

MAEC TECHNICAL NEWS

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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.