To our customers,

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Renesas Electronics website: http://www.renesas.com

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (http://www.renesas.com)

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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

M16C/80 Series

Transferring Blocks

1.0 Abstract

This program transfers memory contents from one location to another by using a block transfer instruction(SMOVF).

2.0 Introduction

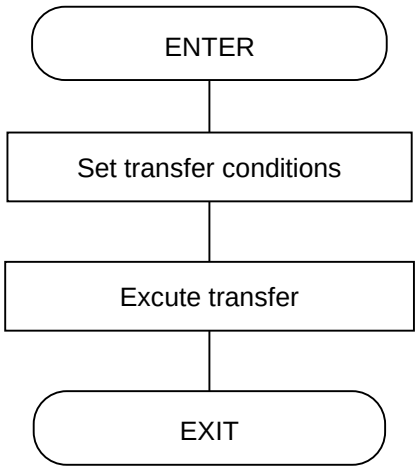
This program transfers memory contents from one location to another by using a block transfer instruction (SMOVF).

The program sets the number of transfers performed in R3, the source's start address in A0, and thedestinations's start address in A1 before executing the SMOVF instruction.

Subroutine name : -	ROM capacity : 14byte
Interrupt during execution:Accepted	Number of stacks used : None

Register/memory	Input	Output	Usage condition
R0	-	-	Unused
R1	-	-	Unused
R2	-	-	Unused
R3	-	"0000_{16}"	Number of transfers performed
A0	-	Last address at source	Source address
A1	-	Last address at destination	Destination address
BLOCK1	Content of BLOCK1	Does not change	←
BLOCK2	Content of BLOCK2	Content of BLOCK1	←
Usage precautions			

3.0 Flowchart



4.0 Programming Code

```
;*****************************************************************
; *
;       M16C Program Collection
;       CPU : M16C/80 series
; *
;*****************************************************************
VramTOP       .EQU    0000400H                ; Declares start address of RAM
VromTOP       .EQU    0FE0000H                ; Declares start address of ROM
      .SECTIONRAM,DATA
      .ORGVramTOP                             ; RAM area
LENGTH        .EQU    10                      ; Length of area
BLOCK1:       .BLKB   LENGTH                  ; Source area of transfer
BLOCK2:       .BLKB   LENGTH                  ; Destination area of transfer
;;
;=====================================================================
;     Title: Transferring blocks
;     Outline: Example for using block transfer instruction
;     Input:        ------------------------------>        Output:
;     R0( )                                       R0(Unused)
;     R1( )                                       R1(Unused)
;     R2( )                                       R2(Unused)
;     R3( )                                       R3(Indeterminate)
;     A0( )                                       A0(Indeterminate)
;     A1( )                                       A1(Indeterminate)
;     Stack amount used: None
;     Notes:
;=====================================================================
                .SECTION        PROGRAM,CODE
                .ORG            VromTOP                 ; ROM area
    MOV.W       #LENGTH,R3                              ; Sets number of transfers performed
    MOV.L       #BLOCK1,A0                              ; Sets source address
    MOV.L       #BLOCK2,A1                              ; Sets destination address
    SMOVF.B                                             ; Executes transfer of blocks
;                                                       ;
                .END ;
```

5.0 Reference

MCU Technical Information Homepage

http://www.infomicom.maec.co.jp/indexe.htm
(or http://www.mdece.com/ , http://www.mitsubishichips.com/products/mcu/index.html or your local Web Site.)

Technical Support

E-mail: support@apl.maec.co.jp
(or your local support E-mail address. A private e-mail address should NOT be used.)

Data Sheet

M16C/80 group
(Use the latest version on the Homepage: http://www.infomicom.maec.co.jp/indexe.htm)

User's Manual

M16C/80 group
(Use the latest version on the Homepage: http://www.infomicom.maec.co.jp/indexe.htm)

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Renesas Technology Corp.

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