

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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MAEC TECHNICAL NEWS

No.M32R-06-0301

M32R/ECU series Usage Notes for 0 Division Instruction

ClassificationCorrections and supplementary
explanation of document

√ Notes

Knowhow

Others

Concerned Products

M32R/ECU Series

Problem and Conditions

Inaccurate calculations for the instructions listed in (2) will result from execution of the 0 division instruction under the conditions described in (1).

- (1) If 0 division calculation is executed when the divisor = 0 for instructions DIV, DIVU, REM and REMU,
- (2) the result will be inaccurate calculations for any of the following instructions that are executed immediately after 0 division:
 - ADDV, ADDX, ADD, ADDI, ADDV3, ADD3,
 - CMP, CMPU, CMPI, CMPUI,
 - SUBV, SUBX, SUB,
 - DIV, DIVU,
 - REM, REMU.

Countermeasure

Assuming that the 0 division occurrence itself is not expected by the system and therefore is the cause of miscalculations, before executing division or remainder instructions, do a 0 check on the divisor to make sure 0 division does not occur.