Old Company Name in Catalogs and Other Documents

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HITACHI MICROCOMPUTER TECHNICAL UPDATE

DATE	23 October 2001	No.		TN-SH7-	368 A/E
THEME	SH7615 limitation on use of internal direct memory access controller.				
CLASSIFICATION	☐ Spec change ☐ Limitation on Use ☐ Supplement of Documents				
PRODUCTNAME	HD6417615ARF		· .	Lot No.etc.	ALL
REFERENCE	SH7615 Hardware manual (ADE-602-198) Rev.1.0			EffectiveDate	
DOCUMENTS				Permanent	
There are two limitations on use of internal Direct Memory Access Controller(DMAC) in SH7615, and their					
countermeasures are shown below. <phenomenon></phenomenon>					
1. DMAC do not execute DMA channel 1 transfer on the condition that on-chip peripheral module request					
mode					
On the condition that DMA channel 0 select cycle-steal mode and DMA channel 1 select on-chip peripheral					
module request mode, there is a case that DMAC do not execute DMA channel 1 transfer.					
2. DMAC do not execute DMA transfer on the condition that external request mode					
On the condition that select external request mode, cycle-steal mode and transfer range select between					
internal memory and internal peripheral module or between internal peripheral module and internal peripheral module, there is a case that DMAC do not execute DMA transfer.					
module, wiere i	o a case that DIVIAC do not execute DIVIA transfer				
<condition></condition>	•				
1. Condition of DMAC do not execute DMA channel 1 transfer on the condition that on-chip peripheral					
module request mode					
When all following conditions are met, DMAC do not execute DMA channel 1 transfer that select the on-chip					
peripheral module request mode. (1) DMAC channel 0/1 are enabled.					
(1) DMAC channel 0/1 are enabled. (2) DMA channel 0 select the cycle-steal mode.					
(3) DMA channel 1 select the cycle-steal mode, dual address mode and on-chip peripheral module request					
mode.					
(4) Round-robin mode is set as priority mode.					
2. Condition of DMA	C do not execute DMA transfer on the condition	n that exteri	nal r	eauest mode	
When all following conditions are met, DMAC do not execute DMA transfer that select the external request					
mode, cycle-steal mode and transfer range select between internal memory and internal peripheral module or					
between internal peripheral module and internal peripheral module.					
(1) Select the external DMA request signal (DREQ) for DMA request source.					
(2) Select the transfer range that between internal memory and internal peripheral module or between internal peripheral module and internal peripheral module.					
(3) Select the cy					
(2) Doloct the Cy	USBMA AAAVMU.				
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<Countermeasures>

1. Countermeasure to DMAC do not execute DMA channel 1 transfer on the condition that on-chip peripheral module request mode

This problem is avoided by the following countermeasures.

- (1) Set to Fixed priority mode.
- 2. Countermeasure to DMAC do not execute DMA transfer on the condition that external request mode This problem is avoided by the following countermeasures.
 - (1) Don't set the external DMA request signal(DREQ) for DMA request source.