

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 Electronics Corporation

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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-SH7-A565A/E	Rev.	1.00
Title	Amendment of SH7720 hardware manual		Information Category	Technical Notification	
Applicable Product	SH3-DSP SH7700 Series SH7720 Group	Lot No.	Reference Document	SH7720 hardware manual (REJ09B0033-0200 Rev.2.00)	
		All			

There are the amendments and additions of SH7720 hardware manual Rev.2.00.

Amendments and additions

1. Page 441 of 1382, Section 11

Amendment

Original: The frequency of CKIO ranges from 33.34 to 66.67 MHz, because the input clock frequency ranges from 33.34 to 66.67 MHz.

Amended: The frequency of CKIO ranges from 24.00 to 66.67 MHz, because the input clock frequency ranges from 24.00 to 66.67 MHz.

2. Page 447 of 1382, Section 11

11.4.2 USBH/USBF Clock Control Register (UCLKCR) Description of Bit 7..5

Amendment

Original:

Bit	Bit Name	Initial Value	R/W	Description
7	USSCS2	0	R/W	Source Clock Selection
6	USSCS1	1	R/W	These bits select the source clock.
5	USSCS0	1	R/W	00X: Clock stopped 01X: Setting prohibited 10X: Setting prohibited 110: EXTAL_USB 111: USB crystal resonator

Amended:

Bit	Bit Name	Initial Value	R/W	Description
7	USSCS2	0	R/W	Source Clock Selection
6	USSCS1	1	R/W	These bits select the source clock.
5	USSCS0	1	R/W	000: Clock stopped 001: Setting prohibited 010: Setting prohibited 011: Initial Value This value must be changed to "110" or "111", before enabling USBH/USBF. 100: Setting prohibited 101: Setting prohibited 110: EXTAL_USB 111: USB crystal resonator

3. Page 449 of 1382, Section 11

11.6 Usage Notes

Add the following note;

Use the USBH or USBF modules with P₀ > 13 MHz. Otherwise, the operation of this LSI is not guaranteed.

4. Page 612 of 1382, Section 18

18.5 Interrupt Sources and DMAC

Amendment

Original:

...by the same source. The DMAC should be activated according to the following procedure.

1. Set the interrupt enable bit (TIE, RIE or TDIE) corresponding to the generated interrupt source to 1.
2. Mask the corresponding interrupt request by the interrupt mask register of the interrupt controller.

Amended:

...by the same source. The DMAC should be activated according to the following procedure.

Set the interrupt enable bits (TIE, RIE, or TDIE) corresponding to the generated interrupt source to 1,

And set the other interrupt enable bits (TSIE, ERIE, BRIE, DRIE) to 0.

5. Page 836 of 1382, Section 25

25.9 Usage Notes

Add the following note;

Use the USBH or USBF modules with P₀ > 13 MHz. Otherwise, the operation of this LSI is not guaranteed.

6. Page 1206 of 1382, Section 37

37.1 Register Address

Amendment

Original:

Register Name	Abbreviation	Number of Bits	Address	Module	Access Size
SDRAMmode register	SDMR3	—	H'A4FD 8xxx		16

Amended:

Register Name	Abbreviation	Number of Bits	Address	Module	Access Size
SDRAM mode register	SDMR3	—	H'A4FD 5xxx		16

7. Page 1219 of 1382, Section 37

37.1 Register Address

Amendment

Original:

Register Name	Abbreviation	Number of Bits	Address	Module	Access Size
Port B data register	PBDR	8	H'A443 0142		8

Amended:

Register Name	Abbreviation	Number of Bits	Address	Module	Access Size
Port B data register	PBDR	8	H'A405 0142		8

8. Page 1346 of 1382, Appendix

A. Pin States, Power-On Reset state

Amendment

Original:

Category		Pin Name	Power-On Reset	Manual Reset	Software Standby	Hardware Standby	Bus Release	I/O	Handling of Unused Pins
PLBG0 256GA -A	PLBG0 256KA -A								
B13	E16	USB2_pwr_en/ PTH1	V	O/P	O/K	Z/Z	O/P	O/I/O	Pull-up

Amended:

Category		Pin Name	Power-On Reset	Manual Reset	Software Standby	Hardware Standby	Bus Release	I/O	Handling of Unused Pins
PLBG0 256GA -A	PLBG0 256KA -A								
B13	E16	USB2_pwr_en/ PTH1	Z	O/P	O/K	Z/Z	O/P	O/I/O	Pull-up

9. Page 1347,1352,1353 of 1382, Appendix

A. Pin States, Ball location of PLBG0256KA-A

Amendment, Page 1347

Original:

Category		Pin Name	Power-On Reset	Manual Reset	Software Standby	Hardware Standby	Bus Release	I/O	Handling of Unused Pins
PLBG0 256GA -A	PLBG0 256KA -A								
C19	B16	USB1_ovr_current/ USBF_VBUS	I/I	I/I	I/I	I/I	I/I	I/I	Pull-down

Amended:

Category		Pin Name	Power-On Reset	Manual Reset	Software Standby	Hardware Standby	Bus Release	I/O	Handling of Unused Pins
PLBG0 256GA -A	PLBG0 256KA -A								
C19	B20	USB1_ovr_current/ USBF_VBUS	I/I	I/I	I/I	I/I	I/I	I/I	Pull-down

Amendment, Page 1352

Original:

