8/38602R	H8/38602R Group Hardware Manual	Rev.2.0	REJ09B0152-0200
	H8/38099	H8/38099 Group Hardware Manual	Rev.1.0	REJ09B0309-0100
	H8/38086R	H8/38086R Group Hardware Manual	Rev.3.0	REJ09B0182-0300
	H8/38076R	H8/38076R Group Hardware Manual	Rev.4.0	REJ09B0093-0400
H8S/2300 Series	H8S/2378*, H8S/2378R*	H8S/2378, H8S/2378R Group Hardware Manual	Rev.6.0	REJ09B0109-0600
	H8S/2368*	H8S/2368 Group Hardware Manual	Rev.5.0	REJ09B0050-0500
H8S/2400 Series	H8S/2437	H8S/2437 Group Hardware Manual	Rev.1.0	REJ09B0059-0100
H8S/2500 Series	H8S/2556, H8S/2552, H8S/2506	H8S/2556, H8S/2552, H8S/2506 Group Hardware Manual	Rev.4.0	REJ09B0099-0400
H8SX/1600 Series	H8SX/1653	H8SX/1653 Group Hardware Manual	Rev.1.0	REJ09B0219-0100
	H8SX/1663	H8SX/1663 Group Hardware Manual	Rev.1.0	REJ09B0294-0100
SH7200 Series	SH7206	SH7206 Group Hardware Manual	Rev.2.0	REJ09B0191-0200
	SH7201	SH7201 Group Hardware Manual	Rev.1.0	REJ09B0321-0100
SH7260 Series	SH7261	SH7261 Group Hardware Manual	Rev.1.0	REJ09B0320-0100
SH7641 Series	SH7641	SH7641 Group Hardware Manual	Rev.1.0	REJ09B0346-0100
			Rev.4.0	REJ09B0023-0400
SH7080 Series	SH7080	SH7080 Group Hardware Manual	Rev.2.0	REJ09B0181-0200
SH7210 Series	SH7211	SH7211 Group Hardware Manual	Rev.1.0	REJ09B0344-0100

Note: * Optional