

RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-MC*-A020A/E	Rev.	1.00
Title	Note on I ² C-bus Interface Master Receive Mode		Information Category	Technical Notification		
Applicable Product	See below	Lot No.	Reference Document	See below		
		ALL				

This document describes a note regarding master receive mode when using the I²C-bus interface in I²C-bus interface mode.

1. Note regarding master receive mode of I²C-bus interface mode

When stop condition generation or start condition regeneration overlaps with the falling edge of the ninth clock cycle of the SCL signal, an additional cycle is output after the ninth clock cycle.

2. Countermeasure

After a master receive operation is completed, confirm the falling edge of the ninth clock cycle of the SCL signal and generate a stop condition or regenerate a start condition.

Confirm the falling edge of the ninth clock cycle of the SCL signal as follows: Confirm the SCLO bit in the ICCR2 register (SCL monitor flag) becomes 0 (SCL pin is low) after confirming the RDRF bit in the ICSR register (receive data register full flag) becomes 1.

NOTE: In H8S/2400 series, H8SX/1500 series, and H8SX/1600 series, ICCR2 is ICCRB.

Applicable Products and Reference Documents

Series	Group	Document Title	Rev.	Document Number
H8/300H Tiny	H8/3687	H8/3687 Group Hardware Manual	5.00	REJ09B0027-0500
	H8/3694	H8/3694 Group Hardware Manual	5.00	REJ09B0028-0500
	H8/36049	H8/36049 Group Hardware Manual	1.00	REJ09B0268-0100
	H8/36064	H8/36064 Group Hardware Manual	2.00	REJ09B0068-0200
	H8/36077,H8/36079	H8/36079 Group H8/36077 Group Hardware Manual	3.00	REJ09B0216-0300
	H8/36087	H8/36087 Group Hardware Manual	2.00	REJ09B0160-0200
	H8/36094	H8/36094 Group Hardware Manual	1.00	REJ09B0268-0100
	H8/36109	H8/36109 Group Hardware Manual	1.50	REJ09B0240-0150
	H8/36912	H8/36912 Group H8/36902 Group Hardware Manual	3.00	REJ09B0105-0300
H8S/2400	H8S/2437	H8S/2437 Group Hardware Manual	2.00	REJ09B0059-0200
H8S/Tiny	H8S/20115,20103, H8S/20215,20203, H8S/20235,20223	H8S/20103,H8S/20203,H8S/20223,H8S/20115, H8S/20215,H8S/20235 Group Hardware Manual	2.00	REJ09B0465-0200
H8SX/1500	H8SX/1544	H8SX/1544 Group Hardware Manual	3.00	REJ09B0381-0300
H8SX/1600	H8SX/1622	H8SX/1622 Group Hardware Manual	2.00	REJ09B0414-0200
	H8SX/1635,H8SX/1635L	H8SX/1635 Group H8SX/1635L Group Hardware Manual	2.00	REJ09B0496-0200
	H8SX/1638,H8SX/1638L	H8SX/1638 Group H8SX/1638L Group Hardware Manual	2.00	REJ09B0364-0200
	H8SX/1645,H8SX/1645L	H8SX/1645 Group H8SX/1645L Group Hardware Manual	2.00	REJ09B0497-0200
	H8SX/1648,H8SX/1648A, H8SX/1648L,H8SX/1648G, H8SX/1648H	H8SX/1648,H8SX/1648A,H8SX/1648L,H8SX/1648G, H8SX/1648H Group Hardware Manual	2.00	REJ09B0365-0200
	H8SX/1653	H8SX/1653 Group Hardware Manual	1.00	REJ09B0219-0100
	H8SX/1655,H8SX/1655M	H8SX/1655 Group H8SX/1655M Group Hardware Manual	2.00	REJ09B0499-0200
	H8SX/1658R,H8SX/1658M	H8SX/1658R Group H8SX/1658M Group Hardware Manual	2.00	REJ09B0413-0200
	H8SX/1663	H8SX/1663 Group Hardware Manual	1.00	REJ09B0294-0100
	H8SX/1665,H8SX/1665M	H8SX/1665 Group H8SX/1665M Group Hardware Manual	2.00	REJ09B0498-0200
	H8SX/1668R,H8SX/1668M	H8SX/1668R Group H8SX/1668M Group Hardware Manual	2.00	REJ09B0412-0200
	SH7200	SH7203	SH7203 Group Hardware Manual	3.00
SH7205		SH7205 Group Hardware Manual	2.00	REJ09B0372-0200
SH7210	SH7211	SH7211 Group Hardware Manual	3.00	REJ09B0344-0300
SH7260	SH7262, SH7264	SH7262 Group SH7264 Group Hardware Manual	2.00	REJ09B0445-0200
	SH7263	SH7263 Group Hardware Manual	3.00	REJ09B0290-0300
	SH7265	SH7265 Group Hardware Manual	2.00	REJ09B0351-0200
SH7450	SH7450, SH7451	SH7450 Group SH7451 Group Hardware Manual	1.00	REJ09B0454-0100
SH-Ether	SH7652	SH7652 Group Hardware Manual	2.00	REJ09B0440-0200
	SH7670	SH7670 Group Hardware Manual	2.00	REJ09B0437-0200