Category										
PLBG0 256GA -A	PLBG0 256KA -A	Pin Name	Power- On Reset	Manual Reset	Software Standby	Hardware Standby	Bus Release	I/O	Handling of Unused Pins	
P4	R1	Vss	-	-	-	-	-	-		
P17	T20	Vcc	-	-	-	-	-	-		
P18	R21	AUDATA0/PTJ1	V	O/P	O/K	Z/Z	O/P	O/IO	Open	
P19	R18	AUDCK/PTJ6	V	O/P	O/K	Z/Z	O/P	O/IO	Open	
P20	U17	VssQ	-	-	-	-	-	-		
R1	T5	VccQ1	-	-	-	-	-	-		
R2	V1	A11	O	O	OZ	Z	Z	O	Open	
R3	V2	A13	O	O	OZ	Z	Z	O	Open	
R4	T1	A15	O	O	OZ	Z	Z	O	Open	
R17	U20	AUDSYNC/PTJ0	V	O/P	O/K	Z/Z	O/P	O/IO	Open	
R18	T18	ASEMD0	I	I	I	I	I	I	Pull-up	
R19	U21	TRST/PTL7	I	I/P	Z/K	Z/Z	I/P	I/IO	Pull-down	
R20	V18	VccQ	-	-	-	-	-	-		
T1	R4	A16	O	O	OZ	Z	Z	O	Open	

Amended:

Category										
PLBG0 256GA -A	PLBG0 256KA -A	Pin Name	Power- On Reset	Manual Reset	Software Standby	Hardware Standby	Bus Release	I/O	Handling of Unused Pins	
P4	R5	Vss	-	-	-	-	-	-		
P17	P21	Vcc	-	-	-	-	-	-		
P18	R20	AUDATA0/PTJ1	V	O/P	O/K	Z/Z	O/P	O/IO	Open	
P19	P18	AUDCK/PTJ6	V	O/P	O/K	Z/Z	O/P	O/IO	Open	
P20	T17	VssQ	-	-	-	-	-	-		
R1	P4	VccQ1	-	-	-	-	-	-		
R2	T2	A11	O	O	OZ	Z	Z	O	Open	
R3	R2	A13	O	O	OZ	Z	Z	O	Open	
R4	R1	A15	O	O	OZ	Z	Z	O	Open	
R17	T20	AUDSYNC/PTJ0	V	O/P	O/K	Z/Z	O/P	O/IO	Open	
R18	R21	ASEMD0	I	I	I	I	I	I	Pull-up	
R19	R18	TRST/PTL7	I	I/P	Z/K	Z/Z	I/P	I/IO	Pull-down	
R20	U17	VccQ	-	-	-	-	-	-		
T1	T5	A16	O	O	OZ	Z	Z	O	Open	

Amendment, Page 1353

Original:

Category		Pin Name	Power-On Reset	Manual Reset	Software Standby	Hardware Standby	Bus Release	I/O	Handling of Unused Pins
PLBG0 256GA -A	PLBG0 256KA -A								
T2	T4	A6	O	O	OZ	Z	Z	O	Open
T3	W1	A5	O	O	OZ	Z	Z	O	Open
T4	AA3	A12	O	O	OZ	Z	Z	O	Open
T17	Y5	TMS/PTL6	I	I/P	Z/K	Z/Z	I/P	I/IO	Pull-up
T18	Y6	TCK/PTL3	I	I/P	Z/K	Z/Z	I/P	I/IO	Pull-up
T19	R1	PCC_RESET/ PINT7/PTK3	V	O/I/P	O/I/P	Z/Z/Z	O/I/P	O/I/IO	Open
T20	T20	ASEBRKAK/PTJ5	V	O/P	O/K	Z/Z	O/P	O/IO	Open
U1	R21	VssQ1	-	-	-	-	-	-	
U2	R18	A9	O	O	OZ	Z	Z	O	Open
U3	U17	A4	O	O	OZ	Z	Z	O	Open
U4	T5	A10	O	O	OZ	Z	Z	O	Open
U5	V1	D11	Z	Z	Z	Z	Z	IO	Pull-up
U6	V2	D8	Z	Z	Z	Z	Z	IO	Pull-up

Amended:

Category		Pin Name	Power-On Reset	Manual Reset	Software Standby	Hardware Standby	Bus Release	I/O	Handling of Unused Pins
PLBG0 256GA -A	PLBG0 256KA -A								
T2	V1	A6	O	O	OZ	Z	Z	O	Open
T3	V2	A5	O	O	OZ	Z	Z	O	Open
T4	T1	A12	O	O	OZ	Z	Z	O	Open
T17	U20	TMS/PTL6	I	I/P	Z/K	Z/Z	I/P	I/IO	Pull-up
T18	T18	TCK/PTL3	I	I/P	Z/K	Z/Z	I/P	I/IO	Pull-up
T19	U21	PCC_RESET/ PINT7/PTK3	V	O/I/P	O/I/P	Z/Z/Z	O/I/P	O/I/IO	Open
T20	V18	ASEBRKAK/PTJ5	V	O/P	O/K	Z/Z	O/P	O/IO	Open
U1	R4	VssQ1	-	-	-	-	-	-	
U2	T4	A9	O	O	OZ	Z	Z	O	Open
U3	W1	A4	O	O	OZ	Z	Z	O	Open
U4	AA3	A10	O	O	OZ	Z	Z	O	Open
U5	Y5	D11	Z	Z	Z	Z	Z	IO	Pull-up
U6	Y6	D8	Z	Z	Z	Z	Z	IO	Pull-up